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RESULTS OF TRIANGULATION AND
PRIMARY TRAVERSE IN OHIO

1898 TO 1911, INCLUSIVE.

R. B. MARSHALL, CHIEF GEOGRAPHER

Work from 1900 to 1911, inclusive, done in cooperation
with the State



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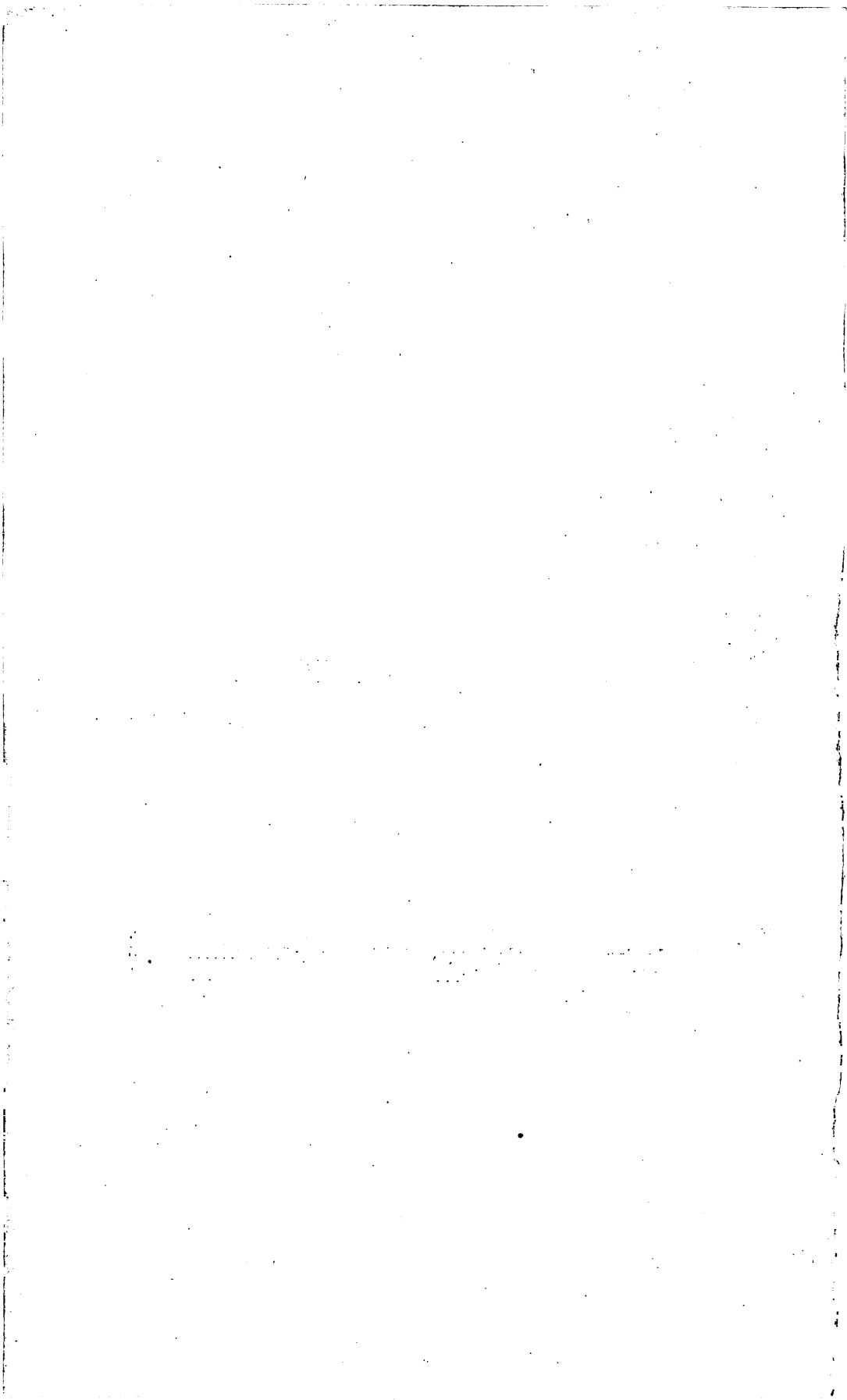


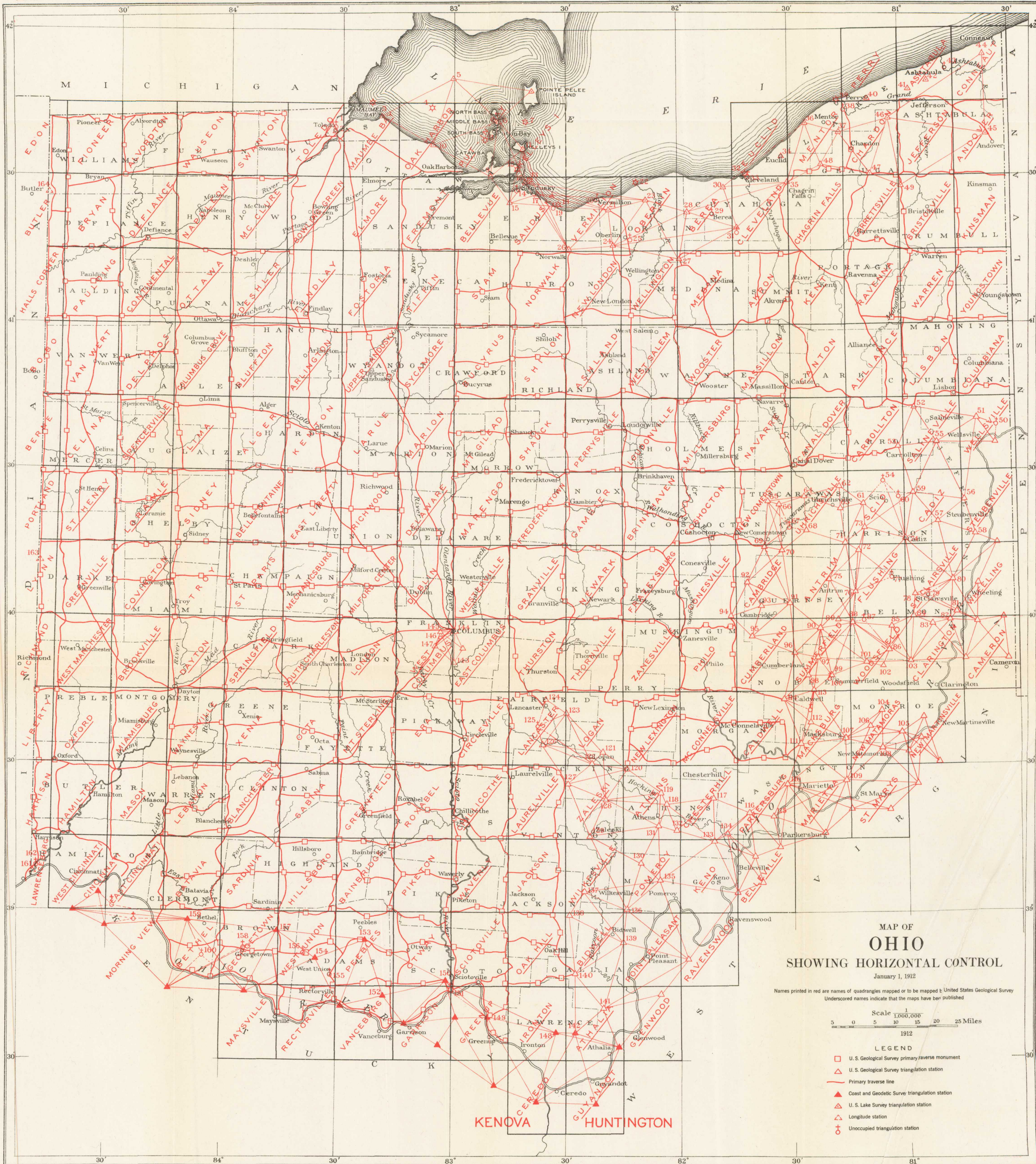
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4. West Sister Island lighthouse
5. Middle Sister Island
6. Middle Bass Island
7. Green Island lighthouse
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13. Cedar Point lighthouse
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15. Sandusky
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39. Cleveland, Almshouse Case
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41. Warrensville
42. Willowby
43. Little Mountain
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59. Carrollton
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63. Hopeville
64. New Alexandria
65. Jefferson
66. Runley
67. Bowerston
68. Baldwin
69. Urichville
70. Wainwright
71. Warden
72. Port Washington
73. Gilmore
74. Widder
75. Booth
76. Tippecanoe
77. Prospect Hill
78. Deersville
79. Cadiz, courthouse
80. McBride
81. Sewellsville
82. Flushing
83. Marks Hill
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85. Mount Pleasant
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88. Gallaway
89. Bryan
90. Newcastle
91. Barnesville, school
92. Steele
93. Hall's Knob
94. Wareham
95. Midway
96. Kennedy
97. College
98. Sago
99. Saylesville
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106. Wiedman
107. Jerusalem, schoolhouse
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110. High Knob
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112. Laws
113. Glass
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161. Peach Mount
162. Cove Hill
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165. West Union, courthouse
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168. Georgetown, courthouse
169. Tate
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171. Boundary post near Eliza
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173. City, Indiana
174. Boundary post near Union
175. Boundary post near Butler, Indiana

RESULTS OF TRIANGULATION AND PRIMARY TRAVERSE IN OHIO, 1898 TO 1911, INCLUSIVE.

R. B. MARSHALL, Chief Geographer.

INTRODUCTION.

Cooperation.—The State of Ohio contributed financially to the work in the State during the years 1900 to 1911, inclusive, and was represented by C. N. Brown, inspector, in 1901–2, and by C. E. Sherman, inspector, from 1902 to 1911.

Previous publication.—All results of triangulation and primary traverse in Ohio published in the appendix to the Twenty-first Annual Report of the Director of the United States Geological Survey, in Bulletins 181, 201, 216, 245, 276, 310, 440, and 496, as well as results of primary traverse not previously published, have, when not at first so computed, been corrected to United States standard datum, rearranged by quadrangles, and assembled in this one volume.

Field work.—The field work of primary control, the computed results of which are given in the following pages, was carried on in 1898 by S. S. Gannett, under H. M. Wilson, geographer; in 1899 and 1900 by G. T. Hawkins, under J. H. Renshaw, geographer; in 1900 by W. T. Griswold and E. L. McNair, under H. M. Wilson; in 1901 by A. H. Thompson, under H. M. Wilson, and by Sledge Tatum, G. T. Hawkins, and J. R. Ellis, under J. H. Renshaw; in 1902 by S. S. Gannett and J. R. Ellis, under J. H. Renshaw; in 1903 by S. S. Gannett and C. B. Kendall, under H. M. Wilson, and by G. T. Hawkins and J. R. Ellis, under J. H. Renshaw; in 1904 by J. R. Ellis and C. B. Kendall, under H. M. Wilson; in 1905 and 1906 by J. R. Ellis, under H. M. Wilson; in 1907 by C. B. Kendall, under Frank Sutton; in 1908, 1909, 1910, and 1911 by J. R. Ellis, under W. H. Herron; R. B. Marshall, chief geographer.

Computation.—The office computation of work done from 1898 to 1907, inclusive, was under the supervision of S. S. Gannett, geographer, and since 1907 under E. M. Douglas, geographer. The results were computed by the chiefs of field parties specified above, as well as by several members of the topographic branch detailed from time to

time to this work. The data were compiled for publication by S. S. Gannett, geographer.

Description of work.—Horizontal control in Ohio consists of (1) the triangulation of the United States Lake Survey carried on in 1876 to 1879, inclusive, in the northern part of the State near the south shore of Lake Erie; (2) the transcontinental triangulation of the Coast and Geodetic Survey extended along the thirty-ninth parallel in 1885, 1886, and 1887, in the southern part of the State; (3) the triangulation of the United States Geological Survey in the central part of the State in 1898 and in the southeastern part in 1900 to 1903, inclusive; (4) primary traverse lines run by the United States Geological Survey from 1899 to 1911, inclusive.

The positions of five triangulation stations near Columbus were determined by S. S. Gannett in 1898 and were originally based on the Coast and Geodetic Survey astronomic station near the state-house. In 1900 a line of primary traverse was run by G. T. Hawkins along the Baltimore & Ohio Southwestern Railroad from Cincinnati to Columbus and two lines along railroads about 15 miles apart from Columbus to Toledo. This traverse was connected in the southern part of the State with Coast and Geodetic Survey transcontinental triangulation, and in the northern part with the lake survey triangulation, and at Columbus with the Geological Survey triangulation above mentioned. It has served as a main control line or base from which other traverse lines have since been extended around the borders of all and through the center of many quadrangles not controlled by triangulation, so that now all the quadrangles in the State (212 in number) are controlled either by triangulation or primary traverse.

Datum.—The positions of all triangulation and traverse stations included in this publication have been computed on or reduced to United States (North American) standard datum.

Station marks.—Permanent marks are placed at all occupied triangulation stations of the Geological Survey and at certain of the primary traverse stations from 3 to 8 miles apart. These marks are of the two forms adopted for leveling bench marks, and the elevations as well as the latitudes and longitudes of many of them have been determined. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. II), $3\frac{1}{2}$ inches in diameter and $\frac{1}{4}$ inch thick, having a 3-inch stem which is cemented in a drill hole in solid rock, or in the wall of some public building, bridge abutment, or other substantial masonry structure. The second form (*F*, Pl. II), set in the ground where no masonry or rock is available, consists of a hollow wrought-iron post $3\frac{1}{2}$ inches in outside diameter and 4 feet long. The bottom is spread out to a width of 10 inches in order to give a firm bearing in the earth. A bronze or aluminum-bronze cap is riveted over the



GEOLOGICAL SURVEY STATION MARKS.

- A, Tablet used in cooperating States. The State name is inserted at G.
 B and D, Copper temporary bench mark, consisting of a nail and copper washer.
 A, C, and E, Tablets for stone or concrete structures.
 F, Iron post used where there is no rock.

top of the post. The tablets as well as the caps on the iron posts are appropriately lettered, and where States have cooperated in the work the fact of such cooperation is indicated by the addition of the State name (*G*, Pl. II).

Topographic maps.—Maps of the following quadrangles, wholly or partly in Ohio, have been published by the United States Geological Survey prior to May 1, 1914. They may be obtained for 10 cents each or \$3 for 50, except as noted, on application to the Director of the Survey, at Washington, D. C.:

Akron.	Defiance.
Alliance.	Delaware.
Alvordton (Ohio-Mich.).	Deshler.
Andover (Ohio-Pa.).	Dublin.
Antrim.	East Cincinnati (Ohio-Ky.). ³
Arlington.	East Columbus.
Ashland.	Elmore.
Ashtabula.	Era.
Athalia (Ohio-W. Va.).	Euclid. ¹
Athens.	Findlay.
Belleville (W. Va.-Ohio).	Flushing.
Bellevue.	Fostoria.
Berea. ¹	Frazeysburg.
Bidwell.	Fremont.
Blanchester.	Garrettsville.
Bluffton.	Glenwood (W. Va.-Ohio).
Bowling Green.	Granville.
Bristolville. ²	Greenville.
Brookville.	Guyandot (W. Va.-Ohio). ⁴
Bryan.	Hamilton.
Cadiz.	Huntington (W. Va.-Ohio-Ky.). ⁴
Cambridge.	Ironton (Ohio-Ky.).
Cameron (W. Va.-Ohio-Pa.).	Jackson.
Canton.	Jefferson. ²
Celina.	Keno (Ohio-W. Va.).
Chagrin Falls.	Kenova (Ky.-W. Va.-Ohio).
Chardon.	Kent.
Chesterhill. ²	Kinsman (Ohio-Pa.).
Chillicothe.	Lancaster.
Cincinnati (Ohio-Ky.) double sheet. (20 cents.) ³	Lima.
Clarington (Ohio-W. Va.).	Lisbon.
Cleveland. ¹	Logan.
Cleveland and vicinity. ¹	London.
Columbiana (Ohio-Pa.).	McClure.
Columbus Grove.	McConnellsville.
Conesville.	Macksburg.
Conneaut (Ohio-Pa.).	Marietta (Ohio-W. Va.).
Continental.	Marion.
Dayton. ²	Mason.
	Massillon.

¹ Cleveland and vicinity map includes parts of Cleveland, Euclid, and Berea sheets.

² Shows wooded areas.

³ Cincinnati double sheet includes East Cincinnati and West Cincinnati sheets.

⁴ Guyandot sheet shows part of Huntington quadrangle on larger scale.

Maumee Bay (Ohio-Mich.).	Scio.
Medina.	Sciotoville (Ohio-Ky.).
Mentor.	Sidney.
Miamisburg.	South Charleston.
Mount Sterling.	Springfield.
Napoleon.	Steubenville (Ohio-W. Va.-Pa.).
Navarre.	Sycamore.
Newark.	Thornville.
New Comerstown.	Thurston.
New Lexington.	Tiffin.
New London.	Toledo (Ohio-Mich.).
New Martinsville (W. Va.-Ohio).	Upper Sandusky.
New Matamoras (Ohio-W. Va.).	Vermilion.
Oak Harbor	Warren.
Oberlin.	Wauseon (Ohio-Mich.).
Ottawa.	Waverly.
Oxford.	Wellington.
Parkersburg (Ohio-W. Va.).	Wellsville (Ohio-W. Va.-Pa.).
Perry.	West Cincinnati (Ohio-Ky.). ²
Philo.	West Columbus.
Pioneer.	Westerville.
Point Pleasant (W. Va.-Ohio).	West Manchester.
Pomeroy (Ohio-W. Va.).	West Salem.
Put-in-Bay.	Wheeling (W. Va.-Ohio-Pa.).
Ravenna.	Wilkesville.
Ravenswood (W. Va.-Ohio).	Woodsfield.
St. Clairsville.	Wooster.
St. Henry.	Youngstown (Ohio-Pa.).
St. Marys (W. Va.-Ohio). ¹	Zaleski. ¹
Salineville.	Zanesville.
Sandusky.	

PRIMARY TRAVERSE.

Akron, Alger, Alliance, Alvordton, Andover, Arlington, Ashland, Ashtabula, Athens, Bainbridge, Batavia, Bellevue, Bellefontaine, Berne, Bethel, Bidwell, Blanchester, Bluffton, Bobo, Bowling Green, Brinkhaven, Bristolville, Brookville, Bryan, Bucyrus, Butler, Caldwell, Cambridge, Canal Dover, Canton, Carrollton, Celina, Chagrin Falls, Chardon, Chillicothe, Circleville, Cleveland, Columbiana, Columbus Grove, Conesville, Conneaut, Continental, Coshocton, Covington, Crestline, Cumberland, Dayton, Defiance, Delaware, Delphos, Deshler, Dublin, East Cincinnati, East Liberty, Edon, Elmore, Era, Findlay, Fostoria, Fazeysburg, Fredericktown, Fremont, Gambier, Garrettsville, Garrison, Georgetown, Granville, Greenfield, Greenup, Greenville, Halls Corners, Hamilton, Harrison, Hillsboro, Jackson, Jefferson, Kent, Kenton, Kinsman, Lancaster, Larue, Laurelville, Lawrenceburg, Lebanon, Liberty, Lima, Lisbon, Logan, London, Loramie, Loudonville, Lynn, McClure, McConnellsville, Marengo, Marion, Mason, Massillon, Maumee Bay, Maysville, Mechanicsburg, Medina, Mentor, Miamisburg, Milford Center, Millersburg, Morning View, Mount Gilead, Mount Sterling, Napoleon, Navarre, Newark, New Comerstown, New Lexington, New London, Norwalk, Oak Harbor, Oakhill, Oberlin, Octa, Ottawa, Otway, Oxford, Paulding, Peebles, Perrysville, Philo, Piketon, Pioneer, Portland, Put-in-Bay, Ravenna, Rectorville, Richmond, Richwood, Roxabel, Sabina, St. Henry, St. Paris, Salineville, Sandusky, Sardinia, Sciotoville, Shauck, Siam, Sidney,

¹ Shows wooded areas.

² Cincinnati double sheet includes East Cincinnati and West Cincinnati sheets.

South Charleston, Spencerville, Springfield, Swanton, Sycamore, Thornville, Thurston, Tiffin, Toledo, Troy, Upper Sandusky, Vanceburg, Van Wert, Vermillion, Warren, Wauseon, Waverly, Waynesville, Wellington, West Cincinnati, West Columbus, Westerville, West Manchester, West Salem, West Union, Wooster, Xenia, Youngstown, Zaleski, and Zanesville quadrangles.

ADAMS, ALLEN, ASHLAND, ASHTABULA, AUGLAIZE, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, HAMILTON, HANCOCK, HARDIN, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MERCER, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE; PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WAYNE, WILLIAMS, WOOD, AND WYANDOT COUNTIES.

The following geographic positions were determined by G. T. Hawkins in 1899, 1900, 1901, and 1903; by E. L. McNair in 1900; by C. B. Kendall in 1903, 1904, and 1907; by Sledge Tatum in 1901; and by J. R. Ellis in 1901, 1902, 1903, 1904, 1905, 1906, 1908, 1909, 1910, and 1911.

AKRON QUADRANGLE.

Along highways north-south through center of quadrangle.

Stations.	Latitude.	Longitude.
Barberton, at right side of main entrance stairway to Barberton Inn, in face of support to veranda; aluminum tablet stamped "Prim. Trav. Sta. No. 50. 981 Cleveland".....	41 00 47.0	81 36 39.7
Barberton, Erie R. R. station.....	41 01 13.2	81 36 36.5
Barberton, 1½ miles west of; road crossing on Erie R. R.....	41 01 08.6	81 38 19.3
Loyal Oak, crossroads at; 46 feet northeast to guidepost, 47 feet southeast to northwest corner of porch to hotel.....	41 03 01.6	81 38 16.9
Norton-Copley township line, T road west, 13 feet southwest to south end of culvert, 33 feet northwest to apple tree at corner of fence.....	41 03 43.9	81 38 16.5
Miksch's mills, forks of road north of, 30 feet east to corner of yard fence, 60 feet south to guidepost.....	41 04 28.0	81 38 21.4
Copley, in southwest corner of Disciples Church; aluminum tablet stamped "Prim. Trav. Sta. No. 51. 1049 Cleveland" (elevation 1,049.163).....	41 05 58.5	81 38 39.5
Montrose, crossroads at Copley-Bath township line, 39 feet southeast to cross on telegraph pole, 45 feet northwest to F. Collins's mail box.....	41 08 08.9	81 38 15.2
Ghent, T road west, 24 feet southeast to northwest corner of water trough, 41 feet southwest to northeast corner of porch to store.....	41 09 29.6	81 38 14.0
Bath High School, crossroads at, 28 feet southeast to cross on telegraph pole, 43 feet southwest to cherry tree at corner of fence.....	41 10 08.4	81 38 13.4
Hammonds Corners, crossroads at, 45 feet to northeast corner of porch to Bath Hotel, 39 feet northwest to guidepost.....	41 11 20.4	81 38 12.0
Bath and Richfield townships, crossroads at, 90 feet east to Wm. Miller's mail box, 48 feet southeast to signboard on tree.....	41 12 08.4	81 38 17.8
Richfield Center, 1½ miles south of; forks of road, 24 feet west to Park Lee's mail box, 46 feet southeast to guidepost.....	41 13 07.0	81 38 18.0

Along Erie R. R. from Akron to Wadsworth.

Akron, Union Station.....	41 04 58.7	81 30 33.8
Akron, courthouse grounds, south meridian mark.....	41 04 44.3	81 31 04.0
Akron, courthouse grounds, north meridian mark.....	41 04 47.8	81 31 04.0
Akron, 2½ miles west of Erie R. R. station; old canal crossing.....	41 02 46.1	81 32 34.7
Milepost 18, 2,200 feet southwest of; road crossing on Baltimore & Ohio R. R.....	41 01 56.4	81 34 51.1
Barberton station.....	41 01 13.2	81 36 35.5
Sherman station.....	41 00 50.4	81 40 04.0
Wadsworth station.....	41 01 02.7	81 43 45.6

AKRON QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Hinckley, four corners, 400 feet west of, in north end of west abutment of iron bridge; bronze tablet stamped "Prim. Trav. Sta. No. 87".....	41 14 18.4	81 44 47.6
Three corners road to south, 45 feet west of bridge.....	41 14 22.2	81 43 43.1
Four corners, 20 feet south to signpost painted "Hinckley, 2 miles; Richfield, 3 miles; Ragatton, 5 miles; Granger, 5 miles".....	41 14 22.8	81 42 10.6
West Richfield, in south wall at southeast corner of stone foundation to the Carter House; aluminum tablet stamped "Prim. Trav. Sta. No. 106 A." Elevation "1,279 Cleveland".....	41 14 24.0	81 39 20.1
Richfield, four corners at, 50 feet northeast to cedar tree painted 1148, 35 feet south-east to corner of store.....	41 14 23.4	81 38 17.3
Furnace Run, east end of bridge, 5 feet north of T. B. M., a chiseled cross and square painted "T. B. M. 913".....	41 14 25.4	81 36.51.2
Three corners, road to south at fork to left, 60 feet northwest to telegraph pole, 40 feet southwest to large rock.....	41 14 44.1	81 35 27.1
Peninsular, four corners at, 8 feet south to Soldiers' Monument.....	41 14 29.3	81 33 19.2
Peninsular, at northwest corner of town hall, in north wall; aluminum tablet, stamped "Prim. Trav. Sta. No. 138 A." elevation 711 Cleveland.....	41 14 27.8	81 32 53.4
Three corners, second-class road to south, 25 feet southeast to mail box, 35 feet southwest to corner fence post.....	41 14 07.9	81 31 39.4

ALGER QUADRANGLE.

Along Erie R. R. in north part of quadrangle.

Stations.	Latitude.	Longitude.
T. 4 S., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12.....	40 42 59.7	83 59 38.7
Westminster station.....	40 42 57.2	83 59 35.3
Harrod station.....	40 42 33.9	83 55 15.9
Alger station.....	40 42 19.1	83 50 37.6
T. 4 S., R. 9 E., corner of secs. 8, 7, 16, and 17.....	40 42 14.1	83 50 31.5
McGuffey station.....	40 41 40.1	83 47 05.3

Along highways near west border of quadrangle.

Santa Fe, crossroads at.....	40 29 28.4	83 59 37.7
Santa Fe, 1½ miles north of; T road west.....	40 30 43.8	83 59 37.8
T. 6 S., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18.....	40 31 40.3	83 59 37.9
T. 6 S., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12.....	40 32 32.7	83 59 37.8
Tps. 5 and 6 S., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36.....	40 33 25.2	83 59 37.7
T. 5 S., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36.....	40 34 17.4	83 59 37.8
T. 5 S., Rs. 7 and 8 E., corner of secs. 19, 24, 25, and 30.....	40 35 09.8	83 59 37.9
T. 5 S., Rs. 7 and 8 E., corner of secs. 13, 18, 19, and 24.....	40 36 02.1	83 59 38.0
T. 5 S., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18.....	40 36 54.3	83 59 38.2
T. 5 S., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12.....	40 37 46.6	83 59 38.4
Tps. 4 and 5 S., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36.....	40 38 38.7	83 59 38.5
Tps. 4 and 5 S., R. 8 E., corner of secs. 5, 6, 31, and 32.....	40 38 39.1	83 58 31.7
T. 4 S., R. 8 E., corner of secs. 29, 30, 31, and 32.....	40 39 31.4	83 58 32.2
T. 4 S., R. 8 E., corner of secs. 19, 20, 29, and 30.....	40 40 23.6	83 58 32.6
Westminster, T road east at.....	40 41 35.9	83 58 47.4
Westminster, 1 mile northwest of; T road north.....	40 42 05.8	83 59 38.6
Westminster station, azimuth of railroad 276° 41'.....	40 42 57.2	83 59 35.3
Westminster station, T. 4 S., R. 7 E., southeast corner of sec. 1, in southeast corner of field of Joseph Craig, northwest corner of his residence bears S. 88° E., distant 62.3 feet, south rail of Erie R. R. at road crossing bears S. 6° E., distant 243.2 feet, in top of a limestone post 30 by 8 by 8 inches set 26 inches in ground; aluminum tablet stamped "Prim. Trav. Sta. No. 1".....	40 42 59.9	83 59 38.9
Tps. 3 and 4 S., Rs. 7 and 8 E., secs. 1, 6, 31, and 36, at crossroads, 35 feet southeast to cross cut on corner fence post, 34 feet northeast to cross cut on corner fence post.....	40 43 52.0	83 59 38.8
T. 3 S., R. 8 E., corner of secs. 30 and 31 (west corner), at T road east; corner stone.....	40 44 44.5	83 59 38.8

ALGER QUADRANGLE—Continued.

North along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Harmony United Brethren Church, about 0.7 mile south of; T road east.....	40 33 13.8	83 45 05.9	.....
Harmony United Brethren Church, about 0.5 mile north of; T road west.....	40 34 13.4	83 45 15.5	6,080
White schoolhouse No. 5, 1 mile south of; T road east.....	40 34 52.4	83 45 21.7	3,970
White schoolhouse No. 5, crossroads at.....	40 35 41.8	83 45 29.7	5,040

East along highways near south border of quadrangle.

T. 6 S., R. 8 E., corner of secs. 14, 15, 22, and 23.....	40 30 48.5	83 55 03.2	.....
Crossroads at cemetery.....	40 30 53.4	83 55 03.2	500
T road north.....	40 31 12.2	83 53 25.0	7,820
Captain Dunlap's residence, on south side of T road north, 25 feet north and 15 feet east to center of T road; iron post stamped "Prim. Trav. Sta. No. 91, Ohio, 1910".....	40 31 31.0	83 51 31.9	8,942
Logan-Hardin county-line monument on north side of road.....	40 31 46.7	83 50 38.1	4,453
T road west.....	40 31 09.1	83 49 35.6	6,146
Elder schoolhouse No. 6; crossroads at.....	40 30 27.6	83 49 18.3	4,397
T road west.....	40 30 55.2	83 47 38.0	8,238
Center of forks of pike.....	40 30 42.6	83 45 32.2	9,795
Belle Center, about 200 feet northeast of Cleveland, Cincinnati, Chicago & St. Louis Ry. station; road crossing.....	40 30 31.5	83 45 07.1	2,240

Magnetic declination for east border, 0° 08' E.; for south border, 0° 16' W.

ALLIANCE QUADRANGLE.

Along Pennsylvania R. R. from Portage-Stark county line to Bayard.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Portage-Stark county line, road crossing on.....	40 59 17.4	81 08 40.2
Milepost 55, road crossing 1,695 feet south of.....	40 56 27.5	81 06 56.0
Alliance, Lake Erie, Alliance & Wheeling R. R., crossing on.....	40 55 33.0	81 06 03.4
Alliance, Pennsylvania R. R., crossing on.....	40 55 18.6	81 05 44.0
Alliance station on Pennsylvania R. R.....	40 55 17.1	81 05 42.2
Stark-Mahoning county line, road crossing on.....	40 54 44.1	81 05 12.8
Milepost 61, road crossing 1,070 feet north of.....	40 52 20.4	81 04 07.3
Homeworth station, road crossing 55 feet south of.....	40 50 14.8	81 04 03.4
Moultrie station, road crossing 255 feet south of.....	40 47 47.8	81 04 13.3
Bayard station.....	40 45 02.7	81 03 57.4

ALVORDTON QUADRANGLE.

Along Lake Shore & Michigan Southern Ry.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Mileposts 38 and 39, east-west road crossing between.....	41 31 42.8	84 15 26.3
Mileposts 39 and 40, north-south road crossing between.....	41 31 36.8	84 16 02.8
Mileposts 40 and 41, north-south road crossing between.....	41 31 25.5	84 17 12.1
Archbold station.....	41 31 15.5	84 18 12.8
Archbold, main street crossing.....	41 31 14.1	84 18 21.9
Mileposts 42 and 43, north-south road crossing between.....	41 31 02.7	84 19 31.3
Mileposts 43 and 44, north-south road crossing between.....	41 30 53.0	84 20 30.4
Milepost 45, north-south road crossing near.....	41 30 35.9	84 22 14.7
Mileposts 45 and 46, north-south road crossing between.....	41 30 27.6	84 23 05.0
Mileposts 46 and 47, north-south road crossing between.....	41 30 18.8	84 23 59.1
Stryker, main street crossing.....	41 30 10.3	84 24 50.9
Stryker station.....	41 30 09.0	84 24 59.2
Milepost 48, north-south road crossing near.....	41 30 03.3	84 25 33.5

ALVORDTON QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 6 N., R. 3 E., north corner of secs. 1 and 2; T road south.....	41 30 50.2	84 28 37.3
T. 7 N., R. 3 E., corner of secs. 25, 26, 35, and 36; crossroads.....	41 31 42.5	84 28 40.1
T. 7 N., R. 3 E., corner of secs. 23, 24, 25, and 26, 0.5 mile north of; T road south.....	41 33 00.9	84 28 39.8
T. 7 N., R. 3 E., corner of secs. 14, 15, 22, and 23; T road east.....	41 33 27.5	84 29 48.7
T. 7 N., R. 3 E., corner of secs. 10, 11, 14, and 15.....	41 34 19.7	84 29 48.5
T. 7 N., R. 3 E., corner of secs. 2, 3, 10, and 11; crossroads.....	41 35 11.9	84 29 48.6
T. 8 N., R. 3 E., southwest corner of sec. 35, in southwest corner of field of Joseph Eberly, northwest corner of his house bears S. 2° E., distant 91.4 feet, southwest corner of Warnick's house bears N. 74° W., distant 76.4 feet; iron post stamped "Prim. Trav. Sta. No. 16, 1905".....	41 36 03.1	84 29 50.0
T. 8 N., R. 3 E., north corner of secs. 34 and 35.....	41 36 55.0	84 29 50.7
T. 10 S., R. 2 W., south corner of secs. 1 and 2; crossroads.....	41 37 19.4	84 29 43.6
T. 9 S., R. 2 W., corner of secs. 25, 26, 35, and 36; crossroads.....	41 39 04.1	84 29 43.3
T. 9 S., R. 2 W., corner of secs. 23, 24, 25, and 26; crossroads.....	41 39 56.8	84 29 43.3
T. 9 S., R. 2 W., corner of secs. 13, 14, 23, and 24; crossroads.....	41 40 49.3	84 29 43.0

Along highways at north border of quadrangle near Ohio-Michigan State line.

T. 9 S., R. 2 W., in southeast corner of sec. 11, in southeast corner of field of E. Thatcher; iron post stamped "Prim. Trav. Sta. No. 17, 1905".....	41 41 42.0	84 29 42.2
T. 9 S., R. 2 W., east corner of secs. 12 and 13; T road west.....	41 41 40.5	84 28 32.6
T. 9 S., R. 1 W., corner of secs. 7, 8, 17, and 18; crossroads.....	41 41 41.3	84 27 23.3
T. 9 S., R. 1 W., corner of secs. 8, 9, 16, and 17; T road south.....	41 41 41.6	84 26 15.4
Ohio-Michigan State line, 0.33 mile west of Cincinnati Northern R. R.; T road south.....	41 42 18.1	84 25 41.1
Ohio-Michigan State line, 0.75 mile east of Cincinnati Northern R. R.; crossroads.....	41 42 19.7	84 24 32.4
T. 9 S., R. 1 W., corner of secs. 10, 11, 14, and 15; Fulton-Williams county line.....	41 41 42.0	84 23 57.2
T. 9 S., R. 1 W., southeast corner of sec. 11, in southeast corner of field of G. S. Wilnor; iron post stamped "Prim. Trav. Sta. No. 23, 1905".....	41 41 42.0	84 22 47.8
T. 9 S., R. 1 W., east corner of secs. 12 and 13; T road west.....	41 41 42.4	84 21 36.7
T. 9 S., R. 1 E., corner of secs. 7, 8, 17, and 18; crossroads.....	41 41 42.3	84 19 41.1
T. 9 S., R. 1 E., corner of secs. 8, 9, 16, and 17; crossroads.....	41 41 44.0	84 18 29.3
T. 9 S., R. 1 E., corner of secs. 9, 10, 15, and 16; crossroads.....	41 41 45.6	84 17 20.2
T. 9 S., R. 1 E., corner of secs. 10, 11, 14, and 15; crossroads.....	41 41 45.9	84 16 10.3
Ohio-Michigan State line, center of north-south road.....	41 42 31.9	84 16 11.5

ANDOVER QUADRANGLE.

Along Lake Shore & Michigan Southern Ry. between Leon and Jefferson.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Leon, 1,000 feet north of; road crossing.....	41 39 24.2	80 36 59.0
Dorset station, low grade line crossing.....	41 41 29.7	80 40 31.1
Road crossing.....	41 42 40.8	80 42 47.4
Jefferson station, 300 feet south of center of east siding at street crossing.....	41 44 17.3	80 45 41.2

Along highways near southwest corner of quadrangle.

Wade schoolhouse, 0.75 mile west of; three corners, fork to south.....	41 30 54.4	80 44 12.2
Wade schoolhouse, 0.75 mile south of; three corners.....	41 30 23.0	80 43 22.3
Four corners.....	41 30 22.7	80 41 06.7
Three corners.....	41 30 38.2	80 39 58.6
White schoolhouse, three corners at.....	41 30 31.3	80 38 52.1
Four corners.....	41 30 35.4	80 37 22.4
Stanhope creamery, 0.6 mile north of; three corners.....	41 30 24.2	80 36 20.3

ARLINGTON QUADRANGLE.

From base line crossing along Toledo & Ohio Central Ry. to Dunkirk.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Base line crossing	40	59	36.0	83	38	27.9
Milepost 49, 130 feet south of; crossing	40	57	53.4	83	38	33.5
Milepost 51, 200 feet south of; crossing	40	56	08.2	83	38	32.4
Corner Tps. 1 and 2 S., Rs. 10 and 11 E.	40	54	23.3	83	39	03.7
Northern Ohio Ry.; crossing on	40	53	56.8	83	38	48.7
Arlington station, 180 feet north of; crossing	40	53	34.9	83	38	48.9
Milepost 56, 470 feet south of; crossing	40	51	46.2	83	38	49.6
Williamstown station, 70 feet south of; crossing	40	50	01.6	83	38	49.8
Corner Tps. 2 and 3 S., Rs. 10 and 11 E.	40	49	09.7	83	39	04.6
Dunkirk station, 900 feet north of; crossing	40	47	24.5	83	38	49.8
Pennsylvania R. R.; crossing on	40	47	17.9	83	38	49.9

Along highways near north border of quadrangle.

Schoolhouse, crossroads at	40	58	31.8	83	30	46.2
Roads east, west, and north	40	58	53.9	83	33	53.2
Roads northeast and southwest	40	58	57.4	83	36	47.1
Tps. 1 N. and 1 S., Rs. 10 and 11 E., corner between	40	59	35.5	83	39	02.2
Tps. 1 N. and 1 S., R. 10 E., corner of secs. 1, 2, 35, and 36	40	59	35.7	83	40	11.1
Tps. 1 N. and 1 S., R. 10 E., quarter corner between secs. 3 and 34	40	59	36.0	83	41	54.6

Along highways near west border of quadrangle.

T. 3 S., R. 10 E., corner of secs. 19, 20, 29, and 30	40	45	42.4	83	44	52.2
T. 3 S., R. 10 E., corner of secs. 7, 8, 17, and 18	40	47	26.6	83	44	51.7
Tps. 2 and 3 S., R. 10 E., quarter corner between secs. 5 and 32	40	49	08.9	83	44	16.5
T. 2 S., R. 10 E., corner of secs. 19, 20, 29, and 30	40	50	53.5	83	44	48.9
T. 2 S., R. 10 E., corner of secs. 7, 8, 17, and 18	40	52	38.5	83	44	48.2
Tps. 1 and 2 S., R. 10 E., corner of secs. 5, 6, 31, and 32	40	54	25.5	83	44	47.7
T. 1 S., R. 10 E., corner of secs. 19, 20, 29, and 30	40	56	10.3	83	44	47.6
T. 1 S., R. 10 E., corner of secs. 7, 8, 17, and 18	40	57	55.2	83	44	48.4
T. 1 S., R. 10 E., corner of secs. 5, 6, 7, and 8	40	58	47.7	83	44	48.0
Findlay, about 5 miles southwest of, Lake Erie & Western R. R. crossing	40	58	54.1	83	44	47.9

Along highways near east border of quadrangle.

Quarter corner of sections	40	50	49.0	83	30	23.2
Big Four Route crossing near milepost 70	40	49	06.4	83	30	08.1

ASHLAND QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Crossroads	40	59	34.8	82	29	12.4
Crossroads	40	58	32.5	82	29	32.0
Road east	40	57	12.8	82	29	41.5
Crossroads	40	56	20.0	82	29	40.8
Road east	40	55	26.3	82	29	50.6
Shenandoah, crossroads at	40	54	43.7	82	29	57.2

Along highways from Mansfield to Hayesville.

Road crossing	40	45	29.0	82	29	39.1
Road crossing	40	45	38.5	82	28	28.0
Road south	40	45	57.4	82	27	18.8
Road south	40	45	57.3	82	26	15.6
Brick schoolhouse	40	45	58.1	82	25	39.5
Road south	40	46	02.7	82	23	51.1
Petersburg, road crossing at	40	46	25.5	82	21	49.2
Road crossing	40	46	22.8	82	20	21.9
Road south	40	46	19.5	82	18	57.4
Road south	40	46	19.7	82	17	15.1
Hayesville, tablet at southeast corner of street crossing	40	46	21.8	82	15	42.5

ASHTABULA QUADRANGLE.

Along highways from Jefferson west to the eighty-first meridian.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Jefferson, 2.5 miles west of; three corners.....	41 45 08.4	80 47 57.6
Austinburg, four corners at.....	41 46 13.3	80 51 17.4
Austinburg, 2.5 miles west of; four corners.....	41 46 01.9	80 53 59.9
Forks of road, road north.....	41 45 46.3	80 55 17.5
Harpersfield Center, four corners at.....	41 45 33.2	80 56 47.8
Residence of J. H. and L. D. Fowler, four corners at.....	41 45 33.2	81 00 10.2

ATHENS QUADRANGLE.

Along highways near Carbon Hill.

Station.	Latitude.	Longitude.
	° ' "	° ' "
Carbon Hill, 0.75 mile south of station; road crossing on new railroad grade just south of schoolhouse, center of track.....	39 29 28.1	82 14 59.6

BAINBRIDGE QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Barrett schoolhouse, No. 12, 0.5 mile south of, 390 feet west of T road north, on south side of Hillsboro-Greenfield pike; iron post stamped "Prim. Trav. Sta. No. 62, 1909, Ohio".....	39 14 24.8	83 29 53.4
Barrett schoolhouse, No. 12, 0.5 mile south of, at southwest corner of T road north; 15 feet north by 10 feet east to center of T road; hub.....	39 14 26.0	83 29 48.8
Bainbridge, 0.8 mile north of, 0.2 mile north of schoolhouse, 20 feet east of forks, just inside field; iron post stamped "Prim. Trav. Sta. No. 70, 1909, Ohio".....	39 14 23.3	83 16 35.1
Stringtown, center of cross pikes at store.....	39 14 05.7	83 29 17.1
Schoolhouse, west of; center of T road south.....	39 14 32.2	83 27 01.4
T road north, center of.....	39 14 49.8	83 25 37.5
Snake Corners schoolhouse, 0.3 mile west of; center of crossroads.....	39 14 47.8	83 24 15.3
Snake Corners schoolhouse, 0.5 mile east of, at southeast corner of T road south; iron post stamped "Prim. Trav. Sta. No. 71, Ohio, 1909".....	39 14 44.0	83 23 19.8
J. Kinsley's mail box, T road east at; 10 feet north and 10 feet west to locust tree.....	39 15 00.0	83 20 39.6

Along highways along east border of quadrangle.

Scioto-Pike county-line monument, in front yard.....	39 00 38.8	83 15 08.0
Scioto-Pike county-line stone monument.....	39 00 52.0	83 15 31.0
Scioto-Pike county-line stone, at forks of road south.....	39 00 49.9	83 15 40.7
County-line monument at junction of Adams, Scioto, and Pike counties.....	39 00 57.1	83 16 16.3
Adams-Pike county-line stone, at crossroads at Groom's store.....	39 01 13.1	83 16 31.6
Groom's store, at northeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 79, 1909, Ohio".....	39 01 13.4	83 16 31.0
Old store building, center of road opposite, at T road north.....	39 02 13.8	83 15 15.3
Whiteoak Church, center of crossroads; 15 feet southeast to center of triangular mound.....	39 03 05.8	83 15 32.3
Latham, 2.5 miles south of, northeast of Grassy Fork schoolhouse; center of T road southeast.....	39 03 54.7	83 16 01.3
Bainbridge, road crossing west of station.....	39 13 53.89	83 16 16.19
Road northeast along wire fence, 25 feet east to north end of gate.....	39 12 16.2	83 16 05.3
Ross-Pike county line, stone on east side of road.....	39 11 39.3	83 15 58.5
Pine Top schoolhouse, 0.5 mile southeast of; center of T road east.....	39 10 44.5	83 16 08.0
Anurville, 0.8 mile northwest of; fork in road, 10 feet south to cross on butternut tree.....	39 09 01.8	83 15 13.5

Along highways near south border of quadrangle.

Schoolhouse, west corner of.....	39 00 47.7	83.17 46.5
Locust Grove, 1.2 miles northwest of; intersection of Sinking Springs-Peebles pike with T road east.....	39 00 09.5	83 23 48.2
Serpent Mound, 0.8 mile southeast of; intersection of pike with T road north.....	39 00 58.4	83 25 33.2
Brush Creek, east fork of, center of steel bridge over.....	39 01 22.6	83 26 11.1
Lovett, post office, center of T road north, at store.....	39 01 36.6	83 27 10.4
Lovett, 1 mile south of post office; T road east, north of small house on west side of road.....	39 00 47.4	83 27 21.4
Lovett, 1.8 miles south of post office; T road north.....	39 00 14.0	83 27 26.7
Fork in road at corner of garden.....	39 00 21.5	83 28 06.4
John Peterson's residence, east of; center of T road north.....	39 00 31.6	83 29 00.6

BAINBRIDGE QUADRANGLE—Continued.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Schoolhouse, 0.2 mile west of, at A. W. Seller's mail box; T road north.....	39 09 51.8	83 29 57.4
Marshall, T pike south at blacksmith shop.....	39 09 07.6	83 29 06.3
Marshall, 1.8 miles east of, at Cameron farm; T road north.....	39 09 30.9	83 27 10.7
T road east, cross cut on stone corner at.....	39 08 30.4	83 26 38.1
Carmel, 2 miles south of; center of T road west.....	39 08 49.6	83 25 19.0
T road west, center of, at abandoned house.....	39 08 34.5	83 24 16.2
Brush Creek, T road north, 0.2 mile west of wooden bridge.....	39 07 32.7	83 23 58.4
Sinking Spring, 3.7 miles north of, 0.7 mile north of Sam Butler's store and hotel, in northeast corner of pasture at T road west; iron post stamped "Prim. Trav. Sta. No. 84, 1909, Ohio".....	39 07 30.0	83 22 47.6
Intersection of Bainbridge-Sinking Spring pike and east-west road.....	39 07 57.1	83 22 24.8
Cynthiana, 2 miles southwest of; Highland-Pike county-line monument, on east side of Bainbridge-Sinking Spring pike.....	39 08 59.8	83.21 51.6
Cynthiana, 1 mile south of, on Bainbridge-Sinking Spring pike, at intersection of T road southeast.....	39 09 22.3	83 20 45.0
Ora A. Benner's mail box, southwest point of triangle at fork in road.....	39 08 30.7	83 19 35.4
Perry-Mifflin township line, culvert.....	39 07 51.2	83 19 24.9
Newlaim, center of road opposite post office.....	39 07 18.4	83 19 08.2
Latham, 2 miles west of, at Sunfish Valley mill; T pike north.....	39 05 36.8	83 16 48.8
Latham, 1 mile west of; forks of pike east of steel bridge, 15 feet south and 15 feet west to mail box.....	39 06 06.4	83 15 52.0

Magnetic declination for north border, 0° 31' W.; for south border, 0° 51' E.; for east border, 1° 56' W.; for west border, 1° 28' E.

BATAVIA QUADRANGLE.

Along highways between Clarence Reiley's residence and Marathon.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Clarence Reiley's residence, center of crossroads.....	39 00 21.8	84 04 23.3
Center of covered bridge over Clover Creek, north.....	39 00 22.5	84 05 57.6
Tate Township, schoolhouse No. 3, center of T road east just southeast of.....	39 00 16.7	84 06 49.1
Bantam, 0.5 mile west of, south side of Bethel-Cincinnati pike, in front of Frederick Ropp's residence; iron post stamped "Prim. Trav. Sta. No. 94. Ohio, 1909".....	39 00 07.3	84 09 07.7
Electric-railroad crossing over public road.....	39 00 30.8	84 10 12.4
Mount Holly, at post office, center of T pike north.....	39 00 47.5	84 10 53.5
Hamlet, Ohio pike at T road south.....	39 01 11.2	84 12 21.1
Amelia, center of T pike southwest at Odd Fellows Hall.....	39 01 49.3	84 13 15.7
Amelia, 0.8 mile southwest of; center of T road west.....	39 01 16.7	84 13 43.5
Perrintown, center of T pike southwest at W. O. Robinson's store.....	39 08 16.4	84 14 12.5
Perrintown, 2 miles north of; center of T road west.....	39 09 58.0	84 14 14.3
Mulberry, northeast of old school building; center of T pike southeast.....	39 11 38.0	84 14 24.1
Barber schoolhouse, No. 9, center of T pike northwest.....	39 12 10.2	84 13 15.2
Union schoolhouse (subdistrict No. 5), center of cross pikes.....	39 12 53.1	84 14 25.3
Schoolhouse No. 7, center of cross pikes.....	39 14 13.9	84 14 36.6
Stone Lick, center of T pike south at.....	39 07 19.8	84 11 50.7
Stone Lick, 2 miles east of; center of Perrintown-Marathon pike at road north-south.....	39 07 09.6	84 09 44.3
Boston, in west part of town, 20 feet south and 15 feet east of center of T pike north; iron post stamped "Prim. Trav. Sta. No. 98. Ohio, 1909".....	39 07 17.5	84 08 32.2
Boston, 2 miles east of, at Hutchinson's residence; center of Perrintown-Marathon pike at T road north.....	39 07 45.9	84 06 04.0
Monterey, at Christian Church; center of cross pikes.....	39 08 00.0	84 04 52.6
Monterey, 0.8 mile east of; center of cross pikes.....	39 08 08.4	84 04 08.9
Monterey, 1.7 miles east of; center of T pike south.....	39 08 12.4	84 03 08.4
Marathon, 1 mile west of; center of T pike south.....	39 08 20.0	84 01 31.6

Along highways along east border of quadrangle.

New Harmony, center of crossroads.....	39 00 48.7	84 00 45.9
Brown-Clermont county-line stone in northeast corner of J. W. Abbot's garden.....	39 00 48.1	84 01 17.5
Henning's mill, 0.5 mile west of; center of T road east.....	39 00 49.1	84 02 32.0
Todds Run schoolhouse, T road west, south of.....	39 02 09.0	84 02 34.4
Williamsburg, 0.5 miles southeast of, at C. P. McKeever's residence; center of forks of pike.....	39 02 57.3	84 02 48.9
Williamsburg, third street crossing, on Norfolk & Western Ry., west of station.....	39 03 27.7	84 03 08.8
Center of pike at T road east.....	39 05 12.6	84 01 58.8
Harbold schoolhouse, 1 mile south of; center of crossroads.....	39 05 45.3	84 01 04.4
Harbold schoolhouse, center of crossroads.....	39 06 28.5	84 00 40.8
Brown-Clermont county-line stone, east of T road.....	39 07 15.5	84 00 25.0
Marathon, 1.5 miles south of, at W. G. Dougherty's mail box; T road east.....	39 07 15.5	84 00 25.8
Brown-Clermont county-line stone, south of covered bridge.....	39 08 03.6	84 00 18.0

BATAVIA QUADRANGLE—Continued.**Along highways along east border of quadrangle—Continued.**

Stations.	Latitude.	Longitude.
Marathon, 0.5 mile south of, 20 feet due east to west end of covered bridge; iron post stamped "Prim. Trav. Sta. No. 90, Ohio, 1909".....	39 08 16.5	84 00 11.2
Brown-Clermont county-line stone.....	39 08 27.6	84 00 15.0
Marathon, T road south at, near M. E. Applegate's store.....	39 08 39.5	84 00 26.6
Marathon, 0.5 mile north of; forks in pike.....	39 09 11.5	84 00 44.8
Lerado, cross pikes at post office, 20 feet north to south corner of public scales.....	39 10 29.2	84 00 30.1
Crossroads, center of.....	39 12 17.0	84 01 42.8
Crossroads, center of, at large brick house.....	39 13 05.6	84 00 30.5
Woodville, in northwest corner of A. W. Garrison's front yard, 20 feet north and 20 feet west to town pump at center of cross pikes; iron post stamped "Prim. Trav. Sta. No. 91, Ohio, 1909".....	39 15 17.5	84 00 38.6
Woodville, at Church, on northeast-southwest pike at T pike north.....	39 15 19.2	84 00 26.3

Magnetic declination for south border, 0° 58' E.; for east border, 1° 2' E.; for west border, 0° 55' E.; for east-west line through center, 0° 48' E.

BELLEVUE QUADRANGLE.**Along highways near south border of quadrangle.**

Stations.	Latitude.	Longitude.
Tps. 3 and 4 N., R. 16 E., corner of secs. 2, 3, 34, and 35; road south.....	41 15 20.2	82 59 38.7
Tps. 3 and 4 N., R. 16 E., corner of secs. 1, 2, 35, and 36; road north-south.....	41 15 20.4	82 58 29.8
Tps. 3 and 4 N., Rs. 16 and 17 E., corner of secs. 1, 6, 31, and 36; road north-south.....	41 15 20.2	82 57 20.3
Tps. 3 and 4 N., R. 17 E., corner of secs. 5, 6, 31, and 32; road north-south.....	41 15 20.0	82 56 10.6
Tps. 3 and 4 N., R. 17 E., corner of secs. 4, 5, 32, and 34; road north-south.....	41 15 19.6	82 55 01.3
Tps. 3 and 4 N., R. 17 E., corner of secs. 3, 4, 33, and 34; road north-south.....	41 15 19.2	82 53 51.4
Road northeast-southwest.....	41 15 18.7	82 52 18.3
Road north-south.....	41 15 18.5	82 51 31.7
Hocking Valley Ry. Azimuth 207° 25'.....	41 15 18.3	82 50 47.8
Road north-south.....	41 14 49.8	82 48 08.4
Lake Shore Ry. Azimuth 307° 31'.....	41 15 34.5	82 46 57.6
Road north-south.....	41 15 34.6	82 45 50.2

BELLEFONTAINE QUADRANGLE.**Along highways near west border of quadrangle.**

Stations.	Latitude.	Longitude.
T. 2 N., R. 8 E., corner of secs. 27, 28, 33, and 34; crossroads.....	40 22 35.8	83 58 49.6
Maplewood, 3 miles east of, southeast corner of crossroads, quarter corner between secs. 27 and 34, T. 2 N., R. 8 E.; iron post stamped "Prim. Trav. Sta. No. 33, Ohio, 1909".....	40 22 36.1	83 58 15.1
T. 2 N., R. 8 E., quarter corner on north side of sec. 27; T road south near schoolhouse.....	40 23 28.4	83 58 16.4
T. 7 S., R. 8 E., corner of secs. 19, 20, 29, and 30.....	40 24 36.4	83 58 27.7
T. 7 S., R. 8 E., corner of secs. 17, 18, 19, and 20.....	40 25 29.6	83 58 28.1
T. 7 S., R. 8 E., corner of secs. 7, 8, 17, and 18; T road south, 715 feet east of schoolhouse No. 4.....	40 26 21.6	83 58 28.5
T. 7 S., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18; crossroads.....	40 26 21.7	83 59 36.9
T. 7 S., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12; T road west.....	40 27 14.1	83 59 37.0
Tps. 6 and 7 S., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36; crossroads near schoolhouse No. 8.....	40 28 06.5	83 59 37.2
T. 6 S., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36; T road west, 22 feet east to dressed stone post.....	40 28 58.9	83 59 37.4
Santa Fe, 0.5 mile south of, in top of southwest corner of bridge abutment; aluminum tablet stamped "Prim. Trav. Sta. No. 34, Ohio, 1909".....	40 29 06.1	83 59 37.6
Tps. 1 and 2 N., R. 8 E., corner of secs. 3, 4, 33, and 34; crossroads.....	40 21 43.0	83 58 49.2
T. 1 N., R. 8 E., corner of secs. 3, 4, 9, and 10; crossroads.....	40 20 50.9	83 58 48.8
T. 1 N., R. 8 E., corner of secs. 9, 10, 15, and 16.....	40 19 58.2	83 58 48.1
T. 1 N., R. 8 E., corner of secs. 15, 16, 21, and 22.....	40 19 08.6	83 58 47.9
Quincy, crossing of Cleveland, Cincinnati, Chicago & St. Louis Ry. and Detroit, Toledo & Ironton Ry.....	40 17 51.4	83 58 18.4
T. 3 N., R. 13 E., corner of secs. 22, 23, 28, and 29; T road west.....	40 17 10.2	83 58 21.4
T. 3 N., R. 13 E., corner of secs. 21, 22, 27, and 28; crossroads near schoolhouse, on Logan-Champaign county line.....	40 16 16.1	83 58 26.9
T. 3 N., R. 13 E., at corner of secs. 20, 21, 26, and 27; T road east, near schoolhouse.....	40 15 23.6	83 58 32.2

BELLEFONTAINE QUADRANGLE—Continued.

East along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 6 S., R. 8 E., west corner of secs. 19 and 30; T road east (county line).	40 29 55.8	83 59 37.7	.....
T. 6 S., R. 8 E., corner of secs. 19, 20, 29, and 30; T road north.....	40 29 55.9	83 58 29.3	5,290
T. 6 S., R. 8 E., corner of secs. 20, 21, 28, and 29; T road south.....	40 29 55.9	83 57 20.7	5,300
T. 6 S., R. 8 E., corner of secs. 21, 22, 27, and 28.....	40 29 55.9	83 56 11.8	5,320
Lakeview, 1 mile north of; Ohio Electric R. R. at east-west road crossing.....	40 29 55.9	83 55 47.4	1,890

West along highways through center of quadrangle.

T road east.....	40 24 15.0	83 46 10.4	.....
Northeast corner of Harrison Township, east corner of secs. 1 and 6; T road west.....	40 23 28.6	83 46 12.1	4,701
Harrison Township, stone corner of secs. 1, 6, 7, and 12.....	40 23 32.8	83 47 20.2	5,290
Bridge over creek, center of.....	40 23 09.6	83 48 16.8	4,971
T road north, at quarter corner.....	40 23 15.1	83 49 41.9	6,610
Harrison Township, quarter corner between secs. 24 and 30; crossroads. Hazleton, 1.25 miles west of, at northwest corner of crossroads at church, 25 feet east and 20 feet south to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 90. Ohio, 1910".....	40 23 19.1	83 50 51.3	5,390
Stone at quarter corner, T road north.....	40 23 24.5	83 52 17.7	6,710
Quarter corner.....	40 23 27.6	83 53 09.8	4,044
T road west.....	40 23 31.6	83 54 18.2	5,309
T road west, just north of church and schoolhouse.....	40 23 06.2	83 54 37.8	2,993
Fractional township, corner of secs. 25, 26, 35, and 36.....	40 22 41.6	83 55 11.1	3,587
Fractional township, north corner of secs. 34 and 35.....	40 22 36.4	83 56 32.5	6,327
	40 22 36.3	83 57 11.2	5,320

Positions near east border of quadrangle.

T road west.....	40 22 47.4	83 45 17.7	.....
Bellefontaine, intersection of Main and Sandusky streets at Carnegie Library.....	40 21 45.0	83 45 34.4	6,441

Magnetic declination for north border, 0° 16' W.; for west border, 0° 10' E.; for center line, 0° 11' W.

BERNE QUADRANGLE.

Along highways along and near Ohio-Indiana State line.

Station.	Latitude.	Longitude.
	° ' "	° ' "
St. Anthony Catholic Church spire.....	40 30 33.2	84 47 05.3
T. 6 S., R. 1 E., west corner of secs. 18 and 19; T road east.....	40 30 34.2	84 48 09.2
T. 27 N., R. 15 E., east corner of secs. 22 and 27; T road west.....	40 30 50.1	84 48 09.0
T. 27 N., R. 15 E., east corner of secs. 22 and 15; crossroads.....	40 31 42.7	84 48 08.7
T. 6 S., R. 1 E., west corner of secs. 6 and 7; T road east.....	40 32 19.9	84 48 08.6
Tps. 5 and 6 S., R. 1 E., west corner of secs. 6 and 31; fence east.....	40 33 12.1	84 48 08.3
T. 27 N., R. 15 E., east corner of secs. 3 and 10; T road west.....	40 33 27.4	84 48 08.3
T. 5 S., R. 1 E., west corner of secs. 19 and 30; T road east.....	40 34 57.3	84 48 07.5
T. 5 S., R. 1 E., west of secs. 18 and 19; T road east.....	40 35 49.8	84 48 07.1
T. 28 N., R. 15 E., east corner of secs. 22 and 27; T road west.....	40 36 05.3	84 48 07.0
T. 5 S., R. 1 E., 15 feet east and 25 feet south of west corner of secs. 7 and 18; iron post stamped "Prim. Trav. Sta. No. 25. Ohio, 1909".....	40 36 41.8	84 48 06.6
T. 28 N., R. 15 E., east corner of secs. 15 and 22; T road west.....	40 36 53.0	84 48 06.8
T. 28 N., R. 15 E., east corner of secs. 10 and 15; T road west.....	40 37 49.9	84 48 06.5
Tps. 4 and 5 S., R. 1 E., west corner of secs. 6 and 31; T road east.....	40 38 26.4	84 48 06.8
T. 28 N., R. 15 E., east corner of secs. 3 and 10; T road west.....	40 38 42.4	84 48 06.9
T. 4 S., R. 1 E., west corner of secs. 30 and 31; T road east.....	40 39 18.8	84 48 06.8
Tps. 28 and 29 N., R. 15 E., east corner of secs. 3 and 34; T road west.....	40 39 57.8	84 48 06.8
T. 4 S., R. 1 E., west corner of secs. 19 and 30; T road east.....	40 40 11.2	84 48 07.0
T. 4 S., R. 1 E., quarter corner between secs. 18 and 19; T road east.....	40 41 03.8	84 47 39.7
T. 4 S., R. 1 E., west corner of secs. 6 and 7; T road east.....	40 42 48.8	84 48 08.7
T. 29 N., R. 15 E., east corner of secs. (no numbers); T road west.....	40 43 07.4	84 48 08.7
T. 29 N., R. 15 E., east corner of secs. (no numbers); fence west.....	40 43 59.5	84 48 08.7
Corner of section on State line.....	40 44 33.9	84 48 06.8

Magnetic declination for east border, 0° 46' E.; for north-south line through center, 0° 42' E.

BETHEL QUADRANGLE.

Along highways from Feesburg to New Harmony.

Stations.	Latitude.	Longitude.
Feesburg, 0.5 mile northwest of, 10 feet west and 10 feet south to center of T road, at Rose Hill Cemetery, on east side of T road southwest; iron post stamped "Prim. Trav. Sta. No. 24. Ohio, 1910".....	38 52 57.4	84 00 24.4
Feesburg, 1 mile north and 1 mile west of; center of T road northeast.....	38 53 28.0	84 01 00.9
Maple, center of crossroads.....	38 54 12.1	84 02 08.8
Maple, Clermont-Brown county line; stone.....	38 54 12.5	84 02 08.8
Maple, 1 mile east and 0.8 mile north of; center of T pike at Maple Dale farm.....	38 54 51.0	84 00 58.8
Hamerstown, 1 mile northwest of; north-south road crossing on electric railroad.....	38 55 33.1	84 00 17.9
John Block's residence, crossing of Hamerstown-Bethel pike and north-south road.....	38 55 59.6	84 00 15.9
Crossing of north-south road and road northwest-southeast, center of.....	38 57 25.4	84 00 05.6
Locust Ridge, 15 feet west to north end of bridge; center of crossroads.....	38 59 30.8	84 00 27.0

Along highways from Maple west to Point Isobel, thence north via Tate triangulation station to Bantam.

Maple, 1.2 miles southwest of; center of crossroads.....	38 53 32.6	84 03 10.1
C. F. Swope farm, center of crossroads.....	38 54 03.9	84 04 05.5
Center of concrete culvert, Franklin-Tate township line.....	38 53 23.8	84 05 31.0
Mount Olive Church, 1 mile west of, 20 feet north to center of small bridge; center of T road north.....	38 54 00.2	84 06 22.2
Point Isobel, east part of; 20 feet north of center of T road south; iron post stamped "Prim. Trav. Sta. No. 25. Ohio, 1910".....	38 53 45.8	84 07 39.4
Point Isobel, center of cross streets.....	38 53 46.4	84 07 54.0
Point Isobel, 1 mile north of; center of crossroads.....	38 54 30.2	84 08 02.7
Saltair, center of cross pikes.....	38 55 35.3	84 08 33.3
Monroe and Washington Townships, corner of gate.....	38 55 41.9	84 08 52.6
Tate-Monroe township line, 0.5 mile east of, on boundary fence separating land of J. Hibbets from that of Salt, at crossroads near post office. Station marks: Pottery pyramid 3 feet below surface of ground, surmounted by section of sewer pipe 2 feet long filled with hydraulic cement; concrete reaches to surface of ground, and station center is marked by 4-inch iron spike. Reference mark: Four drain tile pipes 4 inches in diameter, filled with concrete (Tate triangulation station).....	38 56 26.71	84 08 01.53
C. J. Paeltz's residence, east-west pike at T road south.....	38 57 28.0	84 08 29.5
South Bantam, north-south road crossing on electric railroad at station.....	38 57 57.9	84 08 48.5
Bantam, north-south road crossing on electric railroad.....	38 59 54.9	84 08 29.8

Along highways from Point Isobel west to Point Pleasant, thence north via New Richwood to Spann schoolhouse.

Point Isobel, 1 mile south and 1.5 miles west of, just north of covered bridge over Big Indian Creek; center of triangle in forks of road.....	38 52 52.4	84 09 35.8
Log house with tile chimney, center of T road south.....	38 53 13.2	84 10 31.2
Big Indian Creek, center of stream at ford.....	38 53 17.7	84 10 55.2
Large elm tree on fence line, center of T road south.....	38 53 26.7	84 11 41.8
Washington-Monroe township line, center of road at.....	38 53 27.8	84 12 16.4
Point Pleasant, 1.3 miles east of; center of triangle in T road east just west of bridge.....	38 53 32.3	84 12 28.6
Point Pleasant, southwest corner of T street east, 25 feet north and 10 feet east to its center; iron post stamped "Prim. Trav. Sta. No. 26. Ohio, 1910".....	38 53 38.2	84 13 59.5
Point Pleasant, 0.8 mile northwest of, at large culvert; center of T road east.....	38 54 12.2	84 14 27.5

Along river road from Point Pleasant to point near Higginsport.

Monroe-Washington township stake, on east side of pike.....	38 52 32.4	84 13 32.8
Little Indian Creek, 35 feet east and 10 feet south to south end of stone culvert, pike at T road east.....	38 51 59.9	84 13 25.7
Moscow, center of crossroads at Clermont Distilling & Mill Co.'s plant, 12 feet south to center of small bridge.....	38 51 28.5	84 13 25.8
Pike at T road east, at corner of hedge fence.....	38 50 26.4	84 13 22.6
Neville, 0.8 mile northwest of; center of T pike east.....	38 49 10.7	84 12 51.9
Neville, 30 feet east and 10 feet north to front door of public school building, in grounds of; iron post stamped "Prim. Trav. Sta. No. 27. Ohio, 1910".....	38 48 36.5	84 12 35.1
Neville, center of cross streets at Methodist Church.....	38 48 31.9	84 12 36.8
Neville, 2.8 miles east and 0.5 mile south of; center of small triangle in forks.....	38 48 03.2	84 09 33.4
Chilo, 0.2 mile northwest of, 30 feet north and 60 feet west to center of small bridge, 15 feet west and 5 feet north to south end of stone culvert, set at southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 28. Ohio, 1910".....	38 47 47.7	84 08 27.2
Chilo, center of cross pikes in north part of town.....	38 47 43.3	84 08 11.5
Chilo, 1 mile east and 0.5 mile south of, at road north.....	38 47 18.6	84 07 14.0
Rural, 30 feet southwest of pump; center of crossroads.....	38 46 40.8	84 05 19.5

BETHEL QUADRANGLE—Continued.

Along river road from Point Pleasant to point near Higginsport—Continued.

Station.	Latitude.	Longitude.
Utopia, 15 feet south and 30 feet west of center of crossroads; iron post stamped "Prim. Trav. Sta. No. 29. Ohio, 1910".....	° ' "	° ' "
Brown-Clermont county line, stone on north side of pike.....	38 46 33.3	84 03 26.7
Schoolhouse No. 9, center of pike opposite.....	38 46 35.5	84 03 09.2
Boudesferry, center of crossroads, 20 feet east and 15 feet north to southwest corner of porch of house.....	38 46 42.8	84 02 03.1
Augusta, Ky., cupola of public-school building.....	38 46 51.2	84 00 27.7
	38 46 24.9	84 00 11.7

Along highways from Utopia north to Feesburg.

Utopia, 1 mile north of; center of road at short lane to P. T. Barthlow's residence, on top of hill.....	38 47 18.8	84 03 16.6
Cedron, center of covered bridge over Bullskin Creek.....	38 48 18.7	84 03 16.8
Cedron, about 0.3 mile east of; stone on Brown-Clermont county line.....	38 48 21.8	84 02 55.2
Forks of road near forks of Bullskin Creek, 15 feet south and 5 feet east to cross cut on large sycamore tree.....	38 48 37.2	84 02 29.4
Steel bridge over Bullskin Creek, just east of; center of pike at road south, 15 feet south to sycamore tree.....	38 49 09.4	84 02 32.8
A. E. Cooper's mail box, 10 feet north of; pike at dirt road south.....	38 49 25.7	84 01 30.7
Wm. Metzker's mail box, center of pike at T road northeast.....	38 49 05.8	84 00 37.7
Barr's schoolhouse No. 8, center of T pike southwest.....	38 50 15.4	84 00 08.6
Barr's schoolhouse No. 8, 1.2 miles northwest of, 35 feet east and 15 feet north to Goslin's mail box; forks of pike.....	38 51 02.1	84 00 57.7
Feesburg, 1 mile southwest of; east point of triangle at forks of pike.....	38 52 02.3	84 00 43.7
Feesburg, center of crossroads.....	38 52 42.18	83 59 55.87

Magnetic declination for south border, 1° E.; for south half of east border, 1° 05' E.; for south half of west border, 1° 07' E.; for north half of east border, 0° 56' E.; for north half of west border, 0° 53' E.; for east half of east-west center line, 1° 11' E.; for west half of east-west center line, 1° E.; for north half of north-south line, 1° 0' E.

BIDWELL QUADRANGLE.

Along highways near southwest corner of quadrangle.

Stations.	Latitude.	Longitude.
T. 6 N., R. 17 W., northeast corner of sec. 26.....	° ' "	° ' "
	38 48 06.0	82 28 46.7

Near south border of quadrangle.

Marion Childers's farm, road southeast from pike, 27 feet south to small apple tree, 54 feet northeast to telephone pole.....	38 47 50.2	82 29 58.6
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BLANCHESTER QUADRANGLE.

Along Baltimore & Ohio Southwestern R. R. from Blancheater to blind siding.

Stations.	Latitude.	Longitude.
Blancheater station, crossing 320 feet east of.....	° ' "	° ' "
Midland station, crossing 310 feet west of.....	39 17 31.4	83 59 14.2
Midland station.....	39 18 13.7	83 54 35.4
Midland station.....	39 18 14.4	83 54 31.5
Cuba station, 300 feet south of; crossing under railroad.....	39 21 41.0	83 51 58.1
Milepost 52, crossing 450 feet north of.....	39 23 59.4	83 51 17.8
Wilmington, Baltimore & Ohio R. R. station at.....	39 26 36.6	83 49 25.2
Blind siding, crossing 450 feet west of head block at.....	39 27 56.2	83 45 05.3
Northwest-southeast road crossing.....	39 27 41.1	83 46 11.2

BLANCHESTER QUADRANGLE—Continued.**Along highways near south border of quadrangle.**

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road southeast.....	39 16 54.1	83 59 43.1
Pike road southeast.....	39 15 42.0	83 59 19.3
Blanchester, crossroads 2 miles southeast of.....	39 16 06.0	83 58 13.9
Road northeast.....	39 15 36.7	83 57 39.7
T road southeast.....	39 15 58.1	83 56 37.8
Road south.....	39 16 24.6	83 55 16.7

Along Baltimore & Ohio Southwestern R. R. from Westboro to Klocks.

Westboro station, road crossing 300 feet west of.....	39 16 51.3	83 54 38.6
Crossing of north-south private road.....	39 16 35.5	83 53 48.0
Crossing of north-south private road.....	35 16 17.7	83 52 45.3
Crossing of north-south road.....	39 16 00.6	83 52 02.7
Klocks station, road crossing at.....	39 15 24.5	83 50 14.3
Crossing of north-south private road.....	39 15 06.7	83 49 21.1

Along highways near southeast corner of quadrangle.

T road south.....	39 15 12.9	83 45 55.0
Highland-Clinton county line.....	39 15 49.9	83 46 59.4
Road east.....	39 16 48.6	83 46 21.8
Bridge, T road north at.....	39 17 23.2	83 45 55.6

Along Baltimore & Ohio Southwestern R. R.

Road crossing under trestle.....	39 19 14.8	83 45 12.8
Farmers station, Main Street crossing.....	39 19 13.9	83 45 48.9

Along highways near west border of quadrangle.

Johans Run Church, T road south near.....	39 29 46.9	83 58 54.6
T road west.....	39 29 08.7	83 58 56.8
Hickoryville, T road east, just west of.....	39 27 53.2	83 59 41.0
Road west.....	39 27 10.4	83 59 37.1
Vandervorts crossroads.....	39 26 39.6	83 59 18.7
T road west.....	39 25 46.0	83 58 59.0
Pennsylvania R. R. at private road crossing, azimuth of railroad 60° 01'.....	39 24 25.2	83 58 37.9
Clarksville, crossing of Wilmington-Cincinnati pike and Main Street.....	39 24 03.3	83 58 50.6
Intersection of Wilmington-Cincinnati pike and Blanchester road.....	39 23 40.6	83 59 15.3
T road northwest.....	39 22 04.5	83 58 17.9
Crossroads.....	39 21 33.8	83 59 04.2
T road southeast.....	39 21 11.9	83 59 37.3
Blanchester crossroads, 3 miles northeast of.....	39 19 45.5	83 58 08.7
Road north.....	39 18 55.4	83 59 01.8
T road.....	39 17 53.1	83 59 32.9
Harveysburg, 1.5 miles east of, on north side of pike at Warren-Clinton county line; iron post.....	39 29 48.5	83 59 01.4
Harveysburg, 1.5 miles east of, near St. John's Church; center of T road south.....	39 29 46.9	83 58 54.6
St. John's Church, in southeast corner of foundation; aluminum tablet stamped "Prim. Trav. Sta. No. 50. Ohio, 1909," elevation 943.....	39 29 46.6	83 58 48.1
Clarksville, about 0.3 mile southwest of station, south switch block.....	39 24 03.2	83 59 27.1
Clarksville, 0.2 mile west of, south side of pike; Clinton-Warren county-line post.....	39 24 05.5	83 59 33.5
Clarksville, intersection of main street with Cincinnati-Wilmington pike.....	39 24 03.3	83 58 50.6
Center of T road east.....	39 29 54.9	83 47 06.4
Deserted camp, 1.5 miles north of, just east of Samuel Speer's residence, 40 feet north and 15 feet west to center of T road east, 15 feet west and 125 feet south to center of T road west; iron post stamped "Prim. Trav. Sta. No. 57. Ohio, 1909".....	39 29 54.5	83 47 06.3

Along highways near east border of quadrangle.

Bridge, crossroads at.....	39 20 16.3	83 45 34.3
Farmers station, crossroads 3 miles north of.....	39 21 15.4	83 45 33.9
Church, T road northeast at.....	39 21 59.0	83 46 11.0
Lane southeast.....	39 22 46.4	83 45 55.5
T road northeast.....	39 24 08.2	83 45 19.4
T road southeast.....	39 29 31.3	83 45 40.9
T road east.....	39 29 54.9	83 47 06.4
Crossroads.....	39 29 57.8	83 50 27.2

BLUFFTON QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tps. 1 N. and 1 S., Rs. 9 and 10 E., corner of secs. 1, 6, 31, and 36.....	40 59 36.5	83 45 56.3
Tps. 1 N. and 1 S., R. 9 E., corner of secs. 3, 4, 33, and 34.....	40 59 35.9	83 49 23.1
Tps. 1 N. and 1 S., R. 9 E., corner of secs. 5, 6, 31, and 32.....	40 59 35.4	83 51 41.3
Tps. 1 N. and 1 S., R. 8 E., corner of secs. 1, 2, 35, and 36.....	40 59 35.1	83 53 59.1
Tps. 1 N. and 1 S., R. 8 E., corner of secs. 3, 4, 33, and 34.....	40 59 34.7	83 56 17.5
Tps. 1 N. and 1 S., R. 8 E., corner of secs. 5, 6, 31, and 32.....	40 59 34.0	83 58 36.2

Along highways near west border of quadrangle.

Pennsylvania R. R. at road crossing between Rs. 7 and 8 E., between tracks, azimuth of railroad 82° 21' 09".....	40 45 13.7	83 59 38.7
T. 3 S., Rs. 7 and 8 E., corner of secs. 24 and 25 (east corner); corner stone.....	40 45 36.7	83 59 38.8
T. 3 S., Rs. 7 and 8 E., corner of secs. 13, 18, 19, and 24; corner stone.....	40 46 29.0	83 59 38.9
T. 3 S., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18, at crossroads; corner stone.....	40 47 21.1	83 59 39.2
T. 3 S., Rs. 7 and 8 E., west corner of secs. 1 and 12; corner stone.....	40 48 13.3	83 59 39.5
Lake Erie & Western R. R., road crossing between Rs. 7 and 8 E., azimuth of railroad 229° 10' 15".....	40 49 17.4	83 59 40.1
T. 2 S., R. 7 E., northeast corner of sec. 36, in field owned by Louis Roberts, northeast corner of Roberts's residence bears S. 78° E., distant 63.3 feet, nail in telephone pole on south side of pike bears N. 12° 15' E., distant 8.6 feet, aluminum tablet set in stone 7 by 16 by 24 inches set 20 inches in ground, stamped "Prim. Trav. Sta. No. 2".....	40 49 57.7	83 59 40.8
T. 2 S., Rs. 7 and 8 E., east corner of secs. 24 and 25, at T road west.....	40 50 51.4	83 59 40.9
T. 2 S., Rs. 7 and 8 E., east corner of secs. 13 and 24, at T road east; corner stone.....	40 51 44.1	83 59 41.5
Tps. 1 and 2 S., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36, at T road north, 24 feet southwest to cross cut on telephone pole, 30 feet northwest to arrow on corner fence post.....	40 54 18.8	83 59 42.7
T. 1 S., R. 7 E., corner of secs. 25 and 36, at T road west, 18 feet southwest to cross on south end of culvert, 30 feet northwest to cross on corner fence post.....	40 55 11.4	83 59 43.1
T. 1 S., R. 7 E., in northeast corner of sec. 25 in field owned by John Keine, W. J. Luginbill's mail box bears N. 15° E., distant 39.5 feet, cross cut on third layer of stone retaining wall to culvert bears N. 87° E.; distant 14.5 feet; in top of Bedford limestone post 30 by 16 by 6 inches, set 27 inches in ground, aluminum tablet stamped "Prim. Trav. Sta. No. 3".....	40 56 03.6	83 59 43.8
Northern Ohio Ry. at road crossing between Rs. 7 and 8 E., azimuth of railroad 246° 59' 59".....	40 56 08.9	83 59 43.6

BOBO QUADRANGLE.

Along highways on the Indiana-Ohio State line.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tps. 1 N. and 1 S., R. 1 E., west corner of secs. 6 and 31; T road east.....	40 59 22.3	84 48 10.6
T. 29 N., R. 15 E., east corner of secs. 11 and 14; T road west.....	40 58 51.1	84 48 10.4
T. 1 S., R. 1 E., west corner of secs. 6 and 7; T road east.....	40 58 30.2	84 48 10.3
T. 29 N., R. 15 E., east corner of secs. 14 and 23; T road west.....	40 57 59.3	84 48 10.2
T. 1 S., R. 1 E., west corner of secs. 7 and 18; T road east.....	40 57 38.1	84 48 10.2
T. 29 N., R. 15 E., east corner of secs. 23 and 26; T road west.....	40 57 07.1	84 48 10.0
T. 1 S., R. 1 E., west corner of secs. 18 and 19; T road east.....	40 56 46.4	84 48 09.9
Tps. 28 and 29 N., R. 15 E., east corner of secs. 2 and 35; T road west.....	40 56 14.5	84 48 09.7
T. 1 S., R. 1 E., west corner of secs. 19 and 30; T road east.....	40 55 53.7	84 48 09.6
T. 28 N., R. 15 E., east corner of secs. 2 and 11; T road west.....	40 55 21.7	84 48 09.4
T. 1 S., R. 1 E., west corner of secs. 30 and 31; T road east.....	40 55 01.0	84 48 09.3
Tps. 1 and 2 S., R. 1 E., west corner of secs. 6 and 31; T road east.....	40 54 08.5	84 48 08.9
T. 28 N., R. 15 E., east corner of secs. 14 and 23; T road west.....	40 53 34.3	84 48 08.6
Wolfcave, 2 miles west of, at southeast corner of T road east, 25 feet north and 20 feet west to west corner of secs. 6 and 7, T. 2 S., R. 1 E.; iron post stamped "Prim. Trav. Sta. No. 20. Ohio, 1909".....	40 53 16.3	84 48 08.3
T. 28 N., R. 15 E., east corner of secs. 23 and 26; T road west, near church.....	40 52 42.0	84 48 08.2
T. 2 S., R. 1 E., west corner of secs. 7 and 18; T road east.....	40 52 24.4	84 48 08.0
T. 28 T., N. 15 E., east corner of secs. 26 and 35; T road west.....	40 51 49.7	84 48 07.8
Tps. 27 and 28 N., R. 15 E., east corner of secs. 2 and 35; T road west.....	40 50 57.6	84 48 07.4
T. 2 S., R. 1 E., west corner of secs. 19 and 30; T road east.....	40 50 39.8	84 48 07.2
T. 27 N., R. 15 E., east corner of secs. 2 and 11; T road west.....	40 50 05.3	84 48 07.0
T. 2 S., R. 1 E., west corner of secs. 30 and 31; T road east.....	40 49 47.4	84 48 07.1
Tps. 2 and 3 S., R. 1 E., west corner of secs. 6 and 31; T road east.....	40 48 54.7	84 48 06.8
T. 27 N., R. 15 E., east corner of secs. 11 and 14.....	40 48 20.9	84 48 10.2
T. 3 S., R. 1 E., west corner of secs. 6 and 7; T road east.....	40 48 03.0	84 48 06.6
T. 27 N., R. 15 E., east corner of secs. 23 and 26.....	40 46 36.2	84 48 06.8
Willshire, Ohio, 1.5 miles north of, at northeast corner of T road east; 30 feet south and 20 feet west to west corner of secs. 18 and 19, T. 3 S., R. 1 E.; iron post stamped "Prim. Trav. Sta. No. 21. Ohio, 1909".....	40 46 18.6	84 48 06.7

BOBO QUADRANGLE—Continued.

Near south border of quadrangle.

Stations.	Latitude.	Longitude.
Willshire, Toledo, St. Louis & Western Ry. crossing at east end of bridge over St. Marys River.....	° ' "	° ' "
T. 3 S., R. 1 E., quarter corner between secs. 28 and 29; T road north.....	40 45 09.3 40 44 59.8	84 47 31.4 84 45 54.9

Magnetic declination for east border, 0° 13' E.; for State line north-south through center, 0° 03' E.

BOWLING GREEN QUADRANGLE.

From point near Dowling along Toledo & Ohio Central Ry. to point near Mermill.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Crossing of telephone line road.....	41 29 50.4	83 35 15.5
Dowling station, crossing 250 feet north of.....	41 28 40.4	83 35 53.6
Dowling, 1½ miles southeast of; corner of secs. 20, 21, 28, and 29.....	41 27 27.8	83 36 35.4
Telephone line road.....	41 25 13.3	83 37 46.2
Bowling Green station, 200 feet north of; telephone road crossing.....	41 22 33.2	83 38 40.8
Corner of Tps. 4 and 5 N., Rs. 10 and 11 E.....	41 20 31.3	83 39 02.4
Portage station, crossing 150 feet south of.....	41 19 35.9	83 38 44.8
Mermill station, crossing 200 feet north of.....	41 17 51.0	83 38 44.3
Corner of Tps. 3 and 4 N., Rs. 10 and 11 E.....	41 15 14.0	83 39 00.6

Along highways near west border of quadrangle.

T. 4 N., R. 10 E., corner of secs. 28, 29, 32, and 33.....	41 16 09.8	83 43 40.0
T. 4 N., R. 10 E., corner of secs. 20, 21, 28, and 29.....	41 17 02.0	83 43 40.3
T. 4 N., R. 10 E., corner of secs. 4, 5, 8, and 9.....	41 19 38.8	83 43 41.4
Tps. 4 and 5 N., R. 10 E., corner of secs. 4, 5, 32, and 33.....	41 20 34.4	83 43 42.3
T. 5 N., R. 10 E., corner of secs. 20, 21, 28, and 29.....	41 22 18.9	83 43 41.8
T. 5 N., R. 10 E., quarter corner between secs. 8 and 17.....	41 24 03.8	83 44 16.7
Tps. 5 and 6 N., R. 10 E., quarter corner between secs. 5 and 32.....	41 25 48.2	83 44 16.9
T. 6 N., R. 10 E., quarter corner between secs. 29 and 32.....	41 26 40.1	83 44 17.8
T. 6 N., R. 10 E., quarter corner between secs. 17 and 20.....	41 28 25.2	83 44 17.9
T. 6 N., R. 10 E., corner of secs. 14, 15, 26, and 27.....	41 28 24.0	83 41 23.3
T. 6 N., R. 10 E., corner of secs. 13, 14, 23, and 24.....	41 28 23.9	83 40 13.8
Waterville station, about 800 feet southwest of; east-west pike crossing on Clover Leaf Route.....	41 29 55.9	83 43 35.5

BRINKHAVEN QUADRANGLE.

Along highways near Tunnel Hill.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tunnel Hill, 1.5 miles east of; T road north, 27 feet due south to cross on fence post.....	40 15 29.1	82 01 30.1
Tunnel Hill, 2 miles east of, near northwest corner of field of Wm. L. Wright, northeast corner of Wright's house bears S. 14° W., distant 87 feet; iron post stamped "Prim. Trav. Sta. No. 56. 1905".....	40 15 18.9	82 00 32.8

Along Cleveland, Akron & Columbus Ry.

Tunnel Hill, 1 mile east of; center of T road south, 10 feet south to center of triangle, 40 feet southwest to maple.....	40 15 19.6	82 02 02.6
Tunnel Hill, 1 mile north of; road crossing.....	40 16 12.0	82 02 09.0
Tunnel, north end of.....	40 16 34.1	82 01 53.7
Warsaw, 2.6 miles south of; road crossing 40 feet east to T road west.....	40 17 23.7	82 00 47.2
Warsaw, 1.6 miles south of; road crossing at siding, 200 feet west to covered highway bridge.....	40 18 17.2	82 00 35.3
Warsaw Junction, crossing of the Pittsburgh, Cincinnati, Chicago & St. Louis and Cleveland, Akron & Columbus railways, 100 feet east of station.....	40 19 43.8	82 00 27.6
Baddow Pass, center of highway bridge over Cleveland, Akron & Columbus Ry. at north end of summit cut.....	40 29 32.7	82 08 39.5

BRINKHAVEN QUADRANGLE—Continued.

West along highways.

Stations.	Latitude.	Longitude.
Crossroads near top of hill, 30 feet southwest to corner fence post, 25 feet southeast to corner of fence.....	° ' " 40 29 33.7	° ' " 82 09 25.7
Brinkhaven, 1 mile north of; center of triangle at forks of road.....	40 28 58.5	82 11 30.3

Along Pennsylvania R. R. near Mohican River.

Mohican River bridge, center pier.....	40 29 48.4	82 11 22.2
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Along Pennsylvania R. R. from Warsaw Junction to Walhonding, thence west along highways to Zuck.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Warsaw Junction, 100 feet east of station; center of crossing of Cleveland, Akron & Columbus Ry. and Pennsylvania R. R.....	40 19 43.8	82 00 27.6	
Milepost C-11, 530 feet east of; road crossing.....	40 19 56.4	82 02 08.8	7,936
Mohawk, opposite semaphore at station; center of track.....	40 20 11.9	82 04 04.7	9,107
Walhonding Run, siding west of highway bridge; center of road crossing at.....	40 21 10.2	82 05 25.9	8,617
Township line north-south.....	40 21 13.8	82 05 30.7	522
Road crossing.....	40 21 15.3	82 06 53.4	6,401
Walhonding, in east part of, 75 feet east and 30 feet north to center of triangle in forks of road at Sam Priest's blacksmith shop; iron post stamped "Prim. Trav. Sta. No. 68. Ohio, 1910".....	40 21 32.2	82 08 25.3	7,310
Pennsylvania R. R. crossing.....	40 22 01.4	82 09 33.0	6,013
Knox-Coshocton county line, center of road at.....	40 22 32.4	82 11 19.8	8,334
Reily Chapel, center of crossroads.....	40 22 41.1	82 12 01.7	3,354
Gambel schoolhouse, center of T road north, 15 feet north to center of triangle.....	40 23 02.8	82 13 20.6	6,482
Zuck, 0.2 mile east of; center of triangle at north end of steel bridge over a river, 25 feet south and 10 feet east to north end of bridge.....	40 22 45.4	82 14 13.7	4,467

At Zuck.

Zuck, 0.25 mile east of; center of triangle at north end of bridge over Walhonding River.....	40 22 45.4	82 14 13.7	.....
Zuck, steel bridge over Walhonding River, center of.....	40 22 40.9	82 14 30.4	1,365

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Danville, 1.75 miles southeast of; center of T road east, 200 feet north to road fork northwest, 5 feet east to center of triangle, 40 feet northeast to mail box.....	40 26 02.1	82 14 39.9
T road west, 15 feet south to culvert, 30 feet northwest to stump corner post to wire fence.....	40 25 19.7	82 14 42.2
Danville, 3 miles south of; crossroads, 30 feet southeast to oak, 50 feet northeast to corner picket fence.....	40 24 37.8	82 14 44.0
T. 7 N., R. 10 W., stone corner of secs. 17, 18, 23, and 24, north edge of T road to west, 500 feet south of red barn.....	40 23 59.2	82 14 45.5
Two-story white house, 700 feet west of; center of T road north.....	40 23 09.9	82 14 17.5
Zuck, 0.25 mile east of; center of triangle at three corners at north end of bridge over Kokosing River.....	40 22 45.4	82 14 13.7
Brush Run, four corners 150 feet northeast of schoolhouse, 10 feet northwest to center of plank bridge, 150 feet north to center of Brush Run Bridge.....	40 22 05.4	82 14 34.8
Brush Run schoolhouse, at northeast corner, 150 feet northeast to four corners, iron post stamped "Prim. Trav. Sta. No. 19. Ohio, 1907".....	40 22 04.2	82 14 35.5
Brush Run schoolhouse, 1 mile south of; center of triangle at road forks west and southeast.....	40 21 22.2	82 14 35.6
Esto, 1 mile west of; stone on north edge of east-west road at T road north.....	40 20 00.8	82 14 47.5
Esto, T road south, 25 feet southwest to front-yard gate, 45 feet northwest to store door.....	40 20 03.2	82 13 48.1
Tps. 5 and 6 N., R. 10 W., stone corner of secs. 2, 3, 22, and 23, on Butler-Jackson township line.....	40 18 43.2	82 13 51.1
Dennis Chapel, 900 feet east of, corner of secs. 2, 3, 22, and 23, Tps. 5 and 6 N., R. 10 W., 0.3 mile south of center of triangle at road forks, 30 feet northeast to locust tree.....	40 18 25.4	82 13 53.0

BRINKHAVEN QUADRANGLE—Continued.**Along highways near west border of quadrangle—Continued.**

Stations.	Latitude.	Longitude.
Dennis Chapel, 0.75 mile southwest of; T road northeast, 30 feet east to center of triangle, 30 feet north to telephone pole.....	40 17 55.4	82 14 17.8
Crossroads near top of hill, 40 feet northeast to maple tree, 40 feet northwest to wild-cherry tree.....	40 17 13.8	82 14 34.0
Dennis Chapel, 2.5 miles south and 0.5 mile west of; T road north.....	40 16 21.0	82 14 34.9
Mount Zion Church, 250 feet northwest of; guidepost at five corners, marked "Fallsburg $3\frac{1}{4}$ miles, New Castle 8 miles, Bladensburg 3 miles".....	40 15 17.1	82 14 53.1

Magnetic declination for north border, $2^{\circ} 09' W.$; for east border, $2^{\circ} 12' W.$; for west border, $2^{\circ} 51' W.$; for west part of center line, $2^{\circ} 16' W.$

BRISTOLVILLE QUADRANGLE.**Along highways near north border of quadrangle.**

Stations.	Latitude.	Longitude.
Forks of road.....	41 29 20.6	80 53 49.4
Schoolhouse, four corners at.....	41 29 20.3	80 52 46.3
Four corners on State road.....	41 29 20.5	80 52 05.7

Along highways near west border of quadrangle.

Phalanx post office, crossroads at, 20 feet southeast to guidepost, 18 feet west to stone in road.....	41 15 39.5	80 58 43.9
Phalanx post office, Y road 0.5 mile north of; 24 feet north to cross on telephone pole, 30 feet east to cross on gatepost.....	41 16 12.6	80 58 38.9
T. 5 N., R. 5 W., corner of secs. 31, 32, 33, and 34.....	41 17 38.6	80 59 01.1
Crossroads, 40 feet northeast to cross on telephone pole, 40 feet northwest to cross on fence post.....	41 18 30.3	80 59 01.0
T road east.....	41 19 43.2	80 59 00.9
Crossroads at schoolhouse and corner of secs. 1, 2, 3, and 4, T. 5 N., R. 5 W.; 20 feet northeast to E. F. Culp's mail box, 45 feet southeast to milk platform.....	41 20 21.4	80 59 00.7
T. 6 N., R. 5 W., stone at east corner of secs. 2 and 11.....	41 21 42.0	80 59 00.3
West Farmington, 1.5 miles southwest of, in G. A. McKay's orchard, 120 feet northeast of State road at road northeast, southwest corner of McKay's house bears N. $54^{\circ} 50' E.$, distant 211 feet, nail in east face of elm tree on west side of road bears N. $27^{\circ} 55' W.$, distant 48.7 feet; iron post stamped "Prim. Trav. Sta. No. 31".....	41 22 37.1	80 59 45.4
Pennsylvania R. R. at road crossing.....	41 24 09.1	80 59 24.5
Bundysburg, large flag pole at road intersection.....	41 25 17.9	81 00 17.4

Near Phalanx.

Phalanx station, 1 mile west of, road crossing of Erie R. R.....	41 15 12.8	80 58 39.8
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BROOKVILLE QUADRANGLE.**Along Pittsburgh, Cincinnati, Chicago & St. Louis Ry. in south part of quadrangle.**

Stations.	Latitude.	Longitude.
Crossing of north-south road.....	39 46 26.7	84 15 12.5
Cincinnati, Hamilton & Dayton Ry., crossing of.....	39 46 44.2	84 15 55.9
Milepost 35, road crossing 500 feet west of.....	39 47 23.0	84 17 33.0
Trotwood, crossing of north-south road at.....	39 47 50.1	84 18 40.6
Milepost 33, road crossing $\frac{1}{2}$ mile west of.....	39 48 17.4	84 19 48.9
Mileposts 31 and 32, road crossing between.....	39 48 43.5	84 20 53.9
Airhill, crossing of north-south road.....	39 49 10.5	84 22 01.0
Mileposts 29 and 30, crossing of north-south road between.....	39 49 38.4	84 23 10.2
Brookville station, road crossing 200 feet west of.....	39 50 13.1	84 24 36.9
Milepost 27, crossing of north-south road.....	39 50 33.6	84 25 28.4
Dodson, crossing of north-south road.....	39 51 02.1	84 26 40.1

BROOKVILLE QUADRANGLE—Continued.

Along the Dayton & Union R. R. between Bachman and milepost 21.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Bachman, crossing of National road.....	39	51	46.4	84	27	29.0
Wengerlawn, crossing of east-west road.....	39	52	26.2	84	27	53.9
Wrights, road crossing.....	39	53	20.4	84	28	40.0
Gillispie's road crossing.....	39	53	55.1	84	29	06.0
West Baltimore, road crossing.....	39	54	12.6	84	29	19.0
Mileposts 20 and 21, north-south road crossing between.....	39	54	41.5	84	29	40.6

Along highways near north border of quadrangle.

Tps. 4 and 6, Rs. 5 and 6, corner of secs. 1, 6, 7, and 12.....	39	59	42.0	84	15	27.7
Burckett pike crossing on "Big Four Route".....	39	59	41.9	84	15	49.0
T. 6, R. 5, corner of secs. 2, 3, 10, and 11.....	39	59	40.5	84	17	41.9
Burckett pike crossing, on curve of "Big Four Route".....	39	59	39.7	84	18	36.6
Ludlow Falls station, T road east, 0.5 mile south of.....	39	59	37.9	84	20	08.6
Ludlow Falls station, road crossing 160 feet west of.....	39	59	50.7	84	20	14.2
Crossing of north-south road near milepost No. 316, azimuth of railroad 97° 18'.....	39	59	31.8	84	21	40.7
Laura station, pike crossing 1 mile east of.....	39	59	31.5	84	23	34.4
Laura station, crossing of north-south road at.....	39	59	25.4	84	24	30.6
T. 7, R. 4, corner of secs. 3, 4, 9, and 10.....	39	59	32.5	84	25	38.2
Crossing of north-south section line road.....	39	59	19.3	84	26	47.0
Crossing of north-south section line.....	39	59	18.8	84	27	54.0
Pittsburgh, crossing of north-south township line road, Pittsburgh azimuth of tangent, "Big Four Route," 89° 20'.....	39	59	18.2	84	29	14.3

Along highways near west border of quadrangle.

Tps. 7 and 8, Rs. 3 and 4, corner of secs. 7, 12, 13, and 18.....	39	58	36.2	84	29	13.2
Germany, schoolhouse, crossroads about 900 feet east of.....	39	57	45.1	84	28	49.3
Crossroads.....	39	57	19.2	84	28	48.6
Schoolhouse No. 6, T road south at.....	39	56	01.5	84	28	59.3
Crossroads at Darke-Montgomery county line.....	39	59	07.5	84	28	58.1
Baltimore, Tps. 6 and 7, Rs. 3 and 4 E., corner of secs. 1, 6, 12, and 7.....	39	54	12.6	84	29	06.5
Dayton & Union R. R., at crossing of county line.....	39	53	55.1	84	29	06.0
Tps. 6 and 7, Rs. 3 and 4 E., corner of secs. 7, 12, 13, and 18.....	39	53	20.1	84	29	05.0
Tps. 6 and 7, Rs. 3 and 4 E., corner of secs. 13, 18, 19, and 24, azimuth of Pennsylvania R. R., 0.5 mile north of national road, 297° 27'.....	39	52	27.7	84	29	03.6
Crossing of national road and county line road.....	39	51	36.5	84	29	02.2
Tps. 6 and 7, Rs. 3 and 4 E., corner of secs. 25, 30, 31, and 36.....	39	50	42.6	84	29	00.9
Tps. 5, 6, and 7, Rs. 3 and 4 E., corner of secs. 1, 6, 31, and 36.....	39	49	50.2	84	28	59.8
Tps. 5 and 6, Rs. 3 and 4 E., quarter corner between secs. 7 and 12.....	39	48	37.2	84	28	58.1
Tps. 5 and 6, Rs. 3 and 4 E., corner of secs. 7, 12, 13, and 18.....	39	48	11.2	84	28	57.5
Tps. 5 and 6, Rs. 3 and 4 E., corner of secs. 13, 18, 19, and 24.....	39	47	18.7	84	28	56.3
Tps. 5 and 6, Rs. 3 and 4 E., corner of secs. 19, 24, 25, and 30.....	39	46	26.9	84	28	55.0
Tps. 5 and 6, Rs. 3 and 4 E., corner of secs. 25, 30, 31, and 36.....	39	45	34.4	84	28	53.9

BRYAN QUADRANGLE.

Along Lake Shore & Michigan Southern Ry.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Milepost 52, road crossing near.....	41	29	14.9	84	30	27.2
Milepost 53, road crossing near.....	41	29	07.1	84	31	14.8
Road crossing northeast-southwest.....	41	29	02.0	84	31	45.2
Mileposts 53 and 54, north-south road crossing between.....	41	28	57.9	84	32	10.3
Lake Shore & Michigan Southern Ry. and Cincinnati Northern R. R. crossing.....	41	28	54.3	84	32	32.1
Bryan, road crossing at.....	41	28	50.0	84	32	58.0
Bryan, road crossing at.....	41	28	49.2	84	33	02.5
Bryan station.....	41	28	48.8	84	33	04.9
Road crossing over railroad.....	41	28	36.1	84	34	21.6
Mileposts 56 and 57, north-south road crossing between.....	41	28	23.8	84	35	35.8
Road crossing over railroad.....	41	28	12.1	84	36	46.0
Milepost 59, north-south road crossing near.....	41	28	00.7	84	37	55.1
Melbern station.....	41	27	49.7	84	39	01.3
Milepost 60, north-south road crossing near.....	41	27	49.4	84	39	03.2
Road crossing over railroad.....	41	27	37.4	84	40	15.0
Milepost 62, north-south road crossing near.....	41	27	25.5	84	41	27.1
Mileposts 62 and 63, north-south road crossing between.....	41	27	21.4	84	41	52.1
Milepost 63, north-south road crossing near.....	41	27	13.8	84	42	37.8
Milepost 64, north-south road crossing near.....	41	27	02.6	84	43	45.9
Edgerton, road crossing at.....	41	26	54.7	84	44	33.3
Edgerton station.....	41	26	53.2	84	44	42.7
Edgerton, main street crossing.....	41	26	51.6	84	44	52.1

BRYAN QUADRANGLE—Continued.

