

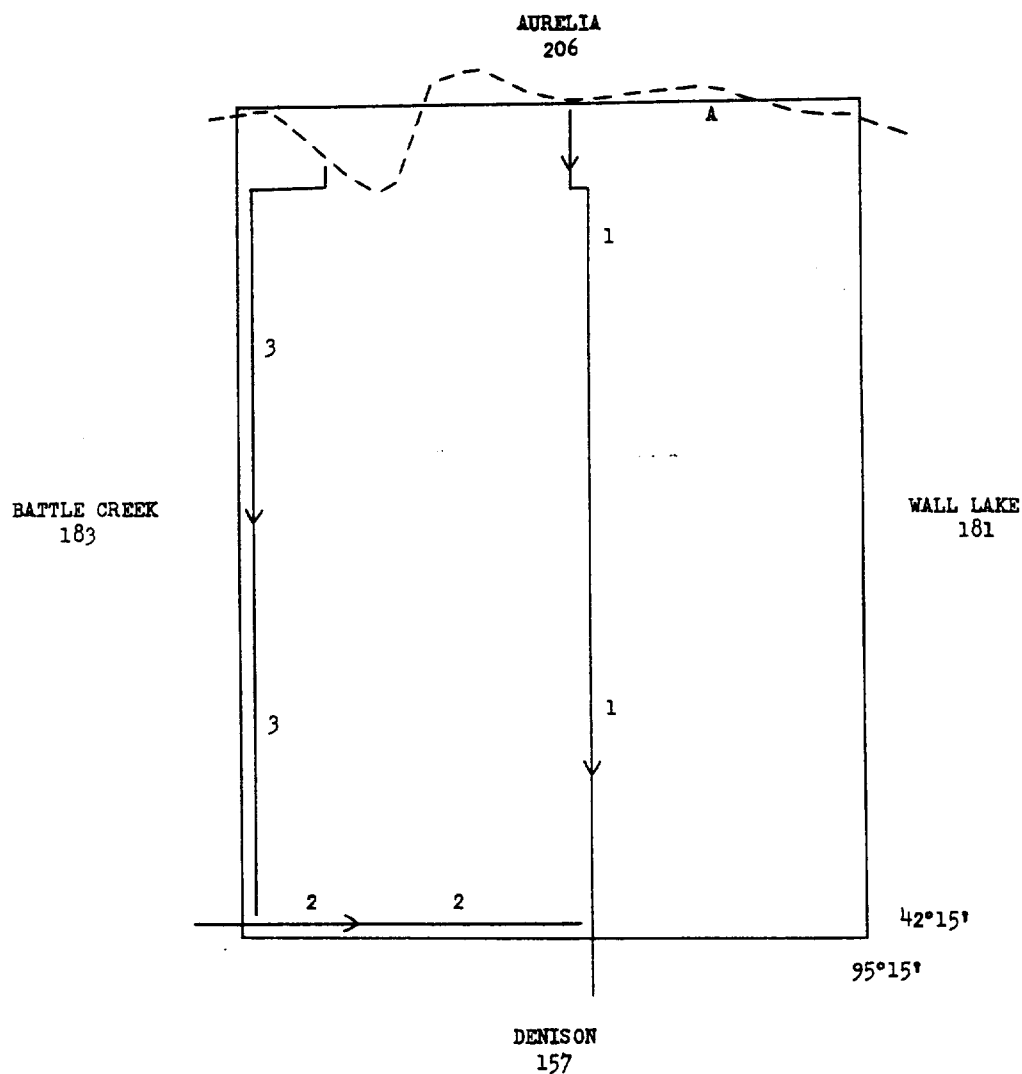
THIRD ORDER LEVELS
SEA LEVEL DATUM OF 1929

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Ida Grove Quadrangle
182 - Iowa
N4215-W9515/15
Diagram NK 15-4
Fort Dodge, Iowa

Ida and Sac Counties

Edition of 11/28/66
PR: AH/mp



USC&GS LEVELING

A. Quadrangle No. 420952

182 A

2
Ida Grove Quadrangle
182 - Iowa

LINE 1

Feet

SOUTH THROUGH CENTER OF QUADRANGLE (by W. E. Knouse, 1966; Book CV 2058)