Along highways along west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Edgerton, 3 miles north of, in southwest corner of yard of schoolhouse No. 22, St. Joseph Township, southwest corner of schoolhouse bears N. 62° 40' E., distant 61 feet; iron post stamped "Prim. Trav. Sta. No. 21, 1905".....	41 29 39.1	84 44 56.5
T. 6 N., R. 1 E., corner of secs. 9, 10, 15, and 16; T road west.....	41 29 02.5	84 44 53.7
T. 6 N., R. 1 E., secs. 15, 16, 21, and 22; T road east.....	41 28 10.3	84 44 52.9
T. 5 N., R. 1 E., corner of secs. 3 and 4; Defiance-Williams county line.....	41 25 33.9	84 44 55.3
T. 5 N., R. 1 E., corner of secs. 3 and 4; on township line.....	41 25 24.6	84 44 55.3
T. 5 N., R. 1 E., corner of secs. 3, 4, 9, and 10; crossroads.....	41 24 41.5	84 44 54.8
T. 5 N., R. 1 E., corner of secs. 9, 10, 15, and 16; crossroads.....	41 23 49.6	84 44 53.9
T. 5 N., R. 1 E., corner of secs. 15, 16, 21, and 22; crossroads.....	41 22 57.3	84 44 53.1
T. 5 N., R. 1 E., corner of secs. 21, 22, 27, and 28; crossroads.....	41 22 05.2	84 44 52.2
T. 5 N., R. 1 E., 4 miles north of Hicksville, northwest corner of sec. 34, northwest corner of yard of schoolhouse No. 9, limestone post 38 by 6 by 4 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 22".....	41 21 12.8	84 44 51.1
Tps. 4 and 5 N., R. 1 E., corner of secs. 3, 4, 33, and 34; crossroads.....	41 20 21.0	84 44 50.7
T. 4 N., R. 3 E., corner of secs. 3, 4, 9, and 10; crossroads.....	41 19 29.7	84 44 50.3
Hicksville, Bryan-Hicksville pike at road north, 1 mile northeast of.....	41 18 11.8	84 44 49.4

Along highways near southeast corner of quadrangle.

The Bend, railroad crossing, 60 feet east of station.....	41 16 57.9	84 30 55.4
T. 4 N., R. 3 E., corner of secs. 15, 16, 21, and 22; cross pikes.....	41 17 47.4	84 30 55.9
T. 4 N., R. 3 E., corner of secs. 9, 10, 15, and 16; crossroads.....	41 18 39.6	84 30 56.3
T. 4 N., R. 3 E., corner of secs. 3, 4, 9, and 10; crossroads.....	41 19 31.9	84 30 56.6

Along Cincinnati Northern R. R. near east border of quadrangle.

Moats, railway crossing 0.5 mile north of.....	41 20 23.6	84 31 30.8
Moats, railway crossing 1.5 miles north of.....	41 21 16.1	84 31 31.5
Ney, 0.5 mile south of, in northwest corner of pasture owned by John Burt, at east-west crossing on Baltimore & Ohio R. R., nail in north face of walnut tree bears S. 6° W., distant 18 feet, east rail of track at north-south crossing bears N. 74° W., distant 51 feet; iron post stamped "Prim. Trav. Sta. No. 14, 1905".....	41 22 34.5	84 31 31.9
Ney, east-west railway crossing 1 mile north of.....	41 23 53.0	84 31 33.5
Ney, east-west railway crossing 2 miles north of.....	41 24 45.0	84 31 34.1
Defiance-Williams county line, east-west road crossing on Cincinnati Northern R. R.....	41 25 37.6	84 31 34.7
Defiance-Williams county line, east-west road crossing 1 mile north of.....	41 26 30.1	84 31 35.4
Bryan, east-west crossing 1.25 miles south of.....	41 27 22.7	84 31 38.5
Bryan, crossing 400 feet south of tank on Cincinnati Northern R. R.....	41 28 07.6	84 32 31.7

Near south border of quadrangle.

T. 3 N., R. 2 E., northeast corner of sec. 3, in northeast corner of field of Henry Martin, iron post stamped "Prim. Trav. Sta. No. 7, 1905".....	41 15 10.1	84 36 40.2
T. 4 N., R. 2 E., south corner of secs. 33 and 34, T road north.....	41 15 10.0	84 37 48.6
T. 4 N., R. 2 E., south corner of secs. 32 and 33 of T road north.....	41 15 09.8	84 38 58.2
Tps. 3 and 4 N., Rs. 1 and 2 E., corner of secs. 1, 6, 31, and 36; crossroads.....	41 15 09.1	84 41 20.4
T. 3 N., R. 1 E., north corner of secs. 1 and 2; T road south.....	41 15 09.0	84 42 29.8
T. 4 N., R. 1 E., south corner of secs. 34 and 35.....	41 15 09.1	84 43 39.4

BUCYRUS QUADRANGLE.

Along highways near southwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Northeast-southwest pike road and road south.....	40 47 38.8	82 59 53.4
Marion City, road northeast-southwest.....	40 46 38.5	82 59 52.7
Pennsylvania R. R. crossing, azimuth 34° 22'.....	40 46 31.7	82 59 14.9

BUCYRUS QUADRANGLE—Continued.

Along highways near northwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tps. 1 N. and 1 S., R. 16 E., corner of secs. 34, 35, 2, and 3; road east-west.....	40 59 36.2	82 59 49.6
T. 1 S., R. 16 E., corner of secs. 3, 2, 11, and 10; road east-west.....	40 58 45.3	82 59 49.7
T. 1 S., R. 16 E., corner of secs. 10, 11, 14, and 15; road east-west.....	40 57 52.9	82 59 49.7
Northern Ohio Ry., road crossing on, azimuth 89° 50' W.....	40 57 26.5	82 59 49.9
T. 1 S., R. 16 E., corner of secs. 14, 15, 23, and 22; road east-west.....	40 57 00.2	82 59 49.9
T. 1 S., R. 16 E., corner of secs. 22, 23, 26, and 27; road east-west.....	40 56 07.9	82 59 50.0
T. 1 S., R. 16 E., corner of secs. 27, 26, 35, and 34; road east-west.....	40 55 15.5	82 59 50.4
Tps. 1 and 2 S., R. 16 E., corner of secs. 34, 35, 2, and 3; road east-west.....	40 54 23.4	82 59 50.8

Along highways from point near Bucyrus to point near Crestline.

Bucyrus, 3 miles southwest of; road crossing on Pennsylvania R. R.....	40 46 31.7	82 59 14.9
T. 3 S., R. 16 E., near quarter corner north side of sec. 26, southwest corner of field, T road east; iron post stamped "Prim. Trav. Sta. No. 20. Ohio, 1906".....	40 45 39.6	82 59 13.7
T. 3 S., R. 16 E., northeast corner of sec. 25; center of east-west road at north-south fence.....	40 45 40.3	82 57 30.5
Milepost 75, east-west pike crossing on Toledo & Ohio Central Ry., 0.25 mile north of.....	40 45 41.0	82 56 51.3
T. 16 N., R. 21 W., northeast corner of sec. 28; T road east, 25 feet northeast and 27 feet southeast to corner fence posts.....	40 45 20.8	82 51 27.2
T. 16 N., R. 21 W., northeast corner of sec. 27; 24 feet southwest to D. Johnson's mail box, 26 feet northwest to corner fence post.....	40 45 20.8	82 50 20.5
T. 16 N., R. 21 W., northeast corner of sec. 26; 27 feet southwest and 30 feet southeast to corner fence posts.....	40 45 20.9	82 49 12.0
T. 16 N., R. 21 W., northeast corner stone of sec. 25.....	40 45 20.0	82 48 02.8
T. 20 N., R. 20 W., northeast corner stone of sec. 30.....	40 45 19.3	82 46 52.9
T. 20 N., R. 20 W., southeast corner stone of sec. 19.....	40 45 19.3	82 46 52.8
Crestline, 1 mile south and 1 mile west of, nail in cherry tree in corner of field bears N. 70° 10', distant 40.9 feet; northeast corner of sec. 20 bears N. 53° W., distant 33.2 feet; iron post stamped "Prim. Trav. Sta. No. 22. Ohio, 1906".....	40 46 10.2	82 45 54.5

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Prim. Trav. Sta. No. 22, 1906.....	40 46 10.2	82 45 54.5	.....
Crestline, 2 miles southwest of, road crossing, west track of "Big Four Route".....	40 45 20.4	82 45 34.8	5,270
Center of T road north.....	40 44 34.1	82 45 05.0	5,227

Along highways east-west through center of quadrangle.

T. 21 N., R. 20 W., stone at corner of secs. 4, 5, 8, and 9.....	40 53 10.1	82 45 46.2	.....
T. 21 N., R. 20 W., corner of secs. 5, 6, 7, and 8.....	40 53 11.1	82 46 55.4	5,310
T. 21 N., R. 20 W., near center of sec. 8; center of crossroads.....	40 52 45.2	82 47 31.8	3,831
T. 21 N., R. 20 W., quarter corner west side of sec. 7; T road east.....	40 52 45.1	82 48 29.9	4,460
T. 17 N., R. 21 W., quarter corner east side of sec. 12.....	40 52 45.3	82 48 29.9	25
Schoolhouse, center of T road south at.....	40 52 34.1	82 49 37.7	5,333
T. 17 N., R. 21 W., stone at west corner of secs. 10 and 15, 550 feet north to crossroads.....	40 52 19.1	82 51 17.4	7,816
Sulphur Springs, at southeast corner of crossing of Bucyrus pike and east-west street at J. B. Bittikofer's residence, 40 feet west and 10 feet north to cross streets; iron post stamped "Prim. Trav. Sta. No. 52. Ohio, 1910".....	40 52 14.6	82 52 37.5	6,172
T. 2 S., R. 17 E., stone at corner of secs. 9, 10, 15, and 16; center of T road west.....	40 52 40.3	82 54 06.1	7,288
T. 2 S., R. 17 E., stone at corner of secs. 8, 9, 16, and 17; T road east.....	40 52 40.1	82 55 15.6	5,340
Brandywine, 0.7 mile north of; stone at center of crossroads.....	40 52 25.3	82 56 24.2	5,477
Bucyrus, 5 miles north of; Bucyrus-Sandusky pike at road east.....	40 52 25.1	82 57 44.6	6,181
T. 2 S., R. 16 E., corner of secs. 11, 12, 13, and 14; center of crossroads.....	40 52 38.3	82 58 42.1	4,616
T. 2 S., R. 16 E., corner of secs. 10, 11, 14, and 15.....	40 52 38.4	82 59 51.6	5,340

BUCYRUS QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 22 N., R. 20 W., northeast corner of sec. 5; stone, T road south.....	40 59 43.8	82 45 45.3
T road north, 20 feet west to stone corner.....	40 59 44.1	82 46 48.7
T. 18 N., R. 21 W., northeast corner of sec. 1, stone.....	40 59 44.8	82 47 47.1
T. 18 N., R. 21 W., northeast corner of sec. 2; T road south, 46 feet southeast to corner fence post, 48 feet southwest to telephone pole.....	40 59 45.8	82 48 56.9
T. 18 N., R. 21 W., northeast corner of sec. 3; T road south.....	40 59 47.0	82 50 05.5
T. 1 N., R. 17 E., near southeast corner stone of sec. 35, south of road at T road north, 60 feet east of T road south, corner sec. 35 bears N. 6° 15' W., distant 15.5 feet, nail in lime tree bears N. 72° 45' E., distant 111.5 feet, iron post stamped "Prim. Trav. Sta. No. 26. Ohio, 1906".....	40 59 35.8	82 51 44.4
T. 1 S., R. 17 E., northeast corner of sec. 3; T road south, 20 feet due north to middle of gate.....	40 59 36.0	82 52 54.9
T. 1 N., R. 17 E., southeast corner of sec. 33; T road north, 38 feet northwest to south end of picket fence, 30 feet northeast to corner of yard fence.....	40 59 35.9	82 54 03.3
T. 1 S., R. 17 E., northeast corner of sec. 4; T road south.....	40 59 35.9	82 54 04.1
Carrothers, 0.33 mile south of; center of crossroads.....	40 59 35.8	82 55 21.8
T. 1 N., R. 17 E., southeast corner stone of sec. 31; T road north.....	40 59 35.9	82 56 21.8
T. 1 S., R. 16 E., northeast corner stone of sec. 1; crossroads.....	40 59 36.0	82 57 31.1
T. 1 S., R. 16 E., northeast corner of sec. 2; crossroads, 40 feet southeast to maple tree, 33 feet northeast to guidepost.....	40 59 36.0	82 58 40.2
Southeast corner of crossroads, northeast corner stone sec. 3 bears S. 40° W. 37.7 feet; iron post stamped "Prim. Trav. Sta. No. 27. Ohio, 1906".....	40 59 36.0	82 59 48.8
T. 1 N., R. 16 E., southeast corner stone of sec. 34.....	40 59 36.2	82 59 49.6

Near west border of quadrangle.

T. 20 N., R. 20 W., northeast corner of sec. 17; T road north, 18 feet southwest to telegraph pole, 29 feet northwest to corner fence post.....	40 47 04.2	82 45 54.8
T. 20 N., R. 20 W., northeast corner of sec. 8, 20 feet due south to center of small bridge.....	40 47 56.4	82 45 53.9
T. 20 N., R. 20 W., northeast corner of sec. 5, 9 feet northwest to corner of rail fence.....	40 48 48.5	82 45 52.0
T. 21 N., R. 20 W., northeast corner of sec. 32; crossroads, 27 feet northwest to corner fence post.....	40 49 38.2	82 45 50.8

Magnetic declination for north border, 0° 44' W.; for south border, 0° 58' W.; for east border, 1° 03' W.; for east-west center line, 0° 59' W.

BUTLER QUADRANGLE.

Near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 5 N., R. 1 E., corner of secs. 28, 29, 32, and 33.....	41 21 13.1	84 45 59.8
T. 5 N., R. 1 E., corner of secs. 29, 30, 31, and 32.....	41 21 12.8	84 47 09.4
Hicksville, in southwest part of town, High Street at Antwerp pike south.....	41 17 24.5	84 45 59.1
Hicksville, crossroads 2 miles south of, 25 feet northwest to north end of culvert, 45 feet southeast to cross cut on telephone pole.....	41 16 01.0	84 45 40.7
Antwerp, 5 miles north of, in northwest corner of field of Everett Longworth, at crossroads, 1.5 feet southeast of large corner fence post; iron post stamped "Prim. Trav. Sta. No. 1, 1905".....	41 15 08.9	84 45 28.8

Along Ohio-Indiana State line.

T. 5 N., R. 1 E., corner on State line between secs. 30 and 31.....	41 21 13.0	84 48 13.1
T. 4 N., R. 1 E., corner of secs. 6 and 7.....	41 19 29.7	84 48 12.9
Road west.....	41 18 52.2	84 48 12.7
Baltimore & Ohio R. R. crossing.....	41 18 14.7	84 48 12.3
Roads west and southeast.....	41 18 00.1	84 48 12.3
Road west.....	41 17 07.6	84 48 11.9
Road northeast-southwest.....	41 16 15.8	84 48 11.5
Road west.....	41 15 23.2	84 48 11.4
Tps. 3 and 4 N., R. 1 E., township corner.....	41 15 09.4	84 48 11.4
T. 4 N., R. 1 E., south corner of secs. 31 and 32; T road north.....	41 15 09.2	84 47 07.8

BUTLER QUADRANGLE—Continued.

Along highways near Ohio-Indiana State line.

Stations.	Latitude.		Longitude.	
	°	'	°	'
T. 5 N., R. 1 E., corner of secs. 29, 30, 31, and 32; crossroads.....	41	21	84	47
T. 5 N., R. 1 E., corner of secs. 19, 20, 29, and 30; crossroads.....	41	22	84	47
T. 5 N., R. 1 E., corner of secs. 17, 18, 19, and 20; crossroads.....	41	22	84	47
Ohio-Indiana State line, center of road.....	41	23	84	48
Edgerton, 3 miles southwest of T road west near schoolhouse, 40 feet southeast to walnut tree on fence line, 30 feet northwest to cross on corner fence post.....	41	24	84	47
Tps. 5 and 6 N., R. 1 E., corner of secs. 1, 6, 31, and 36; T lane east.....	41	25	84	48
Ohio-Indiana State line, post on, near Lake Shore & Michigan Southern Ry. (Astronomic value, latitude, 41° 26' 13.7"; longitude, 84° 48' 08.6").....	41	26	84	48
Edgerton, road crossing, south rail of north track, Lake Shore & Michigan Southern Ry., 1.5 miles southwest of.....	41	26	84	46
Edgerton T road south, 1.5 miles west and 1 mile north of, 25 feet southeast to cross on corner fence post, 27 feet southwest to cross on corner fence post.....	41	27	84	46
Ohio-Indiana State line, stone at turn of road and 600 feet south of T road west.....	41	27	84	48
T. 6 N., R. 1 E., secs. 7 and 18; T road east at west corner of.....	41	29	84	48

CALDWELL QUADRANGLE.

Along highways from Roxbury Ferry east to Lowell.

Stations.	Latitude.		Longitude.	
	°	'	°	'
Roxbury, 1 mile north of ferry, 100 feet east of ford of Mill Creek, road forks northwest and southwest, center of triangle.....	39	32	81	44
Roxbury, 1.5 miles northeast of ferry, road forks at top of hill northwest and southwest, 100 feet northwest to large oak tree, 20 feet northeast to walnut tree.....	39	32	81	43
Swifts, 0.5 mile south of ferry; T road up hill to west, west edge of north-south road.....	39	32	81	43
Swifts, ferry across Muskingum River; ferry bell at west landing.....	39	32	81	43
Swifts, 50 feet south of station; center of main track Baltimore & Ohio R. R. at road crossing.....	39	33	81	42
Maple Grove Church, roads north and east; center of triangle.....	39	33	81	42
Olive Chapel, large oak tree in northeast corner of crossroads.....	39	33	81	42
Olive Chapel, 1.25 miles east of; crossroads, 45 feet south to bridge, 45 feet west to walnut tree.....	39	33	81	39
Waterford, 0.5 mile northwest of, 250 feet east of Baltimore & Ohio R. R.; T road west, small maple tree in center of triangle.....	39	33	81	38
Waterford, intersection of Water and Ferry streets, 40 feet southeast to northeast corner of C. E. Vaughn & Co.'s store, 55 feet southeast to northwest corner of brick store, 90 feet north to south end of highway bridge over Muskingum River.....	39	32	81	38
Beverly, intersection of Ferry and Fifth streets.....	39	32	81	38
Beverly, in top of west wall at north end of Government canal lock at foot of Fifth Street; aluminum tablet stamped "Prim. Trav. Sta. No. 7. Ohio, 1907".....	39	32	81	38
Beverly, 1.25 miles northeast of, T road north; signpost painted "Beverly 1 mile, Marietta 19 miles".....	39	33	81	36
Muskingum River, 0.25 mile south of; top of bare hill, the western of two lone trees.....	39	32	81	35
Coal Run, T street north, 50 feet northwest to southeast corner of W. P. Steven's store, 40 feet northeast to southwest corner of Ross's store.....	39	34	81	34
Coal Run, 1 mile southeast of, 300 feet north of road; cupola of schoolhouse.....	39	33	81	33
Covered bridge over Big Run, 120 feet west of center; T road north, 10 feet south to high telegraph pole, 15 feet north to center of triangle.....	39	33	81	33
Big Run, 1.5 miles southeast of bridge, second-class T road north, red brick schoolhouse; center of main road.....	39	31	81	32
Upper Lowell, west edge of, T street east; center of triangle.....	39	31	81	31
Lowell dam, square cut in top of stone on north end of east abutment of dam across Muskingum River, marked "U. S. B. □ M. (U. S. Engineer Corps b. m.) 608.16".....	39	31	81	30
Lowell, junction of streets at east end of highway bridge over river, 15 feet south to elm, 40 feet northwest to corner of dwelling.....	39	31	81	30
Lowell, in top of east wall at north end of canal lock No. 3; aluminum tablet stamped "Prim. Trav. Sta. No. 8. Ohio, 1907. Elev. 617".....	39	31	81	30
Lowell, junction of Walnut and Canal streets, 25 feet west to high telephone pole, 30 feet southeast to corner of brick store.....	39	31	81	30

CALDWELL QUADRANGLE—Continued.

Along highways from Keith west to Meigs Creek.

Stations.	Latitude.	Longitude.
Keith, 1.25 miles southwest of; T road north, center of triangle, 125 feet north to covered bridge over creek, 200 feet east to T road south, 120 feet west to Noble-Morgan county line.	° ' "	° ' "
Keith, about 1.25 miles southwest of; covered bridge over stream, 120 feet west of Noble-Morgan county line, center of road (house just north of road is said to be about on line).	39 38 46.2	81 35 09.3
Jordan, 0.5 mile south of schoolhouse; road forks west and south, 30 feet north to corner of fence, 40 feet west to mail box, 50 feet east to creek.	39 38 46.6	81 35 10.7
Covered bridge over Olive Green Creek, 130 feet west of; T road east, 25 feet west to elm tree, 30 feet north to stream.	39 38 35.7	81 36 02.9
Covered bridge over Olive Green Creek, 0.5 mile north of; T road west.	39 38 45.3	81 36 27.2
Smiths School, cupola of schoolhouse.	39 39 07.7	81 36 19.5
Smiths School, 800 feet west of; road forks north and southwest, center of triangle.	39 39 29.6	81 37 08.5
Smiths School, 0.7 mile northwest of; road forks south and southeast, ford of stream.	39 39 28.5	81 37 18.3
Reinersville, 2.25 miles south of; road forks north, east, and west, 3 feet north to B. F. Welch's mail box in triangle.	39 39 24.5	81 37 56.8
Reinersville, 2.25 miles south of; stone corner of sec. 4, T. 6 N., R. 10 W., in field north of east-west road, 200 feet west of road forks.	39 39 31.6	81 38 48.3
Reinersville, 2 miles south of, at junction of Little Olive Green Creek with Allen River, crossroads; large forked elm tree in triangle.	39 39 31.3	81 38 50.8
Crossroads church, 0.5 mile north of, T road east; mail box in triangle, 50 feet east to oak tree.	39 39 15.3	81 39 39.3
Reinersville, 3 miles south of, 450 feet south of crossroads church, in southeast corner of front-yard fence to residence of C. E. Drake, T road north, iron post stamped "Prim. Trav. Sta. No. 10, Ohio, 1907"	39 40 23.3	81 41 18.5
Tps. 6, 7, 10, and 11 N., Rs. 10, 11 W., stone corner of secs. 1, 6, 31, and 36.	39 39 52.6	81 41 28.3
Dyes Fork of Meigs Creek, center of covered bridge over.	39 40 03.8	81 41 58.6
T. 10 N., R. 11 W., secs. 1 and 2, north-south line between, near Emory Church.	39 39 35.2	81 42 28.6
Emory Church, 300 feet southwest of, crossroads; center of triangle.	39 39 32.9	81 43 22.7
Meigs Creek, covered bridge over; crossroads, 50 feet west to end of bridge, 20 feet south to corner of fence.	39 39 40.7	81 43 45.5
Meigs Creek, 600 feet west of covered bridge over; corner stone sec. 10, T. 10 N., R. 11 W., in triangle at second-class T road north.	39 39 17.9	81 44 26.9
	39 39 18.6	81 44 35.8

Along highways near north border of quadrangle.

Sharon, T. 6 S., R. 9 W., corner of secs. 5, 6, 7, and 8; crossroads.	39 44 10.1	81 33 53.9
Sharon, 1.5 miles west of, J. Nicolas's residence, just south of; T road southwest, 9 feet west to J. Wallace's mail box.	39 44 22.9	81 35 29.9
Olive Green, T road south, 11 feet due south to center of small bridge.	39 44 38.7	81 36 53.0

Along highways from Lowell north to Keith.

Lowell, 0.5 mile north of; T road west, 20 feet southeast to watering trough, 60 feet west to center of bridge over Cras Creek.	39 32 12.2	81 30 50.4
Lowell, 2 miles north of, road forks north and southeast; center of triangle.	39 33 17.2	81 31 51.1
White schoolhouse, 1,500 feet north of; T road west, 5 feet west to center of triangle, 40 feet south to telephone pole.	39 34 23.4	81 31 58.2
Fork of second-class road to southeast, 30 feet south to oak tree on bank, 30 feet north to oak tree on north edge of road.	39 35 03.1	81 31 36.7
Big Run, 30 feet south of bridge over creek; crossroads, 5 feet east to center of triangle.	39 35 33.5	81 31 54.6
Big Run, 1.4 miles north of; hackberry tree in forks.	39 36 48.9	81 31 56.0
T. 5 N., R. 9 W., northeast corner stone of sec. 21.	39 37 43.7	81 31 42.9
Jackson, 0.25 mile north of town house, road forks north and northeast, center of triangle.	39 37 48.7	81 31 54.2
Keith Fork of Olive Green Creek, 1 mile southeast of; crossroads, 10 feet south to center of triangle, 30 feet southeast to center of bridge.	39 38 36.4	81 32 10.0
Keith, 1 mile east of, 500 feet north of Keith Fork of Olive Green Creek; T road west, 5 feet east to center of triangle, 20 feet southwest to cherry tree and sign "Keith 1 mile, Lowell 9 miles, Caldwell 8 miles"	39 39 15.9	81 32 33.9
Keith, 1 mile east of, 500 feet north of bridge over Keith Fork of Olive Green Creek, at junction with Lowell-Caldwell road, in face of brownstone ledge north of T road west; aluminum tablet stamped "Prim. Trav. Sta. No. 9, Ohio, 1907"	39 39 16.1	81 32 34.1
Keith, 0.6 mile east of, east side sec. 8, T. 5 N., R. 9 W.; north edge of road at crossing.	39 39 23.3	81 32 50.6
Keith, 500 feet east of store; T road north, 35 feet north to south end of covered bridge.	39 39 26.0	81 33 37.1

Magnetic declination for north border, 2° 21' W.; for south border, 2° W.; for east border, 2° 12' W.; for center, 1° 53' W.

CAMBRIDGE QUADRANGLE.

Along highways near northwest corner of quadrangle.

Stations.	Latitude.	Longitude.
West Lafayette, 2.5 miles south of; forks of road at McClain's schoolhouse, 24 feet southeast to guidepost, 22 feet northwest to cross on corner fence post.....	° ' " 40 14 37.3	° ' " 81 44 30.4
West Lafayette, 3 miles south of, at guidepost "Lafayette 3 miles, Plainfield 4 miles"; T road north, 37 feet northwest to guidepost, 39 feet northeast to cross on telegraph pole.....	40 13 53.0	81 44 41.2
Bridge over Bacon Run, 0.18 mile north of; T road west, 30 feet northeast to front-yard gate, 34 feet southeast to mail box.....	40 13 12.8	81 43 40.6
Plainfield, 0.5 mile west of; crossroads, 30 feet northeast to cross on corner fence post, 24 feet southeast to sandstone boulder.....	40 12 13.1	81 43 30.1
Flowing well, T road northwest at, 14 feet east to flowing well, 21 feet west to cross on corner fence post.....	40 11 22.2	81 44 10.0
Top of hill, Y road at, 27 feet northeast to guidepost, "Coshocton 13 miles," 21 feet west to mound.....	40 14 53.8	81 37 59.5

Magnetic declination for north border, 1° 57' W.; for west border, 2° 10' W.

CANAL DOVER QUADRANGLE.

Along Wheeling & Lake Erie R. R. near New Cumberland.

Stations.	Latitude.	Longitude.
Carroll-Tuscarawas county line, center of road at north-south fence line.....	° ' " 40 31 31.2	° ' " 81 16 00.8
Large barn at T road south, 27 feet northeast to corner of barn, 26 feet west to corner fence post.....	40 31 24.7	81 16 58.1
New Cumberland, 1.25 miles south of; road crossing.....	40 31 35.6	81 18 40.4
New Cumberland, east-west road crossing.....	40 32 38.4	81 18 52.2

Along highways near south border of quadrangle.

New Cumberland, 1 mile northwest of, T road north, 25 feet due south to west end of picket fence at gate.....	40 32 59.4	81 19 56.9
Coal shaft, 0.5 mile west of, west end of box culvert at T road north.....	40 33 01.0	81 20 58.4
Fairfield, center of road in front of township house.....	40 32 42.5	81 22 12.9
Johnston, 0.5 mile west of, 6 miles east of Canal Dover, in southwest corner of stone foundation of G. Burgess's barn; aluminum tablet stamped "Prim. Trav. Sta. No. 34, 1906".....	40 32 29.8	81 23 09.9
Line between Rs. 1 and 2 W., center of road at picket fence south.....	40 31 50.6	81 25 02.1

Along Pennsylvania R. R. east of Canal Dover.

Wagon bridge over Tuscarawas River; east-west road crossing on Pennsylvania R. R.....	40 31 47.5	81 25 47.1
Milepost No. 23, private road crossing.....	40 31 01.4	81 27 24.6
Canal Dover, street crossing at station.....	40 31 05.0	81 28 39.8
Canal Dover, in northwest part of; east-west road crossing on Baltimore & Ohio R. R.....	40 31 36.5	81 29 26.6
Canal Dover, at southeast corner of T road southwest, just west of steel bridge over Sugar Creek and about 1 mile northwest of Pennsylvania R. R. station, nail in elm tree bears S. 41° E. distant 25.6 feet, nail in wild-cherry tree north of road bears N. 23° 2' E. distant 53.2 feet, T road northwest bears N. 5° W. distant 44 feet; iron post stamped "Prim. Trav. Sta. No. 42. Ohio, 1906".....	40 31 42.0	81 29 51.6

Along highways near east border of quadrangle.

Carroll-Stark county line, center of Waynesburg-Marcus road at east-west fence..	40 39 02.5	81 15 00.7
Waynesburg, 170 feet west of station; road crossing on Pennsylvania R. R.....	40 40 08.4	81 15 32.2
T. 17 N., R. 7 W., east side of sec. 16; crossroads at quarter corner.....	40 41 15.1	81 15 33.1
T. 17 N., R. 7 W., northeast corner of sec. 9, center of road at north-south rail fence, short distance west of brick schoolhouse.....	40 42 34.4	81 15 28.0

CANTON QUADRANGLE.
Along Pennsylvania R. R. near Canton.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing 2.150 feet east of milepost 107.....	40 47 11.6	81 27 56.6
Road crossing 700 feet west of milepost 104.....	40 46 54.1	81 25 10.8
Canton, crossing of Pennsylvania and Baltimore & Ohio railroads.....	40 47 24.2	81 22 01.1

Along Baltimore & Ohio R. R. between Canton and Akron.

Canton station.....	40 48 01.5	81 23 15.1
Milepost 54, road crossing 1,525 feet south of.....	40 51 16.8	81 24 48.2
New Berlin station, road crossing 65 feet north of.....	40 52 54.0	81 25 31.3
Greentown station, road crossing 245 feet north of.....	40 55 42.5	81 25 9.8
Myersville station, road crossing 215 feet north of.....	40 58 34.0	81 25 35.7
Milepost 44, road crossing 280 feet north of.....	40 59 41.9	81 26 43.5

Along Wheeling & Lake Erie R. R. between Canton and milepost 67.

Canton, crossing of Pennsylvania R. R.....	40 47 43.3	81 22 06.3
Milepost 63, road crossing 1,826 feet west of.....	40 46 26.4	81 19 16.9
Osnaburg station, road crossing 425 feet east of.....	40 47 03.7	81 16 58.6
Milepost 67, road crossing 1,650 feet east of.....	40 45 58.0	81 14 50.9

CARROLLTON QUADRANGLE.

Along Wheeling & Lake Erie R. R. from Robertsville to Minerva.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Robertsville station, road crossing 90 feet west of.....	40 45 38.9	81 11 20.6
Milepost 73, road crossing 180 feet south of.....	40 44 54.2	81 09 23.0
Milepost 75, road crossing 450 feet south of.....	40 43 09.5	81 09 10.8
Minerva, crossing of Pennsylvania R. R. (New Philadelphia branch) and Pennsylvania R. R. (mainline).....	40 43 31.5	81 06 25.2
Minerva station, Pennsylvania R. R., road crossing about 2,200 feet northeast of.....	40 43 40.3	81 06 08.9

Near Lynchburg.

Lynchburg, road crossing 0.25 mile south of.....	40 44 19.4	81 00 02.4
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Along Wheeling & Lake Erie R. R. near Barracks.

Barracks station, north-south road crossing.....	40 32 00.6	81 14 44.2
T. 15 N., R. 7 W., corner stone of secs. 10, 11, 16, and 17; north-south fence at fence west.....	40 32 05.4	81 14 49.6

Near west border of quadrangle.

T. 15 N., R. 7 W., north corner of secs. 12 and 18, east-west rail fence at picket fence south.....	40 33 51.5	81 14 45.0
T. 16 N., R. 7 W., south corner stone of secs. 7 and 13.....	40 33 51.5	81 14 45.3
Methodist Church, about 800 feet west of; road forks, 26 feet southeast to cross on gate, 15 feet northeast to end of picket fence.....	40 34 30.0	81 14 09.0
Methodist Church, 1 mile north of; T road east, 18 feet due north to southwest corner of shed.....	40 35 25.8	81 14 17.9
Top of hill; T road east, 10 feet southwest to small apple tree, 27 feet southeast to corner fence post.....	40 36 21.9	81 14 26.0
Marces, 0.75 mile south of, 135 feet north of T road east, in southwest part of stone abutment of wagon bridge; aluminum tablet stamped "Prim. Trav. Sta. No. 33, 1906".....	40 37 27.6	81 14 42.1
Marces, Catholic Church spire.....	40 38 04.0	81 14 34.6
Marces, T road south, 26 feet southwest to S. Hitt's mail box, 53 feet northwest to southwest corner of yard fence.....	40 38 06.8	81 14 45.2
Mapleton, 1.75 miles south of; T road west, 13 feet northwest to north end of culvert, 21 feet southwest to south end of same culvert.....	40 43 25.4	81 14 39.8
Mapleton, 1 mile south of; crossroads, 15 feet due east to east end of culvert.....	40 44 04.1	81 14 48.2
Mapleton, crossroads, 20 feet southeast to guidepost, 25 feet northwest to corner of schoolhouse grounds.....	40 44 47.5	81 14 28.2
Milepost 67, 1,650 feet east of; east-west road crossing on Wheeling & Lake Erie R. R.....	40 45 58.0	81 14 50.9

CARROLLTON QUADRANGLE—Continued.

Near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 14 N., R. 5 W., corner of secs. 19, 20, 25, and 26, at junction of fences.....	40 34 24.7	81 03 15.0
Carrollton, main street crossing on Wheeling & Lake Erie R. R.....	40 34 25.0	81 05 16.4
Tps. 14 and 15 N., Rs. 5 and 6 W., corner of secs. 1, 6, 31, and 36, at junction of fences.....	40 33 36.5	81 05 36.9
Bridge No. 30 B., 1 mile west of brick plant, in southeast corner of stone abutment of bridge; aluminum tablet stamped "Prim. Trav. Sta. No. 31. Ohio, 1906".....	40 33 59.4	81 07 49.4
Scotts station, north-south road crossing.....	40 33 18.9	81 09 14.4
Dellroy, 1.5 miles east of, northwest-southeast road crossing.....	40 33 07.0	81 10 28.3
Dellroy station.....	40 33 29.1	81 12 06.9
Atwood station, road crossing bears S. 41° W., distant 20 feet, in northwest corner of stone retaining wall to culvert; aluminum tablet stamped "Prim. Trav. Sta. No. 32, 1906".....	40 33 10.2	81 14 27.9

Magnetic declination for east border, 1° 53' W.; for west border, 2° 20' W.

CELINA QUADRANGLE.

Along Cincinnati Northern R. R.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Blind siding, road crossing east-west, 200 feet south of.....	40 30 07.5	84 36 32.1
Pike crossing east-west.....	40 31 39.4	84 35 05.4
Celina, main road crossing in southwest part of town.....	40 32 45.8	84 34 35.7
Cemetery, road crossing east-west at.....	40 33 37.8	84 34 39.6
Road crossing east-west.....	40 34 30.3	84 35 09.3
Road crossing east-west.....	40 35 49.4	84 35 53.5
Schoolhouse, east-west road crossing 0.25 mile west of.....	40 36 41.8	84 36 23.4
Road crossing east-west.....	40 37 34.2	84 36 53.4
Tana, road crossing east-west.....	40 38 00.3	84 37 08.5
Schoolhouse, road crossing 800 feet west of.....	40 39 18.6	84 37 52.2
Road crossing east-west.....	40 40 37.3	84 38 32.9
Rockford, road crossing.....	40 41 26.3	84 38 43.0
Road crossing northeast-southwest.....	40 41 52.5	84 38 41.4
Road crossing north-south.....	40 42 53.2	84 38 16.0
Schoolhouse, road crossing east-west 0.25 mile east of.....	40 44 32.2	84 37 33.3

Along highways near west border of quadrangle.

T. 3 S., R. 1 E., corner of secs. 26, 27, 34, and 35; T road north.....	40 44 33.1	84 43 37.3
Township line crossing north-south road; also Van Wert-Mercer county line.....	40 43 41.0	84 44 11.8
T. 4 S., R. 1 E., center of sec. 2.....	40 43 11.6	84 43 05.0
T. 4 S., R. 1 E., center of sec. 11; crossroads.....	40 42 22.0	84 43 04.6
T. 4 S., R. 1 E., center of sec. 14; crossroads.....	40 41 29.7	84 43 04.3
T. 4 S., R. 1 E., corner of secs. 14, 15, 22, and 23; crossroads.....	40 41 03.7	84 43 38.7
T. 4 S., R. 1 E., corner of secs. 22, 23, 26, and 27; crossroads.....	40 40 11.3	84 43 38.8
T. 4 S., R. 1 E., corner of secs. 26, 27, 34, and 35; crossroads.....	40 39 18.6	84 43 38.6
Tps. 4 and 5 S., R. 1 E., corner of secs. 2, 3, 34, and 35; crossroads.....	40 38 26.1	84 43 38.5
T. 5 S., R. 1 E., corner of secs. 2, 3, 10, and 11; crossroads.....	40 37 33.7	84 43 37.8
Hinton, 1 mile west of, in southwest corner of crossroads, 20 feet east and 25 feet north to corner of secs. 10, 11, 14, and 15, T. 5 S., R. 1 E.; iron post stamped "Prim. Trav. Sta. No. 22. Ohio, 1909".....	40 36 40.9	84 43 38.2
T. 5 S., R. 1 E., corner of secs. 14, 15, 22, and 23; crossroads.....	40 35 48.6	84 43 38.5
T. 5 S., R. 1 E., corner of secs. 22, 23, 26, and 27; T road east.....	40 34 56.0	84 43 36.6
T. 5 S., R. 1 E., corner of secs. 26, 27, 34, and 35; crossroads.....	40 34 03.4	84 43 37.6
Tps. 5 and 6 S., R. 1 E., corner of secs. 2, 3, 34, and 35.....	40 33 10.8	84 43 36.7
T. 6 S., R. 1 E., corner of secs. 2, 3, 10, and 11; crossroads.....	40 32 18.3	84 43 36.7
T. 6 S., R. 1 E., corner of secs. 10, 11, 14, and 15; T road west.....	40 31 25.8	84 43 36.8
T. 6 S., R. 1 E., corner of secs. 14, 15, 22, and 23; crossroads.....	40 30 33.3	84 43 36.8

Magnetic declination for west border, 0° 46' E.

8702°—Bull. 552—14—3

CHAGRIN FALLS QUADRANGLE.

Along highways in northwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
North Woodland, four corners.....	41 29 10.1	81 29 52.3
Three corners; road to north, 20 feet north to telephone pole, 25 feet south to high fence.....	41 29 31.0	81 28 36.9
Orauga Hill Church; four corners, 35 feet northwest to telephone pole.....	41 29 30.1	81 26 18.2

CHARDON QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Schoolhouse of special district No. 2, four corners at.....	41 41 24.4	81 00 58.8
Four corners.....	41 40 41.3	81 00 58.6
Foley's four corners.....	41 39 57.7	81 00 59.0
Catholic Church, three corners just south of.....	41 38 30.4	81 00 59.4
Trumbull Creek, center of iron highway bridge.....	41 38 08.2	81 00 09.9
County line, four corners at.....	41 30 31.1	81 00 11.4

Along highways near south border of quadrangle.

Fowlers Mill, 1 mile east of; four corners, 50 feet northeast to signpost, 25 feet southeast to telephone pole.....	41 31 42.8	81 14 36.5
Munson Township, school district No. 6, four corners at brick schoolhouse.....	41 31 45.4	81 13 00.1
Munson Township, school district No. 6, southeast corner of brick schoolhouse.....	41 31 46.2	81 13 01.2
Munson-Newberry town line.....	41 30 00.8	81 12 58.7
East Claridon, 1.5 miles southwest of; four corners, 34 feet northwest to nail in maple tree, 23 feet southwest to nail in tree.....	41 31 12.9	81 07 32.5
Claridon triangulation station of U. S. Lake Survey.....	41 30 39.38	81 07 05.33
Baltimore & Ohio R. R., center of track at road crossing.....	41 30 18.6	81 06 07.0
Bridge 300 feet west of four corners; 45 feet south to 3-pronged cherry tree, 75 feet north to dead oak tree.....	41 30 04.2	81 04 17.2
Huntsburg, 2 miles south of, four corners; 50 feet northeast to maple tree, 30 feet southeast to signpost "Huntsburg 2 miles, Middlefield 4 miles".....	41 30 35.1	81 03 06.4
Huntsburg, 2.5 miles south of, 0.5 mile east of four corners, in corner stone at south end of west abutment of steel bridge over branch of Phelps Creek; bronze tablet stamped "Prim. Trav. Sta. No. 122".....	41 30 35.2	81 02 37.3
Ashtabula-Geauga county line; four corners, 1.75 miles west of Iona.....	41 30 31.1	81 00 11.4

Along highways from a point 1 mile east of Fowlers Mill to Painesville.

Chardon, 1 mile southeast of; forks of road, 25 feet east to signpost.....	41 33 43.2	81 12 04.6
Chardon, in first stone of banister to west end of stone steps to south entrance to courthouse; aluminum tablet stamped "Prim. Trav. Sta., No. 14".....	41 34 57.2	81 12 12.2
White church, four corners at; 45 feet southeast to maple tree, 35 feet southwest to telephone pole.....	41 37 35.1	81 13 12.8
Concord station, Baltimore & Ohio R. R., center of main track and road crossing.....	41 39 55.1	81 13 18.2
Concord, in large stone at east end of culvert, 250 feet north of Baltimore & Ohio R. R.; bronze tablet stamped "Elevation, 987, Cleveland".....	41 39 57.3	81 13 18.7
Concord Center, four corners, 30 feet northeast to maple tree, 45 feet southwest to maple tree.....	41 40 28.0	81 13 27.9
Painesville, 1 mile south of; three corners and forks of road to southwest, 45 feet northeast to yard fence, 35 feet southeast to maple tree.....	41 42 24.1	81 14 20.1
Painesville, First Congregational Church spire; located by triangulation of U. S. Lake Survey.....	41 43 25.76	81 14 43.37
Painesville, intersection of East Main and North State streets.....	41 43 33.5	81 14 28.7
Painesville, Episcopal Church spire, located by triangulation of U. S. Lake Survey.....	41 43 40.98	81 14 35.16

CHILLICOTHE QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Scioto River, east end of bridge over.....	39 28 21.9	82 59 43.1
Scioto River Bridge, 1 mile east of; nail in hub at T road west, 24 feet east to cross on telephone pole, 27 feet northwest to D. W. Kellenberger's mail box.....	39 28 20.9	82 58 43.8
Corner of secs. 1, 2, 35, and 36; 15 feet west to stone between Ross and Pickaway counties, 35 feet southeast to cross cut on rail fence.....	39 28 45.6	82 58 42.4
Meado, 1 mile southwest of; T road northwest, 21 feet south to cross on gatepost, 30 feet west to cross on fence post.....	39 29 49.0	82 53 29.1
Oak Grove schoolhouse; crossroads, 37 feet north to A. J. & Guy E. Pouter's mail box, 24 feet southwest to cross on large corner fence post.....	39 29 43.6	82 50 56.8
Whistler, crossroads at church, 36 feet northwest to iron fence post, 34 feet southeast to cross on telephone pole.....	39 29 11.0	82 49 19.7
T. 11 N., R. 20 W., corner of secs. 28, 29, 32, and 33.....	39 29 09.3	82 48 46.9
Whistler, 1 mile east of; T road north, 36 feet northwest to George Duhrsten's mail box, 18 feet southeast to south end of easternmost culvert.....	39 29 07.5	82 48 13.4
T. 11 N., R. 20 W., corner of secs. 27, 28, 33, and 34; T road north, 21 feet south to cross on fence post, 30 feet north to cross on corner fence post.....	39 29 05.6	82 47 40.0
T. 11 N., R. 20 W., corner of secs. 26, 27, 34, and 35; T road north, 21 feet south to cross on fence post, 27 feet northwest to cross on corner fence post.....	39 29 02.0	82 46 33.6
T road east, 18 feet west to cross on gatepost.....	39 29 07.2	82 45 23.5

Along highways near east border of quadrangle.

Adelphi, 1 mile south of; T road west, 33 feet northwest to cross on corner fence post, 21 feet to northwest corner of stone culvert.....	39 26 51.2	82 45 01.7
George Haddox's residence; Y road east, 10 feet south to cross on board fence, 30 feet west to cross on post.....	39 21 37.5	82 45 41.8
Summit of hill; center of road, 30 feet north to cross on gatepost.....	39 21 22.6	82 45 58.4
Tedron farm, forks of road near head of Piney Creek; 18 feet northwest to cross on fence post, 24 feet east to cross on fence post.....	39 21 12.6	82 46 56.5
Watson Bobbett's farm, T road north; 21 feet south to cross on rail fence.....	39 20 12.9	82 46 38.7
Intersection of roads, about 0.75 mile north of store; 25 feet southwest to mail box, 25 feet east to cross on corner fence post.....	39 18 14.6	82 46 48.1
Store, 0.33 mile south of; T road west, 27 feet northwest to cross on corner fence post, 25 feet south to J. W. Cunningham's mail box.....	39 17 20.5	82 46 31.1
Schoolhouse; T road northwest, 21 feet south to cross on gatepost, 36 feet northeast to cross on board fence.....	39 16 51.7	82 46 25.2
Gillespieville, in ground owned by George Radcliff, southwest corner of Radcliff's residence bears N. 25° 45' E., distant 98.9 feet, northeast corner of Radcliff's general store bears S. 35° W., distant 126.3 feet, in top of sandstone post 6 by 10 by 30 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 11".....	39 16 01.9	82 47 24.4
Gillespieville, 1 mile west of; T road south, 27 feet southwest to mail box, 35 feet southeast to cross on fence post.....	39 16 09.5	82 48 24.0
Gillespieville, about 2 miles west of; T road north, 36 feet northeast to cross on corner fence post, 21 feet southwest to cross on walnut tree.....	39 16 33.8	82 49 29.7
Bridge over Walnut Creek, center of.....	39 16 49.2	82 50 21.9
Vinton-Ross county line, road south.....	39 15 10.2	82 45 30.9
T. 9 N., R. 19 W., stone at northwest corner of sec. 19, on Vinton-Ross county line.....	39 15 07.5	82 45 31.2

Along Baltimore & Ohio Southwestern R. R. between Schooley and Chillicothe.

Schooley station, in C. E. Harness's pasture, on north side of railroad, nail in cross cut on south face of elm tree bears N. 3° 35' W., distant 51.1 feet, north rail at center of north-south road crossing, azimuth 8° 26' 50", distant 159.8 feet, in top of sandstone post 6 by 8 by 30 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 12".....	39 15 59.0	82 52 11.0
Milepost 104, 1,500 feet northwest of; private road crossing.....	39 16 47.9	82 53 19.5
Gravel pit, 235 feet northwest of west end of switch; private road crossing.....	39 17 35.1	82 54 22.0
Scioto River Bridge, west end of.....	39 18 18.9	82 55 20.0
Chillicothe-Gillespieville pike crossing.....	39 18 50.7	82 56 02.2
Milepost 99, 820 feet west of; pike crossing.....	39 19 42.4	82 57 17.3
Chillicothe, crossing Baltimore & Ohio Southwestern and Norfolk & Western railroads.....	39 20 05.3	82 58 12.7

Along highways near west border of quadrangle.

Schoolhouse No. 2; T lane west, 22 feet east to cross on board fence, 33 feet southwest to cross on fence post.....	39 21 22.3	82 58 34.6
T road east, 29 feet northeast to A. J. Seney's mail box, 33 feet northeast to guidepost.....	39 21 50.9	82 58 33.5
Hopetown; crossroads, 26 feet northeast to C. W. Down's mail box, 50 feet northeast to southwest corner of P. H. Klatz's shoe shop.....	39 22 43.3	82 58 29.0

CHILLICOTHE QUADRANGLE—Continued.

Along highways near west border of quadrangle—Continued.

Stations.	Latitude.	Longitude.
Hopetown, 1 mile north of; forks of pike, 18 feet east to cross on fence post, 50 feet northwest to arrow painted on corner fence post.....	39 23 31.5	82 58 07.1
Hopetown, 2 miles north of; cross pikes, 30 feet south to William Albright's mail box, 24 feet northwest to cross on corner fence post.....	39 24 27.0	82 58 30.7
George Mettler's house, on west side of pike opposite, in northeast corner of field, northwest corner of foundation to cornerib, bears S. 22° 15' E., distant 78.2 feet, nail in west face of black locust tree in front yard bears S. 82° 30' E., distant 54 feet; iron post set 40 inches in ground, stamped "Prim. Trav. Sta. No. 13".....	39 26 16.6	82 58 35.2
Road east, 28 feet southeast to David Umstead's mail box, 24 feet northeast to corner of yard fence.....	39 27 26.6	82 58 42.6

Along highways from Chillicothe south to southwest corner of quadrangle.

Chillicothe, in stone floor to courthouse porch on right side of main entrance to building; aluminum tablet stamped "Prim. Trav. Sta. No. 14".....	39 20 00.6	82 58 56.4
Chillicothe, crossing of Cincinnati, Hamilton & Dayton Ry. on Paint Street.....	39 19 20.9	82 58 45.2
Chillicothe and Portsmouth pikes, center of, at milepost 2 (Chillicothe).....	39 18 31.2	82 57 51.6
Ludbecks siding; crossroads west of, 24 feet east to mail box, 32 feet northwest to cross on telephone pole.....	39 17 53.4	82 57 12.9
Waller, T road southeast at; water trough about 2 miles north of, 27 feet northeast to Blain's mail box, 18 feet northwest to northeast corner of water trough.....	39 17 23.5	82 56 48.6
Waller, T road northwest, 24 feet south to cross on gatepost, 18 feet east to cross on board fence.....	39 16 04.1	82 57 51.6
Waller, 0.75 mile south of, in northeast corner of field owned by Joseph Deuschle, on west side of Chillicothe-Portsmouth pike, nail in east face of apple tree on fence line bears N. 74° 15' W., distant 39.3 feet, hitching ring in east face of locust tree in front of Deuschle's store bears S. 26° 15' W., distant 262.1 feet; iron post set 36 inches in ground, stamped "Prim. Trav. Sta. No. 15".....	39 15 34.7	82 58 10.3

Along highways in southwest part of quadrangle.

Waller, 0.8 mile south of; iron post, elevation 629 feet.....	39 15 34.7	82 58 10.3
Hopetown, 1 mile north of; on Columbus-Chillicothe pike at pike northwest.....	39 23 31.5	82 58 07.0
Hopetown, 2 miles north of, 1 mile east of Ross County Infirmary; center of crossroads.....	39 24 27.1	82 58 30.8
Ross County Infirmary, cupola.....	39 24 35.3	82 59 53.1
Ross County Infirmary, south meridian stone.....	39 24 32.9	82 59 58.3

CIRCLEVILLE QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Nash's Corners; crossroads at, 33 feet southwest to Vernon Estill's mail box, 30 feet southeast to cross on corner of fence post.....	39 30 31.1	82 58 20.7
Nash's Corners, 1 mile east of; T road south, 17 feet northeast to Manger's mail box, 18 feet northwest to cross on gatepost.....	39 30 29.4	82 57 15.2
Nash's Corners, 1.5 miles east of; T road west at small bridge, 3 feet northwest to southwest corner of bridge, 15 feet east to southeast corner of bridge.....	39 30 27.9	82 56 40.7
Azimuth of Norfolk & Western Ry. at Elmwood station=334° 44' 45".....		
Elmwood station, about 900 feet east of; T road west, 22 feet east to cross on gatepost, 50 feet northwest to cross on telephone pole.....	39 30 01.6	82 55 28.0
Meade; crossroads at, 22 feet north to W. F. Anderson's mail box, 38 feet east to corner of grocery store.....	39 30 25.1	82 52 55.5
Meade, in west corner of schoolhouse yard, west corner of water table to schoolhouse bears N. 46° 45' E., distant 38.3 feet, east corner of brick foundation to G. W. Gregg's residence bears S. 25° W., distant 116.3 feet; in top of sandstone block 6 by 12 by 36 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 8".....	39 30 18.0	82 52 40.5
Meade, 0.75 mile southeast of; T road southwest, 16 feet southwest to David Polling's mail box, 21 feet north to cross on fence post at end of hedge fence.....	39 30 00.3	82 52 04.3
Stringtown, in southwest corner of William Ballard's pasture, southeast corner of Levi Imer's store bears N. 24° W., distant 62.4 feet, cross cut on east end of stone culvert bears S. 18° W., distant 38.5 feet, in top of sandstone post 6 by 10 by 36 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 9".....	39 30 03.5	82 46 27.1

CIRCLEVILLE QUADRANGLE—Continued.

Along highways in west-central part of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Circleville, about 3 miles northwest of; center of standpipe.....	39 37 14.2	82 58 21.0
Thomas Brown's field, 150 feet south of entrance to yard, forks of pike at old toll-gate; iron post stamped "Prim. Trav. Sta. No. 76. Ohio, 1909".....	39 35 54.4	82 58 20.4
Circleville, north side of courthouse grounds; iron post stamped "Prim. Trav. Sta. No. 4. Ohio, 1906".....	39 36 02.8	82 56 46.2

Along highways near east border of quadrangle.

Royalton, at southeast corner of public-school building, northwest corner of foundation of church bears N. 55° E., distant 59.6 feet, southeast corner of foundation of school building bears N. 43° 15' W., distant 6.3 feet; iron post stamped "Prim. Trav. Sta. No. 6. Ohio, 1906".....	39 43 35.6	82 45 59.0
Royalton, 1.33 miles south of; crossroads, 21 feet northwest to willow tree at corner of fence, 27 feet southwest to telephone pole.....	39 42 26.2	82 45 46.4
Royalton Cemetery; crossroads, 23 feet northeast to telephone pole, 27 feet southeast to corner fence post.....	39 41 17.1	82 45 46.2
Royalton Cemetery, 1 mile south of; forks of road, 34 feet east to cross on corner fence post, 39 feet southeast to telephone pole.....	39 40 37.9	82 46 08.2
Royalton Cemetery, about 2 miles south of; road west, 23 feet southwest to osage orange tree, 23 feet southeast to telephone pole.....	39 39 56.7	82 45 37.0
Amanda, in west part of; forks of pike, 72 feet northwest to guidepost, 21 feet north to corner fence post.....	39 39 03.6	82 45 07.6
Oakland, in north part of; T road west on section line, 24 feet northwest to mail box 85, 45 feet southwest to corner blacksmith shop.....	39 36 00.8	82 45 21.1
Crossroads on line between sections, 30 feet northwest and 36 feet southwest to corner fence posts.....	39 35 08.5	82 45 34.6
Clear Creek Township, on Fairfield-Pickaway county line; southeast corner stone of sec. 34, T. 12 N., R. 20 W.....	39 33 24.2	82 46 10.4
Salt Creek Township, on county line, northeast corner of sec. 3, T. 11 N., R. 20 W., 16 feet south to cross on gatepost.....	39 33 23.8	82 46 05.5
Tarleton-Stringtown pike crossing on Columbus & Southern Ry.....	39 32 18.7	82 46 12.8
Salt Creek, north corner of bridge over.....	39 31 35.3	82 46 17.3
Stringtown, in southwest corner of William Ballard's pasture, southeast corner of Levi Imer's store bears N. 24° W., distant 62.4 feet, cross cut on east end of stone culvert bears S. 18° W., distant 38.5 feet, in top of sandstone post 6 by 10 by 36 inches, aluminum tablet stamped "Prim. Trav. Sta. No. 9".....	39 30 03.5	82 46 27.1
T. 11 N., R. 20 W., northeast corner of sec. 22; crossroads, 33 feet northwest to willow tree, 27 feet southeast to corner post.....	39 30 46.7	82 46 22.7
T. 11 N., R. 20 W., northeast corner of sec. 23, at schoolhouse, 21 feet north to cross on fence post.....	39 30 43.0	82 45 16.3

Along Norfolk & Western Ry. from Ashville to Circleville.

Ashville, main street crossing on Norfolk & Western Ry.....	39 42 46.4	82 57 17.5
Milepost 25, 575 feet north of; east-west road crossing.....	39 41 00.7	82 57 21.4
T. 2 N., R. 22 W., northeast corner stone of sec. 25.....	39 40 59.3	82 56 47.3
Ritts crossing, 9 feet west of west rail of Norfolk & Western Ry.; iron post stamped "Prim. Trav. Sta. No. 3. Ohio, 1906".....	39 39 20.2	82 57 27.7
East-west township-line crossing.....	39 39 15.7	82 57 26.9
Milepost 29, center of track opposite.....	39 37 30.8	82 56 50.4

Along highways near west border of quadrangle.

T road east on township line, 36 feet northeast to J. B. Deon's mail box, 24 feet west to old gatepost.....	39 34 00.8	82 57 16.8
Section corners.....	39 34 00.8	82 57 30.2
T road west, 39 feet northwest to corner fence post, 40 feet southwest to D. E. Phillips's mail box.....	39 32 16.0	82 58 00.4
Bridge over creek flowing southwest, center of.....	39 31 31.7	82 58 02.5
Nashs Corners, crossroads.....	39 30 31.0	82 58 20.7

CIRCLEVILLE QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
South Bloomfield, in southeast corner of public-school grounds, southeast corner of schoolhouse bears N. 39° W., distant 73.1 feet, corner iron fence post bears 69° E., distant 4.5 feet; iron post stamped "Prim. Trav. Sta. No. 2. Ohio, 1906".....	° / "	° / "
Bridge over canal, center of.....	39 42 58.4	82 59 19.6
Ashville, 0.5 mile east of; T road west on range line, 24 feet due east to cross on fence post.....	39 42 49.8	82 58 31.5
Tps. 2 and 9 N., Rs. 21 and 22 W., corner of sections.....	39 42 50.4	82 56 39.3
Greenfield School, crossroads at north-south range line between Rs. 21 and 22, 36 feet northwest to corner of schoolhouse fence, 39 feet southwest to north end of hedge fence.....	39 42 44.4	82 56 39.3
Schoolhouse, about 700 feet south of crossroads; 24 feet southeast and 22 feet southwest to corner fence posts.....	39 43 23.5	82 56 36.6
T. 9 N., R. 21 W., northeast corner of sec. 9.....	39 43 21.2	82 55 13.5
T. 9 N., R. 21 W., about 0.25 mile south of, northeast corner of sec. 10, east of road at T road east; iron post stamped "Prim. Trav. Sta. No. 5. Ohio, 1906".....	39 43 36.3	82 53 26.5
Crossroads, 27 feet southwest to corner fence post, 25 feet southeast to G. W. Payne's mail box.....	39 43 25.5	82 52 16.1
Fairfield-Pickaway county line, crossroads, 27 feet southeast to corner fence post, 33 feet northwest to guidepost.....	39 43 22.7	82 51 05.1
Bridge over creek flowing southwest, center of.....	39 43 21.6	82 49 52.0
T. 13 N., R. 20 W., northeast corner stone of sec. 5.....	39 43 31.2	82 48 30.9
	39 44 02.8	82 47 29.0

Magnetic declination for north border, 0° 38' E.; for east border, 0° 10' W.; for west border, 1° 17' E.

CLEVELAND QUADRANGLE.

Between Warrensville triangulation station of the United States Lake Survey and Bedford, along highways.

Stations.	Latitude.	Longitude.
Warrensville triangulation station.....	° / "	° / "
Randall station on Erie R. R., about one-fourth mile west of; road crossing near post office.....	41 28 39.01	81 30 11.96
Bedford station on Pennsylvania R. R.....	41 25 42.6	81 32 11.0
	41 23 24.1	81 32 08.8

Along Pennsylvania R. R. between Bedford and Macedonia.

A. B. & C. Electric Ry. crossing.....	41 22 04.4	81 31 36.5
Macedonia, 1 mile north of; road crossing.....	41 20 08.2	81 30 53.4
Macedonia station.....	41 18 48.3	81 30 36.3

COLUMBIANA QUADRANGLE.

Along Pittsburgh, Lisbon & Western R. R. in south part of quadrangle.

Stations.	Latitude.	Longitude.
American Pipe Co., road crossing 0.25 mile east of.....	° / "	° / "
Road crossing under trestle.....	40 46 02.3	80 44 08.6
Elkton, north-south road crossing at station.....	40 45 55.8	80 42 46.5
Newhouse, block of switch to mine.....	40 45 52.8	80 41 54.6
Summit, second road crossing south of station.....	40 46 51.8	80 41 16.7
Rogers, road crossing 1 mile west of.....	40 47 53.7	80 39 34.2
Rogers, in southeast corner of Ida M. Rogers's farm, on north side of Pittsburgh, Lisbon & Western R. R., southeast abutment to wagon bridge bears N. 9° 45' W., distant 202.8 feet, cross on northeast corner of foundation to D. M. Miller's residence bears S. 4° 40' E., distant 644 feet, in sandstone post; aluminum tablet stamped "Prim. Trav. Sta. No. 46".....	40 47 38.1	80 38 37.1
Rogers, road crossing 0.75 mile east of.....	40 47 35.6	80 37 39.4
Millrock station, road crossing.....	40 47 42.1	80 36 58.5
Private road crossing at spur.....	40 47 56.1	80 35 31.2
Negley, north-south road crossing at station.....	40 47 55.5	80 34 30.8
Ohio-Pennsylvania State line monument No. 81, stone is 25 feet east of center of north-south road.....	40 47 27.5	80 32 20.5
	40 47 49.98	80 31 08.93

COLUMBUS GROVE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 1 S., Rs. 5 and 6 E., corner of secs. 1, 6, 7, and 12.....	40 58 37.0	84 13 34.3
T. 1 S., R. 5 E., corner of secs. 11, 12, 13, and 14.....	40 57 42.6	84 14 39.7
T. 1 S., R. 5 E., corner of secs. 23, 24, 25, and 26.....	40 55 58.8	84 14 39.5
Tps. 1 and 2 S., R. 5 E., corner of secs. 1, 2, 35, and 36.....	40 54 14.5	84 14 38.1
T. 2 S., R. 5 E., corner of secs. 13, 14, 23, and 24.....	40 51 35.6	84 14 37.5
T. 2 S., R. 5 E., corner of secs. 25, 26, 35, and 36.....	40 49 51.9	84 14 37.2
T. 3 S., R. 5 E., corner of secs. 1, 2, 11, and 12.....	40 48 07.8	84 14 36.3
T. 3 S., R. 5 E., corner of secs. 13, 14, 23, and 24.....	40 46 23.6	84 14 35.0

Along highways near east border of quadrangle.

Rockport, crossroads at, 25 feet northeast to pump, 33 feet northwest to cross cut on telephone pole.....	40 52 17.5	84 00.00.0
T. 2 S., R. 7 E., quarter corner between secs. 1 and 12; crossroads.....	40 53 26.8	84 00 15.8
T road south at small bridge, 18 feet southeast to cross cut on south end of bridge, 25 feet southeast to cross cut on corner fence post.....	40 57 48.9	84 00 01.7
Schoolhouse of subdistrict No. 1, intersection of roads, 18 feet southwest to south end of stone culvert, 15 feet west to cross on telephone pole.....	40 58 41.5	84 00 46.8
T. 1 S., R. 7 E., north corner of secs. 1 and 2; T road south, 32 feet southwest to cross on corner fence post, 45 feet southeast to cross on telephone pole.....	40 59 34.2	84 00 53.6

CONESVILLE QUADRANGLE.

Along Wheeling & Lake Erie R. R. near Ellis.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Milepost 5, north-south road crossing.....	40 00 25.6	81 58 59.9
Lane's poultry farm, private-road crossing at spur.....	40 01 46.9	81 59 36.7
Ellis station, center of track opposite.....	40 02 46.4	81 58 58.4
Trestle 135A, north-south road crossing under.....	40 03 33.1	81 58 49.7

Along highways near east border of quadrangle.

Seth McCleary's residence, 0.25 mile east of; T road north, 16 feet north to mail box, 24 feet northeast to cross on corner fence post.....	40 10 23.9	81 45 37.9
Wills Creek, W. Roderick's bridge over, north end of.....	40 10 00.7	81 46 20.0
T. 4 N., R. 5 W., quarter corner between secs. 23 and 24, stone.....	40 09 41.5	81 46 22.2
Otsego, 2 miles north of; crossroads, 9 feet southeast to J. E. Simmons's mail box, 18 feet east to cross on fence post.....	40 08 55.5	81 46 07.7
Otsego, in southwest corner of public-school grounds; iron post stamped "Prim. Trav. Sta. No. 59, 1905".....	40 07 04.3	81 45 59.0
Otsego, 2.5 miles south of, 0.25 mile northeast of covered bridge; crossroads, 27 feet northwest to cross on telegraph pole, 22 feet southwest to cross on gatepost.....	40 05 06.4	81 46 01.2
D. W. Ross's mail box, T road west.....	40 03 29.8	81 46 26.3
Corner of sections (no numbers).....	40 02 10.8	81 46 11.0

Magnetic declination for north border, 0° 34' E.; for south border, 1° 52' W.; for east border, 2° 10' W.

CONNEAUT QUADRANGLE.

Along highways from Jefferson east to milepost 15 on Ohio-Pennsylvania State line.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Jefferson, Lake Shore & Michigan Southern Ry., 1.37 miles east of, forks of road to southeast.....	41 44 17.4	80 44 04.3
Forks of road.....	41 45 06.5	80 43 34.8
Lake Shore & Michigan Southern Ry. low-grade line, crossing.....	41 45 03.8	80 42 18.8
Four corners.....	41 45 04.5	80 41 07.8
Giddings post office, four corners at.....	41 45 05.4	80 40 04.0
Gould post office, three corners at church just north of.....	41 45 07.4	80 37 22.0
Bridge over creek, center of.....	41 45 03.9	80 36 05.7
Pierpont, three corners at soldiers' monument.....	41 45 08.4	80 34 13.4
Pierpont, 1.75 miles east of; four corners.....	41 45 09.4	80 32 05.5
Milepost 15, Ohio-Pennsylvania State line, three corners near.....	41 45 09.7	80 31 10.3
Milepost 15.....	41 45 12.9	80 31 10.0

CONTINENTAL QUADRANGLE.

Along Cincinnati, Hamilton & Dayton Ry.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Road crossing, north-south.....	41	01	08.1	84	29	44.0
Grover Hill station.....	41	01	08.4	84	28	38.6
Grover Hill, main street crossing.....	41	01	08.4	84	28	34.7
T. 1 N., Rs. 3 and 4 E., corner of secs. 19, 30, 24, and 25.....	41	01	09.9	84	27	25.6
Road crossing, north-south.....	41	01	09.3	84	25	42.1
Roselins station.....	41	01	09.6	84	25	07.1
Road crossing, north-south.....	41	01	10.0	84	23	58.6
Road crossing, north-south.....	41	01	10.3	84	23	24.3
Road south.....	41	01	10.5	84	22	49.8
Erie Canal crossing.....	41	01	11.1	84	21	31.2
T. 1 N., Rs. 4 and 5 E., corner of secs. 19, 30, 24, and 25.....	41	01	12.2	84	20	31.5
Road crossing, north-south.....	41	01	11.9	84	19	21.8
Road crossing, north-south.....	41	01	12.2	84	18	46.8
Toledo, St. Louis & Western R. R. crossing.....	41	01	12.5	84	18	12.6
Road crossing, north-south.....	41	01	12.8	84	17	38.2
Road crossing, northwest-southeast.....	41	01	12.9	84	17	24.5
Road crossing, under railway.....	41	01	13.0	84	17	14.9
Road crossing, north-south.....	41	01	13.5	84	15	54.6
Road crossing, north-south.....	41	01	13.8	84	15	20.0

Along highways near west border of quadrangle.

T. 1 N., R. 3 E., at crossroads 1 mile north and 1 mile west of Grover Hill, in southeast corner of field owned by F. M. Saul; iron post stamped "Prim. Trav. Sta. No. 4, 1905".....	41	02	01.7	84	29	44.4
T. 1 N., R. 3 E., corner of secs. 10, 11, 14, and 15; crossroads.....	41	02	53.9	84	29	44.2
T. 1 N., R. 3 E., corner of secs. 2, 3, 10, and 11; crossroads.....	41	03	46.3	84	29	44.5
T. 1 N., R. 3 E., north corner of secs. 2 and 3; T road south.....	41	04	39.1	84	29	44.4
T. 2 N., R. 3 E., corner of secs. 26, 27, 33, and 34; crossroads.....	41	05	31.5	84	29	44.1
T. 2 N., R. 3 E., corner of secs. 22, 23, 26, and 27; crossroads.....	41	06	24.3	84	29	44.4
T. 2 N., R. 3 E., southeast corner of sec. 15, in southeast corner of field of Geo. Older, northeast corner of C. Stutsman's house bears S. 37° E., distant 188 feet; iron post stamped "Prim. Trav. Sta. No. 5, 1905".....	41	07	17.0	84	29	44.8
T. 2 N., R. 3 E., corner of secs. 10, 11, 14, and 15; crossroads.....	41	08	09.2	84	29	44.4
T. 2 N., R. 3 E., corner of secs. 2, 3, 10, and 11; crossroads.....	41	09	01.7	84	29	44.6
T. 2 N., R. 3 E., corner of secs. 3, 4, 9, and 10; crossroads.....	41	09	01.3	84	30	54.5
T. 3 N., R. 3 E., corner of secs. 26, 27, 34, and 35; crossroads.....	41	10	47.9	84	29	42.4
T. 3 N., R. 3 E., corner of secs. 22, 23, 26, and 27; center of bridge over canal.....	41	11	39.8	84	29	42.7
Sixmile Creek, center of bridge over.....	41	12	28.2	84	29	43.2
T. 3 N., R. 3 E., east corner of secs. 10 and 15; T road west.....	41	13	25.2	84	29	43.8
T. 3 N., R. 3 E., corner of secs. 2, 3, 10, and 11; crossroads.....	41	14	17.7	84	29	44.9
T. 3 N., R. 3 E., 30 feet west and 30 feet south of quarter corner between secs. 2 and 3, in northeast corner of field owned by Saul, Meyer & Co., south rail of Wabash R. R. at section-line crossing bears N. 19° E., distant 70 feet; iron post stamped "Prim. Trav. Sta. No. 6, 1905".....	41	14	43.7	84	29	45.7

Near Grover Hill.

Grover Hill, 1 mile south and 1 mile west of, at southwest corner of crossroads, 20 feet east and 25 feet north to T. 1 N., R. 3 E., corner of secs. 26, 27, 34, and 35, crossroads; iron post stamped "Prim. Trav. Sta. No. 12. Ohio, 1909".....	41	00	16.7	84	29	44.0
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COSHOCTON QUADRANGLE.

Along Cleveland, Akron & Columbus Ry. from Warsaw to Killbuck.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Warsaw, 1 mile northeast of; road crossing.....	40	20	07.3	81	59	21.6
Warsaw, 1.33 miles northeast of; road crossing.....	40	20	11.5	81	58	12.7
Warsaw, 1.75 miles northeast of; road crossing.....	40	20	30.9	81	57	37.4
Killbuck Creek, center of iron bridge over.....	40	21	19.8	81	57	38.6
Metham, 500 feet northwest of station; north end of road crossing.....	40	22	05.9	81	59	05.6
Metham, 1.25 miles northeast of station; center of iron bridge over Killbuck Creek.....	40	23	00.3	81	58	10.7
Blissfield, road crossing on main track 150 feet west of station.....	40	24	01.2	81	58	11.2
Blissfield, in northwest corner of C. W. Lepley's front yard, 25 feet south of station, 150 feet southwest of road crossing, 12 feet southeast to northwest corner of Dr. Lepley's office; iron post stamped "Prim. Trav. Sta. No. 15, 1907".....	40	24	01.1	81	58	10.9

COSHOCTON QUADRANGLE—Continued.

Along Cleveland, Akron & Columbus Ry. from Warsaw to Killbuck—Continued.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Helmick station, road crossing	40 23 59.0	81 56 42.9
Layland Sand & Stone Co.'s works, opposite northeast corner of; main track.....	40 25 25.1	81 57 40.2
Layland, road crossing just north of station	40 26 12.0	81 57 59.4
Layland, 1.25 miles north of station, center pier of iron railroad bridge over Killbuck Creek.....	40 27 16.1	81 58 16.1
Killbuck, 1.06 miles south of; second-class road crossing.....	40 28 12.3	81 58 41.4
Killbuck, at south edge of; road crossing	40 29 37.0	81 58 59.3

Along highways near north border of quadrangle.

Killbuck, 0.75 mile southeast of; center of triangle at T road west, 20 feet south to large stone.....	40 29 22.4	81 58 39.7
Killbuck, 1.25 miles east of; in triangle at T road south guidepost "Coshocton 21 miles".....	40 29 25.3	81 57 59.6
T. 9 N., R. 13 W., corner of secs. 7, 8, 13, and 14.....	40 29 39.6	81 56 59.3
T road west opposite E. C. Shepler's residence, 15 feet east to front gate, 30 feet north to telegraph pole.....	40 29 26.0	81 55 41.5

Along highways near south border of quadrangle.

Guidepost "Coshocton 7 miles," road south, 60 feet southeast to guidepost, 24 feet northeast to cross on corner of rail fence.....	40 15 10.8	81 59 07.4
Center of Sixmile bridge at crossroads.....	40 15 03.7	81 57 40.7
Pleasant Hill Church, 1 mile east of; road to southwest, 42 feet southwest to A. C. Warren's mail box, 28 feet northwest to peach tree.....	40 15 01.2	81 56 12.2
Coshocton, 3.5 miles west of, just northwest of Joseph Kirker's residence; T road north, 21 feet southeast to cross on fence post, 21 feet west to cross on rail fence.....	40 15 47.7	81 55 07.8
Junction of Mount Vernon and Tyrone roads, 300 feet south of, center of iron bridge over creek.....	40 16 18.6	81 53 31.2
Roscoe, center of bridge over Ohio Canal.....	40 16 45.2	81 52 33.0
Coshocton, in southeast corner of Coshocton County courthouse; aluminum tablet stamped "Prim. Trav. Sta. No. 57, 1905".....	40 16 28.0	81 51 57.4

Along Pennsylvania R. R.

Milepost 71, 0.25 mile west of; road crossing on siding south of main track.....	40 17 17.2	81 50 08.3
Milepost 72, just west of; private road crossing on north track of main line.....	40 17 03.7	81 48 52.3
Morgan Run station, crossing of Pennsylvania and Wheeling & Lake Erie railroads.....	40 16 52.5	81 47 44.8
West Lafayette, 1 mile west of; overhead road crossing, south track.....	40 16 42.7	81 46 07.4

Magnetic declination for north border, 2° 37' W.; for south border, 0° 34' E.; for east border, 2° 18' W.; for west border, 2° 12' W.

COVINGTON QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tps. 7, 8, and 9 N., Rs. 3 and 4 E., corner of secs. 1, 6, 31, and 36.....	40 00 23.1	84 29 16.3
Tps. 8 and 9 N., Rs. 3 and 4 E., corner of secs. 25, 30, 31, and 36.....	40 01 15.6	84 29 17.8
Tps. 8 and 9 N., Rs. 3 and 4 E., corner of secs. 19, 24, 25, and 30.....	40 02 07.9	84 29 19.4
Tps. 8 and 9 N., Rs. 3 and 4 E., corner of secs. 13, 18, 19, and 24.....	40 03 00.5	84 29 21.1
Tps. 8 and 9 N., Rs. 3 and 4 E., corner of secs. 7, 12, 13, and 18.....	40 03 53.0	84 29 22.8
Tps. 8 and 9 N., Rs. 3 and 4 E., corner of secs. 1, 6, 7, and 12.....	40 04 45.2	84 29 24.3
Tps. 8, 9, and 10 N., Rs. 3 and 4 E., corner of secs. 1, 6, 31, and 36.....	40 05 43.2	84 29 26.1
Gettysburg, crossing of Main Street and north-south road.....	40 06 42.0	84 29 44.4
Gettysburg, crossroads 0.5 mile north of.....	40 07 21.9	84 29 50.9
Pennsylvania R. R. at north-south road crossing, 400 feet east of milepost 87, azimuth 103° 20'.....	40 08 38.8	84 29 53.1
Oakland Church, T road south, 0.25 mile east of.....	40 09 07.5	84 29 53.6

COVINGTON QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 7 N., R. 6 E., west corner of secs. 18 and 19.....	40 13 42.6	84 15 42.5
T. 9 N., R. 5 E., east corner of secs. 13 and 24.....	40 13 41.0	84 15 42.6
Bunker Flat schoolhouse, 0.5 mile east of; crossroads.....	40 14 20.0	84 16 18.1
T. 9 N., R. 5 E., corner of secs. 10, 11, 14, and 15; crossroads.....	40 14 32.2	84 18 01.2
T. 9 N., R. 5 E., corner of secs. 9, 10, 15, and 16, near schoolhouse, at fence north-south; east-west road.....	40 14 31.8	84 19 08.9
Houston, in south part of, at E. C. Mitchell's store; T road west, 15 feet south and 15 feet east to guidepost "Piqua 9 miles, Russia 4 miles".....	40 14 57.0	84 20 06.5
Houston, 1 mile west of, in top of southeast corner of abutment of railway bridge; aluminum tablet stamped "Prim. Trav. Sta. No. 30. Ohio, 1909".....	40 14 56.2	84 21 20.2
T. 10 N., R. 4 E., corner of secs. 9, 10, 15, and 16, Shelby-Darke county line; T road south.....	40 14 28.1	84 26 00.6
Catholic cemetery, T road south.....	40 14 27.4	84 27 54.2
Versailles, 1 mile north of, at southeast corner of T road east, 20 feet north and 20 feet east of its center; iron post stamped "Prim. Trav. Sta. No. 31. Ohio, 1909".....	40 14 27.2	84 29 03.2

Along highways east-west through center of quadrangle.

Tps. 6 and 8 N., Rs. 5 and 6 E., quarter corner between secs. 13 and 18.....	40 08 52.8	84 15 34.3
Piqua corporation line, T road north.....	40 08 52.6	84 16 08.3
T. 8 N., R. 5 E., quarter corner between secs. 13 and 14.....	40 08 52.4	84 16 42.6
T. 8 N., R. 5 E., quarter corner between secs. 14 and 15; crossroads.....	40 08 51.8	84 17 54.4
T. 8 N., R. 5 E., quarter corner between secs. 15 and 16; T road south.....	40 08 49.5	84 19 01.6
T. 8 N., R. 5 E., quarter corner between secs. 16 and 17; T road south.....	40 08 48.7	84 20 10.0
Covington, 2 miles north of, at southeast corner of crossroads, 25 feet west and 15 feet north of crossroads; iron post stamped "Prim. Trav. Sta. No. 38, 1909, Ohio".....	40 08 50.5	84 21 08.9
T. 8 N., R. 5 E., corner of secs. 17, 18, 19, and 20.....	40 08 21.0	84 21 18.0
Quarter corner, T. 8 N., R. 5 E., secs. 19 and 20; T road west.....	40 07 55.6	84 21 17.6
Covington, large steel water tank.....	40 07 07.1	84 21 21.9
T. 8 N., R. 5 E., quarter corner on west side of sec. 19; T road east.....	40 07 54.2	84 22 25.6
T. 9 N., R. 4 E., quarter corner on east side of sec. 24; T road west.....	40 07 53.8	84 22 25.6
T. 9 N., R. 4 E., quarter corner between secs. 23 and 24; crossroads.....	40 07 53.0	84 23 34.7
T. 9 N., R. 4 E., corner of secs. 13, 14, 22, and 23; crossroads.....	40 08 18.6	84 24 43.8
T. 9 N., R. 4 E., corner of secs. 15, 16, 21, and 22, on Miami-Darke county line.....	40 08 17.8	84 25 51.4
T. 9 N., R. 4 E., corner of secs. 16, 17, 20, and 21; crossroads.....	40 08 16.8	84 26 59.8
T. 9 N., R. 4 E., corner of secs. 17, 18, 19, and 20.....	40 08 15.6	84 28 08.9
Bradford, 2.5 miles west and 0.5 mile north of, on south side of east-west road, 765 feet east of quarter corner between secs. 18 and 19, T. 9 N., R. 4 E., at crossroads, about 3 feet north of east-west fence; iron post stamped "Prim. Trav. Sta. No. 39. Ohio, 1909".....	40 08 14.9	84 28 33.3

Magnetic declination for north border, $0^{\circ} 04' E.$; for east border, $0^{\circ} 12' E.$; for center line through quadrangle, $0^{\circ} 02' E.$

CRESTLINE QUADRANGLE.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Shenandoah, 1.25 miles south and 0.25 mile west of; center of T road east.....	40 53 40.6	82 30 17.2	.....
Shenandoah, 2 miles south and 0.8 mile west of, at northeast corner of forks of road, 25 feet south and 30 feet west to northeast point of triangle formed by roads; iron post stamped "Prim. Trav. Sta. No. 50. Ohio, 1910".....	40 53 09.0	82 30 47.0	3,927
T. 22 N., R. 18 W., stone at corner of secs. 4, 5, 8, and 9; center of T road east.....	40 53 14.5	82 31 57.6	5,450
Ganges, 1 miles south of, center of crossroads.....	40 53 39.9	82 33 21.7	6,959
T. 22 N., R. 18 W., quarter corner between secs. 1 and 2.....	40 53 39.1	82 34 17.3	4,272
Fred Bricker's mail box, center of T road west.....	40 53 30.3	82 34 17.3	875
Bunkerhill schoolhouse, just south of; crossing of New State road and east-west road.....	40 53 09.5	82 35 24.5	5,572
Shelby, 2 miles east of, at northwest corner of London Cemetery, 35 feet west and 20 feet north to stone in center of crossroads; iron post stamped "Prim. Trav. Sta. No. 51. Ohio, 1910".....	40 53 10.3	82 37 19.4	8,823
T. 22 N., R. 19 W., corner of secs. 3, 4, 9, and 10; center of road at north-south fence line at schoolhouse No. 2.....	40 53 09.9	82 37 46.2	2,060

CRESTLINE QUADRANGLE—Continued.

Along highways east-west through center of quadrangle—Continued.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 22 N., R. 19 W., stone at corner of secs. 4, 5, 8, and 9.....	40 53 09.1	82 38 54.5	5, 249
Shelby, Smiley Avenue crossing on Cleveland, Cincinnati, Chicago & St. Louis R. R., east track.....	40 53 10.3	82 39 39.6	3, 470
Tps. 22 and 23 N., Rs. 19 and 20 W., stone at corner of secs. 1, 6, 7, and 12.....	40 53 09.0	82 41 09.1	6, 880
T road north, center of.....	40 53 09.3	82 41 09.1	35
T. 21 N., R. 20 W., quarter corner between secs. 1 and 2; T road north.....	40 53 37.4	82 42 19.4	6, 120
T. 21 N., R. 20 W., quarter corner between secs. 2 and 3; Richland-Crawford county line.....	40 53 37.0	82 43 29.0	5, 350
T. 21 N., R. 20 W., quarter corner between secs. 3 and 4; center of T road east.....	40 53 36.3	82 44 37.6	5, 270
Prim. Trav. Sta. No. 24, 1906.....	40 52 58.50	82 44 33.40	3, 820

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
United Brethren Church.....	40 59 35.2	82 30 27.2
Road west.....	40 53 42.1	82 30 15.8
Road west.....	40 53 08.7	82 30 46.5
Road east.....	40 52 22.7	82 30 49.6
Crossroads.....	40 50 55.1	82 30 48.2
Road west.....	40 49 21.3	82 30 47.1
Road east.....	40 47 57.0	82 30 47.7
Mansfield, flagstaff of State reformatory.....	40 46 59.2	82 30 10.3

Along highways near south border of quadrangle.

T. 20 N., R. 20 W., northeast corner of sec. 21, T road south at schoolhouse, 30 feet southwest to corner fence post, 25 feet west to large white-oak tree.....	40 46 09.8	82 44 45.1
T. 20 N., R. 20 W., northeast corner of sec. 22, T road north, white-oak tree; Crawford-Richland county line.....	40 46 09.2	82 43 35.7
T. 20 N., R. 20 W., northeast corner of sec. 23, middle of east-west road at north-south fence at schoolhouse No. 3.....	40 46 08.8	82 42 28.8
Schoolhouse No. 10, road north, 20 feet north to center of box culvert.....	40 45 58.2	82 40 01.4
Ontario, west part of, north of road at T road south, north-west corner of foundation to Dr. Richards's residence bears S. 47° 15' W. 136.7 feet, nail in honeylocust tree south of road bears S. 7° 45' E. 54.9 feet; iron post stamped "Prim. Trav. Sta. No. 23. Ohio, 1906".....	40 45 36.9	82 38 51.4
Ontario, 0.66 mile east of; T road north, 30 feet northwest to telephone pole, 39 feet northeast to corner fence post.....	40 45 35.9	82 37 59.1
Ontario, 1.75 miles east of; east-west road crossing on Erie R. R.....	40 45 35.0	82 36 25.8
T. 21 N., R. 19 W., quarter corner east side of sec. 23; crossroads, 24 feet northeast to north end of culvert, 24 feet southeast to south end of culvert.....	40 45 34.0	82 35 25.8
T. 21 N., R. 19 W., quarter-corner stone east side of sec. 19.....	40 45 33.6	82 34 16.7
Milepost 271, 645 feet east of; north-south road crossing on Erie R. R.....	40 46 13.9	82 33 06.7
Mansfield, crossing of Erie and Baltimore & Ohio railroads, just east of Erie station.....	40 45 59.4	82 31 01.2
Mansfield, flagstaff at State reformatory.....	40 46 59.2	82 30 11.1

Near north border of quadrangle.

New Pittsburg, T. 1 N., R. 24 W., south corner of secs. 1 and 4; T road north at hotel.....	40 59 43.3	82 43 49.1
T. 22 N., R. 20 W., north corner of secs. 2 and 3; corner of Richland and Crawford counties at Huron County line.....	40 59 43.2	82 43 29.8
T. 22 N., R. 20 W., north corner of secs. 1 and 2; wire fence south.....	40 59 42.8	82 42 20.6
T. 22 N., R. 20 W., north corner of secs. 1 and 6; wire fence south.....	40 59 42.4	82 41 12.8
Plymouth, public fountain.....	40 59 41.9	82 39 57.2
Plymouth, 0.75 mile east of; county-line road crossing on Northern Ohio Ry.....	40 59 40.7	82 39 00.6
Plymouth, 2 miles east of, T. 1 N., Rs. 22 and 23 W., south corner stone of secs. 1 and 4 bears N. 12° 15' W. 18.5 feet, nail in blaze on cherry tree bears N. 57° 40' E. 76.6 feet; iron post stamped "Prim. Trav. Sta. No. 28. Ohio, 1906".....	40 59 39.5	82 37 50.6
T. 22 N., R. 19 W., north corner of secs. 3 and 4; wire fence south.....	40 59 39.8	82 37 47.8
T. 22 N., R. 19 W., north corner of secs. 2 and 3; west end of bridge over ditch.....	40 59 39.2	82 36 38.3
T. 1 N., R. 22 W., south corner of secs. 1 and 4; crossroads, 30 feet southwest to W. Hulburt's mail box, 33 feet northwest to large corner fence post.....	40 59 38.1	82 34 57.0

CRESTLINE QUADRANGLE—Continued.

Along west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Schoolhouse No. 4, 0.25 mile north of; crossroads, 21 feet southeast to telegraph pole, 26 feet northwest to corner fence post.....	40 49 54.2	82 44 40.3
T. 21 N., R. 20 W., northeast corner stone of sec. 28.....	40 50 33.8	82 44 39.8
T. 21 N., R. 20 W., northeast corner stone of sec. 21.....	40 51 24.4	82 44 39.3
T. 21 N., R. 20 W., northeast corner of sec. 16, 9 feet south to center of culvert...	40 52 17.4	82 44 38.4
Tiro, 1.5 miles south and 1 mile east of, northwest corner of crossroads, northwest corner of foundation to residence bears S. 35° 20' E. 125.2 feet, nail in maple tree bears S. 18° 15' W. 50.8 feet; iron post stamped "Prim. Trav. Sta. No. 24. Ohio, 1906".....	40 52 58.5	82 44 33.4
T. 21 N., R. 20 W., northeast corner stone of sec. 4.....	40 54 04.2	82 44 37.5
T. 22 N., R. 20 W., southeast corner of sec. 33.....	40 54 04.2	82 44 37.1
T. 22 N., R. 20 W., northeast corner of sec. 28; crossroads, 27 feet northwest to mail box, 33 feet northeast to corner fence post.....	40 55 49.1	82 44 36.8
T. 22 N., R. 20 W., northeast corner of sec. 21; crossroads, 27 feet southwest to corner fence post, 27 feet northwest to telegraph pole.....	40 56 41.6	82 44 36.1
T. 22 N., R. 20 W., northeast corner of sec. 16; east-west fence.....	40 57 34.7	82 44 36.0
T. 22 N., R. 20 W., northeast corner of sec. 9; crossroads, 25 feet due south to center of box culvert.....	40 58 27.4	82 44 36.2
Milepost 325, about 300 feet east of; north-south road crossing on Northern Ohio Ry.....	40 58 57.1	82 44 36.3
T. 22 N., R. 20 W., northeast corner of sec. 4, T road south; Crawford-Huron county line, 24 feet north to bench mark (station No. 25).....	40 59 43.5	82 44 36.6
T. 22 N., R. 20 W., northeast corner of sec. 4, north of road at T road south; iron post stamped "Prim. Trav. Sta. No. 25. Ohio, 1906".....	40 59 43.6	82 44 36.5

Magnetic declination for north border, 1° 34' W.; for south border, 1° 52' W.; for west border, 1° 03' W.; for east-west center line, 2° 03' W.

CUMBERLAND QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Morgan County, at northeast corner of, on west side of road opposite cemetery, stone corner, about 2 feet from corner of rail fence.....	39 45 09.8	81 38 24.5
Renrock, crossroads, 90 feet east to center of covered bridge, 27 feet south to center of culvert.....	39 45 28.8	81 40 20.4
Dickerson's mill, just east of; T road north, 24 feet northwest to cross on gatepost, 19 feet northeast to corner of rail fence.....	39 45 49.6	81 41 28.2
Oak Grove Cemetery, on east side of, at rail fence, Muskingum-Margrove county line; stone.....	39 45 22.5	81 42 55.6
Knight, on Knight-Young Hickory road, 1 mile northwest of, J. H. Dingley's mail box.....	39 46 13.2	81 44 03.0
Young Hickory, T road east, 22 feet north to public mail box, 18 feet southeast to arrow on fence.....	39 46 46.0	81 44 57.9

Magnetic declination for south border, 2° 21' W.; for west border, 1° 38' W.

DAYTON QUADRANGLE.

Near milepost 376 on Erie R. R.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Mileposts 376 and 377, on Erie R. R., road crossing halfway between.....	39 51 28.1	84 00 37.9

Along Cleveland, Cincinnati, Chicago & St. Louis Ry. between Osborn and Dayton.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Osborn, road crossing 1 mile north of station.....	39 51 11.6	84 01 11.9
Osborn, road crossing north of station.....	39 50 39.2	84 01 58.8
Osborn, north-south road crossing.....	39 50 33.9	84 02 05.7
Gravel road and telephone road crossing at.....	39 49 43.4	84 03 04.8
Simms, road crossing at.....	39 48 35.8	84 04 23.9
Pike and telephone road crossing, east-west.....	39 47 12.9	84 06 42.6
Harshman, road crossing at.....	39 46 54.8	84 07 14.7
Street-car trestle, road crossing at.....	39 46 41.2	84 08 22.9
Dayton, Third Street car track, crossing of.....	39 45 40.3	84 10 55.5
Dayton, first street-car line east of station, crossing of.....	39 45 18.8	84 11 32.4

DAYTON QUADRANGLE—Continued.

Along Pittsburgh, Cincinnati, Chicago & St. Louis Ry. near Dayton.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Dayton, Germantown Street, crossing of	39 45 04.1	84 12 24.0
Dayton, Third Street car line, crossing of	39 45 20.6	84 12 57.2
Wagon-bridge crossing, at north end of	39 46 01.5	84 14 09.9

Along highways near south border of quadrangle.

Beaver Creek schoolhouse, T road south, $\frac{1}{4}$ mile north of	39 46 04.2	84 00 43.4
Beaver Creek schoolhouse, T road south, $\frac{3}{4}$ mile south of	39 45 11.1	84 00 47.6
T. 3 N., R. 7 E., quarter corner between secs. 22 and 28	39 45 13.2	84 01 28.6
T. 3 N., R. 7 E., quarter corner between secs. 28 and 34	39 45 17.2	84 02 38.2
Big Woods schoolhouse, crossroads at	39 45 19.3	84 03 14.3
T road north	39 45 24.4	84 04 37.4
Montgomery-Greene county line, at Fifth Street road	39 45 29.7	84 06 00.9
Cincinnati, Hamilton & Dayton Ry. at Fifth Street road crossing	39 45 34.7	84 07 18.7
East Dayton, intersection of Smithville road and Huffman Avenue	39 45 27.7	84 08 18.6
Dayton, crossing of Huffman and Linden avenues	39 45 32.2	84 09 32.6
Dayton, crossing of Dayton & Union R. R. on Third Street	39 45 40.3	84 10 55.5
Dayton, crossing of Third and Main streets	39 45 34.7	84 11 30.3
West Dayton, West Third Street crossing on Cincinnati, Hamilton & Dayton Ry.	39 45 06.3	84 14 23.1

Along highways near west border of quadrangle.

Dayton, northwest part of; intersection of Salem and Oxford avenues	39 46 09.4	84 12 40.9
Dayton, intersection of Salem Avenue and Catalpa Drive	39 46 56.9	84 13 31.7
T. 2 N., R. 6 E., corner of secs. 17, 18, 19, and 20	39 47 27.7	84 14 06.0
T. 2 N., R. 6 E., corner of secs. 7, 8, 17, and 18	39 48 20.6	84 14 05.9
Shiloh Church, crossroads at	39 49 11.4	84 14 07.4
Tps. 2, 3, 4, and 5 N., Rs. 5 and 6 E., corner of secs. 31, 36, 1, and 6	39 50 01.4	84 15 15.2
T. 3 N., R. 6 E., quarter corner between secs. 30 and 31	39 50 53.8	84 14 44.0
Spanker, crossroads at	39 51 33.0	84 14 42.3
Spanker, T road east 1 mile north of	39 52 16.6	84 14 43.1
Crossing of National road and north-south road	39 53 13.4	84 14 43.6
T. 3 N., R. 6 E., quarter corner between secs. 6 and 7	39 54 28.3	84 14 45.1
Tps. 3 and 4 N., R. 6 E., quarter corner between secs. 6 and 31, on Montgomery-Miami county line	39 55 20.2	84 14 46.2
T. 4 N., R. 6 E., quarter corner between secs. 31 and 32	39 55 47.0	84 14 12.8
Schoolhouse No. 5, intersection of northeast-southwest road and road south	39 56 56.2	84 14 14.6
Troy, crossroads 5 miles southwest of	39 57 57.9	84 13 39.1

Along highways near north border of quadrangle.

T. 4 N., R. 6 E., corner of secs. 4, 5, 8, and 9, on west side of north-south road, just north of crossroads; iron post stamped "Prim. Trav. Sta. No. 40. Ohio, 1909"	39 59 44.9	84 13 20.1
T. 4 N., R. 6 E., corner of secs. 4, 5, 8, and 9, crossroads near	39 59 44.6	84 13 19.9
T. 4 N., R. 5 E., corner of secs. 5, 6, 7, and 8	39 59 43.0	84 14 19.7
Troy, crossroads, 4 miles southwest of	39 58 51.5	84 13 20.4
T. 4 N., R. 6 E., corner of secs. 9, 10, 15, and 16	39 58 52.3	84 12 17.4
Schoolhouse No. 11, crossroads near	39 58 53.5	84 11 08.1
Lost Creek, center of bridge over	39 59 07.4	84 09 40.9
Grayson, road crossing on Cleveland, Cincinnati, Chicago & St. Louis Ry., azimuth 312° 40'	39 59 44.9	84 08 39.3
Ragtown, T road south at	40 00 04.2	84 07 29.5
T. 2 N., R. 10 E., corner of secs. 14, 15, 20, and 21	39 59 57.4	84 05 47.2
T. 2 N., R. 10 E., corner of secs. 8, 9, 14, and 15	39 59 53.4	84 04 39.1
T. 2 N., R. 10 E., corner of secs. 2, 3, 8, and 9	39 59 49.1	84 03 31.6
Crossroads	39 59 42.4	84 00 02.5
Along, 3 miles east by 1 mile south of, at northwest corner of Troy-Springfield pike and north-south road, 25 feet north and 20 feet west of crossroads near township house; iron post stamped "Prim. Trav. Sta. No. 43, Ohio, 1909"	39 59 42.7	84 00 02.7

Along highways near east border of quadrangle.

T. 3 N., R. 10 E., corner of secs. 21, 22, 27, and 28	39 55 17.7	84 00 29.9
T. 3 N., R. 10 E., corner of secs. 20, 21, 26, and 27	39 54 25.2	84 00 35.6
Midway, crossing of pikes at Tecumseh Hotel	39 52 55.6	84 00 35.0

DEFIANCE QUADRANGLE.

Along Lake Shore & Michigan Southern Ry.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Mileposts 48 and 49, north-south road crossing between.....	41	29	58.2	84	26	05.3
Milepost 49, north-south road crossing near.....	41	29	50.5	84	26	52.0
Mileposts 49 and 50, north-south road crossing between.....	41	29	43.9	84	27	31.7
Mileposts 50 and 51, north-south road crossing between.....	41	29	32.9	84	28	38.9
Mileposts 51 and 52, north-south road crossing between.....	41	29	21.4	84	29	48.5

In northwest corner of quadrangle.

T. 6 N., R. 3 E., northeast corner of sec. 11, in northwest corner of field owned by S. J. Bowman, southwest corner of schoolhouse bears N. 26° 30' E., distant 161 feet; iron post stamped "Prim. Trav. Sta. No. 15, 1905".....	41	29	59.5	84	28	38.8
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Along Wabash R. R. and Baltimore & Ohio R. R. near south border of quadrangle.

Ashwood, 1 mile west of station; crossing of north-south road on section line.....	41	15	03.4	84	28	34.7
Ashwood, road crossing at station.....	41	15	21.7	84	27	25.3
Ashwood, 1 mile east of, crossing of north-south road on section line.....	41	15	39.8	84	26	16.6
Defiance Junction, crossing of Wabash R. R. and Baltimore & Ohio R. R.....	41	16	39.5	84	22	43.5
Defiance, in water table at southwest corner of Defiance County jail; aluminum tablet stamped "Prim. Trav. Sta. No. 8, 1905".....	41	17	11.7	84	21	39.0
Defiance, in southeast part of, Ottawa Avenue crossing on Baltimore & Ohio Southwestern R. R.....	41	16	47.1	84	21	03.5
Midway, 1,300 feet east of telegraph office; north-south road crossing.....	41	16	45.7	84	18	49.7
Midway, overhead crossing 1.25 miles east of.....	41	16	44.9	84	17	41.0
Milepost 82, north-south section line, road crossing 150 feet west of.....	41	16	29.2	84	15	57.1
T. 3 N., R. 3 E., north corner of secs. 2 and 3; T road south.....	41	15	11.5	84	29	45.9
T road east.....	41	16	03.9	84	29	45.2
The Bend, north-south road crossing on Baltimore & Ohio R. R., 1 mile east of.....	41	16	59.0	84	29	34.0

Near northeast corner of quadrangle.

Ridgeville corners, crossroads.....	41	26	15.8	84	15	26.0
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DELAWARE QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Marion-Morrow county line.....	40	29	08.1	83	00	25.9
Corner of lots 15, 14, 20, and 21; road east-west.....	40	28	20.1	83	00	27.9
T. 7 N., R. 18 W., corner of lots 21, 22, 20, and 19; crossroads.....	40	27	21.6	83	00	32.0
T. 6 N., R. 18 W., corner of lots 13, 8, 7, and 14, pike east-west, schoolhouse.....	40	24	43.0	83	00	04.2
Crossroads, corner of lot 15 at turn east.....	40	23	49.9	83	00	10.6
Road crossing on Big Four Route.....	40	19	53.6	83	00	33.0
T. 5 N., R. 18 W., sec. 3, lots 22 and 23, Edin-Delaware Pike northeast-southwest.....	40	18	32.7	83	00	37.8
Pike east-west, old railroad crossing.....	40	17	46.6	83	00	59.2
On pike southeast-northwest, road south.....	40	17	17.7	83	00	57.2
Road east-west.....	40	16	08.1	83	00	02.2

From milepost 103 along Hocking Valley Ry. to a point near Prospect.