IDA GROVE QUAD., 182

- | | | | | |
|----|-----|---|--|----------|
| 1 | 2 | 0.0 | Schaller, 4.25 mi W. along the Chicago and North Western Railway from; at the E. side of sec. 30, T. 89 N., R. 38 W.; about 0.25 mi E. of milepost 34, 40 yards W. of the center of the road along the E. side of sec. 30, 40 ft NE. of a fence corner, at 6 x 6 ft concrete underpass 1498, in the top of the SW. corner of the S. headwall, and 10.8 ft S. of the S. rail. A standard USC&GS disk stamped "1318.393 Z 13 1933" | 1318.393 |
| 2 | 0.1 | UE/13 A; T. 89 N., R. 38 W., near quarter cor. secs. 29 and 30, at center of wooden bridge floor over creek; copper nail and washer (Water level 7/27/66 11.2 ft lower than UE) | 1314.07 | |
| 3 | 0.7 | UE Z 13 B; T. 89 N., R. 38 W.; near corner secs. 29, 30, 31 and 32; 26.5 ft S. and 28.5 ft W. of crossroads, on top of SE. corner of SW. end of concrete box culvert, which runs diagonally under crossroads; chiseled square | 1362.51 | |
| 4 | 1.3 | UE Z 13 C; T. 89 N., R. 38 W., near quarter cor. secs. 31 and 32, 26 ft S. and 26 ft E. of road at E.-W. fence, 36 ft S. and 26 ft E. of road at field road E., on top of S. end of concrete pipe culvert; chiseled cross | 1391.94 | |
| 5 | 1.8 | UE Z 13 D; Ts. 88 and 89 N., Rs. 38 and 39 W. (correction line here, so Rs. 38 and 39 W. are staggered correction of about 3.0 mi) near S. corner secs. 31 and 32 and NE sixteenth cor. sec. 3; 49 ft N. and 16 ft E. of T-rd. N., (T-rd. is with U. S. Hwy. 20) on top E. end of concrete pipe culvert; chiseled square | 1373.65 | |
| 6 | 2.1 | UE Z 13 E; Ts. 88 and 89 N., Rs. 38 and 39 W. (correction line, as above) near N. corner secs. 2 and 3 and SW. sixteenth cor. sec. 32, 31.5 ft E. and 59 ft S. of T-rd. S. (T-rd. with U. S. Hwy. 20), in W. side of power pole; rail spike | 1406.95 | |
| 7 | 2.7 | UE Z 13 F; T. 88 N., R. 39 W.; about 0.1 mi S. of quarter cor. secs. 2 and 3, 56.5 ft S. and 16.5 ft W. of road at drive W., on W. end of concrete pipe culvert; chiseled square | 1348.59 | |
| 9 | 3.1 | Galva, 2.0 mi E. and 3.0 mi S. from, 8.0 mi N. and 1.0 mi W. from Arthur, T. 88 N., R. 39 W.; between SE $\frac{1}{4}$ sec. 3 and SW $\frac{1}{4}$ sec 2; about 0.1 mi N. from T-rd. E., 20 ft N. and 30.5 ft W. of road at field entrance W., 1 ft E. of W. right-of-way fence, in a concrete post; a standard tablet stamped "1 WEK 1966" | 1313.248 | |
| 10 | 3.1 | Reference mark "1 WEK"; 30.5 ft S. and 8 ft E. from tablet, 10.5 ft S. and 22.5 ft W. of road at field entrance W., on top of S. end of a concrete pipe culvert; chiseled square | 1312.46 | |
| 11 | 3.7 | UE 1 A; T. 88 N., R. 39 W.; about .05 mi N. of quarter cor. of secs. 10 and 11; 213 ft N. and 18.5 ft W. of road at fence E., on top of W. end of a corrugated steel culvert; punched hole | 1358.31 | |
| 12 | 4.2 | UE 1 B; T. 88 N., R. 39 W.; near cor. secs. 10, 11, 14 and 15; 26 ft N. and 31 ft E. of crossroads, on N. end of corrugated steel culvert; punched hole | 1329.30 | |