Milepost 103, crossing 340 feet south of.....	40	15	12.6	83	05	08.5
Crossing of telephone line.....	40	17	18.3	83	04	59.8
Delaware, south azimuth stone, 30 feet southeast of Cleveland, Cincinnati, Chicago & St. Louis and Hocking Valley railways; limestone post, 28 by 6 by 6 inches, set 28 inches in ground, bronze meridian tablet cemented in top. Azimuth 185° 10'.....	40	17	34.5	83	04	58.4
Delaware, north azimuth stone, 105 feet north of center of street and 72 feet east of railroad; limestone post, 36 by 6 by 6 inches, set 30 inches in ground, copper bolt cemented in center of top. Azimuth 5° 10'.....	40	17	47.0	83	04	56.9
Delaware station, crossing 50 feet north of.....	40	17	58.7	83	04	57.4
Siding, crossing 150 feet south of south end of.....	40	20	00.3	83	06	03.3
Milepost 95, crossing 200 feet north of.....	40	21	51.6	83	07	15.9
Radnor station, crossing 160 feet north of.....	40	23	09.6	83	08	06.0
Mileposts 90 and 91, crossing halfway between.....	40	25	22.7	83	09	39.1
Prospect station, crossing at.....	40	27	06.1	83	10	45.7
Crossing, four corners.....	40	29	28.0	83	09	59.3

DELAWARE QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
New Dover, 2.5 miles east of, in northeast corner of stone abutment to bridge over Mill Creek at T road south; aluminum tablet stamped "Prim. Trav. Sta. No. 74. Ohio, 1910"	° ' "	° ' "	<i>Fect.</i>
T road south	40 15 01.1	83 14 54.3	.....
Delaware-Union county line, stone at	40 15 02.0	83 14 54.5	91
Delaware-Union county line, pike at	40 15 02.1	83 14 56.0	120
T road north at brick schoolhouse	40 21 10.5	83 14 59.6	.....
Magnetic Springs, 1 mile north and 1.5 miles east of, on north side of road, 15 feet north of center of T road south; iron post stamped "Prim. Trav. Sta. No. 82. Ohio, 1910"	40 21 02.4	83 14 18.9	3, 270
Delaware-Union county line, stone monument	40 21 52.9	83 14 14.4	5, 113
Roads east, west, and north near schoolhouse	40 20 01.0	83 14 59.6	.....
Roads north, east, and south	40 21 53.5	83 13 51.0	.....
Hoskins and State road crossing	40 22 54.5	83 14 58.9	.....
	40 25 08.6	83 14 57.0	.....

Along highways near southeast corner of quadrangle.

Stations.	Latitude.	Longitude.
Intersection of roads north and south and west, about 800 feet below bridge over Olentangy River	° ' "	° ' "
T. 4 N., R. 19 W., secs. 1, 2, 3, 4, corner of, road north and south	40 15 10.4	83 03 46.7
Hocking Valley R'y. road crossing, 340 feet south of milepost 103	40 15 12.1	83 04 56.4
	40 15 12.6	83 05 08.5

DELPHOS QUADRANGLE.

Along public roads from Elgin to Grover Hill.

Stations.	Latitude.	Longitude.
Elgin, 1.25 miles north of, at T road west, 30 feet east and 15 feet south to center of T road; iron post stamped "Prim. Trav. Sta. No. 10. Ohio, 1909"	° ' "	° ' "
Elgin, 1.25 miles north and 0.5 mile west of, 10 feet south to stone; crossroads	40 45 45.2	84 28 32.7
Toledo, St. Louis & Western R. R. crossing on north-south road; center of track	40 45 39.6	84 29 06.8
T. 3 S., R. 3 E., corner of secs. 1, 2, 11, and 12, at T road north, near schoolhouse; section corner stone	40 46 54.5	84 29 06.9
T. 2 S., R. 3 E., south corner of secs. 35 and 36; T road north	40 48 00.0	84 28 32.5
T. 3 S., R. 3 E., north corner of secs. 1 and 2; T road south	40 48 56.7	84 28 31.8
T. 2 S., R. 3 E., corner of secs. 25, 26, 35, and 36; T road east	40 48 56.7	84 28 32.7
T. 2 S., R. 3 E., corner of secs. 23, 24, 25, and 26	40 49 48.6	84 28 31.9
Middlepoint, 1.5 miles west of, 270 feet east of milepost 197, north-south road crossing on Pennsylvania R. R.; center of north track	40 50 41.0	84 28 31.9
T. 2 S., R. 3 E., quarter corner between secs. 11 and 14	40 51 30.5	84 28 32.0
Van Wert County poor farm, 0.25 mile west of, at southeast corner of crossroads, 30 feet north and 20 feet west to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 11. Ohio, 1909"	40 52 25.2	84 29 07.6
T road east, just west of schoolhouse	40 52 42.9	84 29 07.5
T. 2 S., R. 3 E., north corner of secs. 2 and 3; T road south	40 53 43.7	84 29 07.9
T. 1 S., R. 3 E., south corner of secs. 34 and 35; T road north	40 54 11.2	84 29 42.2
T. 1 S., R. 3 E., corner of secs. 26, 27, 34, and 35; crossroads	40 54 11.2	84 29 41.3
T. 1 S., R. 3 E., corner of secs. 22, 23, 26, and 27; crossroads	40 55 03.8	84 29 41.3
T. 1 S., R. 3 E., corner of secs. 14, 15, 22, and 23; crossroads	40 55 55.6	84 29 41.6
T. 1 S., R. 3 E., corner of secs. 10, 11, 14, and 15; crossroads	40 56 47.4	84 29 42.9
T. 1 S., R. 3 E., corner of secs. 2, 3, 10, and 11; crossroads	40 57 39.5	84 29 42.9
Tps. 1 S. and 1 N., R. 3 E., corner of secs. 2, 3, 34, and 35; crossroads on Paulding-Van Wert county line	40 58 31.6	84 29 43.1
Grover Hill, 1.25 miles south and 1 mile west of, in southeast corner of stone retaining wall to bridge; aluminum tablet stamped "730 Ohio"	40 59 24.6	84 29 43.6
	40 59 40.9	84 29 43.5

DELPHOS QUADRANGLE—Continued.

Along public roads through center of Delphos quadrangle east from Primary Traverse Station No. 11.

Station.	Latitude.	Longitude.
	° ' "	° ' "
Cemetery, T road north.....	40 52 43.6	84 28 15.3
Dog Creek, 1 mile north of, near range line, T road east.....	40 53 17.9	84 27 18.0
T. 2 S., R. 4 E., west corner of secs. 6 and 7.....	40 53 17.9	84 27 23.4
T. 2 S., R. 3 E., east corner of secs. 1 and 12.....	40 53 19.3	84 27 23.4
T. 2 S., R. 4 E., corner of secs. 5, 6, 7, and 8; center of bridge at schoolhouse.....	40 53 18.2	84 26 11.2
T. 2 S., R. 4 E., corner of secs. 4, 5, 8, and 9; crossroads.....	40 53 18.5	84 25 02.8
T. 2 S., R. 4 E., corner of secs. 3, 4, 9, and 10; crossroads at Bethel Church and schoolhouse.....	40 53 18.5	84 23 53.3
T. 2 S., R. 4 E., corner of secs. 2, 3 10, and 11.....	40 53 18.8	84 22 45.2
T. 2 S., R. 4 E., corner of secs. 1, 2, 11, and 12, at schoolhouse No. 8.....	40 53 19.1	84 21 35.9
Miami & Erie Canal, bridge over, at range line.....	40 53 20.2	84 20 27.0
Delphos, 3 miles north of, in southeast corner of east-west road crossing of the Cincinnati, Hamilton & Dayton Ry., 25 feet south and 35 feet east to crossing; iron post stamped "Prim. Trav. Sta. No. 13. Ohio, 1909".....	40 53 18.6	84 20 07.6
Fort Jennings, 0.8 mile southwest of, northeast-southwest pike at crossing on Cincinnati, Hamilton & Dayton Ry.; center of track.....	40 53 45.2	84 18 31.8
Fort Jennings, center of steel bridge over Ottawa River.....	40 54 09.6	84 17 44.7
Fort Jennings, 0.8 mile southeast of; T road north.....	40 53 54.4	84 16 47.0
T. 2 S., R. 5 E., north corner of secs. 2 and 3; T road south.....	40 54 14.4	84 15 45.7
T. 1 S., R. 5 E., south corner of secs. 34 and 35; T road north.....	40 54 14.4	84 15 48.3
Fort Jennings, 3 miles east of, at crossroads on township line, 15 feet south and 35 feet west to T. 1 S., R. 5 E., south corner of secs. 35 and 36, T road north, 80 feet east and 30 feet south to T. 2 S., R. 5 E., north corner of secs. 1 and 2, T road south; iron post stamped "Prim. Trav. Sta. No. 14. Ohio, 1909".....	40 54 14.9	84 14 39.0
T. 1 S., R. 5 E., south corner of secs. 35 and 36; T road north.....	40 54 14.7	84 14 39.4
T. 1 S., R. 5 E., corner of secs. 25, 26, 35, and 36.....	40 55 06.8	84 14 39.7

Magnetic declination for south border, 0° 9' W.; for west border, 6° 1' W.; for center, 0° 19' 26" W.

DESHLER QUADRANGLE.

Along Cincinnati, Hamilton & Dayton Ry., near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Rs. 7 and 8 E., road crossing between.....	41 01 18.2	83 59 45.3
Pike road crossing.....	41 01 18.2	83 58 47.0
Road crossing, north-south.....	41 01 18.8	83 57 27.1
Road crossing.....	41 01 19.1	83 55 26.1
Gilboa station.....	41 01 19.1	83 55 19.6
Road crossing, north-south.....	41 01 19.1	83 55 19.2
Road crossing, north-south.....	41 01 19.1	83 55 08.9
Road crossing, north-south.....	41 01 19.2	83 54 16.6
Road crossing, north-south.....	41 01 19.3	83 53 59.4
Pike road crossing, northeast-southwest.....	41 01 19.4	83 53 11.0
Road, north-south.....	41 01 19.5	83 52 50.5
Road crossing, north-south.....	41 01 19.7	83 51 41.4
Moffitt, road crossing at.....	41 01 19.8	83 50 49.2
Road crossing, north-south.....	41 01 20.2	83 48 49.2
Benton Ridge, road crossing at.....	41 01 20.4	83 47 57.0
Benton Ridge, road crossing $\frac{1}{2}$ mile east of.....	41 01 20.5	83 47 08.0
Rs. 9 and 10 E., road crossing between.....	41 01 20.7	83 45 55.7
Road, north-south.....	41 01 20.8	83 45 04.8

Along highways near west border of quadrangle.

T. 1 N., Rs. 7 and 8 E., corner of secs. 7, 18, 13, and 12.....	41 03 02.2	83 59 45.5
T. 2 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36.....	41 05 40.1	83 59 46.5
T. 2 N., Rs. 7 and 8 E., corner of secs. 18, 19, 24, and 13.....	41 07 24.8	83 59 47.5
T. 2 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12.....	41 09 09.5	83 59 48.0
T. 3 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36.....	41 10 53.0	83 59 49.0
T. 3 N., Rs. 7 and 8 E., corner of secs. 18, 19, 24, and 13.....	41 12 37.6	83 59 50.2
T. 3 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12.....	41 14 22.2	83 59 51.2
Ottawa, 3 miles east of, in southwest corner of James Maidlow's front yard, southwest corner of Maidlow's residence bears N. 44° 30' E., distant 46.8 feet, corner post to southwest corner of Maidlow's yard fence bears SW., distant 2 feet, in top of marble post 6 by 6 by 24 inches, set 23 inches in ground; aluminum tablet stamped "Prim. Trav. Sta. No. 4".....	41 00 54.1	83 59 48.9
Cincinnati, Hamilton & Dayton Ry., road crossing between Rs. 7 and 8 E.....	41 01 18.2	83 59 45.3

DESHLER QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
T. 3 N., R. 8 E., northwest corner of sec. 7, in northwest corner of field; iron post stamped "Prim. Trav. Sta. No. 11, 1905"	° ' "	° ' "
T. 3 N., R. 8 E., corner of secs. 5, 6, 7, and 8; crossroads, 48 feet north to center of bridge over ditch.	41 14 21.9	83 59 50.9
T. 3 N., R. 8 E., secs. 4, 5, 8, and 9; crossroads.	41 14 22.7	83 58 41.8
T. 3 N., R. 8 E., west corner of secs. 3 and 10, T road east at schoolhouse; stone.	41 14 23.0	83 57 32.7
T. 3 N., R. 8 E., corner of secs. 2, 3, 10, and 11; crossroads, 25 feet west to center of bridge.	41 14 23.6	83 56 23.3
T. 3 N., R. 8 E., corner of secs. 1, 2, 11, and 12; 28 feet northwest to John Sher's mail box, 30 feet southwest to end of iron bridge.	41 14 24.4	83 55 13.8
T. 3 N., R. 9 E., west corner of secs. 6 and 7; T road east, 15 feet northwest to small Kentucky coffee tree, Henry-Wood county line, 27 feet northeast to cross on telephone pole.	41 14 25.1	83 54 04.4
T. 3 N., R. 9 E., northwest corner of sec. 8, in field of Mrs. Rush, southwest corner of schoolhouse bears N. 15° 30' E., distant 80.8 feet, cross cut on abutment of bridge bears N. 66° 20' W., distant 16.8 feet; iron post stamped "Prim. Trav. Sta. No. 12, 1905"	41 14 25.6	83 52 55.9
T. 3 N., R. 9 E., corner of secs. 4, 5, 8, and 9, 15 feet south to center of bridge over ditch, 12 feet north to crossroads.	41 14 26.1	83 51 43.0
T. 3 N., R. 9 E., corner of secs. 3, 4, 9, and 10, T road west at stone (church and schoolhouse), 50 feet south to center of bridge over ditch.	41 14 26.4	83 50 33.0
T. 3 N., R. 9 E., corner of secs. 2, 3, 10, and 11; crossroads at stone.	41 14 26.2	83 49 24.4
T. 3 N., R. 9 E., east corner of secs. 2 and 11; crossroads at schoolhouse No. 1, stone.	41 14 25.8	83 48 14.6
T. 3 N., Rs. 9 and 10 E., corner of secs. 1, 6, 7, and 12; crossroads, 21 feet south to center of bridge, 21 feet southeast to Mrs. F. A. Lovell's mail box.	41 14 24.9	83 47 07.2
T. 3 N., R. 10 E., northeast corner of sec. 7, at crossroads at schoolhouse No. 2 cross cut in southwest corner of large stone culvert bears N. 11° E., distant 17.6 feet, southwest corner of schoolhouse bears N. 48° E., distant 126 feet; iron post stamped "Prim. Trav. Sta. No. 13, 1905"	41 14 26.9	83 45 57.4
	41 14 26.1	83 44 46.5

DUBLIN QUADRANGLE.

From Columbus along Hocking Valley Ry. to Hyatts.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Columbus, Lane Avenue station; crossing 150 feet south of.	40 00 24.3	83 01 55.5
Olentangy station, crossing under railway 550 feet north of.	40 03 48.5	83 02 48.1
Elmwood station, crossing 200 feet south of.	40 05 25.2	83 03 09.4
Milepost 113, crossing 850 feet north of.	40 07 01.8	83 03 30.7
Powell station, crossing 160 feet south of.	40 09 29.6	83 04 42.3
Milepost 107, crossing 170 feet south of.	40 11 44.5	83 05 22.7
Hyatts station, crossing 1,200 feet south of.	40 12 58.3	83 05 17.6

Flag station along Toledo & Ohio Central Ry. to milepost 127.

Flag station, telephone line 200 feet southeast of.	40 06 15.6	83 12 38.5
Amlin station, crossing 100 feet northwest of.	40 04 36.4	83 10 51.1
Milepost 122, crossing 300 feet southeast of.	40 02 54.5	83 09 01.0
Telephone-line crossing.	40 01 56.6	83 07 58.4
Toledo & Ohio Central Ry. and Pennsylvania R. R. crossing.	40 00 04.5	83 05 57.4
Milepost 127, crossing at.	39 59 36.1	83 05 26.7

Along highways near west border of quadrangle.

Pittsburgh, Cincinnati, Chicago & St. Louis Ry., crossing of.	40 05 43.2	83 14 54.0
Madison-Union county line, stone monument.	40 06 29.8	83 14 01.3
Fork of road northwest.	40 09 50.2	83 13 44.1
Schoolhouse No. 9, road west near.	40 11 26.2	83 14 32.3
Watkins, crossroad in east part of.	40 12 45.5	83 14 41.0
Roads east, west, and north.	40 13 53.0	83 14 46.1

DUBLIN QUADRANGLE—Continued.

Along highways near northeast corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
District No. 7 schoolhouse, road south.....	40 14 24.9	83 00 22.7
Cleveland, Cincinnati, Chicago & St. Louis Ry. crossing. Azimuth 176° 56'.....	40 14 26.0	83 00 46.2
Columbus-Delaware road.....	40 14 31.9	83 03 05.7

Along highways near east border of quadrangle.

Delaware-Franklin county line, road east.....	40 08 10.2	83 00 16.4
Crossing under Cleveland, Cincinnati, Chicago & St. Louis Ry., turn south on railroad.....	40 08 07.6	83 00 19.0
Flint, road crossing 210 feet north of station.....	40 07 38.3	83 00 16.9
Road crossing.....	40 06 33.3	83 00 12.3
Worthington, $\frac{1}{2}$ mile south of, junction of Pennsylvania and Cleveland, Cincinnati, Chicago & St. Louis railroads.....	40 05 10.9	83 00 06.4
Road crossing.....	40 03 42.0	83 00 00.0
Columbus, intersection of North High Street and West Lane Avenue.....	40 00 21.9	83 00 33.8

EAST CINCINNATI QUADRANGLE.

Along Baltimore & Ohio Southwestern R. R. from Cincinnati to Symmes station.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Cincinnati, Mount Lookout astronomic pier.....	39 08 21.93	84 25 21.52
Madisonville station.....	39 09 26.0	84 23 49.0
East Madisonville station.....	39 09 35.3	84 23 10.0
Madeira station.....	39 11 17.0	84 21 45.9
Allandale station.....	39 11 49.2	84 20 34.4
Remington station.....	39 13 35.8	84 19 26.7
Symmes station.....	39 14 50.0	84 17 45.8

Along highways near northwest corner of quadrangle.

Carthage; crossing of Fifth Street and Cincinnati, Hamilton & Dayton Ry.....	39 11 54.3	84 28 57.0
Hartwell, Clark Avenue, east.....	39 13 18.9	84 28 22.6
Parkplace, Allen Avenue, west.....	39 14 32.7	84 28 15.5

Along highways between Spann and Guinea.

Spann, 0.2 mile east of; center of T pike south at bridge.....	39 00 25.9	84 15 25.7
Spann, 0.5 mile east of, 91 feet south of south corner of Spann schoolhouse; iron post stamped "Prim. Trav. Sta. No. 95. Ohio, 1909".....	39 00 48.1	84 15 09.2
Wm. Eppert's mail box, center of crossroads.....	39 01 40.2	84 15 18.1
Merwin, 670 feet southeast of post office; Ohio pike at pike southwest.....	39 03 13.8	84 15 21.0
Withamsville, Ohio pike at T road north at post office.....	39 03 52.3	84 16 45.4
Withamsville, 1.3 miles north of; east-west pike at center of T road south.....	39 05 02.2	84 16 35.4
Gleniste, north-south pike crossing on Cincinnati, Georgetown & Portsmouth Electric Railroad at station.....	39 05 40.1	84 15 46.7
Gleniste, 0.5 mile northwest of; center of T pike north.....	39 06 21.2	84 16 14.7
Dave Hausermann's mail box, bend in road at.....	39 07 10.2	84 16 06.9
Ferrintown, 0.7 mile west of, on north side of east-west pike, 10 feet west and 10 feet north of center of T road; iron post stamped "Prim. Trav. Sta. No. 96. Ohio, 1909".....	39 08 16.7	84 15 01.3
Guinea, 0.3 mile northwest of, at store; center of cross pikes.....	39 13 44.7	84 15 22.8

EAST LIBERTY QUADRANGLE.

South along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Belle Center, 1.25 miles south and 1.25 miles east of; crossroads.....	40 29 28.3	83 43 45.8	-----
Northwood, in east part of, 20 feet south and 10 feet east to old guide-post; crossroads, on McArthur-Richland township line.....	40 28 22.0	83 43 57.0	6,766
Fulton Cemetery; crossroads at.....	40 27 17.0	83 43 40.1	6,712
Intersection of Bellefontaine-Northwood pike with east-west road.....	40 26 08.8	83 44 10.5	7,300
Intersection of Bellefontaine-Northwood pike with east-west road.....	40 25 08.8	83 44 31.2	6,289
Hopewell schoolhouse, T road west at.....	40 24 18.9	83 44 47.8	5,218
Bridge over branch, center of.....	40 23 43.2	83 44 58.5	3,708
Bellefontaine-New Jerusalem pike at corporation line north-south.....	40 21 55.4	83 44 25.2	-----
Bellefontaine, 1.5 miles east of, at southeast corner of forks of road, 30 feet north and 15 feet west to center of triangle in forks; iron post stamped "Prim. Trav. Sta. No. 92. Ohio, 1910".....	40 22 03.9	83 43 51.9	2,716
T road west.....	40 21 33.1	83 43 34.9	3,383
Crossroads, 25 feet north to corner fence post.....	40 20 57.5	83 43 38.4	3,610
Toledo & Ohio Central Ry. at east-west road crossing.....	40 20 16.6	83 44 43.3	6,504
Ludlow pike at pike southeast.....	40 19 42.3	83 44 32.9	3,571
T. 14 N., R. 4 E., east corner of secs. 25 and 26; corner of Jefferson, Monroe, and Liberty townships.....	40 18 59.0	83 44 17.5	4,540
Road west at schoolhouse.....	40 18 45.6	83 44 12.7	1,410
Ludlow pike at pike west.....	40 17 54.5	83 43 54.9	5,350
Five Points schoolhouse; crossroads at.....	40 17 07.1	83 43 38.1	4,970
Crossroads, guideboard "Bellefontaine 7 miles, Liberty 3 miles".....	40 16 12.0	83 43 19.1	5,770
Piat Castle, crossroads at.....	40 15 24.4	83 43 02.6	4,983
T road south near old mill.....	40 15 03.4	83 43 47.7	4,091

East along highways through center of quadrangle.

Bellefontaine, about 2 miles east of; north meridian stone of Coast and Geodetic Survey.....	40 22 17.1	83 43 12.2	-----
Bellefontaine-New Jerusalem pike, at T road south, at John Karu's mail box.....	40 22 33.8	83 42 17.2	4,574
Apple Grove schoolhouse, 0.5 mile east of; T road north.....	40 22 39.5	83 40 40.6	7,497
New Jerusalem, T road west at.....	40 22 30.6	83 39 26.0	5,844
New Salem Church, road north just east of.....	40 22 38.8	83 38 28.9	4,504
Crossroads 130 feet west of township line.....	40 23 01.0	83 36 55.9	7,533
North Greenfield, 0.5 mile west of, at northwest corner of crossroads at Hickman schoolhouse, 25 feet south and 25 feet east to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 93. Ohio, 1910".....	40 22 33.8	83 36 02.8	4,939
North Greenfield, T road north.....	40 22 40.1	83 35 21.4	3,268
Mill Creek schoolhouse, road north at.....	40 22 24.3	83 34 01.5	6,390
Crossroads.....	40 22 02.8	83 32 57.0	5,438
Logan-Union county-line stone.....	40 21 56.1	83 32 10.0	3,700

Near north border of quadrangle.

Big Springs, 1.25 miles west of; crossroads.....	40 29 53.6	83 39 28.8	-----
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Near south border of quadrangle.

Moore schoolhouse; crossroads at.....	40 15 17.6	83 34 52.2	-----
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Near milepost 83 along Toledo & Ohio Central Ry. to Lunda.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Mileposts 83 and 84; crossing halfway between, 1,450 feet north of creek.....	40 29 21.1	83 33 33.6
Milepost 86, crossing 480 feet north of.....	40 27 11.0	83 33 16.9
West Mansfield, main road running north from.....	40 24 34.3	83 32 46.7
Milepost 91, crossing 830 feet south of.....	40 22 59.3	83 31 24.0
Lunda station, crossing 400 feet south of.....	40 21 59.2	83 30 31.7

Magnetic declination for west border, 0° 12' E. to 0° 13' W.; for center line, 0° 08' E.

EDON QUADRANGLE.

Along highways near Ohio-Indiana State line.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tps. 6 and 7 N., R. 1 E., west corner of secs. 6 and 31; T road east.....	41 30 46.5	84 48 15.2
T. 7 N., R. 1 E., stone at corner of secs. 30 and 31.....	41 31 38.9	84 48 15.7
T. 7 N., R. 1 E., west corner of secs. 19 and 30; T road east.....	41 32 30.8	84 48 16.4
Edon, 2 miles west of crossing of Wabash R. R. and Ohio-Indiana State line.....	41 32 54.7	84 48 16.7
T. 7 N., R. 1 E., crossroads at west corner of secs. 7 and 18.....	41 34 14.7	84 48 18.0
T. 7 N., R. 1 E., west corner of secs. 6 and 7; T road east.....	41 35 07.0	84 48 18.7
T. 8 N., R. 1 E., west corner of secs. 30 and 31; T road south.....	41 36 47.4	84 48 20.0
Columbia, crossroads.....	41 37 58.8	84 47 19.4
Columbia, road west 1.5 miles north of.....	41 39 11.6	84 47 37.1
Store; T road east just south of, 0.33 mile north of schoolhouse, 33 feet southeast to mail box, 44 feet northeast to apple tree.....	41 40 16.3	84 47 45.0
Ohio-Indiana State line, T road east, 1.25 miles south of northwest corner of Ohio.....	41 40 41.9	84 48 21.3
T road east.....	41 41 34.8	84 48 21.1
Ohio-Indiana-Michigan State corner.....	41 41 46.2	84 48 21.1

Near Ohio-Michigan State line.

T. 9 S., R. 4 W., corner of secs. 8, 9, 16, and 17; T road north.....	41 41 35.4	84 47 10.9
T. 9 S., R. 4 W., corner of secs. 9, 10, 15, and 16; T road north.....	41 41 36.3	84 46 01.1

ELMORE QUADRANGLE.

From Risingsun along Hocking Valley Ry. to a point near Lemoyne.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Risingsun station, crossing 130 feet south of.....	41 16 06.8	83 25 43.4
T. 4 N., R. 12 E., corner of secs. 11, 12, 13, and 14.....	41 18 43.5	83 26 14.6
Bradner station, crossing 150 feet north of.....	41 19 22.6	83 26 17.8
Milepost 21, crossing 840 feet south of.....	41 22 12.1	83 26 47.5
Pemberville station, crossing 80 feet north of.....	41 24 28.6	83 27 11.3
T. 5 N., R. 12 E., corner of secs. 2, 3, 10, and 11.....	41 24 49.6	83 27 16.7
Milepost 16, crossing 480 feet south of.....	41 26 33.2	83 27 39.9
Lemoyne station.....	41 29 39.6	83 28 25.7
Pike crossing.....	41 29 45.2	83 28 27.0

ERA QUADRANGLE.

At Yellowbud.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Yellowbud, in southeast corner of George Kline's front yard on east side of canal; southeast corner of foundation to Kline's residence bears N. 43° 50' W., distant 25.9 feet; center of southeast corner fence post of yard bears S. 60° E., distant 3.4 feet; lower hinge of front yard gate bears S. 77° 20' W., distant 37.4 feet; in 7 by 14 by 26 inch sandstone post; aluminum tablet stamped "Prim. Trav. Sta. No. 7".....	39 30 12.0	83 00 29.8
Yellowbud, town pump at T road east.....	39 30 11.8	83 00 35.0

Along highways near south border of quadrangle.

Schoolhouse No. 9, center of bridge about 1 mile east of.....	39 30 19.1	83 13 49.3
Schoolhouse No. 1, Deerfield township, T road west, 33 feet northwest to cross on board fence, 26 feet southwest to cross on east end of wood steps.....	39 30 23.4	83 12 30.7
Clarksburg, T road north 1.5 miles west of, 30 feet northeast to cross on corner of fence, 33 feet northwest to cross on large corner fence post.....	39 30 11.4	83 10 46.1
Clarksburg, T road northwest 0.75 mile southwest of, 27 feet east to cross on gatepost, 25 feet southeast to cross on telephone pole.....	39 30 05.6	83 09 50.1
Clarksburg, in north corner of James Corcoran's property; southeast corner of foundation of Wilkins's residence bears N. 60° 30' W., distant 43 feet; northwest corner of brick foundation to James Corcoran's front porch bears S. 30° E., distant 96.3 feet; iron bench-mark post stamped "Prim. Trav. Sta. No. 6".....	39 30 16.2	83 09 11.7

a Post moved in April, 1912, position uncertain.

ERA QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Era, 430 feet west of station; public road crossing on Baltimore & Ohio R. R. ...	39 44 23.2	83 14 38.1
West Union schoolhouse, 0.5 mile northwest of; road north, 27 feet northwest to corner of yard fence, 15 feet east to corner stone.	39 44 07.7	83 12 58.8
West Union schoolhouse, 0.33 mile southeast of; T road east, 15 feet to south end of culvert.	39 43 38.9	83 12 18.6
Saranac, T road northwest, 9 feet south to center of bridge, 24 feet southeast to William Sanderson's mail box.	39 43 20.4	83 10 45.6
Springdale stock farm, T road southwest, Darby-Millburg township line stone.	39 43 56.8	83 09 30.5
Big Darby Creek, at ford, on left bank, arrow painted on sycamore tree.	39 43 47.9	83 07 57.1
Darbyville, 2 miles north of, on east side of Darbyville-Commercial pike at T road west, stone township monument bears S. 72° 14' W. 14.1 feet; iron post stamped "Prim. Trav. Sta. No. 1, 1906".	39 43 59.6	83 06 14.2
Shadyside schoolhouse, 1.5 miles east of; stone at T road north.	39 44 40.2	83 04 48.5
Crossroads at Hall's residence, stone.	39 44 30.5	83 03 30.6
M. L. Thomas's mail box, T road west, 30 feet southwest to elm tree, 34 feet northwest to north end of culvert.	39 44 35.1	83 01 25.7
Darbyville-South Bloomfield pike, at pike to north, 39 feet east to arrow, 18 feet south to cross on fence post.	39 43 17.3	83 01 12.4

Along highways east-west through center of quadrangle.

Yankeetown Methodist Episcopal Church, 0.5 mile west of, on Circleville-Yankeetown pike, at T road south.	39 39 08.1	83 14 44.4
Yankeetown Methodist Episcopal Church, 1 mile east of, on Circleville-Yankeetown pike, at T road north.	39 38 35.5	83 12 58.6
Monroe township schoolhouse No. 10, on Circleville-Yankeetown pike at road south.	39 38 24.2	83 12 23.0
Deer Creek, at post office; center of cross pikes.	39 37 59.8	83 11 05.9
Deer Creek, 1 mile east of post office; center of grass plot at road forks.	39 37 38.4	83 10 09.4
Peter Justin's mail box, on Circleville-Yankeetown pike, at intersection with T road north.	39 37 29.2	83 09 09.8
Monroe township schoolhouse No. 1, on Circleville-Yankeetown pike, at intersection with T road south.	39 37 07.4	83 08 24.3
Williamsport, near; stone on Monroe-Jackson township line.	39 36 48.8	83 07 08.2
Williamsport, 2 miles north of, 260 feet east of Monroe-Jackson township line, about 30 feet southwest of T road west; iron post stamped "Prim. Trav. Sta. No. 75, 1909, Ohio".	39 36 47.8	83 07 05.0
Schoolhouse No. 8, 0.7 mile west of, on Circleville-Yankeetown pike, at T pike north.	39 36 57.3	83 05 54.5
Schoolhouse No. 8, 1 mile east of, on Circleville-Yankeetown pike, at F. J. Clark's mail box; T pike south.	39 37 14.0	83 04 08.8
Schoolhouse No. 8, 2 miles east of; T pike north.	39 37 24.8	83 03 15.1
Circleville, 4.5 miles west of; junction of Circleville-Yankeetown and Circleville-Dayton pikes.	39 37 31.7	83 01 40.8
Wildwood Parks farm, cross pikes.	39 36 41.8	83 00 22.1

Magnetic declination for north border, 1° 56' E.; for center line east-west through quadrangle, 1° 31' W.

FINDLAY QUADRANGLE.

From Cygnet along Toledo & Ohio Central Ry. to milepost 46.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Cygnet station, crossing 270 feet north of.	41 14 23.5	83 38 43.3
Milepost 32, crossing at.	41 12 40.0	83 38 42.8
West corner of secs. 30 and 31, T. 3 N., R. 11 E.	41 10 55.8	83 38 57.6
Galatea, Baltimore & Ohio and Toledo & Ohio Central railroad crossing.	41 10 40.8	83 38 42.8
Vanburen station, crossing 120 feet south of.	41 08 17.5	83 38 42.8
Mortimer, road crossing 465 feet south of station.	41 06 33.4	83 38 42.9
Mortimer station.	41 06 38.0	83 38 42.9
Corner Tps. 1 and 2 N., Rs. 10 and 11 E.	41 04 49.9	83 38 58.3
North Findlay, crossing of Lake Erie & Western R. R.	41 02 50.7	83 38 42.2
Findlay, north azimuth stone at 790 feet north of crossing on Cleveland, Cincinnati, Chicago & St. Louis Ry., 320 feet north of street, and 5 feet east of east rail of Toledo & Ohio Central Ry., in limestone post 36 by 7 by 5 inches, set 34 inches in ground; a copper bolt cemented in top.	41 02 23.4	83 38 38.9
Findlay, south azimuth stone, 268 feet south of crossing on Cleveland, Cincinnati, Chicago & St. Louis Ry., 4 feet north of sidewalk on Main Street, and 17 feet west of west rail of Toledo & Ohio Central Ry., limestone post 40 by 7 by 5 inches set 36 inches in ground, bronze meridian tablet cemented in center of top. Azimuth 178° 02' 30" to north stone.	41 02 13.0	83 38 38.5
Findlay station.	41 02 11.0	83 38 37.9
Findlay, crossing of Toledo & Ohio Central and Cincinnati, Hamilton & Dayton railways.	41 01 20.4	83 38 32.2
Milepost 46, crossing 250 feet south of.	41 00 28.2	83 38 28.1

FINDLAY QUADRANGLE—Continued.

Along Cincinnati, Hamilton & Dayton Ry. near southwest part of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Pike road crossing, northeast-southwest	41	01	20.8	83	44	19.6
Road crossing, north-south	41	01	20.7	83	44	13.1
Road crossing, north-south	41	01	20.7	83	43	39.1
Road crossing, north-south	41	01	20.5	83	42	46.5
Road crossing, north-south	41	01	20.4	83	41	54.3
Lake Erie & Western R. R. crossing	41	01	20.4	83	41	00.2
Road crossing, north-south	41	01	20.4	83	40	45.2
Road crossing, northeast-southwest	41	01	20.5	83	40	05.4
Findlay, Main Street crossing	41	01	20.5	83	39	01.6
Findlay station	41	01	20.5	83	38	59.5

Along highways near west border of quadrangle.

Lake Erie & Western Ry. crossing	41	00	45.2	83	41	54.5
T. 1 N., R. 10 E., quarter corner between secs. 15 and 16	41	02	38.5	83	42	29.2
T. 1 N., R. 10 E., quarter corner between secs. 9 and 10	41	03	30.9	83	42	29.4
Cincinnati, Hamilton & Dayton Ry. crossing	41	04	59.2	83	43	36.9
T. 2 N., R. 10 E., corner of secs. 28, 29, 32, and 33	41	05	42.6	83	43	37.1
T. 2 N., R. 10 E., corner of secs. 16, 17, 20, and 21	41	07	26.8	83	43	37.9
Road northeast-southwest	41	09	34.5	83	43	38.3
T. 3 N., R. 10 E., corner of secs. 28, 29, 32, and 33	41	10	58.1	83	43	36.9
T. 3 N., R. 10 E., corner of secs. 20, 21, 28, and 29	41	11	50.1	83	43	37.8
T. 3 N., R. 10 E., corner of secs. 16, 17, 20, and 21	41	12	42.2	83	43	38.1
T. 3 N., R. 10 E., corner of secs. 4, 5, 8, and 9	41	14	26.6	83	43	38.5

FOSTORIA QUADRANGLE.

From milepost 45 along Hocking Valley Ry. to a point near Longley.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Milepost 45, crossing 900 feet north of	41	01	43.4	83	24	16.0
Alvada station, crossing 100 feet north of	41	03	00.7	83	24	24.1
Siding, crossing 190 feet south of south end of	41	05	38.5	83	24	23.1
Crossing of telephone line	41	07	23.2	83	24	24.0
Fostoria, south azimuth stone, 7 feet east of east rail on Hocking Valley Ry., in arch culvert east of Fostoria Bulb & Bottle Co.'s works; bronze meridian tablet cemented in culvert. Azimuth, 179° 35' 25'	41	08	38.8	83	24	24.6
Fostoria, north azimuth stone, 500 feet south of Baltimore & Ohio and Hocking Valley railroad crossing, and 7 feet east of east rail of Hocking Valley Ry., sandstone post 36 by 8 by 8 inches, set 34 inches in ground; copper bolt cemented in center of top	41	09	01.2	83	24	24.8
Fostoria, street-car crossing on Hocking Valley and Toledo & Ohio Central railways	41	09	13.0	83	24	25.6
Fostoria station, Hocking Valley Ry.	41	09	40.7	83	24	37.1
Milepost 33, crossing 1,300 feet north of	41	12	11.9	83	25	02.2
Longley station, crossing 320 feet north of	41	13	20.6	83	25	14.3
T. 3 N., Rs. 12 and 13 E., corner of secs. 7, 18, 13, 12	41	13	29.6	83	25	13.7

Near southeast corner of quadrangle.

McCutchenville, north part of, Toledo & Ohio Central Ry. crossing	41	00	08.0	83	15	43.1
T. 1 N., R. 14 E., quarter corner between secs. 16 and 21	41	01	44.6	83	15	43.3
T. 1 N., R. 14 E., quarter corner between secs. 28 and 33	41	00	26.3	83	15	43.5

FRAZEYSBURG QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Fallsburg, road west at hotel, 42 feet northwest to cross on telegraph pole, 58 feet southeast to stone step to store.....	40 12 16.6	82 14 18.0
Secs. 12 and 13, quarter corner between.....	40 12 47.2	82 13 58.9
Wakatomika Creek, just east of Eli Frey's residence, east end of covered bridge over.....	40 13 15.1	82 13 16.8
Frampton, at schoolhouse, corner stone to secs. 1, 2, 9, and 10.....	40 13 37.8	82 12 11.9
Frampton, 1 mile east of, at Licking-Coshocton county line, T road south; forked post.....	40 13 40.6	82 11 01.7
Crossroads, guidepost ("Bladensburg 8 miles").....	40 13 47.0	82 09 54.8
French Melick's residence, road north at; cross on telegraph pole.....	40 14 13.5	82 09 21.8
West Carlisle, 1.3 miles west of; road south, 15 feet to cross on fence post, 33 feet west to cross on telegraph pole.....	40 14 10.6	82 08 26.3
West Carlisle, in southwest corner of lot of H. M. Robinson; northwest corner of Presbyterian Church bears S. 1° 30' E., distant 123 feet; nail in east face of locust tree bears N. 83° W., distant 46.2 feet; iron post stamped "Prim. Trav. Sta. No. 55, 1905".....	40 13 43.7	82 07 00.0
Cooperdale, 1.66 miles west of; forks of road, 36 feet southwest to cross on fence post, 35 feet southeast to cross on corner of rail fence.....	40 13 52.4	82 05 50.6

Along Cleveland, Akron & Columbus Ry. from Cooperdale to Tunnel Hill.

Cooperdale, 0.33 mile north of; road crossing.....	40 13 22.6	82 04 05.3
Tunnel Hill, 1.75 miles south of east-west road crossing.....	40 14 00.2	82 03 48.4
Tunnel Hill, 0.75 mile south of; northwest-southeast road crossing.....	40 14 47.0	82 03 13.9
Tunnel Hill, road crossing.....	40 15 17.4	82 02 56.3

Along Wheeling & Lake Erie and Cincinnati & Muskingum Valley railroads near Dresden.

Wheeling & Lake Erie R. R. milepost No. 11; center of track opposite.....	40 04 40.8	82 00 01.1
Dresden, 2 miles south of, just north of milepost No. 4; east-west road crossing of Cincinnati & Muskingum Valley R. R.....	40 05 41.5	82 01 02.0
Milepost 3, east-west road crossing 500 feet north of.....	40 06 33.5	82 00 42.8
Dresden, near northwest corner of public-school grounds, northwest corner of schoolhouse bears N. 80° E., distant 137.3 feet; nail in root of maple tree bears S. 30° 30' E. distant 13 feet; iron post stamped "Prim. Trav. Sta. No. 54, 1905".....	40 07 17.8	82 00 49.8
Canal, road crossing under railroad bridge.....	40 07 57.6	82 01 02.4

Along Cleveland, Akron & Columbus Ry. from Trinway to Wakatomika.

Trinway station, just west of, crossing of Cleveland, Akron & Columbus and Pennsylvania railroads, main line, north track.....	40 08 36.3	82 00 54.4
Trinway, 2 miles north of, northwest-southeast road crossing, at covered bridge..	40 10 16.3	82 01 48.8
Wakatomika, 0.75 mile south of, east-west road crossing.....	40 11 19.2	82 02 19.7
Wakatomika, 0.5 mile north of, road crossing.....	40 12 06.2	82 03 04.6
East-west road crossing.....	40 12 45.1	82 03 36.5

Along highways near Fallsburg.

Second-class T road east, 10 feet east to oak tree, 15 feet southeast to oak.....	40 14 08.3	82 14 01.6
Fallsburg, about 1.5 miles north of, 150 feet east of covered bridge over Wakatomika Creek; Charles Smith's mail box in triangle at forks of road.....	40 13 18.9	82 14 16.2

Along Baltimore & Ohio R. R. from Pleasant Valley to milepost 85.

Pleasant Valley, 1.5 miles southeast of, opposite milepost 86; center of track.....	40 00 09.7	82 06 54.4
Milepost 85, private-road crossing, 275 feet east of.....	40 00 02.6	82 05 48.4

Along highways near Hanover.

Reform, 1.5 miles south of; T road east at H. L. Smith's residence, 36 feet southeast to cross on gatepost, 45 feet southwest to H. L. Smith's mail box.....	40 06 47.1	82 14 49.5
Hanover, 1 mile northeast of; five corners, 24 feet southeast to cross on corner fence post, 32 feet east to cross on picket at corner of fence.....	40 05 34.5	82 14 53.7

Magnetic declination for north border, 0° 46' W.; for west border, 3° 08' W.

FREDERICKTOWN QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Fredericktown, at milepost 84 in north part of, road crossing Baltimore & Ohio Southwestern R. R.....	40 29 16.8	82 32 42.8	.....
Fredericktown, 1.5 miles west and 1 mile north of; center of crossroads.	40 29 42.2	82 34 34.3	9,003
Fredericktown, 3.25 miles west and 1 mile north of; center of T road north.....	40 29 44.5	82 36 22.8	8,393
Fredericktown, 4.8 miles west and 1 mile north of, in south end of concrete culvert at crossroads, 15 feet west and 15 feet north to center of crossroads; aluminum tablet stamped "Prim. Trav. Sta. No. 58. Ohio, 1910".....	40 29 47.3	82 37 42.0	6,131
Knox-Morrow county line.....	40 29 48.6	82 38 08.2	2,028
Chesterville, 2 miles north and 1.25 miles east of; center of T road south.	40 29 52.3	82 39 34.0	6,650
Crossroads.....	40 30 11.4	82 40 29.6	4,710

Along highways east-west through center of quadrangle.

Mount Vernon, 1 mile west of, at northwest corner of T road east at steel bridge over Kokoshing River, 30 feet south to north end of stone water trough, 25 feet south and 65 feet east to northwest corner of bridge, 15 feet east by 35 feet south to center of T road east; iron post stamped "Prim. Trav. Sta. No. 70. Ohio, 1910".....	40 23 35.1	82 30 27.7	.....
Mount Vernon, 2.5 miles west of; center of T road north.....	40 23 55.2	82 31 54.4	7,015
Liberty-Clinton township line; center of T road at.....	40 24 00.6	82 32 42.0	3,730
Mount Vernon, 4 miles west of, center of crossroads; guide board "Green Valley 1½ miles".....	40 24 10.3	82 33 50.3	5,383
Liberty Chapel schoolhouse, 0.8 mile west of; center of T road north.....	40 24 10.6	82 35 02.6	5,594
Polk schoolhouse, center of crossroads.....	40 24 10.9	82 35 50.9	3,750
Polk schoolhouse, center of crossroads 0.8 mile west of.....	40 24 09.9	82 36 39.1	3,736
Sparta, 3.5 miles east and 1 mile north of, in northeast corner of schoolhouse yard at crossroads, 30 feet north and 25 feet east to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 71. Ohio, 1910".....	40 24 16.2	82 37 56.3	6,008
Knox-Morrow county line, center of east-west road.....	40 24 09.5	82 38 32.4	2,879
Sparta, 2.5 miles east and 0.5 mile north of; stone in center of crossroads.....	40 24 03.0	82 39 08.6	2,885
Sparta, 1.25 miles east of; center of crossroads.....	40 23 49.8	82 40 39.7	7,171
Sparta, in northeast part of; junction of northeast-southwest road at road west.....	40 23 54.1	82 41 43.8	4,990
T. 6 N., R. 15 W., quarter corner between secs. 6 and 7; center of T road south.....	40 23 57.7	82 43 19.5	7,419
T. 6 N., R. 15 W., quarter corner on west side of sec. 6; center of crossroads.....	40 24 01.12	82 44 26.38	5,188

Along highways near west border of quadrangle.

Knox-Delaware county line, junction of roads on.....	40 17 03.1	82 45 01.4	.....
Centerburg, 2.5 miles west of, at turn of road, 20 feet south to telephone pole; Delaware-Knox county line.....	40 18 25.5	82 44 55.0	8,357
Centerburg, 3 miles west of; center of T road north.....	40 18 30.6	82 45 38.1	3,375
Vails Corners, guide post.....	40 21 54.6	82 45 13.7	.....
Bloomfield, 1 mile west and 0.5 mile north of, 2.3 miles southwest of Sparta, near southwest corner of J. D. Shorr's yard at T road north, 50 feet south and 20 feet west to center of T road; iron post stamped "Prim. Trav. Sta. No. 72. Ohio, 1910".....	40 22 11.6	82 44 40.3	3,107
T road west, 10 feet west to northeast corner of triangle.....	40 22 47.2	82 44 36.6	3,611
T. 6 N., R. 15 W., stone at corner of secs. 5 and 6; crossroads.....	40 24 36.5	82 44 23.1	.....
Tps. 6 and 7 N., R. 15 W., west corner of secs. 5 and 25.....	40 25 18.7	82 44 19.6	4,280
Penlam, 1 mile south of; center of T road north at J. R. Ulery's mail box.....	40 25 53.6	82 44 51.5	4,315
Penlam, stone at center of crossroads.....	40 26 43.8	82 44 47.5	5,091
Penlam, 1 mile north of; center of T road north, 60 feet east to T road south.....	40 27 34.1	82 44 44.1	5,106
Penlam, 2 miles north of; center of T road south.....	40 28 27.8	82 44 39.9	5,436
Stone at center of crossroads, guide board "Maringo 6 miles, Chester-ville 3.5 miles, Cardington 7.5 miles".....	40 28 29.7	82 45 26.0	3,571

Along highways near east border of quadrangle.

Prim. Trav. Sta. No. 38 at Homer.....	40 15 09.60	82 31 20.62	.....
Homer, 1 mile north by 0.25 mile east of; center of crossroads, Knox-Licking county line, 8 feet west to stone.....	40 16 00.1	82 31 01.8	5,316
Homer, 2 miles north and 0.25 mile east of; center of T road west.....	40 16 48.5	82 30 55.0	4,920
Brandon, 1.5 miles south of; center of T road west.....	40 17 21.1	82 30 50.4	3,320
Brandon, center of crossroads.....	40 18 44.9	82 30 36.8	8,549
Brandon, 1 mile north of; center of T road west.....	40 19 32.3	82 30 28.8	4,836
Miller-Clinton township line, center of north-south road.....	40 20 19.7	82 30 24.6	4,807
Forks of road.....	40 21 10.6	82 29 45.3	5,981

FREDERICKTOWN QUADRANGLE—Continued.

Along highways near southeast corner of quadrangle.

Stations.	Latitude.	Longitude.
Homer, 1.66 miles west of, T road south, 42 feet southeast to cross on corner fence post, 40 feet southwest to hickory tree.....	° ' "	° ' "
.....	40 15 25.5	82 33 17.2
Otter Creek east, center of covered bridge over.....	40 15 11.0	82 32 20.4
Homer, in northwest part of public-school grounds, northwest corner of school-house foundation bears S. 3° 45' W., distant 78 feet, iron pump bears S. 70° W., distant 11.3 feet; iron post stamped "Prim. Trav. Sta. No. 38, 1905".....	40 15 09.60	82 31 20.62

Magnetic declination for north border, 1° 11' W.; for east border, 1° 15' W.; for west border, 0° 57' W.; for east-west line through center, 1° 20' W.

FREMONT QUADRANGLE.

Along highways near west and south borders of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 6 N., R. 14 E., corner of secs. 15, 16, 21, and 22; road east-west.....	41 28 21.1	83 14 27.6
Road east-west.....	41 27 54.9	83 14 27.2
Road east.....	41 26 37.0	83 14 25.7
Lake Shore Ry. Azimuth 314° 41' 20".....	41 25 58.1	83 14 25.0
T. 5 N., R. 14 E., corner of secs. 3, 4, 9, and 10; road east.....	41 24 49.5	83 14 25.6
Hessville, crossing of electric railway in southeast part.....	41 24 03.5	83 14 31.8
Road east-west.....	41 22 13.4	83 13 23.0
T. 5 N., R. 14 E., corner of secs. 26, 27, 34, and 35; road east-west.....	41 21 21.2	83 13 24.9
Tps. 4 and 5 N., R. 14 E., corner of secs. 2, 3, 34, and 35.....	41 20 29.1	83 13 27.1
Corner of secs. 2, 3, 10, and 11; road east-west.....	41 19 33.0	83 13 31.9
Road east-west.....	41 16 55.3	83 14 06.8
Lake Erie & Western R. R. Azimuth 48° 50'.....	41 16 37.3	83 14 06.5
Roads north, south, east, and west.....	41 16 02.6	83 14 06.0
Road southwest.....	41 16 05.6	83 12 21.0
Road northeast.....	41 16 17.2	83 12 07.8
Roads north, south, east, and west.....	41 15 43.4	83 11 15.6
Road north-south.....	41 15 45.1	83 10 04.0
T. 4 N., R. 15 E., center of sec. 33.....	41 15 47.7	83 08 25.6
T. 4 N., R. 15 E., quarter corner between secs. 33 and 34.....	41 15 48.7	83 07 51.7
Tps. 3 and 4 N., R. 15 E., corner of secs. 3, 4, 33, and 34.....	41 15 22.1	83 07 53.1
Tps. 3 and 4 N., R. 15 E., corner of secs. 2, 3, 34, and 35; road north.....	41 15 22.9	83 06 43.5
Tps. 3 and 4 N., R. 15 E., corner of secs. 1, 2, 35, and 36; road north-south.....	41 15 23.5	83 05 30.6
Tps. 3 and 4 N., Rs. 15 and 16 E., corner of secs. 1, 6, 31, and 36; road north.....	41 15 23.7	83 04 21.1
Tps. 3 and 4 N., R. 16 E., corner of secs. 5, 6, 31, and 32.....	41 15 23.3	83 03 14.8
Green Spring, crossing on main street.....	41 15 23.2	83 03 06.6
Cleveland, Cincinnati, Chicago & St. Louis Ry. crossing. Azimuth 227° 28'.....	41 15 22.8	83 02 51.7
Tps. 3 and 4 N., R. 16 E., corner of secs. 3, 4, 33, and 34.....	41 15 20.2	83 00 48.3
New York, Chicago & St. Louis R. R. crossing.....	41 15 20.1	83 00 46.0

GAMBIER QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Brandon, 3 miles north and 0.8 mile east of; center of forks, 35 feet west to corner fence post.....	40 21 10.6	82 29 45.3	.....
Mount Vernon, crossing of Main and Gambier streets.....	40 23 30.8	82 29 09.5	14,458
Mount Vernon, center of soldiers' monument in park.....	40 23 37.6	82 29 08.8	690
Mount Vernon, in north part of; center of Mansfield Avenue and Belmont Avenue west.....	40 24 24.2	82 29 14.6	4,742
Clinton schoolhouse, north of; center of T road east.....	40 25 10.3	82 29 19.8	4,679
Mount Vernon, 3 miles north of; center of triangle at forks.....	40 26 09.3	82 29 09.5	6,017
Mount Vernon, 4 miles north of; center of crossing of Mansfield road and east-west road.....	40 26 58.1	82 29 14.9	4,959
Mount Vernon, 5.7 miles north of; center of T road east.....	40 28 25.1	82 29 01.8	8,861
Berlin-Morris Township line; center of T road east; 20 feet east to center of small bridge.....	40 29 15.3	82 29 00.1	5,079
Fredericktown, 3 miles northeast of; center of crossing of Fredericktown-Amity road and northwest-southeast road at Mrs. M. Barton's residence.....	40 29 44.8	82 29 23.0	3,476

GAMBIER QUADRANGLE—Continued.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Millwood, 1 mile south and 0.25 mile east of, 10 feet northeast to white oak; forks of road to south and southeast.....	40 22 58.4	82 16 00.0	.....
Center of T road east, 20 feet south to west end of sliding gate.....	40 22 56.4	82 16 55.3	4,286
Howard, 1.5 miles south and 1 mile east of; center of crossroads.....	40 22 53.9	82 18 38.8	8,015
Howard, 1.5 miles south of; center of T road south.....	40 22 45.1	82 19 34.2	4,384
Indianfield Run, just east of; center of T road north.....	40 22 26.8	82 20 32.7	4,889
Gambier, 2 miles east of, in northeast corner of Zion schoolhouse yard, 25 feet south and 20 feet west to northeast corner of schoolhouse; iron post stamped "Prim. Trav. Sta. No. 69. Ohio, 1910".....	40 22 31.0	82 21 11.7	3,049
Township line, 5 feet east to center of T road north.....	40 22 33.4	82 22 17.5	5,104
Gambier, center of junction of Chase Avenue and Wiggins Street, 10 feet south and 5 feet east to old well curbing.....	40 22 34.0	82 23 50.6	7,206
Gambier, 0.8 mile west of; forks of road, 20 feet west and 10 feet north to white oak tree.....	40 22 48.5	82 24 50.0	4,832
Gambier, 2.5 miles west and 0.8 mile north of; center of T road north, 15 feet north to granite boulder.....	40 23 10.0	82 26 45.2	9,176
Gambier, 3.5 miles west and 1 mile north of; center of crossroads.....	40 23 17.9	82 27 51.4	5,181
Mount Vernon, center of Gambier road at east corporation line.....	40 23 19.2	82 28 04.4	1,023

Along highways near north border of quadrangle.

Fredericktown, 3.5 miles east and 1.5 miles north of; center of T road north.....	40 29 55.6	82 28 20.2	.....
T. 8 N., R. 12 W., west side of; center of T road north on range line.....	40 29 55.5	82 27 35.9	3,423
Amity, 3.7 miles west and 1.8 miles north of; center of crossroads.....	40 29 42.1	82 25 37.3	9,265
T. 8 N., R. 12 W., corner of secs. 13, 14, 17, and 18.....	40 29 41.3	82 25 22.9	1,118
T. 8 N., R. 12 W., stone at corner of secs. 12, 13, 18, and 19, at six points, 25 feet west and 25 feet south to guidepost.....	40 29 37.4	82 24 13.2	5,400
T. 8 N., R. 12 W., corner of secs. 11, 12, 19, and 20.....	40 29 33.4	82 22 59.0	5,749
Amity, 1.5 miles north of, near southwest corner of T road south, 15 feet north, and 35 feet east to quarter corner between secs. 11 and 20, T. 8 N., R. 12 W., at T road south; iron post stamped "Prim. Trav. Sta. No. 64. Ohio, 1910.".....	40 29 31.7	82 22 24.7	2,651
Amity, 1.5 miles northeast of; center of Loudonville-Mount Vernon road at T road northwest.....	40 29 19.5	82 21 15.9	5,462
Danville, 2.5 miles north and 1 mile west of; center of forks.....	40 29 20.1	82 16 59.0	.....
White schoolhouse, just north of; T road west.....	40 29 18.8	82 15 47.4	5,540

Along highways near Danville.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
White School, just north of; T road west, 20 feet southwest to center of triangle, 10 feet east to telephone pole.....	40 29 18.8	82 15 47.4
Center of triangle at forks, 20 feet west to telegraph pole, 30 feet north to telephone pole.....	40 28 22.9	82 16 24.2
Danville, center of main east-west and north-south streets, 70 feet southeast to corner of brick store, 75 feet southwest to corner of frame store.....	40 27 05.4	82 15 37.8
Danville station, Main Street crossing on Cleveland, Akron & Columbus Ry.....	40 26 42.4	82 15 39.2

Magnetic declination for north border, 2° 01' W.; for east border, 2° 51' W.; for west border, 1° 15' W.; for east-west line through center, 2° 33' W.

GARRETTSVILLE QUADRANGLE.

Along highways from Mantua to Claridon triangulation station.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Mantua station, Erie R. R. crossing near.....	41 16 52.8	81 13 27.8
Mantua post office, road intersection at.....	41 18 37.3	81 13 18.2
Julia post office, on Portage-Geauga county line.....	41 20 50.8	81 13 26.3
Auburn, road intersection at store.....	41 23 14.0	81 12 59.2
South Newbury post office, 2,000 feet south of, one-half mile south of creamery; electric railroad crossing.....	41 25 58.4	81 12 31.9
Burton, 2½ miles southeast of; four corners.....	41 26 59.7	81 10 52.4
Burton, street intersection on north side of park.....	41 28 21.3	81 08 42.9
Burton, about 1½ miles north of; four corners.....	41 29 49.3	81 08 42.8
Claridon triangulation station of United States Lake Survey.....	41 30 39.38	81 07 05.33

GARRETTSVILLE QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Munson township; four corners, 50 feet northeast to small apple tree, 30 feet southwest to telephone pole.....	41 29 41.2	81 13 02.3
North Newbury; four corners, 60 feet northwest to southeast corner of house, 50 feet southeast to telephone pole.....	41 29 42.9	81 11 37.2
Alderman's mill; four corners, 20 feet north to mail box, 25 feet south to telephone pole.....	41 29 51.6	81 09 50.1
Three corners, road north, 20 feet south to telephone pole.....	41 29 49.8	81 07 37.2
Three corners, forks to west.....	41 28 44.9	81 00 11.9
Four corners, center road of Middlefield township.....	41 27 31.3	81 00 12.4

Along Erie R. R. between Mantua and Phalanx.

Mantua, road crossing north-south on Erie R. R.....	41 16 52.8	81 13 28.8
Mantua, 0.33 mile east of, in southwest part of grounds of Standard Oil Co. pumping station, southwest corner of foundation to boiler building bears N. 41° 50' E., distant 135 feet, nail in sugar maple tree bears N. 61° W., distant 35.7 feet, and is 2 feet north of Erie R. R. fence; iron post stamped "Prim. Trav. Sta. No. 29".....	41 16 59.7	81 13 00.9
Mantua, road crossing 1.75 miles east of.....	41 16 50.6	81 11 32.4
T. 5 N., R. 7 W., quarter corner between secs. 41 and 50.....	41 16 51.7	81 10 58.5
Overhead road crossing near milepost 34.....	41 16 34.8	81 09 44.0
Hiram station, road crossing.....	41 16 37.4	81 08 42.9
Overhead road crossing north-south.....	41 16 45.1	81 07 57.9
Garrettsville, in south part of H. J. Langton's yard, southwest corner of foundation to Langton's residence bears N. 30° 45' W., distant 129 feet, nail in cross mark on west face of cherry tree bears S. 49° 30' E., distant 6.2 feet; iron post stamped "Prim. Trav. Sta. No. 30".....	41 16 53.4	81 05 54.2
Road crossing east-west about 800 feet east of milepost 38.....	41 16 48.2	81 05 16.6
Road crossing east-west 0.50 mile southeast of milepost 39.....	41 16 46.4	81 04 02.3
Mahoning, road crossing.....	41 15 42.9	81 02 57.7
Milepost 42, private road crossing 130 feet east of.....	41 15 29.6	81 01 39.4
County line, north-south road crossing.....	41 15 21.5	81 00 10.8

GARRISON QUADRANGLE.

Along highway between Portsmouth and Scioto triangulation station of the United States Coast and Geodetic Survey.

Stations.	Latitude.	Longitude.
Bertha, just south of T road northwest, 12 feet north to cross on post, 20 feet east to cross on telephone pole.....	38 44 51.5	83 01 50.0

Along highways from Portsmouth southwest to McGaw.

Portsmouth, in west part of town; south end of highway bridge over Scioto River.....	38 43 53.4	83 00 40.2
Scioto County infirmary, 0.2 mile northeast of; center of forks of pike.....	38 43 26.9	83 02 38.6
Schoolhouse, north of; center of T road.....	38 42 41.7	83 03 47.9
Dennis, west of; center of crossroads.....	38 42 25.2	83 04 37.3
Friendship, center of T road northwest.....	38 41 50.2	83 05 56.1
Old schoolhouse, center of pike at road north.....	38 41 28.9	83 06 20.6
Pondrun, at southwest corner of T road northwest, 40 feet east to center of T road; iron post stamped "Prim. Trav. Sta. No. 8. Ohio, 1910".....	38 39 40.1	83 07 41.4
C. N. Odler's residence, 25 feet east of center of bridge, pike at road northwest.....	38 37 19.2	83 11 06.2
Private T road south, center of.....	38 37 37.4	83 12 05.4
McGaw, center of crossroads at, 110 feet east to center of covered bridge.....	38 38 15.3	83 13 30.1

GEORGETOWN QUADRANGLE.

Along highways from point near Russellville north to Primary Traverse Station No. 86.

Stations.	Latitude.	Longitude.
Baird schoolhouse, 1.3 miles north and 0.5 mile east of; at turn of private road south.....	38 53 20.1	83 45 00.7
Ash Ridge post office, center of crossroads.....	38 54 28.8	83 45 32.1
Ash Ridge, 1 mile north of small village of Carlisle, on rise of ground clear of trees nearly northwest from church, on turnpike to Carlisle. Station mark, a glass bottle filled with cement, 3 feet below surface of ground. Surface mark, a 6-inch tile pipe 2 feet long, filled with hydraulic-cement concrete. Reference marks, stone monument with cross cut in top, in north-south fence line, 297.6 feet from triangulation station, azimuth to stone, 271° 17' 48"; stone monument with cross cut in top on east-west fence line, 347.3 feet from triangulation station, azimuth to stone 1° 12' 18" (Ash Ridge triangulation station, Coast and Geodetic Survey).....	38 55 13.43	83 45 22.09
Ash Ridge, 1.7 miles north of post office, 15 feet east of J. Knutz's mail box; center of T road east.....	38 55 55.7	83 45 23.9
Schoolhouse No. 5, south end of small bridge; center of crossroads.....	38 56 39.5	83 45 06.0
Milepost 51, Norfolk & Western Ry., at north-south road crossing.....	38 58 40.5	83 45 06.9
Coddaman Church and schoolhouse, 0.8 mile south and 0.2 mile east of; center of T road south.....	38 59 32.8	83 45 19.3

Along highways from Baird schoolhouse to Russellville.

Russellville, 1.7 miles east of, 15 feet north to sycamore tree; pike at road south.....	38 51 54.8	83 45 23.4
Russellville, 0.8 mile east of; center of T pike south.....	38 52 00.5	83 46 23.8
Russellville, center of crossing of Main and Columbus streets.....	38 52 00.6	83 47 14.2

Along electric railroad from Russellville to Georgetown.

Pike crossing at spur.....	38 52 19.2	83 50 06.1
Georgetown, 2.5 miles east of, 25 feet north and 10 feet east to center of T road southwest, corner of T road west, at west end of electric railroad bridge over Straight Creek; iron post stamped "Prim. Trav. Sta. No. 23. Ohio, 1910".....	38 52 05.5	83 50 53.8
Crossing of electric railroad and Ohio River & Columbus Ry.....	38 52 14.4	83 53 32.3
Georgetown, junction of Main and Ohio streets.....	38 52 17.2	83 54 13.5
Georgetown, dome of courthouse.....	38 51 56.33	83 54 14.77

Along public highways from Georgetown west to Feesburg, thence north to New Harmony.

Georgetown, 1 mile west of; center of triangle in forks.....	38 51 51.1	83 55 16.4
Georgetown, 0.5 mile north and 1.5 miles west of; east point of triangle at forks.....	38 52 23.2	83 55 55.0
Eder Church, forks of road at, 25 feet north to junction of rail and wire fences.....	38 52 08.1	83 57 32.2
Martin schoolhouse No. 6, center of T road northwest.....	38 52 17.8	83 58 26.0
Feesburg, 1 mile southeast of; center of T road northeast.....	38 52 02.5	83 59 08.8
Feesburg, center of crossroads.....	38 52 42.2	83 59 55.9
William Baird's farm, center of T road north.....	38 54 51.2	83 59 58.6
Locust Ridge, 1 mile south and 0.5 mile east of; center of crossing of north-south pike and road east-west.....	38 58 43.5	83 59 50.4

Along highways from Mount Ayr schoolhouse to Russellville.

Mount Ayr schoolhouse, southwest corner of yard, 15 feet west and 25 feet south of center of T road north; iron post stamped "Prim. Trav. Sta. No. 31. Ohio, 1910".....	38 46 56.7	83 45 50.5
Mount Ayr schoolhouse, 1 mile north of center of T road west.....	38 47 44.5	83 46 00.0
Mount Ayr schoolhouse, 2 miles north of; center of crossing of Decatur pike and north-south road.....	38 48 43.8	83 45 49.9
C. W. Brown's mail box, center of T road west.....	38 49 36.6	83 45 50.5
Russellville, 2 miles south and 1.5 miles east of, just east of J. M. Moore's residence, 15 feet north and 20 feet east of center of crossroads; iron post stamped "Prim. Trav. Sta. No. 32. Ohio, 1910".....	38 50 21.9	83 45 31.2
Corner of Byrd and Jefferson townships, east end of gate.....	38 50 26.8	83 46 05.9
Russellville, 1 mile south of; center of crossing of north-south pike and east-west road.....	38 50 58.4	83 47 13.5

Along highways near north border of quadrangle.

Eagle-Washington township line.....	38 59 32.1	83 46 32.9
Sardinia, 2 miles east of.....	38 59 20.8	83 46 12.9

GEORGETOWN QUADRANGLE—Continued.

Along highways from Higginsport east through Ripley to Mount Ayr schoolhouse.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Higginsport, 0.7 mile west of; center of bridge.....	38 47 17.1	83 58 49.4
Higginsport; center of cross streets at Christian Church.....	38 47 24.1	83 58 03.8
Bridge over Whiteoak Creek, center of triangle in forks of pike just east of.....	38 47 36.7	83 57 11.8
Sink Creek, center of pike at road north.....	38 47 13.7	83 55 58.1
Cohalis Branch, 20 feet west by 5 feet south to north corner of bridge over; center of pike at road north.....	38 47 09.4	83 54 40.6
Milepost 5, 0.2 mile south of; pike crossing Ohio River & Columbus Ry.....	38 46 35.0	83 54 49.6
Levanua, 1.2 miles west by 0.6 mile north of; T road north.....	38 46 01.7	83 53 24.7
Levanua, 20 feet east by 5 feet north to center of crossroads, at southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 30. Ohio, 1910".....	38 45 59.1	83 53 01.9
Hornets Run, center of trestle of Ohio River & Columbus Ry., over.....	38 45 17.2	83 51 15.5
Ripley, 1 mile east by 0.5 mile north of; center of covered bridge over Redoak Creek.....	38 45 15.2	83 49 38.9
Ripley, 1.8 miles east by 0.5 mile north of, on Ripley-Neal pike at road north-east, 15 feet east to center of small bridge.....	38 45 12.5	83 48 46.4
John Greiner's farm, on top of hill; center of T pike.....	38 45 03.2	83 48 02.0
Fred Swalie's residence, Decatur pike at T pike south.....	38 46 03.3	83 47 57.2
Beasley's farm, Decatur pike at road north.....	38 46 34.8	83 47 08.2
J. H. Self's mail box, forks of road at.....	38 46 27.2	83 46 26.6

Magnetic declination for north border, 0° 34' W.; for west half of south border, 0° 52' E.; for east half of south border, 0° 03' W.; for south half of east border, 0° 32' W.; for south half of west border, 1° 05' E.; for north half of west border, 0° 56' E.; for north half of east border, 2° 13' W.; for west half of east-west center line of quadrangle, 0° 40' E.

GRANVILLE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road east-west.....	40 02 33.8	82 44 51.9
Road east-west.....	40 03 07.4	82 44 51.1
Road north near Clem Blamer's house.....	40 10 14.4	82 44 18.6
Road northwest-southeast.....	40 10 45.2	82 44 16.2
Road east-west.....	40 12 27.1	82 44 24.4
William Feasels, crossroads.....	40 13 56.8	82 44 17.7

Along highways near north border of quadrangle.

Croton, 2.5 miles west and 0.5 mile south of, at crossroads at William Farel's residence, in southeast corner of James Wilson's farm, nail in east face of cherry tree bears S. 89° W., distant 20 feet; iron post stamped "Prim. Trav. Sta. No. 40, 1905".....	40 13 57.1	82 44 18.0
Croton, 1.25 miles west of; T road east, 36 feet southeast to cross on fence post, 27 feet northeast to Green's mail box.....	40 14 21.5	82 42 49.5
Croton, Delanon Street crossing on railroad.....	40 14 20.7	82 41 20.1
Croton, 1 mile east of; T road north, 13 feet due south to cross board at west end of wire fence.....	40 14 27.9	82 39 52.4
Bennington township house, 1.66 miles west of; crossroads 300 feet south of schoolhouse, 21 feet northeast to B. E. Nash's mail box, 36 feet southeast to cross on corner fence post.....	40 14 22.5	82 38 26.4
Lock, 2 miles south of, Bennington township house, at northwest corner of, nail in west oak tree bears S. 60° 45' W., distant 19.8 feet, northwest corner foundation of house bears S. 80° 30' E., distant 3.5 feet; iron post stamped "Prim. Trav. Sta. No. 39, 1905".....	40 14 22.8	82 36 22.1
Bennington township house, 1 mile east of; covered bridge over Otter Creek north, center of.....	40 14 40.5	82 35 14.3
Crossroads, 1,500 feet east of, Otter Creek east; center of iron bridge over.....	40 14 48.8	82 34 16.3

GRANVILLE QUADRANGLE—Continued.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
Granville, 1 mile south of; T road to west at schoolhouse, 19 feet northeast to cross on corner of fence, 7 feet south to end of culvert.....	40 02 53.3	82 31 25.2
Granville station, north-south street crossing on Toledo & Ohio Central Ry.....	40 03 51.7	82 31 14.8
Granville station, 0.75 mile north of; T road west, 35 feet northwest to north end of culvert, 46 feet south to cross on telegraph pole.....	40 04 39.1	82 31 18.2
Schoolhouse No. 8, T road east, 0.5 mile north of, 30 feet southeast to corner of garden fence, 28 feet northeast to cross on telegraph pole.....	40 06 34.7	82 31 08.0
Brushy Creek, south end of iron bridge over.....	40 07 24.5	82 31 04.5
Fredonia, in west part of schoolhouse yard, northwest corner of, foundation of schoolhouse bears S. 72° 30' E., distant 122.6 feet, southeast foundation to Willard's store bears N. 46° 30' W., distant 94.5 feet; iron post stamped "Prim. Trav. Sta. No. 37, 1905".....	40 09 08.6	82 31 12.5
Highwater, crossroads, 63 feet south to northwest corner of store porch, 31 feet southwest to guidepost.....	40 10 34.4	82 31 10.7
Highwater, 1 mile north of; crossroads, 27 feet north to cross on corner of board fence, 60 feet north to J. F. Riley's mail box.....	40 11 22.3	82 31 05.2
Union schoolhouse, T road west, 0.5 mile south of, 16 feet due west to W. F. Wagoner's mail box.....	40 12 42.3	82 31 10.8
Union schoolhouse, 0.5 mile north of; crossroads, post.....	40 13 37.4	82 31 13.6

Along Baltimore & Ohio R. R. near Union.

Milepost 24, private-road crossing, south track.....	40 00 08.3	82 33 26.6
Union station, 1.5 miles west of, east-west road crossing.....	40 00 34.9	82 32 26.1
Union station, 0.75 mile west of, crossroads, in southeast corner of Ira Showman's field, cross cut on stone abutment to bridge bears S. 9° 15' E., distant 47.6 feet; iron post stamped "Prim. Trav. Sta. No. 36, 1905".....	40 01 15.6	82 31 29.2
Union station, 0.5 mile east of; north-south gravel-road crossing.....	40 01 22.8	82 30 22.5

Magnetic declination for north border, 0° 36' W.; for east border, 0° 44' W.

GREENFIELD QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Brick schoolhouse, district No. 10, crossroads.....	39 28 53.5	83 15 45.9
Plano post office.....	39 29 27.2	83 17 07.2
Fairview, road crossing on Cincinnati, Hamilton & Dayton Ry. Azimuth 282° 58'.....	39 28 48.5	83 18 15.6
Fairview Church, road north.....	39 28 42.1	83 19 19.8
Road north-south.....	39 28 49.6	83 20 14.1

Along highways and railroad east-west through center of quadrangle.

East Monroe, just west of station, crossing of Hillsboro pike and Baltimore & Ohio Southwestern R. R.....	39 21 27.6	83 29 57.7
T road southeast.....	39 23 04.2	83 29 14.4
New Martinsburg, center of cross pikes at new store, 30 feet south and 15 feet east to town pump.....	39 23 49.0	83 27 50.0
New Martinsburg, 0.8 mile east of; crossing of pike and north-south road.....	39 23 47.1	83 26 50.1
New Martinsburg, 2 miles east of; intersection of pike with north-south road.....	39 23 07.1	83 25 56.6
Greenfield, 3 miles west of; intersection of pike with north-south road.....	39 22 34.4	83 25 07.9
Greenfield, 1.8 miles west of; intersection of pike with T road south, 0.2 mile west of brick schoolhouse.....	39 22 06.6	83 24 05.3
Greenfield, intersection of North Washington and East Fayette streets.....	39 21 10.4	83 23 00.2
Greenfield, 0.5 mile east of, at northeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 67. Ohio, 1909".....	39 21 11.7	83 22 20.0
Greenfield, 2 miles east of; intersection of Greenfield-Chillicothe pike with T road south.....	39 21 12.9	83 20 40.4
Lyndon, at station, crossing of Baltimore & Ohio Southwestern R. R. and pike.....	39 21 13.4	83 18 42.1
Lyndon, near, center of steel bridge.....	39 21 14.6	83 17 47.0
Harpers, about 0.5 mile south of station, at Parrott schoolhouse, in southwest corner of T road south; iron post stamped "Prim. Trav. Sta. No. 68. Ohio, 1909".....	39 21 21.7	83 16 06.8
Harpers, at station, crossing of road and Baltimore & Ohio Southwestern R. R. T road west, center of.....	39 21 54.7	83 15 41.8
Allison Hires's mail box, intersection of Greenfield-Austin pike with pike south-east.....	39 23 32.2	83 15 42.3
Schoolhouse No. 9, intersection of Greenfield-Austin pike with lane south.....	39 25 09.2	83 16 09.1
Plano, about 1.2 miles southeast of, at brick schoolhouse No. 10; crossroads.....	39 25 32.6	83 15 04.0
Plano, about 1.2 miles southeast of, at north corner of schoolhouse grounds; iron post stamped "Prim. Trav. Sta. No. 69. Ohio, 1909".....	39 28 53.4	83 15 46.1
Harpers, 1.8 miles south of station, south of James H. Fuller's mail box; T road north.....	39 20 22.0	83 15 48.6

GREENFIELD QUADRANGLE—Continued.

Along highways near southwest border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Schoolhouse No. 3, road opposite.....	39 19 53.7	83 16 15.5
Five mail boxes, T road southwest, 20 feet south and 20 feet west to Allen Edgington's mail box.....	39 18 56.8	83 15 21.6
Crossroads at unpainted frame house, 10 feet east to center of box culvert.....	39 18 07.7	83 16 27.2
Cyrus Stork's residence, 900 feet east of, on Fruitdale-Bourneville pike at intersection of T road southwest.....	39 17 25.0	83 16 48.4
Schoolhouse, 0.5 mile south of, crossroads.....	39 16 15.8	83 16 45.5
Fork of road north, east of railroad bridge.....	39 15 01.9	83 17 04.3
Humboldt, about 1 mile southeast of, on Bainbridge-Humboldt road, at intersection of T road southwest near G. W. Chapin's mail box.....	39 15 55.0	83 18 27.7

Magnetic declination for south border, 0° 31' W.; for east border, 1° 18' W.; for west border, 0° 17' W.; for central line east-west, 0° 39' W.

GREENUP QUADRANGLE.

Along Norfolk & Western Ry. between Franklin Furnace and Wheelersburg.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Franklin Furnace, in northeast corner of Methodist Church yard, cross on northwest corner to foundation to church bears S. 24° 25' E., distant 26.4 feet; cross on northwest corner to foundation to public school building bears S. 85° 10' E., distant 130.4 feet; iron bench-mark post set 40 inches in ground, stamped "Prim. Trav. Sta. No. 25".....	38 38 42.2	82 50 56.0
Milepost 113, private-road crossing 900 feet south of.....	38 39 48.8	82 51 20.7
Milepost 112, private-road crossing 935 feet south of.....	38 40 39.8	82 51 34.0
Milepost 111, road crossing east-west 1,400 feet south of.....	38 41 26.4	82 51 46.2
Wheelersburg, private-road crossing at old log house 2 miles south of.....	38 42 14.7	82 51 52.8
Wheelersburg, road crossing east-west 135 feet south of station.....	38 43 44.4	82 51 46.2
Wheelersburg, private-road crossing east-west, just south of signboard "1 mile to water," 1 mile north of.....	38 44 31.6	82 52 09.8
Railroad bridge over Little Scioto River, private-road crossing just south of.....	38 45 13.4	82 52 52.7

Along highways in northeast part of quadrangle.

T road southwest, 30 feet west to J. Herchman's mail box, 24 feet south to cross on rail fence.....	38 44 30.9	82 45 47.0
Cadot farm, intersection of Lyra-Wheelersburg pike and road southeast to Powellsville, near summit of hill; 36 feet northeast to cross on fence post; 36 feet southeast to cross on fence post.....	38 42 59.9	82 45 21.3
J. M. Morgan's residence, intersection of roads just east of, 18 feet south to cross on picket fence.....	38 42 38.1	82 45 22.6
Quarter corner between secs. 28 and 32, stone.....	38 41 42.2	82 45 52.1
George Knapp's residence, intersection of roads at, 18 feet northeast to Knapp's mail box, 40 feet southwest to cross on large willow tree.....	38 40 51.5	82 45 27.3
Powellsville, about 1 mile northeast of, in orchard owned by Lewis Knapp, north corner of foundation to Knapp's residence bears S. 32° 15' W., distant 164.5 feet, nail in cross cut in 8-inch black oak tree bears N. 86° 30' E., distant 85.2 feet; iron bench-mark post stamped "Prim. Trav. Sta. No. 24".....	38 40 30.4	82 46 05.9
Powellsville, crossroads at, 24 feet southeast to Rase Bros.' mail box, 50 feet southwest to northeast corner of Rase Bros.' store.....	38 40 00.3	82 47 01.1
Covered bridge over Piney Creek, intersection of roads 200 feet southeast of, 18 feet north to cross on post.....	38 39 10.0	82 48 08.0
H. Stacker's farm, T road northwest at, 30 feet east to cross on beech tree, 32 feet west to cross on corner fence post.....	38 38 07.6	82 49 02.1
Franklin Furnace, T road west on top of hill, 1.5 miles east of, 27 feet north to cross on black-oak sapling, 40 feet west to cross on stump.....	38 38 34.0	82 49 17.4

Along Norfolk & Western Ry. near Portsmouth.

New Boston, road crossing just west of Burgess steel plant, south track.....	38 44 50.7	82 56 08.6
Norfolk & Western Ry. shops, road crossing north-south, south track.....	38 44 28.6	82 57 25.5
Portsmouth, Gallia Street crossing, south track.....	38 44 15.4	82 58 35.4
Portsmouth, northeast corner of Tracy Park, northwest corner of brick foundation to residence on southeast corner of Tenth and Findlay streets bears S. 80° 15' E., distant 101.1 feet; northeast corner to foundation of Tracy monument bears S. 63° 30' W., distant 261.9 feet; iron post stamped "Prim. Trav. Sta. No. 27".....	38 44 17.1	82 59 40.3
Chillicothe-Portsmouth pike crossing.....	38 44 44.5	82 59 32.6

GREENUP QUADRANGLE—Continued.

Along highways near Haverhill.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Franklin Furnace, 1 mile south of; T road west	38	37	36.2	82	50	42.0
Pike crossing on Norfolk & Western Ry.	38	38	13.3	82	50	51.1
T pike southwest at schoolhouse	38	35	05.0	82	49	58.0
Haverhill, 1.5 miles southeast of, on north side of pike; Scioto-Lawrence county-line monument	38	34	23.6	82	48	32.0
T road north	38	34	10.1	82	47	32.8
Hanging Rock, pike crossing on Norfolk & Western Ry. at north end of siding	38	33	51.8	82	45	21.8
Hanging Rock, near north end of siding, in top of south end of stone culvert, 350 feet east of pike crossing on Norfolk & Western Ry.; aluminum tablet stamped "Prim. Trav. Sta. No. 4. Ohio, 1910"	38	33	50.3	82	45	15.8
Haverhill, 1.5 miles north of, on west side of pike, in J. Oaks & Sons Tile Co.'s grounds, 50 feet north of entrance to grounds; iron post stamped "Prim. Trav. Sta. No. 5. 546, Ohio, 1910"	38	36	19.6	82	50	32.9

Magnetic declination for southeast corner, 1° 24' W.

GREENVILLE QUADRANGLE.

Along Dayton & Union R. R. in south part of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Iron bridge, east-west road crossing	40	00	19.2	84	33	54.6
Mileposts 28 and 29, road crossing between	40	01	00.3	84	34	25.2
Delisle, road crossing	40	01	10.9	84	34	33.0
Jaysville, east-west road crossing	40	02	55.4	84	35	50.0
Mileposts 32 and 33, road crossing between	40	03	47.9	84	36	29.0
Mileposts 34 and 35, road crossing between	40	05	16.7	84	37	33.3

Along Cincinnati Northern R. R. between Greenville and Ansonia.

Greenville, crossing of Dayton & Union and Pennsylvania railroads	40	05	43.5	84	37	38.2
Greenville, crossing north of Dayton & Union R. R. station	40	05	58.8	84	37	40.0
Greenville, crossing of Dayton & Union R. R.	40	06	30.1	84	38	23.3
Road crossing northwest-southeast	40	07	19.6	84	38	47.6
Road crossing east-west	40	08	10.2	84	38	47.8
Road crossing east-west	40	09	02.8	84	38	48.0
Church, road crossing 500 feet west of	40	09	55.6	84	38	47.9
Meekers, crossing of Pennsylvania and Dayton & Union railroads	40	10	16.6	84	38	47.9
House, east-west road crossing 200 feet southeast of	40	11	35.1	84	38	37.0
Road crossing east-west	40	12	27.9	84	38	24.9
Ansonia, crossing of Cleveland, Cincinnati, Chicago & St. Louis and Dayton & Union railroads	40	12	43.4	84	38	24.9
Road crossing east-west	40	13	31.4	84	38	35.2

Along highways near east border of quadrangle.

Oakland Church, T road east 1 mile north of	40	09	57.4	84	30	03.9
Webster crossroads, 1 mile west of	40	10	53.0	84	30	04.8
T. 11 N., R. 3 E., quarter corner between secs. 25 and 36	40	11	45.5	84	30	10.2
T. 11 N., R. 3 E., quarter corner between secs. 24 and 25	40	12	38.0	84	30	11.2
T. 11 N., R. 3 E., corner of secs. 23, 24, 25, and 26; 4,000 feet north of last Cleveland, Cincinnati, Chicago & St. Louis Ry. azimuth=84° 37'	40	12	37.2	84	30	46.0
T. 11 N., R. 3 E., corner of secs. 13, 14, 23, and 24	40	13	29.8	84	30	47.4
Versailles, 2 miles northwest of; crossing of Versailles-Brock pike and north-south road	40	14	26.4	84	30	48.6
Frenchtown, crossroads 0.5 mile east of	40	14	48.5	84	30	49.2
Frenchtown, T road south 0.5 mile west of	40	14	47.1	84	32	15.9
Frenchtown, crossroads 2 miles west of	40	14	45.3	84	34	00.6
T. 11 N., R. 3 E., center of sec. 12	40	14	49.5	84	30	14.2

GREENVILLE QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 13 N., R. 2 E., quarter corner between secs. 8 and 9.....	40 14 36.3	84 40 17.5
T. 13 N., R. 2 E., quarter corner between secs. 7 and 8; crossroads near.....	40 14 36.7	84 41 36.3
T. 13 N., Rs. 1 and 2 E., quarter corner between secs. 7 and 12.....	40 14 37.1	84 42 32.5
T. 13 N., R. 1 E., quarter corner between secs. 11 and 12.....	40 14 40.6	84 43 40.7
T. 13 N., R. 1 E., quarter corner between secs. 10 and 11.....	40 14 40.7	84 44 48.1

Along highways near west border of quadrangle.

T. 13 N., R. 1 E., corner of secs. 11, 12, 13, and 14.....	40 14 14.3	84 43 40.4
T. 13 N., R. 1 E., corner of secs. 13, 14, 23, and 24.....	40 13 21.8	84 43 39.9
T. 13 N., R. 1 E., corner of secs. 23, 24, 25, and 26; 900 feet south of this Cleveland, Cincinnati, Chicago & St. Louis Ry. azimuth=84° 29'.....	40 12 29.3	84 43 39.2
T. 13 N., R. 1 E., corner of secs. 25, 26, 35, and 36; one-half mile south of this Pennsylvania R. R. azimuth=103° 19'.....	40 11 36.7	84 43 39.2
Tps. 12 and 13 N., R. 1 E., quarter corner between secs. 1, 2, 35, and 36.....	40 10 43.7	84 43 39.0
T. 12 N., Rs. 1 and 2 E., quarter corner between secs. 1, 6, 7, and 12.....	40 09 55.5	84 42 29.2
T. 12 N., Rs. 1 and 2 E., west corner of secs. 7 and 18.....	40 09 02.6	84 42 28.3
Coletown, center of bridge 0.25 mile west of.....	40 08 04.0	84 42 22.2
Coletown, four corners 1.5 miles southwest of.....	40 07 17.6	84 42 26.5
Greenville-Spartansburg and Coletown-New Manchester pikes, crossing of.....	40 05 41.8	84 42 24.8
Greenville-Winchester and Coletown-New Manchester pikes, crossing of.....	40 06 23.4	84 42 25.5
T. 11 N., Rs. 1 and 2 E., corner of secs. 1, 6, 7, and 12.....	40 04 38.5	84 42 23.4
T. 11 N., R. 1 E., corner of secs. 1, 2, 11, and 12.....	40 04 38.2	84 43 30.4
T. 11 N., R. 1 E., corner of secs. 11, 12, 13, and 14.....	40 03 45.7	84 43 29.5
T road west.....	40 02 33.7	84 43 27.4
T. 11 N., R. 1 E., corner of secs. 25, 26, 35, and 36.....	40 01 08.3	84 43 25.8

Along Cleveland, Cincinnati, Chicago & St. Louis Ry. near southwest corner of quadrangle.

Charles station, road crossing 1 mile southeast of.....	40 00 15.7	84 42 37.0
Crossing of north-south pike under trestle.....	49 00 05.4	84 42 18.4
Pennsylvania R. R., crossing of.....	39 59 23.0	84 41 02.3

Along highway near west border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
T. 11 N., R. 1 E., corner of secs. 26, 27, 34, and 35; center of crossroads.....	40 01 08.5	84 44 34.1	3,570

HALLS CORNERS QUADRANGLE.

Along Cincinnati, Hamilton & Dayton Ry.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Baldwin station.....	41 01 04.3	84 48 09.0
Road crossing, north-south.....	41 01 04.5	84 47 00.8
Section corner.....	41 01 07.5	84 47 00.8
Road crossing, north-south.....	41 01 04.5	84 46 26.5
McGill station.....	41 01 04.6	84 45 25.7
Road crossing, north-south.....	41 01 04.7	84 45 35.3

Near south border of quadrangle.

T. 29 N., R. 15 E., at east corner of secs. 2 and 35, on State line; T road west....	41 00 35.0	84 48 10.7
Baldwin, 1 mile south of, near T road east, 20 feet south and 15 feet west to west corner of secs. 30 and 31, T. 1 N., R. 1 E.; iron post stamped "Prim. Trav. Sta. No. 19. Ohio, 1909".....	41 00 15.1	84 48 10.6

HALLS CORNERS QUADRANGLE—Continued.

Along highway south along Indiana-Ohio State line to Baldwin (corrected mean of two lines).

Stations.	Latitude.	Longitude.	Distance between stations.
T. 3 N., R. 1 E., corner of secs. 6 and 7; T road east, on Indiana-Ohio State line.....	° ' " 41 14 14.1	° ' " 84 48 11.1	<i>Fect.</i>
T. 3 N., R. 1 E., west corner of secs. 7 and 8; T road east.....	41 13 21.5	84 48 11.1	5,320
T. 3 N., R. 1 E., west corner of secs. 18 and 19; center of crossroads.....	41 12 29.1	84 48 11.4	5,300
T road east.....	41 11 03.5	84 48 11.0	8,660
T road east at church.....	41 10 26.9	84 48 11.2	3,700
T road west at schoolhouse No. 1 and church.....	41 10 12.8	84 48 40.0	2,628
Maumee River, center of middle span of bridge over.....	41 09 49.4	84 48 40.5	2,370
North-south road at road southwest along canal.....	41 09 42.1	84 48 11.3	2,351
T. 2 N., R. 1 E., corner of secs. 6 and 7; stone.....	41 09 02.3	84 48 11.2	4,030
Wabash R. R., road crossing on.....	41 08 55.2	84 48 11.2	720
T. 2 N., R. 1 E., secs. 7 and 18; center of T road east.....	41 08 09.9	84 48 11.4	4,600
T. 2 N., R. 1 E., on line of secs. 18 and 19; T road east.....	41 07 17.4	84 48 11.3	5,315
T. 2 N., R. 1 E., secs. 19 and 30; center of T road east.....	41 06 25.1	84 48 11.1	5,275
T. 2 N., R. 1 E., corner of secs. 30 and 31; center of T road east.....	41 05 32.5	84 48 11.0	5,320
Tps. 1 and 2 N., R. 1 E. township corner; center of crossroads.....	41 04 40.1	84 48 10.8	5,300
T. 1 N., R. 1 E., secs. 6 and 7; T road east.....	41 03 45.0	84 48 10.6	5,590
T. 1 N., R. 1 E., secs. 7 and 18; T road east.....	41 02 52.8	84 48 10.3	5,280
T. 1 N., R. 1 E., secs. 18 and 19; T road east.....	41 02 00.1	84 48 10.3	5,330
Baldwin, road crossing.....	41 01 04.3	84 48 10.6	5,642

Along highways near east border of quadrangle.

Crossing of pike and east-west road.....	41 14 14.3	84 45 17.0	.....
Antwerp, 3 miles north of; crossroads.....	41 13 22.0	84 45 05.7	5,369

Magnetic declination for east border, 17' W.; for Indiana-Ohio State line, 11' W.

HAMILTON QUADRANGLE.

Along highways near north and west borders of quadrangle.

Stations.	Latitude.	Longitude.
	° ' " 39 29 04.7	° ' " 84 30 42.7
Road crossing, north-south.....	39 29 04.7	84 30 42.7
Road crossing, north-south.....	39 29 30.4	84 31 59.5
T. 5 N., R. 3 E., corner of secs. 28, 29, 32, and 33.....	39 29 39.5	84 33 07.6
Seven-mile station, 1 mile northwest of; crossing on Pittsburgh, Cincinnati, Chicago & St. Louis R. R.....	39 29 38.6	84 34 16.5
Road crossing, north-south.....	39 29 27.3	84 36 31.5
T road north.....	39 29 36.9	84 38 14.9
T. 5 N., R. 3 E., corner of secs. 27, 28, 33, and 34.....	39 29 36.9	84 38 47.8
Road, north-south.....	39 29 33.9	84 40 51.0
T. 5 N., Rs. 1 and 2 E., T road east near corner of secs. 30, 25, 36, and 31.....	39 29 35.8	84 41 48.4
Pike northwest-southeast.....	39 28 49.0	84 42 44.6
Wood, crossing on Cincinnati, Hamilton & Dayton R. R., west of station.....	39 27 29.1	84 43 01.1
T. 4 N., R. 1 E., corner of secs. 11, 12, 13, and 14.....	39 26 58.2	84 43 18.8
T. 4 N., R. 1 E., corner of secs. 13, 14, 23, and 24.....	39 26 06.0	84 43 18.4
Road, northwest-southeast.....	39 25 12.5	84 43 45.4
St. Charles, T road north.....	39 23 29.4	84 44 31.1
T. 3 N., R. 1 E., corner of secs. 2, 3, 10, and 11.....	39 22 39.2	84 44 21.9
T. 3 N., R. 1 E., corner of secs. 10, 11, 14, and 15.....	39 21 47.1	84 44 22.2
Crossing on Cold Wail pike.....	39 20 15.1	84 44 23.3
T road south (gravel).....	39 18 59.3	84 43 50.8
Preston post office, one-half mile east of; west end of bridge.....	39 16 32.2	84 43 52.2
T. 2 N., R. 1 E., corner of secs. 14, 15, 22, and 23.....	39 15 40.2	84 44 25.5
T. 2 N., Rs. 1 and 2 E., corner of secs. 7, 12, 13, and 18.....	39 16 32.4	84 42 11.7
Corner of sections (numbers not given).....	39 16 32.5	84 41 04.1
Sater post office, north end of iron bridge.....	39 15 49.5	84 40 02.8
Sater post office, corner of section 1 mile southeast of.....	39 15 10.6	84 39 34.1

HARRISON QUADRANGLE (OHIO-IND.).

Along highways near State line and from Harrison east to Preston.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
T. 7 N., R. 1 W., corner of secs. 24 and 25.....			
Harrison, 0.8 mile south of, on west side of Ohio-Indiana State line pike at pike east, 15 feet east and 15 feet south to junction of pikes; iron post stamped "Prim. Trav. Sta. No. 33. Ohio, 1910".....	39 15 05.5	84 49 12.3	1,465
Harrison, center of crossing of Broadway and State Street.....	39 15 39.3	84 49 11.5	3,420
Harrison, 1.8 miles east and 1 mile south of; road crossing.....			
Harrison, 3 miles east and 0.5 mile south of; center of T road west.....	39 15 16.7	84 46 00.1	6,049
T. 2 N., R. 1 E., stone at corner of secs. 15 16, 21, and 22.....	39 15 41.8	84 45 52.5	2,594
Harrison, 4.2 miles from; center of T pike southeast at guidepost "Harrison 4.2 miles, Venice 6.8 miles".....	39 16 08.7	84 45 05:8	4,561

North along highways.

Harrison, crossing of Broadway and State Street.....			
T. 2 N., R. 1 E., west corner of secs. 18 and 19; State line.....	39 15 42.8	84 49 11.5	350
T. 6 N., R. 1 W., east corner of secs. 13 and 14; center of cross streets at State line.....	39 15 43.3	84 49 11.5	50
Harrison, 1 mile east and 1.8 miles north of; center of triangle in forks. Tps. 2, 3, 7, and 8 N., Rs. 1 E. and 1 W., west corner of secs. 1, 6, 31, and 36; center of T road north.....	39 17 11.6	84 47 58.7	10,608
Tps. 3 and 8 N., Rs. 1 E. and 1 W., corner of secs. 25, 30, 31, and 36; State line.....	39 18 19.0	84 49 09.7	8,811
T. 3 N., R. 1 E., west corner of secs. 19 and 30; State line.....	39 19 11.4	84 49 08.8	5,317
T. 3 N., R. 1 E., west corner of secs. 18 and 19; State line.....	39 20 03.2	84 49 07.9	5,238
T. 3 N., R. 1 E., west corner of secs. 13 and 19; State line.....	39 20 55.4	84 49 07.2	5,280
T. 8 N., R. 1 W., east corner of secs. 13 and 24; State line.....	39 20 56.5	84 49 07.2	110
T. 3 N., R. 1 E., west corner of secs. 7 and 18; State line.....	39 21 47.7	84 49 06.1	5,180
T. 8 N., R. 1 W., east corner of secs. 12 and 13; State line.....	39 21 49.2	84 49 06.0	150
Okeana, 2 miles west and 1 mile north of; center of cross pikes.....	39 21 44.3	84 47 41.9	6,624
Schoolhouse No. 3, just west of; crossing of north-south pike and pike northwest-southeast.....	39 22 32.4	84 47 41.0	4,871
Scipio, in southwest part of town, 20 feet east and 5 feet north to south- west corner of Town Hall building, in Town Hall yard; iron post stamped "Prim. Trav. Sta. No. 35. Ohio, 1910".....	39 23 30.1	84 49 00.7	8,553
Scipio, center of pike on Ohio-Indiana State line.....	39 23 31.0	84 49 03.6	250
Tps. 3 and 4 N., R. 1 E., west corner of secs. 6 and 31; State line.....	39 23 30.8	84 49 03.6	25
T. 9 N., R. 1 W., east corner of secs. 25 and 36; State line.....	39 24 22.9	84 49 02.2	5,274
T. 4 N., R. 1 E., west corner of secs. 30 and 31; State line.....	39 24 23.3	84 49 02.2	40
T road west, center of; State line.....	39 25 36.7	84 49 00.6	7,420
T. 4 N., R. 1 E., west corner of secs. 18 and 19; State line.....	39 26 08.5	84 48 59.9	3,220
T. 9 N., R. 1 W., east corner of secs. 13 and 24; T road west at State line.....	39 26 08.9	84 48 59.9	40
T. 4 N., R. 1 E., west corner of secs. 7 and 18; center of T road east at State line.....	39 26 59.8	84 48 59.1	5,151
T. 4 N., R. 1 E., west corner of secs. 6 and 7; State line.....	39 27 53.5	84 48 58.2	5,430
T. 9 N., R. 1 E., east corner of secs. 1 and 12; State line.....	39 27 54.5	84 48 58.2	100
Tps. 4 and 5 N., R. 1 E., corner of secs. 6 and 31; State line.....	39 28 46.1	84 48 57.4	5,220
Mixersville, center of cross pikes (in Indiana).....	39 29 18.5	84 49 28.9	4,107
Tps. 5 N. and 10 N., Rs. 1 E. and 1 W., corner of secs. 30, 31, 25, and 36; T road north at State line.....	39 29 38.6	84 48 56.2	3,270

Magnetic declination for southeast border, 1° 26' E.; along Ohio-Indiana State line, 1° 45' E.

HILLSBORO QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Dallas, 1.5 miles north of, at southeast corner of crossroads, 20 feet west to inter- section of roads; nail in hub.....	39 14 00.2	83 31 15.8
Hillsboro, 4 miles northeast of; Hillsboro-East Munroe pike at road east, 15 feet west to Mrs. W. K. Wright's mail box.....	39 14 58.0	83 33 34.8
Hillsboro, about 3 miles northeast of, on Hillsboro-East Munroe pike; center of steel bridge over Clear Creek.....	39 13 52.8	83 34 34.5
Mr. Shepard's residence, 0.7 mile north of T road south.....	39 14 46.8	83 35 14.0
James Elliott's residence, center of Samantha pike, at road west.....	39 14 41.0	83 36 19.2
Careytown-Hillsboro pike at road east.....	39 14 28.8	83 37 45.1
Hillsboro, 4 miles northwest of, near Persimmon Ridge schoolhouse, at north- east corner of intersection of Hillsboro-Vienna pike and road east; iron post stamped "Prim. Trav. Sta. No. 63. Ohio, 1909".....	39 14 43.2	83 39 05.2
Dunn's Chapel, 0.2 mile east of; center of crossing of Hillsboro-Lynchburg pike and east-west road.....	39 14 20.7	83 40 51.6
Dunn's Chapel, 1.5 miles west of; T road south.....	39 14 02.0	83 42 36.5
Stone at center of crossroads.....	39 13 49.2	83 43 32.4

HILLSBORO QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Mayhill, 0.8 mile south of; forks of road in branch.....	39 00 01.8	83 30 51.3
Mayhill, center of road at township line.....	39 00 40.1	83 30 15.0
Mayhill, south corner of crossroads, 25 feet north and 10 feet east to center of roads; iron post stamped "Prim. Trav. Sta. No. 82. Ohio, 1909".....	39 00 45.4	83 30 28.5
Jesup, 1 mile south of; north-south pike at T road west.....	39 00 38.3	83 32 13.0
Greenbrier schoolhouse, west of; T road southeast.....	39 00 56.3	83 33 50.3
Buckrun post office, 0.2 mile south of; on Seaman-Fairfax pike, at road northeast.....	39 00 02.9	83 34 55.8
Emerald, center of crossroads.....	39 00 03.1	83 39 29.7
Emerald, 0.8 mile west of; T road south.....	39 00 18.8	83 40 17.6
Pencastle Cemetery, center of pike at T road southeast.....	39 00 00.0	83 42 42.2

Along highways near east border of quadrangle.