<u>Line 1 Cont'd.</u>	<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
1 13 4.4	UE 1 C; T. 88 N., R. 39 W.; between the NW. portion of sec. 14, and NE. portion of sec. 15, about 0.2 mi S. of T-rd. N., on center of floor of bridge (constructed from wood); bridge is on field road, a copper nail and washer (10.2 ft lower to water level from UE)	1312.52
14 5.2	UE 1 D; T. 88 N., R. 39 W.; near cor. secs. 14, 15, 22 and 23, 26 ft S. and 14 ft W. of road at field road S., on top of W. end of a corrugated steel culvert; punched hole	1360.79
15 6.2	Reference mark #2 for USC&GS Triangulation Station ARTHUR, 1950. The mark is 55.2 ft N. of station, 1 ft E. of fence; cap in concrete post, stamped "Arthur No. 2, 1950"	1487.913
16 6.2	USC&GS Triangulation Station ARTHUR, 1950. The station is located about 8.0 mi SSE. of Galva and 6.0 mi NNW. of Arthur on a high hill in the W. edge of a cultivated field. Station is 150 ft N. of a T-fence corner and 3 ft E. of fence. The mark is flush with the ground and the disk is stamped "Arthur 1950"	1485.783
17 6.2	Reference mark #1 for USC&GS Triangulation Station ARTHUR, 1950. The mark is 103 ft N. of T-fence corner and 1 ft E. of fence. The mark projects about 2 inches and the disk is stamped "Arthur No. 1, 1950"	1483.995
18 6.2	UE Arthur A; T. 88 N., R. 39 W., near cor. secs. 22, 23, 26 and 27; 15.5 ft N. and 28.5 ft W. of T-rd. S.; on top of N. end of a corrugated steel culvert; punched hole	1475.23
20 6.8	UE Arthur B; T. 88 N., R. 39 W.; near quarter cor. secs. 26, 27; 16 ft S. and 28 ft E. of road at drive E., on top of S. end of a corrugated steel culvert; chiseled cross	1420.38
21 7.2	UE Arthur C; T. 88 N., R. 39 W.; near corner secs. 26, 27, 34 and 35; 32.5 ft N. and 18.5 ft E. of crossroads; on top of E. concrete pipe culvert; chiseled square	1374.18
22 7.8	UE Arthur D; T. 88 N., R. 39 W.; near quarter cor. secs. 34 and 35; 68 ft S. and 31 ft W. of road at fence W., in E. side of 7 foot cottonwood tree and about 0.6 inches above ground; rail spike	1356.01
23 8.3	UE Arthur E; Ts. 87 and 88 N., R. 39 W.; near cor. secs. 2, 3, 34 and 35; 110 ft S. and 32 ft W. of road crossing, in E. side of a 6 ft. cottonwood tree and 6 inches above ground; rail spike	1302.98
24 8.9	UE Arthur F; T. 87 N., R. 39 W.; near quarter cor. secs. 2 and 3; 38 ft S. and 14.5 ft W. of center of wooden bridge, on top of a 12-in. wooden post; which holds the SW. wingwall in place; copper nail and washer	1281.19
25 9.3	Reference mark #2 WEK; 26 ft NW. from tablet, 39 ft S. and 15 ft W. of crossroads, in W. end of a corrugated steel culvert; chiseled cross	1340.59
26 9.3	Arthur, 2.0 mi N. and 1.0 mi W. from; 1.0 mi N. and 5.0 mi E. from Ida Grove, T. 87 N., R. 39 W.; near cor. secs. 2, 3, 10 and 11; 44 ft S. and 39 ft W. of crossroads; 1 ft E. and 8 ft S. of fence corner post; in concrete post; a standard tablet stamped "2 WEK 1966"	1344.234
28 9.7	UE 2 A; T. 87 N., R. 39 W.; about 0.1 mi N. of quarter cor. secs. 10, 11; 17.5 ft W. of center of N.-S. road, on top of W. end of corrugated steel culvert; punched hole	1378.73

<u>Line</u>	<u>Cont'd.</u>	<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
1 29	10.3	UE 2 B; T. 87 N., R. 39 W.; near cor. secs. 10, 11, 14 and 15; 17.5 ft N. and 32 ft E. from crossroads, on top of N. end of corrugated steel culvert; punched hole	1424.38
30	10.9	UE 2 C; T. 87 N., R. 39 W.; near quarter cor. secs. 14 and 15; 16 ft E. of center of N.-S. road, on top and near E. end of corrugated steel culvert; punched hole	1333.53
31	11.1	UE 2 D; T. 87 N., R. 39 W.; near cor. secs. 14, 15, 22 and 23; 19.5 ft N. and 28.5 ft E. of T-rd. E., on top of N. end of concrete pipe culvert; chiseled square	1301.90
32	11.7	UE 2 E; T. 87 N., R. 39 W.; near quarter cor. secs. 22 and 23; 8 ft E. of center of bridge over creek, on top of 6 inch plank curb support; copper nail and washer; 0.5 ft higher than center of bridge; 14.9 ft above water level (8/2/66)	1282.84
33	12.3	Reference mark #3 WEK; 46.5 ft NW. of tablet, 18.5 ft S. and 29 ft E. of T-rd. E., on top of S. end of concrete pipe culvert; chiseled square	1372.58
34	12.3	Arthur, 0.5 mi S. and 1.0 mi W. from, 1.0 mi S. and 5.0 mi E. from Ida Grove, T. 87 N., R. 39 W.; near cor. secs. 22, 23, 26 and 27; 64.5 ft S. and 38 ft E. of T-rd. E.; 1.5 ft W. of E. right-of-way fence; 30.5 ft S. of fence corner, 3.5 ft N. of power pole, in a concrete post; standard tablet stamped "3 WEK 1966"	1379.877
35	13.0	UE 3 A; T. 87 N., R. 39 W.; near quarter cor. secs. 26 and 27; 9 ft E. of center of wood bridge over creek; on top and near center of 12 in. x 8 in. wooden curbing of bridge; copper nail and washer (1 ft higher than center of bridge and 14.5 ft above water level of drain)	1328.22
36	13.4	UE 3 B; T. 87 N., R. 39 W.; near cor. secs. 26, 27, 34 and 35; about 350 ft S. of crossroads; 14.5 ft W. of center of N.-S. rd., on top of W. end of corrugated steel culvert; punched hole	1360.46
37	14.0	UE 3 C; T. 87 N., R. 39 W.; about 0.2 mi S. of quarter cor. secs. 34 and 35; 21 ft W. of center of N.-S. road, on top of W. end of concrete pipe culvert; chiseled square	1394.40
38	14.3	UE 3 D; Ts. 86 and 87 N., R. 39 W.; near cor. secs. 2, 3, 34 and 35; 21.5 ft S. and 25.5 ft E. of crossroads, on S. end of corrugated steel culvert; punched hole	1428.52
40	14.9	UE 3 E; T. 86 N., R. 39 W.; about 0.1 mi S. of quarter cor. secs. 2 and 3; 21 ft W. of center of N.-S. road, on W. end of concrete pipe culvert; chiseled square	1435.71
41	15.3	Arthur, 3.5 mi S. and 1.0 mi W.; 4.0 mi S. and 5.0 mi E. of Ida Grove; T. 86 N., R. 39 W.; near cor. secs. 2, 3, 10 and 11; 32 ft N. and 54 ft E. of crossroads; 1 ft S. of N. right-of-way fence; 14.5 ft E. of fence corner post; in a concrete post; standard tablet stamped "4 WEK 1966"	1495.967
42	15.4	Reference mark #4 WEK; 57.5 ft S. and 35 ft W. of tablet, 26.5 ft S. and 19 ft E. of crossroads, on top S. end of corrugated steel culvert; punched hole	1494.58
43	15.9	UE 4 A; T. 86 N., R. 39 W.; near quarter cor. secs. 10 and 11; 53 ft N. and 16 ft W. of road at fence W., on top and center of W. headwall of a double bay box culvert; chiseled square	1420.10

<u>Line 1 Cont'd.</u>	<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
1 44 16.3	UE 4 B; T. 86 N., R. 39 W.; near cor. secs. 10, 11, 14 and 15; 23 ft N. and 20 ft E. of crossroads; on N. end of concrete pipe culvert; chiseled cross	1475.40
45 16.8	UE 4 C; T. 86 N., R. 39 W.; near quarter cor. secs. 14 and 15; 49 ft N. and 33 ft E. of road at fence W.; about 0.1 ft above ground level in W. side of a power pole; rail spike	1506.16
46 17.4	UE 4 D; T. 86 N., R. 39 W.; near cor. secs. 14, 15, 22 and 23; 20.5 ft N. and 24.5 ft E. of crossroads, on top of E. headwall of concrete culvert encompassing a steel pipe culvert; chiseled square	1440.325
<u>DENISON QUAD., 157</u>		
48 17.9	UE 4 E; T. 86 N., R. 39 W.; near quarter cor. secs. 22 and 23; 11 ft N. and 30 ft W. of road at field entrance W.; 1 ft N. and 30 ft W. of road at E.-W. fence line, at ground level in E. side of a telephone pole; rail spike	1460.62
49 18.4	Reference mark #5 WEK; 31 ft NE. of tablet, 33 ft S. and 15 ft W. of crossroads; on top of W. end of corrugated steel culvert; punched hole	1468.77
50 18.4	Kiron, 3.0 mi N. and 1.5 mi W. from; 6.5 mi S. and 1.0 mi W. from Arthur; T. 86 N., R. 39 W.; near corner of secs. 22, 23, 26 and 27; 53 ft S. and 38 ft W. of crossroads, 17.5 ft S. of fence corner, 1 ft S. of W. right-of-way fence, in a concrete post; a standard tablet stamped "5 WEK 1966"	1472.568

LINE 2

EAST ALONG WEST PORTION OF SOUTH BORDER (by W. E. Knouse, 1966; Book CV 2058)