Jesup, center of crossroads.....	39 01 30.7	83 31 59.3
Jesup, 0.6 mile northeast of; Highland-Adams county-line monument, in J. H. Moore's front yard.....	39 02 00.2	83 31 44.7
J. W. Moore's mail box, crossroads, 10 feet southwest to telephone pole.....	39 02 32.6	83 31 12.2
Bell, 0.8 mile southeast of post office, north point of grass triangle at forks.....	39 03 19.6	83 31 36.3
Bell, center of T road east at post office.....	39 03 46.9	83 31 58.5
Brush Creek, center of bridge over.....	39 04 50.7	83 30 47.7
Pleasant schoolhouse, 0.2 mile north of; center of T road west, 5 feet north and 15 feet west to center of mound.....	39 05 30.1	83 30 45.4
T road west, north of small store.....	39 06 41.9	83 31 00.9
Berryville, 2.5 miles east of, 15 feet south to center of T road; iron post stamped "Prim. Trav. Sta. No. 83. Ohio, 1909".....	39 07 27.2	83 30 50.9
Marshall, 1 mile west of; stone at crossroads.....	39 08 52.2	83 30 22.6
Marshall, 1 mile northwest of; intersection of Hillsboro-Marshall pike and north- south road.....	39 09 31.0	83 30 20.5
Dallas, 1.7 miles south of; cross pikes at Beechwoods schoolhouse.....	39 11 32.8	83 30 10.5
Dallas, center of crossroads, 20 feet north to town pump.....	39 12 55.2	83 30 38.7

Along highways near west border of quadrangle.

Mowrystown, crossing of main streets.....	39 02 18.2	83 44 55.6
Mowrystown, 1.8 miles north of; on Mowrystown-Taylorsville pike, at T road west.....	39 03 43.1	83 44 45.1
Taylorsville, 0.2 mile west of; center of T pike south.....	39 04 41.3	83 44 30.2
T road south, at northwest corner of wooded field.....	39 05 44.1	83 44 46.5
D. C. Marconet's residence 0.2 mile northeast of; center of T road southeast.....	39 06 41.3	83 44 59.0
Danville, 0.5 mile southwest of, at southwest side of Cincinnati road at road west to Pricetown, 50 feet east and 25 feet north to center of forks; iron post stamped "Prim. Trav. Sta. No. 87. Ohio, 1909".....	39 08 28.2	83 44 42.6
Danville, center of T pike southeast.....	39 08 41.9	83 44 16.3
Danville, 1 mile north of; center of T road east.....	39 09 39.4	83 44 26.7
Danville, 2 miles north of, just north of C. E. Lewis's residence; center of T road west.....	39 10 18.0	83 44 26.4
T road east, just south of church.....	39 11 03.7	83 44 08.5
Fairview, center of cross pikes in west part of town.....	39 12 15.3	83 43 48.0
Fairview, 1 mile west of; center of Cincinnati pike, at road northwest.....	39 12 15.4	83 44 39.3

Along highways east-west through center of quadrangle.

Danville, 0.5 mile southeast of, forks in road, 20 feet east to center of culvert.....	39 08 21.2	83 43 52.3
Newmarket, at station; crossing of east-west road and Norfolk & Western Ry.....	39 08 14.8	83 41 53.2
Newmarket, center of cross pikes.....	39 08 07.8	83 40 07.2
Newmarket, 2 miles east of, northeast corner of Harrisonville schoolhouse, 40 feet east and 10 feet north to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 88. Ohio, 1909".....	39 07 44.5	83 37 57.8
Berryville, 2 miles west of; intersection of Hillsboro-West Union road and old State road.....	39 07 37.7	83 36 01.3
Berryville, 1.5 miles west of; T road southeast on top of hill.....	39 07 49.9	83 35 09.0
Berryville, 0.5 mile northwest of, at Prospect Church; center of cross pikes.....	39 08 06.0	83 33 50.6

Magnetic declination for north border, 0° 14' W.; for south border, 0° 36' W.; for
east border, 1° 28' E.; for west border, 1° 41' W.; for center line east-west, 0° 18' W.

JACKSON QUADRANGLE.

Along highways near east border of quadrangle

Stations.	Latitude.	Longitude.
Pawpaw School, 2.5 miles south of, 20 feet southwest to corner of rail fence, 31 feet southeast to black-oak tree.....	° ' "	° ' "
F. W. Hatfield's residence, about 500 feet east of; T road north, 12 feet east to gate post.....	39 14 25.5	82 32 40.3
Road south just east of bridge.....	39 13 36.0	82 32 48.2
T. 8 N., R. 18 W., northeast corner stone of sec. 1.....	39 12 16.9	82 32 33.9
Hamden Junction, 1.5 miles north of; T road west, 18 feet due west to center of small bridge.....	39 11 43.4	82 32 05.4
	39 10 47.8	82 31 30.2

Along Baltimore & Ohio Southwestern R. R. from Hamden Junction to Berlin.

Hamden Junction, 820 feet north of station; road crossing on Baltimore & Ohio Southwestern R. R.....	39 09 37.6	82 31 23.9
Vinton-Jackson county line, south rail of track.....	39 08 37.5	82 31 59.4
Hamden Junction 0.75 mile south of, northwest corner of John Potter's field at pike crossing, center of crossing bears N. 9° 30' W. 74.6 feet; iron post stamped "Prim. Trav. Sta. No. 13. Ohio, 1906".....	39 08 34.9	82 31 56.6
Wellston, pike crossing 0.8 mile north of station.....	39 07 57.8	82 31 47.9
Wellston station.....	39 07 19.3	82 32 09.2
Wellston, road crossing on Cincinnati, Hamilton & Dayton Ry. at cement plant.....	39 06 42.4	82 32 12.3
Milepost 51, 850 feet south of; east-west road crossing.....	39 05 33.9	82 32 16.1
Berlin, road crossing on Cincinnati, Hamilton & Dayton Ry.....	39 04 50.0	82 32 33.5

Along Cincinnati, Hamilton & Dayton Ry. from Berlin to Rocky Hill.

Milepost 48, north-south pike crossing.....	39 03 50.4	82 32 22.5
Milton-Bloomfield township line.....	39 02 28.9	82 32 05.4
Burriss station, 0.25 mile north of road crossing.....	39 01 42.0	82 31 43.4
T. 8 N., R. 17 W., northeast corner of sec. 7.....	39 01 35.8	82 31 49.9
Ridgeland station, pike crossing.....	39 00 50.9	82 31 30.2
Rocky Hill, road crossing 1 mile north of station.....	39 00 05.8	82 32 21.7

Along highways east and west through center of quadrangle.

T. 7 N., R. 20 W., quarter corner between secs. 29 and 32, road north-south at fence east-west.....	39 08 07.1	82 44 30.7
Valley Chapel, point on Chillicothe pike and road west, 20 feet south to sycamore snag.....	39 08 30.4	82 43 28.8
Covered bridge, north of, Chillicothe-Jackson pike at T road south.....	39 08 00.0	82 42 47.1
Green's store, Chillicothe-Jackson pike and road northeast, 10 feet northeast to center of triangular grass plat.....	39 07 48.9	82 42 01.9
J. C. Randall's residence, T road north, 10 feet northeast to mail box.....	39 08 30.1	82 41 05.6
Leo, 0.2 mile southwest of; section corner.....	39 08 47.9	82 40 30.7
Leo, T road south just east of schoolhouse.....	39 08 49.7	82 40 01.0
Leo and Coalton pike, crossing of line between Rs. 18 and 19 W.....	39 08 34.2	82 39 22.5
T. 7 N., R. 18 W., corner of secs. 29, 30, 31, and 32.....	39 07 42.5	82 38 18.7
Coalton, 1.5 miles northwest of, in stone 30 by 12 by 6 inches at southwest corner of T road south, just east of John Wilson's house, 20 feet east and 20 feet north to center of T road; aluminum tablet stamped "Prim. Trav. Sta. No. 1. Ohio, 1910".....	39 07 27.2	82 37 58.2
Garfield, T pike west at station.....	39 07 26.5	82 37 11.4
T. 8 N., R. 18 W., quarter corner on south side of sec. 33, crossroads at Sach's Hotel, Coalton.....	39 06 49.9	82 36 40.8
Glenray, T road south at school.....	39 06 47.2	82 34 55.5
Electric park, T road north.....	39 07 01.1	82 33 45.3
Wellston, large stone monument on west line of town.....	39 06 59.8	82 33 28.2

Magnetic declination for north border, $+0^{\circ} 25' W.$; for east border, $-0^{\circ} 03' E.$; for south border, $-0^{\circ} 01' E.$; for east-west center line, $0^{\circ} 25' W.$

JEFFERSON QUADRANGLE.

Along highways from Jefferson south to Colebrook.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Jefferson station, 0.6 mile south of; fork of road to southeast.....	41 43 53.0	80 45 51.7
Lenox, 1 mile north of; four corners.....	41 41 40.7	80 45 42.2
Lenox, four corners.....	41 40 47.8	80 45 41.3
New Lyme-Lenox township line, four corners.....	41 38 35.4	80 45 39.1
Three corners, road east.....	41 37 27.3	80 45 47.1
Four corners.....	41 36 17.8	80 45 46.9
Four corners.....	41 35 44.0	80 46 49.2
New Lyme, four corners near hotel.....	41 34 56.1	80 46 35.8
Four corners.....	41 33 26.7	80 46 12.8
Colebrook, four corners at.....	41 32 08.8	80 45 45.4

Along highways near south border of quadrangle.

Four corners.....	41 30 30.2	80 56 21.1
Forks of road to northwest.....	41 30 30.0	80 55 16.6
Grand River, center of covered bridge over.....	41 30 18.1	80 54 28.0
Orwell, 1 mile south of; T road east.....	41 31 16.1	80 52 04.6
Pennsylvania R. R. crossing.....	41 34 16.0	80 50 53.3
Three corners, road north.....	41 31 16.2	80 49 47.1
Three corners.....	41 31 20.0	80 48 36.8
Three corners.....	41 31 19.6	80 47 26.6
Three corners.....	41 30 52.0	80 47 24.0
Schoolhouse, three corners at.....	41 30 51.9	80 45 17.6
Triumph, 0.75 mile north of, in southeast corner of Mrs. E. P. Priar's farm, on west side of Jefferson road, northeast corner of W. Cleat's residence bears S. 37° 20' W., distant 48.6 feet, southwest corner of O. B. Humphrey's house bears N. 29° E., distant 129.4 feet, in stone post, aluminum tablet stamped "Prim. Trav. Sta. No. 35".....	41 30 08.1	80 45 03.0

Along highways near west border of quadrangle.

Three corners.....	41 44 33.6	80 59 47.2
Mill Creek, center of bridge over.....	41 42 45.4	80 59 32.0
Four corners.....	41 41 54.7	80 59 35.6
Schoolhouse, Hartsgrove district No. 4; three corners.....	41 37 58.7	80 59 32.4
T road east.....	41 37 08.7	80 59 32.3
Four corners at signpost "Hartsgrove 2 miles".....	41 36 19.8	80 59 32.3
Schoolhouse, district No. 7; four corners.....	41 35 30.7	80 59 32.3
Three corners, south edge of east-west road.....	41 33 50.3	80 59 30.3
Stoneville, 0.25 mile west of; four corners.....	41 33 14.2	80 57 47.1
Windor Mills, three corners at top of hill near church.....	41 32 06.7	80 57 44.7
Windor Mills, south end of covered highway bridge over Phelps Creek.....	41 31 58.3	80 57 50.8
Three corners, forks to east.....	41 31 22.7	80 57 54.7
Iona post office, four corners at.....	41 30 30.7	80 58 22.6

KENT QUADRANGLE.

Along Pennsylvania R. R. from Hudson to a point near Earlville.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Hudson, observatory of Western Reserve Academy.....	41 14 37.6	81 26 13.9
Portage-Summit county line.....	41 12 45.3	81 23 32.2
Earlville station.....	41 11 21.0	81 20 41.8
Erle Ry. crossing.....	41 10 18.4	81 18 39.7

Along Cleveland, Akron & Columbus Ry. from Hudson to Akron.

Flag station, road crossing at, 1,770 feet south of milepost 3.....	41 11 52.4	81 27 52.8
Road crossing 1,370 feet north of milepost 6.....	41 09 50.3	81 28 09.8
Cuyahoga Falls station.....	41 08 06.9	81 28 51.0
Road crossing 1,925 feet south of milepost 10.....	41 06 08.1	81 29 22.0
Baltimore & Ohio R. R. crossing, stone arch.....	41 05 08.5	81 29 23.3

On Baltimore & Ohio R. R. near Krumroy.

Krumroy station, road crossing 225 feet south of.....	41 00 55.3	81 28 41.8
Overhead road crossing 425 feet south of milepost 39.....	41 03 07.2	81 28 36.0

KENTON QUADRANGLE.

From milepost 64 along Toledo & Ohio Central Ry. to Ridgeway.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Milepost 64, crossing 910 feet south of	40 44 46.5	83 38 34.9
Blanchard station, 150 feet north of; telephone line road crossing	40 43 54.2	83 38 35.6
Milepost 67, crossing 500 feet south of	40 42 14.0	83 38 36.1
Milepost 69, crossing under railroad 450 feet south of	40 40 30.3	83 38 35.1
Pike crossing	40 39 19.2	83 37 59.9
Kenton, northwest azimuth stone 9 feet south of south rail on Toledo & Ohio Central Ry. and 12 feet northwest of switch block, sandstone post 30 by 6 by 6 inches, set 28 inches in ground; bronze meridian tablet cemented in center of top. Azimuth 273° 48' 22" to southeast stone	40 38 40.8	83 36 58.1
Kenton, southeast azimuth stone on middle pier of Big Four Route bridge over Scioto River and Toledo & Ohio Central Ry., 15 feet south of Toledo & Ohio Central Ry. and 3½ feet west of west rail of Big Four Route; copper bolt in top of stonework	40 38 40.0	83 36 42.2
Kenton station, street crossing 140 feet east of	40 38 36.9	83 36 29.2
Erie R. R. crossing	40 38 00.6	83 35 47.2
Siding, crossing 70 feet north of north end of	40 34 35.9	83 34 29.9
Big Four Route crossing	40 31 09.6	83 33 47.6
Ridgeway station, crossing 175 feet south of	40 30 57.9	83 33 46.1

Along highways in central and western part of quadrangle.

Roads north, east, and west	40 37 24.1	83 30 57.4
Henpeck schoolhouse, road crossing at	40 38 04.5	83 33 09.0
Corner of sections	40 38 39.2	83 34 34.0
Kenton, 1.5 miles west of; crossing of Big Four Route	40 38 48.3	83 38 20.6
Kenton, 4.5 miles west of; crossing of Big Four Route	40 39 30.7	83 40 30.2
Big Four Route and north-south road crossing	40 40 09.6	83 42 28.9
T. 3 S., R. 10 E., corner of secs. 5, 6, 31, and 32	40 43 57.2	83 44 52.6
Foraker station	40 40 46.6	83 44 21.8

North along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Mount Victory, 1.25 miles southeast of; northwest-southeast pike at road west	40 31 01.9	83 30 28.2	.....
Mount Victory, Erie R. R. at Main Street crossing	40 32 00.1	83 31 14.1	6,878
Hale-Dudley township stone in center of north-south road	40 33 23.2	83 30 42.1	8,773
Mount Victory, 2 miles north of; crossroads	40 33 54.5	83 30 32.7	3,250
Otterbein United Brethren Church; crossroads	40 35 02.6	83 30 19.4	6,962
T road east	40 35 59.4	83 30 14.4	5,770
Pfeiffer, 1 mile west of, at south side of T road north, 16 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 86. Ohio, 1910"	40 37 24.0	83 30 57.4	.....

West along Cleveland, Cincinnati, Chicago & St. Louis Ry. (Big Four Route) and highways near south border of quadrangle.

Mount Victory, 1.25 miles southwest of; north-south road crossing	40 31 35.2	83 32 29.9	.....
Milepost 124, north-south road crossing at	40 31 21.7	83 33 10.7	3,439
Ridgeway, 175 feet south of station; east-west road crossing on Toledo & Ohio Central Ry.	40 30 57.9	83 33 46.1	3,644
Logan-Hardin county-line post	40 30 48.7	83 34 50.8	5,083
Beechdale schoolhouse, in southeast corner of grounds, 25 feet east by 20 feet south to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 87. Ohio, 1910"	40 30 14.1	83 35 54.0	6,006
Van, east-west pike crossing on Cleveland, Cincinnati, Chicago & St. Louis Ry.	40 30 08.3	83 36 55.3	4,769
Big Springs, 0.25 mile north of; cross pikes at schoolhouse	40 30 01.1	83 38 10.8	5,880
Crossroads	40 30 20.4	83 40 38.5	.....
White Town schoolhouse No. 8, crossroads at	40 30 14.4	83 41 41.5	4,906
Rush Creek-Richland township line, center of pike	40 30 16.5	83 43 04.1	6,381
Belle Center, 1 mile east of, at northwest corner of Fairview Cemetery, 25 feet west by 20 feet north to center of T road south; iron post stamped "Prim. Trav. Sta. No. 88. Ohio, 1910"	40 30 13.8	83 43 52.9	3,782
Belle Center, in southeast part of; crossroads	40 30 14.6	83 44 37.0	3,405

KENTON QUADRANGLE—Continued.

North along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Logan-Hardin county-line stone	40 31 19.9	83 44 46.7	6,648
Graystone schoolhouse, 630 feet south of, T road west	40 32 02.1	83 44 54.0	4,314
McDonald-Lynn township line, T road north	40 35 59.5	83 44 05.9	
Gurn schoolhouse No. 2; crossroads	40 36 13.3	83 43 02.5	5,080
T road east	40 37 18.0	83 43 13.0	6,599
Foraker, 2 miles south of, in northwest corner of Flynn schoolhouse grounds, 45 feet north by 30 feet west to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 89. Ohio, 1910"	40 38 35.5	83 43 25.2	7,893
T road east	40 39 30.1	83 43 34.4	5,509

Magnetic declination for south border, $0^{\circ} 23' E.$; for east border, $1^{\circ} 20' E.$; for west border, $0^{\circ} 08' E.$

KINSMAN QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Stanhope creamery, three corners at Pennsylvania R. R. crossing	41 29 54.1	80 36 17.1
Pennsylvania R. R. crossing, 0.5 mile east of; four corners	41 29 54.3	80 35 50.2
Four corners	41 29 55.5	80 34 12.8
Stratton Creek, center of bridge over	41 29 56.0	80 33 28.0
Cornelian, four corners at	41 29 34.9	80 31 50.7
Ohio-Pennsylvania State line, milepost 33	41 29 34.0	80 31 09.6

Along highways near west border of quadrangle.

Schoolhouse, T road east, 21 feet southeast to W. B. King's mail box, 21 feet northwest to west end of stone culvert	41 15 40.2	80 44 26.9
Road northeast, 90 feet north to guidepost "Cortland 4 miles"	41 16 31.6	80 44 27.1
T road east, 35 feet northeast to corner fence post, 34 feet southeast to corner fence post	41 17 02.8	80 44 27.4
T. 5 N., R. 3 W., corner of secs. 47, 48, 53, and 54; T road south, 13 feet north to A. Barnard's mail box, 40 feet southeast to C. W. Kennedy's mail box	41 18 29.7	80 44 28.2
T. 5 N., R. 3 W., corner of secs. 14, 15, 27, and 28; crossroads, 37 feet southwest to corner fence post, 42 feet northwest to guidepost	41 19 48.6	80 44 28.5
Cortland, 2 miles north of; guidepost at Y road north	41 21 11.1	80 44 13.5
Mecca, 1 mile south of, in west part of schoolhouse yard; nail in east face of maple tree bears S. $55^{\circ} W.$, distant 73.5 feet; nail in south face of maple tree near fence bears N. $19^{\circ} E.$, distant 79.8 feet; iron post stamped "Prim. Trav. Sta. No. 34"	41 21 53.2	80 44 12.4
Mecca, corner stone in center of park	41 23 22.7	80 44 13.3
Crossroads, 40 feet northwest to guidepost, 40 feet southwest to cross on fence post	41 25 07.9	80 44 13.7
T. 7 N., R. 3 W., corner of secs. 44, 45, 46, and 47; T road east, 10 feet northeast to milk platform	41 25 58.1	80 44 13.8
Crossroads, center of bridge	41 26 51.4	80 44 47.7
Kenilworth, crossroads 0.5 mile west of, 40 feet northeast to telephone pole, 66 feet southeast to maple tree	41 27 43.4	80 44 48.2
Triumph, 1 mile south of, T road east, 27 feet west to wild-cherry tree, 70 feet southeast to maple tree	41 28 36.7	80 44 48.5
Triumph, crossroads, 57 feet southwest to northeast corner of shop, 40 feet southeast to C. M. Rice's mail box	41 29 28.4	80 44 48.6

LANCASTER QUADRANGLE.

Along Hocking Valley Ry. between Lancaster and Hooker.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Lancaster, crossing of Fair Avenue and Columbus Street	39 43 26.4	82 36 15.10
Lancaster, 1.6 miles northwest of; pike crossing on Hocking Valley Ry., east track, township line follows railroad northwest	39 43 30.1	82 37 40.60
Water tank, spout between tracks	39 44 16.1	82 38 43.30
Hooker station, 350 feet northwest of, on north side of east-west road, near southeast corner of field of Mike Vase, southwest corner of foundation to house bears N. $43^{\circ} 15' E.$, distant 29 feet; iron post stamped "Prim. Trav. Sta. No. 48, 1905"	39 44 51.5	82 39 47.60

LANCASTER QUADRANGLE—Continued.

Along highways near Hooker.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Hooker, 1.75 miles west of, 22 feet northwest to R. V. Allen's mail box, 25 feet northeast to cross on fence post.....	39 44 52.7	82 41 51.7
Hooker, 3 miles west of, in east part of field owned by Jacob Bookmon, near apple tree on top of steep bank, west of intersection of crossroads; iron post stamped "Prim. Trav. Sta. No. 49, 1905".....	39 44 59.3	82 42 47.1

Along highways near south border of quadrangle.

Gibsonville, east of, crossroads at schoolhouse, 63 feet north to corner of fence, 60 feet northwest to corner fence post.....	39 30 02.6	82 33 36.8
Mound Crossing school, in front yard of, southeast corner of foundation of schoolhouse bears N. 44° E., distant 40.5 feet, north corner of lower step of entrance to front yard bears S. 12° E., distant 71.6 feet; iron post stamped "Prim. Trav. Sta. No. 8. Ohio, 1906".....	39 30 22.0	82 37 25.2
Laurel township, northwest corner of sec. 19, T. 12 N., R. 18 W.....	39 30 21.8	82 37 25.8
Perry, northeast corner of sec. 24, T. 12 N., R. 19 W.; gatepost corner.....	39 30 24.5	82 37 25.6
T. 11 N., R. 20 W., northeast corner of sec. 24; Hocking-Pickaway county line, at T road west, 18 feet northwest to mail box 21, 25 feet southwest to arrow on post.....	39 30 39.3	82 44 10.5
Perry township, northwest corner of sec. 19, T. 12 N., R. 19 W.....	39 30 42.5	82 44 10.5

Along highways near west border of quadrangle.

Amanda, 0.75 mile east of, east of pike at T pike west, cross cut on southwest corner of stone culvert bears N. 12° W., distant 36.5 feet, cross cut on southeast corner of stone culvert bears N. 22° 15' E., distant 26.9 feet; iron post stamped "Prim. Trav. Sta. No. 7. Ohio, 1906".....	39 38 44.4	82 43 37.9
Road east on township line between Tps. 12 and 13.....	39 38 34.6	82 43 46.0
Amanda, Clear Creek, Hocking, and Madison townships, common corner of; northeast corner of sec. 1, T. 12 N., R. 20 W.....	39 38 33.2	82 43 22.8
Crossroads, 225 feet west of northeast corner of sec. 14.....	39 36 52.1	82 44 43.4
T. 12 N., R. 20 W., northeast corner of sec. 14.....	39 36 52.1	82 44 40.6

LARUE QUADRANGLE.

Along highways near southeast corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing, east-west.....	40 30 46.4	83 15 22.2
Roads east, north, and south.....	40 31 47.2	83 15 56.0
Roads east, north, and south.....	40 33 04.0	83 16 07.6
Road, northwest-southeast.....	40 33 20.3	83 15 20.0
Gurley, 1 mile east of; crossing on Big Four Route.....	40 35 09.5	83 15 21.2
Espyville, road crossing southeast and west at.....	40 35 52.5	83 15 20.4

Along highways near west border of quadrangle.

T. 3 S., R. 12 E., corner of secs. 28, 29, 32, and 33.....	40 44 41.7	83 29 48.7
T. 4 S., R. 12 E., corner of secs. 8, 9, 16, and 17.....	40 42 04.8	83 29 45.7
T. 4 S., R. 12 E., corner of secs. 20, 21, 28, and 29.....	40 40 19.4	83 29 45.1
Tps. 4 and 5 S., R. 12 E., corner of secs. 4, 5, 32, and 33.....	40 38 34.0	83 29 46.3

Near west border of quadrangle.

Union-Hardin county-line monument.....	40 30 15.3	83 29 50.3
Steel bridge over Scioto River, center of.....	40 37 09.6	83 29 58.8

LARUE QUADRANGLE—Continued.

East along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Arbela, 1 mile north by 1 mile east of; T road south.....	40 30 04.3	83 24 55.7	.....
Stahl schoolhouse No. 11, T road south.....	40 30 12.6	83 23 47.7	5,328
Union-Marion county-line monument.....	40 30 20.5	83 22 55.4	4,121
Essex, 2 miles north by 1.5 miles west of, at northwest corner of T road north, 0.3 mile south of Union-Marion county line, 35 feet east by 15 feet south to center of T road; iron post stamped "Prim. Trav. Sta. No. 84. Ohio, 1910".....	40 30 02.6	83 22 05.8	4,245
T road south.....	40 30 03.7	83 20 49.9	5,869
Schoolhouse No. 8 (brick), 0.25 mile northwest of; on northwest-south-east road at road west.....	40 30 10.4	83 19 57.5	4,111

Magnetic declination for south border, 1° 04' W.

LAURELVILLE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Adelphi, crossing of Main and Concord streets, 40 feet southeast to lamp-post, 36 feet northwest to telephone pole at general store.....	39 27 58.9	82 44 52.3
T. 10, R. 20, corner of secs. 18, 19, 23, and 24, on Ross-Hocking county line.....	39 25 28.7	82 44 38.5
Feightner, T road north at blacksmith shop, 21 feet west to southwest corner of shop, 30 feet northwest to small apple tree.....	39 24 45.4	82 44 48.2
Tom Pritchard's residence, intersection of roads, 15 feet north to cross cut on small cottonwood tree.....	39 23 39.0	82 43 28.4
Feightner, 2 miles south of, in northeast corner of T. B. Pritchard's front yard, northeast corner to foundation of porch of Pritchard's residence bears S. 73° 15' W., distant 49.2 feet, nail in north face of cottonwood tree in front yard bears S. 15° E., distant 7.7 feet, in top of sandstone post 6 by 10 by 36 inches set 32 inches in ground; aluminum tablet stamped "Prim. Trav. Sta. No. 10".....	39 23 36.8	82 43 28.8
T road southwest, 18 feet south to cross on corner fence post, 20 feet northeast to cross on fence post.....	39 22 19.2	82 43 47.9
Pike Run, T road east at, 25 feet northeast to cross on telephone pole, 25 feet southeast to corner of old store building.....	39 21 11.8	82 43 19.8
Pike Run, crossroads 0.75 mile south of, 18 feet northwest to cross on corner fence post, 22 feet southwest to south end of box culvert.....	39 20 40.3	82 43 26.6
Pike Run, intersection of roads at bridge about 1 mile west of, 10 feet east to north corner of bridge, 10 feet south to southwest corner of bridge.....	39 21 19.2	82 44 22.2

Along highways near south border of quadrangle.

Pawpaw school, T road north 1 mile south of schoolhouse, 27 feet west to small bridge.....	39 15 44.0	82 32 26.9
McArthur, 3.75 miles northwest of, 0.25 mile west of J. T. Hartley's residence, north side of old State road, nail in apple tree bears S. 35° 45' W., distant 53.7 feet, nail in gum tree bears N. 56° 30' W., distant 25.3 feet; iron post stamped "Prim. Trav. Sta. No. 11. Ohio, 1906".....	39 16 40.1	82 32 09.0
Schoolhouse, just west of, rail fence south of old State road; T road north.....	39 16 13.9	82 34 31.7
Allensville, northeast corner of sec. 8, T. 9 N., R. 18 W.; stone in schoolhouse yard.....	39 16 23.9	82 36 13.3
Allensville, center of crossroads.....	39 16 21.4	82 36 24.0
Allensville, 1.33 miles west of; T road north, 21 feet east to southwest corner of covered bridge.....	39 16 28.4	82 37 48.2
Line between Rs. 18 and 19 W., center of old State road, rail fence south.....	39 16 16.8	82 38 37.1
Allensville, 2.5 miles west of, south side of old State road, one-sixth mile west of James Anderson's residence, 30 feet east of T road south; iron post stamped "Prim. Trav. Sta. No. 12. Ohio, 1906".....	39 16 12.8	82 39 04.7
T road north, 30 feet east to center of small bridge.....	39 16 18.3	82 39 46.0
T. 9 N., R. 19 W., northeast corner of sec. 15; stone, lane south.....	39 15 43.9	82 40 57.6
Private road south in hollow.....	39 15 04.4	82 42 33.7
Gillespieville, 4 miles east of; T road south, 15 feet south to guidepost.....	39 14 49.1	82 43 33.5

LAURELVILLE QUADRANGLE—Continued.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
Stone on township line at north end of wire fence.....	39 26 29.7	82 30 39.8
Joseph Earnhart's blacksmith shop, about 400 feet northeast of; T road east, 45 feet east to southwest corner of bridge, 26 feet northeast to cross on fence.....	39 25 10.6	82 31 23.4
Old residence site, T road south, 33 feet north to cross on board fence, 29 feet southeast to corner of old yard.....	39 24 06.0	82 31 02.3
T. 11 N., R. 18 W., northeast corner of sec. 25; stake at junction of fences.....	39 23 56.4	82 30 52.4
T. 12 N., R. 17 W., northwest corner of sec. 6; stone at topped hickory.....	39 23 44.8	82 30 52.4
Hue, at northwest corner of H. S. Honnold's yard, nail in locust tree bears N. 20° E. distant 6 feet; iron post stamped "Prim. Trav. Sta. No. 10, 1900".....	39 23 25.1	82 31 06.7
Hocking-Vinton county line, center of road, at east-west rail fence, about 700 feet north of N. R. Pettit's residence.....	39 22 12.9	82 32 03.2
Millharm school, road forks, 15 feet north to large white oak.....	39 21 22.0	82 32 39.4
Stella, crossroads, 27 feet southeast to northwest corner of old building, 43 feet southwest to sassafras stump.....	39 20 55.1	82 33 05.0
Stella, 1.25 miles southeast of; road forks, 15 feet south to Frank Allen's mail box, 30 feet northwest to stump.....	39 19 59.4	82 32 18.2
Centenary Church, about 0.25 mile northeast of; T road south, 9 feet south to center of small bridge, 18 feet west to E. Reinhart's mail box.....	39 19 12.4	82 32 33.0
T. 11 N., R. 17 W., northwest corner of sec. 6, west side of Mr. Davis's farm, 27 feet north of junction of fences.....	39 18 24.5	82 31 23.1
H. J. Westcott's residence, T road north, 37 feet northwest to arrow on fence, 26 feet southeast to guidepost.....	39 18 14.9	82 31 37.6
Curry schoolhouse, 0.25 mile southeast of; T road west, 21 feet south to center of small bridge.....	39 17 45.1	82 32 30.0
T road west, 9 feet southeast to west end of box culvert.....	39 16 59.6	82 32 17.7

Along highways near north border of quadrangle.

T. 12 N., R. 19 W., about 0.33 mile west of northeast corner of sec. 30; T road east, 27 feet northwest to cross on large sycamore tree, 24 feet northeast to J. C. Anderson's mail box.....	39 29 45.3	82 43 30.0
T road north on section line, 27 feet southeast to wooden mail box, 18 feet south to G. H. McClelland's mail box.....	39 29 48.0	82 42 00.8
T. 12 N., R. 19 W., northeast corner of sec. 29.....	39 29 41.8	82 42 00.8
South Perry, south end of bridge at crossroads.....	39 29 47.8	82 40 19.3
South Perry, 1 mile east of; T road north, 15 feet south to cross on fence post.....	39 29 51.9	82 39 11.2
Rockhouse, T road north, 27 feet northwest to end of board fence, 32 feet northeast to corner of picket fence.....	39 29 38.8	82 36 53.7
Moore's sawmill, just south of; T road north, 21 feet west to center of small bridge, 18 feet southwest to west end of gate.....	39 29 54.1	82 35 21.0
Gibsonville, 1 mile east of, just south of M. N. McCowen's residence, west of road, nail in locust tree bears N. 30° E. distant 44.3 feet, nail in locust tree bears S. 40° 30' E., distant 33.9 feet; iron post stamped "Prim. Trav. Sta. No. 9, Ohio, 1906".....	39 29 54.2	82 32 41.2
Bridge over Pine Creek, just northeast of; T road north, cross on fence post.....	39 28 10.3	82 32 06.0
Zion Church, T road east, 20 feet south to center of bridge, 18 feet east to arrow cut on board fence.....	39 28 31.3	82 30 34.6
Laurel township, northeast corner of sec. 36, T. 12 N., R. 18 W.....	39 28 13.8	82 30 30.2

Magnetic declination for north border, 0° 29' E.; for south border, 0° 25' W.; for east border, 0° 28' W.

LAWRENCEBURG QUADRANGLE (OHIO-IND.).

Along highways to a point near Harrison.

Stations.	Latitude.	Longitude.	Distance between stations.
Elizabethtown, 1.1 miles southwest of, at northeast corner of T pike north at Indiana-Ohio State line, 4 feet south and 1 foot east to large stone monument, 20 feet west and 35 feet south to center of T pike; iron post stamped "Prim. Trav. Sta. No. 32, Ohio, 1910".....	39 08 57.2	84 49 12.5	749
Elizabethtown, street crossing on electric railroad.....	39 09 29.7	84 48 17.8	5,412
Elizabethtown, about 1 mile east of State line, 200 meters northwest of Cleveland, Cincinnati, Chicago & St. Louis Ry. station; stone astronomical pier.....	39 09 32.2	84 48 21.5	386
Astronomic value (Coast and Geodetic Survey).....	39 09 28.54	84 48 22.48	5,412
Suspension bridge, just west of; center of T pike east.....	39 10 58.7	84 47 41.8	9,444
Harrison, 2 miles from; center of T road south, 25 feet south and 15 feet east to guidepost "Locust Grove Church 2 miles, Harrison 2 miles".....	39 14 05.6	84 48 27.8	19,256
T. 7 N., R. 1 W., east corner of secs. 24 and 25; Ohio-Indiana State line.....	39 14 51.0	84 49 12.4	5,774
Harrison, 1.8 miles east and 1 mile south of; center of pike at north-south road.....	39 14 52.9	84 47 10.7	10,604

Magnetic declination for north half of border of quadrangle along Ohio-Indiana State line, 1° 12' E.

LEBANON QUADRANGLE.

Along Baltimore & Ohio Southwestern R. R. from Camp Ground to Windsor.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Camp Ground station.....	39 15 18.2	84 16 47.5
Loveland, crossing of Pennsylvania and Baltimore & Ohio Southwestern rail-roads.....	39 16 00.6	84 15 31.9
Hills station, crossing 340 feet west of.....	39 15 18.7	84 11 17.7
Cozaddale station, crossing 80 feet west of.....	39 16 15.2	84 09 39.9
Pleasant Plain station, crossing 110 feet west of.....	39 16 47.5	84 06 43.6
Windsor station, crossing 40 feet west of.....	39 17 04.6	84 02 59.5

Along Pennsylvania R. R. near west border of quadrangle.

Road crossing north-south.....	39 21 05.1	84 14 27.8
Road crossing northeast-southwest.....	39 22 17.2	84 14 42.3

Along highways near west border of quadrangle.

Crossroads.....	39 23 30.0	84 14 52.9
Road crossing north-south.....	39 24 34.0	84 14 35.4
Road southeast.....	39 26 54.6	84 14 06.4
Bridge over creek south.....	39 28 06.1	84 14 16.2
Red Lion, T. 3 E., R. 4 N., center of sec. 15.....	39 29 28.2	84 14 55.4

Along highways near southeast corner of quadrangle.

Road northwest.....	39 15 51.4	84 00 09.2
Woodville, intersection of roads 0.25 mile east of.....	39 15 19.2	84 00 26.3

Along highways near north border of quadrangle.

Red Lion, 0.5 mile east of, north of pike, 15 feet south and 25 feet east to center of small bridge over branch to north, 10 feet north to southeast corner of E. W. Decker's garden; iron post stamped "Prim. Trav. Sta. No. 48. Ohio, 1909".....	39 29 25.5	84 14 17.3
Red Lion, 1.5 miles from; T road north, 20 feet south to guidepost "Springfield 5 miles".....	39 29 14.1	84 13 10.6
Red Lion, 2.5 miles east of, 3.5 miles north of Lebanon; center of crossroads.....	39 29 06.2	84 12 09.2
Red Lion, 3.5 miles east of; corner of secs. 27, 28, 33, and 34, T. 4, R. 4.....	39 29 29.1	84 10 47.6
Utica, corner of secs. 21, 22, 27, and 28, T. 4, R. 4, 10 feet west and 10 feet south to center of crossroads.....	39 29 40.0	84 09 37.7
Yale, 4.5 miles from, 4 miles from Waynesville; center of crossroads and section corner.....	39 29 34.9	84 08 29.0
Schoolhouse, center of T road south at section corner.....	39 29 31.0	84 07 18.0
Waynesville, 3.5 miles southwest of, on east side of T road west at Ellis Ivin's residence, 10 feet west and 25 feet south to center of stone culvert; iron post stamped "Prim. Trav. Sta. No. 49. Ohio, 1909".....	39 29 22.1	84 06 34.9
Waynesville, 2.5 miles southwest of; center of steel bridge over Little Miami River.....	39 29 51.0	84 06 06.6
Wayne township schoolhouse No. 10, 0.2 mile south of, 10 feet south to center of triangular grass plat.....	39 29 57.8	84 04 36.8

Along highways east-west through center of quadrangle.

Hopkinsville, 0.5 mile southwest of; center of Foster-Morrow pike at pike south.....	39 20 02.1	84 13 43.6
Hopkinsville, at northeast corner of cross pikes, 300 feet south and 20 feet west to center of pikes; iron post stamped "Prim. Trav. Sta. No. 51. Ohio, 1909".....	39 20 20.4	84 13 07.9
Hopkinsville, 1 mile northeast of; on Foster-Morrow pike at pike north.....	39 20 47.5	84 12 19.0
Zoar Methodist Episcopal Church, west of; center of cross pikes.....	39 21 02.9	84 11 26.4
Foster-Morrow pike at T pike north.....	39 21 21.8	84 10 28.5
Morrow, crossing of north-south street and Cincinnati & Muskingum Valley R. R. Milepost 147, 550 feet east of, just southeast of intersection of northeast-southwest road and Cincinnati & Muskingum Valley R. R., on east side of wagon road; iron post stamped "Prim. Trav. Sta. No. 52. Ohio, 1909".....	39 20 33.1	84 06 10.4
Milepost 146, private road crossing.....	39 20 43.2	84 05 15.2
Milepost 145, 0.2 mile west of, near east end of bridge; pike crossing under rail-road.....	39 21 01.2	84 04 26.5
Hicks, northwest-southeast road crossing at station.....	39 21 29.9	84 03 19.4
Milepost 143, overhead road crossing.....	39 22 09.4	84 02 36.7
Spur to sawmill, east-west road crossing at.....	39 22 34.2	84 01 57.7
Clarksville, 2.3 miles southwest of, on east side of Cincinnati & Muskingum Valley R. R., 50 feet west and 15 feet south to center of road crossing; iron post stamped "Prim. Trav. Sta. No. 53. Ohio, 1909".....	39 22 57.0	84 01 00.8
Milepost 140, 0.2 mile south of, crossing of northeast-southwest road.....	39 23 10.7	84 00 07.9

LEBANON QUADRANGLE—Continued.

At Loveland.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Loveland, about 0.5 mile southeast of, at southeast corner of T pike east; iron post stamped "Prim. Trav. Sta. No. 97. Ohio, 1909".....	39 15 30.9	84 14 57.6

Magnetic declination for north border, 0° 28' E.; for center line east-west, 0° 45' E.

LIBERTY QUADRANGLE (OHIO-IND.).

Along highway north on State line.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Tps. 5 and 10 N., Rs. 1 E. and 1 W., corner of secs. 30, 31, 26, and 36.....			
Tps. 5 and 10 N., Rs. 1 E. and 1 W., 20 feet south and 45 feet west of corner of secs. 19, 24, 25, and 30, 4 miles west of Oxford, in northeast corner of Frank Hausel's field, at T road south on Ohio-Indiana State line; iron post stamped "Prim. Trav. Sta. No. 36. Ohio, 1910".....	39 30 30.6	84 48 55.9	5,259
T. 5 N., R. 1 E., corner of secs. 19, 20, 29, and 30.....	39 30 30.6	84 47 47.2	5,379
Oxford, 2.8 miles west of; center of T road north.....	39 30 30.4	84 47 22.1	1,970
T. 5 N., R. 1 E., stone at corner of secs. 20, 21, 28, and 29.....	39 30 30.2	84 46 38.7	3,390
T. 5 N., R. 1 E., corner of secs. 21, 22, 27, and 28.....	39 30 29.6	84 45 31.0	5,291
To tie point 2.8 miles west of Oxford.....			5,213
T. 5 N., R. 1 E., corner of secs. 17, 18, 19, and 20; center of T road north at schoolhouse No. 4.....	39 31 23.1	84 47 46.0	5,656
T. 5 N., R. 1 E., corner of secs. 7, 8, 17, and 18; center of T road west.....	39 32 15.8	84 47 44.8	5,331
Tps. 5, 6, 10, and 11 N., Rs. 1 W. and 1 E., corner of secs. 1, 6, 31, and 36, Butler, Preble, and Union counties; State line.....	39 34 04.4	84 48 53.5	12,230
T. 6 N., R. 1 E., west corner of secs. 19 and 30; center of T road east, State line.....	39 35 49.5	84 48 53.2	10,635
T. 6 N., R. 1 E., west corner of secs. 18 and 19; T road east, State line.....	39 36 37.0	84 48 52.7	4,810
T. 11 N., R. 1 W., east corner of secs. 13 and 24; T road west, State line.....	39 36 37.4	84 48 52.7	40
T. 11 N., R. 1 W., east corner of secs. 12 and 13, 10 feet west to center of T road west; State line.....	39 37 29.9	84 48 52.3	5,310
College Corner, 5 miles north of, northeast corner of T road east at Ohio-Indiana State line, 20 feet south and 20 feet west to center of T road; iron post stamped "Prim. Trav. Sta. No. 37. Ohio, 1910".....	39 38 16.8	84 48 52.0	4,744
T. 11 N., R. 1 W., east corner of secs. 1 and 12; T road west, State line.....	39 38 22.5	84 48 52.2	580
Tps. 6 and 7 N., R. 1 E., west corner of secs. 6 and 31; center of T road east, State line.....	39 39 21.6	84 48 51.8	5,980
T. 7 N., R. 1 E., west corner of secs. 30 and 31; State line.....	39 40 14.7	84 48 51.9	5,370
T. 12 N., R. 1 W., east corner of secs. 24 and 25; center of T road west, State line.....	39 40 58.6	84 48 51.9	4,440
T. 12 N., R. 1 W., east corner of secs. 13 and 24; State line.....	39 41 51.2	84 48 51.5	5,320
T. 7 N., R. 1 E., west corner of secs. 18 and 19; State line.....	39 41 59.9	84 48 51.4	880
T. 12 N., R. 1 W., east corner of secs. 12 and 13; center of T road west, State line.....	39 42 43.6	84 48 51.1	4,420
T. 7 N., R. 1 W., west corner of secs. 7 and 18; center of T road east, State line.....	39 42 52.7	84 48 51.1	920
T. 12 N., R. 1 W., stone at east corner of secs. 1 and 12, junction of Union, Wayne, and Preble county lines; State line.....	39 43 35.9	84 48 51.0	4,370
T. 7 N., R. 1 E., west corner of secs. 6 and 7; center of T road east, State line.....	39 43 46.0	84 48 51.0	1,020
Tps. 7 and 8 N., R. 1 E., 27 feet north and 15 feet east of corner of secs. 1 and 6, at northeast corner of crossroads, 3 miles west of West Florence; iron post stamped "Prim. Trav. Sta. No. 38. Ohio, 1910".....	39 44 37.7	84 48 50.9	5,227

Along highways east from Primary Traverse Station No. 38 to tie east of West Florence.

T. 7 N., R. 1 E., north corner of secs. 5 and 6; center of T road south.....	39 44 37.5	84 47 51.2	4,629
T. 7 N., R. 1 E., north corner of secs. 4 and 5.....	39 44 37.6	84 46 42.9	5,300
T. 7 N., R. 1 E., north corner of secs. 3 and 4; center of T road south.....	39 44 37.7	84 45 34.4	5,160
T. 8 N., R. 1 E., south corner of secs. 33 and 34; center of T road north.....	39 44 37.7	84 45 36.4	160
Corner of secs. 3 and 4 to tie point east of West Florence.....			5,243

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Schoolhouse No. 2, 560 feet east of; center of T road south.....	39 33 16.6	84 45 15.2
T. 5 N., R. 1 E.; northeast corner stone of sec. 4, on Butler-Preble county line.....	39 34 04.3	84 45 27.3
Bridge over Fourmile Creek, 0.25 mile west of; center of T road east, 5 feet south and 10 feet east to center of grass plot.....	39 34 50.3	84 45 30.0

Magnetic declination, along Ohio-Indiana State line, 1° 14' E.; along line near south-east border of quadrangle, 1° 35' E.

LIMA QUADRANGLE.

Along Erie R. R. and highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Kemp station (Kempton post office).....	40 43 25.6	84 13 27.6
Road crossing, northeast-southwest.....	40 43 34.7	84 08 56.7
Lima station.....	40 43 28.4	84 06 21.9
Detroit, Toledo & Ironton Ry. crossing.....	40 43 28.5	84 05 10.5
T. 4 S., R. 7 E., corner of secs. 3, 4, 9, and 10.....	40 43 00.7	84 03 06.3
T. 3 S., R. 5 E., corner of secs. 25, 26, 35, and 36.....	40 44 38.5	84 14 33.3
Tps. 3 and 4 S., R. 5 E., corner of secs. 1, 2, 35, and 36.....	40 43 46.1	84 14 32.8

Along highways near west border of quadrangle.

Kempton. Azimuth of railroad, 267° 26'.....	40 43 25.6	84 13 27.6
Kempton, crossroads 0.5 mile south of.....	40 42 52.9	84 13 23.3
T. 4 S., Rs. 5 and 6 E., corner of secs. 7, 12, 13, and 18.....	40 42 01.9	84 13 22.7
T. 4 S., Rs. 5 and 6 E., corner of secs. 13, 18, 19, and 24.....	40 41 09.6	84 13 22.3
T road west.....	40 40 17.4	84 13 21.9
T. 4 S., R. 6 E., quarter corner between secs. 29 and 30.....	40 39 51.6	84 12 13.0
Hume, crossroads 0.5 mile south of. Azimuth of Lake Erie & Western R. R., 228° 45'.....	40 39 12.2	84 12 12.4
T. 5 S., R. 6 E., corner of secs. 7, 8, 17, and 18.....	40 36 48.8	84 12 11.2
T road east.....	40 35 56.3	84 12 10.7
T. 5 S., R. 6 E., quarter corner between secs. 19 and 20.....	40 35 29.9	84 12 10.4
Wapakoneta, crossing of Blackhoof and Auglaize streets.....	40 34 14.6	84 11 46.2
Wapakoneta, Piqua pike at crossroads 1 mile south of.....	40 33 18.8	84 11 55.7
Schoolhouse, crossroads at.....	40 32 00.2	84 12 09.3
T road west.....	40 31 07.7	84 12 09.1
Schoolhouse, road east one-third mile north of.....	40 30 41.3	84 12 13.0
Buckland, 1.5 miles east of, at southeast corner of crossroads, 35 feet west and 10 feet north to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 5, Ohio, 1909".....	40 37 40.1	84 14 08.6
T. 5 S., Rs. 5 and 6 E., near corner of secs. 1, 6, 7, and 12; T road north.....	40 37 40.1	84 13 19.8
T. 5 S., R. 6 E., near corner of secs. 5, 6, 7, and 8, near church and schoolhouse; crossroads.....	40 37 41.4	84 12 11.9

LISBON QUADRANGLE.

Along the Pittsburgh, Lisbon & Western R. R. at Lisbon.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Lisbon, street crossing of Pittsburgh, Lisbon & Western R. R., just south of....	40 46 16.5	80 45 27.4

Along Erie R. R. in northeast part of quadrangle.

T road south, 90 feet west to east-west road crossing, on Erie R. R.....	40 59 17.8	80 45 49.2
Corner of secs. 1, 2, 11, and 12, at crossroads.....	40 58 21.5	80 45 49.5
Corner of secs. 11, 12, 13, and 14, at crossroads, 21 feet southeast to mail box, 18 feet southwest to west end of culvert.....	40 57 29.8	80 45 50.3
Crossroads at schoolhouse, corner of secs. 13, 14, 23, and 24.....	40 56 38.0	80 45 50.8
Corner of secs. 23, 24, 25, and 26.....	40 55 46.1	80 45 51.4
Schoolhouse, T road west, at 14 feet north to east end of stone culvert, 21 feet northwest to west end of culvert.....	40 55 01.3	80 45 52.0
Washingtonville, Main Street crossing on Erie R. R.....	40 54 02.6	80 45 50.5

Along highways in southeast part of quadrangle.

Leetonia, 0.5 mile northwest of, in southwest corner of city reservoir grounds, cross cut on stone foundation of left side of ventilator bears N. 52° 10' E., distant 50.3 feet, cross cut on northeast corner of foundation to Mont Stover's residence bears S. 89° W., distant 106.4 feet; iron post stamped "Prim. Trav. Sta. No. 44".....	40 53 14.4	80 45 52.8
Leetonia, north-south road crossing on Pennsylvania R. R. at Salem Iron Works.....	40 52 22.7	80 45 53.6
Leetonia, crossroads 2.5 miles south of, 24 feet southwest to guidepost, 39 feet southeast to mail box.....	40 51 03.0	80 45 54.3
T. 15 N., R. 3 W., corner of secs. 23, 24, 25, and 26.....	40 50 33.7	80 45 54.5
Crossroads at schoolhouse, T. 15, R. 3, corner of secs. 25, 26, 35, and 36.....	40 49 40.8	80 45 54.9
Tps. 14 and 15 N., R. 3 W., corner of secs. 1, 2, 35, and 36, at crossroads.....	40 48 48.7	80 45 55.0
Lisbon, T road west, 0.25 mile east of; covered bridge, 21 feet northwest to corner fence post, 31 feet southeast to mail box.....	40 47 56.2	80 45 38.8
Lisbon, crossroads 0.25 mile northeast of, 30 feet northwest to cross on telephone pole, 42 feet southeast to water trough.....	40 46 51.9	80 45 47.4

LISBON QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Lisbon, in southwest corner of eastmost park, east corner of foundation to mounted gun bears N. 79° 15' W., distant 78.8 feet, bronze tablet in northeast corner of courthouse bears S. 48° 05' W., distant 119.9 feet; iron post stamped "Prim. Trav. Sta. No. 45".....	° ' "	° ' "
T. 14 N., R. 3 W., corner of secs. 15, 16, 21, and 22.....	40 46 20.3	80 46 04.6
Lisbon, T road south, 2.5 miles west of, 39 feet southwest to P. Joseph's mail box, 36 feet east to large white-oak tree.....	40 46 12.3	80 48 13.6
T. 14 N., R. 3 W., corner of secs. 17, 18, 19, and 20, at crossroads, 18 feet north-east to mail box, 36 feet southeast to 4-mile post.....	40 46 07.0	80 48 59.7
Lisbon, 5.5 miles west of, in southwest corner of Charles Miller's stable lot, cross on southwest corner of foundation to residence bears N. 56° 20' E., distant 111 feet, cross on southwest corner of stable foundation bears S. 66° E., distant 106 feet, cemented in sandstone post; aluminum tablet stamped "Prim. Trav. Sta. No. 47".....	40 46 12.5	80 50 30.0
Hanoverton, T road 3 miles northeast of, 46 feet northeast to guidepost, 10 feet south to cross on fence post.....	40 45 55.9	80 51 56.8
Hanoverton, crossroads 2.5 miles east of, 18 feet south to mail box, 24 feet north-west to mail box.....	40 45 58.4	80 52 42.6
Hanoverton, T road north, 1.25 miles east of, 53 feet northeast to telephone pole, 36 feet, northwest to cross on rail fence.....	40 45 47.1	80 53 36.7
Hanoverton, crossing of Canal and First streets; 60 feet northeast to southwest corner of Wilhelm Hotel, 241 feet northwest to lamp-post.....	40 45 21.0	80 54 11.6
	40 45 03.7	80 56 12.7

Along highways near west border of quadrangle.

J. C. Thomas's field, in northwest corner of, on east side of north-south road and just south of road to east, cross on northeast corner of foundation to Thomas's residence bears N. 66° W., distant 54.5 feet, nail in west face of locust tree on east-west fence line bears N. 87° 10' E., distant 117.6 feet, in top of sandstone post; aluminum tablet stamped "Prim. Trav. Sta. No. 48".....	40 45 38.3	80 59 58.3
Road west, 18 feet north to guidepost, 24 feet south to corner stone.....	40 46 14.6	80 59 43.3
Section corner, T road east, 15 feet northwest to fence post, 27 feet northeast to guidepost.....	40 47 06.6	80 59 38.8
Corner of secs. 1, 2, 11, and 12, T road east at schoolhouse.....	40 47 59.0	80 59 38.4
New Alexander, crossroads 2 miles north of, 39 feet southwest to guidepost, 9 feet east to stone in center of east-west road.....	40 48 50.1	80 59 32.0
North Georgetown, crossroads 1 mile south of, 28 feet northeast to east end of stone culvert, 30 feet northwest to cross on telephone pole.....	40 49 42.6	80 59 20.7
North Georgetown crossroads, 30 feet southwest to guidepost, 32 feet northwest to American Hotel signpost.....	40 50 35.2	80 59 10.1
Section corner stone to secs. 14 and 23, T. 6 N., R. 5 W.; T road west at.....	40 51 28.0	80 59 39.0
Section corner stone, crossroads at.....	40 52 20.4	80 59 39.1
T road east, 33 feet southeast to northwest corner of schoolhouse, 19 feet north-east to north end of culvert.....	40 53 13.2	80 59 39.0
Westville, on land of R. F. Randolph, northwest corner of Randolph stable bears S. 25° E., distant 15.2 feet, northwest corner of tile foundation to blacksmith shop bears N. 59° 40' W., distant 65 feet; iron post stamped "Prim. Trav. Sta. No. 49".....	40 54 08.0	80 59 38.8
Beloit, north-south road crossing on Pennsylvania R. R.....	40 55 14.7	80 59 37.6
Corner of secs. 23 and 24, T road west.....	40 55 50.0	80 59 37.4
Crossroads, 31 feet northeast to cross on telephone pole, 22 feet northwest to cross on milk platform.....	40 56 42.1	80 59 37.2
Snodes station, corner of secs. 11, 12, 13, and 14, road crossing on Pennsylvania R. R.....	40 57 34.3	80 59 37.0
Corner of secs. 1, 2, 11, and 12.....	40 58 26.5	80 59 36.9
Corner of secs. 1 and 2, at T road south.....	40 59 16.2	80 59 36.8
Christie's pottery, crossroads at, 42 feet southwest to mail box, 39 feet southeast to cross on telephone pole.....	40 59 50.4	80 59 08.9

LOGAN QUADRANGLE.

Along Cincinnati & Muskingum Valley R. R. near Junction City.

Stations.	Latitude.	Longitude.
Milepost 42, 0.33 mile east of, road crossing.....	° ' "	° ' "
Junction City, near Stalzenbach & Harris's store, on north line between Cincinnati & Muskingum Valley R. R. and property of Junction City, southwest corner of store bears N. 26° 50' W., distant 78.9 feet, north rail of track at road crossing bears S. 43° 45' W., distant 53 feet; iron post stamped "Prim. Trav. Sta. No. 66, 1905".....	39 43 23.5	82 16 43.8
Milepost 13, road crossing.....	39 43 13.4	82 17 57.0
McElroy's, 1 mile south of, road crossing at spur.....	39 43 24.6	82 20 00.6
McElroy's station, road crossing.....	39 44 00.8	82 20 19.3
	39 44 57.3	82 19 53.2

LONDON QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Roads, north, east, and south.....	39 45 11.9	83 15 11.1
Loubert Creek, bridge over.....	39 47 09.3	83 14 53.1
Wrightsville-Klousville pike, 300 feet east of W. McNeff's house.....	39 48 58.2	83 16 26.2
Wrightsville, crossroads.....	39 51 39.3	83 14 52.2
Lilly Chapel-Georgesville road and road north.....	39 53 13.0	83 15 06.1
Lilly Chapel-Georgesville and West Jefferson crossroads.....	39 55 51.3	83 16 54.4
National pike, crossroads on.....	39 56 45.4	83 15 14.0
Road east.....	39 58 24.9	83 15 36.0
Schoolhouse, road southwest.....	39 59 53.5	83 15 50.9

Along Pittsburgh, Cincinnati, Chicago & St. Louis Ry. from West Jefferson to London.

Pike and telephone road crossing.....	39 57 16.8	83 15 16.6
West Jefferson station, road crossing.....	39 56 48.6	83 16 08.9
West Jefferson, national road crossing.....	39 56 40.3	83 16 23.9
Milepost 19, north-south road crossing 350 feet west of.....	39 55 08.5	83 20 34.5
Milepost 20, north-south road crossing 100 feet east of.....	39 54 49.1	83 21 31.0
Milepost 22, north-south road crossing 0.25 mile west of.....	39 54 01.7	83 23 48.4
London, crossing of Big Four Route.....	39 53 04.7	83 26 33.5

Along Cleveland, Cincinnati, Chicago & St. Louis Ry. near London.

London, road crossing west of station.....	39 53 03.2	83 26 45.6
London, High Street crossing.....	39 53 01.5	83 27 08.8

Along highways near north border.

West Jefferson, 4 miles north of; T road southwest at schoolhouse.....	39 59 53.5	83 15 50.9
T road northeast.....	39 59 17.7	83 17 02.5
Cregor schoolhouse, T road southwest.....	39 59 54.6	83 17 30.9
T road northeast.....	39 58 50.4	83 19 39.3
Gillivan post office, crossroads.....	39 59 19.0	83 20 13.4
Little Darby Creek, center of bridge.....	39 58 18.4	83 21 23.8
Urbana pike and pike northeast-southwest, crossing of.....	39 57 59.7	83 21 45.5
Deer Creek on Jefferson-Monroe township line; stone monument.....	39 58 15.3	83 22 15.4
Road north.....	39 58 29.6	83 22 42.0
Crossroads.....	39 58 46.6	83 23 32.0
Schoolhouse, crossroads.....	39 59 35.6	83 25 14.3
Road southeast.....	39 59 14.8	83 29 52.1
Summerford, crossroads.....	39 56 01.5	83 29 30.9

Along highways near southwest border of quadrangle.

South Charleston-London pike, T road north.....	39 52 10.6	83 29 40.9
Union-Paint township line, stone monument.....	39 51 09.5	83 29 45.7
Pennsylvania R. R., north-south road crossing.....	39 52 02.1	83 29 37.2
T road north.....	39 50 34.5	83 29 49.1
Walnut Run, intersection of pike 1 mile north of.....	39 50 59.3	83 27 57.6
Walnut Run, crossing of pikes.....	39 50 06.7	83 27 54.9
T road west.....	39 47 22.2	83 28 28.7
Creighton schoolhouse, T road east.....	39 45 20.1	83 28 53.8
Sedalia, cross streets.....	39 44 00.5	83 28 36.7

LORAMIE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Chickasaw, Main Street crossing.....	40 26 13.7	84 29 50.2
Maria Stein station, road crossing.....	40 24 28.2	84 29 35.5
T. 7 S., R. 3 E., corner of secs. 26, 27, 34, and 35.....	40 23 35.3	84 29 36.4
Tps. 7 and 8 S., R. 3 E., corner of secs. 2, 3, 34, and 35.....	40 22 42.7	84 29 36.6
Tps. 7 and 8 S., R. 3 E., corner of secs. 2, 3, 11, and 12.....	40 21 16.0	84 29 42.5
Osgood station, street crossing 75 feet south of.....	40 20 24.0	84 29 42.0
Tps. 1 and 12 N., Rs. 3 and 4 E., secs. 7, 12, 13, and 18.....	40 19 31.8	84 29 42.7
Road crossing east-west near schoolhouse.....	40 18 23.2	84 29 42.1
Road crossing about 500 feet east of quarter corner between secs. 25 and 30, T. 11 N., Rs. 3 and 4 E.....	40 17 30.9	84 29 37.0

LORAMIE QUADRANGLE—Continued.

Along highways through center of quadrangle.

Stations.	Latitude.	Longitude.
Maria Stein, 2 miles south of, in southeast corner of foundation of bridge on east-west road, 0.2 mile east of section corner; aluminum tablet stamped "Prim. Trav. Sta. No. 26. Ohio, 1909".....	40 22 42.5	84 29 21.8
Tps. 7 and 8 S., R. 3 E., corner of secs. 1, 2, 35, and 36; crossroads.....	40 22 42.5	84 28 27.9
Tps. 7 and 8 S., Rs. 3 and 4 E., corner of secs. 1, 6, 31, and 36; Mercer-Auglaize county line.....	40 22 42.3	84 27 19.1
Tps. 7 and 8 S., R. 4 E., corner of secs. 5, 6, 31, and 32, Mercer-Auglaize county line; T road west.....	40 22 42.4	84 26 01.8
T road south.....	40 22 29.2	84 24 53.2
Loramie, Catholic Church spire.....	40 21 04.5	84 22 17.4
Minster, corner of secs. 26, 27, 34, and 35, T. 7 S., R. 4 E.; cross streets.....	40 23 35.5	84 22 35.4
Minster, 1 mile east of, in southeast abutment of bridge over ditch, 40 feet west and 10 feet south from corner of secs. 25, 26, 35, and 36, T. 7 S., R. 4 E., at T road south; aluminum tablet stamped "Prim. Trav. Sta. No. 27. Ohio, 1909".....	40 23 36.0	84 21 27.4
T. 7 S., R. 4 E., east corner of secs. 25 and 36, Auglaize-Shelby county line; T road west.....	40 23 36.6	84 20 18.7
T. 7 S., R. 5 E., west corner of secs. 30 and 31, Auglaize-Shelby county line; T road east.....	40 23 37.7	84 20 18.7
T. 7 S., R. 5 E., corner of secs. 29, 30, 31, and 32; T road north.....	40 23 38.2	84 18 59.5
T. 7 S., R. 5 E., corner of secs. 28, 29, 32, and 33; crossroads.....	40 23 39.4	84 17 50.4
T. 7 S., R. 5 E., corner of secs. 27, 28, 33, and 34, near schoolhouse No. 6; T road south.....	40 23 39.7	84 16 42.0
Tps. 7 and 8 S., R. 5 E., corner of secs. 3, 4, 33, and 34; T road east.....	40 22 47.0	84 16 41.6
Tps. 7 and 8 S., R. 5 E., corner of secs. 2, 3, 34, and 35; crossroads.....	40 22 48.0	84 15 32.9

Along highways near south border of quadrangle.

T. 9 N., R. 5 E., corner of secs. 5, 6, 7, and 8; T road west.....	40 15 22.0	84 21 27.2
T. 9 N., R. 5 E., west corner of secs. 6 and 7; near crossroads.....	40 15 21.4	84 22 35.3
T. 9 N., R. 4 E., east corner of secs. 1 and 12; near crossroads.....	40 15 21.6	84 22 35.3
T. 10 N., R. 4 E., corner of secs. 1, 2, 11, and 12; T road north.....	40 15 21.1	84 23 43.9
T. 10 N., R. 4 E., corner of secs. 2, 3, 10, and 11; crossroads.....	40 15 20.7	84 24 52.6
T. 10 N., R. 4 E., corner of secs. 3, 4, 9, and 10, Shelby-Darke county line; T road east.....	40 15 20.4	84 26 01.5

Along highways near north border of quadrangle.

New Knoxville, 3 miles east and 1 mile south of, at southwest corner of crossroads, 15 feet north and 25 feet east to corner of secs. 26, 27, 34, and 35, T. 6 S., R. 5 E.; iron post stamped "Prim. Trav. Sta. No. 6. Ohio, 1909".....	40 28 54.4	84 15 34.5
T. 6 S., R. 5 E., corner of secs. 27, 28, 33, and 34; T road north (Shelby-Auglaize county line).....	40 28 54.4	84 16 42.7
T. 6 S., R. 5 E., corner of secs. 28, 29, 32, and 33; T road south (Shelby-Auglaize county line).....	40 28 53.5	84 17 51.5
T. 6 S., R. 5 E., corner of secs. 29, 30, 31, and 32; crossroads (Shelby-Auglaize county line).....	40 28 52.8	84 19 00.0
T. 6 S., R. 5 E., west corner of secs. 30 and 31; T road east (northwest corner of Shelby County).....	40 28 52.3	84 20 20.7
T. 6 S., R. 4 E., east corner of secs. 25 and 30; T road west.....	40 28 51.2	84 20 20.7
New Knoxville, 2 miles southwest of, northeast corner of schoolhouse No. 4; aluminum tablet stamped "918, Adj., 1905. Prim. Trav. Sta. No. 7. Ohio, 1909".....	40 28 50.5	84 21 05.2
T. 6 S., R. 4 E., corner of secs. 25, 26, 35, and 36; crossroads.....	40 28 50.8	84 21 29.7
T. 6 S., R. 4 E., corner of secs. 26, 27, 34, and 35; crossroads.....	40 28 50.6	84 22 37.8
T. 6 S., R. 4 E., corner of secs. 27, 28, 33, and 34.....	40 28 50.4	84 23 46.9
St. Marys, 4 miles south of, in northwest corner of schoolhouse No. 1; aluminum tablet stamped "912 Adj., 1905. Prim. Trav. Sta. No. 8. Ohio, 1909".....	40 28 49.9	84 23 51.5
T. 6 S., R. 4 E., corner of secs. 28, 29, 32, and 33; crossroads.....	40 28 50.2	84 24 55.4
T. 6 S., R. 4 E., corner of secs. 20, 21, 28, and 29; crossroads.....	40 29 42.8	84 24 55.6
T. 6 S., R. 4 E., corner of secs. 29, 30, 31, and 32; crossroads near schoolhouse No. 8.....	40 28 50.0	84 26 03.8
T. 6 S., R. 3 E., east corner of secs. 25 and 26, on Mercer-Auglaize county line.....	40 28 49.8	84 27 17.8
Montezuma, 3 miles east of, 25 feet east and 20 feet south to T road north; iron post stamped "Prim. Trav. Sta. No. 9. Ohio, 1909".....	40 29 15.5	84 29 18.5

Magnetic declination for north border, 0° 05' W.; for east border, 0° 24' W.; for south border, 0° 04' E.; for east-west line through center, 0° 08' W.

LOUDONVILLE QUADRANGLE.

Near northeast corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing.....	40 44 43.3	82 02 52.0
Road north.....	40 43 51.4	82 01 26.1

Along highways near west border of quadrangle.

South Loudonville station, cross streets just west of Main Street crossing on Pennsylvania R. R., 35 feet southwest to telephone pole, 35 feet northwest to maple tree.....	40 38 08.7	82 14 26.7
Loudonville, near center of southeast quarter of city park, 115 feet east of center of Market Street, 150 feet south of center of Main Street, northwest corner of First Presbyterian Church bears S. 21° 15' E., distant 188.6 feet, northeast corner of First Baptist Church bears S. 68° 15' W., distant 103.3 feet; iron post stamped "Prim. Trav. Sta. No. 20. Ohio, 1907".....	40 38 06.4	82 13 59.2
Loudonville, north edge of; cross streets, 40 feet southwest to water trough, 30 feet northeast to maple tree.....	40 38 25.7	82 13 50.2
Loudonville, 1 mile north of; crossroads, 40 feet southwest to apple tree, 30 feet northeast to telephone pole.....	40 39 10.5	82 13 39.3
Loudonville, 2 miles north of; angle of forks 300 feet north of brick schoolhouse, guidepost marked "Hayesville 8 miles, Loudonville 2 miles, Perryville 5 miles, McKay 3 miles".....	40 40 04.2	82 14 03.6
Loudonville, 3 miles north of; triangle at four corners, guidepost marked "Hayesville 7 miles, Loudonville 3 miles, Mohican 4 miles, Tylertown 8 miles".....	40 40 42.8	82 14 14.5
McKay, 0.6 mile south of; center of triangle at T road east.....	40 41 48.8	82 14 34.2
Tps. 20 and 21 N., R. 16 W., corner of secs. 14, 15, 17, and 18.....	40 41 48.8	82 14 26.2
McKay, crossroads, 30 feet southwest to northwest corner of store, 12 feet northwest to southeast corner of scale house.....	40 42 22.3	82 14 34.1
McKay, 1 mile north of; stone in center of road, at quarter-section corner.....	40 43 07.8	82 14 27.0
McKay, 1.25 miles north of; crossroads, center of quadrangle formed by four stones set about 5 feet apart.....	40 43 32.8	82 14 27.2
Hayesville, 2.5 miles southeast of; center of triangle at road fork, 30 feet northwest to guidepost marked "Jeromes 5 miles, Loudonville 7 miles".....	40 44 19.5	82 14 27.4
Wesley Chapel, 200 feet northeast of; center of triangle at four corners.....	40 30 11.5	82 15 33.7
Wesley Chapel Cemetery, at southeast corner of, west of Danville-Loudonville road, 3.6 miles northeast to Greer, 4 miles south to Danville; iron post stamped "Prim. Trav. Sta. No. 18. Ohio, 1907".....	40 30 10.0	82 15 34.3

Along Cleveland, Akron & Columbus Ry. from Killbuck to Glenmont.

Killbuck, 1 mile west of; road crossing, 250 feet east to milepost C 76.....	40 30 15.5	82 00 21.0
Killbuck, 1.5 miles west of station; road crossing.....	40 30 33.2	82 01 45.0
Milepost C 73, 1,000 feet east of; road crossing.....	40 30 28.0	82 03 17.9
Stone works, second-class road crossing at siding.....	40 30 42.7	82 04 20.5
Glenmont, in northeast corner of grass plot at northwest corner of station, 40 feet north of center of main track; iron post stamped "Prim. Trav. Sta. No. 17. Ohio, 1907".....	40 31 02.4	82 05 26.5
Glenmont, 1 mile west of station, 200 feet west to milepost C 70; road crossing.....	40 30 39.0	82 06 28.6
Steel trestle, near east end of; center of track over road crossing.....	40 30 01.8	82 08 05.7

Along Pennsylvania R. R. near Greersville.

Mohican River, highway bridge over; road crossing about 500 feet south of.....	40 30 32.8	82 11 04.6
Ediam, Main Street crossing 75 feet south of station.....	40 31 21.2	82 11 59.9

Along highways.

Triangle at T road south, center of, 200 feet west of another T road south.....	40 30 58.4	82 12 20.4
Greer, 1.5 miles southwest of post office, telephone pole and T. E. Greer's mail box in center of triangle at T road west.....	40 30 43.2	82 12 51.1
T road north, center of triangle.....	40 30 29.9	82 13 53.1
T road southeast, 5 feet southeast to center of triangle, 40 feet south to guideboard "Millersburg 14 miles, Holmesville 7 miles, Wooster 7 miles".....	40 42 45.8	82 00 28.4
Shreve, 1 mile north of; crossroads, 20 feet northwest to large maple tree, 30 feet southeast to dead mulberry tree.....	40 41 50.8	82 01 11.0
Shreve, 100 feet east of station, Market Street crossing on Pennsylvania R. R.....	40 40 57.9	82 01 21.6
Shreve, 1 mile south of, T road south; center of triangle, Wayne-Holmes county line.....	40 40 05.3	82 01 19.9
Shreve, 2 miles south of; center of triangle at forks of road, 35 feet south to guidepost "Holmesville 6 miles, Shreve 2 miles, Welcome 9 miles".....	40 39 16.1	82 01 03.3
Shreve, 3 miles south of; crossroads, 25 feet southwest to guideboard "Holmes 6 miles, Big Prairie 5 miles, Welcome 8 miles, Shreve 3.5 miles," 25 feet northwest to corner of wire fence.....	40 38 19.6	82 01 15.8

LOUDONVILLE QUADRANGLE—Continued.

Along highways—Continued.

Stations.	Latitude.	Longitude.
Shreve, 4 miles south of, 6 miles west of Holmesville, 5 miles east of Danville, guidepost at junction of Holmesville-Loudonville road with road south to Killbuck; iron post stamped "Prim. Trav. Sta. No. 23. Ohio, 1907".....	° ' "	° ' "
Center of triangle at T road south, 30 feet southeast to Prim. Trav. Sta. No. 23.....	40 37 26.5	82 01 28.8
Hopewell Church, crossroads, 25 feet northeast to southwest corner of cemetery fence, 30 feet southeast to northwest corner of buggy shed, 80 feet northwest to southeast corner of church.....	40 37 26.7	82 01 28.0
Center of triangle at three corners, 450 feet north of iron bridge over Paint Creek, 30 feet northeast to guideboard "Millersburg 6 miles, Paint Valley 1.5 miles, Holmesville 7 miles, Shreve 7 miles, Nashville 6 miles, Welcome 3 miles".....	40 36 20.7	82 01 28.8
Welcome, 2 miles north of; east end of watering trough at crossroads, 50 feet southwest to guideboard "Welcome 2 miles, Paint Valley 1.5 miles, Millersburg 6 miles, Nashville 5 miles," 25 feet east to hickory tree.....	40 35 25.7	82 01 17.6
Center of triangle at T road north, 40 feet west to guideboard "Welcome 1 mile, Millersburg 6 miles, Paint Valley 2 miles, Shreve 9 miles," 40 feet east to hickory tree.....	40 34 36.2	82 01 17.4
Welcome, 130 feet west of Anderson's store, crossroads; 40 feet southeast to bridge over Hog Run, 40 feet southwest to guidepost "Killbuck 4 miles, Nashville 5 miles, Glenmont 5 miles, Millersburg 6 miles".....	40 33 29.0	82 00 56.4
Welcome, 1 mile southeast of; oak tree in center of triangle at road forks.....	40 32 47.4	82 01 21.1
	40 32 00.1	82 00 49.5

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
Loudonville, Prim. Trav. Sta. No. 20. Ohio, 1907.....	40 38 06.4	82 13 59.2	-----
Loudonville, 0.8 mile east of; center of east-west road at Ashland-Holmes county line.....	40 38 06.6	82 13 15.2	3,410
Loudonville, 1 mile east of; center of T road south.....	40 38 06.2	82 12 58.4	1,310
Lake Fork of Mohican River; center of steel bridge over.....	40 37 10.8	82 11 10.1	10,061
Philip Hefflinger's residence, T road east just south of, 20 feet west and 5 feet south to corner fence post.....	40 36 25.1	82 11 24.0	4,748
T. 19 N., R. 15 W., quarter corner between secs. 16 and 17.....	40 36 11.2	82 10 57.4	2,503
Nashville, 3 miles west by 0.5 mile north of; center of crossroads.....	40 36 10.7	82 10 11.1	3,581
T. 19 N., R. 15 W., quarter corner between secs. 15 and 16.....	40 36 10.6	82 09 49.7	1,670
Nashville, 1.5 miles west by 0.8 mile north of; center of T road south, 10 feet south to mail box.....	40 36 31.5	82 09 16.0	3,349
T. 19 N., R. 15 W., quarter corner between secs. 10 and 15.....	40 36 35.4	82 09 16.0	400
Nashville, in public school grounds; iron post stamped "Prim. Trav. Sta. No. 67. Ohio, 1910".....	40 35 47.3	82 06 55.1	11,766
Nashville, center of cross streets.....	40 35 48.1	82 06 50.2	398
Nashville, 1.5 miles north by 1 mile east of; center of northeast-southwest road at road east.....	40 37 01.4	82 05 44.4	9,001
Nashville, 2.5 miles northeast of, crossing of Loudonville-Holmesville road and Shreve-Nashville road; center of small bridge.....	40 37 27.8	82 05 22.1	3,177
T. 17 N., R. 14 W., corner of secs. 4, 5, 8, and 9; T lane north.....	40 37 28.0	82 04 20.3	4,780
T. 17 N., R. 14 W., corner of secs. 3, 4, 9, and 10; T road north.....	40 37 27.8	82 03 12.6	5,240
Prim. Trav. Sta. No. 23. Ohio, 1907.....	40 37 26.5	82 01 28.8	8,017

Magnetic declination for east border, 1° 55' W.; for west border, 2° 12' W.; for south border, 2° 09' W.; for east-west center line, 2° 29' W.

LYNN QUADRANGLE (OHIO-IND.).

Along highways east from Primary Traverse Station No. 40 to tie north of Noggle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
Hollandsburg, cross streets.....			-----
Glen Karn, 0.7 mile north of station, 0.8 mile east of Ohio-Indiana State line, 20 feet south and 20 feet west to center of crossroads, at southwest corner of schoolhouse yard; iron post stamped "Prim. Trav. Sta. No. 40. Ohio, 1910".....	40 01 11.4	84 47 51.9	7,851
T. 11 N., R. 1 E., corner of secs. 28, 29, 32, and 33, east-west road at fence line north-south.....	40 01 10.0	84 46 50.4	4,787
T. 11 N., R. 1 E., corner of secs. 27, 28, 38, and 34; east-west road at fence north-south.....	40 01 09.4	84 45 42.1	5,316
Schoolhouse, center of T road south at.....	40 01 09.1	84 45 20.0	1,720

LYNN QUADRANGLE (OHIO-IND.)—Continued.

North along Ohio-Indiana State line.

Stations.	Latitude.	Longitude.	Distance between stations.
T. 11 N., R. 1 E., west corner of fractional secs. 30 and 31; Ohio-Indiana State line.....	° ' "	° ' "	<i>Feet.</i>
Tampico, center of crossroads.....	40 01 12.0	84 48 36.4	3,460
T. 11 N., R. 1 E., corner stone of secs. 7, 8, 17, and 18; crossroads at cemetery.....	40 02 56.6	84 47 40.3	10,675
T. 11 N., R. 1 E., west fractional corner of secs. 7 and 18; Ohio-Indiana State line.....	40 03 49.8	84 47 57.5	5,541
T. 11 N., R. 1 E., stone at west fractional corner of secs. 6 and 7.....	40 03 51.2	84 48 32.5	2,706
Tps. 11 and 12 N., R. 1 E., west corner of secs. 6 and 31; east-west road, State line.....	40 04 43.3	84 48 31.7	5,270
T. 12 N., R. 1 E., west corner of secs. 31 and 30; T road north, State line.....	40 05 34.4	84 48 30.8	5,170
T. 12 N., R. 1 E., west corner of secs. 19 and 30; T road east, State line.....	40 06 26.8	84 48 29.6	5,303
T. 12 N., R. 1 E., west corner of secs. 18 and 19; State line.....	40 07 19.2	84 48 28.1	5,300
T. 12 N., R. 1 E., 20 feet north by 20 feet east of west corner of secs. 7 and 18, at northeast corner of crossroads, 3 miles south of Union City; iron post stamped "Prim. Trav. Sta. No. 41. Ohio, 1910".....	40 08 11.8	84 48 26.8	5,310
T. 12 N., R. 1 E., west corner of secs. 6 and 7; T road east, State line.....	40 09 04.8	84 48 25.0	5,369
Tps. 17 and 18 N., R. 1 W., east corner of secs. 1 and 36; T road west, State line.....	40 09 57.3	84 48 23.8	5,311
Union City, crossing of State-line road and Pear Street.....	40 10 49.7	84 48 22.4	5,301
T. 13 N., R. 1 E., west corner of secs. 17 and 20; T road east, State line.....	40 11 58.3	84 48 20.4	6,940
T. 18 N., R. 1 W., east corner of secs. 13 and 24; T road west, State line.....	40 13 26.3	84 48 18.3	8,901
T. 13 N., R. 1 E., west corner of secs. 8 and 17; center of crossroads, State line.....	40 13 26.9	84 48 18.3	60
Union City, 3 miles north of, just south of crossroads at blacksmith shop, in northeast corner of concrete abutment of bridge; aluminum tablet stamped "Prim. Trav. Sta. No. 42. Ohio, 1910".....	40 14 19.4	84 48 16.9	5,310
Blacksmith shop, center of T road east.....	40 14 44.1	84 48 16.2	2,502
	40 14 45.9	84 48 16.2	180

Magnetic declination along Ohio-Indiana State line, 1° 49' E.

Near northeast corner of quadrangle.

Station.	Latitude.	Longitude.
T. 13 N., R. 1 E., center of sec. 9; crossroads near.....	40 14 43.2	84 46 30.6

McCLURE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
Tps. 3 and 4 N., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36.....	41 15 15.1	83 59 52.1
T. 4 N., Rs. 7 and 8 E., corner of secs. 19, 30, 24 and 25.....	41 16 59.4	83 59 54.0
T. 4 N., R. 7 E., corner of secs. 7, 13, 13, and 12.....	41 18 44.4	83 59 56.0
Tps. 4 and 5 N., R. 7 E., corner of secs. 1, 6, 31, and 36.....	41 20 30.1	83 59 58.2
T. 5 N., Rs. 7 and 8 E., corner of secs. 19, 30, 24, and 25.....	41 22 14.9	83 59 57.7
T. 5 N., R. 7 E., corner of secs. 7, 13, 13, and 12.....	41 23 59.3	83 59 57.0
Iron bridge over creek of southeast, center of.....	41 25 59.1	83 59 56.0
T. 6 N., Rs. 7 and 8 E., corner of secs. 19, 30, 24, and 25.....	41 27 26.9	83 59 55.6
T. 6 N., R. 7 E., corner of secs. 7, 13, 13, and 12.....	41 29 11.3	83 59 55.2

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Waterville, 3.5 miles west of, on Waterville-Neapolis pike, T road north in, southeast corner of field of John Lichales; iron post stamped "Prim. Trav. Sta. No. 29, 1905".....	° ' "	° ' "
Waterville, 2 miles west of; crossroads at schoolhouse, 44 feet southwest of guidepost, 48 feet southeast to iron pump.....	41 29 43.8	83 46 58.6
Whitehouse, 1.5 miles south of, 4 miles east of Neapolis; crossroads and schoolhouse, 44 feet northeast to school pump, 33 feet northwest to guidepost.....	41 29 44.1	83 46 00.9
Neapolis, 2.25 miles east of; crossroads, 32 feet southwest to Geo. Rapp's mail box, 23 feet northwest to northeast corner stone of culvert.....	41 29 43.1	83 48 26.6
Crossroads at schoolhouse, 28 feet northwest to cross on corner fence post, 39 feet southwest to S. Jewell's mail box.....	41 29 42.6	83 49 36.0
Neapolis, road crossing.....	41 29 42.0	83 50 44.6
	41 29 32.9	83 52 23.9

McCLURE QUADRANGLE—Continued.

Along highways near north border of quadrangle—Continued.

Stations.	Latitude.	Longitude.
T. 6 N., R. 8 E., sec. 12, southeast corner of, in southeast corner of field of Mary A. Long; iron post stamped "Prim. Trav. Sta. No. 30, 1905".....	41 29 14.5	83 52 58.4
T. 6 N., R. 8 E., corner of secs. 11, 12, 13, and 14; stone at crossroads.....	41 29 13.1	83 54 08.6
T. 6 N., R. 8 E., corner of secs. 10, 11, 14, and 15; crossroads, 29 feet northwest to H. Leneman's mail box, 36 feet southwest to board on small tree.....	41 29 13.1	83 55 18.1
T. 6 N., R. 8 E., corner of secs. 9, 10, 15, and 16; stone at crossroads.....	41 29 12.9	83 56 27.8
T road north, T. 6 N., R. 8 E., corner of secs. 8, 9, 16, and 17, 22 feet southeast to F. C. March's mail box, 24 feet south to cross on fence post.....	41 29 12.5	83 57 37.6
T. 6 N., R. 8 E., corner of secs. 7, 8, 17, and 18; crossroads, 36 feet northwest to mail box, 31 feet southwest to cross on telephone pole.....	41 29 12.1	83 58 47.0

McCONNELLSVILLE QUADRANGLE.

Along highways from Bishopville east to Roxbury.

Stations.	Latitude.	Longitude.
Mountville, 0.8 mile southwest of, forks 180 feet east of bridge over creek; telephone pole in center of triangle.....	39 31 11.3	81 59 55.3
Mountville, west edge of, T road north; center of triangle, 35 feet northwest to southeast corner of schoolhouse.....	39 31 05.4	81 59 07.8
Mountville, 0.5 mile southeast of; crossroads, 20 feet west to hickory tree, 80 feet northeast to corner of small dwelling.....	39 30 43.0	81 58 41.2
Moody school (No. 14), 150 feet north of, 400 feet west of covered bridge over Federal Creek, T road east; Charlie Preu's mail box.....	39 31 09.7	81 57 54.3
Elliotts crossroads, 40 feet southwest to store door, 30 feet north to corner of blacksmith shop.....	39 31 50.5	81 56 34.7
Elliotts crossroads, 0.75 mile northeast of; 3 corners, roads north and east, 40 feet southeast to walnut tree, 20 feet northeast to corner of fence; 50 feet east to stream crossing.....	39 32 19.2	81 56 20.9
Elliotts crossroads, 1.5 miles northeast of; road forks south and southwest, 25 feet southwest to telephone pole, 25 feet southeast to clump of four mulberry trees.....	39 32 13.1	81 55 26.3
Westland, 1.3 miles west of; forks at top of hill, roads south and northeast, 20 feet southeast to telephone pole, 50 feet southwest to northeast corner of house.....	39 32 34.1	81 54 51.2
Penn-Marion east-west township line; center of road.....	39 32 38.2	81 54 45.8
Westland, at northeast corner of Westland Grange hall (No. 121); iron post stamped "Prim. Trav. Sta. No. 5. Ohio, 1907".....	39 33 01.7	81 53 47.9
Wolf Creek, east corner of south end of covered bridge over, at roads northeast, northwest, and south.....	39 32 58.6	81 52 23.7
Pennsville, junction of Washington and Columbus streets, 40 feet west to corner of store, 50 feet north to corner of dwelling, 40 feet east to locust tree.....	39 34 27.7	81 51 16.6
Pennsville, east edge of, cupola of public schoolhouse.....	39 34 25.6	81 51 04.9
Pennsville, 0.5 mile southeast of, section corner (no numbers), T fence in field.....	39 34 14.0	81 50 49.6
Pennsville, 0.7 mile southeast of; T road south, 60 feet southeast to telephone pole in triangle, 30 feet west to corner fence post.....	39 34 08.0	81.50 49.8
Road forks northeast, center of pike, 20 feet northwest to mail box, 30 feet east to corner post of wire fence.....	39 33 47.8	81 49 49.0
Stockport, 1.5 miles west of, on top of ridge; crossroads 35 feet northeast to poplar tree, 90 feet south to corner of dwelling.....	39 32 52.8	81 49 11.4
Stockport, west edge of, junction of Main Street and Broadway; small pipe culvert.....	39 32 55.3	81 47 58.9
Stockport, U. S. Engineer Corps bench mark, in southeast corner of capstone to drawbridge pier of highway bridge over Muskingum River, marked "U S B □ M 657.66".....	39 32 52.2	81 47 13.4
Stockport, 1.5 miles southeast of; second-class T road northeast, 20 feet north to corner of house, 20 feet northeast to corner of fence.....	39 31 55.2	81 46 20.4
Roxbury, ferry across Muskingum River, 450 feet north of north landing, in triangle at junction of river road north and road south across river to Roxbury; iron post stamped "Prim. Trav. Sta. No. 6. Ohio, 1907".....	39 31 28.1	81 45 04.2

From Roxbury west to McConnellsville.

Schoolhouse, 600 feet east of, T road to south near top of hill; center of main road.....	39 39 10.8	81 45 11.9
Schoolhouse, 0.5 mile west of, public roads northwest and southwest; center of triangle at forks, 20 feet west and 20 feet north to corner fence posts.....	39 39 04.9	81 45 52.2
Bridge over Fourmile Run, 270 feet east of; T road south, 15 feet south to center of bridge.....	39 38 45.9	81 46 01.8
T. 10 N., R. 11 W., east side of sec. 8; bend of road to northwest.....	39 38 49.6	81 46 59.8
McConnellsville, 3 miles east of, in angle at road forks, 70 feet west of southwest corner of McKendree Methodist Episcopal Church on the center road; iron post stamped "Prim. Trav. Sta. No. 11. Ohio, 1907".....	39 39 25.9	81 48 29.9
McKendree Church, 0.9 mile west of; T road north, 15 feet northeast to mail box, 20 feet south to plank fence.....	39 39 14.6	81 49 23.9
McConnellsville, southeast corner of veranda of Morgan County courthouse; iron post stamped "Prim. Trav. Sta. No. 12, 1907".....	39 38 57.2	81 51 09.6
McConnellsville, center of; cross streets 100 feet southwest of courthouse.....	39 38 56.5	81 51 11.2

McCONNELLSVILLE QUADRANGLE—Continued.

From McConnellsville west to Portersville.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Malta, center of intersection of Main and Bell streets.....	39 38 52.0	81 51 35.1
Malta, road forks 300 feet west of sash and door factory, 40 feet west to signpost.	39 39 04.3	81 51 58.1
Malta, 3 miles west of; T road south, 60 feet southeast to signpost "Malta 3 miles, Pennsville 8 miles, Portersville 7 miles," 40 feet southwest to corner of rail fence.....	39 39 24.9	81 54 25.6
Joetown, T road east, 15 feet west to signboard "Morgansville, 3 miles, Tridelphia 3 miles, Malta 4 miles".....	39 40 01.7	81 55 29.3
Deerfield Church, 400 feet southeast of, east side of sec. 27, T. 9 N., R. 13 W.; center of road 350 feet east of crossroads.....	39 39 48.0	81 57 14.9
Deerfield Church, 400 feet south of; crossroads, 10 feet west to center of bridge, 15 feet southeast to mail box.....	39 39 48.2	81 57 19.2
Wolf Creek, 40 feet northeast of northeast end of covered bridge, road forks southeast and northwest; center of triangle.....	39 39 52.2	81 57 57.2
Portersville, 3 miles southeast of, T road south; ford of small stream, 40 feet northwest to sign "Portersville 3 miles," 40 feet southeast to oak tree.....	39 39 51.5	81 59 18.2
Portersville, 1.8 miles southeast of, in southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 13. Ohio, 1907".....	39 39 59.4	81 59 51.1

Magnetic declination for south border, 1° 06' W.; for center line, 1° 02' W.

MARENGO QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Center of crossroads.....	40 15 40.2	82 45 07.9	.....
Delaware, Knox, and Licking counties, junction of.....	40 16 37.5	82 45 03.4	5,811
Knox-Delaware county line, junction of roads on.....	40 17 03.1	82 45 01.4	2,608
Centerburg, 3 miles west of; center of T road north.....	40 18 30.6	82 45 38.1	.....
East Liberty, 2.5 miles east of; center of crossroads.....	40 19 18.9	82 45 33.4	4,906
Peerless, 0.8 mile southeast of; north-south road crossing on Toledo & Ohio Central Ry.....	40 20 29.3	82 45 27.7	7,140
Morrow-Delaware county line; center of T road north.....	40 21 00.4	82 45 17.2	3,260
Vails Corners, guidepost at.....	40 21 54.6	82 45 13.7	5,500
Crossroads, stone at center of; guideboard "Marengo 6 miles, Chester-ville 3.5 miles, Cardington 7.5 miles".....	40 28 29.7	82 45 26.0	.....
Center of northeast-southwest road at road east.....	40 29 22.5	82 45 05.3	5,580
Prim. Trav. Sta. No. 59. Ohio, 1910.....	40 30 21.56	82 44 44.04	6,203

Along highways east-west through center of quadrangle.

Marengo, 3 miles southeast of, east-west road crossing on Toledo & Ohio Central Ry.....	40 21 54.0	82 46 36.8	.....
Marengo, 3 miles south and 1 mile east of; center of crossroads.....	40 21 44.6	82 47 31.2	4,300
Pagetown, 0.5 mile east of; center of crossroads.....	40 21 25.3	82 48 28.0	4,821
Bennington-Peru township line, stone in road at.....	40 21 29.0	82 50 24.2	9,007
Pagetown, 2 miles west of, in southwest part of Hawkins schoolhouse yard, 30 feet south and 50 feet west to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 73. Ohio, 1910".....	40 21 32.2	82 51 19.4	4,295
Pagetown, 3.5 miles west of; center of T road north.....	40 21 38.1	82 53 04.6	8,180
White Hall schoolhouse, center of T road southeast.....	40 22 01.4	82 54 28.1	6,883
Tps. 5 and 6 N., R. 18 W., east corner of secs. 1 and 4, southwest corner of Morrow County; stone.....	40 21 34.5	82 55 46.1	6,635
Leonardsburg, 2.5 miles east and 0.5 mile south of; junction of north-east-southwest road at road west, 15 feet south to small telephone pole.....	40 21 04.8	82 56 30.9	4,596
Leonardsburg, north end of; east-west road crossing Big Four Route.....	40 21 26.2	82 59 20.1	13,283
Leonardsburg, in stone step of hardware store just southeast of road crossing on Big Four Route; bronze tablet stamped "971".....	40 21 25.7	82 59 19.9	52
Leonardsburg, 1 mile southeast of, road crossing on Big Four Route.....	40 20 39.4	82 59 50.3	5,245

MARENGO QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T road south.....	40 30 25.5	82 46 18.1	.....
Chestnut Grove Church, 1 mile east and 0.25 mile north of; center of T road north.....	40 29 51.9	82 46 20.2	3,400
Chestnut Grove Church, center of T road north.....	40 29 38.1	82 47 28.8	5,485
Cardington, 4 miles east of, 4 miles south of Mount Gilead; center of crossroads.....	40 29 42.7	82 49 12.1	8,000
Cardington, 2.5 miles east of, 4 miles south of Mount Gilead; center of crossroads.....	40 29 46.7	82 50 16.3	4,980
Cardington, 2.25 miles east of; T lane south.....	40 29 50.3	82 51 09.1	4,099
Cardington, 1.25 miles east of, in northeast corner of stone abutment to bridge just west of crossroads, 730 feet east of Olentangy River bridge; aluminum tablet stamped "Prim. Trav. Sta. No. 60. Ohio, 1910" ^a	40 29 55.9	82 52 26.6	6,021
Cardington, main street crossing on Big Four Route.....	40 30 01.4	82 53 46.0	6,168
Cardington, 1.25 miles west of; center of T road north.....	40 29 59.4	82 55 10.8	6,556
T. 6 S., R. 17 E., south corner of secs. 20 and 21.....	40 29 56.3	82 55 10.8	310
Crossroads.....	40 30 10.4	82 56 21.2	5,506
T. 6 S., Rs. 16 and 17 E., corner of secs. 19, 24, 25, and 30, Marion-Morrow county line.....	40 29 59.4	82 57 30.0	5,432
Marion-Morrow county line, 0.25 mile west of; center of crossroads.....	40 29 58.9	82 57 47.0	1,320
T. 6 S., R. 16 E., corner of secs. 23, 24, 25 and 26.....	40 29 57.4	82 58 38.2	3,960
T. 6 S., R. 16 E., corner of secs. 22, 23, 26, and 27; crossroads at St. Johns Church.....	40 29 56.0	82 59 44.2	5,108
Claridon, 5.5 miles south of, 8 by 10 by 24 inches set 20 inches in ground at northwest corner of crossroads at St. Johns Church, 20 feet south by 25 feet east to center of crossroads; tablet in stone stamped "Prim. Trav. Sta. No. 61. Ohio, 1910".....	40 29 56.2	82 59 44.5	33

^a This tablet removed.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 6 S., R. 16 E., corner of secs. 22, 23, 26, and 27, road east-west, at church.....	40 29 56.0	82 59 44.2
Road east-west.....	40 29 29.7	82 59 44.6
T. 7 N., R. 18 W., corner of lots 12, 9, 8, and 13, road north-south.....	40 27 18.2	82 59 21.7
Westfield, one-quarter mile west of; center of bridge over Whetstone River.....	40 25 56.8	82 59 13.2
Schoolhouse at turn south.....	40 23 48.8	82 59 40.7
Leonardsburg, 840 feet northeast of Big Four Route station.....	40 21 34.5	82 59 14.5
Leonardsburg, 1 mile southwest of; road crossing.....	40 20 39.4	82 59 50.3
Road northeast-southwest.....	40 19 58.3	82 59 53.5
Corner of lots 19, 12, 11, and 20.....	40 19 53.7	82 59 53.5

Magnetic declination for north border, 1° 20' W.; for east border, 0° 57' W.; for east-west center line, 0° 52' W.

MARION QUADRANGLE.

From Owen along the Hocking Valley Ry. to Harpster.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Owen station, crossing 600 feet north of.....	40 31 13.2	83 09 28.6
Mileposts 79 and 80, crossing halfway between.....	40 34 31.3	83 08 30.8
Marion station, 140 feet south of Main Street crossing.....	40 35 19.2	83 08 28.0
Marion, south azimuth stone, 225 feet north of Big Four Route crossing, 45 feet north of tool house, between Y tracks and main line of Hocking Valley Ry., limestone post, 40 by 7 by 6 inches, set 40 inches in ground; bronze meridian tablet cemented in center of top. Distant mark is spire of Catholic Church. Azimuth of same is 259° 11' 30".....	40 35 25.0	83 08 30.1
Crossing under railroad.....	40 38 01.5	83 10 25.1
Morral station, crossing 160 feet north of.....	40 41 12.4	83 12 45.6
T. 3 S., R. 14 E., quarter corner between secs. 33 and 34.....	40 44 17.6	83 14 44.8
Harpster station.....	40 44 20.4	83 15 04.2

MARION QUADRANGLE—Continued.**Along highways near northwest border of quadrangle.**

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 5 S., R. 14 E., quarter corner between secs. 15 and 16.....	40 36 28.8	83 14 47.0
T. 5 S., R. 14 E., corner of secs. 3, 4, 9, and 10.....	40 37 47.1	83 14 46.1
Tps. 4 and 5 S., R. 14 E., quarter corner between secs. 3 and 34.....	40 38 39.3	83 14 11.1
Pike road crossing, northeast-southwest.....	40 38 54.7	83 13 13.4
School house, road crossing east-west, near.....	40 40 23.9	83 13 55.7
Crossing, east-west road with Harpster and Marion road.....	40 42 08.4	83 14 53.1

Along highways near northeast corner of quadrangle.

Crawford-Marion county line, road east-west.....	40 42 11.1	83 00 15.6
Kirkpatrick, road east-west.....	40 41 18.9	83 00 30.7
T. 4 S., R. 16 E., corner of secs. 21, 22, 28, and 27; road east-west.....	40 40 26.3	85 00 53.0
Road east-west.....	40 39 07.4	83 01 08.7
Erie R. R. crossing. Azimuth, 248° 04'.....	40 37 05.3	83 01 44.8
T. 5 S., R. 16 E., quarter corner between secs. 15 and 10.....	40 36 56.8	83 00 18.4

MASON QUADRANGLE.**Along Pennsylvania R. R. between Loveland and Foster.**

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Loveland, road crossing.....	39 16 00.6	84 15 31.9
Road crossing north and south.....	39 16 51.3	84 15 35.1
Road crossing under trestle.....	39 18 27.7	84 15 23.5
Foster, road crossing at.....	39 19 19.0	84 15 03.4

Along highways near north border of quadrangle.

T road south.....	39 29 31.1	84 16 23.8
T road north.....	39 29 35.6	84 17 32.3
Crossroads.....	39 29 36.5	84 19 00.3
Blue Ball, crossroads.....	39 29 37.3	84 20 09.8
T road west.....	39 28 25.8	84 20 32.4
Cincinnati, Lebanon & Northern Ry., road crossing on.....	39 28 29.7	84 21 49.4
T. 3 E., R. 4 N., corner of secs. 20, 26, 25, 19.....	39 28 34.2	84 23 45.2
Electric-railway crossing.....	39 28 51.7	84 25 09.8
Tranton, crossing of State Street on Cincinnati, Hamilton & Dayton Ry.....	39 28 52.2	84 27 10.4
Tps. 4 and 5 N., Rs. 3 and 4 E., corner of.....	39 28 50.6	84 28 36.4
Tps. 4 and 5 N., R. 3 E., corner of secs. 1, 2, 35, 36.....	39 28 49.4	84 29 44.2

Along highways near west border of quadrangle.

T. 3 N., R. 1 E., corner of secs. 4, 5, 10, 11; Sullivan road, east.....	39 15 28.9	84 28 09.7
Springdale, Banklick road, east-west.....	39 17 13.8	84 29 04.9
Butler-Hamilton county line, road east.....	39 18 06.9	84 29 04.9
Jones, road crossing on Cincinnati, Hamilton & Dayton Ry.....	39 19 20.3	84 29 37.5
Flockton, road crossing on Pennsylvania R. R.....	39 21 08.7	84 29 25.6
Hamilton-Princeton pike, east-west.....	39 23 22.9	84 28 48.6
Flenner's Corners, road northeast-southwest.....	39 24 58.1	84 28 29.9
Wooddale, road intersection.....	39 25 58.4	84 28 31.5
Tps. 4 and 5 N., Rs. 3 and 4 E., corner of.....	39 28 51.0	84 28 35.8
Trenton, Tps. 1 and 2, 2 and 3 N., Rs. 3 and 4 E., 1 mile west of.....	39 28 51.0	84 28 35.8
Tps. 2 and 3, Rs. 3 and 4 E., corner of secs. 25, 30, 31, and 36.....	39 29 43.3	84 28 36.5

MASSILLON QUADRANGLE.