<u>BATTLE CREEK QUAD., 183</u>		
2 68 24.7	UE 11 E; T. 86 N., R. 40 W.; about 0.1 mi W. of quarter cor. secs. 16 and 21; 20 ft N. of center of E.-W. road, on top W. end of N. headwall of concrete box culvert; chiseled square	1342.86
69 25.3	Reference mark # 12 WEK; 76 ft W. of tablet, 59 ft S. and 36 ft W. of crossroads; in NE. side of telephone pole and 0.5 ft above ground; rail spike	1397.03
<u>IDA GROVE QUAD., 182</u>		
70 25.3	Ida Grove, 6.0 mi S. and 1.0 mi W. from, 4.0 mi S. and 5.0 mi E. from Battle Creek; T. 86 N., R. 40 W.; near cor. secs. 15, 16, 21 and 22; 1 ft W. of E. right-of-way fence, 59 ft S. and 40 ft E. of crossroads, in a concrete post; a standard tablet stamped "12 WEK 1966"	1396.755
71 25.8	UE 12 A; T. 86 N., R. 40 W.; about 300 ft W. of quarter cor. secs. 15 and 22; 41 ft E. and 16 ft S. of road at drive S., on top of S. headwall of box culvert; chiseled square	1329.33
72 26.3	UE 12 B; T. 86 N., R. 40 W.; near cor. secs. 14, 15, 22 and 23; 35 ft S. and 62 ft W. of crossroads; on top S. end of a corrugated steel culvert; punched hole	1382.24
73 26.7	UE 12 C; T. 86 N., R. 40 W.; about 0.1 mi W. of quarter cor. secs. 14 and 23; 23 ft N. of center of E.-W. road, on top of N. end of concrete culvert; chiseled square (S. end of culvert is corrugated steel - they are joined under road)	1402.63

6
Ida Grove Quadrangle
182 - Iowa

<u>Line 2 Cont'd.</u>		<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
2	74 27.4	UE 12 D; T. 86 N., R. 40 W.; near cor. secs. 13, 14, 23 and 24; about 100 ft E. of crossroads, 10 ft S. of center of bridge, on top of center of S. rail curbing of bridge; chiseled square	1339.33
	75 28.0	UE 12 E; T. 86 N., R. 40 W.; about 0.15mi E. of quarter cor. secs. 13 and 24, 18 ft N. of center of road, on N. end of corrugated steel culvert; punched hole	1383.14
	76 28.3	Reference mark 13 WEK; 49 ft WSW. of tablet, 36 ft N. and 28 ft E. of crossroads, on E. end of concrete pipe culvert; chiseled square	1419.92
	77 28.3	Ida Grove, 6.0 mi S. and 1.0 mi E.; T. 86 N., Rs. 39 and 40 W.; near cor. secs. 13, 18, 19 and 24; 51 ft N. and 76 ft E. of crossroads; 6 ft E. of fence corner, 1.5 ft S. of N. right-of-way fence, in concrete post, standard tablet stamped "13 WEK 1966"	1427.678
	78 28.9	UE 13 A; T. 86 N., R. 39 W.; about 0.1 mi E. of quarter cor. secs. 18 and 19; 34 ft S. and 18 ft W. of road at drive S., on W. end of concrete pipe culvert; chiseled square	1367.64
	79 29.4	UE 13 B; T. 86 N., R. 39 W.; near cor. secs. 17, 18, 19 and 20; about 300 ft E. of crossroads, 24 ft N. and 8.5 ft E. of road at field entrance N., on top of E. end of concrete pipe culvert; chiseled square	1402.25
	80 29.8	UE 13 C; T. 86 N., R. 39 W.; near quarter corner secs. 17 and 20; 15 ft S. and 25 ft E. of road at fence S., on top of S. end of corrugated steel culvert (end culvert bent); chiseled cross	1406.56
1	59 30.3	UE 13 D; T. 86 N., R. 39 W.; near cor. secs. 16, 17, 20 and 21; 15 ft S. and 33 ft E. of crossroads, on S. end of corrugated steel culvert; chiseled cross	1434.75
	60 30.8	UE 13 E; T. 86 N., R. 39 W.; near quarter cor. secs. 16 and 21; 154 ft N. and 111 ft W. of rd. at fence N., on N. end of a corrugated steel culvert; chiseled cross	1462.40
	61 31.3	Reference mark 14 WEK; 75 ft WSW. of tablet, 15 ft N. and 29 ft W. of crossroads, on top of N. end of a corrugated steel culvert; chiseled cross	1387.67
	62 31.3	Ida Grove, 6.0 mi S. and 4.0 mi E. from; 4.0 mi N. and 3.0 mi W. from Kiron, T. 86 N., R. 39 W.; near cor. secs. 15, 16, 21 and 22; 32.5 ft N. and 45.5 ft E. of crossroads; 12.5 ft E. of fence corner post, 1 ft S. of N. right-of-way fence, in a concrete post; a standard tablet stamped "14 WEK 1966"	1387.087
	63 32.0	UE 14 A; T. 86 N., R. 39 W.; about 0.3 mi W. of corner secs. 14, 15, 22 and 23; 18 ft N. of center of E.-W. road, on top of N. end of concrete pipe culvert; chiseled square	1426.47
	64 32.3	"UE 4 D" (previously described in line 1)	1440.32