Along Wheeling & Lake Erie R. R. between Orrville and Massillon.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Burton City station.....	40 50 36.5	81 42 11.1
Dalton station.....	40 48 02.0	81 41 14.2
Pocock mine junction.....	40 48 20.7	81 38 42.9
Sippo station, road crossing 325 feet west of.....	40 48 56.4	81 36 04.9
Sherwood flag station, road crossing at.....	40 48 19.8	81 33 16.9
Massillon, crossing of Wheeling & Lake Erie and Baltimore & Ohio railroads.....	40 47 43.5	81 31 46.3
Massillon, East Street crossing on Pennsylvania R. R.....	40 47 32.4	81 31 00.2

Near Massillon.

Navarre, 2.25 miles north of, 26 feet northwest to road crossing, east of Wheeling & Lake Erie R. R.; iron post stamped "Prim. Trav. Sta. No. 36. Ohio, 1906".....	40 45 08.1	81 31 54.0
Columbia station.....	40 46 50.4	81 31 10.2
Massillon, crossing of Wheeling & Lake Erie and Baltimore & Ohio railroads.....	40 47 43.5	81 31 46.3
T road east, 24 feet northeast to corner fence post, 24 feet southeast to guidepost.....	40 45 12.1	81 32 49.4

MAUMEE BAY QUADRANGLE.

From Ironville along Wheeling & Lake Erie R. R. to Trowbridge.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Ironville station, crossing at.....	41 40 19.0	83 29 04.5
Booth station, crossing east of.....	41 38 16.9	83 24 50.0
Curtis, crossing 1,000 feet east of.....	41 37 04.7	83 22 06.2
Trowbridge, crossing 150 feet east of.....	41 34 46.8	83 16 50.5

From Walbridge along Hocking Valley Ry. to Lemoyne.

Walbridge, first crossing south of.....	41 34 36.4	83 29 37.4
Lemoyne, crossing 2 miles north of.....	41 31 19.5	83 28 50.0
Lemoyne, crossing of pike at.....	41 29 45.2	83 28 26.2

MAYSVILLE QUADRANGLE.

Along river road from Ripley southeast to Aberdeen.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Ripley, center of main street at crossing of Ohio River & Columbus Ry.....	38 44 43.2	83 50 45.7
Ripley, 1.2 miles south by 1 mile east of; center of bridge.....	38 43 37.7	83 49 48.4
Ripley, 1.8 miles south by 1.2 miles east of; center of steel bridge over Eagle Creek.....	38 43 14.8	83 49 30.7
Damson orchard, telephone pole at forks of road.....	38 42 28.5	83 48 28.6
O'Connor, 500 feet north of schoolhouse No. 3; center of T road west.....	38 41 24.0	83 46 15.6

Along highways from Aberdeen north to Hickory Ridge Church.

Aberdeen, center of crossing of Market and Third streets.....	38 39 19.9	83 45 42.4
Aberdeen, 0.5 mile north of, on east side of pike just north of road to northeast, 35 feet south and 25 feet west to center of forks, 60 feet north to south end of steel bridge over Fishgut Creek; iron post stamped "Prim. Trav. Sta. No. 20. Ohio, 1910".....	38 39 42.0	83 45 40.8

MECHANICSBURG QUADRANGLE.

West along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
Marysville-North Lewisburg pike, road northeast at Broderick's Cemetery, 20 feet north to corner fence post.....	40 13 42.1	83 30 00.6	Feet.
Center of pike at road north.....	40 13 40.4	83 31 22.4	6,346
North Lewisburg, Sycamore Street crossing on Erie R. R.....	40 13 26.1	83 33 23.2	9,480
Champaign-Logan county-line stone.....	40 13 47.0	83 33 33.2	2,246
T lane northeast.....	40 14 31.5	83 34 12.1	5,423
Union Chapel, 1 mile southeast of, at north side of crossroads, 20 feet west by 20 feet south to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 95. Ohio, 1910".....	40 14 05.6	83 37 26.2	.....
Champaign-Logan county-line stone.....	40 14 03.7	83 37 25.5	195
Union Chapel, cross pikes at.....	40 14 46.2	83 37 43.2	4,515
Union Chapel, 1 mile southwest of; T road northwest.....	40 14 09.6	83 38 41.9	5,869
Stone.....	40 14 11.1	83 39 51.6	5,409
T road north.....	40 14 01.1	83 41 04.0	5,702
Schoolhouse No. 8, crossroads at.....	40 13 43.7	83 42 27.9	6,741
West Liberty, 1.5 miles east and 1 mile south of, at southeast corner of crossroads, 20 feet north and 20 feet west to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 96. Ohio, 1910".....	40 14 04.2	83 43 39.6	5,932
T. 13 N., R. 5 E., corner of secs. 14, 15, 20, and 21, 10 feet north by 20 feet east to Champaign-Logan county-line stone.....	40 14 29.8	83 43 37.5	2,590

South along highways near west border of quadrangle.

T road north.....	40 13 11.0	83 43 45.3	.....
T. 13 N., R. 5 E., quarter corner south side of sec. 19.....	40 12 47.2	83 44 22.9	3,795
T. 12 N., R. 5 E., quarter corner between secs. 23 and 24.....	40 11 54.7	83 44 28.2	5,340
T road east at schoolhouse.....	40 11 37.2	83 44 29.9	1,790
T. 12 N., R. 5 E., corner of secs. 16, 17, 22, and 23; T road south.....	40 11 00.3	83 43 57.6	4,504
T. 12 N., R. 5 E., corner of secs. 15, 16, 21, and 22; crossroads at cemetery.....	40 10 10.2	83 44 04.5	5,108
T road east.....	40 09 18.0	83 44 10.0	5,310
T. 12 N., R. 5 E., corner of secs. 13, 14, 19, and 20.....	40 08 26.0	83 44 15.6	5,290
T. 12 N., R. 5 E., south corner of secs. 13 and 19.....	40 07 32.6	83 44 20.9	5,430
Urbana, 3,500 feet east of soldiers' monument in public square, 27 feet north and 45 feet west to center of T street; iron post stamped "Prim. Trav. Sta. No. 99. Ohio, 1910".....	40 06 26.5	83 44 23.5	6,700
T. 11 N., R. 5 E., quarter corner between secs. 16 and 17; T road west.....	40 05 45.3	83 43 57.7	4,626
T. 11 N., R. 5 E., quarter corner between secs. 15 and 16.....	40 04 52.1	83 44 02.8	5,399
T. 11 N., R. 5 E., quarter corner between secs. 14 and 15; crossroads.....	40 04 00.4	83 44 08.2	5,248
T road east.....	40 03 03.3	83 44 13.8	5,299
T. 11 N., R. 5 E., quarter corner south side of sec. 13; T road north.....	40 02 16.0	83 44 20.0	5,320
Tps. 10 and 11 N., R. 5 E., stone corner of secs. 7 and 13, 12 and 18, at turn in road.....	40 02 13.7	83 43 45.2	2,719
T. 10 N., R. 5 E., stone corner of secs. 11, 12, 17, and 18; Champaign-Clark county line.....	40 01 21.6	83 43 50.3	5,290
T. 10 N., R. 5 E., corner of secs. 10, 11, 16, and 17; T road west.....	40 00 29.4	83 43 56.0	5,300

East along highways.

Urbana, 1 mile east of, 20 feet north to telephone pole; fork of road.....	40 06 24.3	83 43 45.7	.....
Carnegie schoolhouse No. 7, crossroads at.....	40 06 23.8	83 42 44.0	4,793
T. 11 N., R. 5 E., corner of secs. 5, 6, 11, and 12.....	40 06 30.7	83 42 09.0	2,813
T. 11 N., R. 5 E., east corner of secs. 5 and 6.....	40 06 25.7	83 40 57.4	5,590
Intersection of Ludlow pike with Urbana-Milford Center pike.....	40 06 26.8	83 40 04.6	4,107
Road north.....	40 06 45.4	83 38 44.8	6,486
T road south.....	40 06 35.1	83 37 50.1	4,379
Mutual, about 1 mile north of, at northeast corner of T road north, 20 feet west and 10 feet south to center of T road; iron post stamped "Prim. Trav. Sta. No. 101. Ohio, 1910".....	40 06 17.1	83 36 47.5	5,196
Union-Goshen township monument.....	40 06 08.7	83 35 48.7	4,650
Mechanicsburg, 2 miles northwest of; crossroads.....	40 05 48.6	83 34 46.9	5,213
Center of five roads, 15 feet south by 10 feet east to guidepost.....	40 06 04.0	83 32 35.1	10,368
T road north.....	40 06 45.9	83 31 14.8	7,543
Champaign-Union county-line stone.....	40 07 12.2	83 30 11.3	5,613
T road northwest.....	40 07 15.6	83 30 04.6	620

Near east border of quadrangle.

Crossroads.....	40 04 15.1	83 30 12.7	.....
T road northeast.....	40 03 40.9	83 30 38.8	4,008
Madison-Champaign county-line stone, 15 feet north by 35 feet east of center of T road.....	40 02 37.4	83 30 41.6	6,386

Magnetic declination for north border, 0° 40' E.; for west border, 0° 13' E.; along center line, 0° 16' E. to 0° 52' W.

MEDINA QUADRANGLE.

Along the Baltimore & Ohio R. R. from Seville to Grafton triangulation station of the United States Lake Survey.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Seville station.....	41 00 30.5	81 51 49.5
Road crossing 2,340 feet south of milepost 39.....	41 02 39.8	81 53 03.0
Flag station 400 feet south of milepost 37.....	41 04 37.6	81 53 38.8
Road crossing 250 feet north of milepost 34.....	41 07 16.1	81 53 02.3
Medina station.....	41 08 18.8	81 52 23.3
Road crossing 2,150 feet south of milepost 29.....	41 10 01.9	81 55 12.2
Lester station.....	41 10 48.2	81 56 30.5
Erhart station.....	41 11 55.2	81 58 20.1
Grafton triangulation station of United States Lake Survey.....	41 12 43.97	81 59 36.96

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Grafton Δ station, 0.5 mile southeast of; crossing on Baltimore & Ohio R. R., near four corners.....	41 12 25.9	81 59 02.2
Grafton, four corners 1 mile northwest of, 31 feet northeast to nail in mail-box post, 34 feet west to nail in telegraph pole.....	41 13 20.0	82 00 13.2
Four corners, 45 feet southeast to corner of hedge fence, 50 feet northwest to corner fence post marked with brass tacks.....	41 14 13.8	82 00 11.8
Lorain and Medina counties, road to north between; three corners.....	41 14 14.6	81 58 29.0
Liverpool, in north wall of Lutheran Church, 1 foot to left of entrance; bronze tablet stamped "Prim. Trav. Sta. No. 62 A".....	41 14 13.8	81 55 38.3
Liverpool, road crossing 200 feet south of station of Baltimore & Ohio R. R.....	41 14 14.5	81 54 29.9
Four corners, 45 feet southeast to telegraph pole, 40 feet northwest to signboard.....	41 14 15.2	81 52 42.4
Three corners, road to north, 35 feet northwest to maple tree, 40 feet northeast to maple tree.....	41 14 17.0	81 49 25.8
Four corners, Hinckley-Brunswick township line, 25 feet northeast to pump, 20 feet southeast to elm tree.....	41 14 17.5	81 47 06.6
Four corners, 40 feet northwest to fence corner, 40 feet northeast to maple tree near corner of house.....	41 14 17.9	81 45 52.7

MENTOR QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Mayfield, street-car station on State road, 35 feet south to center of car track, 40 feet south to northwest corner of street-car station.....	41 31 12.0	81 26 19.7
Gates Mill, in coping stone of west end of south abutment of bridge over Chagrin River; aluminum tablet stamped "Prim. Trav. Sta. No. 22 A. 729 Cleveland".....	41 31 02.9	81 24 13.5
Three corners, road to south, 35 feet northwest to telephone pole, 60 feet south to signpost "Chester Crossroads, 2.5 miles; Cleveland, 16 miles; Chagrin Falls, 7 miles".....	41 31 10.5	81 23 27.1
Scotland station, 50 feet northwest of; center of trolley-car track.....	41 31 20.3	81 21 33.4
Chester triangulation station of United States Lake Survey. (No station or reference marks could be found. Approximate location of center identified by ruins of observation tripod).....	41 32 02.7	81 21 16.3
Chesterland post office, H. C. Cottrell & Sons' store, in west wall at northwest corner of stone foundation; bronze tablet stamped "Prim. Trav. Sta. No. 37 A. 1,217 Cleveland".....	41 31 19.0	81 20 15.4
Chesterland post office, four corners, 1 mile east of, 35 feet southeast to signpost, 25 feet northeast to mail box.....	41 31 17.6	81 18 48.1
Four corners, 30 feet east to signpost, 40 feet northwest to corner fence post, 35 feet south to corner fence post.....	41 31 17.1	81 16 55.0
Fowlers Mill, bridge over Chagrin River west of, in coping stone at north end of west abutment; tablet stamped "Prim. Trav. Sta. No. 51 A. 1,111 Cleveland".....	41 31 31.4	81 15 39.2

MIAMISBURG QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 2 N., R. 4 E., T. 3 N., R. 3 E., corner of secs. 19, 24, 25, and 30.....	39 30 35.9	84 28 37.3
T road east.....	39 33 12.2	84 29 49.5
T. 4 N., R. 3 E., quarter corner between secs. 35 and 36.....	39 34 32.1	84 29 49.8
T. 4 N., R. 3 E., corner of secs. 23, 24, 25, and 26.....	39 35 46.7	84 29 51.6
T. 3 N., R. 4 E., T. 4 N., R. 3 E., quarter corner between secs. 19 and 24; T road near.....	39 36 15.6	84 28 43.4
T road east.....	37 37 16.3	84 28 44.5
Crossing of Germantown-Winchester and Farmersville-Middletown pikes.....	39 38 09.8	84 28 45.4
T. 3 N., R. 4 E., T. 4 N., R. 3 E., corner of secs. 1, 6, 7, and 12.....	39 38 30.4	84 28 45.8
T. 3 N., R. 4 E., T. 4 N., R. 3 E., corner of secs. 1 and 6 (north corner).....	39 39 26.2	84 28 46.6
T road east.....	39 40 39.4	84 28 47.9
Cincinnati Northern R. R., at crossing of north-south county-line road.....	39 41 53.1	84 28 49.3
T. 4 N., R. 4 E., T. 5 N., R. 3 E., quarter corner between secs. 13 and 18.....	39 42 30.6	84 28 50.0
Crossing of county-line road and West Alexandria-Germantown pike.....	39 43 23.1	84 28 51.2
Tps. 4 and 5 N., Rs. 3 and 4 E., corner of secs. 1, 6, 7, and 12.....	39 43 51.2	84 28 52.0
Tps. 4 and 5 N., R. 4 E., Tps. 5 and 6 N., R. 3 E.....	39 44 42.1	84 28 53.1

Along highways near north border of quadrangle.

T road south.....	39 44 42.7	84 27 41.7
T road north.....	39 44 43.2	84 26 44.0
T. 5 N., R. 4 E., corner of secs. 34 and 33 (south corner).....	39 44 43.7	84 25 21.4
T. 5 N., R. 4 E., corner of secs. 34 and 35 (south corner).....	39 44 44.4	84 24 13.7
Tps. 4 and 5 N., R. 4 E., corner of secs. 1, 2, 35, and 36.....	39 44 44.9	84 23 05.8
Tps. 3 and 4 N., R. 5 E., Tps. 4 and 5 N., R. 4 E., corner of secs. 1, 6, 31, and 36.....	39 44 45.5	84 21 58.4
Tps. 3 and 4 N., R. 5 E., corner of secs. 5, 6, 31, and 32.....	39 44 45.9	84 20 50.3
Tps. 3 and 4 N., R. 5 E., corner of secs. 4 and 5 (north corner).....	34 44 46.6	84 19 42.3
T. 4 N., R. 5 E., corner of secs. 33 and 34 (south corner).....	39 44 47.2	84 18 34.0
T road north.....	39 44 47.4	84 18 00.4
Miller Avenue north.....	39 44 48.0	84 16 55.2
Soldiers' Home, at northeast corner of; crossing of Eaton pike and north-south road.....	39 44 58.4	84 15 10.4

MILFORD CENTER QUADRANGLE.

From Marysville along Toledo & Ohio Central Ry. to Arnold.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Marysville station, crossing 100 feet east of.....	40 14 25.7	83 22 13.5
Marysville, north azimuth stone 940 feet north of Big Four Route crossing, 450 feet north of north end of Y, 200 feet north of east-west road, 16 feet east of east rail of Toledo & Ohio Central Ry., sandstone post 30 by 6 by 6 inches, set 26 inches in ground; copper bolt cemented in center of top.....	40 14 12.8	83 21 15.7
Marysville, south azimuth stone 613 feet south of crossing of Big Four Route, 6 feet east of east rail of Toledo & Ohio Central Ry., sandstone post 30 by 6 by 6 inches, set 28 inches in ground; bronze meridian tablet cemented in center of top. Azimuth, 139° 43' 20" to north stone.....	40 14 01.1	83 21 02.8
Milepost 106, 330 feet south of pike and telephone line crossing.....	40 13 36.3	83 20 36.1
Milepost 108, crossing 1,350 feet south of.....	40 12 08.2	83 19 00.5
Blind siding, crossing 20 feet northwest of head block.....	40 10 06.4	83 16 48.5
Milepost 113, pike crossing 530 feet southeast of.....	40 08 54.0	83 15 30.0
Arnold station, 580 feet southeast of pike and telephone line crossing.....	40 08 27.4	83 15 01.2

Along highways near southeast corner of quadrangle.

Worthington store, road east at.....	40 02 30.5	83 15 49.9
Road east.....	40 04 08.1	83 15 05.6
Roads east, north, and south.....	40 05 27.3	83 15 23.4

Along highways near southwest corner of quadrangle.

Tradersville, crossroads 2 miles northeast of.....	40 01 02.8	83 27 56.6
Tradersville, intersection of roads 1 mile northeast of.....	40 00 24.2	83 28 52.2
Tradersville, crossroads at.....	40 00 00.7	83 29 54.9

MILFORD CENTER QUADRANGLE—Continued.

West along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
New Dover, 1.5 miles east of, 0.25 mile south of brick schoolhouse; T road west.....	40 14 53.3	83 15 53.3	Feet.
Dover Station, 0.5 mile east of; Cleveland, Cincinnati, Chicago & St. Louis Ry. at road crossing.....	40 14 53.6	83 17 29.0	7,439
Covered bridge, center of.....	40 14 51.4	83 18 54.8	6,674
T road north.....	40 14 28.2	83 20 15.1	6,658
Toledo & Ohio Central Ry. at road crossing, 740 feet north of Cleveland, Cincinnati, Chicago & St. Louis Ry. crossing.....	40 14 11.3	83 21 14.0	4,895
Marysville, in sandstone, south azimuth mark in church yard; bronze tablet stamped "Prim. Trav. Sta. No. 75. Ohio, 1910".....	40 14 06.6	83 22 06.2	4,073
Crossroads just east of schoolhouse.....	40 14 34.2	83 23 48.0	8,381
United Brethren Church, 0.25 mile south of; crossroads.....	40 14 55.1	83 25 03.1	6,197
Allen Center, 1 mile southeast of; T road northeast.....	40 13 59.3	83 27 53.4	.....
Allen Center, at west side of T road southwest, 40 feet due west of center of T road; iron post stamped "Prim. Trav. Sta. No. 94. Ohio, 1910".....	40 14 26.3	83 28 34.7	4,214

South along highways and Cleveland, Cincinnati, Chicago & St. Louis Ry. near west border of quadrangle.

T road south.....	40 13 27.8	83 27 20.3	.....
Crossroads, signboard "Marysville 4½ miles, Milford Center 2½ miles, Pottersburg 5 miles".....	40 12 28.5	83 26 48.7	6,491
Crossroads.....	40 11 53.7	83 27 55.4	6,249
T road southwest.....	40 11 13.3	83 27 33.6	4,430
Milford Center, State Street crossing on Cleveland, Cincinnati, Chicago & St. Louis Ry.....	40 10 45.0	83 26 10.6	7,054
Milepost 138, 1,040 feet south of; road crossing.....	40 09 27.8	83 27 25.9	9,757
Milepost 139, 1,030 feet south of; northeast-southwest pike crossing.....	40 08 45.1	83 28 04.7	5,269
Private-road crossing.....	40 08 12.7	83 28 34.1	3,999
Irwin, at east edge of Cleveland, Cincinnati, Chicago & St. Louis Ry. property line, 1 foot south of south edge of sidewalk on south side of Main Street, 3 feet west and 9 feet south to northwest corner of Irwin Hardware Store (concrete building), 45 feet north and 25 feet west to Main Street crossing on railroad; iron post stamped "Prim. Trav. Sta. No. 76. Ohio, 1910".....	40 07 20.9	83 29 20.4	6,359
Union-Madison county line, center of track, 35 feet east to stone monument.....	40 06 41.1	83 29 57.2	4,936
North-south pike at private road west, 10 feet west to Wm. Larnell's mail box.....	40 06 00.6	83 29 33.2	4,500
Tradersville, at west corner of crossroads, 23 feet east to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 77. Ohio, 1910".....	40 00 00.7	83 29 55.2	.....

East along highways through center of quadrangle.

Irwin, 1 mile east of; T road south.....	40 07 05.2	83 28 11.4	.....
Little Darby Creek, center of covered bridge over.....	40 07 18.1	83 27 21.7	4,085
Little Darby Creek, just south of covered bridge over; T road north.....	40 06 54.6	83 25 32.0	8,854
Chuckery, southwest of; Union-Madison county-line monument.....	40 06 37.6	83 23 42.8	8,654
Chuckery, south of store; Union-Madison county-line monument.....	40 06 37.5	83 23 31.3	897
Chuckery, 1 mile northeast of, at northwest corner of T road north, 20 feet east by 25 feet south to center of T road; iron post stamped "Prim. Trav. Sta. No. 78. Ohio, 1910".....	40 07 03.8	83 22 22.8	5,963
Chuckery, 2 miles east of; T road south.....	40 06 54.5	83 21 25.6	4,543
Chuckery, 2.8 miles east of; crossroads.....	40 06 51.7	83 20 25.3	4,696
T road south.....	40 06 55.4	83 19 01.3	6,539
Post road at road northwest, 20 feet east by 15 feet north to north end of culvert.....	40 06 47.1	83 17 43.9	6,078
T road northeast.....	40 06 42.2	83 16 54.3	3,891
Big Darby Creek, center pier of bridge over.....	40 07 20.2	83 16 08.8	5,224
Robinson River, center of steel bridge over.....	40 07 43.6	83 16 14.2	2,401
Arnold station, 0.25 mile west of, at northwest corner of T road north; iron post stamped "Prim. Trav. Sta. No. 79. Ohio, 1910".....	40 08 20.4	83 15 15.7	5,880

Magnetic declination for north border, 0° 21' E. to 0° 29' W.; for west border, 0° 34' W.; for center line, 0° 55' W. to 0° 36' E.

MILLERSBURG QUADRANGLE.

Near northwest corner of quadrangle.

Stations.	Latitude.	Longitude.
Pennsylvania R. R. bridge No. 121, near Millbrook; copper bolt in abutment at northwest corner of bridge.	° ' " 40 43 59.9	° ' " 81 58 23.8

Along Pennsylvania R. R. near Millbrook.

Road crossing 100 feet east of bridge No. 121	40 44 00.7	81 58 22.8
Overhead road crossing	40 44 51.8	81 57 40.4

Along highways near east border of quadrangle.

T road south, 15 feet northwest to north end of culvert	40 35.40.6	81 45 07.8
T. 9 N., R. 5 W., northeast corner of sec. 4; stake in fence corner at jog in north-south road	40 35 37.3	81 45 43.4
Berlin, 2 miles north and 2 miles east of; stone at T road east	40 34 15.7	81 45 10.4
T road west, just south of creek at red barn, 39 feet east to arrow on gatepost, 31 feet south to northeast corner of barn	40 33 22.4	81 45 12.5
Walnut Creek, 1.5 miles west of post office; T road north at schoolhouse, 43 feet northwest to telephone pole, 21 feet south to picket fence	40 32 45.3	81 45 08.5
Schoolhouse No. 8, 900 feet southwest of; stone at T road south	40 31 26.3	81 45 05.8
T. 8 N., R. 5 W., north line of; 9 feet southeast to southwest corner of machine shed	40 31 08.8	81 45 07.4

Along highways near north border of quadrangle.

T. 16 N., R. 11 W., northeast corner of sec. 36	40 44 28.4	81 45 57.2
Kidron, 1.5 miles west of; crossroads, 25 feet southwest to guideboard "Orrville 7 miles, Mount Hope 7 miles, Apple Creek 3.5 miles, West Lebanon 7 miles," 25 feet southeast to 2 mail boxes	40 44 28.5	81 46 32.4
Kidron, 2 miles west of; northeast corner of sec. 35, T. 16 N., R. 12 W.; crossroads at cheese factory	40 44 28.0	81 47 07.5
Apple Creek, 1.25 miles southeast of; center of crossroads, 40 feet southwest to guidepost "Fredericksburg 6.25 miles, Orrville 8 miles, West Lebanon 10.75 miles, Apple Creek 1.25 miles," 50 feet northeast to oak tree	40 44 27.6	81 48 59.5
Apple Creek, 1 mile southeast of; T road south, guidepost "Apple Creek 1 mile, West Lebanon 11 miles, Mount Eaton 8 miles"	40 44 27.3	81 49 28.5
Apple Creek, highway crossing on Cleveland, Akron & Columbus Ry., 300 feet west of station	40 44 56.0	81 50 09.7
Road forks, center of triangle at northwest edge of Apple Creek road, 35 feet northwest to guidepost "Moorland 8 miles, Fredericksburg 5 miles, Wooster 5.5 miles, Apple Creek 0.5 mile"	40 45 19.9	81 51 04.0
T road south, 10 feet south to plank bridge, 25 feet southwest to guidepost "Fredericksburg 4 miles, Moorland 7 miles, Apple Creek 1 mile"	40 44 43.7	81 51 50.0
T. 16 N., R. 12 W., corner of secs. 25, 26, 30, and 31	40 44 30.6	81 52 38.2
Apple Creek, 3 miles west of; northeast corner of sec. 36, T. 15 N., R. 13 W., crossroads; iron post stamped "Prim. Trav. Sta. No. 21. Ohio, 1907"	40 44 29.8	81 52 38.4
Apple Creek, about 4 miles west of; T road east at east line of sec. 35, 25 feet northeast to guidepost "Apple Creek 3 miles, Wooster Road 2 miles, Moorland 4.5 miles," 5 feet east to center of triangle	40 44 12.7	81 53 47.0
Church at crossroads, 30 feet southwest to northeast corner of church, 22 feet east to guideboard "Wooster 5 miles, Fredericksburg 4 miles, Apple Creek 3.5 miles, Moorland 4 miles"	40 44 00.3	81 53 56.1
T. 15 N., R. 13 W., quarter corner stone, east side of sec. 34, 25 feet south to center of T road south	40 43 46.7	81 54 56.6
Millbrook, 1 mile east of; crossroads, center of sec. 33, T. 15 N., R. 13 W., 20 feet southwest to large oak tree, 30 feet north to telephone pole	40 44 00.9	81 56 40.1
Millbrook, 1 mile northeast of; 5 miles southwest of Wooster, at T road east, west of Wooster-Shreve road, at northeast corner of Chas. Part's field; iron post stamped "Prim. Trav. Sta. No. 22. Ohio, 1907"	40 43 59.6	81 59 33.0
Millbrook, 0.5 mile southeast of; east edge of main road at T road northwest, 35 feet north to corner of fence, 50 feet southwest to guideboard "Blachleville 5 miles, Moorland 3 miles, Wooster 6 miles, Shreve 3 miles," 100 feet southwest to T road east	40 43 19.5	81 59 56.9

MILLERSBURG QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Killbuck, 1 mile north and 0.5 mile west of; center of triangle at crossroads, 40 feet north to Smith's mail box, 50 feet east to pump.....	° ' " 40 31 04.4	° ' " 81 59 42.3
Killbuck, 0.25 mile northwest of; center of triangle at road forks.....	40 30 24.0	81 59 10.5
Millersburg, 4 miles south of; center of triangle at T road east, 35 feet northeast to corner of picket fence, 45 feet southeast to telephone pole.....	40 30 03.9	81 55 27.9
Road forks southwest and west; center of triangle, 25 feet north to cherry tree, 35 feet south to telephone pole, 40 feet east to walnut tree.....	40 30 01.5	81 53 39.9
Grade, center of triangle at T road east, 40 feet southeast to corner of yard fence, 15 feet west to center of north-south road.....	40 30 27.0	81 53 21.1
Grade, 1 mile east of; roads to east, west, and south, second-class road north, 25 feet southeast to picket fence, 60 feet west to forks.....	40 30 29.3	81 52 22.1
Saltillo, 0.75 mile southwest of; road forks southwest and west, 40 feet southwest to mail box, 15 feet northwest to wire fence.....	40 30 40.1	81 51 18.0
Saltillo, outside of; fence corner in angle of road forks east and southeast, at blacksmith shop; iron post stamped "Prim. Trav. Sta. No. 24. Ohio, 1907".....	40 31 15.2	81 50 53.2
Saltillo, center of triangle at forks of road.....	40 31 15.2	81 50 53.6
Saltillo, 1 mile southeast of; four corners, public road northeast, second-class road southwest, 50 feet northeast to southwest corner of schoolhouse, 50 feet south to elm tree.....	40 30 46.3	81 50 11.2
Saltillo, 1.5 miles southeast of; center of triangle at T road west, 30 feet northwest to farm gate.....	40 30 33.4	81 49 30.9
Trayer's wool factory, center of iron bridge over Dowdys Fork.....	40 30 09.7	81 48 21.9
Trayer's wool factory, 0.5 mile northeast of; center of triangle at T road west, 25 feet north to corner fence post, 30 feet southeast to forked hickory.....	40 30 19.5	81 48 04.2
Charm, T road east; 30 feet west to office door, 25 feet northeast to telephone pole.....	40 30 24.0	81 47 08.3
Charm, 1 mile east of; center of triangle at T road north, 170 feet west of T road south.....	40 30 22.7	81 46 13.7
Killbuck, 450 feet west of station, in north end of east abutment to Cleveland, Akron & Columbus Ry. bridge across Killbuck Creek; aluminum tablet stamped "Prim. Trav. Sta. No. 16, 1907".....	40 30 11.8	81 58 59.1

Magnetic declination for north border, 2° 14' W.; for south border, 2° 37' W.; for west border, 1° 55' W.

MORNING VIEW QUADRANGLE.

Along highways from Point Pleasant north through New Richmond to Spann schoolhouse.

Stations.	Latitude.	Longitude.
Clermontville, T pike north at; 20 feet south and 5 feet east to northeast corner of platform scales.....	° ' " 38 55 24.4	° ' " 84 15 02.2
Clermontville 0.8 mile northwest of; center of pike at road southeast up hill.....	38 56 01.3	84 15 50.1
New Richmond, center of intersection of Front and Walnut streets.....	38 57 03.0	84 17 01.3
Twelvemile Creek, center of steel bridge over.....	38 57 42.2	84 17 13.8
Steel bridge over creek, center of T pike east, just north of, just east of electric railroad.....	38 59 07.5	84 17 24.3
George Neep's mail box, center of T road northeast at.....	38 59 51.8	84 16 28.6

MOUNT GILEAD QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
Mount Gilead, 3 miles south by 2.5 miles east of; T road south at R. E. George's mail box.....	° ' " 40 30 25.5	° ' " 82 46 18.1	Feet.
Cardington, main street crossing on Big Four Route.....	40 30 01.4	82 53 46.0	
Marion-Morrow county line, 1 mile east of; center of crossroads.....	40 30 10.4	82 56 21.2	

MOUNT GILEAD QUADRANGLE—Continued.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 5 S., R. 16 E., quarter corner between secs. 10 and 15; crossroads..	40 36 56.8	83 00 18.4	.....
Caledonia, 1.5 miles south by 2 miles west of, 240 feet west of corner of secs. 10, 11, 14, and 15, T. 5 S., R. 16 E., in southwest corner of stone foundation of bridge abutment; aluminum tablet stamped "Prim. Trav. Sta. No. 62. Ohio, 1910".....	40 36 57.6	82 59 47.4	2,400
T. 5 S., R. 16 E., corner of secs. 10, 11, 14, and 15.....	40 36 57.7	82 59 44.3	240
T road east, center of.....	40 37 24.5	82 58 02.2	8,335
T. 5 S., R. 17 E., west corner of secs. 6 and 7; Marion-Morrow county line.....	40 37 49.8	82 57 27.4	3,704
T. 5 S., R. 17 E., corner of secs. 5, 6, 7, and 8.....	40 37 50.8	82 56 15.4	5,560
T. 5 S., R. 17 E., corner of secs. 4, 5, 8, and 9; center of crossroads at church and schoolhouse.....	40 37 50.3	82 55 05.6	5,390
T. 5 S., R. 17 E., corner of secs. 3, 4, 9, and 10; center of T road south.....	40 37 49.9	82 53 59.5	5,100
Climax, east-west road crossing on Toledo & Ohio Central Ry.....	40 37 49.5	82 53 20.0	3,050
Climax, 0.5 mile east of, in northwest corner of stone abutment of steel bridge over Thorns Run, 30 feet west by 10 feet south to corner of secs. 2, 3, 10, and 11, T. 5 S., R. 17 E.; aluminum tablet stamped "Prim. Trav. Sta. No. 63. Ohio, 1910".....	40 37 49.6	82 52 48.5	2,428
T. 14 N., R. 21 W., corner of secs. 3 and 10; center of T road east.....	40 37 30.5	82 51 37.3	5,827
T. 14 N., R. 21 W., corner of secs. 2, 3, 10, and 11; center of crossroads.....	40 37 30.5	82 50 31.2	5,100
T. 14 N., R. 21 W., corner of secs. 1, 2, 11, and 12; center of crossroads.....	40 37 30.2	82 49 22.6	5,290
T. 14 N., R. 21 W., corner of secs. 1, 6, 7, and 12; center of crossroads.....	40 37 29.8	82 48 14.5	5,260
T. 18 N., R. 20 W., stone at corner of secs. 5, 6, 7, and 8; center of crossroads at schoolhouse.....	40 37 28.9	82 47 06.2	5,272
T. 18 N., R. 20 W., stone at corner of secs. 4, 5, 8, and 9; center of crossroads.....	40 37 28.0	82 45 57.6	5,300
Prim. Trav. Sta. No. 54, 1910.....	40 37 27.39	82 44 50.33	5,190

Along highways near east border of quadrangle.

Galion, 0.8 mile north by 1.5 miles east of; center of T road north.....	40 44 34.1	82 45 05.0	.....
Galion, 1.25 miles east of; center of T road north.....	40 43 59.5	82 45 45.4	4,688
T road west, center of.....	40 43 33.3	82 45 53.5	2,735
T. 20 N., R. 20 W., south corner of secs. 32 and 33.....	40 43 33.3	82 45 53.2	25
T. 19 N., R. 20 W., north corner of secs. 4 and 5.....	40 43 33.3	82 45 53.9	55
T. 19 N., R. 20 W., corner of secs. 3, 4, 9, and 10, crossroads at schoolhouse; Crawford-Martion county line.....	40 42 40.8	82 44 46.0	7,460

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road east-west.....	40 44 47.4	82 59 29.9
Tps. 3 and 4 S., R. 16 E., corner of secs. 34, 35, 2, and 3; road west.....	40 43 55.0	82 59 42.5
Road east-west.....	40 43 03.9	82 59 59.4
T. 5 S., R. 16 E., corner of secs. 15, 14, 23, and 22.....	40 36 04.6	82 59 44.1
T. 5 S., R. 16 E., corner of secs. 22, 23, 26, and 27, due east of; road northeast.....	40 35 12.2	82 59 48.5
Road east-west.....	40 33 43.1	82 59 44.9
T. 6 S., R. 16 E., corner of secs. 3, 2, 11, and 10.....	40 32 34.0	82 59 44.1
T. 6 S., R. 16 E., corner of secs. 10, 11, 14, and 15; road east-west.....	40 31 42.0	82 59 44.2
T. 6 S., R. 16 E., corner of secs. 15, 14, 23, and 22; road east-west.....	49 30 48.9	82 59 43.8

Along highways near north border of quadrangle.

Milepost 74, 2,000 feet south of; east-west road crossing Toledo & Ohio Central Ry.....	40 44 23.2	82 56 07.2
T. 3 S., R. 17 E., northeast corner of sec. 32; crossroads 0.2 mile south of church.....	40 44 23.9	82 54 54.6
T. 3 S., R. 17 E., northeast corner of sec. 33; middle of east-west road at rail fence north.....	40 44 24.4	82 53 46.0
W. L. Tupps' farm, southwest corner of; northeast corner of T road north, nail in tree in southeast corner of field bears S. 69° W., distant 49.1 feet, nail in root of elm tree bears S. 12° W., distant 107.8 feet; iron post stamped "Prim. Trav. Sta. No. 21. Ohio, 1906".....	40 44 32.1	82 52 54.3
Whetstone Creek, course north, center of bridge over.....	40 44 51.2	82 52 16.2

Magnetic declination for south border, 1° 20' W.; for east border, 1° 19' W.; for east-west line through center, 1° 05' W.

MOUNT STERLING QUADRANGLE.

Along Baltimore & Ohio Southwestern R. R. from milepost 69 to Mount Sterling.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Milepost 69, crossing 800 feet west of.....	39 30 12.2	83 35 19.4
Rattlesnake, crossing over railroad at.....	39 30 41.8	83 33 09.4
Jasper Mills, crossing at.....	39 31 08.0	83 31 14.4
Washington Court House, south azimuth stone 1,400 feet south of Baltimore & Ohio Southwestern R. R. station, near coal chutes 6 feet east of main track, 11 feet from end of bulkhead leading to elevated tracks; limestone post, 36 by 8 by 8 inches, set 33 inches in ground, bronze meridian tablet cemented in center of top. Distant mark is a copper bolt cemented in east abutment of wagon bridge. Azimuth, 218° 12' 45". Distance from south stone 1,093 feet.....	39 32 04.0	83 26 53.7
Washington Court House, crossing of Baltimore & Ohio Southwestern and Cincinnati, Hamilton & Dayton railroads.....	39 32 13.3	83 26 43.4
Fayette station.....	39 34 09.9	83 25 13.7
Bloomingsburg station, crossing 300 feet east of.....	39 36 22.7	83 23 17.4
Madison Mills station, crossing 30 feet east of.....	39 39 13.5	83 20 21.4
Cook station, crossing 200 feet east of.....	39 40 59.4	83 18 24.3

Along highways near east border of quadrangle.

Mount Sterling, Main Street crossing on Baltimore & Ohio Southwestern R. R. (Hawkins traverse, 1900).....	39 43 17.6	83 16 03.7
Mount Sterling, road southwest to Washington Court House.....	39 42 59.3	83 16 06.2
Fayette-Madison county line.....	39 41 47.3	83 16 16.4
Jones schoolhouse No. 5, center of road.....	39 40 51.0	83 16 16.6
Old Yanketown, east-west road.....	39 39 41.1	83 16 05.8
Schoolhouse No. 2, road.....	39 38 50.6	83 16 16.3
Waterloo, in northwest corner of yard of Christian Church; iron post stamped "Prim. Trav. Sta. No. 74. Ohio, 1909".....	39 37 39.2	83 15 58.2
Waterloo, near, Fayette-Pickaway county-line stone.....	39 38 20.2	83 15 25.5
Waterloo, in front of Methodist Church.....	39 37 24.7	83 15 55.5
Fayette-Pickaway county line, stone monument.....	39 37 01.4	83 15 31.0
Road north-south.....	39 36 09.4	83 16 04.9
Bridge near Chauncey Dick's.....	39 35 29.9	83 15 56.0
Pike, northwest-southeast.....	39 34 08.0	83 16 13.5
Pickaway-Fayette county-line road.....	39 33 32.8	83 15 46.9
New Holland, Main Street crossing on Cincinnati & Muskingum Valley R. R.....	39 33 15.8	83 15 26.2
Road southwest.....	39 31 31.2	83 14 43.9
Ross-Pickaway county line.....	39 30 55.6	83 14 56.7
Schoolhouse No. 9, intersection of roads.....	39 30 15.2	83 15 03.4
Schoolhouse No. 9, in northeast corner of yard, northeast corner of schoolhouse bears S. 53° 45' W., distant 30.4 feet, center of wooden pump in schoolhouse yard bears N. 71° 15' W., distant 51.2 feet, in top of sandstone post 5 by 10 by 30 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 5".....	39 30 15.0	83 15 03.5

Along highways near south border of quadrangle.

Pleasant Grove, southwest corner of schoolhouse yard; road north.....	39 30 02.2	83 21 36.6
Blacksmith shop, road north-south.....	39 30 32.8	83 22 39.8
Bridge over drain south.....	39 30 50.6	83 23 57.1
Washington Court House, 1 mile south of; north end of bridge over Middle Fork Paint Creek.....	39 31 04.4	83 25 01.5
Detroit, Toledo & Ironton Ry. crossing near trestle, 480 feet southeast of 102-mile post.....	39 30 55.1	83 25 06.5
Washington Court House, 2 miles south of; crossroads on Greenfield pike.....	39 30 34.2	83 26 28.8
Leesburg pike, north-south.....	39 30 16.3	83 28 22.3
Snow Hill pike, Ingles schoolhouse, 20 feet north.....	39 30 19.6	83 29 43.1
Snow Hill pike, center of, at road northwest, 0.3 mile southwest of schoolhouse.....	39 30 11.4	83 29 58.4

Along highways near north border of quadrangle.

Hayes schoolhouse, road east-west.....	39 42 51.4	83 29 52.4
Sedalia, Detroit, Toledo & Ironton Ry. crossing, three-fourths mile southwest of.....	39 43 28.7	83 29 17.4
Sedalia, South Solon pike, east-west.....	39 44 01.4	83 29 06.5
Sedalia, intersection of Main Street and road east-west.....	39 44 00.5	83 28 36.7
Bridge over creek northeast.....	39 43 55.9	83 25 45.2
Range, London pike northwest.....	39 43 55.5	83 25 31.7
Bethel, Methodist Episcopal Church, crossroads at.....	39 43 48.8	83 23 37.4
Bridge over branch south.....	39 43 52.0	83 22 16.6
Chenoweth, road north.....	39 43 51.6	83 21 25.1
Sugar Run Bridge.....	39 43 49.7	83 19 53.9
Road south at schoolhouse.....	39 43 48.8	83 19 11.5
Mount Sterling, one-half mile north of London pike.....	39 43 48.7	83 16 17.2

NAPOLEON QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 6 N., R. 5 E., corner of secs. 13, 14, 23, and 24.....	41 28 16.1	84 14 52.8
T. 5 N., R. 5 E., corner of secs. 1, 2, 11, and 12.....	41 24 46.9	84 14 50.7
T. 5 N., R. 5 E., corner of secs. 13, 14, 23, and 24.....	41 23 02.3	84 14 49.3
T. 5 N., R. 5 E., corner of secs. 25, 26, 35, and 36.....	41 21 17.6	84 14 48.0
T. 4 N., R. 5 E., corner of secs. 1, 2, 11, and 12.....	41 19 32.5	84 14 48.0
T. 4 N., R. 5 E., corner of secs. 13, 14, 23, and 24.....	41 17 48.2	84 14 48.0
T. 4 N., R. 5 E., corner of secs. 25, 26, 35, and 36.....	41 16 03.8	84 14 47.9
Tps. 3 and 4 N., R. 5 E., corner of secs. 1, 2, 35, and 36.....	41 15 11.5	84 14 47.8

Along highways near northeast corner of quadrangle.

T. 6 N., R. 7 E., northeast corner of sec. 13, at crossroads, in northeast corner of orchard owned by Edna Cline; iron post stamped "Prim. Trav. Sta. No. 31, 1905".....	41 29 10.5	84 00 30.7
T. 6 N., R. 7 E., north corner of secs. 11 and 12; T road south, 31 feet southwest to cross on corner fence post, 30 feet northwest to E. M. Smith's mail box.....	41 29 10.9	84 01 05.5
T. 6 N., R. 7 E., corner of secs. 10, 11, 14, and 15; crossroads, 33 feet southwest to end of wire fence, 37 feet northwest to cross on gatepost.....	41 29 11.5	84 02 15.2

NAVARRE QUADRANGLE.

Along Baltimore & Ohio R. R. from Canal Dover to Strasburg.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Shovel works, 1.25 miles north of; east-west road crossing.....	40 32 58.1	81 30 03.8
Crown fire-clay works, at south part of; east-west road crossing.....	40 33 43.3	81 30 13.1
Overhead crossing of electric railroad.....	40 34 55.1	81 31 04.2
T. 10 N., R. 3 W., corner stone of secs. 19, 20, 21, and 22, in north part of Strasburg..	40 36 07.4	81 31 45.1

Along highways near east border of quadrangle.

Strasburg, 1 mile north of, south of road at forks, cross on west end of stone culvert bears S. 74° W., distant 8.4 feet, southwest corner of residence bears N. 19° 30' E., distant 135 feet; iron post stamped "Prim. Trav. Sta. No. 35, Ohio, 1906".....	40 36 55.0	81 31 28.7
T. 10 N., R. 3 W., corner of secs. 9, 10, 11, and 12; oak tree at cross fences.....	40 37 43.5	81 31 44.6
Schoolhouse, crossroads, 30 feet northeast to guidepost, 32 feet northwest to corner fence post.....	40 38 15.2	81 31 19.8
Tuscarawas-Stark county line, 510 feet north of; stone in center of T road west...	40 39 01.9	81 31 14.8
T. 9 N., R. 9 W., northeast corner stone of sec. 29.....	40 40 21.0	81 30 39.7
T. 9 N., R. 9 W., northeast corner of sec. 20; center of north-south road at east-west rail fence.....	40 41 14.5	81 30 39.3

Along Wheeling & Lake Erie R. R. in Navarre.

Navarre, east track of Wheeling & Lake Erie R. R., at crossing of electric railroad, just south of station.....	40 43 05.5	81 31 22.2
Navarre, in northwest part of; overhead railroad crossing.....	40 43 21.2	81 31 51.2

Along highways near north border of quadrangle.

Pigeon Run, T road north.....	40 44 57.2	81 34 35.1
T. 12 N., R. 10 W., northeast corner stone of sec. 34, at schoolhouse.....	40 44 58.3	81 35 09.1
T. 12 N., R. 10 W., northeast corner of sec. 33; center of road at rail fence north.	40 45 00.7	81 36 19.4
West Lebanon, 2 miles northeast of, Massillon-Millersburg road, crossroad bears east, distant 20 feet, nail in blaze on white oak bears S. 66° 45' E., distant 67 feet; iron post stamped "Prim. Trav. Sta. No. 37, 1906".....	40 44 27.7	81 38 06.0
Stark-Wayne county line, center of Millersburg road.....	40 44 05.3	81 38 55.8
T. 11 N., R. 10 W., northeast corner of sec. 6; junction of fence, Stark-Wayne county line.....	40 44 13.9	81 38 55.8
West Lebanon, 0.5 mile north of; crossroads, 15 feet southeast to guidepost, 24 feet to south end of culvert.....	40 44 01.0	81 40 07.1
West Lebanon, 0.5 mile north and 1.5 miles west of; crossroads, 24 feet northwest to guidepost, 33 feet northeast to fence post.....	40 44 01.4	81 41 51.3
Kidron, 0.75 mile east of; crossroads, 27 feet southeast to guidepost, 24 feet southwest to south end of box culvert.....	40 44 12.1	81 43 53.0
Kidron, southwest corner of crossroads, northwest corner of foundation to creamery bears S. 68° E., distant 72 feet, cross cut on southeast corner of foundation to warehouse bears N. 44° 15' W., distant 86.2 feet; iron post stamped "Prim. Trav. Sta. No. 38, 1906".....	40 44 28.4	81 44 44.5

NAVARRE QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 16 N., R. 11 W., northeast corner of sec. 31; crossroads.....	40 44 28.7	81 44 44.3
T. 15 N., R. 11 W., northeast corner of sec. 6.....	40 43 35.9	81 44 43.8
Frame schoolhouse, crossroads, 36 feet northeast to guidepost, 48 feet northwest to mail box No. 50.....	40 42 39.4	81 44 48.0
Gordin School, 0.75 mile north of; crossroads, 39 feet northwest to east gatepost 25 feet northeast to north end of stone culvert.....	40 41 36.2	81 44 47.4
Gordin School, crossroads, 22 feet northeast to corner fence post, 39 feet northwest to mail box No. 49.....	40 40 57.3	81 44 47.1
Wayne-Holmes county line.....	40 40 04.7	81 44 28.5
Wayne-Holmes county line, 1 mile south of; crossroads, 30 feet northwest to guidepost, 19 feet southwest to west end of culvert.....	40 39 12.1	81 43 50.0
Small cemetery, just south of; crossroads, 25 feet southeast to east end of hedge fence, 12 feet southwest to south end of culvert.....	40 38 35.0	81 44 46.6
Fairview, southeast corner of crossroads at schoolhouse, halfway between Mount Hope and Winesburg, nail in east face of large white-oak tree bears S. 73° 30' W. distant 47.2 feet; iron post stamped "Prim. Trav. Sta. No. 39, 1906".....	40 37 07.0	81 44 40.2
Crossroads, at northwest corner of triangle formed by roads, 9 feet northwest to northwest end of box culvert.....	40 35 53.1	81 44 58.7
Schoolhouse No. 3, 500 feet east of, south of Charm-Sugarcreek road at fork to northeast, cross cut on bowlder bears N. 20° 30' W. distant 24.3 feet, iron post stamped "Prim. Trav. Sta. No. 40, 1906".....	40 30 21.7	81 44 50.6

Along highways near south border of quadrangle.

T. 8 N., R. 5 W., corner of secs. 1, 2, 9, and 10; junction of fence.....	40 30 13.4	81 43 36.3
Sugarcreek, Main Street crossing of Wheeling & Lake Erie R. R., 215 feet south of station.....	40 30 07.3	81 38 24.4
Sugarcreek, about 0.75 mile northeast of; T road north, 36 feet northwest to corner fence post, 48 feet northeast to corner fence post.....	40 30 29.3	81 37 25.2
Union Hill Church, 0.33 mile north of, at southwest corner of crossroads, northeast corner of E. Crite's residence bears S. 57° 20' W. distant 23.3 feet, cross cut on west end of culvert bears N. 11° 15' E. distant 35 feet; iron post stamped "Prim. Trav. Sta. No. 41, 1906".....	40 30 29.4	81 36 38.0
T road north.....	40 30 26.6	81 35 45.1
Sugarcreek-Dover township line, northeast corner of sec. 4.....	40 30 52.8	81 34 17.4
Schoolhouse No. 2, T road north, 10 feet southwest to south end of bridge.....	40 30 44.4	81 33 00.9
Canal Dover, 2.75 miles west of; crossroads, 21 feet northwest to north end of stone culvert, 29 feet southwest to south end of same culvert.....	40 30 30.9	81 31 28.5

NEWARK QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Homer, 1.33 miles southeast of; large sugar-maple tree in center of road.....	40 14 39.2	82 29 22.5
Road southwest, 24 feet south to cross on black-oak tree.....	40 13 55.7	82 28 00.0
Utica, in southeast part, east-west road crossing on Baltimore & Ohio R. R.....	40 13 57.2	82 26 52.4
Licking-Knox county line, road west, 27 feet northwest to cross on gatepost, 27 feet southeast to cross on rail fence.....	40 14 35.8	82 25 04.2
Hill Church, 0.5 mile west of; T road north, 28 feet northwest to telephone pole, 22 feet southwest to cross on fence post.....	40 14 32.4	82 23 44.6
Martinsburg, 1.5 miles south of, at crossroads, in northeast corner of field of W. P. Harrison; iron post stamped "Prim. Trav. Sta. No. 41, 1905".....	40 14 53.7	82 21 36.2
Martinsburg, about 2 miles southeast of; crossroads, 10 feet southeast to gum tree, 21 feet northeast to mail box.....	40 14 50.8	82 20 18.1
County line, 0.5 mile north of; crossing of east-west and northwest-southeast roads, 38 feet north to large white-oak tree, 38 feet northeast to cross on fence post.....	40 14 49.6	82 19 14.8
County line, 0.5 mile north of, at A. J. Blount's farm; T road west, 29 feet northeast to cross on fence post, 30 feet southeast to cross on telegraph pole.....	40 14 48.6	82 17 06.4
Henpeck Corners, crossroads, 28 feet southeast to guidepost, 27 feet northwest to Benbow Simpkins's mail box.....	40 14 02.2	82 16 52.7
Henpeck Corners, 1 mile southeast of, 2 miles northwest of Fallsburg, just north of schoolhouse, in southeast corner of W. H. Kidd's farm, at T road northeast; iron post stamped "Prim. Trav. Sta. No. 42, 1905".....	40 13 44.4	82 16 03.7
Fallsburg, 1 mile northwest of; T road east, 200 feet north of scales, 16 feet east to Matt Frost's mail box.....	40 12 51.1	82 15 26.8
Corner of secs. 14, 15, 16, and 17, cross on top of stone.....	40 11 56.0	82 15 46.1

NEWARK QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Fulton schoolhouse, 0.25 mile east of; T road north, 22 feet south to cross on red gate.....	40 01 21.5	82 26 41.7
Lloyds Corners, 1 mile west of; T road south, 21 feet east to east end of tile culvert, 19 feet southwest to west end of same.....	40 00 54.1	82 25 24.5
Newark, about 3 miles south of, at Lloyds Corners; crossroads, 13 feet southeast to ring on telephone pole, 31 feet northeast to cross on picket fence.....	40 00 49.7	82 24 14.0
Lutheran Church, 1 mile northwest of, at top of hill; T road west, point on intersection.....	40 00 48.7	82 22 54.6
Newark, 4.5 miles southeast of, in Lutheran school grounds, southeast corner of schoolhouse foundation bears N. 25° 15' W. distant 11.9 feet; northwest corner of Lutheran Church foundation bears S. 37° 30' W. distant 67.6 feet; iron post stamped "Prim. Trav. Sta. No. 45, 1905".....	40 00 16.6	82 22 04.8
John Fry's farm, at southwest corner of; crossroads, 30 feet northeast to cross on post at south end of wire fence, 46 feet northwest to T. J. Moore's mail box....	40 00 00.8	82 21 01.3
R. S. Sigler's residence, T road south, 10 feet northeast to mail box, 30 feet southwest to guidepost.....	40 00 50.3	82 19 58.7
T. 1 N., R. 11 W., stone at corner of secs. 1, 2, 9, and 10.....	40 00 46.1	82 18 34.3
Boodle schoolhouse, 1.33 miles southeast of; road south, 13 feet north to cross on gatepost, 36 feet southwest to mail box.....	40 00 04.8	82 16 57.9
Clay Lick, about 4 miles south of, in south part of grounds of Boodle schoolhouse, southwest corner of schoolhouse foundation bears N. 9° 15' E. distant 57 feet, nail in root of maple tree bears N. 84° 30' E. distant 60.1 feet; iron post stamped "Prim. Trav. Sta. No. 44, 1905".....	40 00 58.7	82 17 23.4
Boodle schoolhouse, about 1.38 miles southeast of; road to south, 13 feet north to cross on gatepost, 36 feet southwest to mail box.....	40 00 04.8	82 16 57.9

Along highways near east border of quadrangle.

G. W. Scott's residence, intersection of roads; mail box.....	40 10 38.4	82 16 03.0
Sawmill, 900 feet north of; on top of hill, T road west, 30 feet northwest to mail box.....	40 10 01.2	82 15 29.1
Reform, 0.66 mile northwest of; crossroads, 25 feet northeast to F. Priest's mail box, 29 feet northwest to cross on corner fence post.....	40 08 53.1	82 15 14.3
Reform crossroads, 21 feet southeast to R. S. Paine's mail box, 30 feet northeast to willow tree.....	40 08 16.6	82 15 02.0
Reform, 0.75 miles south of, in southwest corner of field of John W. Gardner, opposite Methodist Church, iron post stamped "Prim. Trav. Sta. No. 43, 1905".....	40 07 34.0	82 15 05.0
Hanover, in northwest part of; center of road crossing under Pennsylvania R. R.....	40 04 34.2	82 15 47.2
Hanover electric railroad station, road crossing, Newark & Zanesville Electric R. R.....	40 03 53.4	82 16 03.6
Clay Lick, 0.5 mile north of, just south of electric railroad station; center of bridge over old Ohio Canal.....	40 03 54.0	82 17 27.7
Clay Lick, 1 mile south of; T road west.....	40 02 52.7	82 17 29.2
Clay Lick, 2 miles south of; road to southwest at Jonathan Intow's residence, 12 feet southwest to J. R. Shepherd's mail box.....	40 01 36.1	82 17 38.1

Along Toledo & Ohio Central Ry. near Central City.

Milepost 28, 240 feet east of, east-west gravel-road crossing; north track.....	40 01 43.1	82 29 25.1
Central City, 0.75 mile south of, 105 feet north of milepost 14; east-west gravel-road crossing.....	40 01 30.2	82 28 26.9
Milepost 13, just north of; private-road crossing.....	40 00 38.5	82 28 38.8

Magnetic declination for north border, 2° 31' W.; for south border, 1° 05' W.; for east border, 3° 08' W.; for west border, 0° 36' W.

NEW COMERSTOWN QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
Farmerstown, 0.5 mile west of, quarter corner between secs. 9 and 12, T. 8 N., R. 5 W.; T road east.....	40 29 21.6	81 44 12.9
Farmerstown, telephone pole in center of triangle of crossroads, 50 feet east to top of hill.....	40 29 14.1	81 43 42.6
Farmerstown, 1.5 miles south of; four corners, 20 feet southwest to guideboard "New Bedford 2.5 miles, Baltic 3 miles, Sugar creek 5 miles," 20 feet southeast to west end of stone at north end of culvert.....	40 27 58.8	81 43 40.9

NEW COMERSTOWN QUADRANGLE—Continued.

Along highways near Baltic.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 8 N., R. 5 W., corner stone of secs. 19, 20, 21, and 22.....	40 27 35.6	81 43 41.7
Holmes-Coshocton county line, corner of sections.....	40 26 42.4	81 43 43.7
Baltic, 1 mile west of; Holmes-Coshocton county line at bend of road to east....	40 26 41.1	81 42 46.6
Baltic, intersection of Main and Maple streets.....	40 26 26.3	81 42 18.1
Baltic, northeast corner of Main and Maple streets, at southwest corner of Baltic Hotel; iron post stamped "Prim. Trav. Sta. No. 25. Ohio, 1907".....	40 26 26.5	81 42 16.9

Along Wheeling & Lake Erie R. R. from Baltic to West Lafayette.

Baltic, 1.5 miles south of; road crossing, 100 feet northeast of milepost Z 46.....	40 25 34.2	81 43 13.5
Baltic, 2.5 miles southwest of; road crossing, 540 feet south of milepost C 99.....	40 24 37.6	81 43 13.3
Chili station, 1 mile northeast of; center of trestle over road crossing, 350 feet south of milepost Z 43 C 101.....	40 22 59.2	81 43 05.5
Chili, road crossing, 150 feet south of station.....	40 22 08.0	81 43 39.2
Chili, in northwest corner of crossroads, 100 feet south and 23 feet east of Wheeling & Lake Erie R. R. station, iron post stamped "Prim. Trav. Sta. No. 26. Ohio, 1907".....	40 22 08.3	81 43 38.9
Chili, 1 mile south of station; road crossing.....	40 21 19.2	81 44 05.5
Fresno, 1.1 miles north of; road crossing, 260 feet south of milepost Z 40 C 104....	40 20 39.2	81 44 04.2
Fresno, at southeast corner of public-school grounds, northeast corner of foundation to school building bears N. 49° 15' W., distant 189.2 feet, top of ornamental ball on northwest corner of bridge over White Eyes Creek bears S. 48° 30' E., distant 55.2 feet; iron post stamped "Prim. Trav. Sta. No. 27. Ohio, 1907".....	40 20 00.2	81 44 33.7
Fresno, 1 mile south of; road crossing.....	40 19 11.6	81 44 38.7
Fresno, 2 miles south of; road crossing.....	40 18 16.9	81 44 50.8
West Lafayette, 1.5 miles north of; Fresno-West Lafayette road crossing on Wheeling & Lake Erie R. R.....	40 17 51.9	81 44 53.2
West Lafayette, 100 feet east of station; Kirk Street crossing on Pennsylvania R. R.....	40 16 36.5	81 45 04.2
West Lafayette, Prim. Trav. Sta. No. 58, 1905.....	40 16 33.3	81 44 50.2

Along Pennsylvania R. R. between West Lafayette and Isleta.

West Lafayette, 1 mile south of; T road east, 24 feet east to guidepost, "Plain-field 5 miles," 38 feet southeast to cross on corner fence post.....	40 15 29.8	81 44 27.6
West Lafayette, at northwest corner of public-school grounds, northwest corner of schoolhouse bears S. 16° 15' E., distant 256.6 feet; iron post stamped "Prim. Trav. Sta. No. 58, 1905".....	40 16 33.3	81 44 50.2
Milepost 77, 300 feet east of, road crossing; north track.....	40 16 24.3	81 43 04.4
Milepost 78, 700 feet east of, north-south road crossing; south track.....	40 16 18.5	81 41 51.8
Isleta station, road crossing; south track.....	40 16 18.3	81 40 24.8
Isleta, 1 mile southeast of; forks of road, 30 feet north to cross on board fence, 75 feet southeast to cross on telegraph pole.....	40 15 50.2	81 39 25.5

Along highways near north border of quadrangle.

Youter schoolhouse, 1 mile east of; T road north, 36 feet east to N. I. Trayer's mail box.....	40 29 49.0	81 42 02.5
Union cheese factory, T road north, 27 feet northeast of corner rail fence, 43 feet northwest to mail box.....	40 29 26.4	81 40 54.7
Sugarcreek, about 1.5 miles west of Holmes-Tuscarawas county line, 10 feet north to arrow painted on fence post.....	40 29 40.2	81 40 05.7
Sugarcreek, 0.75 mile west of; T road south, 10 feet north to junction of fences.....	40 29 50.8	81 39 15.8

Magnetic declination for south border, 1° 57' W.; for west border, 2° 18' W.

NEW LEXINGTON QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Deavertown, cross streets, 48 feet northwest to southeast corner of post office, 48 feet southwest to northeast corner of store at pump.....	39 44 03.1	82 02 16.7
T. 14 S., R. 14 W., north corner of secs. 34 and 35.....	39 44 28.2	82 03 37.0
Deavertown station, road crossing on Zanesville & Western Ry.....	39 44 20.6	82 04 36.0
Stringtown crossroads, guidepost.....	39 44 39.5	82 05 18.1

NEW LEXINGTON QUADRANGLE—Continued.

Along Cincinnati & Muskingum Valley R. R. between McLuney and New Lexington.

Stations.	Latitude.	Longitude.
McLuney, near station, on land of Charles Myers, southeast corner of station bears S. 71° W., distant 71.5 feet; northwest corner of store bears S. 81° 40' E., distant 10 feet; iron post stamped "Prim. Trav. Sta. No. 65, 1905".....	39 44 26.2	82 06 27.8
Lyondale station, road crossing.....	39 43 54.8	82 08 13.8
Milepost 35, 0.5 mile west of; north-south road crossing.....	39 43 29.1	82 09 47.6
Wilburn station, road crossing.....	39 43 26.7	82 10 38.1
New Lexington, 1 mile northeast of; north-south road crossing.....	39 43 16.0	82 11 45.6
New Lexington station, center of track opposite.....	39 43 08.7	82 13 00.0
Milepost 40, 900 feet west of; road crossing.....	39 43 20.9	82 14 35.7

Along highways from New Lexington south near west border of quadrangle.

New Lexington, center of main track of Cincinnati & Muskingum Valley R. R., opposite station.....	39 43 08.7	82 13 00.0
New Lexington, Perry County courthouse, in east face at southeast corner; aluminum tablet stamped "Prim. Trav. Sta. No. 1. Ohio, 1907".....	39 42 50.3	82 12 29.4
New Lexington, 0.7 mile south of courthouse, T. 15 N., R. 15 W., section corner under corner of outhouse 150 feet east of public road.....	39 42 15.9	82 12 25.1
New Lexington, 2.2 miles south of, road forks south and southeast; center of triangle.....	39 41 55.8	82 12 43.3
Bristol, about 1.25 miles north of; T. 15 N., R. 15 W., quarter section corner stone (no numbers).....	39 40 58.8	82 13 05.9
Bristol, at east edge of; T road north, center of triangle.....	39 40 07.4	82 13 24.3
Bristol, at west edge of; four corners at store and schoolhouse, 80 feet southwest to northeast corner of schoolhouse.....	39 40 08.0	82 13 46.2
Bristol, 1 mile south of, road forks east and southwest; center of triangle.....	39 39 30.1	82 13 57.4
Bristol, 1.5 miles south of, second-class T road east; east-west section line, T. 15 N., R. 15 W.....	39 39 15.8	82 13 48.4
Pike-Salt Lick, east-west township line, center of main road 110 feet north of second-class road west.....	39 38 49.1	82 13 44.1
McCuneville, 0.75 mile north of; road crossing on Baltimore & Ohio R. R. spur track to Jobs mines.....	39 38 17.6	82 13 30.2
McCuneville, at northeast edge of; road crossing on Baltimore & Ohio R. R. spur track to Jobs mines.....	39 37 42.8	82 14 00.0
McCuneville, at northwest edge of, 2 feet in front of east end of schoolhouse; iron post stamped "Prim. Trav. Sta. No. 2. Ohio, 1907".....	39 37 43.5	82 14 09.3

Along highways near west border of quadrangle.

McCuneville, 1 mile southeast of, road crossing on Baltimore & Ohio R. R.; center of track.....	39 36 48.2	82 13 49.9
Shawnee, Shawnee-Straitsville road, at crossing on Zanesville & Western Ry., between freight and passenger stations; center of main track.....	39 36 09.6	82 12 45.5
Shawnee, 0.5 mile southwest of; stone section corner, T. 14 N., R. 15 W., on hill, about 300 feet northeast of private coal mine.....	39 35 59.0	82 13 10.2
Shawnee, 0.7 mile southeast of; four corners on east-west section line, T. 14 N., R. 15 E.....	39 35 44.7	82 13 18.2
Shawnee, 0.7 mile southeast of; 775 feet west of stone corner on section line, T. 14 N., R. 15 E.....	39 35 44.7	82 13 28.0
New Straitsville, 0.75 mile northeast of; stone section corner, T. 14 N., R. 15 W., on hill, 450 feet west of road, Salt Lick-Straitsville township line.....	39 35 19.2	82 13 30.1
New Straitsville, Main and Clark streets, opposite Columbus & Hocking Coal & Iron Co.'s office.....	39 34 40.4	82 14 14.7
New Straitsville, at southeast edge of, public-road forks south and southeast, 140 feet south to mine-motor road crossing, 40 feet southeast to signboard, "Colgate 2 miles, Murry City 5 miles, Crawford schoolhouse 1.25 miles".....	39 34 20.4	82 13 22.8
New Straitsville, 1.5 miles southeast of, public-road forks south and southeast; signpost.....	39 33 42.2	82 13 22.9
New Straitsville, 1.75 miles southeast of, northeast corner (tile) sec. 6, T. 13 N., R. 15 W., 120 feet east of center of road, in small field; Perry-Hocking county line.....	39 33 35.1	82 13 27.7
Perry-Hocking county line, 0.75 mile south of, public-road forks south and southeast; center of triangle.....	39 32 56.9	82 13 24.5
Sandrun, 2.5 miles north of; crossroads, 15 feet north to top of small hill, 60 feet west to chestnut-oak tree.....	39 32 49.0	82 13 38.1
Sandrun, 1.25 miles north of; T road east, center of bridge on north-south road.....	39 31 57.6	82 13 53.4
Sandrun, at north edge of, road forks north and northwest; center of triangle.....	39 31 10.2	82 14 19.0
Sandrun, at northwest corner of public schoolhouse; iron post stamped "Prim. Trav. Sta. No. 3. Ohio, 1907".....	39 30 49.0	82 14 12.5
Carbon Hill, at north edge of; road forks north and northwest, 10 feet east to corner of garden, 50 feet northwest to telephone pole.....	39 30 16.7	82 14 55.0
Carbon Hill, 200 feet west of railroad station, road crossing on Hocking Valley Ry.; center of track.....	39 30 03.5	82 14 47.4

NEW LEXINGTON QUADRANGLE—Continued.

Along highways from New Straitsville east.

Stations.	Latitude.	Longitude.
New Straitsville, 1.75 miles southeast of, Hocking-Perry county line; New Straitsville-Murray road crossing.....	39 33 34.2	82 13 15.1
Coalgate, 0.25 mile north of, road forks north and west; center of small bridge.....	39 33 14.3	82 12 11.2
Coalgate, about 0.5 mile south of, second-class road north up valley; center of small bridge.....	39 32 42.0	82 11 30.6
Murray, 0.5 mile north of station, road crossing on Hocking Valley Ry.; center of track.....	39 31 15.8	82 10 01.9
Murray, 30 feet south of Hocking Valley Ry. station; center of track at street crossing.....	39 30 51.0	82 09 58.2
Murray, 0.75 mile northeast of, forks of road on ridge, second-class T road to southwest; center of main road.....	39 31 23.5	82 09 34.5
Murray, 1.5 miles northeast of; road north on top of hill 300 feet southeast of dwelling, 110 feet north to bending oak, 20 feet east to top of hill, 15 feet south to stump.....	39 31 51.0	82 09 02.8
Dwelling on top of ridge, T road south, 10 feet south to corner of picket fence, 25 feet northwest to southeast corner of dwelling.....	39 32 04.2	82 07 53.4
James Brunten's mail box in triangle, at T road south.....	39 31 59.3	82 07 26.7
McLeish, road crossing on Zanesville & Western Ry.; center of main track.....	39 32 09.1	82 06 07.4
McLeish, T road east, 120 feet south of Sunday Creek; center of pike.....	39 31 56.6	82 06 07.6
McLeish, 0.8 mile east of, T road north; center of triangle.....	39 32 05.8	82 05 15.6
T. 11 N., R. 14 W., north-south section line; center of road at crossing.....	39 32 04.5	82 05 11.5
Burr Oak, 1 mile south of, T road west; center of triangle.....	39 31 46.8	82 04 22.5
Burr Oak, 1.5 miles south of, road crossing on Kanawha & Michigan Ry., 100 feet east of covered bridge over creek; center of track.....	39 31 30.0	82 04 16.9
Bishopville, 0.6 mile northwest of; west entrance to tunnel.....	39 31 08.8	82 03 15.8
Bishopville, Main Street crossing on Marietta, Columbus & Cleveland R. R.; center of track.....	39 30 46.4	82 02 53.2
Bishopville, at southeast corner of Christian Church and Masonic Hall; iron post stamped "Prim. Trav. Sta. No. 4. Ohio, 1907".....	39 30 47.2	82 02 58.6
Bishopville, 0.8 mile east of; road fork east, pike to northeast, 30 feet to locust tree, 40 feet west to walnut tree.....	39 30 40.6	82 02 11.9
Bishopville, 1.25 miles northeast of, at five corners; walnut tree on west edge of pike.....	39 30 57.8	82 01 37.1
Bishopville, 2.1 miles northeast of, T road east, 25 feet north to oak tree, 35 feet southwest to locust tree; center of triangle.....	39 31 26.4	82 01 24.3

Along highways from Portersville west to McCuneville.

Portersville, at east edge of; Morgan-Perry county line.....	39 40 21.6	82 01 42.3
Portersville, at north edge of, T road west; center of triangle, 30 feet northwest to telephone pole, 25 feet east to telephone pole.....	39 40 39.3	82 01 51.8
Portersville, 1 mile west of; T road north, 30 feet northeast to small dwelling, 12 feet south to wire fence.....	39 40 18.6	82 02 46.9
Sayre, 1.5 miles south of, T road north; center of triangle, 20 feet northwest to sign "Sayre station 1.5 miles," 20 feet northeast to sign "Moxahala 6 miles, Portersville 2 miles".....	39 40 12.1	82 03 38.0
Portersville, 3.25 miles west of; T road east, 50 feet south to oak tree, 10 feet west to oak tree.....	39 39 54.2	82 04 45.4
Road crossing on Marietta, Columbus & Cleveland R. R.; center of track.....	39 40 05.8	82 04 56.2
Oakfield, 1.5 miles northeast of, road forks southwest, east, and north; center of triangle.....	39 40 27.1	82 05 50.6
Oakfield, T road north; center of triangle, 10 feet north to telephone pole, 60 feet southwest to corner of dwelling.....	39 39 33.7	82 06 57.1
Oakfield, at west edge of, at southwest corner of Oakfield brick schoolhouse, 200 feet northeast of three corners; iron post stamped "Prim. Trav. Sta. No. 14. Ohio, 1907".....	39 39 31.8	82 07 14.1
Oakfield, 1 mile southwest of, 1 mile south of Moxahala; T road south, 30 feet northeast to forked walnut tree, 40 feet southwest to small walnut tree, 15 feet west to T road north.....	39 39 03.0	82 07 45.0
Moxahala, 2 miles southwest of; T road east, 5 feet east to center of triangle, 20 feet southeast to corner of fence.....	39 38 35.8	82 08 51.8
T road east, center of triangle, 45 feet west to front-yard gate, 75 feet north to corner of barn.....	39 38 33.0	82 09 51.0
Jobs mines, 1.8 miles east of, T road east; center of triangle.....	39 38 19.1	82 10 43.8
Jobs mines, 1 mile east of; T road north, 20 feet east to mail box, 31 feet northwest to hickory tree.....	39 38 37.4	82 11 36.2
Jobs mines, forks of road 310 feet north of company store, 10 feet west to buggy house, 100 feet north to front door of old dwelling in road forks.....	39 38 22.8	82 12 40.9
McCuneville, northeast edge of; road crossing on Baltimore & Ohio R. R. spur track to Jobs mines.....	39 37 42.24	82 13 59.98

Magnetic declination for south border, 0° 38' W.; for west border, 0° 34' W.; for center line, 0° 56' W.

NEW LONDON QUADRANGLE,

Along Baltimore & Ohio R. R. in south part of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing.....	41 01 56.3	82 15 35.8
Road crossing.....	41 01 57.0	82 16 49.5
Road crossing.....	41 01 57.9	82 18 17.5
Road crossing.....	41 02 03.2	82 19 33.6
Road crossing.....	41 02 33.7	82 20 45.3
Road crossing.....	41 03 19.4	82 22 31.9
Hereford station.....	41 03 34.3	82 23 37.1
Rumley station.....	41 03 03.7	82 26 07.9
Road crossing.....	41 02 17.3	82 29 08.5

Along highways near northeast corner of quadrangle.

Wheeling & Lake Erie R. R., crossing of.....	41 10 10.1	82 16 30.2
Brighton, crossroads.....	41 10 15.8	82 18 33.3
Road west.....	41 12 55.1	82 18 21.8

Along highways near northwest corner of quadrangle.

Road east.....	41 13 19.0	82 29 29.1
Crossroads.....	41 10 31.0	82 29 24.8

Along highways near north border of quadrangle.

Road north-south.....	41 14 51.6	82 28 01.0
T. 4 N., Rs. 20 and 21 W., corner of secs. 1, 2, 3, and 4.....	41 14 50.7	82 26 31.8
Wakeman, road north through center.....	41 14 51.0	82 24 07.6
T. 4 N., R. 20 W., corner of secs. 1, 2, 3, and 4.....	41 14 51.5	82 23 30.3
Road north-south.....	41 14 16.8	82 21 40.0
Road north.....	41 14 16.5	82 20 49.7
Road north.....	41 14 15.7	82 19 55.5
T. 4 N., R. 19 W., lots 29, 28, 4, and 5, corner between subdistricts 3 and 4.....	41 14 15.3	82 18 15.4
Road north-south.....	41 14 15.3	82 17 22.0
T. 4 N., Rs. 18 and 19 W., corner between subdistricts 3 and 4.....	41 14 14.7	82 16 06.1
Road north-south.....	41 14 14.1	82 15 22.3

NORWALK QUADRANGLE.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Havana, "Prim. Trav. Sta. No. 29, 1906".....	41 08 12.2	82 44 49.2	
Havana, 0.2 mile south by 0.5 mile east of; center of T road west.....	41 07 57.2	82 44 09.7	3,398
Schoolhouse, center of crossroads.....	41 07 53.5	82 43 05.8	4,916
T. 2 N., R. 23 W., north corner of secs. 2 and 3; center of T road east.....	41 08 27.2	82 41 14.9	9,158
T. 2 N., R. 23 W., south corner of secs. 1 and 4.....	41 08 27.2	82 41 14.7	10
Macksville, 1.8 miles south by 0.2 mile west of; center of crossroads.....	41 08 25.8	82 39 19.0	8,881
Tps. 2 and 3 N., Rs. 22 and 23 W., stone at corner of secs. 1, 2, 3, and 4, crossroads; sign "Macksville 1 1/2 miles, Fairfield 4 miles".....	41 08 25.2	82 38 19.2	4,590
North Fairfield, 2 miles north of, near southeast corner of crossroads, 60 feet west by 25 feet north to stone at center of crossroads; iron post stamped "Prim. Trav. Sta. No. 48. Ohio, 1910".....	41 08 23.5	82 36 45.2	7,200
Tps. 2 and 3 N., Rs. 22 W., corner of secs. 1, 2, 3, and 4; center of crossroads at frame schoolhouse.....	41 08 22.9	82 35 18.6	6,640
Frame schoolhouse, center of T road south.....	41 08 22.1	82 33 54.0	6,490
Tps. 2 and 3 N., Rs. 21 and 22 W., corner of secs. 1, 2, 3, and 4; center of crossroads.....	41 08 21.4	82 32 18.5	7,320
Olena, 2 miles southeast of, 3 miles northwest of Fitchville, at northeast corner of Norwalk-Fitchville road, at road east, 30 feet south by 5 feet west to center of intersection of roads; iron post stamped "Prim. Trav. Sta. No. 49. Ohio, 1910".....	41 07 55.0	82 31 17.8	5,370
Fitchville, 2 miles northwest of; Norwalk-Fitchville road at road south.....	41 07 19.2	82 30 46.6	4,348
Fitchville, 1.2 miles west and 0.8 mile north of; center of crossroads.....	41 06 08.6	82 30 49.6	7,143

NORWALK QUADRANGLE—Continued.

Along Baltimore & Ohio R. R. and highway near Greenwich.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing.....	41 02 05.9	82 30 00.2
Greenwich station, street crossing 100 feet east.....	41 02 04.7	82 30 39.3
Road west.....	41 00 40.6	82 30 35.8

Along highways near east border of quadrangle.

Road west.....	41 08 40.1	82 30 50.4
Road west.....	41 07 49.0	82 31 12.4
Crossroads.....	41 06 08.6	82 30 48.8
Road east.....	41 03 53.4	82 30 44.0
Greenwich, bronze tablet in base of standpipe at city waterworks.....	41 01 37.3	82 31 12.7

Along highways near north border of quadrangle.

Road north-south.....	41 14 59.5	82 39 54.4
Norwalk, corner of Whittsey and Washington streets.....	41 14 58.7	82 37 11.8
Norwalk, junction of Wheeling & Lake Erie and Lake Shore & Michigan Southern railroads.....	41 14 52.4	82 36 08.8
T. 3 N., R. 22 E., corner of secs. 1, 2, 3, and 4.....	41 14 58.9	82 35 25.0
Road north-south.....	41 14 58.0	82 33 56.8
Road north-south.....	41 14 56.7	82 31 57.2
Road north-south.....	41 14 53.5	82 29 30.0
Townsend, U. S. Lake Survey triangulation station.....	41 15 43.26	82 28 59.77

Along highways near west border of quadrangle.

Bridge over large ditch, center of.....	41 01 07.0	82 43 53.1
Tps. 1 and 2 N., Rs. 23 and 24 W., corner of secs. 1, 2, 3, and 4; crossroads, 42 feet northwest to guidepost, 28 feet northeast to corner fence post.....	41 01 55.2	82 43 54.7

Along Baltimore & Ohio R. R. near Chicago Junction.

Chicago Junction, range-line road crossing on main line of Baltimore & Ohio R. R. Township line, road crossing.....	41 03 40.0	82 43 59.2
Havana, east line of Baltimore & Ohio R. R. property, just south of road crossing, northwest corner of stone porch bears S. 23° E. distant 117.7 feet, northeast corner of foundation to Flath & Gross's undertaking establishment bears S. 52° 45' W. distant 74.9 feet; iron post stamped "Prim. Trav. Sta. No. 29. Ohio, 1906".....	41 04 07.4	82 44 11.0
Havana, 0.3 mile north of; township-line road crossing.....	41 08 12.2	82 44 49.2
T. 3 N., Rs. 23 and 24 W., corner stone of secs. 1, 2, 3, and 4.....	41 08 30.4	82 44 41.5
Milepost 22, 0.33 mile north of; east-west road crossing.....	41 08 29.8	82 44 10.5
Milepost 20, 1,090 feet south of; road crossing.....	41 09 23.0	82 44 18.6
Pontiac, road crossing just south of station.....	41 10 32.4	82 43 48.5
Milepost 18, 1,435 feet north of; east-west road crossing.....	41 11 18.9	82 43 28.3
Monroeville, crossing of Baltimore & Ohio and Lake Shore & Michigan Southern railroads.....	41 12 35.3	82 42 55.4
Monroeville, north part of, north of road crossing, at east property line, small maple tree in corner of yard bears S. 63° 30' E. distant 46.7 feet, center of Baltimore & Ohio R. R. track at road crossing bears S. 57° W. distant 30 feet; iron post stamped "Prim. Trav. Sta. No. 30, 1906".....	41 14 25.4	82 42 08.1
	41 14 47.7	82 41 52.5

Near Greenwich.

Milepost 58, 1,080 feet northeast of; north-south road crossing on Big Four Route.....	41 00 08.6	82 33 32.0
Milepost 57, 0.5 mile northeast of; east-west road crossing.....	41 00 50.8	82 32 30.4

Magnetic declination for south border, 1° 34' W.; for west border, 1° 14' W.; for east-west center line, 1° 27' W.

OAK HARBOR QUADRANGLE.

From Trowbridge along Wheeling & Lake Erie R. R. to Oak Harbor.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Trowbridge, $4\frac{1}{2}$ miles southeast of; crossing 900 feet west of head block.....	41 33 00.3	83 12 46.0
Oak Harbor station, crossing 700 feet east of.....	41 31 11.8	83 08 43.6

At Lacarne on Lake Shore & Michigan Southern Ry.

Lacarne, crossing 1,000 feet east of station.....	41 31 09.9	83 02 22.0
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OAKHILL QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Rocky Hill station, pike crossing on Baltimore & Ohio R. R.....	38 59 21.5	82 32 40.6
Rocky Hill station, 0.75 mile south of, northeast corner of J. N. Evans's field at east-west road crossing, center of road crossing bears N. $44^{\circ} 15'$ E., distant 27.2 feet; iron post stamped "Prim. Trav. Sta. No. 14. Ohio, 1906".....	38 58 58.8	82 32 39.6
T. 6 N., R. 18 W., quarter corner east side of sec. 13; road west at jog.....	38 59 02.3	82 33 33.0
T road north near quarter corner east side of sec. 14, 9 feet south to south end of box culvert.....	38 59 10.5	82 34 41.2
Keystone station, pike crossing on Baltimore & Ohio R. R.....	38 59 16.4	82 36 19.4
Keystone, 1.66 miles west of station, in southwest corner of Wm. Cload's field at T road east, cross cut on southeast corner of bridge abutment bears S. 50° W., distant 37.5 feet, junction of roads bears S. 7° W., distant 34 feet; iron post stamped "Prim. Trav. Sta. No. 15. Ohio, 1906".....	38 59 23.4	82 38 13.1
Franklin Grange Hall, 0.2 mile southwest of; Jackson-Mabee pike, at road northeast, 18 feet southeast to mail box No. 14, 21 feet west to center of gate.....	38 58 30.7	82 39 35.6
T. 6 N., R. 19 W., northeast corner of sec. 24; junction of fences at southeast corner of woods.....	38 59 08.1	82 40 22.7
Fairview School, 0.5 mile northwest of; T road south, 22 feet northwest to walnut tree, 25 feet southeast to cross cut on small gum tree.....	38 59 24.9	82 41 12.9
Jackson pike at road south, 27 feet southwest to white oak tree, 21 feet southeast to corner of wire fence.....	38 59 48.4	82 43 28.1

Along highways near east border of quadrangle.

Coal shaft, road crossing at siding.....	38 57 35.6	82 31 56.3
Rempel, 600 feet north of station, in rock cut; tablet stamped "688" "Prim. Trav. Sta. No. 16. Ohio, 1906".....	38 56 28.3	82 31 21.6
Milepost 37, 0.3 mile southwest of; north-south road crossing.....	38 55 34.7	82 31 37.7
McKittericks, 700 feet north of; road crossing.....	38 54 33.2	82 32 28.6
T. 7 N., R. 17 W., northeast corner stakes sec. 19, 20 feet southwest to large white oak tree.....	38 54 35.4	82 32 52.0
Milepost 34, 60 feet north of; east-west road crossing.....	38 53 41.5	82 32 38.3
Kitchen, road crossing just south of station bears N. $85^{\circ} 30'$ W., distant 81 feet, at southwest corner of T road west; iron post stamped "Prim. Trav. Sta. No. 17. Ohio, 1906".....	38 52 12.3	82 32 31.9
Kitchen, 1 mile south of; road crossing.....	38 51 33.0	82 32 13.1
Jackson-Gallia county line.....	38 51 02.3	82 31 47.9
Milepost 30, north-south road crossing 300 feet east of.....	38 50 31.7	82 31 21.5
Gallia station, road crossing just south of water tank.....	38 49 49.6	82 31 04.9
Road fork, "Elev. 851.8" painted on north end of culvert.....	38 48 21.0	82 29 18.3

Along highways near south border of quadrangle.

Gallia-Lawrence county line, 0.25 mile north of, south corner of crossroads, 3.5 miles west of Wagner triangulation station, nail in maple tree bears N. 21° W., distant 40 feet, nail in hickory tree bears S. 25° W., distant 30.8 feet; iron post stamped "Prim. Trav. Sta. No. 18. Ohio, 1906".....	38 47 16.1	82 31 12.5
T road north, 24 feet west to apple tree, 21 feet southeast to dead tree.....	38 46 53.1	82 31 44.8
Lloyd's store, 0.25 mile northeast of, T road northeast; small apple tree in triangle.....	38 47 07.4	82 33 44.2
Cincinnati, Hamilton & Dayton Ry. at Gallia-Lawrence county line.....	38 46 42.5	82 34 50.5
Tps. 4, and 5 N., R. 18 W., northeast corner of sec. 1, approximate southwest corner of Gallia County; blazed black oak tree.....	38 46 44.1	82 34 58.3
Olive Furnace, 0.5 mile northeast of station, north of Cincinnati, Hamilton & Dayton Ry. at road crossing, joint of south rail at crossing bears S. $45^{\circ} 30'$ E., distant 39.5 feet; iron post stamped "Prim. Trav. Sta. No. 19. Ohio, 1906".....	38 45 36.1	82 37 24.2
Olive Furnace, 1 mile southwest of; crossroads, 26 feet northwest to small elm tree, 39 feet north to small sycamore tree.....	38 45 22.6	82 38 40.4

OAKHILL QUADRANGLE—Continued.

Along highways near south border of quadrangle—Continued.

Stations.	Latitude.	Longitude.
Lawrence-Scioto north-south county line, 14 feet east to maple tree, 26 feet north to junction of fences at road southeast.....	38 45 25.8	82 39 43.6
Madland, northeast corner of sec. 6, T. 3 N., R. 18 W.; large white oak tree just east of post office.....	38 45 48.1	82 40 49.7
Bridge over Piney Creek, about 600 feet northeast of; T road east, 30 feet north to gate hinge, 25 feet northwest to cross on board fence.....	38 46 15.7	82 42 19.6
Andre, 1 mile north of station; private-road crossing on Detroit, Toledo & Ironton Ry.....	38 45 37.2	82 43 38.6
Andre, road crossing 70 feet south of station.....	38 44 47.6	82 44 06.2
Andre, northeast corner stone of sec. 9, T. 3 N., R. 19 W., at junction of fences 1 mile northwest of station.....	38 45 08.8	82 45 00.8
T road west, 24 feet northwest to E. Strickland's mail box, 24 feet southwest to cross on fence post.....	38 45 22.7	82 46 38.0

Along highways east-west through center of quadrangle.

T road east.....	38 52 53.5	82 34 05.4
Oak Hill, 500 feet south of station; pike crossing on Baltimore & Ohio R. R.....	38 53 38.3	82 34 24.7
T. 5 N., R. 18 W., quarter corner between secs. 13 and 14.....	38 53 48.2	82 35 17.6
Mount Orab Church, north of; crossroads.....	38 54 12.2	82 36 43.2
Jefferson Furnace, 1.5 miles northwest of, in southeast corner of foundation of Homer schoolhouse; aluminum tablet stamped "Prim. Trav. Sta. No. 2. Ohio, 1910".....	38 54 24.0	82 37 20.0
T. 5 N., R. 18 W., corner of secs. 9, 10, 15, and 16, 15 feet west to center of T road south.....	38 54 24.4	82 37 27.4
Homer schoolhouse, 0.8 mile southwest of; forks of road.....	38 54 12.8	82 38 14.0
A. C. Arthur's house, crossroads.....	38 53 24.2	82 39 40.2
Forks of road.....	38 53 10.8	82 41 18.6
T. 5 N., R. 19 W., quarter corner between secs. 13 and 24.....	38 53 44.2	82 41 26.0
T. 5 N., R. 19 W., corner of secs. 13, 14, 23, and 24.....	38 53 45.7	82 41 54.5
Mabee, T road south.....	38 54 11.5	82 43 10.5
Covered bridge, west of; T road east.....	38 52 58.9	82 44 39.7

Magnetic declination for north border, 0° 01' E.; for south border, 0° 24' W.; for southeast border, 0° 35' E.; for line east-west through center of quadrangle, 0° 10' W.

OBERLIN QUADRANGLE.

Near southwest part of quadrangle.

Stations.	Latitude.	Longitude.
Road east-west.....	41 15 55.6	82 13 01.2
Crossing on Lake Shore & Michigan Southern Ry.....	41 16 53.1	82 14 11.8
Road east-west.....	41 17 40.6	82 14 18.2
T. 5 N., R. 18 W., corner of lots 53, 54, 63, and 64; road east.....	41 18 32.3	82 14 16.3
South Amherst, crossroads.....	41 21 27.2	82 14 25.2

OCTA QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
Jasper Mills, Baltimore & Ohio R. R. crossing, three-fourths mile east of. Azimuth, 253° 36'.....	39 31 19.1	83 30 27.0
Sugarcreek church, intersection of Palmer pike east-west and road north, about 300 feet west of.....	39 32 54.1	83 30 27.5
Johnstown schoolhouse.....	39 33 59.5	83 30 19.6
Township line, stone post.....	39 34 28.5	83 30 46.4
Luray siding on Cincinnati, Hamilton & Dayton Ry.; east switch block.....	39 34 36.3	83 30 51.6
Hagler, Detroit, Toledo & Ironton Ry. crossing.....	39 35 16.8	83 30 55.7
Washington-Jefferson pike, northwest-southeast.....	39 35 41.1	83 30 46.2
Blackoak schoolhouse, platform in front of.....	39 36 08.6	83 30 29.8
Paint Creek, west end of bridge over.....	39 37 10.1	83 30 17.2
McDill's blacksmith shop, road east-west.....	39 38 58.3	83 30 01.1
Paint Creek, center of bridge over.....	39 39 35.3	83 30 16.7
Paint Creek, south end of iron bridge over.....	39 39 49.9	83 30 17.2
Pike west at small bridge.....	39 40 31.3	83 30 15.7
Maple Grove schoolhouse.....	39 41 47.6	83 30 15.2
Fayette-Madison county line, stone monument.....	39 42 29.9	83 30 10.1
Stokes-Range township monument.....	39 44 02.8	83 30 07.8
Sedalia, 2 miles west of; center of South Solon pike, in front of Jim Chapman's gate.....	39 43 59.8	83 31 02.3

OCTA QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
T road north.....	39	44	02.7	83	30	01.9
Y road east.....	39	43	41.5	83	31	32.1
Grasse Point church, T road north at.....	39	43	50.2	83	32	00.2
Paint Creek, center of covered bridge over.....	39	43	58.2	83	32	31.6
T road south.....	39	44	07.8	83	32	50.1
T road north.....	39	44	11.4	83	34	51.6
Thomas schoolhouse, T road south at.....	39	44	12.4	83	35	13.5
South Solon, Main Street crossing on Detroit, Toledo & Ironton Ry.....	39	44	14.9	83	36	34.1
South Solon, crossing of Main and Washington streets.....	39	44	15.5	83	36	50.7
South Solon, T road south 1 mile west of.....	39	44	19.6	83	38	06.5
Madison-Green county line, stone monument.....	39	44	24.4	83	39	03.7
T road southwest.....	39	44	36.7	83	39	47.9
Shiloh Academy, T road north 0.5 mile east of.....	39	43	45.7	83	43	27.6
T road northwest.....	39	43	55.1	83	42	46.0
Gladstone, intersection of pikes one-fourth mile south of.....	39	44	18.5	83	41	03.3
Gladstone, intersection of roads 1 mile north of.....	39	45	17.7	83	41	15.7

Along highways east-west through center of quadrangle.

Jamestown, 2 miles south of, southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 55. Ohio, 1909".....	39	37	33.9	83	43	51.6
Jamestown, 1 mile south of; center of T road east.....	39	38	20.8	83	43	48.8
Jamestown, about 500 feet west of station; crossing of Cincinnati, Hamilton & Dayton Ry. and pike.....	39	39	22.4	83	44	06.0
Oak Grove schoolhouse No. 3, 0.8 mile southeast of; Jamestown-Cedarville pike at road northwest.....	39	40	45.1	83	44	20.9
Oak Grove schoolhouse, 0.7 mile northwest of; Jamestown-Cedarville pike at intersection with road southwest, 15 feet southwest to east corner of triangular grass plat.....	39	41	50.8	83	44	56.6
Center of pike on east-west Silver Creek-Jefferson township line.....	39	37	01.8	83	43	38.3
T road east, center of.....	39	35	46.7	83	43	22.2
Bowersville, center of cross streets, at town well.....	39	34	49.5	83	43	28.2
North-south road crossing.....	39	34	30.6	83	44	01.4
Greene-Clinton county-line stone post, near road.....	39	33	16.9	83	44	28.8
Bowersville, 2.5 miles south of, 0.5 mile south of Greene-Clinton county line; center of crossroads.....	39	32	53.7	83	44	47.2
Jamestown, about 2.5 miles southeast of, T road south; center of triangular plat.....	39	37	19.4	83	42	15.8
Pleasant Valley schoolhouse, center of T road south.....	39	37	06.4	83	41	07.1
Rosemoor, near station, road crossing on Cincinnati, Hamilton & Dayton Ry.....	39	37	43.3	83	40	00.2
Greene-Fayette county-line post, center of Cincinnati, Hamilton & Dayton Ry. track opposite.....	39	37	37.1	83	39	45.8
Edgefield, road crossing on Cincinnati, Hamilton & Dayton Ry.....	39	37	04.7	83	38	31.0
Edgefield, 1 mile north of, at Maple Grove schoolhouse; center of T road south.....	39	38	03.2	83	38	13.6
West Lancaster, in southwest part of town, southwest corner of intersection of roads at T road south; iron post stamped "Prim. Trav. Sta. No. 58. Ohio, 1909".....	39	37	22.6	83	36	43.1
Jasper-Jefferson township line, 10 feet south to center of T road south.....	39	36	37.2	83	35	12.0
Creamer farm, intersection of Washington-Jamestown pike with road northwest.....	39	36	24.0	83	33	54.8
Washington-Jeffersonville pike and crossroad, center of intersection, near Mr. Gaul's mail box.....	39	36	01.4	83	33	08.8
Jasper township, northeast corner of; center of north-south road at wire fence west Parrott, near station, road crossing on Detroit, Toledo & Ironton Ry.....	39	36	34.3	83	32	51.8
Parrott, 1.25 miles east of station, north side of T road south; iron post stamped "Prim. Trav. Sta. No. 59. Ohio, 1909".....	39	36	51.8	83	31	53.2
Blackoak schoolhouse, center of road opposite.....	39	36	56.7	83	30	29.4
Hagler, crossing of Detroit, Toledo & Ironton Ry. and northeast-southwest road.....	39	36	08.7	83	30	29.8
	39	35	16.8	83	30	55.7

Along highways near southwest corner of quadrangle.

Jasper Mills, Baltimore & Ohio R. R. crossing northeast of.....	39	31	19.1	83	30	27.0
Jasper, 0.8 mile east of station, at southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 60. Ohio, 1909".....	39	31	09.0	83	30	27.8
Corner stone at T road northwest.....	39	30	01.2	83	30	38.4

Magnetic declination of center line east-west through quadrangle, 0° 11' W.

OTTAWA QUADRANGLE.

Along Cincinnati, Hamilton & Dayton Ry. near south border of quadrangle.

Stations.	Latitude.		Longitude.	
	°	' "	°	' "
Road crossing, north-south.....	41 01	14.1	84 14	45.4
Rs. 5 and 6 E., road crossing between.....	41 01	14.5	84 13	36.3
Detroit, Toledo & Ironton Ry. crossing.....	41 01	14.7	84 12	59.0
Criswell station.....	41 01	15.0	84 11	58.1
Road crossing, north-south.....	41 01	15.0	84 11	52.7
Road crossing, north-south.....	41 01	15.4	84 10	18.0
Avis, road crossing.....	41 01	15.4	84 10	09.7
Road crossing, north-south.....	41 01	15.7	84 08	59.7
Road crossing, north-south.....	41 01	15.8	84 08	25.8
Road crossing, north-south.....	41 01	15.8	84 08	07.9
Rs. 6 and 7 E., road crossing between.....	41 01	16.4	84 06	41.2
Road crossing, north-south.....	41 01	16.8	84 05	32.3
Road crossing, north-south.....	41 01	17.0	84 04	57.5
Road crossing, north-south.....	41 01	17.1	84 04	42.1
Glandorf, road crossing.....	41 01	17.2	84 04	23.4
Glandorf, road crossing one-half mile east of.....	41 01	17.4	84 03	48.0
Ottawa, crossing on Cincinnati, Hamilton & Dayton Ry.....	41 01	17.7	84 02	51.0
Ottawa, station of former Findlay, Fort Wayne & Western Ry.....	41 01	17.7	84 02	49.0
Road crossing, north-south.....	41 01	17.8	84 02	39.4
Detroit, Toledo & Ironton Ry. crossing.....	41 01	17.9	84 02	04.4

Along highways near west border of quadrangle.

T. 3 N., R. 5 E., corner of secs. 11, 12, 13, and 14.....	41 13	26.1	84 14	48.6
T. 3 N., R. 5 E., corner of secs. 23, 24, 25, and 26.....	41 11	41.7	84 14	49.8
Tps. 2 and 3 N., R. 5 E., corner of secs. 1, 2, 35, and 36.....	41 09	57.3	84 14	50.2
T. 2 N., R. 5 E., corner of secs. 11, 12, 13, and 14.....	41 08	13.0	84 14	49.7
T. 2 N., R. 5 E., corner of secs. 23, 24, 25, and 26.....	41 06	28.1	84 14	48.4
Tps. 1 and 2 N., R. 5 E., corner of secs. 1, 2, 35, and 36.....	41 04	43.4	84 14	47.2
T. 1 N., Rs. 5 and 6 E., corner of secs. 1, 6, 7, and 12.....	41 03	52.0	84 13	37.7
T. 1 N., Rs. 5 and 6 E., corner of secs. 25, 30, 31, and 36.....	41 00	22.3	84 13	35.9

Near southeast corner of quadrangle.

T. 1 N., R. 7 E., west corner of secs. 25 and 36; center of road at fence east.....	41 00	26.7	84 00	54.8
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Along Baltimore & Ohio R. R. between Holgate and Hamler.

Holgate, crossing of Baltimore & Ohio R. R. and Clover Leaf Route.....	41 14	53.9	84 07	40.5
Holgate, 1 mile east of, in northwest corner of field at T road, south, T. 3 N., R. 7 E., west quarter corner to sec. 6 is 30 feet west and 35 feet north of station; iron post stamped "Prim. Trav. Sta. No. 10, 1905".....	41 14	46.0	84 06	47.7
Holgate, 2 miles east of; road crossing north-south.....	41 14	30.0	84 05	34.6
Hamler, 2.5 miles west of, section line; road crossing north-south.....	41 14	17.4	84 04	28.8
T. 3 N., R. 7 E., corner of secs. 4, 5, 8, and 9; stone at crossroads.....	41 14	21.0	84 04	28.8
Hamler, 1.25 miles west of; road crossing north-south.....	41 14	04.1	84 03	18.9
Hamler, crossing of Baltimore & Ohio and Detroit, Toledo & Ironton railroads.....	41 13	46.7	84 01	47.4
Road crossing northeast-southwest, south track.....	41 13	31.1	84 00	25.4

OTWAY QUADRANGLE.

Along Norfolk & Western R. R. near northeast corner of quadrangle.

Stations.	Latitude.		Longitude.	
	°	' "	°	' "
Milepost 88, private-road crossing 1,080 feet south of.....	38 53	45.3	83 00	05.1
Milepost 87, Chillicothe-Portsmouth pike crossing northwest-southeast 630 feet north of.....	38 54	48.0	83 00	44.4
Clifford station.....	38 55	29.3	83 01	12.4
Wakefield, road crossing east-west 1 mile south of.....	38 57	14.3	83 01	22.6
Wakefield, road crossing.....	38 58	13.1	83 01	14.2
Wakefield, Chillicothe-Portsmouth pike crossing 1 mile north of.....	38 58	57.7	83 01	19.5
Sargents Pit, milepost 81 near, private-road crossing 760 feet south of.....	38 59	38.0	83 01	21.0

OTWAY QUADRANGLE—Continued.

Along highways.