LINE 3

GENERALLY SOUTH ALONG WEST BORDER OF QUADRANGLE (by W. E. Knouse, 1966; Book CV 2058)

IDA GROVE QUAD., 182

3	2 0.0	Galva, 4.3 mi SW. along the Chicago and North Western Railway from, Ida County, 150 yards SE. of the E. end of bridge 1528, at the crossing of the road along the E. line of sec. 32, T. 89 N., R. 39 W.; 46.8 ft NE. of the center of the track, 36 ft W. of the center of the road, and 6.3 ft S. of a power transmission line pole. Standard USC&GS disk stamped "1283.252 B 14 1933" and set in the top of a concrete post	1283.252
---	-------	--	----------

<u>Line 3 Cont'd.</u>	<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
3 2 0.7	UE B 14 A; Ts. 88 and 89 N., Rs. 39 and 40 W. (two ranges due to offset because of correction line); near cor. of secs. 32 and 33, and quarter corner of sec. 2; 44 ft S. and 30 ft E. of crossroads (U. S. Hwy. 20 with gravel road), on top of E. end of a cutaway end concrete culvert; chiseled square	1327.76
3 1.2	UE B 14 B; Ts. 88 and 89 N., Rs. 39 and 40 W. (two ranges due to offset because of correction line), near cor. secs. 2 and 3 and quarter cor. sec. 32; 50.5 ft S. and 32 ft W. of T-rd. S., on top of W. end of cutaway end concrete culvert; chiseled cross	1368.52
4 1.6	UE B 14 C; Ts. 88 and 89 N., Rs. 39 and 40 W. (correction line - - 2 ranges - ranges staggered); near cor. secs. 31 and 32, and quarter cor. of sec. 3, 73 ft S. and 37 ft E. of T-rd. N., 3 ft NE. of a power pole, on top of a small square highway marker and about 1 inch above top of marker; reinforcement rod top (set vertically in post)	1401.72
5 2.2	UE B 14 D; Ts. 88 and 89 N., Rs. 39 and 40 W. (correction line); near cor. secs. 3 and 4, and quarter cor. sec. 31; 47 ft S. and 27 ft W. of T-rd. S., on top and center of W. headwall of concrete box culvert; Iowa Highway Commission Plug.	1379.64
6 3.0	UE B 14 E; T. 88 N., R. 40 W.; about 0.25 mi S. of quarter cor. secs 3 and 4; 94 ft N. and 15.5 ft W. of road at drive W., on top of W. headwall of concrete culvert; chiseled square	1342.88
7 3.4	Galva, 3.0 mi W. and 3.5 mi S. from; 7.0 mi N. and 1.0 mi W. from Ida Grove, T. 88 N., R. 40 W.; near cor. secs. 3, 4, 9 and 10; 30 ft N. and 55 ft W. of crossroads; 1 ft S. of N. right-of-way fence, in concrete post; standard tablet stamped "15 WEK 1966"	1410.757
8 3.4	Reference mark; 61.5 ft SSE. of tablet, 31.5 ft S. and 48 ft W. of crossroads, on top of an 18 inch stump of a tree, copper nail and washer	1413.19
9 4.0	UE 15 A; T. 88 N., R. 40 W.; near quarter cor. secs. 9 and 10; 148 ft S. and 14 ft W. of road at E.-W. fence, on top and center of W. concrete headwall of culvert; chiseled square	1343.57
10 4.5	UE 15 B; T. 88 N., R. 40 W.; about 350 ft S. of cor. secs. 9, 10, 15 and 16; 18 ft W. of center of N.-S. rd., on top of W. end of concrete pipe culvert; chiseled square	1399.88
11 5.1	UE 15 C; T. 88 N., R. 40 W.; near quarter corner secs. 15 and 16; 5 ft S. and 28 ft E. of road at fence E., on top of N. end of corrugated steel culvert; chiseled cross.	1410.85
12 5.4	UE 15 D; T. 88 N., R. 40 W.; near cor. secs. 15, 16, 21 and 22; 24.5 ft N. and 18.5 ft E. of crossroads, on top of E. end of corrugated steel culvert; chiseled cross	1349.91
13 6.0	UE 15 E; T. 88 N., R. 40 W.; near quarter cor. secs. 21 and 22; about 200 ft S. of road at E.-W. fence, 18 ft W. of center of road, on top of W. end of concrete pipe culvert; chiseled square	1371.49
14 6.5	Galva, 6.0 mi S. and 3.5 mi W. from; 4.0 mi N. and 1.0 mi W. from Ida Grove, T. 88 N., R. 40 W.; near cor. secs. 21, 22, 27 and 28; 67 ft S. and 35 ft E. of crossroads, 1 ft W. of E. right-of-way fence; in concrete post; standard tablet stamped "16 WEK 1966"	1416.611