Stations.	Latitude.	Longitude.
Pond Creek road at road east along ridge, 5 feet west to small white oak tree.....	38 45 31.7	83 04 13.3
Upper Pond Creek schoolhouse, 0.3 mile east of; center of T road west at W. E. Davis's residence, 25 feet west to stump.....	38 46 48.1	83 05 24.4
Pond Creek Baptist Church, west of T road south, 15 feet west and 30 feet south to A. J. Carter's mail box.....	38 46 44.9	83 06 32.6
Bertha, about 5 miles northwest of, in southwest corner of foundation of W. S. Newman's residence on Pond Creek; aluminum tablet stamped "Prim Trav. Sta. No. 6. Ohio, 1910".....	38 46 50.3	83 07 50.1
Grant de Mint's residence, front-yard gate.....	38 46 30.6	83 08 50.7
Pond Creek-Bear Creek divide, top of; forks of road.....	38 46 34.8	83 09 51.6
Forks of Bear Creek, north side of triangle in forks of road; James Morgan's mail box.....	38 47 33.3	83 11 31.1
William Rousch's residence, 0.25 mile south of; T road west at house, 15 feet north to southeast corner of yard fence.....	38 46 46.7	83 12 43.3
M. M. Smith's mail box, stump at forks of road.....	38 47 08.5	83 13 21.2
New Amsterdam schoolhouse; center of T road northeast.....	38 47 35.7	83 13 49.4
Pink, 3 miles north of; center of T road east at Halve's residence.....	38 48 22.0	83 14 51.0
Pink, 3.5 miles north of; center of T road east.....	38 48 51.9	83 14 30.4
J. W. Smith's mail box at private road southeast.....	38 50 50.0	83 12 39.5
Otway, 0.8 mile southwest of, just north of bridge over Brush Creek; center of forks of road.....	38 51 18.1	83 12 13.5
Otway, 730 feet southeast of station, road crossing on Norfolk & Western Ry.....	38 51 50.1	83 11 15.5
Otway-Brush township line.....	38 52 01.4	83 11 29.1
Otway, 1 mile north west of; road crossing.....	38 52 37.9	83 11 48.2
Milepost 22, 1,200 feet south of; road crossing.....	38 53 37.5	83 11 56.9
Rarden-Brush Creek township line.....	38 53 55.6	83 12 22.1
Milepost 24, track opposite.....	38 54 59.6	83 13 38.1
Rarden, road crossing at station.....	38 55 16.8	83 14 35.9
Rarden, 1.8 miles north of; center of T road northeast in Dry Fork Creek.....	38 56 47.4	83 14 51.9
Harmon, 1 mile southwest of; center of T road north.....	38 59 18.8	83 14 53.8
Harmon, in schoolhouse yard; Pike-Scioto county-line monument.....	38 59 55.4	83 14 02.0
Atkins's store, center of pike at road northwest.....	38 51 59.5	83 13 27.4
James Jones's residence, forks of road.....	38 51 17.0	83 14 28.8
Otway, 2 miles northeast of; center of T road northwest at top of hill.....	38 53 33.5	83 10 05.8
Comstock, pike at road south west, 15 feet southeast to forked apple tree.....	38 53 37.5	83 08 55.7
Comstock, 1 mile east of, south side of pike at road north, 10 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 7. Ohio, 1910".....	38 53 40.1	83 07 55.2
Crabtree, forks of road at T. F. Crowe's store, 10 feet northwest to north end of stone culvert.....	38 53 31.9	83 06 16.6
Crabtree, 1 mile southeast of; 45 feet east to center of bridge; pike at road south.....	38 52 53.7	83 05 50.8
John Noel's residence, center of pike at T road south.....	38 52 45.1	83 04 54.4
Rush Free Baptist Church, west of; pike at road northeast.....	38 51 49.8	83 03 42.9
Owensville, center of T road north at McDaniel's store.....	38 51 04.1	83 02 23.2
Owensville, 0.8 mile southeast of, just west of bridge over Dutch Run, 24 feet north to east end of stone culvert; forks of pike.....	38 50 30.9	83 01 48.0
Racetown, center of T pike west at old church building.....	38 50 32.6	83 01 14.6
Racetown, 1.5 miles north of; pike at T road west.....	38 51 54.5	83 00 53.0
Lucasville, 1 mile west of; center of T pike east at bridge over canal.....	38 52 30.4	83 00 57.3

Along highways near north border of quadrangle.

Harmon, 0.3 mile east of; Scioto-Pike county-line monument.....	38 59 52.2	83 13 37.4
McKinley residence, 0.2 mile east of; Scioto-Pike county-line monument.....	38 59 36.7	83 13 11.9
Scioto-Pike county-line monument in field.....	38 59 20.0	83 12 49.7
J. E. Teeter's residence, just north of; T road east.....	38 59 15.5	83 12 50.1
Scioto-Pike county-line monument in field.....	38 59 13.8	83 12 49.3
Ladd, center of crossroads at post office.....	38 59 12.9	83 10 53.4
Ladd, 1 mile south of post office, southwest point of triangle formed by forks of road, crossroad is just north of forks.....	38 58 16.6	83 10 52.5
Ladd, near center of T road south at large barn.....	38 58 29.2	83 09 31.1
Star schoolhouse, 0.5 mile west of; center of T road north, 65 feet west to center of steel bridge near Creek Fork.....	38 58 55.6	83 08 35.3
Camp, 1 mile west of post office, northeast corner of Jerry Star's farm, southwest corner of T road north at Star schoolhouse; iron post stamped "Prim. Trav. Sta. No. 80. Ohio, 1909".....	38 58 46.6	83 08 01.3
Camp, center of crossroads.....	38 58 27.8	83 06 56.9
Camp, near T road south at John M. Jones's mail box.....	38 58 26.2	83 04 56.3
Coopersville, 1 mile west of; road east at west point of grove.....	38 58 20.6	83 03 53.1
Coopersville, bridge over canal, center of crossroads west of.....	38 57 40.6	83 02 39.3
Wakefield, south of; Columbus-Portsmouth pike at road west.....	38 58 04.6	83 01 19.9

Magnetic declination for north border, 2° 24' W.; for south border, 1° 08' W.; for west border, 1° 06' W.; for center line, 1° 50' W.

OXFORD QUADRANGLE.

Near southeast corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Jacksonboro, T road east 1.5 miles south of.....	39 31 00.7	84 30 14.5
Jacksonboro, crossroads.....	38 32 19.7	84 30 07.1

Along highways near north border of quadrangle.

Tps. 5 and 6 N., R. 3 E., corner of secs. 1, 2, 35, and 36.....	39 44 41.7	84 30 01.0
Tps. 5 and 6 N., R. 3 E., corner of secs. 2, 3, 34, and 35.....	39 44 41.2	84 31 09.4
West Alexandria, crossing of Dayton and Main streets. Azimuth of Cincinnati Northern R. R. in West Alexandria is 336° 32'.....	39 44 40.9	84 31 54.5
Tps. 5 and 6 N., R. 3 E., corner of secs. 4, 5, 32, and 33.....	39 44 40.4	84 33 25.3
T. 8 N., R. 3 E., corner of secs. 31 and 32.....	39 44 39.9	84 34 32.8
T. 8 N., Rs. 2 and 3 E., corner of secs. 31 and 36.....	39 44 39.4	84 35 40.1
Tps. 7 and 8 N., R. 3 E., corner of secs. 1, 2, 35, and 36.....	39 44 38.9	84 36 45.8
Eaton, crossing of Pennsylvania R. R. and Main Street. Azimuth of railroad, 168° 28'.....	39 44 39.0	81 37 47.4
Eaton, in west part of; intersection of Main Street and Richmond pike.....	39 44 38.9	84 38 27.0
Tps. 7 and 8 N., R. 2 E., corner of secs. 4, 5, 32, and 33.....	39 44 38.2	84 40 08.3
Tps. 7 and 8 N., Rs. 1 and 2 E., corner of secs. 1, 6, 31, and 36.....	39 44 37.8	84 42 11.5
T. 8 N., R. 1 E., corner of secs. 35 and 36.....	39 44 37.8	84 43 18.8

Along highways near west border of quadrangle.

T. 5 N., R. 1 E., near northeast corner of sec. 36; T road east.....	39 29 35.8	84 41 48.4
T. 5 N., R. 1 E., northeast corner of sec. 25; T road north.....	39 30 30.1	84 42 08.7
Fourmile Creek, center of covered bridge over.....	39 30 34.6	84 43 03.2
T. 5 N., R. 1 E., northeast corner stone of sec. 26.....	39 30 28.5	84 43 16.0
Oxford, in southwest corner of City Hall; aluminum tablet stamped "Prim. Trav. Sta. No. 1, 1908".....	39 30 37.4	84 44 25.2
Oxford, north end of College Avenue at center of junction with east-west street.....	39 30 55.6	84 44 42.7
T. 6 N., R. 1 E., northeast corner of sec. 34; center of T road east.....	39 31 56.6	84 44 28.7
T. 6 N., R. 1 E., northeast corner of sec. 22.....	39 36 42.5	84 44 27.8
Ramsey School No. 2, in northwest corner of schoolhouse; aluminum tablet (elevation 1,038) stamped "Prim. Trav. Sta. No. 2, 1908".....	39 37 35.8	84 44 27.1
T. 6 N., R. 1 E., northeast corner of sec. 15; center of crossroads.....	39 37 35.0	84 44 27.5
T. 6 N., R. 1 E., northeast corner of sec. 10; center of crossroads.....	39 38 29.1	84 44 27.5
T. 6 N., R. 1 E., northeast corner of sec. 3; crossroads.....	39 39 21.3	84 44 27.1
T. 7 N., R. 1 E., southeast corner of sec. 34; crossroads.....	39 39 21.3	84 44 26.8
T. 7 N., R. 1 E., northeast corner of sec. 34; center of crossroads.....	39 40 13.8	84 44 26.4
T. 7 N., R. 1 E., quarter corner east side of sec. 27; aluminum tablet in northeast corner of concrete bridge just south of crossroads (elevation 1,093).....	39 40 39.6	84 44 26.6
T. 7 N., R. 1 E., northeast corner of sec. 27.....	39 41 06.5	84 44 27.1
T. 7 N., R. 1 E., northeast corner of sec. 22; center of T road west.....	39 41 59.4	84 44 27.4
T. 7 N., R. 1 E., northeast corner of sec. 15; center of crossroads.....	39 42 52.2	84 44 26.9
T. 7 N., R. 1 E., northeast corner of sec. 10; center of crossroads.....	39 43 45.0	84 44 27.0
Eaton, 6 miles west and 0.8 mile south of, 850 feet north of northeast corner of sec. 10; aluminum tablet in southwest corner of foundation of bridge (elevation 1,119).....	39 43 53.3	84 44 27.2
Eaton, 6 miles west of, in southeast corner of foundation of concrete bridge; aluminum tablet stamped "Prim. Trav. Sta. No. 4. Ohio, 1908".....	39 44 37.9	84 44 26.9
T. 7 N., R. 1 E., northeast corner of sec. 3; center of crossroads.....	39 44 37.9	84 44 27.4
Tps. 7 and 8 N., R. 1 E., southeast corner of sec. 35; T road north.....	39 44 37.8	84 43 18.8

Magnetic declination for west border, 1° 05' E.

PAULDING QUADRANGLE.

Along Cincinnati, Hamilton & Dayton Ry.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Batson station.....	41 01 04.9	84 44 44.0
Road crossing, north-south.....	41 01 05.0	84 43 34.6
Road crossing, north-south.....	41 01 05.3	84 42 25.4
T. 1 N., Rs. 1 and 2 E., corner of secs. 19, 30, 24, and 25.....	41 01 07.9	84 41 15.6
Tipton, road crossing.....	41 01 05.8	84 40 08.1
Road crossing, north-south.....	41 01 06.1	84 38 57.8
Road crossing, north-south.....	41 01 06.3	84 37 48.9
Road crossing, north-south.....	41 01 06.6	84 36 40.1

PAULDING QUADRANGLE—Continued.

Along Cincinnati, Hamilton & Dayton Ry.—Continued.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing, north-south.....	41 01 06.7	84 36 05.4
Road crossing, north-south.....	41 01 06.8	84 35 30.6
Haviland, crossing of Cincinnati Hamilton & Dayton Ry. and Cincinnati Northern R. R.....	41 01 06.9	84 34 55.6
T. 1 N., Rs. 2 and 3 E., corner of secs. 19, 30, 24, and 25.....	41 01 09.1	84 34 21.2
Road crossing, north-south.....	41 01 07.3	84 33 11.6
Road crossing, north-south.....	41 01 07.5	84 32 02.5
Road crossing, north-south.....	41 01 07.8	84 30 53.0

On Cincinnati Northern R. R.

Crossing of east-west road.....	41 00 10.4	84 34 55.0
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Along highways near north border of quadrangle.

Section line at north-south road crossing.....	41 14 25.9	84 30 55.1
T. 3 N., R. 3 E., corner of secs. 4, 5, 8, and 9; crossroads.....	41 14 16.5	84 32 02.9
T. 3 N., R. 3 E., corner of secs. 5, 6, 7, and 8; crossroads.....	41 14 15.6	84 33 11.8
T. 3 N., Rs. 2 and 3 E., crossing of Cincinnati Northern R. R. just east of corner of secs. 1, 6, 7, and 12.....	41 14 15.6	84 34 08.8
T road south.....	41 13 54.7	84 34 56.5
Cecil, crossroads 1 mile north of.....	41 13 52.2	84 36 06.3
T. 3 N., R. 2 E., center of sec. 2 T road west.....	41 14 41.4	84 36 05.1

Along west border of quadrangle (corrected mean of two lines).

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Crossroads at schoolhouse No. 2.....	41 12 29.6	84 44 54.2	.....
T. 3 N., R. 1 E., corner of secs. 15, 16, 21, and 22.....	41 12 29.6	84 44 47.0	550
Antwerp, Main Street crossing on Wabash R. R.....	41 10 51.0	84 44 23.9	10,122
Antwerp, 0.9 mile southeast of; bridge over ditch.....	41 10 00.1	84 44 04.2	5,375
T. 2 N., R. 1 E., corner of secs. 2, 3, 10, and 11; crossroads.....	41 09 02.7	84 43 36.7	6,178
T. 2 N., R. 1 E., 30 feet north by 25 feet east of corner of secs. 10, 11, 13, and 14, about 3.5 miles southeast of Antwerp, in southwest corner of Pugh schoolhouse yard; iron post stamped "Prim. Trav. Sta. No. 44, 1910".....	41 08 10.3	84 43 36.2	5,302
T. 2 N., R. 1 E., corner of secs. 10, 11, 14, and 15; crossroads at schoolhouse.....	41 08 09.9	84 43 36.4	.....
T. 2 N., R. 1 E., corner of secs. 14, 15, 22, and 23, 10 feet north to center of crossroads.....	41 07 17.3	84 43 36.2	5,370
T. 2 N., R. 1 E., northwest corner of sec. 23, at crossroads at bridge over ditch, in northwest corner of field owned by E. H. Amspough; iron post stamped "Prim. Trav. Sta. No. 2, 1905".....	41 07 16.9	84 43 35.8	.....
T. 2 N., R. 1 E., corner of secs. 22, 23, 26, and 27; crossroads.....	41 06 24.5	84 43 35.9	5,340
T. 2 N., R. 1 E., corner of secs. 26, 27, 34, and 35; crossroads.....	41 05 31.8	84 43 35.4	5,330
Payne, Main Street crossing on Nashville, Chattanooga & St. Louis Ry. Tps. 1 and 2 N., R. 1 E., corner of secs. 2, 3, 34, and 35.....	41 04 39.2	84 43 35.0	1,160
T. 1 N., R. 1 E., corner of secs. 2, 3, 10, and 11.....	41 03 45.5	84 43 35.4	5,440
Crossroads at schoolhouse No. 2.....	41 03 39.7	84 44 45.0	.....
T. 1 N., R. 1 E., corner of secs. 10, 11, 14, and 15; crossroads.....	41 02 52.9	84 43 35.2	5,320
T. 1 N., R. 1 E., corner of secs. 9, 10, 15, and 16; crossroads.....	41 02 52.9	84 44 45.8	.....
T. 1 N., R. 1 E., corner of secs. 14, 15, 22, and 23; crossroads.....	41 02 00.4	84 43 35.0	5,310
T. 1 N., R. 1 E., corner of secs. 15, 16, 21, and 22; crossroads at schoolhouse.....	41 02 00.3	84 44 44.3	.....
T. 1 N., R. 1 E., corner of secs. 22, 23, 26, and 27; crossroads.....	41 01 07.7	84 43 34.6	5,330
Batson, southwest corner of G. H. Chapman's front yard, at crossroads; iron post stamped "Prim. Trav. Sta. No. 3".....	41 01 08.0	84 44 43.7	.....
Batson, 1 mile east of, road crossing on Cincinnati, Hamilton & Dayton Ry.....	41 01 05.0	84 43 34.6	274

Near east border of quadrangle.

T. 2 N., R. 1 E., north corner of secs. 3 and 4; jog in road.....	41 09 54.7	84 30 54.8	.....
T. 3 N., R. 3 E., corner of secs. 27, 28, 33, and 34; crossroads.....	41 10 47.3	84 30 52.3	.....

PAULDING QUADRANGLE—Continued.

Along highways through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 2 N., R. 1 E., corner of secs. 11, 12, 13, and 14; crossroads.....	41 08 09.2	84 42 27.2	.....
T. 2 N., R. 1 E., east corner of secs. 12 and 13, 5 feet north of center of crossroads.....	41 08 08.8	84 41 16.8	5,390
Crossroads.....	41 08 08.7	84 41 16.8	.....
T. 2 N., R. 2 E., west corner of secs. 7 and 18, 15 feet south of center of crossroads.....	41 08 08.6	84 41 16.8	.....
T. 2 N., R. 2 E., corner of secs. 7, 8, 17, and 18; crossroads at school-house.....	41 08 08.4	84 40 10.9	5,040
T. 2 N., R. 2 E., corner of secs. 8, 9, 16, and 17; T road north.....	41 08 07.9	84 39 01.4	5,310
T. 2 N., R. 2 E., corner of secs. 9, 10, 15, and 16; crossroads.....	41 08 07.6	84 37 52.0	5,310
Paulding, 2 miles west of, at southeast corner of crossroads, 20 feet south and 20 feet east of quarter corner; iron post stamped "Prim. Trav. Sta. No. 45. Ohio, 1910"	41 08 07.4	84 37 17.3	2,654
T. 2 N., R. 2 E., corner of secs. 10, 11, 14, and 15.....	41 08 07.2	84 36 43.0	2,630
T. 2 N., R. 2 E., corner of secs. 11, 12, 13, and 14; T road south.....	41 08 07.1	84 35 33.2	5,340
Paulding, cross streets; southeast corner of public square.....	41 08 14.5	84 34 45.1	3,746
T. 2 N., R. 3 E., west corner of secs. 7 and 18; crossroads.....	41 08 07.8	84 34 24.3	1,729
T. 2 N., R. 3 E., west corner of secs. 18 and 19; T road east.....	41 07 15.4	84 34 24.0	5,310
T. 2 N., R. 2 E., east corner of secs. 13 and 24.....	41 07 15.7	84 34 24.0	.....
T. 2 N., R. 3 E., corner of secs. 17, 18, 19, and 20; crossroads at school-house.....	41 07 15.8	84 33 13.8	5,370
T. 2 N., R. 3 E., corner of secs. 16, 17, 20, and 21; crossroads.....	41 07 16.2	84 32 03.7	5,360
T. 2 N., R. 3 E., corner of secs. 15, 16, 21, and 22; crossroads at school-house.....	41 07 16.2	84 30 53.6	5,370

Near southwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Batson, 1 mile south and 1.3 miles east of, at southeast corner of crossroads, 20 feet north and 20 feet east to corner of secs. 26, 27, 31, and 35, T. 1 N., R. 1 E., near St. Paul's Church; iron post stamped "Prim. Trav. Sta. No. 18. Ohio, 1909".	41 00 15.1	84 43 34.3

Magnetic declination for west border, 17' W.; for center line, 23' W.

PEEBLES QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Adams-Scioto county-line monument, at Mustard farm.....	38 58 00.7	83 16 10.2
Adams-Scioto county-line monument.....	38 58 10.8	83 16 10.3
Sycamore tree in triangle at forks.....	38 59 30.7	83 18 49.6
Old frame schoolhouse, center of crossroads at.....	38 59 12.2	83 19 49.2
Locust Grove, 1.5 miles east of; center of T road north.....	38 59 06.9	83 21 01.0
Locust Grove, in north part of town, southeast corner of Bratton's blacksmith shop, northwest corner of T road west; iron post stamped "Prim. Trav. Sta. No. 81. Ohio, 1909".....	38 59 30.6	83 22 39.2

Along highways near southeast corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
M. M. Correll's residence, on top of hill northwest of, forks of road; 10 feet north to charred stump.....	38 45 28.9	83 17 14.8
Pink, at post office, in southeast corner of garden, on north side of road at W. B. Evans's store; iron post stamped "Prim. Trav. Sta. No. 10. Ohio, 1910".....	38 45 21.4	83 16 11.6
Scioto-Adams county-line monument.....	38 45 21.1	83 16 06.0
Perry Chapel grounds, front gate.....	38 46 07.1	83 15 42.6
Forks, 0.2 mile north of store, 15 feet west to Kenton Lawson's mail box.....	38 47 36.3	83 15 23.1

PEEBLES QUADRANGLE—Continued.

Along highways east from point near Scioto-Adams county line to point near Unity.

Stations.	Latitude.	Longitude.
Scioto-Adams county line, 0.2 mile east of, on south side of Otway-Wamsley pike, just east of road south, opposite W. H. Jones's residence; iron post stamped "Prim. Trav. Sta. No. 11. Ohio, 1910".....	38 50 28.7	83 15 48.9
W. H. Jones's residence, on Otway-Wamsley pike, at road south, 20 feet west to center of bridge.....	38 50 28.5	83 15 49.6
Scioto-Adams county line, at center of Otway-Wamsley pike.....	38 50 21.2	83 16 06.9
Wamsley, 0.5 mile northeast of; center of forks of pike.....	38 50 19.0	83 16 53.1
Old store building, forks of pike, south point of grass triangle.....	38 51 41.8	83 19 28.9
Mineral Springs, center of forks of pike.....	38 53 12.3	83 19 46.5
Mineral Springs, 0.8 mile northwest of, at forks at old store building; south point of triangle.....	38 53 53.0	83 20 42.5
Mineral Springs, 2 miles northwest of, on ridge, on land of James Miller, northwest of his house; underground station mark a pottery pyramid (Peach Mount triang. sta., C. & G. S.), surface mark a section of 6-inch drain tile pipe filled with concrete.....	38 53 43.52	83 21 43.44
Atkins's store, just outside of Christ Church grounds, 10 feet northwest to corner of church yard, 30 feet west and 5 feet north to center of pike at road northeast; iron post stamped "Prim. Trav. Sta. No. 12. Ohio, 1910".....	38 53 15.8	83 22 31.9
Old steam furnace, center of T pike east, 20 feet north and 5 feet west to J. R. Shoemaker's mail box.....	38 54 21.5	83 24 29.8
Old steam furnace, 0.8 mile northwest of; center of T road north, 35 feet north to small sycamore tree.....	38 54 39.0	83 25 16.8
Jacksonville, center of T pike southeast at W. H. Foster's general store.....	38 54 28.9	83 26 25.7
Jacksonville, 1 mile southwest of; center of forks of pike.....	38 53 59.7	83 27 04.2
Brush Creek, center of T pike east of west end of bridge.....	38 52 06.7	83 27 36.4
Dunkinsville, center of T pike west at Methodist Episcopal Church.....	38 51 20.2	83 28 16.7
Dunkinsville, 1 mile northwest of; stone monument on pike at road north.....	38 52 07.4	83 28 34.6
Unity, 2 miles southeast of; center of T road south at Thomas Sevearingin's farm.....	38 52 41.9	83 29 20.1
Dunkinsville, 0.8 mile southwest of; center of covered bridge over Brush Creek.....	38 51 02.4	83 28 57.8

Along highways from point 2 miles southeast of West Union east via Lynx and Blue Creek to tie at Lower Churn Creek schoolhouse.

Andy Groom's residence, center of east-west road at private road south.....	38 45 52.2	83 29 46.1
Harmony Church, center of T road north, near.....	38 45 59.7	83 29 14.4
W. C. Satterfield's mail box, center of crossroads at; 0.2 mile east to covered bridge over Brush Creek.....	38 46 49.8	83 27 18.0
Lynx, center of pike at T road south.....	38 46 19.7	83 25 14.3
Lynx, 1 mile east of, on south side of pike at T road north, 15 feet west to center of small bridge; iron post stamped "Prim. Trav. Sta. No. 15. Ohio, 1910".....	38 46 34.8	83 23 46.6
Copas Hotel, just west of; center of pike at T road south.....	38 46 19.0	83 22 02.0
Copas Hotel, 1 mile east of; center of pike at T road north.....	38 46 26.4	83 20 49.0
Blue Creek post office, forks of pike at Coleman's store, 20 feet north by 12 feet west to southwest corner of office building.....	38 46 40.8	83 19 50.5
Covered bridge, center of forks at south end of.....	38 46 16.3	83 19 54.5

Magnetic declination for center line east-west, 1° E.; for south half of west border, 0° 02' W.; for north half of west border, 0° 35' E.; for west half of south border, 0° 1' E.; for east half of north border, 1° 43' E.; for west half of north border, 0° 51' E.

PERRYSVILLE QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T road northwest.....	40 29 19.5	82 21 15.9	.....
Northeast-southwest road at road south.....	40 30 17.4	82 20 03.2	8,114
Schoolhouse, center of crossroads.....	40 30 07.4	82 18 22.6	7,837
Danville, 3.5 miles north by 1.5 miles west of, at northeast corner of crossroads, 40 feet west by 15 feet north to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 65. Ohio, 1910".....	40 30 06.1	82 17 11.9	5,462
Forks of road.....	40 29 20.1	82 16 59.0	4,754

PERRYSVILLE QUADRANGLE—Continued.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Prim. Trav. Sta. No. 20. Ohio, 1907.....	40 38 06.4	82 13 59.2	.....
Loudonville, 1 mile west of, center of T road south.....	40 38 07.2	82 15 33.3	7,250
Quarter corner between sections, center of T road south.....	40 38 01.4	82 16 42.1	5,327
Loudonville, 3.25 miles west of, center of T road east at Mount Falls Church, 20 feet west to guide post.....	40 37 58.3	82 17 52.3	5,421
Loudonville, 4.5 miles west and 1 mile north of, 10 feet south and 5 feet east to triangle; forks of road.....	40 38 57.7	82 19 18.6	8,954
Tps. 20 and 22 N., Rs. 16 and 17 W., quarter corner between secs. 31 and 36, at T road north; Ashland-Richland county line.....	40 38 45.7	82 20 19.7	4,852
T. 22 N., R. 17 W., south corner of secs. 35 and 36.....	40 38 19.3	82 21 28.1	5,908
Clear Fork, center of covered bridge over.....	40 38 18.6	82 22 03.6	2,725
Newville, 0.8 mile northeast of, on west side of T road east, 12 feet east and 5 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 66. Ohio, 1910".....	40 38 18.8	82 22 49.4	3,522
Newville, center of crossroads at schoolhouse.....	40 37 42.8	82 23 12.8	4,070
Newville, 1.7 miles west and 0.25 mile south of; center of T road south. T. 21 N., R. 17 W., stone at corner of secs. 4, 5, 8, and 9.....	40 37 33.0	82 24 54.0	7,854
Slaters Run, 0.25 mile north of schoolhouse, small mound in triangle at forks of road just south of bridge over run.....	40 37 24.8	82 24 54.0	830
T. 19 N., R. 18 W., east corner of secs. 1 and 12, 20 feet south to road north.....	40 37 37.7	82 25 42.3	3,934
T. 21 N., R. 17 W., west corner between secs. 6 and 7.....	40 37 24.6	82 27 11.3	6,990
T. 19 N., R. 18 W., stone at corner of secs. 1, 2, 11, and 12.....	40 37 23.9	82 27 11.3	70
Belleville, 1 mile northeast of, forks of road, 15 feet east to south end of culvert.....	40 37 27.4	82 28 18.0	5,144
	40 37 29.3	82 29 41.8	6,455

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Wesley Chapel, 1 mile north of; T road west, 5 feet west to center of triangle, 15 feet southeast to maple tree.....	40 31 03.9	82 15 48.9
Wesley Chapel, 2 miles north of; crossroads, 40 feet southwest to three mail boxes. Knox-Ashland county line, 1 mile south of; crossroads, 15 feet north to cherry tree, 35 feet west to center of triangle, 40 feet east to two mail boxes in triangle.....	40 32 00.7	82 15 31.2
Center of road at Knox-Ashland county line.....	40 33 02.0	82 15 34.5
Junction of Danville-Loudonville and State roads, center of triangle, 30 feet south-west to guidepost "Loudonville 5 miles, Danville 9 miles, Mount Vernon 17 miles," 30 feet north to telephone pole.....	40 33 48.9	82 15 40.0
T road east, 25 feet north to telegraph pole 328, 45 feet south to peach tree on bank. Loudonville, 3 miles south and 1.5 miles west of; center of triangle at road forks, 180 feet southwest to bridge over Pine Run, 35 feet southwest to guidepost "Mount Vernon 19 miles, Loudonville 3 miles," 25 feet north to telegraph pole.....	40 34 15.9	82 15 47.3
Loudonville, 2 miles south of; crossroads, 60 feet north to south end of covered bridge over Clear Fork.....	40 34 49.3	82 15 47.7
Loudonville, 1.5 miles southwest of; T road west, 40 feet southwest of telephone pole 3163, 35 feet northwest to corner of picket fence.....	40 35 42.8	82 16 00.1
North-south section line, second-class road south at bend of road to north, 12 feet east to telephone pole painted "1242".....	40 36 23.3	82 15 36.4
Hayesville, primary traverse station tablet stamped "1244 elev.".....	40 37 07.6	82 15 04.3
Hayesville, 1.25 miles south of; four corners, 25 feet southeast to board painted "1, 2, 3, 4, 8".....	40 44 59.1	82 15 35.8
Hayesville, center of fountain at intersection of Main, South Locust, and North Mechanic streets.....	40 46 21.8	82 15 43.3
	40 45 17.2	82 15 35.7
	40 46 22.2	82 15 43.7

Magnetic declination for south border, 2° 01' W.; for east border, 2° 12' W.; for west border, 1° 52' W.; for east-west line through center, 1° 44' W.

PHILO QUADRANGLE.

Along Baltimore & Ohio R. R. between Zanesville and Norwich.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Zanesville, 2 miles north of, Zanesville-Gilbert road just west of, between Baltimore & Ohio and Cincinnati & Muskingum Valley railroads, in southeast corner of field of Mrs. Margaret Clark, in stone post 10 by 12 by 33 inches; aluminum tablet stamped "Prim. Trav. Sta. No. 62, 1905".....	39 58 42.2	81 58 55.0
Block station, just west of; overhead crossing.....	39 58 40.7	81 58 31.0
Milepost 65, center of track opposite.....	39 58 35.6	81 55 08.4

PHILO QUADRANGLE—Continued.

Along Baltimore & Ohio R. R. between Zanesville and Norwich—Continued.

Stations.	Latitude.	Longitude.
Sonora station, just northeast of, just inside of railroad right of way, northwest corner of J. A. Rush's residence bears S. 40° 45' E., distant 25.5 feet, northeast corner of station bears S. 39° W., distant 87.8 feet; iron post stamped "Prim. Trav. Sta. No. 61, 1905".....	39 59 02.3	81 54 12.4
Milepost 67, road crossing.....	39 59 25.7	81 53 27.4
Milepost 69, 0.75 mile west of, at road crossing; warning post on north side of track.....	39 58 51.3	81 52 17.2
Bridgeville, 1 mile west of; road crossing under culvert.....	39 58 34.1	81 51 07.2
Bridgeville station, center of track opposite.....	39 58 54.4	81 50 05.6
Norwich station, 1.25 miles west of, national road crossing.....	39 58 39.5	81 48 48.3
Sundale station, center of track opposite.....	39 58 35.3	81 47 36.9
Sundale station, 0.75 mile east of, on north side of Baltimore & Ohio R. R., at north-south road crossing, in southwest corner of field owned by W. E. Dingley, center of railroad at road crossing bears S. 12° 30' W., distant 48 feet; iron post stamped "Prim. Trav. Sta. No. 60, 1905".....	39 58 54.0	81 46 47.1
Norwich, 0.5 mile east of; crossing of national road and north-south road, 33 feet northwest to cross on telephone pole, 54 feet south to corner yard fence.....	39 59 14.9	81 46 54.4
Wheeling & Lake Erie R. R., 400 feet south of milepost 4; private road crossing.....	39 59 35.3	81 58 52.1

Along highways near east border of quadrangle.

Sleepy Hollow schoolhouse, 0.75 mile south of; T road north, 6 feet south to south end of culvert, 39 feet northwest to mail box on fence.....	39 47 35.5	81 45 29.2
Sleepy Hollow, 0.5 mile north of; T road east, 13 feet northeast to elm snag, 27 feet west to cross on fence post.....	39 48 53.8	81 45 13.6
Snowball schoolhouse, 0.33 mile southeast of T road southwest, 15 feet north to cross on large corner fence post, 28 feet southeast to west end of box culvert....	39 49 32.6	81 45 14.2
Highhill post office, just north of; T road east, 16 feet southwest to cross on corner of stable, 33 feet northeast to "MF" cut on stone wall.....	39 50 00.8	81 46 04.4
Freeland, 1.5 miles south of, opposite Lee Warner's mail box; arrow painted on rail fence.....	39 51 33.4	81 46 16.2
Freeland, in west corner of George Thorla's field, south rail of narrow-gage railroad bears N. 31° 45' W., distant 38 feet, south corner of station bears N. 57° E., distant 152.3 feet; in stone post 12 by 12 by 36 inches, marked "U.S.G.S."; tablet stamped "Prim. Trav. Sta. No. 69".....	39 52 51.2	81 46 31.7
Bridge, center of.....	39 53 43.9	81 45 34.0
Rich Hill, Methodist Church, T road southeast, 10 feet northwest to cross on telegraph pole, 28 feet southeast to guidepost "Rexs Mill 1.5 miles".....	39 54 33.9	81 45 12.1
Rexs Mill, 0.25 mile southeast of; T road west, 32 feet west to cross on fence post, 27 feet southwest to cross on gatepost.....	39 55 19.0	81 44 29.5
Rexs Mill, 1 mile northwest of; crossroads, 21 feet northwest to Lee Davis's mail box, 22 feet northeast to cross on telegraph pole.....	39 56 14.0	81 45 14.0
Sundale, 1.25 miles east by 0.25 mile south of; T road south, 22 feet southeast to cross on corner fence post, 45 feet north to cross on board fence.....	39 58 11.0	81 45 57.3

Along Ohio & Little Kanawha Ry. between Brush Creek and Dillon.

Brush Creek bridge, about 1 mile northwest of, 0.25 mile southeast of coal-mine shaft; road crossing.....	39 53 22.1	81 59 42.6
Frazer station, in northeast corner of A. M. Shyllock's field, 24 feet north to south rail of Ohio & Little Kanawha Ry., 31 feet east to center of north-south road; iron post stamped "Prim. Trav. Sta. No. 63, 1905".....	39 52 41.4	81 58 50.9
Brush Creek bridge, 0.75 mile south of; overhead road crossing.....	39 52 02.8	81 59 00.9
Ohio & Little Kanawha Ry., 0.33 mile north of milepost 3, north-south road crossing.....	39 51 15.2	81 59 07.3
Stovertown, road crossing at station.....	39 50 19.6	81 59 12.0
Milepost 1, road crossing.....	39 49 28.6	81 59 06.8
Cannelsville station, Dillon post office, just east of; street crossing on railroad....	39 48 48.9	81 59 46.0

Along highways from Dillon post office to a point 1.75 miles north of Rowland post office.

Dillon post office, 1 mile southeast of; T road west at large elm tree, 15 feet southwest to elm tree, 29 feet northeast to corner fence post.....	39 48 16.4	81 59 15.9
Forks of road, 17 feet north to cross on telegraph pole, 22 feet east to mail box No. 46.....	39 47 25.2	81 58 57.9
Bailey Church and schoolhouse, 0.25 mile north of; T road south, 24 feet east to small walnut tree, 35 feet southwest to cross on fence post.....	39 45 21.5	81 59 13.8
Sharp Hill schoolhouse, 0.25 mile east of; T road south, 35 feet southwest to cross on corner fence post, 21 feet northeast to wild-cherry tree.....	39 45 39.4	81 56 46.3
Durant, 0.75 mile west of; T road north, arrow painted on Lewis Fouta's yard fence.....	39 44 57.2	81 55 37.4

PHILO QUADRANGLE—Continued.

Along highways from Dillon post office to point 1.75 miles north of Rowland post office—Continued.

Stations.	Latitude.	Longitude.
Durant, W. H. Stokes's front yard, south corner of fence bears N. 10° 45' W., distant 29.7 feet; iron post stamped "Prim. Trav. Sta. No. 67, 1905".....	39 45 02.9	81 54 48.5
At corner of apple orchard; T road north, 30 feet to cross on board fence, 28 feet east to cross on fence post.....	39 45 03.2	81 53 33.4
Durant, 2 miles east of; T. 11 S., R. 12 W., at corner of secs. 3, 4, 9, and 10, stone. Brick house; T road west, cross on corner fence post.....	39 44 53.7	81 52 19.3
John Sewall's residence; T road east, 24 feet north to cross on fence post, 45 feet west to cross on corner of outbuilding.....	39 45 10.7	81 50 40.2
John Sewall's residence, 1 mile east of; T road southwest, 28 feet south to cross on gatepost, 36 feet west to corner of hedge fence.....	39 45 30.3	81 49 29.2
Rowland post office, 0.5 mile north of, at T road west, in northeast corner of Walton Blackledge's field; iron post stamped "Prim. Trav. Sta. No. 68, 1905".....	39 45 12.0	81 48 31.8
Rowland, 1.75 miles north of; T road southeast, 19 feet south to mail box, 24 feet northeast to large dead tree.....	39 45 04.2	81 46 21.5
	39 45 59.2	81 45 55.2

Magnetic declination for north border, 1° 52' W.; for south border, 1° 04' W. to 1° 22' W.; for east border, 1° 15' W. to 1° 38' W.; for west border, 0° 51' W.

PIKETON QUADRANGLE.

Along Norfolk & Western Ry. from Piketon to Sargents.

Stations.	Latitude.	Longitude.
Piketon station, road crossing 165 feet north of.....	39 03 51.0	83 00 50.3
Piketon, crossing of Chillicothe-Portsmouth pike 1 mile south of.....	39 03 14.6	83 01 09.9
Switch block to spur.....	39 02 34.9	83 01 35.3
Sargents, crossing of east-west road 1 mile north of.....	39 01 20.9	83 01 32.7
Sargents station, 1,200 feet north of, in southwest corner of Mrs. Carrie Sargent's farm, on east side of Chillicothe-Portsmouth pike, wire nail in cross cut in west face of sugar-maple tree bears S. 88° 05' E., 9 feet southwest to corner post at southwest corner of Mrs. Sargent's farm; iron bench-mark post stamped "Prim. Trav. Sta. No. 17".....	39 00 39.1	83 01 24.8

Along highways near north border of quadrangle.

Bainbridge, 1.5 miles east of; road crossing on Detroit, Toledo & Ironton Ry....	39 14 05.6	83 14 41.6
Dill, crossing of Chillicothe pike and Detroit, Toledo & Ironton Ry. at station....	39 14 42.8	83 12 44.4
Yankeetown, intersection of pike and road just southwest of town hall.....	39 14 26.9	83 03 34.1
Yankeetown, 0.7 mile southeast of cemetery; center of crossroads southeast of Dawson's mail box.....	39 14 35.7	83 02 23.3
Waller, about 3 miles southwest of; T road south.....	39 14 39.6	83 01 04.7

Along highways east-west through center of quadrangle.

Waverly, 1.2 miles west of; center of T road north.....	39 07 44.9	83 00 16.5
Red Bridge schoolhouse, north of, at George Cooke's mail box; center of T road west.....	39 07 18.6	83 01 42.5
Daleyville, forks of pike at old store, 15 feet east to locust tree in front of store....	39 06 25.7	83 03 39.4
Peeper Church, 300 feet northwest of; fork in road.....	39 07 16.2	83 04 31.3
Peeper Church, 0.5 mile north of, at frame schoolhouse; fork in road, 20 feet due south to small bridge.....	39 07 36.1	83 04 48.5
T road northeast, at foot of long hill.....	39 08 32.9	83 05 35.0
Buchanan, 15 feet north and 25 feet west to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 77. Ohio, 1909".....	39 08 59.3	83 07 25.5
Buchanan, 1 mile west of; T road northeast, 10 feet northwest to guide board on tree marked "Bainbridge 12 miles, No Name bridge 4 miles".....	39 08 33.1	83 08 39.5
Buchanan, near center of T road north at George Key's mail box.....	39 08 10.6	83 10 00.5
Mount Holiness Church, 20 feet south to center of triangle in forks of road.....	39 07 30.9	83 10 22.6
Steel bridge, forks of road east of, 30 feet north to end of board of guard fence....	39 07 04.5	83 11 23.2
Morgantown, T road west.....	39 07 45.5	83 11 53.6
Morgantown, 2.2 miles northwest of, at Isaac Wall's farm, on north side of T road southwest; iron post stamped "Prim. Trav. Sta. No. 78. Ohio, 1909".....	39 08 25.9	83 14 20.7
Benner schoolhouse, 0.2 mile south of; center of T road west.....	39 07 44.3	83 15 04.3
Latham, 1 mile northeast of; intersection of old State road and road northwest to Bainbridge.....	39 06 51.9	83 14 16.3
Latham, at I. O. O. F. building; center of crossroads.....	39 05 58.6	83 14 46.7
Sunfish Creek, 520 feet northeast of bridge.....	39 05 44.77	83 14 50.13

PIKETON QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Scioto-Pike county-line monument, in center of road opposite white-oak tree.....	39 00 36.5	83 14 57.0
Scioto-Pike county-line monument, 20 feet south and 20 feet east to T road west.	39 00 35.3	83 14 19.5
Scioto-Pike county-line monument, on bank, on north side of road.....	39 00 15.2	83 14 09.0
Scioto-Pike county-line monument, in J. W. Campbell's orchard, just north of Harmon.....	39 00 07.5	83 13 58.5
Sargents station, iron post No. 17.....	39 00 39.10	83 01 24.80

Magnetic declination for north border, 1° 26' W.; for south border, 2° 24' W.; for west border, 1° 56' W.; for east-west center line, 1° 24' W.

PIONEER QUADRANGLE.

Along highways near Ohio-Michigan State line.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 9 S., R. 2 W., corner of secs. 10, 11, 14, and 15; T road north.....	41 41 41.3	84 30 51.8
T. 9 S., R. 2 W., corner of secs. 9, 10, 15, and 16; T road east.....	41 41 41.0	84 32 01.1
Ohio-Michigan State line, center of north-south road.....	41 42 09.7	84 32 01.4
Pioneer, T road west, 1 mile east of, 30 feet northwest to cross cut on corner fence post, 42 feet southwest to cross cut on telephone pole.....	41 40 48.4	84 32 08.5
Pioneer, northeast corner of bridge at crossing of main streets.....	41 40 47.9	84 33 11.5
T. 9 S., R. 2 W., corner of secs. 17, 18, 19, and 20; crossroads.....	41 40 48.3	84 34 20.9
T. 9 S., R. 2 W., west corner of secs. 18 and 19; T road east.....	41 40 48.0	84 35 31.6
T. 9 S., R. 3 W., corner of secs. 13, 14, 23, and 24; crossroads.....	41 40 47.6	84 36 41.6
T. 9 S., R. 3 W., corner of secs. 14, 15, 22, and 23, at Bethel Church; crossroads.....	41 40 47.2	84 37 50.9
T. 9 S., R. 3 W., southeast corner of sec. 10, 4 miles west and 1 mile north of Pioneer, in southeast corner of Osborne's farm; iron post stamped "Prim. Trav. Sta. No. 13, 1905".....	41 41 39.7	84 37 51.3
Ohio-Michigan State line, T. 9 S., R. 3 W., 349 feet south of quarter corner between secs. 10 and 11.....	41 42 02.2	84 37 51.2
T. 9 S., R. 3 W., corner of secs. 9, 10, 15, and 16; T road north.....	41 41 39.2	84 39 01.3
T. 9 S., R. 3 W., corner of secs. 8, 9, 16, and 17; crossroads.....	41 41 38.8	84 40 11.4
T. 9 S., R. 3 W., north corner of secs. 17 and 18; T road south.....	41 41 38.4	84 41 21.4
Northwest Church, T road north.....	41 41 37.0	84 43 05.6
Field owned by F. M. Hugghy, in southeast corner of; iron post stamped "Prim. Trav. Sta. No. 19, 1905".....	41 41 37.1	84 44 50.8
Ohio-Michigan State line, center of north-south road, 3 feet south of southwest gatepost.....	41 41 51.3	84 44 50.6

Along highways near west border of quadrangle.

T. 9 S., R. 4 W., corner of secs. 14, 15, 22, and 23; crossroads.....	41 40 44.3	84 44 50.6
T. 9 S., R. 4 W., corner of secs. 22, 23, 26, and 27; T road west.....	41 39 51.9	84 44 50.6
T. 9 S., R. 4 W., corner of secs. 26, 27, 34, and 35; T road west.....	41 38 59.5	84 44 49.7
Tps. 9 and 10 S., R. 4 W., corner of secs. 2, 3, 34, and 35; center of north-south road crossing at corner.....	41 38 07.1	84 44 48.5
T. 10 S., R. 4 W., south corner of secs. 2 and 3; T road north.....	41 37 15.1	84 44 47.6
T. 8 N., R. 1 E., south corner of secs. 33 and 34; crossroads.....	41 36 07.5	84 44 58.8
T. 7 N., R. 1 E., southwest corner of sec. 3, in southwest corner of John Fox's garden, southwest corner of schoolhouse bears N. 79° 40' W., distant 190.7 feet, southwest corner of section 3 bears S. 48° W., distant 30.7 feet; iron post stamped "Prim. Trav. Sta. No. 20, 1905".....	41 35 07.5	84 44 58.1
T. 7 N., R. 1 E., corner of secs. 9, 10, 15, and 16; crossroads.....	41 34 15.0	84 44 58.3
T. 7 N., R. 1 E., corner of secs. 15, 16, 21, and 22; crossroads.....	41 33 23.0	84 44 58.3
T. 7 N., R. 1 E., corner of secs. 21, 22, 27, and 28; crossroads.....	41 32 31.0	84 44 58.0
T. 7 N., R. 1 E., corner of secs. 27, 28, 33, and 34; crossroads.....	41 31 39.0	84 44 57.7
Tps. 6 and 7 N., R. 1 E., corner of secs. 3, 4, 33, and 34; stone.....	41 30 47.0	84 44 57.3

PORTLAND QUADRANGLE (OHIO-IND.).

North along Ohio-Indiana State line.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Blacksmith shop, T road east.....			
T. 18 N., R. 1 W., east corner of fractional secs. 1 and 12, lane west; State line.....	40 15 11.8	84 48 15.8	2,620
T. 13 N., R. 1 E., west corner of secs. 5 and 8, center of T road east; State line.....	40 15 12.4	84 48 15.7	70
Tps. 13 and 14 N., R. 1 E., west corner of secs. 5 and 31, center of cross- roads; State line.....	40 16 04.0	84 48 14.7	5,220
T. 14 N., R. 1 E., west corner of secs. 30 and 31, T road east; State line.....	40 16 56.4	84 48 13.5	5,311
T. 19 N., R. 1 W., east corner of secs. 24 and 25; State line.....	40 17 48.9	84 48 12.8	5,310
T. 14 N., R. 1 E., west corner of secs. 19 and 30; State line.....	40 17 49.6	84 48 12.8	70
T. 19 N., R. 1 W., west corner of fractional secs. 13 and 24.....	40 18 41.6	84 48 12.4	5,270
T. 14 N., R. 1 E., west corner of secs. 7 and 18.....	40 19 26.6	84 48 12.0	4,550
T road west, center of.....	40 19 27.2	84 48 12.0	60
T. 14 N., R. 1 E., west corner of secs. 6 and 7, center of T road east; State line.....	40 20 18.5	84 48 12.5	5,200
T road west, center of; State line.....	40 20 19.8	84 48 12.5	130
Tps. 14 N., R. 1 E., northwest corner of sec. 6, Darke-Mercer county line, T road east; State line.....	40 21 11.2	84 48 13.1	5,200
T road west, center of; State line.....	40 21 12.3	84 48 13.1	110
T. 15 N., R. 1 E., 25 feet north and 20 feet east of stone at west corner of secs. 29 and 32, center of T road east, 3.5 miles south and 1.2 miles west of Fort Recovery; iron post stamped "Prim. Trav. Sta. No. 43. Ohio, 1910".....	40 22 03.9	84 48 13.4	5,229
T. 15 N., R. 1 E., west corner of secs. 20 and 29, T road east; State line.....	40 22 54.3	84 48 13.8	5,100
T. 15 N., R. 1 E., stone at west corner of secs. 17 and 20, T road east; State line.....	40 23 46.8	84 48 14.3	5,320
T. 15 N., R. 1 E., west corner of fractional secs. 30 and 19; State line.....	40 24 39.1	84 48 14.0	5,290
T road west, center of; State line.....	40 24 42.2	84 48 14.0	320
Fort Recovery, 1.2 miles north and 1.2 miles west of; center of T road east.....	40 25 58.1	84 48 13.5	7,677
Fort Recovery, 2 miles north and 1.2 miles west of; stone at T road east.....	40 26 50.9	84 48 12.7	5,350
T. 16 N., R. 1 E., west corner of secs. 6 and 31, stone at T road east; State line.....	40 27 56.5	84 48 11.6	6,641
Bridge, ditch west.....	40 28 44.0	81 48 10.7	4,811
Prim. Trav. Sta. No. 24. Ohio, 1909.....	40 29 41.3	84 48 09.6	5,801

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 6 S., R. 1 E., corner of secs. 28, 29, 32, and 33; crossroads.....	40 28 48.0	84 45 54.1
T. 6 S., R. 1 E., corner of secs. 29, 30, 31, and 32; crossroads.....	40 28 48.4	84 47 02.8
T. 6 S., R. 1 E., 20 feet east and 25 feet south of west corner of secs. 19 and 30, on Indiana-Ohio State line; iron post stamped "Prim. Trav. Sta. No. 24. Ohio, 1909".....	40 29 41.2	84 48 09.5
T. 27 N., R. 15 E., east corner of secs. 27 and 34, T road west; Ohio-Indiana State line.....	40 29 57.8	84 48 09.5
Ohio-Indiana State line, near quarter corner between secs. 25 and 30, T. 6 S., Rs. 1 E. and 1 W.....	40 29 06.1	84 48 10.3

Magnetic declination along Ohio-Indiana State line, 1° E.

PUT-IN-BAY QUADRANGLE.

Near Lacarne on Lake Shore & Michigan Southern Ry.

Station.	Latitude.	Longitude.
	° ' "	° ' "
Lacarne crossing, 2½ miles east of.....	41 31 09.0	82 59 35.4

RAVENNA QUADRANGLE.

Along Pennsylvania R. R. from Ravenna to Atwater.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Ravenna, Main Street crossing	41 09 28.0	81 14 51.5
Ravenna, crossing on Baltimore & Ohio R. R.	41 08 56.4	81 14 43.6
Rootstown station, road crossing 150 feet north of.....	41 06 18.4	81 12 51.7
Road crossing 15 feet south of milepost 45	41 04 38.2	81 11 39.5
Road crossing 655 feet north of milepost 48	41 02 21.2	81 10 19.6
Atwater station, road crossing 295 feet south of.....	41 01 25.4	81 09 49.8

Near Shalersville.

Shalersville, $2\frac{1}{2}$ miles south of, four corners	41 12 07.4	81 14 46.1
Shalersville, intersection of roads at	41 14 19.8	81 13 52.6

Along highways near south border of quadrangle.

T road south at stone culvert.....	41 01 28.8	81 00 08.2
Deerfield station, in southeast corner of Hubbards orchard on north side of east-west road, 418 feet east of road crossing, northeast corner of house owned by Mullen Coal Co. bears S. $51^{\circ} 15'$ E., distant 160.1 feet, nail in root of black oak tree on south side of road bears S. $42^{\circ} 15'$ W., distant 72 feet; iron post stamped "Prim. Trav. Sta. No. 38".....	41 01 29.3	81 01 11.8
T road south, 27 feet southeast to telephone pole.....	41 01 28.8	81 02 34.7
T. 1 R. 6, corner of secs. 29, 30, 31, and 32.....	41 01 28.5	81 03 02.1
T road south, 36 feet southeast to cross on corner fence post, 13 feet north to A. H. Legaller's mail box.....	41 01 28.9	81 03 54.4
Deerfield, 1.5 mile west of, T. 1, R. 6, corner of secs. 43, 44, 52, 53.....	41 01 29.0	81 04 46.1
T. 1, R. 6, corner of secs. 55 and 56 crossroads, 36 feet southwest to guidepost, 40 feet southeast to large fence post.....	41 01 29.0	81 05 55.6
Crossroads, 40 feet northeast to cross on corner yard fence, 40 feet southeast to cross on corner board fence.....	41 01 24.6	81 07 25.0
Atwater, crossroads.....	41 01 25.2	81 08 53.3
Atwater Center, in northeast corner of George Heiser's front lawn; iron post stamped "Prim. Trav. Sta. No. 37".....	41 01 25.1	81 09 41.5
Atwater Center, Pennsylvania R. R., crossing of east-west road.....	41 01 25.4	81 09 49.4

Along Lake Erie, Alliance & Wheeling R. R. between Newton Falls and Deerfield.

Newton Falls, 2.66 miles south of, in southwest corner of D. T. Hott's farm, at east-west road crossing, nail in root of gum tree bears N. $53^{\circ} 40'$ E., distant 72.4 feet, nail in root of black-oak tree bears S. $79^{\circ} 55'$ E., distant 39.8 feet, in sandstone post; aluminum tablet stamped "Prim. Trav. Sta. No. 36".....	41 09 10.8	81 00 05.3
Pritchard, road crossing.....	41 08 03.1	81 00 29.2
Road crossing.....	41 06 48.2	81 00 51.6
Diamond post office, road crossing at station.....	41 05 55.5	81 01 21.3
Diamond post office, road crossing 1 mile south	41 05 14.0	81 01 21.3
Davis, road crossing at station.....	41 04 22.3	81 01 20.7
Davis, road crossing east-west 0.75 mile south of station.....	41 03 43.8	81 01 16.9
Schoolhouse, road crossing.....	41 02 47.6	81 01 16.7
Deerfield station, road crossing east-west 70 feet northwest	41 01 29.0	81 01 17.2

RECTORVILLE QUADRANGLE.

Along highways from Wrightsville to Groom's store.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Wrightsville, 0.3 mile north of, at northeast corner of cross pikes at Leonard & Sons' general store, 20 feet west and 20 feet south to center of cross pikes; iron post stamped "Prim. Trav. Sta. No. 17. Ohio, 1910".....	38 42 28.3	83 30 37.6
Wrightsville, 1.3 miles north of, at J. B. Johnson's residence; center of pike at T road northeast.....	38 43 26.3	83 30 51.5
Abandoned schoolhouse, on pike at T road west.....	38 44 04.4	83 31 00.6
Groom's store, 0.2 mile southwest of; forks of road at west end of bridge.....	38 44 48.9	83 31 06.8

RECTORVILLE QUADRANGLE—Continued.

Along highways from point near Groom's store via Bentonville and Clayton to Hickory Church.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T road north up branch, center of pike.....	38 44 21.5	83 32 16.8
Catbird schoolhouse No. 10, center of crossroads.....	38 44 13.4	83 33 20.4
T road west, center of.....	38 44 24.6	83 33 47.1
Old house, north of; center of crossroads.....	38 44 56.5	83 34 11.3
Bentonville, center of cross pikes.....	38 44 57.8	83 36 47.8
Bentonville, 1 mile west of; in northeast corner of pasture at southwest corner of, T road south, 30 feet east and 20 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 18. Ohio, 1910".....	38 45 15.3	83 37 55.7
Bentonville, 0.3 mile south by 1.5 miles west of; center of crossroads.....	38 44 36.8	83 38 33.3
Ratis Roush farm, center of T road south, 20 feet north and 20 feet west to Ed West's mail box.....	38 44 05.4	83 39 15.9
Clayton, center of crossroads, 25 feet due east to southwest corner of old house.....	38 44 39.4	83 40 36.1
Clayton, 1 mile west of, Adams-Brown county-line monument, on south side of road.....	38 44 47.3	83 41 53.0

Along highways from Wrightsville via Manchester to Aberdeen.

Allen's store, center pike opposite.....	38 42 04.0	83 32 45.2
Lindsey Creek, west of; pike at private road northwest.....	38 41 44.8	83 34 44.8
Manchester, 1 mile east of; center of forks of pike.....	38 41 33.7	83 35 19.1
Manchester, center of crossing of Main and Pike streets.....	38 41 13.8	83 36 32.0
Schoolhouse No. 15, pike opposite.....	38 41 08.3	83 37 31.1
J. C. Rinehart's residence, east side of Manchester-Aberdeen pike, at T road west, 10 feet west of center of T road; iron post stamped "Prim. Trav. Sta. No. 19. Ohio, 1910".....	38 39 15.0	83 38 26.9
Jos. D. Mott's mail box, center of Manchester-Aberdeen pike at road south.....	38 38 17.7	83 39 17.2
Glendale schoolhouse No. 1, center of Manchester-Aberdeen pike, at T road south.....	38 38 20.0	83 40 14.0
Little Threemile Creek, T pike north just east of; 10 feet south to D. Scott & Son's mail box.....	38 38 30.5	83 41 04.9
Manchester-Aberdeen pike at Adams-Brown county line, 10 feet west to culvert.....	38 38 41.8	83 42 20.4
Aberdeen, 0.8 mile east of, near Manchester-Aberdeen pike, at road northeast up hill, 15 feet south to center of yard gate.....	38 39 03.4	83 44 58.3

Along highways from Aberdeen to Hickory Ridge Church.

Threemile Creek, at south end of covered bridge over forks of road; 20 feet north to southwest corner of bridge.....	38 40 21.6	83 44 52.6
Schoolhouse No. 5, 0.3 mile north of; center of small triangle at forks of pike....	38 41 26.9	83 44 43.2
Pike at T road north, 20 feet east and 5 feet north to mail box of John Griffith, jr. Heitt, at covered bridge, center of triangle in forks of pike.....	38 41 56.2	83 44 17.8
Hickory Ridge Church, 0.5 mile south of covered bridge, center of forks of road..	38 43 12.5	83 43 32.1
	38 44 35.2	83 42 42.3

Magnetic declination for west half of north border, 0° 43' W.; for east half of north border, 0° 27' W.; for east half of east-west line, 0° 16' W.; for north half of east border, 0° 10' E.; for north half of west border, 1° 43' W.; for west half of east-west line, 1° 18' W.

RICHMOND QUADRANGLE.

Along spur line from Ebenezer west to Ohio-Indiana State line.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Ebenezer (Gettysburg), 1.5 miles west of; crossing of National road and north- south road.....	39 50 19.7	84 44 47.7
Crossing of National road and New Paris-Westerville pike.....	39 50 08.8	84 47 35.5
Crossing of National road and Ohio-Indiana State line.....	39 50 01.9	84 48 48.0

RICHMOND QUADRANGLE—Continued.

Along highways north along State line.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Prim. Trav. Sta. No. 38.....			
T. 8 N., R. 1 E., west corner of secs. 30 and 31; State line.....	39 45 30.6	84 48 51.0	5,360
T. 8 N., R. 1 E., west corner of secs. 19 and 30, center of T road east; State line.....	39 46 23.8	84 48 50.7	5,380
T. 13 N., R. 1 W., east corner of secs. 13 and 24.....	39 47 07.2	84 48 50.8	4,390
T. 8 N., R. 1 E., stone at west corner of secs. 18 and 19; State line.....	39 47 16.8	84 48 50.8	970
T. 8 N., R. 1 E., west corner of secs. 7 and 18, at stone; State line.....	39 48 08.4	84 48 50.2	5,220
Stone at turn of road.....	39 48 51.9	84 48 49.9	4,400
Ohio-Indiana State line, crossing of electric railroad at Richmond pike.....	39 49 37.2	84 48 49.1	4,580
Tps. 8 and 9 N., R. 1 E., west corner of secs. 6 and 31.....	39 49 48.6	84 48 49.0	1,152
New Paris, 1.5 miles south of; center of cross pikes.....	39 50 08.5	84 47 36.2	6,027
New Paris, center of crossing of Main and Washington streets.....	39 51 27.5	84 47 33.0	7,996
New Paris, 0.8 mile northwest of forks of pike, 15 feet north to north end of culvert.....	39 51 53.8	84 48 08.5	3,836
T. 9 N., R. 1 E., west corner of secs. 18 and 19, center of T road north; State line.....	39 52 23.5	84 48 46.6	4,233
T road west, center of; State line.....	39 53 28.0	84 48 45.4	6,530
New Paris, 2.2 miles north and 1 mile west of, 0.5 mile east of Ohio- Indiana State line, on south side of T road north at J. A. Garretson's residence; iron post stamped "Prim. Trav. Sta. No. 39, Ohio, 1910".	39 53 30.1	84 48 18.6	2,098
State line, 0.5 mile east of, 1 mile south of Preble-Darke county line; center of T road east.....	39 54 05.2	84 48 16.1	3,556
Tps. 9 and 10 N., R. 1 E., west corner of secs. 6 and 31; stone at meeting point of Preble, Darke, and Wayne counties, State line.....	39 55 02.4	84 48 44.2	6,185
J. M. Wallace's mail box, center of T road west.....	39 55 55.1	84 48 34.5	5,386
T road east, center of.....	39 57 40.7	84 48 33.4	10,686
T. 10 N., R. 1 E., west corner of fractional secs. 18 and 19; State line.....	39 57 40.7	84 48 41.4	623
Hollandsburg, 1.7 miles southwest of; center of T road east.....	39 58 33.3	84 48 21.0	5,555
Hollandsburg, 1 mile southwest of; forks of pike.....	39 59 11.2	84 48 03.4	4,072
Hollandsburg, center of cross streets at post office.....	39 59 54.8	84 47 35.4	4,919

Magnetic declination along Ohio-Indiana State line, 1° 34' E.

RICHWOOD QUADRANGLE.

From Raymonds along Toledo & Ohio Central Ry. to siding.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Raymonds station, crossing 180 feet northwest of.....	40 19 56.2	83 28 11.5
Peoria, Erie R. R. crossing at.....	40 18 39.2	83 27 04.0
Milepost 98, crossing 1,340 feet south of.....	40 18 05.4	83 26 34.9
Siding, crossing 120 feet north of north end of.....	40 16 28.9	83 25 11.7

Along highways near east border of quadrangle.

Roads north, south, east, and west.....	40 16 56.0	83 15 02.0
Road north, west, and south.....	40 18 00.7	83 15 07.2
State road, northeast and southwest.....	40 23 46.7	83 16 07.9
Richwood-Prospect pike.....	40 26 10.7	83 15 32.1
East-west pike.....	40 27 47.0	83 15 04.0
Woodland, 570 feet southwest of; crossing on Big Four Route.....	40 28 45.3	83 15 27.4
Crossing of east-west pike.....	40 29 37.0	83 15 35.6

RICHWOOD QUADRANGLE—Continued.

North along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Marysville-Bellefontaine pike at road south.....	40 15 17.8	83 26 23.8	.....
Crossroads.....	40 16 32.8	83 26 31.2	.....
T road south.....	40 17 44.0	83 26 38.3	7,234
Peoria, junction of Erie and Toledo & Ohio Central railroads.....	40 18 39.2	83 27 04.0	5,933
Broadway, 1 mile southwest of; Erie R. R. at north-south pike crossing.....	40 19 51.0	83 25 36.5	9,941
T road north.....	40 20 09.4	83 26 23.3	4,061
York, 3 miles south of, on east side of road at T road west, 10 feet west by 5 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 80. Ohio, 1910".....	40 21 50.8	83 26 09.8	10,315
York, 3 miles south of; crossroads.....	40 21 50.9	83 27 16.2	5,136
York, 1.5 miles south of; T road west.....	40 23 14.0	83 27 13.2	8,409
York Center, cross pikes.....	40 24 27.9	83 27 11.0	7,480
York Center, 2 miles northeast of; crossroads.....	40 25 26.5	83 25 49.0	8,682
Greenville treaty line, center of road.....	40 26 35.9	83 26 48.7	8,398
Byhalia, cross pikes.....	40 27 12.8	83 27 19.7	4,430
Pike at road east.....	40 27 49.8	83 27 50.7	4,440
Byhalia and county-line road at road east to Arbela.....	40 28 53.0	83 28 43.1	7,570
Byhalia, 3 miles northwest of, at southeast corner of Byhalia and county-line pike at road east, 35 feet west by 20 feet north to center of intersection; iron post stamped "Prim. Trav. Sta. No. 83. Ohio, 1910".....	40 29 32.4	83 29 15.4	4,693

East along highways near north border of quadrangle.

Covered bridge over Rush Creek, center of.....	40 29 43.8	83 27 44.7	7,103
Arbela, 1 mile north of; crossroad just east of schoolhouse.....	40 29 55.4	83 26 07.7	7,587
T road north.....	40 29 40.0	83 19 05.4	.....
Baldwin schoolhouse No. 5, center of pike at road west.....	40 29 48.5	83 17 37.3	6,858
Woodland, 1 mile north of, at southwest corner of T road south, 25 feet east by 20 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 85. Ohio, 1910".....	40 29 36.7	83 15 36.0	9,458

East along highways through center of quadrangle.

North-south road at road southwest, 10 feet west and 10 feet north to hickory tree.....	40 22 24.2	83 29 34.6	.....
T road east at Frank Watt's mail box.....	40 21 53.2	83 28 53.7	4,464
Middleton schoolhouse, 0.25 mile east of; crossroads.....	40 22 20.5	83 25 02.2	.....
Crossroads.....	40 22 44.2	83 24 18.7	4,144
T road north.....	40 22 38.9	83 23 24.2	4,259
Erie R. R. at east-west road crossing, 0.5 mile northeast of water tank.....	40 22 26.3	83 22 10.7	5,841
Taylor-Leesburg township line, at northwest corner of crossroads, 30 feet east by 30 feet south to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 81. Ohio, 1910".....	40 22 08.2	83 20 54.8	6,161
Crossroads.....	40 21 49.5	83 19 40.8	6,039
Schoolhouse No. 1, T road west at.....	40 21 33.8	83 18 38.4	5,091
Schoolhouse No. 2, just south of; T road east.....	40 21 22.2	83 17 54.0	3,644
Magnetic Springs, 0.3 mile north of; crossroads.....	40 21 30.9	83 15 40.0	10,418

Magnetic declination for north border, 1° 04' W.; for west border, 0° 18' E. to 0° 12' W.; for line through center, 0° 24' W. to 0° 14' E.

ROXABEL QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Egypt Church, intersection of roads about 300 feet north of; 27 feet north to cross on corner fence post; 48 feet west to front-yard gate.....	39 29 59.0	83 12 10.1
Clarksburg, T road southwest 1 mile southeast of, 18 feet west to cross on white-oak tree, 28 feet north to A. L. Lippincott's mail box.....	39 29 41.5	83 08 20.6
Bridge, T road northeast about 400 feet southeast of, on Chillicothe pike, 33 feet north to cross on telephone pole, 40 feet east to cross on corner fence post.....	39 29 11.5	83 07 37.1
Carrie, T road north, 19 feet northwest to north corner of post-office porch, 50 feet east to cross cut on board fence.....	39 29 36.5	83 06 10.8
Deer Creek, south end of covered steel bridge over.....	39 29 12.1	83 05 06.3
T road northeast, 21 feet west to mail box, 30 feet north to cross on corner fence post.....	39 29 21.1	83 04 32.3
Schoolhouse No. 3, T road north, 27 feet southeast to cross on gatepost, 30 feet northwest to cross on corner fence post.....	39 28 55.0	83 03 13.8
Yellowbud, T road west 0.75 mile south of, 25 feet northeast to cross on telephone pole, 40 feet southwest to cross on corner fence post.....	39 29 28.7	83 00 48.9
Yellowbud, T road east, about 1.75 miles south of, 21 feet southwest to cross on telephone pole, 21 feet northeast to cross on fence post.....	39 28 39.3	83 01 02.5

Along highways near south border of quadrangle.

T road south.....	39 15 19.4	83 11 25.1
Bourneville, 1 mile southwest of, intersection of Chillicothe and Waverly pikes.....	39 15 59.8	83 10 15.0
Junction of Waverly pike with pike west to Storms station.....	39 15 20.8	83 09 34.6
Schoolhouse No. 10, center of T road south.....	39 15 18.1	83 07 52.2
Andy Miller's store, T road south.....	39 15 02.4	83 06 48.1
Newingburg, on south side of east-west road; iron post stamped "Prim. Trav. Sta. No. 72. Ohio, 1909".....	39 16 04.7	83 06 01.5
Slaughter farm, center of crossroads.....	39 15 19.2	83 04 36.4

Along highways and railways east-west through center of quadrangle.

Ross County infirmary, 0.8 mile west of; crossroads, 25 feet north and 10 feet west to W. D. Overly's mail box.....	39 24 27.6	83 00 43.8
Pinto's store, center of crossroads.....	39 24 13.4	83 03 01.1
Store at forks of road south of John O. Byer's residence.....	39 23 57.5	83 04 29.7
Schoolhouse No. 4, on Chillicothe-Frankfort pike; T pike north.....	39 22 47.0	83 04 38.2
Maple Grove Hotel, flagstaff on water tank.....	39 22 22.6	83 06 04.8
Baltimore & Ohio Southwestern R. R. and Cincinnati, Hamilton & Dayton railway crossing, about 200 feet northeast of, on north side of public road; iron post stamped "Prim. Trav. Sta. No. 73. Ohio, 1909".....	39 21 32.7	83 06 25.9
Bridge No. 88, road crossing south of.....	39 21 54.6	83 07 56.3
Musselman, road crossing at station.....	39 22 06.2	83 08 31.6
Musselman, 1 mile west of station.....	39 22 37.9	83 09 17.0
Roxabel, at station; center of track opposite telegraph window.....	39 23 01.7	83 11 07.0
Roxabel, about 1.2 miles southwest of station, 770 feet west of milepost 84 C; road crossing.....	39 22 37.1	83 12 22.3
Milepost 83 C, east of; road crossing.....	39 22 15.1	83 13 09.2
Crossing on road northwest-southeast.....	39 22 11.8	83 13 52.8
T road north, west of steel bridge, 0.2 mile east of large white house.....	39 22 34.3	83 14 54.8
Austin, forks of road, west of bridge, 25 feet north and 15 feet west to Shaw & Haine's store door.....	39 26 12.5	83 13 23.8
North-south pike crossing on Cincinnati, Hamilton & Dayton Ry., 70 feet west of west end of bridge 92.....	39 27 05.8	83 14 02.4

Magnetic declination for south border, $1^{\circ} 26' W.$; for west border, $1^{\circ} 18' W.$; for east-west line through center, $1^{\circ} 02' W.$

SABINA QUADRANGLE.

Along Baltimore & Ohio Southwestern R. R. from Melvin to Sabina.

Stations.	Latitude.	Longitude.
Melvin station, crossing 200 feet east of.....	39 28 24.8	83 43 01.2
Reesville, crossing at.....	39 28 57.1	83 40 41.2
Sabina station, crossing 100 feet west of.....	39 29 33.6	83 38 07.4

SABINA QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Intersection of roads.....	39	18	22.9	83	44	45.6
T road southwest.....	39	23	29.5	83	44	55.0
New Antioch, in west part of; T road northeast at church.....	39	24	32.0	83	44	56.0
Union schoolhouse, T road southwest near.....	39	25	53.4	83	44	11.0
T road southwest.....	39	26	31.9	83	44	53.0
T road northwest.....	39	28	23.3	83	44	21.9

Along highways near east border of quadrangle.

Bunker Hill schoolhouse, on Snowhill pike, road southeast.....	39	29	20.5	83	31	29.4
Staunton, 1 mile southwest of, on Worthington pike; T road northwest.....	39	28	17.8	83	30	14.8
Worthington pike at junction of Plymouth-Rockville road.....	39	27	47.2	83	31	23.0
Plymouth-Rockville road at junction of Leesburg pike.....	39	26	50.8	83	30	08.2
Washington-Leesburg pike at crossing of Sabina-Greenfield pike; Washington 9 miles, Leesburg 6 miles.....	29	25	52.9	83	30	49.0
Schoolhouse No. 6, 1.2 miles south of; on Washington-Leesburg pike at road east.....	39	24	29.6	83	31	38.2
Washington-Leesburg pike at crossing of Sabina-East Monroe pike.....	39	23	53.2	83	31	59.6
Olive Chapel (Methodist Episcopal), west of junction of Barger and Stafford pikes.....	39	23	05.7	83	31	08.3
Fayette-Highland county line, intersection with Barger pike.....	39	22	41.5	83	30	43.9
East Monroe, 1.25 miles northwest of, on west side of Barger pike at road northeast; iron post stamped "Prim. Trav. Sta. No. 61. Ohio, 1909".....	39	22	26.6	83	30	30.5
Lees Creek, center of steel bridge over.....	39	20	39.9	83	30	33.4
Hillsboro-East Monroe pike at crossing of east-west road.....	39	19	43.8	83	31	14.8
Union schoolhouse, No. 6, 0.2 mile north of, on East Monroe-Hillsboro pike at T pike west.....	39	18	40.0	83	31	25.4
Johnson's blacksmith shop, 0.3 mile south of; crossing of east-west road and East Monroe-Hillsboro pike.....	39	17	02.4	83	32	07.3
T road south.....	39	16	59.9	83	31	21.6
Andy Morrison's residence, 0.2 mile west of; center of T road east.....	39	16	14.3	83	31	11.0
Bridge, center of.....	39	15	18.2	83	30	42.6

Along highways east-west through center of quadrangle.

Snowhill, 1.5 miles northwest of, on east side of New Vienna-New Antioch pike, at T road southwest; iron post stamped "Prim. Trav. Sta. No. 65. Ohio, 1909".....	39	21	56.8	83	43	47.8
Mount Olive schoolhouse, district 10, cross pikes.....	39	23	00.3	83	42	29.2
Snowhill, 2 miles northeast of; center of cross pikes.....	39	22	18.4	83	41	08.7
Joseph Edward's mail box, cross pikes.....	39	21	40.8	83	39	18.3
M. L. Rockford's mail box, on north-south pike, pike northeast.....	39	21	35.4	83	38	07.4
T. Morrison's residence, southeast of, on east side of Lexington-Reesville pike at pike southwest; iron post stamped "Prim. Trav. Sta. No. 66. Ohio, 1909".....	39	22	43.4	83	36	32.4
Albert Van Pell's mail box, crossing of road northeast-southwest and Lexington-Reesville pike.....	39	23	21.8	83	36	44.8
H. S. Adams's mail box, on old Urbana pike, road southwest, 20 feet north to center of bridge.....	39	23	55.9	83	35	57.4
Clinton-Fayette county-line stone.....	39	23	54.9	83	35	21.1
Morris pike at crossing of Barger pike.....	39	24	24.2	83	34	41.2
Barger pike at crossing of north-south road.....	39	24	25.8	83	33	31.1
Washington-Leesburg pike at crossing of Barger pike.....	39	23	53.2	83	31	59.6
Highland-Fayette county line, center of road at.....	39	22	41.2	83	30	04.6

Magnetic declination for south border, 0° 14' W.; for east border, 0° 17' W.; for east-west center line, 1° 13' W.

ST. HENRY QUADRANGLE.

Along Cincinnati Northern R. R. from Oaktree to Coldwater.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Bridge, east-west road crossing west of.....	40	15	02.5	84	38	34.7
Oaktree, east-west road crossing 150 feet southwest of.....	40	15	54.4	84	38	32.6
Rossville, east-west road crossing.....	40	16	46.6	84	38	22.8
Crossing of east-west road.....	40	17	38.8	84	38	37.6
Trestle, road crossing under railway at south end of.....	40	18	31.2	84	38	37.1
Crossing of east-west road.....	40	19	23.7	84	38	36.6
New Weston, road crossing.....	40	20	15.8	84	38	36.2
Gilbert, road crossing.....	40	21	07.6	84	38	36.1
Crossing of east-west road.....	40	21	59.8	84	38	36.1
Crossing of east-west road.....	40	23	32.9	84	38	36.1
Crossing of east-west road.....	40	24	25.3	84	38	36.1
St. Henry, road crossing.....	40	25	05.0	84	38	36.1
Crossing of east-west road.....	40	26	10.8	84	38	36.1
Baradees, road crossing.....	40	27	03.3	84	38	36.0
Crossing of east-west road.....	40	27	55.9	84	38	16.3
Coldwater, road crossing.....	40	28	47.9	84	37	38.4

ST. HENRY QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
T road south.....	40	15	21.1	84	35	24.7
Schoolhouse No. 6, T road west at.....	40	15	28.3	84	35	57.6
T. 13 N., R. 2 E., quarter corner between secs. 1 and 2.....	40	15	28.1	84	36	52.3
T road east, near quarter corner between secs. 2 and 3, T. 13 N., R. 2 E.....	40	15	28.4	81	38	10.9
Cincinnati Northern R. R. at east-west road crossing.....	40	15	02.5	84	38	34.7
T. 13 N., R. 2 E., corner of secs. 3, 4, 9, and 10.....	40	15	02.5	84	39	08.8

Near northwest corner of quadrangle.

T. 6 S., R. 1 E., corner of secs. 26, 27, 34, and 35.....	40	28	47.9	81	43	36.8
T. 6 S., R. 1 E., corner of secs. 27, 28, 33, and 34.....	40	28	47.9	81	44	45.7

Along highways near west border of quadrangle.

T. 13 N., R. 1 E., corner of secs. 1, 2, 11, and 12.....	40	15	06.9	84	43	40.9
T. 14 N., R. 1 E., corner of secs. 26, 27, 34, and 35.....	40	16	54.3	84	44	49.8
Tps. 13 and 14 N., R. 1 E., corner of secs. 2, 3, 33, and 34.....	40	16	02.0	84	44	49.0
T. 14 N., R. 1 E., corner of secs. 22, 23, 26, and 27.....	40	17	40.6	84	44	48.9
T. 14 N., R. 1 E., quarter corner between secs. 15 and 23.....	40	18	32.8	84	44	14.5
T. 14 N., R. 1 E., corner of secs. 11, 12, 13, and 14.....	40	19	24.3	84	43	39.5
T. 14 N., R. 1 E., corner of secs. 1, 2, 11, and 12.....	40	20	16.6	84	43	38.9
Tps. 14 and 15 N., R. 1 E., corner of secs. 1, 2, 35, and 36.....	40	21	08.9	84	43	38.4
Sharpsburg, crossing of pike and north-south road.....	40	22	04.4	84	42	38.8
Road southwest.....	40	22	53.2	84	42	08.0
T. 15 N., R. 1 E., quarter corner between secs. 24 and 25.....	40	22	53.6	84	43	09.4
T. 15 N., R. 1 E., quarter corner between secs. 13 and 24.....	40	23	46.7	84	43	08.6
Schoolhouse, T road south at.....	40	24	15.6	84	43	08.6
T. 7 S., R. 1 E., corner of secs. 13, 14, 23, and 24.....	40	25	17.9	84	42	27.5
T. 7 S., R. 1 E., corner of secs. 11, 12, 13, and 14.....	40	26	10.5	84	42	27.6
Tps. 6 and 7 S., R. 1 E., corner of secs. 1, 2, 35, and 36.....	40	27	55.4	84	42	27.8
T. 7 S., R. 1 E., corner of secs. 1, 2, 11, and 12.....	40	27	02.9	84	42	27.8

Along highways near north border of quadrangle.

T. 6 S., R. 1 E., corner of secs. 25, 26, 35, and 36.....	40	28	47.9	84	42	27.8
T. 6 S., Rs. 1 and 2 E., corner of secs. 25, 30, 31, and 36.....	40	28	47.9	84	41	19.2
T. 6 S., R. 2 E., corner of secs. 29, 30, 31, and 32.....	40	28	47.9	84	40	00.1
T. 6 S., R. 2 E., corner of secs. 28, 29, 32, and 33.....	40	28	48.0	84	38	51.4
T. 6 S., R. 2 E., corner of secs. 27, 28, 33, and 34.....	40	28	47.9	84	37	43.0
Coldwater, crossing of Cincinnati Northern R. R. and Main Street.....	40	28	47.9	84	37	38.5
T. 6 S., R. 2 E., corner of secs. 26, 27, 34, and 35.....	40	28	48.2	84	36	34.3
Coldwater, crossroads 2 miles east of.....	40	28	52.3	84	35	25.9
Montezuma station, crossroads 1 mile west of.....	40	29	01.7	84	34	16.9
Montezuma station, road crossing on Cincinnati, Hamilton & Dayton Ry. north of.....	40	29	18.0	84	33	10.1
Crossing of east-west road.....	40	28	49.1	84	32	38.8
Tps. 6 and 7 S., R. 2 E., corner of secs. 32, 33, 34, and 35.....	40	27	56.4	84	31	53.3
Crossing of north-south road.....	40	27	19.7	84	31	01.8
Crossing of north-south road.....	40	26	48.1	84	30	27.5

Near southeast corner of quadrangle.

T road west at center of sec. 36, T. 11 N., R. 3 E.....	40	16	28.5	84	30	15.5
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Near north border of quadrangle.

T. 6 S., R. 3 E., quarter corner between secs. 27 and 28, near township house; crossroads.....	40	29	15.3	84	30	44.0
T. 6 S., R. 3 E., quarter corner between secs. 28 and 29; T road north.....	40	29	15.3	84	31	52.9

Along highways near northwest corner of quadrangle.

T. 6 S., R. 1 E., corner of secs. 22, 23, 26, and 27, 20 feet north and 20 feet west of, crossroads at section corner; iron post stamped "Prim. Trav. Sta. No. 23. Ohio, 1909".....	40	29	40.7	84	43	36.9
T. 6 S., R. 1 E., corner of secs. 26, 27, 34, and 35; crossroads.....	40	28	48.0	84	43	36.6

ST. PARIS QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
St. Paris, 1.5 miles west of, at southwest corner of crossroads, 25 feet west and 85 feet north of quarter corner between secs. 24 and 30, T. 3, R. 11; iron post stamped "Prim. Trav. Sta. No. 42. Ohio, 1909"	40 08 00.0	83 59 12.4
T. 3, R. 11, quarter corner between secs. 23 and 29; crossroads.	40 07 08.1	83 59 17.2
T. 3, R. 11, corner of secs. 22, 23, 28, and 29.	40 06 42.0	83 59 19.9
T. 3, R. 11, corner of secs. 20, 21, 26, and 27.	40 04 57.7	83 59 30.6
T. 3, R. 11, corner of secs. 19, 20, 25, and 26; crossroads.	40 04 04.9	83 59 35.7
T. 3, R. 10, corner of secs. 23, 24, 29, and 30; Champaign-Clark county line.	40 02 17.5	83 59 46.7
T. 3, R. 10, corner of secs. 22, 23, 28, and 29.	40 01 24.9	83 59 52.1
T. 3, R. 10, corner of secs. 21, 22, 27, and 28; crossroads.	40 00 31.3	83 59 57.6
T. 3, R. 11, corner of secs. 24 and 30, at jog in road west.	40 08 24.6	83 59 09.9
T. 3, R. 12, corner of secs. 19, 20, 25, and 26; crossroads.	40 09 17.4	83 59 08.5
Princeschoolhouse, No. 1, 430 feet south of; T road east.	40 10 09.6	83 59 03.5
T. 3, R. 12, corner of secs. 21, 22, 27, and 28.	40 10 52.3	83 58 59.6
T. 3, R. 12, corner of secs. 22, 23, 28, and 29; T road east.	40 11 54.3	83 58 53.6
Carysville, crossroads.	40 12 43.1	83 58 48.4
T. 3, R. 12, corner of secs. 23, 24, 29, and 30.	40 12 46.8	83 58 47.9
T. 3, Rs. 12 and 13, corner of secs. 19, 24, 25, and 30.	40 13 38.8	83 58 42.6
Quincy, 4 miles south of, at northeast corner of crossroads, 20 feet east and 20 feet north of corner of secs. 19, 20, 25, and 26, T. 3, R. 13; iron post stamped "Prim. Trav. Sta. No. 35. Ohio, 1909"	40 14 32.1	83 58 37.1
T. 3, R. 13, corner of secs. 25, 26, 31, and 32, near church; crossroads.	40 14 35.8	83 59 46.2

West along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Crossroads.	40 13 52.1	83 47 47.7	.....
T. 13 N., R. 4 E., quarter corner between secs. 7 and 8; crossroads.	40 13 56.1	83 48 56.6	5,360
T. 13 N., R. 4 E., stone corner of secs. 13, 14, 19, and 20; crossroads.	40 14 02.6	83 50 37.8	7,880
T. 13 N., R. 4 E., 10 feet northwest of corner of secs. 19, 20, 25, and 16, at southeast corner of T road east, 20 feet west and 15 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 97. Ohio, 1910"	40 14 06.4	83 51 46.7	5,363
T road north.	40 13 44.7	83 53 01.0	6,175
T. 13 N., Rs. 3 and 4 E., stone at quarter corner between secs. 1 and 31; township line.	40 13 48.1	83 54 06.6	5,100
T. 13 N., R. 3 E., quarter corner between secs. 1 and 7; T road south.	40 13 52.4	83 55 13.2	5,190
T. 13 N., R. 3 E., quarter corner between secs. 7 and 13; T road east at Tremont Church and schoolhouse.	40 13 56.8	83 56 22.2	5,370
T. 13 N., R. 3 E., corner of secs. 13, 14, 19, and 20; crossroads.	40 14 27.6	83 57 28.5	6,016

East along highways through center of quadrangle.

St. Paris, intersection of Main and Springfield streets.	40 07 43.1	83 57 32.8	.....
Crossroads.	40 07 28.6	83 56 05.5	6,940
T. 11 N., Rs. 3 and 4 E., corner of secs. 5 and 6, 35 and 36.	40 07 17.6	83 54 45.2	6,334
T. 11 N., R. 4 E., corner of secs. 29, 30, 35, and 36.	40 07 13.8	83 53 37.8	5,250
Nettleton, T road north.	40 07 09.9	83 52 28.5	5,395
T. 11 N., R. 4 E., 40 feet west and 15 feet north of quarter corner between secs. 19 and 23, at northwest corner of T road north; iron post stamped "Prim. Trav. Sta. No. 98. Ohio, 1910"	40 06 39.2	83.51 23.2	5,945
T. 11 N., R. 4 E., quarter corner between secs. 11 and 19; crossroads at Westville.	40 06 34.9	83 50 14.6	5,349
T. 11 N., R. 4 E., quarter corner between secs. 5 and 11; T road south.	40 06 30.9	83 49 06.8	5,280
T. 11 N., Rs. 4 and 5 E., quarter corner between secs. 5 and 35; T road south.	40 06 26.9	83 47 57.7	5,380
T road south.	40 06 23.8	83 47 05.0	4,110
Urbana, Main street at north-south road.	40 06 33.6	83 46 11.0	4,313

Magnetic declination for north border, 0° 19' E. to 0° 10' W.; for west border, 0° 02' W.; for center line, 0° 04' E.

SALINEVILLE QUADRANGLE.

Near northwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
East Rochester station, road crossing 700 feet east of.....	40 44 41.8	81 02 05.3
Hanover-West township line.....	40 44 00.5	80 58 31.0
Kensington station, road crossing 150 feet west of.....	40 44 05.3	80 57 22.0
Kensington triangulation station.....	40 43 20.6	80 56 39.1
Milepost 50, road crossing 620 feet west of.....	40 44 05.4	80 58 52.3

SANDUSKY QUADRANGLE.

Along highways near southwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road northwest.....	41 15 21.8	82 44 42.6
Monroeville, north part of, Baltimore & Ohio R. R. crossing.....	41 15 02.5	82 41 51.4
Road northeast-southwest.....	41 15 00.8	82 41 03.2
Monroeville, northwest part of; T road west.....	41 15 01.9	82 42 16.0

SARDINIA QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Sardinia, 2.5 miles east of, at 5 points near Coddaman schoolhouse, 30 feet north and 20 feet west to intersection of roads; iron post stamped "Prim. Trav. Sta. No. 86. Ohio, 1909".....	39 00 07.5	83 45 41.33
County line, fork in road just south of, 10 feet north to center of bridge.....	39 01 10.7	83 45 05.5
Brown-Highland county-line stone, on west side of road.....	39 01 12.7	83 45 04.9
Sardinia, 1 mile east of, road crossing.....	39 00 01.6	83 47 25.5
Sardinia, west part of, intersection of Norfolk & Western Ry. and Mount Orab pike.....	39 00 26.0	83 48 40.2
Sardinia, 1.2 miles west of, on Mount Orab-Sardinia pike; T road north.....	39 00 33.3	83 49 52.7
Whiteoak, 1.2 miles east of station; T road south.....	39 00 51.0	83 51 18.6
Whiteoak, northeast corner of crossroads, 25 feet west and 10 feet south to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 92. Ohio, 1909".....	39 01 07.1	83 52 38.5
T road north.....	39 01 29.8	83 54 25.4
Mount Orab, center of town; cross streets.....	39 01 39.4	83 55 11.9
Williamsburg and Mount Orab pike, center of; opposite township-line stone.....	39 01 55.3	83 56 31.4
Maple Grove schoolhouse, 1.25 miles east of; center of T road south.....	39 00 57.6	83 57 37.9
Maple Grove schoolhouse, center of T road south.....	39 00 52.1	83 59 11.0

Along highways east-west through center of quadrangle.

A. W. Willett's residence, on Cincinnati road at intersection of road east.....	39 07 41.2	83 45 42.5
Danville, 1.7 mile west of, north-south road crossing.....	39 08 30.6	83 46 09.1
Horner-Salem township line, at crossing of Danville-Pricetown pike.....	39 08 32.4	83 46 40.0
Pricetown, center of cross pikes.....	39 08 34.4	83 48 09.4
Pricetown, 1 mile west of; center of pike at T road north.....	39 08 29.7	83 49 10.4
Harwood, center of cross pikes at post office.....	39 07 51.7	83 50 46.8
Harwood, 1 mile west of post office; stone in center of crossroad.....	39 07 49.9	83 51 38.6
Harwood, 1.2 miles west of post office; center of road at Highland-Brown county line, 15 feet southwest to road north.....	39 07 50.9	83 52 05.5
Northtown, 3 miles east of, at southeast corner of Harwood and Fivemile road, at road south, 20 feet west and 10 feet north to stone at forks; iron post stamped "Prim. Trav. Sta. No. 89. Ohio, 1909".....	39 07 28.5	83 52 52.9
Gum Corner schoolhouse, 0.8 mile east of; T road south.....	39 07 16.4	83 54 05.1
Gum Corner schoolhouse, center of crossroads.....	39 07 11.9	83 54 51.5
Northtown (Fivemile), center of crossroads.....	39 07 09.4	83 55 58.4
Crossing of pike and road.....	39 06 54.2	83 57 27.2
Marathon, 2.5 miles east of; center of pike and road crossing.....	39 07 35.0	83 58 37.9
Dill, crossing of east-west pike and Baltimore & Ohio Southwestern R. R.....	39 13 38.1	83,45 02.0

SARDINA QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Lynchburg, in north corner of railroad fork, 29 feet south of store, 74 feet northwest of railroad station; iron post stamped "Prim. Trav. Sta. No. 64. Ohio, 1909"	° ' "	° ' "
Lynchburg, crossing of Main Street and Baltimore & Ohio Southwestern R. R.	39 14 30.8	83 47 32.0
Crossing of north-south road	39 14 30.5	83 47 32.4
Lynchburg, Main Street crossing	39 14 35.0	83 47 45.6
Crossing of north-south road	39 14 30.5	83 47 32.4
M. Brown's mail box; T road southwest	39 14 08.4	83 46 28.6
T road southwest	39 13 59.5	83 59 11.8
	39 14 26.9	83 59 41.3

Magnetic declination for south border, 0° 34' E.; for east border, 1° 41' W.; for west border, 1° 02' E.; for east-west center line, 0° 10' W.

SCIOTOVILLE QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
Schoolhouse, T road west just south of, 15 feet east to cross on rail fence, 36 feet southwest to cross on corner fence post	° ' "	° ' "
Mary Crabtree's residence, crossroads at, 21 feet northwest to cross on picket fence, 35 feet southeast to cross on corner post to yard fence	38 59 21.2	82 46 40.9
T road east, 30 feet southeast to cross on fence post, 21 feet northeast to cross on white-oak tree	38 58 41.6	82 46 27.0
T. 5, R. 19, corner of secs. 5 and 6	38 57 27.2	82 46 15.5
Myrtle post office (discontinued), 0.25 mile north of, in ground in northwest part of Hamilton churchyard, wire nail in cross cut on south face of large white-oak tree on north side of east-west road bears N. 27° E., distant 49.5 feet, cross cut on northwest corner of foundation to church bears S. 15° 45' E., distant 13.1 feet, iron bench-mark post stamped "Prim. Trav. Sta. No. 21"	38 56 46.6	82 46 08.4
T. 5, R. 19, quarter corner between secs. 8 and 17	38 55 18.8	82 45 34.8
McDaniel's residence, intersection of roads south of, 30 feet north to cross on sycamore tree; 24 feet south to arrow on corner fence post	38 54 54.5	82 45 52.5
Schoolhouse No. 12, near, cemented in solid rock; bench-mark tablet stamped "Elevation, 678 feet"	38 54 38.9	82 46 42.8
J. H. Dever's farm, T road west just north of covered bridge, 27 feet southwest to cross on top board fence, 24 feet east to J. H. Dever's mail box	38 54 16.1	82 46 42.7
Iron bridge over Brushy Fork, T road west, 60 feet west to east end of bridge, 60 feet north to J. D. Martin's mail box	38 53 43.5	82 46 18.6
T. 5, R. 20, 0.25 mile west of corner of secs. 28, 30, 32, and 33	38 53 10.8	82 46 30.0
Intersection of roads near church, east end of small bridge	38 52 12.1	82 45 59.6
Pinkerman, in Liberal Brethren churchyard, southwest corner of foundation to church bears N. 67° E., distant 6.3 feet; northwest corner foundation to church bears N. 45° E., distant 38 feet; iron post set 36 inches in ground stamped "Prim. Trav. Sta. No. 22"	38 51 24.0	82 46 06.7
	38 50 17.4	82 46 09.9

Along Baltimore & Ohio Southwestern R. R. between Webster and Scioto Furnace.

Webster, road crossing Baltimore & Ohio Southwestern R. R. about 0.75 mile southwest of	38 48 57.4	82 44 27.0
Trestle No. 374, north-south road crossing under	38 48 28.8	82 45 35.5
Scioto Furnace station	38 47 57.9	82 45 54.8

Along highways east-west through center of quadrangle.

Jackson-Scioto county line, at crossing of pike	38 53 19.3	82 45 33.5
Jackson-Scioto county line, T. 5 N., R. 19 W., corner of secs. 20, 21, 27, and 28	38 53 04.0	82 45 35.2
Steel bridge over Little Scioto River, T road west	38 53 10.6	82 46 30.3
Irwin's store, T road east	38 52 54.0	82 47 19.0
Schoolhouse No. 10, northwest of; road south	38 52 30.6	82 48 19.0
T. 4 N., R. 20 W., corner of secs. 25, 26, 35, and 36	38 52 22.4	82 49 11.7
T. 4 N., R. 20 W., center of sec. 4; T road north	38 51 57.6	82 50 33.2
Purdyville, center of sec. 33, T. 4 N., R. 20 W.; crossroads	38 52 00.4	82 51 48.4
Purdyville, 0.5 mile west of, 0.8 mile north of Scioto (Harrisonville), in center of top of north retaining wall to concrete culvert; aluminum tablet stamped "Prim. Trav. Sta. No. 3. Ohio, 1910"	38 52 01.9	82 52 20.4
Township corner	38 51 40.3	82 54 23.8
East-west road at road south, 35 feet east and 10 feet south to John Flower's mail box	38 51 34.3	82 54 33.8
J. H. Chandler's mail box, in triangle at T road southwest	38 52 00.0	82 57 21.0
Corner of sections	38 52 18.2	82 57 43.3
Lucasville, 1.5 miles east of; T road south at church	38 52 35.0	82 57 54.9

SCIOTOVILLE QUADRANGLE—Continued.

Along highways near Scioto Furnace.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Cameron farm, crossroads, 33 feet southeast to cross on apple tree.....	38 46 49.1	82 45 17.7
Scioto Furnace, 3 miles south of, in orchard at John Bisco's farm, southwest corner of stone foundation bears N. 40° 35' E., distant 108.6 feet, wire nail in south face of apple tree used for gatepost bears N. 30° 45' E., distant 22.5 feet; iron bench-mark post stamped "Prim. Trav. Sta. No. 23".....	38 45 48.3	82 46 24.4
T road west, 24 feet northwest to E. Strickland's mail box, 24 feet southeast to cross on fence post.....	38 45 22.7	82 46 38.0

Along Baltimore & Ohio Southwestern R. R. between Sciotoville and Lilly.

Sciotoville, in east corner of W. M. Price's property, on north side of Baltimore & Ohio Southwestern R. R., just off of right of way, northeast corner of foundation of Sciotoville Milling Co.'s building bears S. 6° 50' E., distant 168.5 feet, northeast corner of Baltimore & Ohio Southwestern R. R. depot bears S. 59° W., distant 441.5 feet; iron bench-mark post set 42 inches in ground, stamped "Prim. Trav. Sta. No. 26".....	38 45 37.9	82 53 26.9
Milepost 48, crossing of north-south road 600 feet west of.....	38 46 05.0	82 52 14.2
Slocum, crossing of north-south road west of platform.....	38 45 59.8	82 50 32.9
Slocum, crossing of east-west road 1 mile east of.....	38 45 58.1	82 49 39.6
Milepost 45, road crossing 220 feet south of.....	38 46 29.8	82 49 16.7
Trestle No. 387, road crossing under.....	38 46 36.3	82 48 27.7
Lilly, road crossing at south end of switch.....	38 47 06.5	82 47 46.5
Lilly, 0.75 mile northeast of; overhead road crossing.....	38 47 31.8	82 47 09.7

Along Norfolk & Western Ry. from Doty to Lucasville.

Doty station.....	38 45 19.5	82 54 23.9
Junction, road crossing under trestle No. 1068, 700 feet north of, east track.....	38 45 43.7	82 59 28.2
Milepost 97, private road crossing 870 feet north of, west track.....	38 46 53.7	82 59 07.7
Milepost 96, east track.....	38 47 33.0	82 59 09.4
Chillicothe-Portsmouth pike at crossing under trestle No. 1081, west track.....	38 48 38.7	82 59 05.6
Davis station.....	38 49 34.2	82 58 57.3
Davis station, road crossing under trestle No. 1083, 1 mile north of.....	38 50 28.0	82 59 03.0
Schoolhouse, private road crossing.....	38 51 07.1	82 59 12.0
Milepost 90, private road crossing 200 feet south of.....	38 52 13.2	82 59 38.3
Lucasville, at southwest corner of Purdue Bros' roller mills, southeast corner of foundation to elevator bears N. 58° 20' W., distant 53.5 feet, cross on southwest corner of foundation to roller mills bears N. 1.4 feet distant; iron bench-mark post set 42 inches in the ground, stamped "Prim. Trav. Sta. No. 28".....	38 52 51.6	82 59 44.4

Magnetic declination for east-west line through center of quadrangle, 1° 02' W.

SHAUCK QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	
T. 19 N., R. 20 W., corner of secs. 3, 4, 9, and 10, crossroads at schoolhouse; Crawford-Morrow county line.....	40 42 40.8	82 44 46.0	
T. 19 N., R. 20 W., corner of secs. 9, 10, 15, and 16.....	40 41 48.5	82 44 46.8	5,300
T. 19 N., R. 20 W., corner of secs. 15, 16, 21, and 22; center of T road east at schoolhouse.....	40 40 56.4	82 44 47.7	5,280
T. 19 N., R. 20 W., corner of secs. 21, 22, 27, and 28; center of crossroads.....	40 40 04.5	82 44 48.4	5,260
T. 19 N., R. 20 W., corner of secs. 27, 28, 33, and 34; center of crossroads at schoolhouse.....	40 39 11.9	82 44 49.0	5,330
Tps. 18 and 19 N., R. 20 W., stone at corner of secs. 3, 4, 33, and 34; center of crossroads.....	40 38 20.0	82 44 49.4	5,260
Shauck, 4.25 miles west of, 3 miles north and 1 mile west of Williamsport, at northwest corner of crossroads, 0.5 mile north of Mount Pleasant church and schoolhouse, 20 feet east and 20 feet south to corner of secs. 3, 4, 9, and 10, T. 18 N., R. 20 W., crossroads; iron post stamped "Prim. Trav. Sta. No. 54. Ohio, 1910".....	40 37 27.4	82 44 50.3	5,336

SHAUCK QUADRANGLE—Continued.

Along highways near west border of quadrangle—Continued.

Stations.	Latitude.	Longitude.	Distance between stations.
T. 18 N., R. 20 W., stone at corner of secs. 9, 10, 15, and 16; center of T road west.....	40 36 34.5	82 44 51.3	5,360
Williamsport, 2 miles north by 1 mile west of; center of T road east.....	40 36 08.6	82 44 51.8	2,630
Williamsport, 1 mile west by 0.5 mile north of; stone at T road north.....	40 35 15.2	82 44 53.0	5,411
Williamsport, center of crossroads, 40 feet north to guideboard, 42 feet west to southeast corner of James Cox's store.....	40 34 46.2	82 43 49.5	5,718
Williamsport, 1.5 miles south of, center of crossroads, 12 feet south by 5 feet east to beach tree.....	40 33 29.8	82 44 02.8	7,808
Crossroads, center of.....	40 32 08.6	82 44 19.6	8,329
T. 17 N., R. 20 W., 350 feet south of quarter corner between secs. 3 and 10.....	40 32 08.6	82 44 23.7	320
Crossroads, center of.....	40 31 19.3	82 44 31.2	5,023
T. 17 N., R. 20 W., 0.25 mile east of corner of secs. 9, 10, 15, and 16.....	40 31 19.3	82 44 42.1	840
Mount Gilead, 3 miles south by 4 miles east of, in southeast corner of foundation to steel bridge over Middle Fork of Owl Creek, just west of crossroads; aluminum tablet stamped "Prim. Trav. Sta. No. 59. Ohio, 1910".....	40 30 21.56	82 44 44.04	5,860

Along highways near south border of quadrangle..