Ida Grove Quadrangle
182 - Iowa

<u>Line 3 Cont'd.</u>		<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
3 15 6.5	Reference mark, 28 ft S. of tablet, 95 ft S. and 36 ft E. of crossroads; in W. side of a power pole; rail spike		1420.68
16 6.9	UE 16 A; T. 88 N., R. 40 W.; near quarter cor. secs. 27 and 28; 19 ft W. of center of road, on N. end of W. headwall of a catch basin culvert; chiseled square		1342.81
17 7.4	UE 16 B; T. 88 N., R. 40 W.; near cor. secs. 27, 28, 33 and 34; 135 ft N. and 25 ft E. of crossroads, 18 ft S. and 25 ft E. of drive to electric power station, on top of S. end of concrete pipe culvert; chiseled square		1327.23
18 7.9	UE 16 C; T. 88 N., R. 40 W.; near quarter cor. secs. 33 and 34; about 300 ft N. of road at E.-W. fence, 17 ft W. of center of road, on top of W. end of corrugated steel culvert; chiseled cross		1333.22
19 8.4	UE 16 D; Ts. 87 and 88 N., R. 40 W.; near cor. secs. 33, 34, 3 and 4; 18.5 ft N. and 24 ft W. of T-rd. W., on top of N. end of corrugated steel culvert; chiseled cross		1421.26
20 9.0	UE 16 E; T. 87 N., R. 40 W.; near quarter cor. secs. 3 and 4; 6 ft S. and 13.5 ft E. of road at E.-W. fence, on top of E. headwall of concrete box culvert; chiseled square		1354.26
21 9.7	Reference mark; 43 ft NW. of tablet, 44 ft NE. of center of road, in SW. side of telephone pole; rail spike		1427.56
22 9.7	Ida Grove, 1.0 mi N. and 0.5 mi W. from; T. 87 N., R. 40 W.; in NW $\frac{1}{4}$ sec. 10, about 400 ft SE. along right-of-way fence from T-fence E., 1.5 ft W. of E. right-of-way fence, 46.5 ft NE. of center of road, in a concrete post; standard tablet stamped "17 WEK 1966"		1427.244
23 10.1	UE 17 A; T. 87 N., R. 40 W.; near center sec. 10, 21 ft N. of center of drive to electric power station, 46 ft E. of center of county road, on top N. end of a concrete pipe culvert; chiseled square		1349.43
24 10.7	UE 17 B; T. 87 N., R. 40 W.; in N. central portion of sec. 15, 24 ft NW. of center of road, 25 ft NE. of field drive SE., on top of NW. end of concrete culvert; chiseled square		1279.87
25 11.0	UE 17 C; T. 87 N., R. 40 W.; in NW $\frac{1}{4}$ sec. 15, (jct. of gravel rd. N. and State Hwy. 175 and U. S. Hwy. 59), 69 ft N. and 31 ft E. of T-rd. N.; on E. end of concrete pipe culvert; chiseled square		1241.96
26 11.4	UE 17 D; T. 87 N., R. 40 W.; in E. central portion of sec. 15; about 300 ft SE. of Hwy. 59 at T-rd. SE. (at NW. edge Ida Grove), on top of the N. end of the W. concrete rail at bridge; chiseled cross (br. over Maple River)		1224.53
27 11.4	UE 8740-15 NE (2) Maple; 35 ft S. of UE 17 D, on same bridge rail - chiseled square. Water Resource Description: About 200 yards downstream from Hwy. 175 and 59; bridge over Maple River at Ida Grove. At a street bridge, chiseled square on the downstream guard rail, 25 ft streamward from the right downstream end of the bridge. Water resource elevation 1964 1223.50 Elevation by USGS		1223.81
28 12.1	Reference mark, station 20; 60 ft E. of tablet, 26 ft N. and 23 ft E. of cross roads, in concrete post; brass cap with cross on top		1234.76