Ankenytown, 1 mile south of, center of crossroads.....	40 31 16.2	82 30 11.3	.....
Ankenytown, 1.7 miles south by 0.8 mile west of; T road northwest..	40 30 40.9	82 31 02.9	5,358
Fredericktown, 1.25 miles north by 0.5 mile east of, in top of granite boulder at northeast corner of Fredericktown-Wooster road at road north, 25 feet south by 35 feet west to locust tree in triangle; aluminum tablet stamped "Prim. Trav. Sta. No. 57. Ohio, 1910".....	40 30 04.5	82 31 58.8	5,680
T road south.....	40 29 52.3	82 39 34.0	.....
Mount Gilead, 10 miles from; center of crossroads, 8 miles to Fredericktown.....	40 30 11.4	82 40 29.6	4,710
Chesterville, 2 miles north by 1 mile west of; center of T road south.....	40 30 14.3	82 41 59.6	6,964
Chesterville, 2 miles north by 2 miles west of; center of T road south..	40 30 17.5	82 43 07.1	5,230
Mount Gilead, 3 miles south by 4 miles east of, in southeast corner of abutment of steel bridge over Middle Fork of Owl Creek; aluminum tablet stamped "Prim. Trav. Sta. No. 59. Ohio, 1910".....	40 30 21.6	82 44 44.0	7,506

Along highways east-west through center of quadrangle.

T. 18 N., R. 20 W., corner of secs. 2, 3, 10, and 11; center of crossroads..	40 37 26.6	82 43 42.1	.....
T. 18 N., R. 20 W., corner of secs. 1, 2, 11, and 12; center of crossroads at schoolhouse No. 5.....	40 37 25.2	82 42 33.2	5,320
T. 18 N., R. 20 W., east corner of secs. 1 and 12, 10 feet south to center of crossroads.....	40 37 23.5	82 41 25.5	5,230
T. 19 N., R. 19 W., west corner of secs. 6 and 7.....	40 37 22.3	82 41 25.5	125
Shauck, corner of secs. 5, 6, 7, and 8, T. 19 N., R. 19 W.; center of T road west.....	40 37 22.2	82 39 48.1	7,513
Shauck, 1 mile northeast of, on west side of road just north of church and in front of cemetery, 44 feet northwest to Wilhelm Monument, 52 feet northwest to Craven Monument; iron post stamped "Prim. Trav. Sta. No. 55. Ohio, 1910".....	40 37 49.4	82 38 57.5	4,782
Crossroads, center of.....	40 37 27.3	82 37 31.8	6,991
T. 19 N., R. 19 W., corner of secs. 3, 4, 9, and 10; Morrow-Richland county line.....	40 37 22.2	82 37 31.8	520
Belleville, 5 miles west of, 4 miles south of Lexington; center of crossroads.....	40 37 16.1	82 36 45.5	3,625
Cedar Creek, center of steel bridge over.....	40 37 05.4	82 35 23.9	6,391
Cedar Creek, bridge over, just south of schoolhouse; center of T road south.....	40 37 22.7	82 32 54.7	11,646
T. 19 N., R. 18 W., corner of secs. 4, 5, 8, and 9.....	40 37 25.4	82 31 47.3	5,200
Belleville, 1 mile west of; center of crossroads.....	40 37 22.6	82 31 47.4	280
Hub at Belleville.....	40 37 29.1	82 30 44.0	4,937

SHAUCK QUADRANGLE—Continued.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Ankenytown, north-south road crossing on Baltimore & Ohio R.R.....	40 31 57.5	82 30 19.9	.....
Ankenytown, 0.3 mile north of, center of T road east; on Greenville treaty line.....	40 32 15.1	82 30 21.9	1,799
Tps. 18 and 19 N., R. 18 W., corner of secs. 3, 4, 33, and 34, Richland-Knox county line; crossroads.....	40 33 02.4	82 30 34.2	4,890
T. 19 N., R. 18 W., stone at corner of secs. 27, 28, 33, and 34; T road north, at Walnut Hill schoolhouse.....	40 33 56.6	82 30 35.4	5,504
T. 19 N., R. 18 W., corner of secs. 21, 22, 27, and 28; T road east.....	40 34 48.2	82 30 36.2	5,230
T. 19 N., R. 18 W., corner of secs. 15, 16, 21, and 22.....	40 35 40.8	82 30 36.7	5,340
Belleville, 1.25 miles south of; center of forks.....	40 36 08.8	82 30 51.0	3,052
Belleville, at turn of concrete walk in front part of public school grounds; iron post stamped "Prim. Trav. Sta. No. 56. Ohio, 1910".....	40 37 05.2	82 30 32.7	5,884
Belleville, hub at.....	40 37 29.1	82 30 44.0	2,597
Belleville, 1.25 miles north of; center of T road west.....	40 38 29.0	82 30 42.2	6,080
Belleville, 2 miles north of; center of crossroads.....	40 39 07.8	82 30 35.1	3,973
T. 20 N., R. 18 W., corner of secs. 27, 28, 33, and 34.....	40 39 07.8	82 30 42.0	530
Belleville, 3.7 miles north of; center of T lane east.....	40 40 33.2	82 30 42.1	8,661
T. 20 N., R. 18 W., corner of secs. 9, 10, 15, 16; center of crossroads.....	40 41 44.8	82 30 42.4	7,250
Schoolhouse, center of T road west.....	40 42 36.6	82 30 43.6	5,261
Tps. 20 and 21 N., R. 18 W., corner of secs. 3, 4, 33, and 34.....	40 43 19.4	82 30 45.1	4,350
Mansfield, water trough at west side of courthouse.....	40 45 28.0	82 30 51.4	13,050
Mansfield, crossing of Pennsylvania and Erie railroads.....	40 46 05.79	82 30 45.24	3,867

Magnetic declination for south border, 1° 11' W.; for east border, 1° 52' W.; for west border, 1° 19' W.; for east-west line through center, 1° 50' W.

SIAM QUADRANGLE.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 2 N., R. 16 E., 860 feet east of corner of secs. 14, 15, 22, and 23, 1 mile east of Republic, north side of road; iron post stamped "Prim. Trav. Sta. No. 46. Ohio, 1910".....	41 07 28.4	82 59 34.3	.....
T. 2 N., R. 16 E., corner of secs. 13, 14, 23, and 24; center of crossroads.....	41 07 28.2	82 58 35.2	4,520
T. 2 N., R. 16 E., east corner of secs. 13 and 24, 15 feet north to crossroads.....	41 07 27.9	82 57 26.3	5,270
T. 2 N., R. 17 E., west corner of secs. 18 and 19.....	41 07 28.2	82 57 26.3	35
T. 2 N., R. 17 E., corner of secs. 17, 18, 19, and 20; center of crossroads at schoolhouse.....	41 07 28.1	82 56 17.9	5,230
T. 2 N., R. 17 E., corner of secs. 16, 17, 20, and 21.....	41 07 27.5	82 55 08.9	5,280
T. 2 N., R. 17 E., corner of secs. 15, 16, 21, and 22; center of crossroads at frame schoolhouse.....	41 07 27.4	82 53 59.6	5,300
T. 2 N., R. 17 E., corner of secs. 14, 15, 22, and 23; T road north.....	41 07 26.9	82 52 49.4	5,370
Omar, 0.5 mile east of station, at northwest corner of crossroads, 20 feet south by 60 feet east to center of crossroads, 10 feet south by 20 feet east to north end of culvert; iron post stamped "Prim. Trav. Sta. No. 47. Ohio, 1910".....	41 07 26.7	82 51 34.8	5,705
T. 2 N., Rs. 17 and 18 E., corner of secs. 13, 18, 19, and 24; center of T road south.....	41 07 25.8	82 50 30.5	4,920
Seneca-Huron county line, center of road at fence line north-south.....	41 07 25.8	82 50 03.8	2,040
Seneca-Huron county line, 1 mile east of; center of crossroads.....	41 07 30.2	82 48 51.4	5,560
Norwich township, crossroads (probably quarter corner between secs. 2 and 3).....	41 07 27.9	82 47 06.7	8,005
Mud Run, center of bridge over.....	41 07 38.1	82 46 03.8	4,925

SIAM QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
T. 3 N., R. 16 E., corner of secs. 3, 2, 11, and 10.....	41	14	29.4	82	59	40.2
T. 3 N., R. 16 E., corner of secs. 10, 11, 14, and 15; road east-west.....	41	13	37.0	82	59	40.6
T. 3 N., R. 16 E., corner of secs. 13, 14, 23, and 22; road east-west.....	41	12	44.7	82	59	41.4
T. 3 N., R. 16 E., corner of secs. 22, 23, 26, and 27; road east-west, schoolhouse.....	41	11	51.4	82	59	42.2
T. 3 N., R. 16 E., corner of secs. 27, 26, 35, and 34; road east-west.....	41	10	59.4	82	59	43.4
Tps. 2 and 3 N., R. 16 E., corner of secs. 34, 35, 2, and 3, road east-west (jogs east 50 feet, then turns south).....	41	10	08.1	82	59	46.4
T. 2 N., R. 16 E., corner of secs. 3, 2, 11, and 10.....	41	09	12.8	82	59	44.9
T. 2 N., R. 16 E., corner of secs. 10, 11, 14, and 15.....	41	08	20.4	82	59	45.5
T. 2 N., R. 16 E., corner of secs. 15, 14, 23, and 22; road east-west.....	41	07	28.2	82	59	45.6
T. 2 N., R. 16 E., corner of secs. 27, 26, 35, and 34; road east-west.....	41	05	43.5	82	59	45.6
Tps. 1 and 2 N., R. 16 E., corner of secs. 34, 35, 2, and 3; road east-west.....	41	04	51.3	82	59	45.6
T. 1 N., R. 16 E., corner of secs. 3, 2, 11, and 10; road east.....	41	03	57.9	82	59	45.9
T. 1 N., R. 16 E., corner of secs. 10, 11, 14, and 15; pike east.....	41	03	05.5	82	59	46.5
Bloomville, crossing on Pennsylvania R. R., 290 feet east of switch block. Azimuth of railroad, 308° 55'.....	41	02	40.8	82	59	56.6
T. 1 N., R. 16 E., corner of secs. 15, 14, 23, and 22; roads east, west, and north-west.....	41	02	13.3	82	59	46.8
T. 1 N., R. 16 E., corner of secs. 22, 23, 26, and 27; road east-west.....	41	01	21.1	82	59	48.2
T. 1 N., R. 16 E., corner of secs. 27, 26, 35, and 34; road east-west.....	41	00	28.9	82	59	47.8

Along Baltimore & Ohio R. R. near Centertown.

Centertown, road crossing just south of station.....	41	04	58.4	82	45	06.4
Milepost 26, 0.33 mile north of; private road crossing under trestle.....	41	06	03.4	82	45	28.8
Havana, 1.5 miles south of; east-west road crossing.....	41	06	52.9	82	45	23.9

Magnetic declination for east-west center line, 0° 55' W.

SIDNEY QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Church, crossroads one-fifth mile north of.....	40	29	48.8	84	12	37.0
Cincinnati, Hamilton & Dayton Ry., at east-west road crossing; azimuth of railroad, 175° 48'.....	40	29	48.9	84	11	17.5
T. 6 S., R. 6 E., corner of secs. 21, 22, 27, and 28.....	40	29	49.3	84	09	51.5
T. 6 S., R. 6 E., corner of secs. 22, 23, 26, and 27.....	40	29	49.7	84	08	42.6
T. 6 S., R. 6 E., corner of secs. 23, 24, 25, and 26.....	40	29	50.6	84	07	34.2
T. 6 S., Rs. 6 and 7 E., corner of secs. 19, 24, 25, and 30.....	40	29	51.9	84	06	25.6
T. 6 S., R. 7 E., corner of secs. 19, 20, 29, and 30.....	40	29	51.6	84	05	17.1
T. 6 S., R. 7 E., corner of secs. 20, 21, 28, and 29.....	40	29	51.7	84	04	08.3
T. 6 S., R. 7 E., corner of secs. 21, 22, 27, and 28.....	40	29	51.7	84	02	09.8
T. 6 S., R. 7 E., corner of secs. 22, 23, 26, and 27.....	40	29	51.6	84	01	51.3
T. 6 S., R. 7 E., corner of secs. 23, 24, 25, and 26.....	40	29	51.5	84	00	42.9

Along highways near west border of quadrangle.

Tps. 7 and 8 S., R. 5 E., corner of secs. 1, 2, 35, and 36.....	40	22	49.0	84	14	24.3
Anna, 1 mile south and 2 miles west of, northwest corner of crossroads, 15 feet north and 25 feet west of corner of secs. 1, 6, 31, and 36, Tps. 7 and 8 S., Rs. 5 and 6 E.; iron post stamped "Prim. Trav. Sta. No. 28. Ohio, 1909".....	40	22	49.9	84	13	15.9
T. 7 S., Rs. 5 and 6 E., corner of secs. 25, 30, 31 and 36; crossroads.....	40	23	42.0	84	13	15.7
T. 7 S., Rs. 5 and 6 E., corner of secs. 19, 24, 25, and 30; crossroads.....	40	24	34.7	84	13	15.8
T. 7 S., Rs. 5 and 6 E., corner of secs. 13, 18, 19, and 24; crossroads.....	40	25	26.8	84	13	15.8
T. 7 S., Rs. 5 and 6 E., corner of secs. 7, 12, 13, and 18; crossroads.....	40	26	19.2	84	13	15.9
T. 7 S., Rs. 5 and 6 E., corner of secs. 1, 6, 7, and 12; crossroads.....	40	27	11.7	84	13	15.9
Tps. 6 and 7 S., Rs. 5 and 6 E., corner of secs. 1, 6, 31, and 36; T road south.....	40	28	04.0	84	13	16.1
T. 6 S., Rs. 5 and 6 E., corner of secs. 25, 30, 31, and 36; Shelby-Auglaize county line.....	40	28	56.3	84	13	16.7
T. 6 S., R. 5 E., corner of secs. 25, 26, 35, and 36; crossroads.....	40	28	55.3	84	14	25.8
T. 7 S., R. 5 E., north corner of secs. 1 and 2.....	40	28	03.1	84	14	24.5
T. 6 S., R. 5 E., south corner of secs. 35 and 36; T road north.....	40	28	03.1	84	14	24.9
Greenville treaty line, T road north on.....	40	22	01.3	84	13	15.4
T. 8 N., R. 6 E., corner of secs. 3, 4, 9, and 10; crossroads.....	40	20	43.6	84	12	31.8
T. 8 N., R. 6 E., corner of secs. 9, 10, 15, and 16; crossroads.....	40	19	51.3	84	12	30.4
T. 8 N., R. 6 E., corner of secs. 21, 22, 27, and 28; crossroads.....	40	18	06.2	84	12	27.8
T. 8 N., R. 6 E., corner of secs. 27, 28, 33, and 34; crossroads.....	40	17	15.4	84	12	26.1
Cleveland, Cincinnati, Chicago & St. Louis Ry., north-south road crossing.....	40	16	23.6	84	12	25.0
Quarter corner between secs. 10 and 11, T. 7 N., R. 6 E., at T road west.....	40	15	05.7	84	11	13.9

SIDNEY QUADRANGLE—Continued.

Along highways on east-west line through center of quadrangle.

Stations.	Latitude.	Longitude.
Tps. 7 and 8 S., R. 6 E., corner of secs. 5, 6, 31, and 32, near schoolhouse No. 6; crossroads.....	40 22 49.9	84 12 06.4
T. 7 S., R. 6 E., corner of secs. 32 and 33; fence north at south corner of sections.....	40 22 50.1	84 10 58.1
Tps. 7 and 8 S., R. 6 E., corner of secs. 3, 4, 33, and 34, near schoolhouse No. 8.....	40 22 50.4	84 09 49.6
Tps. 7 and 8 S., R. 6 E., corner of secs. 3, 4, 33, and 34.....	40 22 50.7	84 08 41.0
Tps. 7 and 8 S., R. 6 E., corner of secs. 1, 2, 35, and 36.....	40 22 51.0	84 07 32.6
Schoolhouse No. 5, 0.2 mile east of; crossroads.....	40 22 51.1	84 07 15.4
T. 7 S., Rs. 6 and 7 E., south corner of secs. 31 and 36; T road north.....	40 22 51.4	84 06 24.0
Maplewood, 3 miles west of, in southwest corner of abutment to bridge on Greenville treaty line road at Louis Covault's house; aluminum tablet stamped "Prim. Trav. Sta. No. 32, Ohio, 1909".....	40 22 53.6	84 05 15.4
T. 2 N., R. 7 E., corner of secs. 26, 27, 34, and 35, near schoolhouse No. 9; T road east.....	40 22 32.4	84 04 31.8
T. 2 N., R. 7 E., corner of secs. 25, 26, 35, and 36; crossroads.....	40 22 33.2	84 03 23.4
Maplewood, Main Street crossing on Detroit, Toledo & Ironton Ry.....	40 22 34.4	84 01 26.8
T. 2 N., R. 8 E., corner of secs. 29, 30, 31, and 32; crossroads.....	40 22 34.6	84 01 07.3
Shelby and Logan counties, stone boundary post between.....	40 22 34.9	84 00 15.6

Magnetic declination for south border, 0° 13' E.; for east border, 0° 10' E.; for line through center, 0° 17' E.

SOUTH CHARLESTON QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
New Moorefield, T road south.....	39 59 32.5	83 43 05.5
T. 5, R. 10, corner of secs. 9, 10, 15, and 16.....	39 59 36.3	83 44 01.5
New Moorefield station. Azimuth of railroad, 220° 41'.....	39 59 17.0	83 42 57.4
Cleveland, Cincinnati, Chicago & St. Louis Ry., at east-west road crossing. Azimuth of railroad, 220° 41'.....	39 59 31.1	83 42 41.5
Tps. 5 and 6, R. 10, corner of secs. 3, 4, 33, and 34.....	39 59 27.6	83 41 41.2
Intersection of east-west road and road northwest.....	39 58 58.0	83 40 51.4
T road south.....	39 58 57.2	83 40 35.8
Bridge, west end of.....	39 59 27.1	83 39 18.0
Cemetery, T road east at.....	39 59 43.3	83 38 50.1
T. 6, R. 10, corner of secs. 15, 16, 21, and 22.....	39 59 15.4	83 38 18.4
Catawba, T road west about 1 mile south of.....	39 59 12.9	83 37 32.5
Catawba, T road northeast about 1.75 miles south of.....	39 58 38.8	83 37 20.5
Pleasant Township, schoolhouse, road southeast at.....	39 58 54.4	83 36 06.6
T road northwest.....	39 59 07.4	83 35 05.8
T road southeast.....	39 59 18.0	83 34 15.6
Nation Chapel, Y road 0.25 mile northwest of.....	39 59 39.4	83 32 38.6
Clark and Madison counties, stone monument between.....	39 59 14.4	83 31 11.2

Along highways near southwest corner of quadrangle.

Oakland schoolhouse, crossroads at.....	39 45 05.1	83 40 47.0
Gladstone, T road west, about 1.75 miles north of.....	39 45 59.1	83 41 47.1
Green-Clark county line, T road east, near.....	39 46 44.3	83 42 00.7
Selma, crossing of pikes at.....	39 47 11.7	83 42 31.7
Selma, Pennsylvania R. R. at street crossing.....	39 47 19.6	83 42 46.4
Selma, crossroads 0.75 mile northwest of.....	39 47 47.6	83 43 15.4
T road northeast.....	39 48 26.8	83 44 06.5
Pitchin, crossroads 2 miles southeast of.....	39 49 12.2	83 44 48.4

Along Cleveland, Cincinnati, Chicago & St. Louis Ry. east-west through center of quadrangle.

Gravel road crossing.....	39 53 16.4	83 30 01.0
Myers, road crossing 0.25 mile west of.....	39 53 25.3	83 31 45.3
Dirt road crossing.....	39 53 30.7	83 33 12.5
Gravel road and telephone road crossing.....	39 53 37.8	83 35 13.6
Plattsburg, pike crossing at.....	39 53 43.8	83 36 40.8
Gravel road and telephone road crossing.....	39 53 51.5	83 38 20.5
Brooks, road crossing at.....	39 54 02.0	83 40 35.0
Oxtobys, road crossing at.....	39 54 07.2	83 41 43.2
Pike and telephone road crossing.....	39 54 16.3	83 43 47.9
Overhead road crossing.....	39 54 22.2	83 44 40.0

SOUTH CHARLESTON QUADRANGLE—Continued.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Y road southeast.....	39 57 17.3	83 30 20.5
Covered bridge, center of.....	39 56 45.5	83 30 09.2
Summerford, T road south 0.5 mile west of.....	39 56 00.0	83 30 04.9
Tile factory, private road west at.....	39 54 59.5	83 30 27.3
T road west.....	39 54 26.0	83 30 28.8
State fishery, T road north at.....	39 53 45.5	83 30 32.5
Big Four Route, gravel road crossing on. Azimuth of railroad, 276° 21'.....	39 53 10.4	83 30 01.0

Along highways near west border of quadrangle.

Big Four Route, overhead road crossing north and south.....	39 54 22.2	83 44 40.0
Reeds schoolhouse, crossroads at.....	39 54 45.4	83 44 33.4
T. 5, R. 9, corner of secs. 10, 11, 16, and 17.....	39 55 11.6	83 44 24.2
Crossing of old Columbus-Springfield road and Buck Creek lane.....	39 56 17.9	83 43 48.4
Township line crossing on north-south road between secs. 7 and 12, and Tps. 5 and 6, R. 10.....	39 56 55.2	83 43 44.7
Big Four Route, at northwest-southeast road crossing, about 1.75 miles southwest of New Moorefield. Azimuth of railroad, 220° 40'.....	39 58 25.9	83 43 54.3

Near northwest corner of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 5 N., R. 10 E., stone at corner of secs. 9, 10, 15, and 16; T road north. New Moorefield, in southwest corner of public-school building; aluminum tablet stamped "Prim. Trav. Sta. No. 100. 1054, Ohio, 1910".....	39 59 36.4	83 44 01.6	.....
	39 59 33.4	83 43 08.6	4,131

SPENCERVILLE QUADRANGLE.

Along west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 3 S., R. 3 E., south corner of secs. 35 and 36; Van Wert-Mercer county line....	40 43 42.3	84 28 31.1
T. 4 S., R. 3 E., north corner of secs. 1 and 2; Van Wert-Mercer county line.....	40 43 42.3	84 28 31.5
T. 4 S., R. 3 E., corner of secs. 1, 2, 11, and 12, at Church of God; corner of crossroads.....	40 42 49.4	84 28 31.2
T. 4 S., R. 3 E., corner of secs. 12, 13, 11, and 14, 0.2 mile east of Baptist Church, corner of crossroads.....	40 41 57.2	84 28 30.8
North-south road crossing on Cincinnati, Hamilton & Dayton Ry.....	40 41 04.8	84 28 30.7
T. 4 S., R. 3 E., corner of secs. 13, 14, 23, and 24.....	40 41 04.6	84 28 30.7
T. 4 S., R. 3 E., center of sec. 24, near Dunkard Church, at crossroads.....	40 40 38.7	84 27 56.2
St. Marys River, center of steel bridge over.....	40 39 53.9	84 27 56.1
T. 4 S., R. 3 E., corner of secs. 25, 26, 35, and 36; T road south.....	40 39 19.9	84 28 30.5
T. 4 S., R. 3 E., south corner of secs. 35 and 36, near crossroads.....	40 38 27.5	84 28 30.4
T. 5 S., R. 3 E., north corner of secs. 1 and 2, near crossroads.....	40 38 27.5	84 28 30.2
Elm Grove schoolhouse, No. 10, northwest corner of crossroads, 20 feet west and 20 feet south to corner of secs. 1, 2, 11, and 12, T. 5 S., R. 3 E.; iron post stamped "Prim. Trav. Sta. No. 3. Ohio, 1909".....	40 37 35.2	84 28 29.8
T. 5 S., R. 3 E., corner of secs. 11, 12, 13, and 14; crossroads.....	40 36 42.5	84 28 30.0
T road east.....	40 35 49.9	84 28 29.7
T. 5 S., R. 3 E., quarter corner between secs. 24 and 25; crossroads.....	40 34 57.4	84 27 54.9
T. 5 S., R. 3 E., quarter corner between secs. 25 and 36; T road west.....	40 34 04.8	84 27 54.8
Auglaize-Mercer county line; T road north.....	40 33 04.1	84 27 20.0
Pump factory, north-south road crossing Lake Erie & Western R. R.....	40 32 32.4	84 24 56.4
Grand Reservoir Lock, west end of bridge over.....	40 31 18.1	84 25 18.2
T. 5 S., R. 4 E., corner of secs. 16, 17, 20, and 21; crossroads.....	40 30 35.2	84 24 55.9

SPENCERVILLE QUADRANGLE—Continued.

Along highways near center of quadrangle.

Stations.	Latitude.	Longitude.
T. 5 S., Rs. 3 and 4 E., corner of secs. 1, 6, 7, and 12, Auglaize-Mercer county line; crossroads.....	° ' "	° ' "
T. 5 S., R. 4 E., corner of secs. 5, 6, 7, and 8; crossroads.....	40 37 35.0	84 27 21.6
T. 5 S., R. 4 E., corner of secs. 4, 5, 8, and 9, near church and schoolhouse; crossroads.....	40 37 35.0	84 26 05.7
T. 5 S., R. 4 E., corner of secs. 3, 4, 9, and 10; crossroads.....	40 37 35.2	84 24 56.7
T. 5 S., R. 4 E., corner of secs. 2, 3, 10, and 11.....	40 37 35.2	84 23 48.0
T. 5 S., R. 4 E., corner of secs. 1, 2, 11, and 12; T road north.....	40 37 35.5	84 22 39.2
Tps. 4 and 5 S., Rs. 4 and 5 E., corner of secs. 1, 6, 31, and 36; T road west.....	40 37 36.0	84 21 30.7
Kossuth, 0.8 mile southeast of, at southwest corner of intersection of northwest-southeast pike with road south, on range line, 15 feet east and 10 feet north to center of intersection; iron post stamped "Prim. Trav. Sta. No. 4. Ohio, 1909".....	40 38 29.4	84 20 21.7
Pike, at road south.....	40 38 53.8	84 20 22.0
Buckland, 1.2 miles west by 0.3 mile north of; crossroads.....	40 38 21.1	84 19 22.2
Buckland, 0.3 mile north of; crossroads.....	40 37 51.5	84 17 05.1
	40 37 50.7	84 15 38.0

Along highways from Kemp to Elgin.

Kemp station, 1 mile west and 0.33 mile north of, at northwest corner of crossroads, 15 feet south to T. 4 S., R. 5 E., corner of secs. 1 and 2, 15 feet south and 30 feet east to T. 3 S., R. 5 E., corner of secs. 35 and 36; iron post stamped "Prim. Trav. Sta. No. 1. Ohio, 1909".....	40 43 46.0	84 14 33.0
Tps. 3 and 4 S., R. 5 E., corner of secs. 2, 3, 34, and 35; center of crossroads.....	40 43 45.5	84 15 41.6
T. 3 S., R. 5 E., stone at corner of secs. 26, 27, 34, and 35; T road west.....	40 44 37.6	84 15 42.1
T. 3 S., R. 5 E., corner of secs. 27, 28, 33, and 34; center of crossroads.....	40 44 37.2	84 16 51.1
T. 3 S., R. 5 E., corner of secs. 28, 29, 32, and 33; center of T road north.....	40 44 36.6	84 18 00.0
District schoolhouse No. 2, T road west.....	40 44 10.3	84 18 53.3
Cincinnati, Hamilton & Dayton Ry., center of road crossing.....	40 44 10.0	84 20 21.9
Spencerville, 1.8 miles north of, northwest corner of crossroads, 33 feet east and 20 feet south to T. 3 S., R. 4 W., quarter corner between secs. 35 and 36, center of crossroads; iron post stamped "Prim. Trav. Sta. No. 2. Ohio, 1909".....	40 44 09.9	84 21 32.4
T. 3 S., R. 4 E., center of sec. 34; center of crossroads.....	40 44 09.5	84 23 15.4
T. 3 S., R. 4 E., corner of secs. 27, 28, 33, and 34; T road west on Allen-Van Wert county line.....	40 44 35.7	84 23 49.4
T. 3 S., R. 4 E., corner of secs. 28, 29, 32, and 33; center of crossroads.....	40 44 35.4	84 24 58.3
T. 3 S., R. 4 E., corner of secs. 29, 30, 31, and 32.....	40 44 35.1	84 26 07.4
T. 3 S., R. 3 E., east corner of secs. 25 and 36; railroad spike in bridge.....	40 44 34.9	84 27 22.4
T. 3 S., R. 4 E., west corner of secs. 30 and 31.....	40 44 33.7	84 27 22.4
T. 3 S., R. 3 E., corner of secs. 25, 26, 35, and 36, at Elgin; center of crossroads at schoolhouse.....	40 44 34.2	84 28 31.5

Magnetic declination for north border, 0° 9' W.; for south border, 0° 05' W.; for west border, 0° 14' W.; for line through center, 0° 09' W.

SPRINGFIELD QUADRANGLE.

Along Cleveland, Cincinnati, Chicago & St. Louis Ry. in northeast part of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Detroit Southern R. R., crossing of.....	39 54 31.4	83 45 53.5
Gravel road crossing.....	39 54 33.0	83 46 15.8
Detroit, Toledo & Ironton Ry., crossing on.....	39 54 37.4	83 46 33.5
Springfield, Limestone street-car line, crossing on.....	39 55 20.2	83 48 31.0
Springfield, national road crossing.....	39 55 35.3	83 50 32.3
Overhead road crossing.....	39 55 10.1	83 51 41.6

Along Erie R. R. between Durbin and milepost 376.

Durbin, milepost 369.....	39 54 42.5	83 53 21.7
Snyderville, road crossing.....	39 54 04.7	83 54 48.1
Enon, road crossing.....	39 53 22.6	83 56 08.6
Mileposts 375 and 376, road crossing halfway between.....	39 51 53.1	83 59 38.6

SPRINGFIELD QUADRANGLE—Continued.

Along highways near north border of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
T. 5, R. 10, corner of secs. 15, 16, 21, and 22.....	39	59	39.9	83	45	10.1
T. 5, R. 10, corner of secs. 21, 22, 27, and 28.....	39	59	44.0	83	46	20.6
Springfield and Urbana pike, T road east.....	39	59	50.1	83	48	02.8
T road east.....	39	58	57.7	83	48	26.9
Erie R. R. at east-west crossing, on long curve.....	39	58	27.9	83	48	44.1
Mad River, T road north, near.....	39	58	41.2	83	49	50.3
Blacksmith shop, crossroads at.....	39	58	38.7	83	50	31.2
T road north.....	39	58	57.3	83	51	22.1
Lawrenceville, intersection of roads in east part of.....	39	59	08.8	83	52	09.7
T. 4, R. 10, corner of secs. 20, 21, 26, and 27.....	39	59	14.6	83	53	19.2
T. 4, R. 10, corner of secs. 26, 27, 32, and 33.....	39	59	18.8	83	54	28.2
Northampton, road southeast 1 mile east of.....	39	59	22.0	83	55	21.4
Northampton, crossroads at.....	39	59	25.5	83	56	23.9
T. 3, R. 10, corner of secs. 8, 9, 14, and 15.....	39	59	30.5	83	57	46.6
T. 3, R. 10, corner of secs. 14, 15, 20, and 21.....	39	59	34.3	83	58	54.7
T. 3, R. 10, quarter corner between secs. 20 and 21.....	39	59	36.2	83	59	28.8
T road south.....	39	58	42.7	83	59	01.8
Liberty schoolhouse, T road east, 400 feet south of.....	39	57	45.4	83	59	05.5
Liberty Church, T road south, 0.5 mile west of.....	39	57	26.7	83	59	42.1
New Carlisle, T road north, 1.5 miles east of.....	39	55	52.9	83	59	50.0

Along highways near west border of quadrangle.

Mad River, T road east at.....	39	52	33.3	83	59	42.2
Erie R. R., at north-south road crossing. Azimuth of railroad, 241° 18'.....	39	51	53.1	83	59	38.6
T. 3, R. 8, corner of secs. 16, 17, 22, and 23.....	39	50	49.6	83	59	45.2
T. 3, R. 8, corner of secs. 15, 16, 21, and 22.....	39	49	56.0	83	59	51.2
T. 3, R. 8, corner of secs. 14, 15, 20, and 21.....	39	49	04.6	83	59	57.6
Crossing of Xenia pike and north-south road.....	39	48	42.8	83	58	51.6
T. 3, R. 8, corner of secs. 7, 8, 13, and 14.....	39	48	07.2	83	58	54.7
Byron, road north at.....	39	47	08.5	83	59	01.0
Byron, T road north, 1.5 miles south and 0.5 mile west of.....	39	46	03.4	83	59	36.3
Byron, T road east, 2.5 miles south of, near T. 3, R. 7, quarter corner between secs. 10 and 16.....	39	45	05.5	83	59	15.2
T. 3, R. 7, quarter corner between secs. 4 and 10.....	39	45	00.9	83	58	04.4
Byron, 2.5 miles south of, west side of north-south road, opposite T road east, near quarter-section corner; iron post stamped "Prim. Trav. Sta. No. 44, Ohio, 1909".....	39	45	05.4	83	59	15.35

Along highways near east border of quadrangle.

Pitchin, crossroads at.....	39	50	34.5	83	45	45.9
Pitchin, road west about 1 mile northwest of.....	39	51	24.7	83	46	26.8
Crossing of Springfield-Selma pike and east-west road.....	39	52	15.8	83	46	43.9
Crossroads.....	39	52	38.0	83	45	53.9
Calvary Cemetery, T road west.....	39	53	02.2	83	45	16.9
T. 5, R. 9, quarter corner between secs. 14 and 15.....	39	53	28.4	83	45	14.1
Locust Grove Church, road east.....	39	53	35.9	83	45	01.4

Along highways near south border of quadrangle.

T road southeast.....	39	45	27.2	83	53	52.2
Clifton-Xenia and Yellow Springs-Cedarville pikes, crossing of.....	39	46	30.6	83	52	04.4
Cory schoolhouse, one-half mile southeast of; T road northwest.....	39	45	30.1	83	51	36.1
Cedarville, about 2.5 miles northwest of; T road southeast.....	39	45	46.6	83	50	45.8
Cedarville, 1 mile northwest of; T road northeast.....	39	45	02.9	83	49	28.2

SWANTON QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Seward, 2 miles east and 0.5 mile north of, at crossing of township-line road and Lyons-Metamora road, in northwest corner of field of Adam Math; iron post stamped "Prim. Trav. Sta. No. 25, 1905"	° ' "	° ' "
Whiteville, crossroads, 20 feet southwest to E. J. Smith's mail box, 36 feet north to road crossing on Toledo & Western electric road.	41 42 33.7	83 59 53.2
Whiteville, T road north 1 mile east of, 27 feet north to road crossing on Toledo & Western electric road, 24 feet east to Peter Myer's mail box.	41 42 40.3	83 58 34.9
Whiteville, T road north 2 miles east of, at stop 27, 39 feet north to road crossing on electric railroad.	41 42 45.5	83 57 25.9
Ohio-Michigan State line at north-south road.	41 42 51.0	83 56 15.4
Metamora, center of bridge over creek.	41 43 05.9	83 56 16.0
South part of schoolhouse yard at county line; north rail of electric road at switch block bears S. 49° 30' E., distant 126 feet, southeast corner of schoolhouse bears N. 0° 15' E., distant 78 feet; iron post stamped "Prim. Trav. Sta. No. 26, 1905".	41 42 41.2	83 54 38.0
Berkey, crossroads at stop 55, 1 mile west of, 33 feet west to mail box, 30 feet southwest to south end of culvert.	41 42 42.6	83 52 48.3
Berkey, crossroads, 33 feet southeast to crossing on Toledo & Western electric road	41 43 01.5	83 51 31.9
Berkey, crossing of north-south road and electric road 1 mile east of.	41 42 54.2	83 50 21.9
Berkey, T road north 2 miles east of.	41 42 48.5	83 49 11.9
T. 9 S., R. 5 E., sec. 11, northeast part of, 0.25 mile west of electric-railroad junction, in northeast corner of field owned by John S. Clark, at T road south; iron post stamped "Prim. Trav. Sta. No. 27, 1905"	41 42 55.7	83 48 05.6
Ohio-Michigan State line.	41 42 56.3	83 47 11.7
T. 9 S., R. 5 E., corner of secs. 11, 12, 13, and 14, 0.25 mile west of, mail box of Kate R. Van Norman and Paul Talor; crossroads.	41 43 19.8	83 48 06.6
	41 42 05.8	83 47 09.2

Along highways near east border of quadrangle.

T. 9 S., R. 5 E., secs. 13, 14, 23, and 24; crossroads 0.25 mile west of, 19 feet northeast to John G. Taylor's mail box, 18 feet north to east end of small bridge.	41 41 12.4	83 47 07.9
T. 9 S., R. 5 E., secs. 23, 24, 25, and 26; T road north 0.25 mile west of, 30 feet north to C. Lochriller's mail box, 27 feet northeast to east end of stone culvert.	41 40 22.7	83 47 05.4
T. 9 N., R. 5 E., corner of secs. 22, 23, 26, and 27, T road north, 24 feet northeast to cross on telephone pole, 21 feet northwest to west end of stone culvert.	41 40 22.5	83 47 42.9
T. 9 S., R. 5 E., corner of secs. 21, 22, 27, and 28, 33 feet southwest to cross on telephone pole, 38 feet southeast to corner fence post; T road south.	41 40 21.7	83 49 07.3
T. 9 S., R. 5 E., corner of secs. 27, 28, 33, and 34; crossroads, 21 feet west to center of bridge, 36 feet northeast to southwest corner of pool hall.	41 39 27.4	83 49 05.6
T. 9 S., R. 5 E., south corner of secs. 33 and 34; stone at T road north.	41 38 35.9	83 49 03.9
T. 10 S., R. 5 E., corner of secs. 3, 4, 9, and 10, 32 feet northwest to cross on telephone pole, 31 feet southeast to J. K. Barnes's mail box.	41 37 45.2	83 49 02.3
T road north at Oak Grove schoolhouse, 18 feet northeast to J. R. Bower's mail box, 36 feet northwest to arrow on post.	41 37 00.9	83 49 00.6
Holland, 4 miles west of, 0.33 mile south of Lake Shore & Michigan Southern Ry., at crossroads; iron post stamped "Prim. Trav. Sta. No. 28, 1905"	41 36 01.0	83 47 34.8
T. 7 N., R. 5 E., secs. 11 and 12, quarter corner between, T road east; stone at intersection of road.	41 34 55.0	83 47 10.5
T. 7 N., R. 5 E., east corner of secs. 14 and 23; T road west, 21 feet northwest to northeast corner of stone culvert, 23 feet southwest to southeast corner of same culvert.	41 33 36.8	83 47 09.8
T. 7 N., R. 5 E., corner of secs. 23, 24, 25, and 26; crossroads at schoolhouse, 25 feet northeast to mail box on post, 33 feet northwest to maple tree at corner of fence.	41 32 44.0	83 47 09.4
T. 7 N., R. 5 E., south corner of secs. 35 and 36, stone to; T road north.	41 30 59.4	83 47 09.2

Along Lake Shore & Michigan Southern Ry.

Milepost 12, east-west road crossing west of.	41 36 35.3	83 45 22.6
Mileposts 12 and 13, north-south road crossing between.	41 36 32.4	83 45 40.3
Mileposts 13 and 14, east-west road crossing between.	41 36 24.2	83 46 31.4
Mileposts 14 and 15, east-west road crossing between.	41 36 11.7	83 47 49.6
Mileposts 16 and 17, north-south road crossing between.	41 35 55.9	83 49 27.6
Mileposts 17 and 18, north-south road crossing between.	41 35 44.4	83 50 39.1
Mileposts 18 and 19, north-south road crossing between.	41 35 33.3	83 51 47.7
Mileposts 18 and 19, north-south road crossing between.	41 35 22.3	83 52 55.9
Swanton station.	41 35 18.1	83 53 22.0
Swanton, Main Street crossing.	41 35 17.5	83 53 25.9
Mileposts 20 and 21, north-south road crossing between.	41 35 11.0	83 54 05.6
Mileposts 20 and 21, north-south road crossing between.	41 35 03.3	83 54 53.5
Mileposts 21 and 22, north-south road crossing between.	41 34 59.7	83 55 15.6
Mileposts 22 and 23, north-south road crossing between.	41 34 48.2	83 56 26.9
Mileposts 23 and 24, north-south road crossing between.	41 34 31.3	83 58 11.0
Mileposts 24 and 25, east-west road crossing between.	41 34 25.2	83 58 48.3
Delta station.	41 34 14.8	83 59 52.9
Delta, road crossing west of.	41 34 14.5	83 59 54.8

SWANTON QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Tps. 6 and 7 N., R. 7 E., quarter corner between secs. 1 and 36.....	41 30 55.6	84 00 30.1
Tps. 7 and 8 N., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36.....	41 36 10.1	83 59 54.1
Tps. 9 and 10 S., Rs. 3 and 4 E., corner of secs. 1, 6, 31, and 36.....	41 38 30.9	83 59 45.2
T. 9 S., Rs. 3 and 4 E., corner of secs. 24, 19, 30, and 25.....	41 40 13.8	83 59 48.6
T. 9 S., R. 3 E., corner of secs. 7, 18, 13, and 12.....	41 41 57.2	83 59 52.5
T. 9 S., R. 3 E., corner of secs. 1, 6, 7, and 12.....	41 42 49.8	83 59 54.0

SYCAMORE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Roads, northeast and southwest.....	40 46 28.5	83 14 28.6
Quarter corner sections (no numbers).....	40 47 21.6	83 13 03.3
T. 3 S., R. 14 E., corner of secs. 2, 3, 10, and 11.....	40 48 13.8	83 13 38.9
Tps. 2 and 3 S., R. 14 E., corner of secs. 3, 4, 33, and 34.....	40 49 06.2	83 14 47.2
Roads east, west, and northeast.....	40 54 02.0	83 14 47.4
Sandusky River, bridge over.....	40 55 41.8	83 14 44.7
T. 1 S., R. 14 E., corner of secs. 15, 16, 21, and 22.....	40 56 57.9	83 14 49.5
T. 1 S., R. 14 E., corner of secs. 10, 11, 14, and 15.....	40 57 49.9	83 14 49.8

Along highways near east border of quadrangle.

Brokensword, crossroads at Tps. 1 and 2 S., R. 16 E., corner of secs. 33, 34, 3, and 4.....	40 54 23.3	83 00 59.4
T. 2 S., R. 16 E., corner of secs. 3, 4, 10, and 9; road east-west.....	40 53 30.4	83 00 59.9
T. 2 S., R. 16 E., corner of secs. 9, 10, 15, and 16; road east-west.....	40 52 38.2	83 00 59.9
T. 2 S., R. 16 E., corner of secs. 16, 15, 22, and 21, road east-west; schoolhouse.....	40 51 46.1	83 00 59.8
Toledo & Ohio Central Ry. road crossing. Azimuth of railroad, 126° 32'.....	40 50 49.8	83 00 59.5
Tps. 2 and 3 S., R. 16 E., corner of secs. 33, 34, 3, and 4.....	40 49 08.5	83 00 59.4
Bueyrus, Pennsylvania R. R. crossing, 2 miles west of. Azimuth of railroad, 273° 52'.....	40 48 41.4	83 01 03.2
T. 3 S., R. 16 E., corner of secs. 4, 3, 10, and 9; road east-west.....	40 48 16.3	83 01 02.5
Bueyrus, 5 miles north by 2 miles west of, 2 miles south of Brokensword, north-west corner of crossroads, 20 feet south by 30 feet east to corner of secs. 9, 10, 15, and 16, T. 2 S., R. 16 E., crossroads; iron post stamped "Prim. Trav. Sta. No. 53. Ohio, 1910".....	40 52 38.4	83 01 00.3

THORNVILLE QUADRANGLE.

Along Baltimore & Ohio R. R. between milepost 28 and Chalfant.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Milepost 28, private-road crossing, 2,000 feet north of.....	39 45 47.3	82 18 55.7
Wellan station, east-west road crossing.....	39 46 34.8	82 18 42.5
Road crossing under trestle.....	39 47 27.2	82 18 20.6
Somerset, 0.5 mile south of station; overhead crossing.....	39 48 18.8	82 17 51.7
Brick plant, switch block to spur.....	39 49 25.0	82 17 19.4
Milepost 22, east-west road crossing; 495 feet north of.....	39 50 17.6	82 16 43.2
Milepost 21, road crossing; 440 feet north of.....	39 51 08.6	82 16 48.0
Chalfant station, east-west road crossing in southwest corner of field of N. S. Axline, center of road crossing bears S. 60° 15' W., distant 33 feet; iron post stamped "Prim. Trav. Sta. No. 52, 1905".....	39 52 08.7	82 17 11.0

Along Zanesville & Western Ry. near Glassrock.

Glassrock station, north-south road crossing railroad.....	39 52 36.7	82 17 22.0
Milepost 21, 0.5 mile east of; crossing of north-south road.....	39 52 34.7	82 16 06.8
Glassrock station, 2 miles east of, railroad bridge over Jonathan Creek; north-south road crossing, 800 feet east of.....	39 52 39.8	82 15 06.9

THORNTONVILLE QUADRANGLE—Continued.

Along highways near northeast corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Top of hill, T road east; G. Hartsough's mail box.....	39 53 57.9	82 15 16.8
Corner of secs. 13 and 14 (?) on Licking-Perry county line; rail fence west along north edge of woods, 19 feet west to cross on fence post.....	39 54 50.5	82 15 12.8
Brownsville, 1 mile south of, crossroads; cross on corner fence post.....	39 55 44.8	82 15 43.2
Brownsville, Davy Hotel, just west of; T road north, 35 feet northwest to guidepost, 39 feet southeast to cross on telegraph pole.....	39 56 49.6	82 15 28.1
Brownsville, 3 miles north of, at Clark's blacksmith shop, crossroads; guidepost..	39 59 21.2	82 15 48.8

Along Toledo & Ohio Central Ry. near Hebron.

Milepost 13, just north of; private-road crossing.....	40 00 38.5	82 28 38.8
Trestle No. 1364 over northeast-southwest gravel road; center of.....	39 59 27.9	82 28 48.9
Hebron, crossing of Toledo & Ohio Central Ry. and Ohio Electric Ry.....	39 57 41.2	82 29 34.1

Along highways near south border of quadrangle.

Baptist Corners, 1 mile east of; center of bridge at crossroads.....	39 46 31.1	82 29 20.4
West Rushville, crossroads, 46 feet southwest to northeast corner of Dilger Bros.' store, 63 feet southeast to John Dilger's store.....	39 45 48.9	82 26 51.8
Rushville, crossroads at Rushville Hotel; center of intersection.....	39 45 52.6	82 25 54.5
Rushville, 1.1 miles east of; T road north, 27 feet northwest to cross on fence post, 27 feet southwest to cross on telegraph pole.....	39 46 01.2	82 24 41.3
Perry-Fairfield county line, T road south.....	39 46 06.4	82 24 06.9
Rushville, 2.5 miles east of, 2 miles north of Avlon, at crossroads, in southeast corner of John Love's farm; southwest corner of Thos. Griffin's residence bears N. 59° E., distant 45.6 feet; iron post stamped "Prim. Trav. Sta. No. 51, 1905".....	39 46 06.6	82 22 57.9
Ottoman, United Brethren Church, 0.25 mile south of; crossroads, 10 feet west to cross on corner fence post, 24 feet to cross on corner post in wire fence.....	39 46 09.9	82 21 47.4
Top of hill, T road east, 15 feet southeast to Henry Brehm's mail box.....	39 45 50.1	82 21 06.8
Shoal House, T road west, 12 feet east to cross on small locust tree, 32 feet northwest to southeast corner of coal shed.....	39 45 21.4	82 20 34.8

Magnetic declination for north border, 1° 05' W.; for south border, 0° 37' W.; for east border, 1° 22' W.; for west border, 0° 15' W.

THURSTON QUADRANGLE.

Along Pittsburgh, Cincinnati, Chicago & St. Louis Ry. from Summit to Outville.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Summit, road crossing at station; north track.....	39 59 52.6	82 45 07.5
Summit, 1 mile east of station; north track at north-south road crossing.....	39 59 50.7	82 43 45.4
Summit, 2 miles east of station; north track at east-west road crossing.....	39 59 49.3	82 42 43.4
Columbia Center, north-south road crossing.....	39 59 48.0	82 41 49.6
Pataskala, street crossing east of station.....	39 59 46.2	82 40 31.1
Pataskala, 1.5 miles east of, at road crossing on Pennsylvania R. R., in southeast corner of field of Edward Condit, north rail of north track at road crossing bears S. 20° 30' E., distant 60 feet; iron post stamped "Prim. Trav. Sta. No. 35, 1905".....	39 59 44.2	82 38 41.5
Pataskala, 2.5 miles east of, south track at road crossing.....	39 59 41.9	82 37 32.6
Outville, north-south road crossing.....	39 59 39.6	82 35 48.4
Outville, 1 mile east of; north track at north-south road crossing.....	39 59 44.0	82 34 40.4

Along Toledo & Ohio Central Ry. from milepost 8 to Pleasantville.

Milepost 8, center of track opposite.....	39 56 49.4	82 30 36.6
Licking-Fairfield county line, east-west road crossing.....	39 55 38.6	82 31 15.1
Millersport, 1 mile north of, water tank; center of track.....	39 54 42.6	82 31 43.7
Millersport, near bridge, in south part of lot owned by Pence & Swisher, 47 feet due west to east rail, cross on corner of bridge abutment bears S. 54° 45' W., distant 54.7 feet; iron post stamped "Prim. Trav. Sta. No. 46, 1905".....	39 53 57.7	82 32 12.9
Millersport, 2 miles south of; east-west gravel road crossing.....	39 52 10.2	82 32 32.8
Thurston, crossing of Zanesville & Western and Toledo & Ohio Central railways.....	39 50 48.2	82 32 39.7
Thurston, 1.2 miles south of; center of track at east-west road crossing.....	39 49 28.3	82 31 45.9
Thurston, 1.2 miles south of, T. 16 S., R. 18 W., corner of secs. 27, 28, 33, and 34, 610 feet west of east-west road crossing.....	39 49 28.3	82 31 53.8
Pleasantville, township line; road crossing.....	39 48 33.2	82 31 02.4

• THURSTON QUADRANGLE—Continued.

Along highways from Pleasantville to point 5 miles west of Zinc schoolhouse.

Stations.	Latitude.	Longitude.
Pleasantville, 1.33 miles east of; crossroads at schoolhouse, 33 feet northeast to cross on telegraph pole, 38 feet northwest to cross on corner fence post.....	39 47 51.7	82 30 23.5
Schoolhouse, 1 mile south of; T road east, 24 feet northeast to granite boulder, 39 feet southeast to locust tree.....	39 46 55.8	82 30 28.8
Pleasantville, 2.5 miles south and 0.5 mile east of, in southeast corner of Baptist schoolhouse yard, pump bears west, distant 11 feet; southeast corner of schoolhouse bears N. 44° 20' W., distant 25.7 feet; iron post stamped "Prim. Trav. Sta. No. 47, 1905".....	39 46 22.1	82 30 22.5
Bridge over creek, 700 feet east of; T road south just east of J. G. Mertz's mail box.....	39 45 57.2	82 31 41.8
T. 15 S., R. 18 W., secs. 16, 17, 20, and 21, corner stone; T road north.....	39 46 01.5	82 33 31.2
Lancaster, 3.5 miles north of, Friesner's nursery; crossroads, 30 feet northwest to cross on telegraph pole.....	39 46 04.0	82 34 37.8
Zinc schoolhouse, crossroads, 19 feet south to large elm tree.....	39 45 09.2	82 35 01.1
T road west at corner of sections (no numbers).....	39 45 34.2	82 42 43.6
Gravel pit, crossroads, 33 feet northeast to cross on board fence, 34 feet northwest to cross on corner fence post.....	39 46 24.3	82 42 15.4

Along Hocking Valley Ry.

Carroll station, 0.5 mile southeast of; north-south road crossing on railroad.....	39 47 33.8	82 42 09.7
Carroll station, crossing of east-west road.....	39 48 00.6	82 42 35.6
Little Walnut Creek, 0.25 mile south of; crossing of east-west road.....	39 49 06.6	82 43 04.2
Sherman schoolhouse, 1 mile south of; crossing of north-south road.....	39 49 45.2	82 43 30.5

Along highways from Sherman to district 10 schoolhouse.

Sherman schoolhouse, crossroads, 35 feet southwest to walnut tree, 23 feet southeast to cross on telegraph pole.....	39 50 27.3	82 43 27.2
Sherman schoolhouse, 1 mile north of; crossroads, 30 feet northeast to mail box, 26 feet southeast to cross on fence post.....	39 51 20.6	82 43 22.6
T. 15 S., R. 20 W., corner of secs. 13, 14, 23, and 24.....	39 51 47.4	82 43 20.4
T. 15 S., R. 20 W., secs. 11, 12, 13, and 14; crossroads, 24 feet southwest to mail box on fence post, 24 feet northwest to cross on telegraph pole.....	39 52 39.4	82 43 16.1
T. 15 S., R. 20 W., northwest corner of sec. 12, at T road south, in northwest corner of Wm. Hay's pasture; nail in root of small cherry tree bears S. 6° E., distant 13.4 feet; iron post stamped "Prim. Trav. Sta. 50, 1905".....	39 53 32.6	82 43 11.4
Violet Chapel, 0.25 mile north of; forks of road, 19 feet northwest to cross on gatepost, 21 feet southeast to cross on large fence post.....	39 54 36.8	82 43 42.4
Violet Chapel, 1.5 miles north of; stone at crossroads.....	39 55 46.7	82 43 35.9
Wagram, 1 mile south of; crossroads, 23 feet southeast to corner of rail fence, 24 feet northeast to boulder at end of hedge fence.....	39 56 40.6	82 43 51.3
Wagram, at post office, crossing of north-south road and Ohio Electric Ry.....	39 57 24.6	82 43 50.1
Wagram, 1.25 miles west of; T road north, 24 feet northeast to cross on board fence, 40 feet northwest to guidepost.....	39 57 23.4	82 45 11.1
Schoolhouse, district 10, T road south; Philip Krunnas's mail box.....	39 58 31.3	82 45 05.4

Magnetic declination for west border, 0° 31' W.

TIFFIN QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
Bettsville, crossing on Pennsylvania R. R.....	41 14 41.3	83 14 13.2
Crossroads at section corner.....	41 13 58.9	83 14 42.4
T. 3 N., R. 14 E., corner of secs. 15, 16, 21, and 22.....	41 12 36.7	83 14 41.0
T. 3 N., R. 14 E., corner of secs. 27, 28, 33, and 34.....	41 10 51.7	83 14 46.2
Tps. 2 and 3 N., R. 14 E., corner of secs. 3, 4, 33, and 34.....	41 09 59.6	83 14 49.4
T. 2 N., R. 14 E., corner of secs. 9, 10, 15, and 16.....	41 08 17.0	83 14 50.6
T. 2 N., R. 14 E., corner of secs. 15, 16, 21, and 22.....	41 07 24.4	83 14 50.4
T. 2 N., R. 14 E., corner of secs. 27, 28, 33, and 34.....	41 05 39.5	83 14 51.6
Tps. 1 and 2 N., R. 14 E., corner of secs. 3, 4, 33, and 34.....	41 04 47.5	83 14 51.6
Roads north, south, east, and west.....	41 02 36.8	83 14 51.0

TOLEDO QUADRANGLE.

Near Toledo.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Toledo, St. Mary's Church spire, located by U. S. Lake Survey.....	41 39 32.85	83 32 02.9
Toledo, Park, U. S. Lake Survey station.....	41 39 57.78	83 30 36.43
Summit Avenue, crossing on Wheeling & Lake Erie R. R.....	41 40 41.8	83 29 49.0
Michigan and Ash streets, corner of.....	41 40 04.8	83 30 59.4

From Toledo along Lake Shore & Michigan Southern Ry. to Mich.-Ohio State line.

Bancroft Street, Michigan Central R. R. crossing.....	41 39 48.9	83 34 21.6
Bancroft Street, Lake Shore & Michigan Southern Ry. crossing.....	41 39 48.7	83 34 37.4
Ottawa Park, forks of road at southwest corner of.....	41 39 47.2	83 36 28.0
Central Avenue, crossing on.....	41 40 36.0	83 40 16.7
Sylvania, crossing 400 feet west.....	41 42 30.8	83 42 05.8
State line, crossing at.....	41 43 30.8	83 42 33.9
State line, crossing 1 mile north.....	41 44 21.2	83 43 26.2
West Toledo station.....	41 41 25.7	83 33 23.7

Near northeast part of quadrangle.

Lake Shore & Michigan Southern Ry., crossing of pike.....	41 41 59.9	83 32 54.2
State line, crossing of Lake Shore & Michigan Southern Ry.....	41 43 52.3	83 31 17.4
Schoolhouse, crossing at.....	41 44 23.6	83 30 50.4

In south part of quadrangle.

Crossing of Michigan Central and Toledo, St. Louis & Western railroads.....	41 37 34.4	83 34 23.6
Crossing 2 miles southwest of last crossing.....	41 36 16.7	83 35 51.8
Maumee, crossing 320 feet northeast of station.....	41 33 56.5	83 39 19.5
Waterville, crossing 2½ miles north.....	41 32 11.3	83 42 35.4
Waterville station, first crossing south.....	41 30 01.3	83 43 30.1

Near central part of quadrangle.

Crossing of Toledo, St. Louis & Western and Wabash railroads.....	41 37 18.0	83 34 47.4
Crossing 2 miles southwest of Michigan Central R. R. crossing.....	41 36 44.3	83 35 36.4
Crossing of Michigan Central and Lake Shore & Michigan Southern railroads.....	41 38 20.9	83 34 24.8
Long Bridge, east end of truss.....	41 37 53.2	83 32 20.8
Fassett Street, crossing on.....	41 37 43.8	83 31 40.5

Along Lake Shore & Michigan Southern Ry. between Toledo and milepost 12.

Toledo, crossing of Michigan Central and Toledo, St. Louis & Western railroads.....	41 37 33.5	83 34 23.2
Mileposts 4 and 5, north-south road crossing between.....	41 38 01.4	83 36 23.6
Mileposts 5 and 6, north-south road crossing between.....	41 37 50.4	83 37 32.6
Mileposts 6 and 7, north-south road crossing between.....	41 37 39.3	83 38 42.4
Mileposts 7 and 8, north-south road crossing between.....	41 37 28.2	83 39 52.0
Milepost 8, one-fourth mile east of; east-west road crossing.....	41 37 24.7	83 40 13.4
Mileposts 8 and 9, north-south road crossing between.....	41 37 17.0	83 41 01.8
Holland, north-south road crossing east.....	41 37 05.9	83 42 11.3
Holland station.....	41 37 00.8	83 42 43.2
Holland, road crossing west.....	41 37 00.2	83 42 47.1
Mileposts 11 and 12, north-south road crossing between.....	41 36 46.3	83 44 14.0

On Toledo & Ohio Central Ry. at Lime City.

Lime City, crossing of telephone-line road.....	41 32 06.2	83 34 01.8
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TROY QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
T. 3, R. 13, west corner of secs. 31 and 32; T road on Champaign-Shelby county line.....	40 14 39.7	84 01 02.3
T. 2, R. 13, east corner of secs. 1 and 2, Champaign-Shelby county line.....	40 14 32.0	84 01 03.0
New Palestine, 0.5 mile north by 0.5 mile west of; T road north, 40 feet north of J. H. Loudenback's mail box.....	40 14 35.6	84 02 11.6
T. 2, R. 13, corner of secs. 7, 8, 13, and 14; crossroads.....	40 14 39.2	84 03 22.2
T. 2, R. 13, corner of secs. 13, 14, 19, and 20; T road south.....	40 14 43.6	84 04 30.6
Tps. 1 and 2, R. 13, corner of secs. 19, 20, 25, and 26.....	40 14 48.6	84 05 39.6
Sidney, 3.5 miles east and 1.8 miles south of, 25 feet north and 20 feet east of T road north; iron post stamped "Prim. Trav. Sta. No. 36. Ohio, 1909".....	40 14 49.7	84 05 51.7
T. 1, R. 13, corner of secs. 25, 26, 31, and 32; crossroads.....	40 14 52.4	84 06 38.3
T. 1, R. 13, corner of secs. 1, 2, 31, and 32; T road south.....	40 14 57.9	84 07 48.6
T. 1, R. 12 and 13, corner of secs. 1, 6, 7, and 12.....	40 14 09.3	84 09 03.3
T road west of schoolhouse.....	40 13 50.1	84 09 39.6
T road east.....	40 14 07.0	84 11 22.7
Sidney, 3 miles south of; center of bridge over Miami River.....	40 14 38.7	84 10 58.4
Shelby County infirmary, 0.2 mile southwest of, 20 feet east and 10 feet south of crossroads; iron post stamped "Prim. Trav. Sta. No. 29. Ohio, 1909".....	40 14 52.9	84 12 22.4
T. 7 N., R. 6 E., quarter corner between secs. 16 and 17; T road west.....	40 14 11.6	84 13 30.6
T. 7 N., R. 6 E., quarter corner between secs. 17 and 18; T road north.....	40 14 10.0	84 14 33.5

Along highways near west border of quadrangle.

T. 1, R. 12, corner of secs. 16, 17, 22, and 23; T road west.....	40 12 31.3	84 11 29.8
T. 1, R. 12, corner of secs. 15, and 21; Miami-Shelby county line.....	40 11 39.3	84 11 34.9
T. 1, R. 12, corner of secs. 14, 15, 20, and 21; crossroads.....	40 10 46.9	84 11 40.5
T. 1, R. 12, corner of secs. 13, 14, 19, and 20; T road east.....	40 09 53.0	84 11 45.6
Piqua, 2 miles east of, at northeast corner of T road north near schoolhouse No. 7, 20 feet south and 20 feet west to south corner of secs. 13 and 19, T. 1, R. 12; iron post stamped "Prim. Trav. Sta. No. 37. Ohio, 1909".....	40 09 00.5	84 11 50.8
T. 1, R. 12, corner of secs. 19 and 25; T road north.....	40 09 04.3	84 12 59.3
Piqua, crossing of Main and Ash streets.....	40 08 59.7	84 14 21.8
T. 1, R. 11, corner of secs. 17, 18, 23, and 24, near schoolhouse No. 1; crossroads.....	40 08 07.8	84 11 51.9
T. 1, R. 11, corner of secs. 16, 17, 22, and 23; crossroads.....	40 07 15.8	84 11 55.6
T. 1, R. 11, corner of secs. 15, 16, 21, and 22; crossroads.....	40 06 24.1	84 12 00.1
T. 1, R. 11, corner of secs. 21, 22, 27, and 28; crossroads.....	40 06 27.3	84 13 08.5
Covered bridge crossing east-west road and electric railway.....	40 06 28.2	84 13 55.1
Milestone marked "P. 4, T. 3," on west side of pike.....	40 05 12.7	84 13 23.1
Milestone marked "P. 7, T. 1," 15 feet north of; center of T road west.....	40 03 44.0	84 12 50.2
Troy, McKay Avenue crossing on Cincinnati, Hamilton & Dayton Ry.....	40 02 24.0	84 12 50.4
Trout-south crossing on Cincinnati, Hamilton & Dayton Ry.....	40 01 35.0	84 13 04.4
Tps. 4 and 5 N., R. 6 E., corner of secs. 4, 5, 32, and 33; crossroads.....	40 00 37.6	84 13 11.4

Along highways east-west through center of quadrangle.

T. 1, R. 12, corner of secs. 7 and 13.....	40 08 56.2	84 10 42.1
Old cemetery, T road north.....	40 08 52.2	84 09 35.7
Tps. 1 and 2, R. 12, south corner of secs. 1 and 31.....	40 08 48.4	84 08 26.0
Tps. 1 and 2, R. 11, north corner of secs. 6 and 36.....	40 08 48.3	84 08 23.0
T. 2, R. 12, south corner of secs. 25 and 31.....	40 08 44.4	84 07 17.7
T. 2, R. 11, north corner of secs. 30 and 36.....	40 08 44.2	84 07 14.0
T. 2, R. 12, south corner of secs. 19 and 25; T road north.....	40 08 40.5	84 06 10.0
Fletcher, 0.5 mile east of, southeast corner of T road south, 20 feet south and 30 feet east of north corner of secs. 24 and 30, T. 2, R. 11; iron post stamped "Prim. Trav. Sta. No. 41. Ohio, 1909".....	40 08 40.1	84 06 06.0
T. 2, R. 12, south corner of secs. 13 and 19; T road north near schoolhouse.....	40 08 36.6	84 05 01.6
T. 2, R. 11, north corner of secs. 18 and 24; T road south near schoolhouse.....	40 08 36.5	84 05 00.0
T. 2, R. 12, south corner of secs. 7 and 13; T road north.....	40 08 32.8	84 03 53.3
T. 2, R. 11, north corner of secs. 12 and 18; T road south.....	40 08 32.7	84 03 52.6
T. 2, R. 11 and 12, corner of secs. 1, 6, 7, and 12; crossroads near Lena schoolhouse.....	40 08 29.1	84 02 44.0
Miami-Champaign county line, center of pike.....	40 08 25.2	84 01 36.2

Along highways near southeast corner of quadrangle.

Alcony, crossroads 1 mile east of.....	40 00 34.0	84 02 33.6
Alcony, 2 miles east of; T road south.....	40 00 07.8	84 01 12.8

Magnetic declination for north border, 0° 13' E.; for east border, 0° 02' W.; for west border, 0° 12' E.; for center line, 0° 01' E,

UPPER SANDUSKY QUADRANGLE.

From milepost 63 along Hocking Valley Ry. to a point near Carey.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Milepost 63, crossing, 1,180 feet north of.....	40 47 19.8	83 17 12.1
Upper Sandusky, south azimuth stone, 9 feet east of railroad, 1,395 feet from north stone, limestone post 30 by 5 by 5 inches, set 30 inches in ground; bronze meridian tablet cemented in center of top. Azimuth, 180° 18' 30".....	40 49 14.8	83 17 31.4
Upper Sandusky, north azimuth stone, 55 feet south and 150 feet east of crossing of Pennsylvania and Hocking Valley railroads, 11 feet east of Hocking Valley Ry., limestone post 38 by 6 by 6 inches, set 34 inches in ground; copper bolt cemented in center of top.....	40 49 28.6	83 17 31.3
Upper Sandusky station.....	40 49 30.0	83 17 31.3
T. 2 S., R. 14 E., west corner of secs. 19 and 30.....	40 50 49.7	83 18 16.6
Crossing at flag station.....	40 53 26.8	83 19 54.7
Crawford station, crossing.....	40 55 05.2	83 21 03.8
Carey station, crossing south of.....	40 57 04.2	83 22 28.3
Carey, south azimuth stone, in south abutment of bridge north of station, 4 feet east of east rail; copper bolt sunk and cemented in second stone. Azimuth, 151° 40' 20" to north mark.....	40 57 10.3	83 22 32.6
Carey, north azimuth stone, 339 feet north of Cleveland, Cincinnati, Chicago & St. Louis Ry. crossing, 8 feet southeast of Northern Ohio Ry. crossing, 34 feet east of east rail on Hocking Valley Ry., marble post 24 by 8 by 8 inches, set 24 inches in ground; copper bolt cemented in center of top.....	40 57 22.9	83 22 41.5
Quarter corner north of sec. 5 on base line, R. 13 E.....	40 59 31.7	83 23 49.1

Along highways near east border of quadrangle.

T. 2 S., R. 14 E., quarter corner between secs. 28 and 33.....	40 49 58.4	83 15 22.5
T. 2 S., R. 14 E., quarter corner between secs. 16 and 21.....	40 51 42.9	83 15 23.2
Roads east, west, north, and south.....	40 52 35.4	83 15 04.2
Roads north, west, and south.....	40 54 32.3	83 15 24.6
McCutchenville, crossing of Main Street and Perrysburg road.....	40 59 26.6	83 15 36.6

Along highways near north and west borders of quadrangle.

T. 1 N., Rs. 13 and 14 E., quarter corner between secs. 31 and 36.....	40 59 59.8	83 18 18.6
Tps. 1 N. and 1 S., R. 13 E., corner of secs. 3, 4, 33, and 34.....	40 59 32.3	83 21 47.1
Tps. 1 N. and 1 S., Rs. 12 and 13 E., corner of secs. 1, 6, 31, and 36.....	40 59 30.9	83 25 13.9
Roads northeast and southwest.....	40 59 28.1	83 27 29.1
Vanlue, in northwest part of; Main Street crossing on Cleveland, Cincinnati, Chicago & St. Louis Ry.....	40 58 32.6	83 29 03.4
T. 1 S., R. 12 E., quarter corner between secs. 16 and 21.....	40 56 53.5	83 29 10.5
T. 1 S., R. 12 E., quarter corner between secs. 28 and 33.....	40 55 09.2	83 29 10.3
T. 2 S., R. 12 E., quarter corner between secs. 4 and 9.....	40 53 24.7	83 29 10.7
Roads northeast and southwest.....	40 51 51.5	83 29 30.6
Crossing of northeast-southwest road.....	40 47 09.0	83 29 49.4

VANCEBURG QUADRANGLE.

Along highways from Buena Vista north along east border of quadrangle to Pink.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Buena Vista, 0.5 mile east of, in northwest corner of crossroads, 30 feet east to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 9. Ohio, 1910".....	38 37 52.4	83 15 16.8
Scioto-Adams county line, 10 feet south to sycamore tree.....	38 38 24.3	83 16 06.9
Stone quarry, forks of road, 15 feet to guy wire of derrick.....	38 39 08.0	83 16 47.0
Forks of road, about 35 feet northwest of, corner of fence; cross cut on corner board.....	38 40 28.5	83 18 15.7
Forks of trail on top of hill.....	38 41 33.2	83 16 52.1
Upper Twin Creek-Churn Creek road, at road south, on divide between creeks.....	38 42 25.8	83 16 50.9
Schoolhouse, northeast corner of.....	38 43 28.6	83 17 26.4
Forks of road at junction of State Fork and Churn Creek at Lee Cooper's farm, 15 feet east to sycamore tree at west end of foot log.....	38 44 04.6	83 18 18.0
Lower Churn Creek schoolhouse, south west corner of, at forks of road.....	38 44 54.4	83 19 02.3

VANCEBURG QUADRANGLE—Continued.

Along highways from adjusted position at Buena Vista west via Rome to Wrightsville.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Scioto-Adams county-line monument, on north side of Buena Vista-Rome pike.....	38 37 12.6	83 16 06.0
Foster's residence, 300 feet west of; stone monument on south side of road.....	38 36 26.6	83 17 30.4
Sandy Springs Church crossroads, 5 feet north to large white-oak tree.....	38 36 41.1	83 17 54.3
Sandy Springs Church, 1.3 miles north and 0.8 mile west of road northeast, 5 feet north west to telephone pole.....	38 37 53.9	83 18 42.1
Forks of road east of small creek, walled spring.....	38 38 14.8	83 19 22.1
Stout (Rome), near southeast corner of cross streets, east of town pump, 50 feet west and 30 feet north to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 16. Ohio, 1910".....	38 39 50.5	83 22 51.8
Stout Run, center of steel bridge over.....	38 40 02.8	83 23 20.5
Stout, 1.5 miles west of; road north, 20 feet east and 5 feet north to telephone pole.....	38 40 13.2	83 24 23.5
Lockhart schoolhouse, No. 5, center of pike.....	38 40 11.2	83 25 49.0
Brush Creek Bridge, 0.5 mile north of; center of small triangle in forks of pike.....	38 40 56.5	83 27 14.1
Concord, Ky., Christian Church spire.....	38 41 07.6	83 29 26.0

Magnetic declination of line, 0° 59' E. at the north, 1° 10' E. at the south.

Magnetic declination of west half of north border of quadrangle, 0° 01' E.; east half, 1° 43' E.; for east border, 1° 02' W.

VAN WERT QUADRANGLE.

Along Cincinnati Northern R. R.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Pipe line and road crossing.....	40 45 24.7	84 37 10.5
Ohio City, Toledo, St. Louis & Western R. R. crossing.....	40 46 12.0	84 36 51.1
Ohio City, crossing of telephone line and street.....	40 46 17.4	84 36 49.0
Road crossing east-west.....	40 47 10.0	84 36 27.7
Road crossing east-west.....	40 48 02.4	84 36 08.3
Road crossing east-west 100 feet west of pike.....	40 49 21.1	84 35 26.4
Road crossing east-west.....	40 50 13.6	84 35 26.0
Van Wert, crossing of main road in southwest part of town.....	40 51 54.1	84 35 26.4
Van Wert, Pennsylvania R. R. crossing.....	40 52 49.3	84 35 18.5
Road crossing east-west.....	40 54 10.1	84 34 52.6
Bridge, east-west road crossing 300 feet west of.....	40 55 02.3	84 34 52.9
Bridge, east-west road crossing 400 feet west of.....	40 56 20.8	84 34 53.6
Cavett station, road crossing.....	40 56 46.9	84 34 53.8
Road crossing east-west.....	40 57 38.3	84 34 54.2
Sawmill, east-west road crossing.....	40 58 31.5	84 34 54.6
Scott, east-west road crossing.....	40 59 23.9	84 34 54.8

Along highways near south border of quadrangle.

T. 3 S., R. 1 E., quarter corner between secs. 27 and 28, near schoolhouse; crossroads.....	40 44 59.9	84 44 46.2
T. 3 S., R. 1 E., quarter corner between secs. 26 and 27, 0.5 mile south of Schumm; crossroads.....	40 44 59.2	84 43 37.1
T road east.....	40 45 39.4	84 30 14.9
T. 3 S., R. 3 E., corner of secs. 21, 22, 27, and 28, near church; crossroads.....	40 45 26.2	84 30 48.8
T. 3 S., R. 3 E., corner of secs. 20, 21, 28, and 29.....	40 45 25.7	84 31 57.3
T. 3 S., R. 3 E., corner of secs. 19, 20, 29, and 30; T road east.....	40 45 25.4	84 33 06.0
T. 3 S., R. 3 E., west corner of secs. 19 and 30.....	40 45 25.6	84 34 16.1
T. 3 S., R. 2 E., east corner of secs. 24 and 25; T road west.....	40 45 25.9	84 34 16.2
T. 3 S., R. 2 E., at corner of secs. 23, 24, 25, and 26; crossroads.....	40 45 25.0	84 35 25.5
T. 3 S., R. 2 E., corner of secs. 22, 23, 26, and 27; crossroads.....	40 45 25.2	84 36 33.9
Ohio City, 1 mile south of; crossing of Cincinnati Northern R. R.....	40 45 24.7	84 37 10.5
Ohio City, 1 mile south and 0.5 mile west of, at northeast corner of crossroads, 30 feet west and 20 feet south to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 15. Ohio, 1909".....	40 45 24.4	84 37 32.5
T. 3 S., R. 2 E., corner of secs. 21, 22, 27, and 28; T road north.....	40 45 24.1	84 37 42.6
T. 3 S., R. 2 E., corner of secs. 20, 21, 28, and 29; north-south fence.....	40 45 23.9	84 38 50.5
T. 3 S., R. 2 E., corner of secs. 19, 20, 29, and 30; T road north.....	40 45 24.2	84 39 59.1
T. 3 S., R. 2 E., west corner of secs. 19 and 30; T road east.....	40 45 24.1	84 41 18.4
T. 3 S., R. 1 E., east corner of secs. 24 and 25.....	40 45 24.6	84 41 18.4
T. 3 S., R. 1 E., corner of secs. 23, 24, 25, and 26.....	40 45 25.3	84 42 27.3
Schumm, 25 feet west and 25 feet south to Toledo, St. Louis & Western Ry. crossing; iron post stamped "Prim Trav. Sta. No. 16. Ohio, 1909".....	40 45 25.7	84 43 36.7

VAN WERT QUADRANGLE—Continued.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
T. 3 S., R. 1 E., corner of secs. 14, 15, 22, and 23; crossroads.....	40 46 17.6	84 43 36.8
T. 3 S., R. 1 E., corner of secs. 10, 11, 14, and 15; crossroads.....	40 47 00.0	84 43 36.6
T. 3 S., R. 1 E., corner of secs. 2, 3, 10, and 11; crossroads.....	40 48 02.4	84 43 36.5
T. 3 S., R. 1 E., north corner of secs. 2 and 3.....	40 48 54.4	84 43 36.4
T. 2 S., R. 1 E., south corner of secs. 34 and 35; T road north.....	40 48 54.4	84 43 34.8
T. 3 S., R. 1 E., north corner of secs. 1 and 2, just west of crossroads.....	40 48 54.4	84 42 26.9
T. 2 S., R. 1 E., south corner of secs. 35 and 36.....	40 48 54.5	84 42 26.2
T. 3 S., R. 1 E., quarter corner between secs. 25 and 26; crossroads.....	40 50 13.1	84 42 25.6
T. 2 S., R. 1 E., corner of secs. 13, 14, 23, and 24, near church and schoolhouse; crossroads.....	40 51 31.9	84 42 25.1
Convoy, 3.25 miles south of; crossroads.....	40 52 11.1	84 42 25.1
T. 2 S., R. 1 E., near schoolhouse, 20 feet south and 20 feet west of corner of secs. 1, 2, 11, and 12, in southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 17. Ohio, 1909".....	40 53 16.4	84 42 25.7
T. 2 S., R. 1 E., north corner of secs. 1 and 2, near crossroads.....	40 54 08.8	84 42 25.9
T. 1 S., R. 1 E., south corner of secs. 35 and 36, near crossroads.....	40 54 06.6	84 42 24.9
Tps. 1 and 2 S., R. 1 E., corner of secs. 2, 3, 34, and 35; T road north.....	40 54 08.8	84 43 34.1
T. 1 S., R. 1 E., corner of secs. 26, 27, 34, and 35; crossroads.....	40 55 01.1	84 43 34.0
T. 1 S., R. 1 E., corner of secs. 14, 15, 22, and 23; crossroads.....	40 56 45.8	84 43 34.1
T. 1 S., R. 1 E., corner of secs. 10, 11, 14, and 15; crossroads.....	40 57 38.2	84 43 34.0
T. 1 S., R. 1 E., corner of secs. 2, 3, 10, and 11; crossroads.....	40 58 30.6	84 43 34.2
Tps. 1 S. and 1 N., R. 1 E., corner of secs. 2, 3, 34, and 35; crossroads, at Paulding-Van Wert county line.....	40 59 22.6	84 43 34.5

Magnetic declination for south border, 0° 11' E.; for west border, 0° 13' E.

VERMILION QUADRANGLE.

Near Camden triangulation station.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Lake Shore & Michigan Southern Ry., road crossing on.....	41 16 04.3	82 18 07.9
Camden triangulation station of United States Lake Survey.....	41 16 25.8	82 17 45.86

Along highways near Townsend triangulation station of United States Lake Survey.

Townsend triangulation station of United States Lake Survey.....	41 15 43.26	82 28 59.77
Lake Shore & Michigan Southern Ry., road crossing on.....	41 15 29.0	82 29 30.2

Along highways near Brownhelm triangulation station.

Crossing on Lake Shore & Michigan Southern Ry. at stone quarry No. 6.....	41 22 09.7	82 15 10.2
Crossing on Lake Shore & Michigan Southern Ry. at stone quarry No. 6.....	41 22 14.1	82 15 10.1
Crossroads.....	41 22 42.8	82 15 9.8
Shore Rice, in front of machine shop.....	41 22 46.3	82 15 26.1
T. 6, R. 19, corner of lots 38, 39, 42, and 43, Brownhelm post office.....	41 23 20.9	82 16 57.3
Brownhelm, U. S. Lake Survey triangulation station.....	41 23 18.24	82 18 27.89

WARREN QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Christie's pottery, crossroads 1 mile north of, 35 feet north to cross on board fence, 39 feet north to corner fence post.....	41 00 37.1	80 59 10.7
Berlin Center, crossroads, 1.75 miles west of; schoolhouse, 31 feet southwest to guidepost, 27 feet southeast to A. L. Bardos's mail box.....	41 01 28.1	80 59 11.4
Berlin Center, crossroads, 24 feet southeast to pump, 90 feet northeast to corner of stone porch.....	41 01 28.6	80 56 52.2
Berlin Center, Pennsylvania R. R., east-west road crossing 1 mile east of.....	41 01 28.5	80 55 33.7
Berlin Center, 2 miles east of, in southwest corner of H. C. Beardsley's farm at crossroads, nail in root of hickory tree bears north 57° 30' E., distant 24.3 feet, nail in root of hickory tree bears N. 26° 30' W., distant 8.5 feet; iron post stamped "Prim. Trav. Sta. No. 39".....	41 01 27.3	80 54 20.8
Ellsworth, crossroads, 40 feet southwest to guidepost, 100 feet northeast to iron pump.....	41 01 28.0	80 51 27.0
Meander Creek, center of bridge over.....	41 01 29.8	80 50 18.2
T road south, 42 feet northwest to Peach Hill Coal Co.'s mail box, 32 feet north to cross on picket fence.....	41 01 28.7	80 48 34.1
Canfield, crossroads 1.5 miles west of; 40 feet southwest to guidepost, 36 feet southeast to mail box.....	41 01 29.3	80 47 16.2
Canfield, west end of stone water trough at crossroads.....	41 01 29.4	80 45 38.6

WARREN QUADRANGLE—Continued.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
Canfield, crossroads 1 mile north of; 43 feet southwest to guidepost, 36 feet north-east to telephone pole.....	41 02 39.2	80 45 38.4
Canfield, T road west 2 miles north of, 36 feet southwest to corner of hedge fence, 45 feet northwest to hickory post.....	41 03 20.4	80 45 38.3
Smith corners, crossroads, 17 feet southeast to guidepost, 52 feet northeast to churchyard gate.....	41 04 08.4	80 45 42.0
Austintown, crossroads 1 mile south of, 33 feet southeast to corner of yard fence, 35 feet southwest to telephone pole.....	41 05 02.6	80 45 46.0
Austintown, iron pump at crossroads.....	41 05 58.6	80 45 50.0
National Sandstone plant, road crossing tramway to.....	41 06 50.2	80 46 26.1
Ohlstown, road crossing on Erie R. R.....	41 07 18.8	80 46 47.8
Mineral Ridge, in southeast corner of E. R. Edwards's farm on west side of road, northeast corner of Andrew Armalio's residence, bears S. 58° W., distant 20.1 feet, southwest corner of Erie R. R. depot, bears N. 2° E., distant 355 feet; iron post stamped "Prim. Trav. Sta. No. 40".....	41 08 19.3	80 46 26.0
Crossing of east-west road.....	41 08 59.3	80 46 35.6
Crossing of Niles-Mineral Ridge pike.....	41 09 38.3	80 46 07.5
Niles, crossing of Erie R. R. (branch) and Baltimore & Ohio Southwestern R. R. Niles, Cedar Street and Vienna Avenue, 21 feet west to stone hitching post, 45 feet northeast to telephone pole.....	41 10 34.0	80 45 20.3
Crossroads.....	41 11 22.6	80 45 11.9
T road east, 25 feet northwest to Hayrick's mail box, 27 feet southwest to front-yard gate.....	41 12 19.4	80 44 25.2
	41 13 26.2	80 44 25.4

Along Erie R. R. near Canfield.

Canfield, in town park, cross on southwest corner of water trough bears N. 2° 50' E., distant 32.15 feet, cross on northeast corner of foundation of Farmers National Bank bears N. 47° W., distant 148.4 feet; iron post stamped "Prim. Trav. Sta. No. 143".....	41 01 26.1	80 45 38.6
Canfield, T road east 1 mile south of, 19 feet northeast to end of culvert, 58 feet southeast to cross on telephone pole.....	41 00 19.9	80 45 38.7

Along Erie R. R. near north border of quadrangle.

Phalanx station, in southeast corner of G. W. Strong's yard, southeast corner of foundation of Strong's house bears N. 24° 20' W., distant 95.5 feet, north rail of north track of Erie R. R. at road crossing bears S. 6° 40' E., distant 157.5 feet; iron post stamped "Prim. Trav. Sta.".....	41 14 55.7	80 57 17.3
Phalanx station, road crossing 1 mile east of.....	41 14 37.1	80 56 04.4
Milepost 48, road crossing 400 feet east of.....	41 14 22.8	80 55 03.5
Milepost 49, road crossing 1,200 feet west of.....	41 14 17.9	80 54 18.5
Leavittsburg, road crossing just west of station.....	41 14 15.7	80 52 50.3
Milepost 51, road crossing 500 feet east of.....	41 14 09.7	80 51 38.3
Warren Tile Co., crossing of north-south road.....	41 14 01.5	80 50 09.7

Along highways near Warren.

Warren, copper bolt in south meridian stone in courthouse yard.....	41 14 11.6	80 49 06.8
Warren, Market Street crossing on Baltimore & Ohio R. R.....	41 14 10.8	80 48 13.0
Mosquito Creek, crossroads 0.5 mile west of; 30 feet north to mail box, 36 feet southeast to mail box.....	41 14 13.8	80 45 58.0

Along Lake Erie, Alliance & Wheeling R. R.

Briceville, crossing of Lake Erie, Alliance & Wheeling and Erie railroads.....	41 13 45.6	80 57 31.1
Crossing of east-west road.....	41 13 16.3	80 57 43.6
Crossing of east-west private road.....	41 11 55.6	80 58 03.2
Newton Falls, road crossing 320 feet north of station.....	41 11 16.5	80 58 21.7
Newton Falls, crossing of north-south road 1 mile south of.....	41 10 34.5	80 59 01.7

WAUSEON QUADRANGLE.

Along Lake Shore & Michigan Southern Ry. and highways.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Delta, road crossing west of.....	41 34 13.4	84 00 01.7
Delta, road crossing west of.....	41 34 11.7	84 00 11.9
Crossing of northeast-southwest road.....	41 34 01.8	84 01 13.0
Mileposts 27 and 28, north-south road crossing between.....	41 33 51.8	84 02 14.4
Mileposts 28 and 29, north-south road crossing between.....	41 33 40.6	84 03 23.5
Mileposts 29 and 30, north-south road crossing between.....	41 33 29.2	84 04 33.6
Mileposts 31 and 32, north-south road crossing between.....	41 33 06.6	84 06 52.6
Mileposts 32 and 33, north-south road crossing between.....	41 32 55.1	84 08 02.9
Wauseon, main street crossing.....	41 32 51.1	84 08 27.3
Wauseon station.....	41 32 49.7	84 08 35.9
Wauseon, crossing of Lake Shore & Michigan Southern Ry. and Detroit, Toledo & Ironton Ry.....	41 32 47.2	84 08 51.7
Wauseon, north-south road crossing at cemetery.....	41 32 44.0	84 09 11.2
Milepost 34, east-west road crossing at.....	41 32 37.5	84 09 50.9
Mileposts 34 and 35, north-south road crossing between.....	41 32 32.7	84 10 20.5
Mileposts 35 and 36, north-south road crossing between.....	41 32 21.4	84 11 29.9
Mileposts 36 and 37, north-south road crossing between.....	41 32 10.0	84 12 39.4
Mileposts 37 and 38, north-south road crossing between.....	41 31 59.3	84 13 44.7
Mileposts 38 and 39, north-south road crossing between.....	41 31 48.0	84 14 53.7
T. 9 S., R. 3 E., corner of secs. 2, 3, 10, and 11.....	41 42 50.3	84 02 13.2
T. 9 S., R. 3 E., corner of secs. 5, 6, 7, and 8.....	41 42 47.3	84 05 43.2
Ohio-Michigan State line.....	41 42 46.5	84 07 10.3
Schoolhouse, road crossing.....	41 42 14.8	84 08 37.3
T. 9 S., R. 2 E., corner of secs. 3, 4, 9, and 10; State line.....	41 42 40.4	84 10 22.2
T. 9 S., R. 2 E., corner of secs. 8, 9, 16, and 17.....	41 41 48.5	84 11 30.8
T. 9 S., Rs. 1 and 2 E., corner of secs. 7, 18, 13, and 12.....	41 41 47.4	84 13 49.2
Ritters, 1.5 miles southeast of, in northwest corner of Hewey Sutton's front yard; northwest corner of Sutton's house bears S. 79° E., distant 181.2 feet; east rail of electric railway at crossing bears N. 67° W., distant 69 feet; iron post stamped "Prim. Trav. Sta. No. 24, 1905".....	41 41 47.0	84 14 57.2
T. 9 S., R. 1 E., corner of secs. 13, 14, 23, and 24.....	41 40 54.5	84 14 56.1
T. 9 S., R. 1 E., corner of secs. 25, 26, 35, and 36.....	41 39 09.1	84 14 54.7
T. 10 S., R. 1 E., corner of secs. 1, 2, 11, and 12.....	41 37 24.1	84 14 52.3
T. 9 S., R. 5 E., corner of secs. 1, 2, 11, and 12.....	41 35 12.3	84 14 56.2
T. 7 N., R. 5 E., corner of secs. 13, 14, 23, and 24.....	41 33 27.8	84 14 55.6
T. 6 N., R. 5 E., corner of secs. 1, 2, 11, and 12.....	41 30 00.5	84 11 53.6
T. 9 S., R. 1 E., south corner of secs. 1 and 2; center of crossroads.....	41 42 39.6	84 14 58.8

Along highways on south border of quadrangle.

T. 6 N., R. 7 E., corner of secs. 2, 3, 10, and 11; crossroads, 22 feet southwest to south end of culvert, 41 feet southeast to cross on corner fence post.....	41 30 03.9	84 02 14.9
T. 6 N., R. 7 E., corner of secs. 3, 4, 9, and 10; crossroads, 39 feet southeast to cross on corner fence post, 45 feet southwest to G. S. Frederick's mail box.....	41 30 01.2	84 03 23.8
T. 6 N., R. 7 E., corner of secs. 4, 5, 8, and 9; crossroads, 34 feet southeast to cross on corner fence post, 48 feet southwest to cross on fence post.....	41 30 01.1	84 04 34.8
T. 6 N., R. 7 E., corner of secs. 5, 6, 7, and 8; crossroads at schoolhouse, 33 feet northeast to T. L. Ammand's mail box, 35 feet northwest to cross on telephone pole.....	41 30 00.9	84 05 43.8
T. 6 N., R. 6 E., east corner of secs. 1 and 12, 31 feet northwest to Val Snyder's mail box, 34 feet southwest to corner of rail fence.....	41 30 02.0	84 06 52.5
T. 6 N., R. 6 E., southwest corner of sec. 1, in southwest corner of schoolhouse No. 3 yard, crossroads, southwest corner of schoolhouse bears N. 16° 10' E., distant 171.4 feet, northwest corner of foundation of church bears S. 2° 30' E., distant 79.9 feet; iron post stamped "Prim. Trav. Sta. No. 32, 1905".....	41 30 01.7	84 08 02.0
T. 6 N., R. 6 E., corner of secs. 2, 3, 10, and 11; crossroads, 34 feet southeast to cross on corner fence post, 36 feet northeast to cross on yard fence post.....	41 30 01.3	84 09 12.0
T. 6 N., R. 6 E., corner of secs. 3, 4, 9, and 10; crossroads, 34 feet southeast to cross on telephone pole, 39 feet northeast to penalty notice.....	41 30 01.2	84 10 21.7
T. 6 N., R. 6 E., corner of secs. 4, 5, 8, and 9; crossroads, 12 feet southeast to cross on telephone pole, 29 feet southwest to Frank Lea's mail box.....	41 30 00.0	84 11 30.1
T. 6 N., R. 6 E., corner of secs. 5, 6, 7, and 8, at schoolhouse; crossroads, 28 feet southwest to David Reyz's mail box, 43 feet northeast to iron fence.....	41 30 00.3	84 12 41.1
T. 6 N., R. 5 W., east corner of secs. 1 and 12, 33 feet southwest to corner of garden fence, 32 feet northwest to cross on advertising board.....	41 30 00.6	84 13 44.0
T. 6 N., R. 5 E., southeast corner of sec. 2, in southeast corner of yard of district No. 14 schoolhouse, center of iron pump in yard bears N. 82° W., distant 42 feet, southeast corner of schoolhouse bears N. 45° W., distant 44.7 feet.....	41 30 00.8	84 14 54.0

WAVERLY QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
Massieville, forks of road about 2 miles south of, 45 feet west to G. W. Bender's mail box, 40 feet northeast to cross on telephone pole.....	39 14 53.4	82 58 50.9
Milepost, "Waverly, 8 miles," center of Chillicothe-Portsmouth pike.....	39 14 06.7	82 59 03.7
T road west, 15 feet east to cross on gatepost, 27 feet southwest to cross on white-oak tree.....	39 13 20.0	82 59 01.9
Hermit Cave, road east near, 15 feet northwest to southwest corner of bridge, 30 feet southeast to mail box.....	39 11 53.9	82 58 43.7
Coler's store, T road northeast, 30 feet east to pump, 27 feet to arrow on telephone pole.....	39 11 02.8	82 58 34.2
Alma, T road west about 1 mile south of, 36 feet southeast to cross on telephone pole.....	39 10 31.5	82 58 30.6
Waverly, dirt road northeast, 2 miles north of, 15 feet east to cross on board fence, 21 feet northwest to cross on telephone pole.....	39 09 05.9	82 58 37.8
Waverly, T road west 0.75 mile north of, 15 feet east to cross on telephone pole, 18 feet northwest to northeast corner of bridge.....	39 08 18.0	82 58 55.9
Waverly, in west corner of courthouse yard, west corner of foundation to courthouse bears S. 62° 50' E., distant 31.7 feet; corner post of iron fence to courthouse yard bears W. 2.9 feet; iron bench-mark post set 36 inches in ground stamped "Prim. Trav. Sta. No. 16".....	39 07 33.8	82 59 04.0

Along Norfolk & Western Ry. near Glen Junction.

Glen Junction, crossing of Norfolk & Western and Detroit, Toledo & Ironton railroads.....	39 06 48.4	82 58 41.5
Chillicothe-Portsmouth pike crossing.....	39 05 53.6	82 58 21.0
Milepost 634, 600 feet north of; private road crossing.....	39 05 09.3	82 59 03.0
Glen Junction, private-road crossing, 2.75 miles south of.....	39 04 34.3	82 59 39.7

Along Baltimore & Ohio Southwestern R. R. between West Junction and Vigo.

West Junction, overhead-road crossing about 0.25 mile east of.....	39 13 02.6	82 45 50.1
Milepost 111, road crossing 330 feet southeast of.....	39 13 58.3	82 46 52.9
Vigo station, crossing of north-south road 90 feet southeast of.....	39 14 52.2	82 47 33.5

Along highways near east border of quadrangle.

Glade, north-south road crossing.....	39 00 48.9	82 46 58.4
Glade, in John Whitman's woods pasture, 440 feet south of road crossing; on east side of north-south road, spike in north face of white-oak tree bears S. 14° 10' E., distant 27.3 feet, spike in white-oak tree bears S. 46° E., distant 31.6 feet; iron bench-mark post set 40 inches in ground, stamped "Prim. Trav. Sta. No. 20".....	39 00 44.6	82 46 58.5
Glade, T road west 1 mile south of, 15 feet east to cross on fence, 30 feet northwest to cross on corner of fence post.....	39 00 04.0	82 47 02.3
Schoolhouse, intersection of roads just south of, 43 feet south to C. L. Grover's mail box, 15 feet southwest to cross on board fence.....	39 04 25.6	82 46 11.0
Vance's store, T road west 1.5 miles south of, 10 feet southwest to M. A. Harper's mail box, 18 feet east to cross on fence post.....	39 04 54.0	82 45 53.1
Vance's store or Eastburn, T road crossing, 15 feet northeast to door of store, 24 feet southwest to cross on front-yard gatepost.....	39 06 14.7	82 45 19.4
Bridge, road southeast, 27 feet to northeast corner of bridge, 15 feet northeast to cross on small sycamore tree.....	39 06 57.1	82 45 09.6
Limerick, in southeast corner of T. J. Beatty's garden, southeast corner of foundation to Beatty's residence bears N. 34° W., distant 81 feet, center of commissioners' plate on north truss of bridge over Pidgeon Creek bears south 63° 30' E., distant 96.1 feet; iron bench-mark post set 40 inches in ground, stamped "Prim. Trav. Sta. No. 19".....	39 07 31.4	82 45 01.4
Limerick, intersection of roads 1.5 miles north of, 12 feet southwest to mail box, 27 feet northeast to cross on locust tree at corner of fence.....	39 08 43.6	82 45 08.1
Springer, T road east 1 mile southwest of, 20 feet northeast to cross on gatepost, 30 feet west to cross on board fence.....	39 09 46.5	82 45 54.1
Springer, T road west at, 30 feet west to cross on telephone pole, 50 feet southeast to cross on telephone pole.....	39 10 20.9	82 44 45.2
McGill's store, intersection of roads, 40 feet northeast to east corner of bridge, 40 feet southwest to store door.....	39 11 15.1	82 45 04.5
Cemetery, intersection of roads about 400 feet east of, 18 feet east to cross on rail fence, 15 feet northwest to west end of small stone culvert.....	39 11 28.1	82 45 39.6
T road west at Jackson-Vinton county line, 27 feet southwest to cross on walnut tree, 45 feet northwest to cross on corner fence post.....	39 12 27.6	82 45 39.0

WAVERLY QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Shyville, forks of road 0.25 mile southeast of, 24 inches southwest to cross on corner fence post, 18 inches west to south end of culvert.....	39 00 27.7	82 59 07.8
Mount Carmel Church, intersection of roads north of, 27 feet northwest to cross on hickory tree, 27 feet east to cross on small black oak.....	39 00 50.1	82 57 05.9
Bobo, road west about 0.5 mile northeast of, 21 feet west to cross on large white-oak tree, 22 feet east to cross on corner fence post.....	39 01 40.6	82 56 07.7
Beaver, intersection of roads 5 miles west of, 18 feet southeast to guidepost, 18 feet southwest to cross on small oak tree.....	39 02 05.0	82 55 17.8
Beaver, crossroads at Arminstrout schoolhouse 4 miles west of, 21 feet southeast to corner fence post, 30 feet southwest to cross on board fence.....	39 02 00.2	82 54 05.3
Beaver, 2.5 miles west of, in northeast corner of churchyard at crossroads; cross cut on northeast corner of foundation of church bears S. 56° 15' W., distant 27.3 feet, 2 nails in blaze on west face of locust tree in northeast corner of churchyard bear S. 82° 30' E., distant 6.5 feet; iron bench-mark post set 42 inches in ground, stamped "Prim. Trav. Sta. No. 18".....	39 01 56.7	82 52 43.8

Along Detroit, Toledo & Ironton Ry. between Beaver and Glade.

Beaver, Beaver-Waverly pike crossing on Detroit, Toledo & Ironton Ry., 1.5 miles west of.....	39 01 53.9	82 51 30.2
Beaver, crossing of north-south road, 1 mile west of.....	39 01 40.6	82 50 47.6
Beaver station, crossing of north-south road, 35 feet east of.....	39 01 25.2	82 49 39.2
Beaver, crossing of north-south road at east end of siding.....	39 01 18.3	82 49 08.6
Glade, private-road crossing 0.75 mile west of.....	39 00 59.2	82 47 44.1
Glade, north-south road crossing.....	39 00 48.9	82 46 58.4

Along highways near south border of quadrangle.

Salem Church, intersection of roads at bridge, 0.25 mile north of, 35 feet west to northeast corner of bridge.....	39 01 34.4	82 47 12.9
H. B. Hoover's residence, road east through gate at bridge, 18 feet southeast to cross on butternut tree, 16 feet northeast to cross on locust tree.....	39 02 29.5	82 46 42.0
Road southwest, 33 feet southwest to cross on corner fence post, 30 feet west to cross on corner fence post.....	39 03 29.0	82 46 38.5
Bethel Church, T road east at, 22 feet north to mail box, 27 feet west to cross on rail fence.....	39 03 48.8	82 46 41.2
Cove, 0.5 mile southwest of, east-west road at crossing on Detroit, Toledo & Ironton Ry.....	39 00 35.4	82 45 09.2
Glade, in Jno. Whitman's wood pasture, 440 feet south of road crossing, east of north-south road, spike in north face of white-oak tree bears S. 14° 10' E. 27.3 feet, spike in white-oak tree bears S. 46° E. 31.6 feet; iron post stamped "Prim. Trav. Sta. No. 20".....	39 00 44.6	82 46 58.5

WAYNESVILLE QUADRANGLE.

Along highways near west border of quadrangle.