<u>Line 3 Cont'd.</u>	<u>IDA GROVE QUAD., 182</u>	<u>Feet</u>
3 29 12.1	At Ida Grove, T. 87 N., R. 40 W.; near cor. secs. 14, 15, 22 and 23, at junction of old Hwy. 59 and 5th St. (SW. portion of town), 30 ft N. and 37 ft W. of crossroads, in a concrete post; US&GS and state mark stamped "Station 20" Elevation by USGS	1235.924
30 12.6	UE Station 20 A, T. 87 N., R. 40 W.; near quarter cor. secs. 22 and 23, 72 ft S. and 30 ft W. of road at fence W., on N. end of concrete pipe culvert (under field entrance W.); chiseled square	1265.89
31 13.1	UE Station 20 B, T. 87 N., R. 40 W.; near cor. secs. 22, 23, 26 and 27, at T-rd. W., about 3 inches W. of center of N.-S. road; chiseled square	1373.71
32 13.6	UE Station 20 C, T. 87 N., R. 40 W.; near quarter cor. secs. 26 and 27; 87 ft N. and 25 ft E. of road at E.-W. fence, on top of E. end of corrugated steel culvert; chiseled cross	1337.41
33 14.1	UE Station 20 D; T. 87 N., R. 40 W.; near cor. secs. 26, 27, 34 and 35; 29 ft N. and 22 ft E. of crossroads, on top of E. end of corrugated steel culvert; chiseled cross	1335.89
34 14.6	UE Station 20 E; T. 87 N., R. 40 W.; about 0.2 mi S. quarter cor. secs. 27 and 34; 30 ft N. and 7 ft W. of road at field entrance N., 30 ft N. and 144 ft E. of road at N.-S. fence and also N.-S. power line, on top of W. end of corrugated steel culvert; chiseled square	1341.64
35 15.1	Reference mark; about 94 ft NNE. of tablet, 32 ft N. and 30 ft W. of crossroads; in S. side of telephone pole, rail spike	1351.41
36 15.1	Ida Grove, 2.0 mi S. and 1.0 mi W. from; T. 87 N., R. 40 W.; near cor. secs. 27, 28, 33 and 34; 61 ft S. and 36 ft W. of crossroads; 20 ft S. of fence corner post; 1.5 ft E. of W. right-of-way fence, in concrete post; standard tablet stamped "18 WEK 1966"	1349.789
37 15.6	UE 18 A; T. 87 N., R. 40 W.; near quarter cor. secs. 33 and 34, 146 ft S. and 17 ft W. of road at fence E., on top of W. end of corrugated steel culvert; chiseled cross	1385.80
38 16.1	UE 18 B; Ts. 86 and 87 N., R. 40 W.; near cor. secs. 33, 34, 3 and 4; 187 ft S. and 24 ft W. of crossroads, on top and center of W. headwall of concrete box culvert; chiseled square	1400.27
40 16.6	UE 18 C; T. 86 N., R. 40 W.; near quarter cor. secs. 3 and 4; 105 ft S. and 14 ft E. of road at fence E.; on E. end of corrugated steel culvert; chiseled cross	1435.22
41 17.1	Reference mark; about 58 ft NNW. of tablet, 17 ft S. and 28 ft W. of crossroads, on S. end of corrugated steel culvert; chiseled cross	1452.72
42 17.1	Ida Grove, 4.0 mi S. and 1.0 mi W. from; T. 86 N., R. 40 W.; near cor. secs. 3, 4, 9 and 10; 74.5 ft S. and 35 ft W. of crossroads; 33 ft S. of fence corner, 24 ft S. and 35 ft W. of road at field entrance W., in a concrete post; standard tablet stamped "19 WEK 1966"	1454.349
43 17.8	UE 19 A; T. 86 N., R. 40 W.; near quarter cor. secs. 9 and 10; 10 ft N. and 18 ft W. of road at field entrance W.; 21 ft N. and 18 ft W. of road at fence W. on top of N. end of corrugated steel culvert; chiseled cross	1474.49
44 18.1	UE 19 B; T. 86 N., R. 40 W.; near cor. secs. 9, 10, 15 and 16; 17 ft N. and 28 ft E. of corrugated steel culvert; chiseled cross	1445.46

10
Ida Grove Quadrangle
182 - Iowa

Line 3 Cont'd.

IDA GROVE QUAD., 182

Feet

3	45	18.6	UE 19 C; T. 86 N., R. 40 W.; near quarter cor. secs. 15 and 16; 87 ft S. and 14 ft W. of road at fence W., on top of W. end of corrugated steel culvert; chiseled square	1387.96
46	19.1		"BM 12 WEX" (previously described in line 2)	1396.755