Stations.	Latitude.	Longitude.
West Dayton, Big Four Route, east-west crossing, 760 feet north of railroad bridge. Azimuth of railroad, 12° 02'.....	39 43 57.4	84 12 40.4
West Dayton, intersection of Springboro pike and road, southwest.....	39 43 30.0	84 13 01.6
West Dayton, Big Four Route at Springboro pike, north-south crossing.....	39 42 14.8	84 13 08.5
T. 1, R. 6, corner of secs. 10, 11, 16, and 17.....	39 41 40.3	84 13 11.3
T. 1, R. 6, quarter corner between secs. 9 and 15.....	39 40 23.9	84 13 17.7
Tps. 1 and 2, R. 6, corner of secs. 7, 12, 13, and 18.....	39 38 56.9	84 13 27.6
T road west.....	39 37 43.8	84 13 32.3
Corner of sections, T road east.....	39 36 46.9	84 13 37.6
Dunkard Church, crossroads at.....	39 35 48.9	84 13 42.8
T. 2, R. 4, corner of secs. 8, 9, 14, and 15.....	39 34 30.8	84 13 50.1
Springboro, crossing of pikes in north part of.....	39 33 24.0	84 13 56.8
Tps. 2 and 3, R. 4, corner of secs. 7, 12, 13, and 18.....	39 32 41.7	84 14 01.1
T. 3, R. 4, corner of secs. 11, 12, 17, and 18.....	39 31 47.0	84 14 05.9
T. 3, R. 4, corner of secs. 10, 11, 16, and 17.....	39 30 52.8	84 14 11.2

WAYNESVILLE QUADRANGLE—Continued.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Spring Valley, 0.8 mile northwest of; fork at mail box.....	39 37 21.7	84 00 22.9
Pennsylvania R. R. crossing, 220 feet north of milepost C-60.....	39 37 37.8	84 00 05.4
Bellbrook, 3.5 miles east of, north side of lower Bellbrook pike, at road northeast; iron post stamped "Prim. Trav. Sta. No. 45. Ohio, 1909".....	39 38 05.9	84 00 50.6
Little Miami River, center of covered bridge over.....	39 37 59.1	84 03 04.9
Bellbrook, center of cross streets at post office.....	39 38 10.0	84 04 13.8
T. 3, R. 6, corner of secs. 1, 2, 31, and 32.....	39 38 02.5	84 04 14.4
T. 2, R. 6, corner of secs. 1, 2, 7, and 8; center of pike at north-south fence.....	39 38 17.6	84 05 22.9
Greene-Montgomery county line, center of T pike north at corner of secs. 7, 8, 13, and 14, T. 2, R. 6.....	39 38 17.1	84 06 39.4
Bellbrook, 3 miles west of, at northwest corner of T road north; iron post stamped "Prim. Trav. Sta. No. 46. Ohio, 1909".....	39 38 35.8	84 07 41.3
T. 2, R. 6, corner of secs. 19, 20, 25, and 26, center of pike at north-south fence.....	39 38 37.9	84 08 52.0
T. 2, R. 6, quarter corner between secs. 25 and 26, 1 mile north of Centerville; center of crossroads.....	39 38 38.1	84 09 26.2
Centerville, quarter corner between secs. 25 and 30, T. 2, R. 6; center of crossroads..	39 37 42.6	84 09 31.1
T. 2, R. 6, corner of secs. 25, 30, 31, and 36, 10 feet west of T road north.....	39 37 41.3	84 10 05.3
T. 2, R. 6, corner of secs. 25, 26, 35, and 36, 10 feet east of T road north; section cornerstone.....	39 37 39.9	84 11 16.5
Tps. 1 and 2, Rs. 5 and 6, corner of secs. 1, 6, 7, and 12.....	39 38 01.8	84 12 21.1
Intersection of Dayton-Springboro and Centerville-Miamisville pikes, southeast corner of; iron post stamped "Prim. Trav. Sta. No. 47. Ohio, 1909".....	39 38 16.4	84 13 29.2
T. 1, R. 6, corner of secs. 7, 12, 13, and 18.....	39 38 09.5	84 13 30.0

Near south border of quadrangle.

T pike south, 15 feet south and 5 feet west to D. S. Woollard's mail box.....	39 30 08.5	84 03 23.2
Carsons Creek, center of.....	39 30 17.9	84 02 20.8
T road south, 20 feet north to elm tree at end of fence.....	39 30 09.9	84 01 31.1
Harveysburg, 0.5 mile east of; center of cross pikes at creamery.....	39 30 00.7	84 00 00.8

Magnetic declination for south border, 0° 28' E.; for east border, 0° 13' E.; for east-west center line, 0° 08' E.

WELLINGTON QUADRANGLE.

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Lodi, junction of main line of Baltimore & Ohio R. R. with branch from the south, 75 feet west of tool house.....	41 01 39.3	82 01 04.6
Lodi, in stone step at northeast corner of Taylor Inn; bronze tablet stamped "Prim. Trav. Sta. No. 4".....	41 02 00.3	82 00 45.8
North-south road at fork to southwest, west edge of, 30 feet southeast to telegraph pole, 40 feet west to telegraph pole.....	41 04 00.6	82 01 29.8
Road to east, west edge of north-south road, 30 feet to William Gusinger's mail box, 40 feet southeast to corner of front yard.....	41 04 37.2	82 01 29.2
Chatham Center, in northeast corner of Academy Hall; bronze tablet stamped "Prim. Trav. Sta. No. 23 A".....	41 06 06.2	82 01 29.0
Chatham Center, four corners 1 mile north of, 40 feet northwest to signpost, 40 feet southeast to mail box.....	41 06 44.6	82 01 27.8
Litchfield, road crossing 300 feet west of Northern Ohio Ry. station.....	41 09 29.9	82 01 24.2
Litchfield, stone in center of park, said to be center of township.....	41 10 04.0	82 01 23.3
Medina-Lorain county line, three corners, road to east.....	41 11 55.8	82 01 25.8
Schoolhouse, four corners, 40 feet northeast to corner of school-yard fence, 35 feet southeast to telephone pole.....	41 12 26.7	82 01 25.8

Along Baltimore & Ohio R. R. (Lodi and Wooster branch) from Erie R. R. crossing to Lodi.

Erie R. R. and Baltimore & Ohio R. R., crossing of.....	40 59 19.4	82 01 32.7
Burbank, 2 miles west of; road crossing.....	41 00 04.6	82 01 08.0

WELLINGTON QUADRANGLE—Continued.

Along Baltimore & Ohio R. R. (main line) from Lodi to Sullivan.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Lodi, junction of main line and branch, 70 feet west of tool house.....	41 01 39.3	82 01 03.7
Road crossing.....	41 00 51.8	82 02 47.2
Road crossing.....	41 00 51.6	82 03 16.9
Road crossing.....	41 00 49.5	82 04 40.7
Road crossing.....	41 01 05.0	82 05 49.8
Homer station, road crossing 770 feet east of.....	41 01 03.6	82 07 15.6
Road crossing.....	41 01 32.4	82 08 43.3
Road crossing.....	41 01 50.2	82 09 48.8
Road crossing.....	41 01 54.2	82 12 05.2
Sullivan station, road crossing west of.....	41 01 55.0	82 13 19.6

Along highways near west border of quadrangle.

Sullivan, bronze tablet in public-school building.....	41 01 47.3	82 13 06.8
Sullivan, crossing on Baltimore & Ohio R. R.....	41 01 55.0	82 13 19.6
Crossroads.....	41 03 27.8	82 13 15.8
Crossroads.....	41 05 04.8	82 13 15.6
Road east.....	41 06 58.5	82 13 11.4
Crossroads.....	41 08 52.3	82 13 05.2
Wellington station, Wheeling & Lake Erie R. R.....	41 09 48.2	82 13 29.1
T. 4, R. 18, T. lots 75, 76, 85, and 86, Center Pittsfield.....	41 14 13.4	82 13 06.3
Crossing of electric railroad, run north on railroad.....	41 14 13.4	82 13 06.0

WEST CINCINNATI QUADRANGLE.

Along highways in northeast part of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Barnesburg tollgate, crossroads at.....	39 13 57.7	84 37 41.5
Crossroads.....	39 13 15.0	84 36 05.0
Grossbeck, crossroads at.....	39 13 12.6	84 35 09.7
T. 3 N., R. 1 E., corner of secs. 26, 32, 31, 25.....	39 13 05.0	84 32 57.8

WEST COLUMBUS QUADRANGLE.

From Era along Baltimore & Ohio Southwestern R. R. to Columbus.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Era station, crossing 430 feet west of.....	39 44 23.2	83 14 38.1
Derby station, crossing 350 feet west of.....	39 46 08.4	83 12 20.5
Morgan station, crossing 100 feet west of.....	39 48 17.8	83 09 19.5
Pleasant Corners station, crossing 100 feet southwest of.....	39 50 37.5	83 07 41.1
Grove City station, crossing 100 feet southwest of.....	39 52 59.7	83 05 44.3
Urban Crest station, crossing 100 feet northeast of.....	39 53 53.2	83 05 00.4
Briggsdale station, crossing 50 feet northeast of.....	39 55 36.0	83 03 36.1
North Base U. S. G. S. triangulation station.....	39 55 57.3	83 03 18.6
Columbus, crossing of Baltimore & Ohio R. R. and Broad Street.....	39 57 31.9	83 01 54.4

Along Hocking Valley Ry. near Columbus.

Crossing of Hocking Valley Ry. and east-west pike.....	39 59 16.8	83 01 37.1
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Along Pennsylvania R. R. from point 5 miles northwest of Columbus to west border of quadrangle.

Columbus, northwest of; crossing of Toledo & Ohio Central and Pennsylvania railroads.....	40 00 04.5	83 05 57.4
Sullivant road crossing, 0.75 mile north of.....	39 57 58.9	83 04 38.8
Pike and telephone road crossing.....	39 57 55.1	83 05 43.5
Milepost 6, road crossing 400 feet west of.....	39 57 51.7	83 06 40.5
Milepost 8, road crossing 200 feet east of.....	39 57 44.3	83 08 47.3
Mileposts 8 and 9, road crossing between.....	39 57 42.1	83 09 27.6
Alton, road crossing.....	39 57 40.3	83 10 00.9
Pike and telephone road crossing northwest-southeast.....	39 57 33.2	83 12 12.0
Overhead road crossing.....	39 57 27.5	83 13 57.3

WESTERVILLE QUADRANGLE.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Columbus, Mock road crossing	40 00 54.0	82 59 47.9
Road northeast-southwest, electric railway	40 00 48.5	82 58 03.2
Cleveland, Akron & Columbus Ry. crossing. Azimuth of railway, 194° 09'	40 00 49.1	82 57 54.3
Road north-south	40 00 47.7	82 57 24.1
Alum Creek, south end of bridge	40 00 34.7	82 56 06.5
Road north-south	40 01 13.3	82 54 41.5
Road north-south	40 01 08.7	82 53 03.1
Gahanna, center of bridge over Big Walnut River	40 01 08.3	82 52 48.7
T. 1 N., Rs. 16 and 17 E., corner of secs. 1, 2, 3, and 4; road north-south	40 01 06.2	82 52 00.1
District No. 11, schoolhouse	40 01 02.9	82 50 39.4
T. 1, R. 16, corner of secs. 2, 1, 4, 3	40 00 57.6	82 49 08.0
Havens Corners, crossroads	40 01 10.4	82 48 54.3
Road north-south, at schoolhouse	40 01 09.6	82 47 23.4
Franklin-Licking county line, road north	40 01 06.0	82 46 13.4
Squir. Swishers, road north-south	40 00 56.6	82 45 00.6
Summit station, 1 mile north of, in northwest corner of small lot owned by W. S. Griffith, lot situated just south of east-west section line, on east side of north-south road; iron post stamped "Prim. Trav. Sta. No. 34, 1905"	40 00 44.6	82 45 03.2

Along highways near east border of quadrangle.

Intersection of road north and east-west road, south of schoolhouse	40 03 02.0	82 45 20.8
Bridge	40 03 40.2	82 45 18.0
Beech, crossroads	40 04 46.2	82 45 13.3
Road east-west	40 05 50.6	82 45 14.6
Bridge over branch running west	40 06 34.0	82 45 11.6
Intersection of road north and Johnstown road northeast-southwest	40 07 27.6	82 45 07.5
Licking, Franklin, and Delaware counties, corner of, also corner of Tps. 2 and 3, Rs. 15 and 16, secs. 1, 2, 3, and 4	40 07 33.8	82 45 43.0
Road west at schoolhouse	40 08 19.9	82 45 30.6
Roads east, west, and southeast	40 09 22.6	82 45 34.8
Road east	40 10 17.9	82 45 30.8

Along highways near east border of quadrangle.

Stations.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
Prim. Trav. Sta. No. 40, 1905	40 13 57.1	82 44 18.0	.....
Delaware-Licking county line, center of crossroads	40 13 59.1	82 45 15.3	4,455
Center of T road west, 10 feet east to J. E. Hannan's mail box	40 14 46.5	82 45 12.2	4,799

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Delaware-Licking county line, road north-south	40 13 59.0	82 45 15.3
Road north	40 13 57.7	82 47 24.1
South Condit, crossroads	40 14 52.9	82 47 20.4
Road north	40 14 44.8	82 49 48.5
Cleveland, Akron & Columbus Ry. crossing. Azimuth of railroad, 253° 00'	40 14 47.4	82 50 42.3
Big Walnut Creek, center of bridge	40 14 48.6	82 50 59.3
Sanbury, Harrison Street and Mount Vernon Road, at Dr. Vankirk's	40 14 42.3	82 51 14.5
Road northwest-southeast	40 14 44.4	82 51 53.6
Road west to Rome	40 15 01.5	82 52 18.6
T. 4 N., R. 17 W., corner of secs. 1, 2, 3, and 4	40 14 46.2	82 53 40.0
Rome, intersection of roads at guidepost	40 14 48.1	82 54 38.7
Johnnycake schoolhouse, road north-south	40 14 17.0	82 56 22.7
Cheshire, road north	40 14 19.9	82 57 41.0
Cheshire, Whitman's store	40 14 20.1	82 57 45.3
Cheshire, 1 mile west of, station on Green Spring & Columbus line	40 14 22.4	82 58 45.8

WESTERVILLE QUADRANGLE—Continued.**Along highways near west border of quadrangle.**

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Road west to Berlin station.....	40 15 16.6	82 59 35.1
T. 4 N., R. 18 W., secs. 2, 1, 4, and 3.....	40 14 58.2	82 59 11.9
Cheshire, 1 mile west of, State road north-south.....	40 14 22.4	82 58 45.9
Road east-west.....	40 12 59.2	82 59 04.8
Road east-west.....	40 11 54.2	82 59 24.0
T. 3 N., R. 18 W., corner of secs. 2, 1, 4, and 3.....	40 10 26.2	82 59 31.8
Road east-west.....	40 09 26.0	82 59 42.3
Road east.....	40 08 44.7	82 59 58.4
Road crossing.....	40 01 58.6	82 59 52.6
Mock road crossing, east-west.....	40 00 54.1	82 59 47.9
Columbus, intersection of North Fourth Street and Wyandotte Avenue.....	40 00 36.3	82 59 53.4

WEST MANCHESTER QUADRANGLE.**Along Dayton & Union R. R. from Gordon to Arcanum.**

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Gordon, crossing of street-car line and road.....	39 55 58.0	84 30 37.7
Milepost 23, east-west road crossing 1,000 feet north of.....	39 56 49.8	84 31 16.5
Mileposts 24 and 25, east-west road crossing between.....	39 57 41.5	84 31 55.8
Mileposts 25 and 26, east and west road crossing between.....	39 58 33.6	84 32 35.2
Arcanum, crossing on Big Four Route.....	39 59 16.3	84 33 07.5
Arcanum, road crossing east-west.....	39 59 19.8	84 33 10.1

Along highways near west border of quadrangle.

T. 8 N., R. 1 E., corner of secs. 23, 24, 25, and 26.....	39 46 23.4	84 43 18.6
Azimuth of Pennsylvania R. R. between these two positions, 112° 19'.....		
T. 8 N., R. 1 E., corner of secs. 13, 14, 23, and 24.....	39 47 16.8	84 43 20.1
T. 8 N., R. 1 E., corner of secs. 11, 12, 13, and 14.....	39 48 08.9	84 43 21.4
T. 8 N., R. 1 E., corner of secs. 1, 2, 11, and 12.....	39 49 01.1	84 43 21.5
Ebenezer (Gettysburg), T road south at.....	39 50 26.1	84 43 22.3
T. 9 N., R. 1 E., corner of secs. 23, 24, 25, and 26.....	39 51 28.6	84 43 22.6
T. 9 N., R. 1 E., corner of secs. 13, 14, 23, and 24.....	39 52 21.6	84 43 22.6
T road west.....	39 52 52.7	84 44 18.6
T. 9 N., R. 1 E., corner of secs. 1, 2, 11, and 12.....	39 54 07.5	84 43 24.2
Tps. 9 and 10 N., R. 1 E., corner of secs. 1, 2, 35, and 36.....	39 55 00.6	84 43 24.3
New Madison, crossroads $2\frac{1}{2}$ miles south of.....	39 55 50.2	84 43 22.7
T. 10 N., R. 1 E., corner of secs. 23, 24, and 25.....	39 56 45.9	84 43 21.3

Along Pennsylvania R. R. near New Madison.

New Madison, road crossing 200 feet southwest of.....	39 58 08.5	84 42 41.0
Road crossing northwest-southeast.....	39 58 39.1	84 41 48.0

Along Cleveland, Cincinnati, Chicago & St. Louis Ry. near north border of quadrangle.

T. 10 N., R. 2 E., corner of secs. 4, 5, 8, and 9.....	39 59 23.4	84 40 17.2
Savona, crossing of Cincinnati Northern R. R.....	39 59 12.7	84 39 43.6
Road crossing north-south.....	39 59 13.0	84 39 10.1
Road crossing north-south.....	39 59 13.7	84 37 53.0
Greenville-Lewisburg pike crossing.....	39 59 14.3	84 36 48.0
Private-road crossing.....	39 59 15.0	84 35 28.4
Road crossing north-south.....	39 59 15.5	84 34 35.5
Arcanum, crossing on Dayton & Union R. R.....	39 59 16.3	84 33 07.5
Road crossing north-south.....	39 59 16.8	84 32 03.7
Road crossing north-south.....	39 59 17.3	84 30 56.4

WEST SALEM QUADRANGLE.

Along highways from a point about 4½ miles east of Hayesville northward via Polk to northwest corner of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Ashland & Western Ry., crossing on.....	40 47 57.9	82 11 37.0
Crossroads.....	40 49 39.8	82 12 36.5
Crossroads.....	40 52 15.7	82 12 41.8
Crossroads.....	40 54 03.7	82 12 47.5
Polk, Erie R. R. crossing.....	40 57 00.7	82 12 53.1
Crossroads.....	40 58 25.9	82 12 54.4
Crossroads.....	40 59 31.7	82 13 22.8

Along highways near south border of quadrangle.

Road north.....	40 46 18.8	82 13 51.5
Road south.....	40 46 18.1	82 12 45.8
Road crossing.....	40 46 14.0	82 11 03.6
Road north.....	40 45 41.6	82 09 22.5
Lakefork, forks of road.....	40 44 54.8	82 08 25.7
Road crossing.....	40 45 13.7	82 06 50.0
Blachleville, street crossing.....	40 45 51.0	82 04 54.0

Along Lodi and Wooster branch of Baltimore & Ohio R. R. from Erie crossing to Overton.

Erie crossing.....	40 59 19.4	82 01 32.7
Road crossing at flag station.....	40 57 08.3	82 01 26.7
Armstrong flag station.....	40 54 42.0	82 00 33.0
Overton flag station.....	40 51 51.0	82 00 31.3

WEST UNION QUADRANGLE.

Along highways from Unity via Tranquillity to Mayhill.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Harshasville, about 1.2 miles southeast of, at southwest corner of T road south at C. F. Campbell's residence, 20 feet east and 20 feet north to center of T road; iron post stamped "Prim. Trav. Sta. No. 13. Ohio, 1910".....	38 53 03.2	83 30 12.2
Unity, spire of church (Coast and Geodetic Survey triangulation station).....	38 53 30.09	83 31 18.12
Unity, center of crossroads.....	38 53 30.2	83 31 25.1
Unity, 1 mile north of; center of crossroads.....	38 54 23.8	83 30 58.4
Newport, 2 miles southwest of; center of crossing of Newport-Harshasville pike and north-south road.....	38 55 28.4	83 30 47.7
J. S. Montgomery's mail box, center of T road east.....	38 56 32.6	83 31 36.0
Tranquillity, about 0.8 mile southwest of; Seaman-Tranquillity pike at road east, 15 feet east to north end of picket fence.....	38 57 16.2	83 32 19.3
Tranquillity, T road northwest at post office and store, 20 feet south to southwest corner of store porch.....	38 57 43.3	83 31 59.8
Fairview schoolhouse, stone at T road east.....	38 58 48.4	83 30 52.5

Along pike from Dunkinsville to West Union.

Schoolhouse, north end of covered bridge at forks of road.....	38 49 59.0	83 30 11.4
West Union, 1.5 miles northeast of; Dunkinsville-West Union pike at road northwest.....	38 48 37.5	83 31 19.9
West Union, monument in Odd Fellows Cemetery (Coast and Geodetic Survey mark).....	38 47 54.6	83 31 53.4
West Union, Children's Home (Coast and Geodetic Survey triangulation station).....	38 47 42.63	83 32 08.86
West Union, center of crossing of Mulberry and Second streets.....	38 47 44.4	83 32 37.7
West Union, 2 miles southeast of, near Trotter schoolhouse, on north side of West Union-Wrightsville pike at road north, at east end of bridge over Beasleys Fork, 40 feet south and 10 feet east to T road; iron post stamped "Prim. Trav. Sta. No. 14. Ohio, 1910".....	38 45 56.7	83 31 23.2
Schoolhouse 27, center of forks of road, 10 feet northwest to ash stump.....	38 54 58.2	83 30 47.0
Wrightsville-West Union pike at township line, 0.3 mile north of Groom's store.....	38 45 16.4	83 31 09.7

WEST UNION QUADRANGLE—Continued.

Along highways from Unity west to point near Russellville, thence north to Tate triangulation station.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Unity-Harshasville pike at road northeast.....	38	54	08.7	83	32	11.3
Harshasville, center of T pike south at Williamson's store.....	38	51	27.7	83	32	34.5
Harshasville, 1.3 miles west of; center of cross pikes.....	38	54	37.7	83	33	55.2
Covered bridge over Grace River, near forks of pike at old blacksmith shop.....	38	54	56.3	83	34	30.2
North Liberty, 1 mile north and 1 mile east of; center of pike at T road southeast.....	38	54	04.4	83	35	37.4
North Liberty, in north part of town, center of T street east.....	38	53	16.0	83	36	52.7
North Liberty, center of steel bridge over Cherry Fork.....	38	53	04.3	83	36	53.8
Eckmansville, in west part of town, near northwest corner of T road west, just south of gate to W. C. Morrison's yard, 35 feet south and 25 feet east to center of T road; iron post stamped "Prim. Trav. Sta. No. 21. Ohio, 1910".....	38	51	57.5	83	38	42.3
Eckmansville, spire of church (Coast and Geodetic Survey triangulation station). Eckmansville, old State road at T road east at F. M. Eyer's farm, 10 feet west to John W. Bailey's mail box.....	38	51	50.03	83	38	34.63
Center of crossing of old State road and North Liberty-Russellville pike.....	38	52	00.6	83	40	58.8
Adams-Brown county-line stone on north side of pike.....	38	53	06.6	83	40	33.3
J. W. Marshall's residence, North Liberty-Russellville pike at road west.....	38	53	05.1	83	41	05.4
Center of T pike east at large hickory tree, about 800 feet northeast of covered bridge.....	38	52	50.9	83	42	00.4
Center of North Liberty-Russellville pike at Jackson-Jefferson township line.....	38	52	54.3	83	43	20.4
Russellville, 2 miles east and 0.5 mile north of, near southeast corner of Baird schoolhouse grounds, 25 feet south and 25 feet east to center of crossroads; iron post stamped "Prim. Trav. Sta. No. 22. Ohio, 1910".....	38	52	26.2	83	44	19.7
Macon, 1 mile southwest of; center of crossroads.....	38	52	21.4	83	44	31.1
	38	57	19.7	83	44	58.5

Along highways from Hickory Ridge Church to Highland Farm.

Hickory Ridge Church, center of crossing on north-south pike and east-west road.....	38	45	07.1	83	42	48.6
Bowman's store, center of covered bridge over Eagle Creek.....	38	46	11.1	83	42	54.2
Eagle Chapel, center of T pike west.....	38	46	30.4	83	42	34.8
Front gate to cemetery.....	38	46	45.7	83	43	21.6
Highland stock farm, center of crossing on Decatur pike and north-south road.....	38	47	14.1	83	44	56.3

Along highways near north border of quadrangle.

Buckhorn schoolhouse, 700 feet south of, on Seaman-Fairfax pike, at road west, 20 feet north and 10 feet west to southeast corner of yard.....	38	59	08.4	83	34	48.1
Calvary Church, 0.3 mile south of; 2 mail boxes at forks just north of blacksmith shop.....	38	59	45.6	83	36	50.0
T road northwest, center of.....	38	58	49.4	83	37	24.7
T road north, center of; 20 feet north to corner of gatepost.....	38	59	17.3	83	38	34.4
Emerald, 0.5 mile east of; at northeast corner of T road north; iron post stamped "Prim. Trav. Sta. No. 85. Ohio, 1909".....	38	59	51.0	83	38	52.8
Adams-Brown county line, center of road at.....	38	59	58.4	83	40	30.9
Schoolhouse, 0.2 mile south of; center of crossroads.....	38	59	31.3	83	41	25.4
Fincastr, 1 mile west of; center of T road north.....	38	59	49.6	83	43	43.4

Magnetic declination for north border, $0^{\circ} 36' W.$; for west half of east-west center line, $0^{\circ} 51' W.$; for east half of east-west center line, $0^{\circ} 07' E.$; for south half of west border, $0^{\circ} 32' W.$; for north half of west border, $2^{\circ} 13' W.$; for north half of east border, $0^{\circ} 35' E.$; for south half of east border, $0^{\circ} 02' W.$; for south border, $0^{\circ} 35' W.$

WOOSTER QUADRANGLE.

Along Erie R. R. in north part of quadrangle.

Stations.	Latitude.			Longitude.		
	°	'	"	°	'	"
Road crossing one-half mile west of milepost 217.....	40	59	46.5	81	44	54.5
Rittman station.....	40	58	06.4	81	46	54.2
Sterling, crossing on Baltimore & Ohio R. R.....	40	58	10.9	81	50	51.7
Creston station.....	40	58	56.6	81	53	32.2
Road crossing 370 feet east of water tank.....	40	59	22.8	81	57	29.2
Burbank station.....	40	59	24.2	81	59	49.1

WOOSTER QUADRANGLE—Continued.
Along Baltimore & Ohio R. R. near Wooster.

Station.	Latitude.	Longitude.
	° ' "	° ' "
Road crossing 600 feet south of water tank.....	40 48 38.1	81 58 50.0
Wooster fair grounds, south meridian mark.....	40 47 50.3	81 57 02.5
Wooster fair grounds, north meridian mark.....	40 47 55.6	81 57 02.5
Wooster station, Baltimore & Ohio R. R.....	40 47 43.6	81 56 54.1

Along Pennsylvania R. R. from Wooster to Orrville.

Baltimore & Ohio overhead crossing.....	40 46 32.6	81 56 46.7
Wooster station.....	40 47 57.0	81 55 53.8
Stone arch culvert 1,040 feet north of milepost 132.....	40 49 09.8	81 53 18.6
Smithville station.....	40 50 25.5	81 51 39.9
Road crossing about one-third mile east of water tank.....	40 49 46.0	81 48 34.0
Orrville, crossing of Pennsylvania and Cleveland, Akron & Columbus railroads.....	40 50 22.1	81 46 04.8

XENIA QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
	° ' "	° ' "
Xenia, 4 miles northwest of; intersection of Xenia-Fairfield pike and road west.....	39 44 55.7	83 56 30.4
Oldtown, Pennsylvania R. R., east-west crossing.....	39 44 38.3	83 55 49.4
Cedarville, crossing on Pennsylvania R. R. Azimuth of railroad, 235° 24'.....	39 44 23.7	83 48 20.9
Schoolhouse, crossroads.....	39 43 05.1	83 46 31.9
Schoolhouse, T road northwest, 1.25 miles northeast of.....	39 43 22.4	83 45 11.3

Along highways near south border of quadrangle.

T road north.....	39 30 03.0	83 48 04.1
Intersection of roads.....	39 30 05.5	83 48 56.7
Gurneyville, crossroads 1 mile southeast of.....	39 30 24.8	83 51 29.9
Gurneyville, crossroads.....	39 30 53.2	83 52 37.3
T road north.....	39 31 13.4	83 53 43.5

Along Detroit, Toledo & Ironton R. R.

Private road crossing.....	39 31 14.2	83 54 28.9
Crossing of north-south road.....	39 30 42.9	83 55 14.3
Kingman road crossing.....	39 29 58.9	83 56 21.7

Along highways near west border of quadrangle.

W. W. Mills's residence, center of cross pikes west.....	39 30 35.6	83 57 52.3
T road north, 20 feet north to south end of steel bridge.....	39 31 28.2	83 58 48.5
Warren-Clinton county line, stone on hillside on south side of pike, southwest of bridge over branch.....	39 31 25.9	83 58 52.1
Briar schoolhouse, 0.25 mile north of; stone corner at crossroads.....	39 32 19.0	83 58 26.0
Fork in pike, 25 feet east to corner of fence post.....	39 33 21.7	83 57 52.4
New Burlington, center of cross streets at post office.....	39 34 04.1	83 58 01.0
New Burlington, 0.5 mile west of; stone monument at intersection of Clinton, Warren, and Greene counties.....	39 34 10.3	83 58 36.3
New Burlington, 1 mile west of, at Cornstalk schoolhouse; center of cross pikes.....	39 34 14.2	83 59 08.5
Cornstalk schoolhouse, 1.5 miles north of; center of T pike west.....	39 35 40.4	83 59 37.3
Spring Valley, 1 mile east of; center of T pike south.....	39 36 25.7	83 59 27.2
Xenia, 4.5 miles from, T road southeast at guidepost marked "Bellbrook 4½ miles, Xenia 4½ miles".....	39 38 24.3	83 59 52.6
Xenia, about 3.5 miles southwest of; on lower Bellbrook pike at pike northwest.....	39 39 15.3	83 58 47.5
T road southwest at R. F. Harper's residence.....	39 39 52.8	83 59 41.8
Rural Home schoolhouse, No. 9, 0.5 mile south of, on upper Bellbrook pike; pike north.....	39 40 43.4	83 59 18.7
Trebeins, at station, north end of wagon bridge over Little Miami River; center of crossroads.....	39 42 29.5	83 59 15.8
T. 3 N., R. 7 E., corner of secs. 8, 9, 14, and 15; center of north-south road at fence east.....	39 43 46.2	83 59 20.3
T. 3 N., R. 7 E., corner of secs. 9, 10, 15, and 16.....	39 44 38.9	83 59 15.1

XENIA QUADRANGLE—Continued.

Along highways east-west through center of quadrangle.

Stations.	Latitude.	Longitude.
Spring Valley, about 1.7 miles northeast of; east-west road at center of Cincinnati pike, 25 feet north and 20 feet west of mail box.....	39 37 32.3	83 59 07.2
Richland Church, T road west.....	39 37 30.2	83 57 39.0
Richland schoolhouse, 0.2 mile east of; on Xenia-New Burlington pike at pike west.....	39 37 21.2	83 56 53.1
Xenia-Spring Valley township-line stone, at T road west.....	39 37 17.8	83 55 10.6
Caesars Creek, south of covered bridge over; north-south pike at road west.....	39 37 24.9	83 54 08.2
Xenia, about 5 miles southeast of, southeast corner of crossroads at Reformed Church and schoolhouse; iron post stamped "Prim. Trav. Sta. No. 54. Ohio, 1909".....	39 36 31.6	83 54 23.3
Xenia, 5 miles southeast of, on Xenia-Wilmington pike, at intersection of cross-road.....	39 36 49.5	83 53 11.7
Needmore schoolhouse, 600 feet east of; center of T road south.....	39 36 59.9	83 51 36.0
Mount Tabor Church, 0.2 mile west of; at Harvey Field's residence center of grass plat at forks in roads.....	39 37 24.6	83 50 00.3
T road south.....	39 37 35.8	83 48 24.3
Patterson's Corners, 1.3 miles southwest of; intersection of pike and road south.....	39 37 47.1	83 47 16.5

Along highways near east border of quadrangle.

Patterson's Corners, center of cross pikes.....	39 38 12.0	88 46 13.1
T road southwest.....	39 42 32.7	83 46 14.0
Schoolhouse, center of crossroads.....	39 43 05.0	83 46 32.1
Cedarville, about 3 miles southeast of, near northwest corner of T road northwest; iron post.....	39 43 22.4	83 45 12.2
T road northwest.....	39 43 22.4	83 45 11.3
Bowersville, 4.5 miles from; center of crossroads.....	39 31 45.4	83 45 59.4
Melvin, 4.5 miles from, at John Atley's residence; center of T road east.....	39 30 58.5	83 47 00.0

Magnetic declination for east border, 0° 09' W.; for west border, 0° 13' E.; for center line east-west, 0° 28' E.

YOUNGSTOWN QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Crossroads, in southwest corner of Z. T. Ewalt's garden on north side of road just west of, northwest corner foundation of Ewalt's new house bears N. 43° 30' W., distant 83.6 feet, southwest corner of foundation to porch of Ewalt's old house bears S. 89° 10' E., distant 208.6 feet; iron post stamped "Prim. Trav. Sta. No. 33".....	41 14 18.0	80 44 27.9
Warren, U. S. B. M. post No. 33, 5 miles east of.....	41 14 18.0	80 44 27.9
T road north at shops, 28 feet northwest to mail box, 42 feet northeast to southwest corner of blacksmith shop.....	41 14 12.8	80 42 45.7
Schoolhouse No. 7, T road north.....	41 14 17.8	80 41 24.3
Vienna crossroads, T. 4 N., R. 2 W., corner of secs. 17, 18, 27, and 28.....	41 14 15.9	80 39 49.7
Vienna, 1.5 miles east of, in northeast corner of Newman's farm at crossroads, nail in west part of large maple tree on north side of road bears N. 64° 20' E., distant 110.4 feet, cross on south end of stone culvert bears N. 75° 30' W., distant 96.7 feet; iron post stamped "Prim. Trav. Sta. No. 41".....	41 14 15.7	80 38 11.5
Paynes Corners, crossroads, 42 feet northwest to guidepost, 30 feet southwest to west end of stone culvert.....	41 14 13.2	80 37 01.6
T. 4 N., R. 1 W., corner of secs. 14 and 23; T road north, 19 feet northeast to east end of box culvert.....	41 14 09.2	80 35 50.2
Brookfield, T road north, 33 feet northwest to guideboard on telephone pole, 36 feet south to iron pump.....	41 14 02.7	80 34 05.5
Schoolhouse, road northwest about 600 feet east of, 35 feet north to guidepost, 24 feet south to cross on fence.....	41 14 07.6	80 31 55.9
Sharon, on High Street in west part of; Ohio-Pennsylvania State boundary monument No. 51.....	41 13 55.1	80 31 09.2

YOUNGSTOWN QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Stations.	Latitude.	Longitude.
Ohio-Pennsylvania State line monument No. 654.....	° ' " 41 01 27.3	° ' " 80 31 08.9
T. 1 N., corner of secs. 49, 50, 55, and 57; T road north at schoolhouse.....	41 01 25.9	80 32 37.6
Crossroads at schoolhouse, corner of secs. 34, 35, 42, and 43, 36 feet southeast to guidepost, 33 feet northwest to post.....	41 01 25.5	80 34 03.2
T. 1 N., corner of secs. 15, 16, 25, and 26; T road north, 24 feet northeast to mail box, 30 feet south to cross on corner fence post.....	41 01 25.1	80 35 29.5
Poland, T road northeast at Bishop's Hotel, 33 feet east to lamp-post, 39 feet north to hotel signpost.....	41 01 25.3	80 36 49.8
Poland, 1 mile west of, in southeast corner of Joseph Hitchcock's farm, at crossroads, iron guidepost bears S. 89° 25' W., distant 58.6 feet, southwest corner of Hitchcock's residence bears S. 38° 15' W., distant 173 feet; iron post stamped "Prim. Trav. Sta. No. 42".....	41 01 27.5	80 38 04.0
Oakland, road crossing on Youngstown Southern R. R.....	41 01 27.6	80 39 18.3
Schoolhouse, T road north, 32 feet northwest to John Hitchcock's mail box, 20 feet northeast to northwest corner of culvert.....	41 01 28.2	80 40 55.7
Canfield, crossroads 2½ miles east of, 19 feet southeast of mail box, 42 feet northwest to cross on fence post.....	41 01 28.7	80 42 40.8
Canfield, crossroads at schoolhouse 1.5 miles east of.....	41 01 29.0	80 44 13.2

ZALESKI QUADRANGLE.

Near Barton triangulation station.

Stations.	Latitude.	Longitude.
Blackjack, T road south, 30 feet east to guidepost, 34 feet west to north end of water trough.....	° ' " 39 28 05.1	° ' " 82 29 30.0
Barton triangulation station, on a flat cultivated ridge in sec. 18, Washington township, owned by William Barton, who lives 0.25 mile west of station; marble post 30 by 6 by 6 inches set 28 inches in ground over an earthenware pyramid, a top of post marked "U.S.C.&G.S.".....	39 26 22.32	82 29 46.50

a Reference marks consist of 3 marble posts, 30 by 4 by 4 inches, as follows: (1) True azimuth 99° 53', distant 140.25 feet; (2) true azimuth 54° 31', distant 175.8 feet; (3) true azimuth 338° 12', distant 437.75 feet.

ZANESVILLE QUADRANGLE.

Along highways near north border of quadrangle.

Stations.	Latitude.	Longitude.
Gratiot, 2.5 miles north of, 2.5 miles east of Clark's blacksmith shop, T road south, 30 feet southeast to large chestnut tree, 17 feet northeast to cross on rail fence.....	° ' " 39 59 05.1	° ' " 82 13 15.9
Licking-Muskingum county line, rail fence north-south; center of road, 25 feet south to west end of hedge fence.....	39 59 12.2	82 11 48.5
G. W. Fisher's mail box at Newark, road to northwest.....	39 59 16.6	82 11 05.7
J. Riggles's mail box, center of small bridge.....	39 59 24.1	82 10 08.7
E. T. Smith's mail box, southeast corner of iron bridge.....	39 59 53.0	82 09 20.8
Pleasant Valley station, 2 miles southwest of, just south of Mapdonia Church, in northeast corner of lot, in front of S. W. Wincia's residence; iron post stamped "Prim. Trav. Sta. No. 53, 1905".....	39 59 47.1	82 08 24.2
Dillon station, 0.75 mile north of, on east side of river; T road east, 25 feet southeast to cross on board fence, 27 feet northeast to cross on corner fence post.....	39 58 49.6	82 03 05.6
Harris's farm, crossing of Frostburg road and east-west road, 33 feet southwest to cross on telegraph pole, 27 feet northeast to cross on telegraph pole.....	39 58 46.5	82 01 01.8
Zanesville, 3 miles north of, J. N. Blair's farm, T road west, 33 feet northwest to cross on board fence, 16 feet east to cross on gatepost.....	39 58 45.0	82 00 14.7

Along Wheeling & Lake Erie R. R. near Zanesville.

Zanesville, Monroe Street Bridge over railroad.....	39 57 05.5	82 00 06.0
Licking Creek, center of terminal railway bridge over.....	39 56 30.6	82 01 23.1
J. B. Owen Pottery Co.'s plant, just south of, road crossing under trestle.....	39 55 35.4	82 01 43.6
Jonathan Creek, road crossing just north of bridge over.....	39 54 15.9	82 00 14.4

ZANESVILLE QUADRANGLE—Continued.

Along highways near southeast corner of quadrangle.

Stations.	Latitude.	Longitude.
Muskingum-Morgan county line, center of road, 30 feet due east to dead beech tree at corner of fence.....	° ' " 39 46 05.9	° ' " 82 00 15.6
Morgan County line, 0.33 mile south of; stone at crossroads, 25 feet south to cross on fence post, 54 feet northeast to corner of barn.....	39 45 50.7	82 00 20.6
Muskingum-Morgan county line, 0.5 mile south of, in southeast corner of foundation to brick house of N. H. Pletcher on the Dillon-Dovertown road; aluminum tablet stamped "Prim. Trav. Sta. No. 64, 1905".....	39 45 43.6	82 00 31.1
Dovertown, 1.5 miles northeast of, at Charles Bush's residence; T road east, 40 feet to C. A. Pletcher's mail box, 9 feet south to west end of box culvert.....	39 45 01.4	82 01 18.7

Along Baltimore & Ohio R. R. near Dillon.

Milepost 84, 900 feet west of; private-road crossing.....	39 59 38.0	82 05 07.9
Milepost 83, center of track opposite.....	39 58 57.7	82 04 09.9
Dillon station, road crossing.....	39 58 17.0	82 03 30.8

Magnetic declination for east border, 0° 51' W.; for west border, 1° 22' W.

PRIMARY TRIANGULATION.

Antrim, Athalia, Athens, Bidwell, Cadiz, Cambridge, Chesterhill, Clarington, Cumberland, Flushing, Keno, Lancaster, Logan, Macksburg, Marietta, New Comers-town, New Matamoras, New Martinsville, Parkersburg, Perry, Point Pleasant, Pomeroy, Salineville, St. Clairsville, Scio, Steubenville, Summerfield, Uhrichsville, Wellsville, Wilkesville, Woodsfield, and Zaleski quadrangles.

ATHENS, BELMONT, CARROLL, COLUMBIANA, COSHOCTON, FAIRFIELD, FRANKLIN, GALLIA, GUERNSEY, HARRISON, HOCKING, JACKSON, JEFFERSON, LAWRENCE, MEIGS, MONROE, MUSKINGUM, NOBLE, TUSCARAWAS, VINTON, AND WASHINGTON COUNTIES.

The positions of triangulation stations in eastern Ohio result from the field work of W. T. Griswold in 1900, A. H. Thompson in 1901, G. T. Hawkins in 1902, and S. S. Gannett in 1902 and 1903.

Before 1902 these positions depended upon Maryland Heights and Sugar Loaf stations of the United States Coast and Geodetic Survey, near Harpers Ferry, W. Va., but in that year Mr. Gannett extended a belt of triangulation from Wray-Gebhardt stations in the trans-continental belt of the Coast and Geodetic Survey near Huntington, W. Va., up the Ohio River and connected with earlier work near Parkersburg, W. Va. The discrepancies in latitude and longitude were distributed arbitrarily, so as not to disturb figure adjustments, and were applied so as to reduce all positions to the North American standard datum as derived from Wray-Gebhardt.

BALDWIN, TUSCARAWAS COUNTY.

About 7 miles northeast from Uhrichsville, on a bald hill 100 yards east of ridge road, on land owned by David Baldwin.

Station mark: A sandstone post 36 by 6 by 6 inches set 33 inches in the ground, in the center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 27' 01.37''$. Longitude $81^{\circ} 17' 28''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Wainwright.....	75 00 27.85	254 54 15.71	4.1462651
Bowerston.....	308 57 08.21	129 01 07.70	4.0493365
Uhrichsville.....	355 40 02.51	175 40 20.53	3.9386187

BARNESVILLE SCHOOLHOUSE, BELMONT COUNTY.

(Not occupied.)

High school in village of Barnesville, Warren Township.

Station mark: Center of cupola.

[Latitude $39^{\circ} 59' 21.42''$. Longitude $81^{\circ} 10' 45.33''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Steele.....	80 40 36.44	260 38 36.77	3.6510482
Newcastle.....	322 02 20.19	142 06 20.66	4.1604334

BARTON, HOCKING COUNTY.

On a flat cultivated ridge, in section 18, Washington Township, owned by William Barton, who lives one-fourth mile west of station. Selected and occupied by the United States Coast and Geodetic Survey in 1884–85.

Station mark: A marble post 30 by 6 by 6 inches set 28 inches in the ground, over an earthenware pyramid. Top of post marked

U.	S.
C. &	G.S.

Reference marks: Three marble posts 30 by 4 by 4 inches, set as follows:

- (1) True azimuth, $99^{\circ} 53'$; distance, 140.25 feet.
- (2) True azimuth, $54^{\circ} 41'$; distance, 175.8 feet.
- (3) True azimuth, $338^{\circ} 12'$; distance, 437.75 feet.

[Latitude $39^{\circ} 26' 22.32''$. Longitude $82^{\circ} 29' 46.50''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Brown.....	146 40 36.24	326 36 32.15	4.2220318
Schultz.....	222 46 20.65	42 49 24.02	4.0063763
Cook.....	228 57 23.90	49 03 10.28	4.2366543
Brooks.....	257 42 22.62	77 52 27.11	4.3666779
McDaniel.....	290 56 26.59	111 03 09.10	4.2107237
Zaleski.....	338 05 36.66	158 09 14.12	4.3433070

BEALLSVILLE, MONROE COUNTY.

Situated 3 miles east of the town of Beallsville on the highest point of a bare hill on the farm of the Gale brothers.

Station mark: A cut marble post 48 by 6 by 6 inches set 40 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

8702°—Bull. 552—14—11

[Latitude 39° 50' 49.76". Longitude 80° 58' 49.99".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Galloway.....	182 29 34.33	2 29 55.83	4.2612655
Jacobsburg.....	210 24 53.13	30 28 36.52	4.2108474
Myers.....	221 32 26.97	41 39 03.80	4.3447990
Riggs.....	269 45 19.11	89 53 56.89	4.2835700
Wiedman.....	87 09 57.20	267 02 01.79	4.2471021
Newcastle.....	118 21 49.78	298 18 11.29	3.9639688
Steele.....	125 11 13.00	305 01 44.45	4.4179181
Bryan.....	155 16 01.67	335 13 05.87	4.1914760

BOND, ATHENS COUNTY.

On a flat ridge covered with fruit trees in Carthage Township, 7 miles southeast of Guysville. Station is on eastern edge of summit, about 4 feet lower and 200 feet east of highest point, on land owned by William Bond, who lives 300 yards south.

Station mark: A sandstone post 38 by 9 by 9 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 14' 17.07". Longitude 81° 51' 10.74".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Fulton.....	106 34 55.98	286 28 31.40	4.1818210
White.....	129 06 44.67	308 58 43.68	4.3696920
Southland.....	179 06 54.47	359 06 47.89	4.2068403
Nolan.....	226 08 49.91	46 14 13.62	4.2298152
Lyons.....	247 00 38.53	67 02 55.00	3.7495497
Wigal.....	290 51 25.79	110 58 02.69	4.2074866
Melhorn.....	335 49 20.01	155 53 06.15	4.3327202

BOOTH, TUSCARAWAS COUNTY.

On a sharp, bald knob, 5 miles southeast from New Comerstown, one-fourth mile south from Booth post office, and 400 feet southeast of Mr. Walter's residence, on land owned by him.

Station mark: A sandstone post 36 by 7 by 7 inches set 34 inches in the ground, in the center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 13' 26.69". Longitude 81° 32' 56.37".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kennedy.....	50 57 10.87	230 51 07.97	4.2342578
Widder.....	103 17 39.33	283 15 05.76	3.7615799
Wasen.....	166 55 12.11	346 53 04.26	4.2784021
Stone Creek.....	179 22 08.98	359 22 03.72	4.2391088
Gilmore.....	228 11 04.90	48 15 13.50	4.0860014
Midway.....	352 05 52.54	172 07 03.12	4.2759110

BOWERSTON, HARRISON COUNTY.

Situated on a cleared hill in section 25, Monroe Township, about 2 miles south of the village of Bowerston, on land owned by J. E. Brown.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

PRIMARY TRIANGULATION.

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[Latitude 40° 23' 13.23". Longitude 81° 11' 18.71".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Tippecanoe.....	24 21 54.23	204 19.00.04	4.1880466
Jefferson.....	260 45 35.42	80 54 37.31	4.3003187
Cadiz.....	304 31 25.13	124 38 35.25	4.2790048
Deersville.....	358 23 14.06	178 23 20.87	3.9461666

BOYS' INDUSTRIAL SCHOOL CHIMNEY, FAIRFIELD COUNTY.

(Not occupied.)

In sections 35 and 36, Hocking Township, 6 miles south of Lancaster.

Station mark: Center of tall brick chimney.

[Latitude 39° 38' 28.64". Longitude 82° 37' 36.53".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Pleasant (2).....	196 16 42.49	16 17 55.39	3.9867933
Buck.....	248 35 57.26	68 40 43.74	4.0607701
Schultz.....	309 29 26.62	129 37 29.82	4.3707116
Brown.....	346 20 02.87	166 20 57.88	3.9405008

BOYS' INDUSTRIAL SCHOOL WATER TOWER, FAIRFIELD COUNTY.

(Not occupied.)

In sections 35 and 36, Hocking Township, 6 miles south of Lancaster.

Station mark: Center of large white water tower.

[Latitude 39° 38' 32.48". Longitude 82° 37' 38.20".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Pleasant (2).....			3.9820877
Buck.....			4.0605764
Schultz.....	309 39 00.95	129 47 05.22	4.3726735
Brown.....	346 15 44.39	166 16 40.48	3.9466564

BROOKS, HOCKING COUNTY.

A station of the United States Coast and Geodetic Survey, on a wooded ridge near the northern line of section 19, Ward Township, about 3 miles north of Nelsonville.

Station mark: A marble post 29 by 6 by 6 inches set 22 inches in the ground, above a square earthenware pyramid 5 inches high. Top of post marked

U.	S.
C. &	G. S.

Reference marks: (1) A marble post 30 by 4 by 4 inches set 28 inches in the ground; azimuth from mark, 74° 11'; distance, 110.75 feet. (2) A marble post 30 by 4 by 4 inches set 28 inches in the ground; azimuth from mark, 336° 13'; distance, 275 feet. (3) A marble post 30 by 4 by 4 inches set 28 inches in the ground; azimuth from mark, 200° 35'; distance, 185.4 feet.

[Latitude 39° 29' 01.86". Longitude 82° 13' 55.39".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
McDaniel.....	35 15 15.27	215 11 53.84	4.1188828
Barton.....	77 52 27.11	257 42 22.62	4.3666779
Schultz.....	99 07 21.22	279 00 19.77	4.2050498
Cook.....	123 23 44.62	303 19 26.03	4.0653816
Nebo.....	303 54 52.42	124 00 23.75	4.1770814

BROWN, HOCKING COUNTY.

On the property of Isaac Brown, in the southeast quarter of section 30, Good Hope Township, 13 miles by road west of Logan, 13 miles south of Lancaster, 5 miles west of Rockbridge. Station has a good view in nearly all directions, being just east of a cemetery which occupies the summit of the hill.

Station mark: A marble post 30 by 6 by 6 inches set 28 inches in the ground, over an earthenware pyramid.

[Latitude 39° 33' 53.90". Longitude 82° 36' 10.23".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Boys' Industrial School water tower.....	166 16 40.48	346 15 44.39	3.9466564
Boys' Industrial School chimney.....	166 20 57.88	346 20 02.87	3.9405008
Buck.....	214 20 02.08	34 23 53.61	4.1858328
Cook.....	276 38 41.55	96 48 32.74	4.3486753
Schultz.....	291 55 33.81	112 02 41.69	4.2383235
Barton.....	326 36 32.15	146 40 36.24	4.2220318

BRYAN, BELMONT COUNTY.

Situated on a high, partly cleared hill in Goshen Township, about 2 miles north of Hunter post office and 4 miles a little east of south of Bethesda. Land owned by Mr. Patterson.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

Reference mark: The tall dead signal tree on highest part of hill. Distance from station mark, 6 feet; true azimuth, 355° 13'.

[Latitude 39° 58' 27.33". Longitude 81° 03' 23.94".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Newcastle.....	9 15 31.48	189 14 48.57	3.9944416
Steele.....	93 39 27.39	273 33 44.12	4.1738583
Gallaway.....	240 30 53.44	60 34 11.06	3.9231502
Beallsville.....	335 13 05.87	155 16 01.67	4.1914760

BUCK, FAIRFIELD COUNTY.

On the farm of Noah Seifert, 7 miles east-southeast of Lancaster, in the southwest part of section 13, Berne Township, on a small mound in a cleared field 100 feet north of the east and west road which crosses summit of hill. Timber obstructs view to the southwest.

Station mark: A marble post 30 by 6 by 6 inches set 28 inches in the ground, over an earthenware pyramid.

[Latitude 39° 40' 44.49". Longitude 82° 30' 07.18".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Brown.....	34 23 53.61	214 20 02.08	4.1858328
Boys' Industrial School chimney.....	68 40 43.74	248 35 57.26	4.0607701
Boys' Industrial School water tower.....			4.0605764
Pleasant (2).....	122 42 18.23	302 38 44.12	3.9771162
Cook.....	318 30 42.80	138 36 43.24	4.3091667
Schultz.....	338 54 01.46	158 57 18.49	4.3120770

CADIZ, HARRISON COUNTY.

Situated 1½ miles north of the town of Cadiz on a hill locally known as the Sand Lot, on land owned by Louis Rider, at forks of road to Hanover and Rumley.

Theodolite elevated 52 feet.

Station mark: A cut marble post 48 by 6 by 6 inches sunk 36 inches in the ground, in center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 17' 22.36". Longitude 81° 00' 14.58".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Jefferson.....	196 06 28.74	16 08 19.68	4.1631951
Hopedale.....	249 40 19.70	69 46 06.04	4.1295800
Mount Pleasant.....	312 57 37.85	133 05 59.66	4.4004381
Clarks Hill.....	350 11 27.43	170 13 03.92	4.3177623
Sewellsville.....	40 08 03.66	219 59 50.71	4.4482271
Deersville.....	97 22 22.94	277 15 19.98	4.1923301
Bowerston.....	124 38 35.25	304 31 25.13	4.2799048

CADIZ COURTHOUSE, HARRISON COUNTY.

(Not occupied.)

Station mark: Center of cupola on courthouse.

[Latitude 40° 16' 22.39". Longitude 80° 59' 52.62".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Hopedale.....	241 40 48.88	61 46 20.94	4.1388232
Mount Pleasant.....	310 31 40.34	130 39 47.88	4.3715307

CALLAND, NOBLE COUNTY.

Situated on a high cleared hill in Seneca Township, about 2 miles northeast of village of Summerfield, near the Noble-Monroe county line on land owned by Mrs. Martha Calland.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 48' 14.31". Longitude 81° 19' 22.61".]

To station—	Azimuth	Back azimuth	Log. distance.
	° ' "	° ' "	Meters.
Fulda.....	53 35 25.20	233 32 02.90	3.9709420
Pleasant.....	87 36 24.91	267 31 42.37	4.0215172
Tucker.....	142 01 12.68	321 58 40.51	3.9625705
Warehime.....	165 10 18.15	345 08 11.50	4.2628296
Steele.....	201 35 53.45	21 39 25.88	4.3293954
Wiedman.....	251 29 17.30	71 34 31.64	4.0901708

CARROLLTON, CARROLL COUNTY.

Situated $2\frac{1}{2}$ miles east of the town of Carrollton, on the Scroggsfield road, on land owned by Mr. Campbell.

Station mark: A cut marble post 40 by 6 by 6 inches set 30 inches in the ground in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 34' 35.51''$. Longitude $81^{\circ} 01' 47.82''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kensington.....	204 06 05.89	24 09 27.05	4. 2491471
Elders.....	262 50 29.70	82 57 51.91	4. 2070630
Jefferson.....	340 45 32.78	160 48 24.64	4. 2772402

CENTENNIAL, BELMONT COUNTY.

A secondary station situated $2\frac{1}{2}$ miles northwest of the city of Bellaire, on land owned by William Nichol.

Station mark: A lone pine tree on highest point of hill.

[Latitude $40^{\circ} 02' 19.01''$. Longitude $80^{\circ} 46' 27.91''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Myers.....	31 55 37.0	211 54 17.4	3. 7445933
Sherrard.....	304 01 30.3	124 04 47.5	3. 9432353

CLARKS HILL, BELMONT COUNTY.

Situated 1 mile east of Bannock station, south of the Baltimore & Ohio R. R., on the summit of a hill owned by the heirs of Mr. Samuel Clark.

Station mark: A cut marble post 6 by 6 inches on top and extending to 6 by 12 inches at bottom. It is 24 inches long, sunk 25 inches in the ground, and set in cement. In the center of the top is cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 06' 18.28''$. Longitude $80^{\circ} 57' 45.02''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Galloway.....	4 07 10.89	184 06 50.55	4. 0183310
Cadiz.....	170 13 03.93	350 11 27.43	4. 3177623
Mount Pleasant.....	257 20 13.51	77 26 58.01	4. 1827579

CLAYSVILLE, GUERNSEY COUNTY.

On a bald knob one-fourth mile northwest from village of Claysville.

Station mark: A bottle of ashes $2\frac{1}{2}$ feet below surface, above which is a tile 30 by 4 by 4 inches set 30 inches in the ground.

[Latitude $39^{\circ} 56' 25.33''$. Longitude $81^{\circ} 40' 43.04''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sago.....	131 54 42.28	311 50 42.87	4. 0746717
College.....	193 42 02.84	13 43 15.84	4. 0557460
Midway.....	226 49 26.89	46 55 37.28	4. 2725062
Warehime.....	264 12 48.08	84 24 23.41	4. 4121452
Gregg.....	290 24 08.88	110 31 13.35	4. 2245402

COFFEE KNOB, NOBLE COUNTY.

Situated in Olive Township on summit of hill known locally as Coffee Knob. The land belongs to John Hughes and is covered with a peach orchard.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 43' 27.31". Longitude 81° 32' 47.22".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Gregg.....	193 41 15.25	13 43 14.30	4.2709766
Pleasant.....	225 47 16.75	45 51 09.15	4.0813436
Fulda.....	254 08 13.79	74 13 26.06	4.0823867
Coffey.....	313 58 36.21	134 02 58.60	4.1340788
Dovenbecker.....	338 41 35.73	158 44 36.15	4.2675872
Fulda Church.....	270 09 40.00	90 14 41.00	4.0496191

COFFEY, NOBLE COUNTY.

Situated in Jefferson Township, about 2 miles east of Macksburg and near the Noble-Washington county line. It is on a knob at the southern end of what is locally known as Coffey Ridge on land belonging to the Coffey brothers. A house surrounded by a peach orchard occupies the whole summit of knob.

Station mark: A stone post 15 by 6 by 6 inches set 15 inches in the ground, with a cross cut on upper surface.

Reference mark: The south chimney of house; distance from station, 69 feet; azimuth, 121° 43'.

Subsurface mark: An aluminum bolt buried 2 feet below surface underneath station mark.

[Latitude 39° 38' 20.51". Longitude 81° 25' 56.23".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Dovenbecker.....	21 34 03.43	201 32 41.16	3.9232258
Coffee Knob.....	134 02 58.60	313 58 36.21	4.1340788
Fulda.....	188 13 57.47	8 14 46.99	4.1102507
Laws.....	290 04 00.35	110 10 06.45	4.1639102

COLLEGE, GUERNSEY COUNTY.

In a field about 400 feet southeast from white schoolhouse, on what is known locally as College Hill, 2.5 miles northwest of Cambridge.

Station mark: A limestone post 40 by 7 by 7 inches set 39 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 02' 23.47". Longitude 81° 38' 49.47".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Claysville.....	13 43 15.84	193 42 02.84	4.0557460
Sago.....	74 54 42.29	254 49 29.58	4.0771353
Kennedy.....	152 47 17.23	332 45 02.42	4.0350419
Midway.....	260 51 24.41	80 56 22.09	4.0455896

COLUMBUS, FRANKLIN COUNTY.

The roof of the statehouse, which was occupied and angles reduced to center of flagpole. A Coast and Geodetic Survey astronomic station.

Station mark: Center of flagpole.

Latitude, approximate U. S. standard, $39^{\circ} 57' 41.12''$; astronomic C. & G. S., $39^{\circ} 57' 40.46''$. Longitude, approximate U. S. standard, $82^{\circ} 59' 56.93''$; astronomic C. & G. S., $82^{\circ} 59' 46.26''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Spangler.....	00 50 03.50	180 49 58.86	4.0721158
South base.....	45 51 20.58	225 47 59.84	4.0151152
North base.....	56 15 00.73	236 12 51.25	3.7603278
Asylum.....	85 43 35.18	265 41 27.41	3.6753250
Baker.....	336 06 47.21	156 08 01.02	3.8290019

COLUMBUS INSANE ASYLUM, FRANKLIN COUNTY.

Three miles west of Columbus. The point occupied is on the southern square tower of the main building. The theodolite was set on iron roof just south of flagpole to which angles are reduced. The main central tower is 25 or 30 feet higher, but can not be occupied.

Station mark: Center of flagpole.

[Latitude, approximate U. S. standard, $39^{\circ} 57' 29.64''$; astronomic C. & G. S., $39^{\circ} 57' 28.98''$. Longitude, approximate U. S. standard, $83^{\circ} 03' 15.87''$; astronomic C. & G. S., $83^{\circ} 03' 05.20''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
North base.....	1 17 58.88	181 17 57.13	3.4544326
South base.....	21 30 41.82	201 29 28.77	3.8676913
Columbus.....	265 41 27.41	85 43 35.18	3.6753250
Baker.....	307 55 27.15	127 58 48.64	3.9755769
Spangler.....	338 17 47.73	158 19 50.71	4.0907165

COLUMBUS INSANE ASYLUM (CENTRAL TOWER), FRANKLIN COUNTY.

Station mark: Central tower on insane asylum.

[Latitude, approximate U. S. standard, $39^{\circ} 57' 30.13''$; astronomic C. & G. S., $39^{\circ} 57' 29.47''$. Longitude, approximate U. S. standard, $83^{\circ} 03' 16.33''$; astronomic C. & G. S., $83^{\circ} 03' 05.66''$.]

COLUMBUS NORTH BASE, FRANKLIN COUNTY.

Three and one-half miles by wagon road southwest of Columbus post office, on land owned by H. C. Detwiler, just west of railroad track, on northern prolongation of tangent and 900 feet north of its extremity. Theodolite elevated 31 feet.

Station mark: Limestone post, 46 by 8 by 8 inches set 38 inches in the ground, in center of top of which is cemented a bronze tablet.

Reference marks: Iron bench-mark post on fence line between field and right of way, 29.65 feet distant, the azimuth to it being $302^{\circ} 19'$. Iron bench-mark post set in same direction on eastern side of railroad right of way, 90.55 feet distant.

[Latitude, approximate U. S. standard, $39^{\circ} 55' 57.34''$; astronomic C. & G. S., $39^{\circ} 55' 56.68''$. Longitude, approximate U. S. standard, $83^{\circ} 03' 18.59''$; astronomic C. & G. S., $83^{\circ} 03' 07.92''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
South base.....	33 19 41.30	213 18 30.02	3.6815710
Insane asylum.....	181 17 57.13	1 17 58.80	3.4544326
Columbus.....	236 12 51.25	56 15 00.73	3.7603278
Baker.....	291 30 15.84	111 33 39.03	3.9076388

COLUMBUS SOUTH BASE, FRANKLIN COUNTY.

Seven miles by road southwest of Columbus; about 900 feet southwest of Urban Crest station; 280 feet west of Baltimore & Ohio Southwestern R. R. track; about 200 feet west of Henry Newmeister's house. Instrument elevated 31 feet.

Station mark: Limestone post 40 by 8 by 8 inches set 36 inches in ground, in center of top of which is cemented a bronze tablet.

Reference marks: Iron bench-mark post on line between lot and street, 38.70 feet distant, azimuth $96^{\circ} 59'$; iron bench-mark post eastward, 11.20 feet distant; iron bench-mark post southward on line between lot and alley, 30.50 feet distant, azimuth, $2^{\circ} 16'$.

[Latitude, approximate U. S. standard, $39^{\circ} 53' 47.19''$; astronomic C. & G. S., $39^{\circ} 53' 46.53''$. Longitude, approximate U. S. standard, $83^{\circ} 05' 09.69''$; astronomic C. & G. S., $83^{\circ} 04' 59.02''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Asylum.....	201 29 28.77	21 30 41.82	3.8676913
North base.....	213 18 30.02	33 19 41.30	3.6815710
Columbus.....	225 47 59.84	45 51 20.58	4.0151152
Baker.....	264 04 45.67	84 09 20.04	4.0092338
Spangler.....	302 16 28.18	122 19 44.05	3.9339777

COOK, HOCKING COUNTY.

On the estate of John Cook, in the northeast quarter of section 23, Green Township, 4 miles east of Logan. A good view can be had in all directions excepting north 0° east to north 30° east, which is interfered with by timber at north end of ridge. This station was also occupied by the United States Coast and Geodetic Survey in 1881.

Station mark: A marble post 30 by 6 by 6 inches set 28 inches in the ground, immediately above an earthenware pyramid. Top of post marked

U.	S.
C. &	G. S.

[Latitude $39^{\circ} 32' 29.14''$. Longitude $82^{\circ} 20' 41.83''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Barton.....	49 03 10.28	228 57 23.90	4.2366543
Schultz.....	57 44 19.75	237 41 36.70	3.8596674
Brown.....	96 48 32.74	276 38 41.55	4.3486753
Buck.....	138 36 43.24	318 30 42.80	4.3091667
Brooks.....	303 19 26.03	123 23 44.62	4.0653816
McDaniel.....	352 53 21.32	172 54 18.10	4.2371864

DAVIS, JACKSON COUNTY.

On a cultivated hill in Bloomfield Township, 12 miles eastward from Jackson, $1\frac{1}{2}$ miles north of Orpheus post office, 3 miles east of Winchester (Rocky Hill post office). Land owned by Evan D. Davis who lives about 500 feet west-southwest of station. An unobstructed view can be had for many miles toward the north, northwest, and west, and comparatively few trees obstruct the view southwest.

Station mark: Center of wild-cherry signal tree about 500 feet east-northeast of Mr. Davis's residence and 13 feet south of an east-west fence.

[Latitude $38^{\circ} 58' 54.17''$. Longitude $82^{\circ} 28' 47.63''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Lawler.....	200 26 28.47	20 28 23.27	4.0984524
Graham.....	294 03 37.74	114 12 13.18	4.3352839
Wagner.....	358 19 33.89	178 19 50.05	4.3278387

DEERSVILLE, HARRISON COUNTY.

Situated in the village of Deersville, Franklin Township. Station is the center of cupola of public-school building in the eastern part of the village.

Station mark: Center of cupola.

[Latitude 40° 18' 26.93". Longitude 81° 11' 08.13".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sewellsville.....	6 19 40.88	186 18 29.97	4.3730446
Prospect.....	10 06 05.78	190 05 23.84	3.9417489
Tippecanoe.....	51 43 47.10	231 40 46.25	3.9252612
Bowerton.....	178 23 20.87	358 23 14.06	3.9461666
Jefferson.....	238 15 45.68	58 24 40.31	4.3594835
Cadiz.....	277 15 19.98	97 22 22.94	4.1923301

DILLON, MONROE COUNTY.

Station mark: The chimney on Mr. J. D. Dillon's residence, 1 mile south of Way post office.

[Latitude 39° 37' 40.67". Longitude 81° 10' 31.26".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Moore.....	19 50 50.56	199 47 41.01	4.3215874
Laws.....	65 40 13.26	245 36 29.65	3.9630466
Tank.....	216 55 13.70	36 57 28.00	3.9554300
High Knob.....	282 34 05.00	102 39 53.00	4.1253100
Glass.....	332 17 56.67	152 19 54.03	3.9758125

DOVENBECKER, WASHINGTON COUNTY.

Situated about 5 miles southwest of Macksburg in pasture field on a high, cleared hill on land owned by William Dovenbecker.

Station mark: A sandstone post 48 by 6 by 6 inches set 48 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 34' 07.79". Longitude 81° 28' 05.23".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Coffee Knob.....	158 44 36.15	338 41 35.73	4.2675872
Fulda.....	193 27 26.49	13 29 38.34	4.3249454
Coffey.....	201 32 41.16	21 34 03.43	3.9232258
Laws.....	260 32 30.54	80 39 58.60	4.2307093
Moore.....	306 00 36.00	123 08 37.09	4.3492957

EAST LIVERPOOL CHAPEL, COLUMBIANA COUNTY.

(Not occupied.)

Memorial Chapel in the cemetery at East Liverpool, Ohio.

Station mark: Cap on monument of soldier.

[Latitude 40° 38' 15.62". Longitude 80° 34' 22.70".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Hammond.....	114 30 16.57	294 26 23.76	3.96492
Allison.....	353 41 30.73	173 41 45.23	3.67712

ELDERS, JEFFERSON COUNTY.

Situated one-half mile south of the village of Monroeville on land owned by Mr. Elder.

Station mark: A cut marble post 48 by 6 by 6 inches set 40 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 35' 40.04". Longitude 80° 50' 28.10".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Jefferson.....	26 13 45.61	206 09 16.01	4.3452306
Carrollton.....	82 57 51.91	262 50 29.70	4.2070630
Kensington.....	148 30 40.69	328 26 39.02	4.2218375
Hammond.....	238 50 48.93	58 57 24.93	4.2224370
Allison.....	269 43 49.10	89 54 31.77	4.3659427
Wintersville.....	336 29 21.40	156 33 37.87	4.3682786

FLUSHING, BELMONT COUNTY.

(Not occupied.)

In village of Flushing, in township of same name.

Station mark: Center of cupola on Dr. Burraclough's house.

[Latitude 40° 08' 58.90". Longitude 81° 03' 50.24".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Sewellsville.....	65 25 32.21	245 19 39.26	4.1542888
Prospect Hill.....	126 53 21.86	306 47 57.45	4.1720159

FULDA, NOBLE COUNTY.

Situated on a cleared hill in Enoch Township about 2 miles north of Fulda post office on land owned by Mr. Bates.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 45' 14.16". Longitude 81° 24' 38.75".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Coffey.....	8 14 46.99	188 13 57.47	4.1102507
Dovenbecker.....	13 29 38.34	193 27 26.49	4.3249454
Coffee Knob.....	74 13 26.06	254 08 13.79	4.0823867
Pleasant.....	149 46 36.80	329 45 16.75	3.7718484
Tucker.....	188 18 59.48	8 19 49.89	4.1112795
Calland.....	233 32 02.90	53 35 25.20	3.9709420
Laws.....	326 17 40.64	146 22 57.69	4.3294759

FULDA CHURCH SPIRE, NOBLE COUNTY.

(Not occupied.)

In village of Fulda.

Station mark: Center of church spire.

[Latitude 39° 43' 26.01". Longitude 81° 24' 56.52".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Coffee Knob.....	90 14 41.03	270 09 40.22	4.0496191
Fulda Δ.....	187 13 47.17	7 13 58.53	3.5265941

FULTON, ATHENS COUNTY.

A bare hogback ridge in Lodi Township 7 miles southeast of Athens on land owned by William Fulton.

Station mark: A sandstone post 36 by 12 by 12 inches, dressed 8 inches square on top, set 34 inches in the ground; in the center of top is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 16' 37.29". Longitude 82° 01' 18.47".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Townsend (2).....	103 28 43.53	283 25 56.81	3.8121631
White.....	160 49 23.38	340 47 47.32	4.0432222
Southland.....	230 29 38.61	50 35 57.22	4.2678598
Bond.....	286 28 31.40	106 34 55.98	4.1818210

GALLAWAY, BELMONT COUNTY.

Situated 4 miles southeast of Belmont and 2 miles south of Lewis Mills, on the summit of a bare hill owned by Mr. Gallaway.

Station mark: A cut marble post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 00' 40.94". Longitude 80° 58' 16.52".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Beallsville.....	2 29 55.83	182 29 34.33	4.2612655
Clarks Hill.....	184 06 50.55	4 07 10.89	4.0183311
Mount Pleasant.....	228 38 05.78	48 45 10.24	4.3180322
Myers.....	276 53 33.03	96 59 49.03	4.1453970
Jacobsburg.....	299 35 16.63	119 38 37.92	3.9318086
Newcastle.....	32 41 30.82	212 37 30.44	4.2166459
Bryan.....	60 34 11.06	240 30 53.45	3.9231502

GILMORE, TUSCARAWAS COUNTY.

On a bald knob one-third mile north of the village of Gilmore, 300 feet from where road elbows to east going from Gilmore.

Station mark: A sandstone post 36 by 6 by 6 inches set 33 inches in the ground in the center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 17' 50.02". Longitude 81° 26' 31.76".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Widder.....	65 15 18.37	245 08 36.06	4.2095562
Port Washington.....	107 14 03.00	287 11 28.00	3.7758890
Stone Creek.....	134 52 35.59	314 48 21.35	4.1164240
Wainwright.....	176 58 27.78	356 58 08.37	4.1267768
Uhrichsville.....	238 12 02.93	58 18 12.91	4.2004975
Tippecanoe.....	284 58 09.52	105 05 05.88	4.1973700
Booth.....	48 15 13.50	228 11 04.90	4.0860014

GLASS, WASHINGTON COUNTY.

On north end of ridge, 0.5 mile east of Glass post office and 100 feet south of road.

Reference mark: A sandstone post 36 by 8 by 8 inches set 36 inches in the ground, with cross cut in center of top. Azimuth, $166^{\circ} 50'$; distance, 14.3 feet.

Station mark: Chimney on a small frame house owned by John Newell, 14.3 feet south of reference mark.

[Latitude $39^{\circ} 33' 09.09''$. Longitude $81^{\circ} 07' 27.10''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Moore.....	45 26 59.54	225 21 53.00	4.2088840
Laws.....	109 48 40.00	289 42 59.25	4.1324413
Dillon.....	152 19 54.03	332 17 56.67	3.9758125
Tank.....	183 47 44.00	3 48 12.00	4.1938000
High Knob.....	237 39 24.40	57 43 14.20	4.00798
Smith.....	276 51 34.5	96 56 45.4	4.06987

GRAHAM, GALLIA COUNTY.

A flat, partly timbered ridge 9 miles by road north-northwest of Gallipolis, $1\frac{1}{2}$ miles east of Evergreen post office.

An extensive view can be had in all directions except eastward. Land owned by Charley Graham and rented by Mr. Sparrows.

Station mark: A marble post 30 by 6 by 6 inches, set 28 inches in the ground 7 feet east of signal tree and on south side of rail fence. In center of top is cemented a bronze triangulation tablet. "Ohio."

Reference mark: The oak signal tree on fence line on south side of road. Azimuth from mark, $99^{\circ} 11'$; distance, 7 feet.

[Latitude $38^{\circ} 54' 07.25''$. Longitude $82^{\circ} 15' 07.55''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Houck.....	15 43 53.36	195 40 54.83	4.4049004
Wagner.....	57 07 05.39	236 58 47.15	4.3584636
Davis.....	114 12 13.18	294 03 37.74	4.3362839
Leonard.....	186 38 36.75	6 39 15.03	4.1024633
Finlay.....	285 15 10.50	105 26 39.74	4.4386594

GREENLER, MEIGS COUNTY.

On a cultivated ridge in Scipio Township, $2\frac{1}{2}$ miles southeast of Harrisonville and 9 miles northwest of Pomeroy. Land owned by the widow Greenler. An extended view can be had in all directions.

Station mark: A stone post 30 by 8 by 8 inches, set 28 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 06' 36.10''$. Longitude $82^{\circ} 05' 37.56''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Leonard.....	49 22 32.39	229 17 11.56	4.2078401
McKnight.....	131 06 34.33	311 03 11.43	4.0103602
Townsend (2).....	179 42 39.02	359 42 36.35	4.3021055
Bond.....			4.4013817
Melhorn.....	279 28 14.79	99 41 07.07	4.4750063
Finlay.....	337 13 28.07	157 19 00.37	4.5174129

GREGG, NOBLE COUNTY.

Situated on a cleared hill in Wayne Township about 4 miles south of Senecaville and near the Noble-Guernsey county line. Hill partly covered by an orchard. Land owned by Walter Gregg.

Station mark: A boulder 20 by 10 by 8 inches, set in the ground and having a cross (+) cut on its upper surface.

Subsurface mark: A bronze triangulation tablet buried 2 feet below surface immediately underneath cross on boulder.

[Latitude 39° 53' 15.23". Longitude 81° 29' 41.50".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Coffee Knob.....	13 43 14.30	193 41 15.25	4.2709766
Warehime.....	229 51 54.19	49 56 24.57	4.1165523
Tucker.....	282 43 32.96	102 47 37.40	3.9679631
Pleasant.....	336 31 55.44	156 33 49.16	4.0254190

HALLS KNOB, GUERNSEY COUNTY.

(Not occupied.)

A high knob in northern part of Millwood Township, locally known as Joe Halls Knob.

Station mark: Center of tobacco barn on highest part of knob.

[Latitude 39° 59' 57.14". Longitude 81° 17' 15.25".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sewellsville.....	209 31 02.83	29 33 48.43	4.0925218
Steele.....	290 41 37.89	110 43 48.80	3.7132089

HAMMOND, COLUMBIANA COUNTY.

Situated 2 miles east of the village of Glasgow on the highest point of a knob, known locally as Hammonds Knob.

Station mark: A cut marble post 40 by 6 by 6 inches, set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 40' 19.50". Longitude 80° 40' 20.06".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Wintersville.....	9 29 54.97	189 27 36.41	4.4836287
Elders.....	58 57 24.93	238 50 48.93	4.2224370
Kensington.....	103 44 59.61	283 34 21.24	4.3739205
Allison.....	313 44 30.76	133 48 37.93	4.0918031

HIGH KNOB, MONROE COUNTY.

About 4 miles by road northwest of Sistersville, W. Va., on a prominent knob having two large wooden tanks on its summit.

Station mark: Wooden projection 5 feet square on southeast side of eastern tank, top about 4 feet higher than top of tank.

PRIMARY TRIANGULATION.

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[Latitude 39° 36' 05.63". Longitude 81° 01' 26.40".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Glass	57 43 14.2	237 39 24.4	4.00798
Laws	87 46 51.7	267 37 20.9	4.33012
Dillon			4.12445
Flag N.	230 51 47.3	50 55 25.0	4.02074
Pollock	279 41 54.3	99 44 56.3	3.83962
Smith	336 01 36.3	156 02 57.6	3.87521
Owls Head			4.27736

HOPEDALE, JEFFERSON COUNTY.

Situated 2 miles west of Bloomingdale on the north side of the Bloomingdale-Hopedale pike, on the highest point of hill in cleared field belonging to Mr. S. N. Beall.

Station mark: A cut marble post 24 by 4 by 4 inches sunk 24 inches in the ground. "U. S. G. S." marked on top of post.

[Latitude 40° 19' 53.80". Longitude 80° 51' 19.20".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Cadiz C. H.	61 46 20.94	241 40 48.88	4.1388232
Cadiz	69 46 06.04	249 40 19.70	4.1295800
Jefferson	137 22 06.82	317 18 11.04	4.1028039
Wintersville	233 31 31.07	53 36 19.99	4.1166735
New Alexander	290 17 09.61	110 23 39.92	4.1817202
Mount Pleasant	345 17 50.68	165 20 28.93	4.3534510

HOUCK, GALLIA COUNTY.

In Harrison Township, on a bare hill owned by Noah Houck, 3 miles south of Lincoln and one-fourth mile north of Ruby post office. A few locust trees still standing near summit of hill.

Station mark: A sandstone post 30 by 8 by 8 inches set 28 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

Reference mark: The locust signal tree; true azimuth from mark, 268° 05'; distance, 21.2 feet.

[Latitude 38° 40' 54.17". Longitude 82° 19' 52.51".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Wray	49 35 13.43	229 30 22.22	4.1709604
Wagner	134 25 23.87	314 20 05.14	4.2358550
Graham	195 40 54.83	15 43 53.36	4.4049004
Finlay	242 38 56.49	62 53 22.49	4.5747505
Kennard	263 24 39.30	83 33 45.05	4.3270505
Gebhardt	338 02 32.74	158 05 28.36	4.2608573

JACOBSBURG, BELMONT COUNTY.

Situated on the top of Mr. Robert C. McKelvey's house. Signal was placed on roof within railing. The center comes at edge of second layer of tin from south railing and in center of cupola east and west.

[Latitude 39° 58' 24.01". Longitude 80° 53' 03.37".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Beallsville.....	30 28 36.52	210 24 54.13	4.2108474
Gallaway.....	119 38 37.92	299 35 16.63	3.9318086
Myers.....	248 31 07.18	68 34 01.77	3.8405264

JEFFERSON, HARRISON COUNTY.

Situated on a bare hill one-fourth mile northwest of the town of Jefferson, between the forks of the New Philadelphia and Carrollton roads, on land owned by Samuel Meed.

Station mark: A cut marble post 42 by 6 by 6 inches sunk 36 inches in the ground, in center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 24' 55.88". Longitude 80° 57' 23.13".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Cadiz.....	16 08 19.68	196 06 28.74	4.1631951
Carrollton.....	160 48 24.64	340 45 32.78	4.2772402
Elders.....	206 09 16.01	26 13 45.61	4.3452306
Wintersville.....	274 33 35.99	94 42 21.10	4.2824762
Hopedale.....	317 18 11.04	137 22 06.82	4.1028039
Deersville.....	58 24 40.31	238 15 45.68	4.3594835
Bowerston.....	80 54 37.31	260 45 35.42	4.3003187

JERUSALEM SCHOOLHOUSE, MONROE COUNTY.

(Not occupied.)

Schoolhouse in Jerusalem, Sunbury Township.

Station mark: Center of cupola.

[Latitude 39° 50' 54.00". Longitude 81° 06' 06.45".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Wiedman.....	81 59 06.96	261 55 51.27	3.8653255
Newcastle.....	208 14 14.47	28 15 15.85	3.6820293

KENNEDY, GUERNSEY COUNTY.

On east slope of hill, in field owned by Mr. Kennedy, about 5 miles west of Kimbolton and 3 miles northwest of Hopewell village.

Station mark: A sandstone post 40 by 7 by 7 inches set 36 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

PRIMARY TRIANGULATION.

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[Latitude 40° 07' 36.01". Longitude 81° 42' 18.85'".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Sago.....	27 14 31.91	207 11 33.69	4.1566993
Widder.....	212 17 49.89	32 21 19.42	4.1574000
Booth.....	230 51 07.97	50 57 10.87	4.2342578
Midway.....	296 16 48.49	116 24 01.27	4.2495411
College.....	332 45 02.42	152 47 17.23	4.0350419

KENSINGTON, CARROLL COUNTY.

Situated 1 mile south of Kensington, on the highest point of a wooded hill. A county road passes over the south side of the hill.

Station mark: A cut marble post 48 by 6 by 6 inches sunk 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 43' 20.61". Longitude 80° 56' 39.07'".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Carrollton.....	24 09 27.05	204 06 05.89	4.2491471
Hammond.....	283 34 21.24	103 44 59.61	4.3739205
Elders.....	328 26 39.02	148 30 40.69	4.2218375

LAWLER, VINTON COUNTY, NEAR JACKSON COUNTY LINE.

A secondary station on a flat, partly timbered ridge 8 miles by road east-southeast of Wellston post office, on land owned by Frank Lawler and rented by Jim Kennison.

Station mark: South chimney on two-story house with red tin roof.

[Latitude 39° 05' 15.32". Longitude 82° 25' 45.35'".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Davis.....	20 28 23.27	200 26 28.47	4.0984524
Leonard.....	295 28 23.01	115 35 43.20	4.2699658
Graham.....	323 15 25.71	143 22 07.04	4.4097687

LAWS, WASHINGTON COUNTY.

Situated on a high, cleared, flat-topped hill in Liberty Township, about three-quarters of a mile south of the village of Lebanon, on land owned by Mr. Laws.

Station mark: A dead oak tree.

Reference mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of the top of which is cemented a bronze triangulation tablet, "Ohio." Distance to center of tree, 1.4 feet; true azimuth, 170° 43'.

[Latitude 39° 35' 37.83". Longitude 81° 16' 21.98'".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Pinkerton.....	50 51 42.70	230 41 51.34	4.4572810
Doyenbecker.....	80 39 58.60	260 32 30.54	4.2307093
Coffey.....	110 10 06.45	290 04 00.35	4.1639102
Fulda.....	146 22 57.69	326 17 40.64	4.3294759
Moore.....	355 27 25.12	175 27 58.83	4.2038199

LEONARD, MEIGS COUNTY.

On a partly timbered ridge in Salem Township, 12 miles by road west of Middleport, 4 miles north of Eno post office. Timber interferes with view northeast and southeast, but in other directions the view is particularly good. Land owned by W. H. Leonard, who lives 300 yards north.

Station mark: A sandstone post 36 by 8 by 8 inches set 34 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

Reference mark: The poplar signal tree at roadside. True azimuth from station mark, $322^{\circ} 19'$; distance, 128.1 feet.

[Latitude $39^{\circ} 00' 55.06''$. Longitude $82^{\circ} 14' 06.67''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Graham.....	6 39 15.03	186 38 36.75	4.1024633
Wagner.....	39 34 55.56	219 25 58.48	4.5104457
Lawler.....	115 35 43.20	295 28 23.01	4.2699658
Zaleski.....	151 46 12.85	331 39 56.21	4.4807510
McKnight.....	194 38 18.41	14 40 16.75	4.2510681
Greenler.....	229 17 11.56	49 22 32.39	4.2078401
Finlay.....	308 21 37.63	128 32 29.47	4.5039347

LYONS, ATHENS COUNTY.

A bald hill in Troy Township, 1 mile north of Latrobe post office (Coolville station). Land owned by Eli Lyons, who lives 200 yards southeast of station. A good view in nearly all directions except northward, which is limited to 2 miles.

Station mark: A marble post 30 by 6 by 6 inches set 28 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 15' 28.16''$. Longitude $81^{\circ} 47' 35.04''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Bond.....	67 02 55.00	247 00 38.53	3.7495497
Nolan.....	216 30 09.55	36 33 16.71	4.0753794
Wigal.....	308 45 37.51	128 49 58.11	4.1032825
Melhorn.....	350 53 46.66	170 55 16.63	4.3354363

MCBRIDE, GUERNSEY COUNTY.

Situated on a cleared hill about 2 miles northeast of the village of Antrim, in Londonderry Township, on land owned by J. E. McBride.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 07' 59.22''$. Longitude $81^{\circ} 20' 04.72''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Warehime.....	11 05 17.55	191 03 37.47	4.2832082
Tippecanoe.....	203 13 59.21	23 16 45.07	4.1873542
Prospect Hill.....	226 01 54.41	46 06 58.83	4.1902726
Sewellsville.....	292 03 17.71	112 07 52.73	4.0377941
Steele.....	332 03 18.01	152 07 18.16	4.2763282

McDANIEL, HOCKING COUNTY.

Situated in the southern edge of the southwest quarter, section 7, Starr Township, on the estate of George McDaniel, 8 miles southwest of Nelsonville post office, 15 miles southeast of Logan, and 2 miles east of Starr. The knob is quite prominent and has only a few trees on its southwest side to interfere with view. Selected and occupied by the United States Coast and Geodetic Survey in 1882-83.

Station mark: A marble post 26 by 6 by 6 inches set 25 inches in the ground immediately above a square earthenware pyramid. Top of post marked

U.	S.
C. &	G. S.

[Latitude 39° 23' 13.57". Longitude 82° 19' 12.52'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Zaleski.....	25 29 15.51	205 26 11.15	4.2098137
Barton.....	111 03 09.10	290 56 26.59	4.2107237
Schultz.....	148 07 04.09	328 03 24.55	4.1939372
Cook.....	172 54 18.10	352 53 21.32	4.2371864
Brooks.....	215 11 53.84	35 15 15.27	4.1188828
Nebo.....	263 16 04.46	83 24 56.70	4.3054151
White.....	274 32 58.10	94 42 43.35	4.3453947
Townsend (2).....	298 48 45.11	118 57 19.04	4.3458525

McKNIGHT, MEIGS COUNTY.

A cleared ridge in the northwestern part of Scipio Township, 2 miles east of Carpenter post office and 5 miles south of Albany on land owned by Thornton McKnight.

Station mark: A bluestone post 40 by 8 by 8 inches set 38 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 10' 14.34". Longitude 82° 10' 59.00'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Leonard.....	14 40 16.75	194 38 18.41	4.2510681
Zaleski.....	116 35 39.29	296 27 23.36	4.3229316
Townsend (2).....	209 42 32.43	29 45 53.05	4.1858081
Greenler.....	311 03 11.43	131 06 34.33	4.0103602

MIDWAY, GUERNSEY COUNTY.

About 6 miles northeast of Cambridge and 1½ miles southeast of village of Midway, 200 feet west of north-south road and 300 feet northwest of schoolhouse, on a prominent bald hill.

Station mark: A limestone post 36 by 6 by 6 inches set 30 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 03' 20.47". Longitude 81° 31' 06.84'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Claysville.....	46 55 37.28	226 49 26.89	4.2725062
College.....	80 56 22.09	260 51 24.41	4.0455890
Kennedy.....	116 24 01.27	296 16 48.49	4.2495411
Widder.....	157 42 44.98	337 39 01.10	4.3353514
Booth.....	172 07 03.12	352 05 52.54	4.2759110
Warehime.....	310 23 54.26	130 29 19.95	4.1983205
Gregg.....	353 48 09.85	173 49 04.63	4.2735701

MOORE, WASHINGTON COUNTY.

Situated 4 miles north of Newport on a high cleared knob owned by Mr. Moore and known locally as Moores Hill.

Station mark: A sandstone post 48 by 8 by 8 inches set 48 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 27' 00.99". Longitude 81° 15' 29.00".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Pinnacle.....	24 47 56.51	204 43 50.23	4.3462483
Seffens.....	64 45 45.97	244 33 51.52	4.4743073
Pinkerton.....	84 46 38.67	264 36 14.56	4.3728093
Dovenbecker.....	126 08 37.09	306 00 36.00	4.3492957
Laws.....	175 27 58.83	355 27 25.12	4.2038199
Owlshhead.....	272 39 24.48	92 50 53.05	4.4140545
McCullough.....	308 27 51.47	128 34 48.44	4.3030833
Griffith.....	354 57 28.03	174 57 55.01	4.0637096

MOUNT PLEASANT, BELMONT COUNTY.

Situated near Morningview post office, on the north end of a bare hill on the west side of the Wheeling-Mount Pleasant pike, on land owned by Mr. Goff.

Station mark: A cut marble post 40 by 6 by 6 inches set 30 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 08' 06.07". Longitude 80° 47' 16.28".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Myers.....	6 32 00.56	186 31 12.65	4.1908702
Galloway.....	48 45 10.24	228 38 05.78	4.3180322
St. Clairsville.....	58 03 07.29	237 58 45.00	4.0555471
Clarks Hill.....	77 26 58.01	257 20 13.51	4.1827579
Cadiz Courthouse.....	130 39 47.88	210 31 40.34	4.3715300
Cadiz.....	133 05 59.66	312 57 37.85	4.4004381
Hopedale.....	165 20 26.93	345 17 50.68	4.3534510
New Alexander.....	207 17 14.17	27 21 07.51	4.2700856
Independence.....	238 17 59.54	58 27 33.56	4.3938130
West Liberty.....	252 09 09.19	72 16 23.96	4.2241846
Sherrard.....	331 35 42.42	151 39 31.51	4.2492017

MYERS, BELMONT COUNTY.

Situated 4 miles southwest of the city of Bellaire, on a cleared knob on land owned by Mr. P. B. Myers.

Station mark: A cut marble post 48 by 6 by 6 inches set 40 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 59' 46.16". Longitude 80° 48' 31.67".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Beallsville.....	41 39 03.80	221 32 26.97	4.3447990
Jacobsburg.....	68 34 01.77	248 31 07.18	3.8405264
Galloway.....	96 59 49.03	276 53 33.03	4.1453970
Mount Pleasant.....	186 31 12.65	6 32 00.56	4.1908702
Centennial.....	211 54 17.38	31 55 36.99	3.7445900
Clinton.....	224 11 47.70	44 17 52.97	4.2850900
Sherrard.....	271 04 45.82	91 09 22.42	4.0090858
Riggs.....	344 41 46.06	164 43 47.81	4.2327314

NEBO, ATHENS COUNTY.

A small knob in Dover Township, 6 miles by road north of Athens, owned by the Hibbard heirs. Summit covered with a peach orchard (trees mostly dead). A fine view can be had in all directions except eastward. The station was selected and occupied by the United States Coast and Geodetic Survey in 1881.

Station mark: A marble post 30 by 6 by 6 inches set 30 inches in the ground over

a square earthen pyramid 5 inches high. Top of post is marked

U.	S.
C. &	G. S.

[Latitude 39° 24' 29.53''. Longitude 82° 05' 13.90'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Townsend (2).....	2 55 47.28	182 55 29.61	4.1162949
McDaniel.....	83 24 56.70	263 16 04.46	4.3054151
Brooks.....	124 00 23.75	303 54 52.42	4.1770814
White.....	334 05 08.78	154 06 01.99	3.6620298

NEW ALEXANDRIA, JEFFERSON COUNTY.

Situated 1 mile southwest of the village of New Alexandria in a cleared field on west side of county road one-fourth mile beyond point at which it leaves the New Alexandria-Bloomington pike.

Station mark: A cut marble post 24 by 6 by 6 inches sunk 2 feet under surface of the ground; in the center of top of post is cemented a bronze triangulation tablet, "Ohio."

Reference marks: A large tree, true bearing N. 53° 20' E., distant 272 feet. A small tree, true bearing S. 1° 36' W., distant 131 feet. An old stump in field, true bearing N. 68° 36' W., distant 14.7 feet.

[Latitude 40° 17' 02.55''. Longitude 80° 41' 15.83'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Mount Pleasant.....	27 21 07.51	207 17 14.17	4.2700856
Hopedale.....	110 23 39.92	290 17 09.61	4.1817202
Wintersville.....	164 08 12.73	344 06 30.92	4.1325490
Independence.....	286 01 22.01	106 07 03.27	4.1133566
West Liberty.....	327 04 20.90	147 07 42.89	4.1338982

NEWCASTLE, BELMONT COUNTY.

Situated on a high, cleared hill in Wayne Township, about one-half mile southeast of the village of Newcastle, on land owned by Benjamin Pitman.

Station mark: A stone post 30 by 6 by 6 inches set 30 inches in the ground on solid rock, in center of top of which is cemented a bronze triangulation tablet, "Ohio."

Reference mark: The tall poplar signal tree; distance from station mark, 8.15 feet; true azimuth, 67° 49'.

[Latitude 39° 53' 11.37''. Longitude 81° 04' 30.75'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Wiedman.....	61 08 38.37	241 04 21.24	4.0370559
Steele.....	128 47 53.71	308 41 53.72	4.2323159
Bryan.....	189 14 48.57	9 15 31.48	3.9944416
Galloway.....	212 37 30.44	32 41 30.82	4.2166459
Beallsville.....	298 18 11.29	118 21 49.78	3.9639688

NOLAN, WASHINGTON COUNTY.

Situated in Dunham Township, about 2 miles west of Veto post office and 4 miles southwest of Vincent railroad station. The summit of hill occupied by house is surrounded by shade and fruit trees. The land is owned by R. E. Sutton.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

Reference mark: Chimney on north end of house; distance from station mark, 34 feet; true azimuth from station mark, $142^{\circ} 29' 20''$.

[Latitude $39^{\circ} 20' 38.11''$. Longitude $81^{\circ} 42' 39.55''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Lyons.....	36 33 16.71	216 30 09.55	4.0753794
Bond.....	46 14 13.62	226 08 49.91	4.2298152
Southland.....	109 14 36.48	289 09 05.68	4.1212888
Goff.....	314 58 46.74	135 04 44.31	4.2822068
Wigal.....	350 54 54.61	170 56 08.43	4.2486674

PERRYVILLE, CARROLL COUNTY.

(Not occupied.)

Station mark: Center of church spire.

[Latitude $40^{\circ} 27' 54.90''$. Longitude $81^{\circ} 05' 53.49''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Jefferson.....	294 32 31.88	114 38 03.15	4.1217691
Cadiz.....	337 39 22.36	157 43 02.21	4.3238587

PINKERTON, WASHINGTON COUNTY.

Situated about 4 miles northwest of Marietta and 2 miles south of Churchtown on Pinkerton farm, 600 feet west of Pinkerton residence.

Station mark: A sandstone post 48 by 8 by 8 inches set 48 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 25' 50.23''$. Longitude $81^{\circ} 31' 51.42''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Goff.....	4 55 52.16	184 54 59.34	4.3666186
Seffens.....	17 59 25.94	197 57 54.99	4.0458915
Nolan.....	58 13 59.25	238 07 08.00	4.2613741
Dovenbecker.....	199 23 14.85	19 25 38.76	4.2113735
Laws.....	230 41 51.34	50 51 42.70	4.4572810
Moore.....	264 36 14.56	84 46 38.67	4.3728093
Griffith.....	290 46 50.36	110 57 40.75	4.4191325
Pinnacle.....	321 34 57.99	141 41 14.67	4.3601976

PLEASANT, NOBLE COUNTY.

Situated on a high hill, with a few scattering trees on its summit, in Center Township, about 2 miles southeast of Sarahsville.

Station mark: A stone post 30 by 6 by 6 inches set 30 inches in the ground, in center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 47' 59.84". Longitude 81° 28' 43.92".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Coffee Knob.....	45 51 09.15	225 47 16.75	4.0813436
Gregg.....	156 33 49.09	336 31 55.44	4.0254160
Warehouse.....	197 40 49.35	17 43 25.93	4.2799538
Tucker.....	212 14 38.28	32 16 48.80	3.9579200
Calland.....	267 31 42.37	87 36 24.91	4.0215172
Fulda.....	329 45 16.75	149 46 36.80	3.7718484

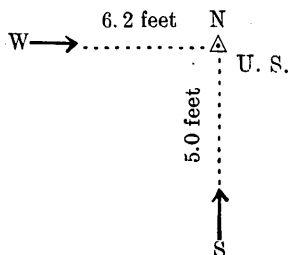
PLEASANT (2), FAIRFIELD COUNTY.

On summit of a bluff, locally called Mount Pleasant, about 300 feet above and 1 mile north of Lancaster, immediately east of fair grounds, on land owned by F. J. Buschemeyer.

Station mark: Center of iron windmill near western end of summit.

Reference mark: A \triangle cut in sandstone ledge, with arrows cut on edge of bluff pointing to station.

Azimuth from \triangle to center of windmill, 148° 23'; distance, 228 feet.



[Latitude 39° 43' 30.56". Longitude 82° 35' 42.36".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Boys' Industrial School chimney.....	16 17 55.39	196 16 42.49	3.9867933
Boys' Industrial School water tower.....			3.9820877
Buck.....	302 38 44.12	122 42 18.23	3.9771162

PORT WASHINGTON, TUSCARAWAS COUNTY.

(Not occupied.)

A lone tree on prominent bald mound about 2 miles south of the village of Port Washington, on east side of river.

Station mark: Center of lone tree.

[Latitude 40° 18' 47.30". Longitude 81° 30' 33.18".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Widder.....	46 27 45	226 23 39	4.09426
Wasen.....	138 16 26	318 12 55	4.06184
Stone Creek.....	154 24 37	334 22 59	3.91720
Gilmore.....	287 11 28	107 14 03	3.77588

PROSPECT HILL, HARRISON COUNTY.

Situated on the summit of a sharp hill about 4 miles northeast of Freeport and just east of the Freeport and Cadiz road. The hill is known locally as Prospect Hill and is the highest point for miles around. Land owned by Robert Moore.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 13' 47.80". Longitude 81° 12' 12.96".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sewellsville.....	4 06 05.81	184 05 36.80	4.1729676
McBride.....	46 06 58.83	226 01 54.41	4.1902726
Tippecanoe.....	123 45 44.31	303 43 25.52	3.7857938
Deersville.....	190 05 23.84	10 06 05.78	3.9417489
Flushing.....	306 47 57.00	126 53 22.00	4.1720159

RUMLEY, HARRISON COUNTY.

(Not occupied.)

Station mark: Spire of Methodist Episcopal Church.

[Latitude 40° 24' 14.72". Longitude 81° 02' 04.54".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Jefferson.....	259 02 14.82	79 05 17.47	3.8303382
Cadiz.....	348 24 50.50	168 26 01.90	4.1130606

SAGO, MUSKINGUM COUNTY.

On a bald hill 4 miles southwest of the village of Sago, on land owned by J. W. Carnes.

Station mark: A limestone post 40 by 7 by 7 inches set 39 inches in the ground, in the center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 00' 42.40". Longitude 81° 46' 55.70".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kennedy.....	207 11 33.69	27 14 31.91	4.1566993
College.....	254 49 29.58	74 54 42.29	4.0771353
Claysville.....	311 50 42.87	131 54 42.28	4.0746717

ST. CLAIRSVILLE COURTHOUSE, BELMONT COUNTY.

(Not occupied.)

Station mark: Center of cupola on courthouse.

[Latitude 40° 04' 50.90". Longitude 80° 54' 04.27".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Mount Pleasant.....	237 58 45.00	58 03 07.29	4.0555471
Sherrard.....	297 53 05.27	118 01 16.04	4.3112543

ST. JOHNS, MONROE COUNTY.

(Not occupied.)

St. John's Church, situated about one-half mile west of village of Miltonburg.
Station mark: Center of church spire.

[Latitude 39° 50' 15.20". Longitude 81° 10' 32.48'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Steele.....	163 40 24.15	343 38 16.46	4.2252598
Newcastle.....	237 40 56.39	57 44 48.27	4.0073924
Wiedman.....			2.9781631

SCHULTZ, HOCKING COUNTY.

A prominent knob 3 miles south of Logan on the estate of Daniel Schultz, in the west half of the northeast quarter of section 26, Falls Township. Summit has apple and peach trees which interfere somewhat with the view. This station was occupied by the United States Coast and Geodetic Survey in 1885.

Station mark: A marble post 30 by 6 by 6 inches set 28 inches in the ground immediately above an earthenware pyramid. Top of post marked

U.	S.
C. &	G. S.

[Latitude 39° 30' 23.76". Longitude 82° 24' 58.05'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Barton.....	42 49 24.02	222 46 20.65	4.0063768
Brown.....	112 02 41.69	291 55 33.81	4.2383235
Boys' Industrial School chimney.....	129 37 29.82	309 29 26.62	4.3707116
Boys' Industrial School watertower.....	129 47 05.22	309 39 00.95	4.3726735
Buck.....	158 57 18.49	338 54 01.46	4.3120770
Cook.....	237 41 36.70	57 44 19.75	3.8596674
Brooks.....	279 00 19.77	99 07 21.22	4.2050498
McDaniel.....	328 03 24.55	148 07 04.09	4.1939372

SEFFENS, WASHINGTON COUNTY.

Situated on the summit of a cleared hill in Dunham Township about 1 mile west of Constitution railroad station. The land is owned by William Seffens.

Station mark: A stone post 30 by 8 by 8 inches set 30 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

Reference mark: The southern one of three trees which occupy the extreme summit of hill; distance from station mark, 3.1 feet; true azimuth from station mark, 46° 22'.

[Latitude 39° 20' 07.43". Longitude 81° 34' 14.77'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Nolan.....	94 31 08.23	274 25 48.26	4.0836942
Pinkerton.....	197 57 54.99	17 59 25.94	4.0458915
Moore.....	244 33 51.52	64 45 45.97	4.4743073
Pinnacle.....	292 39 17.80	112 47 04.89	4.2822967
Goff.....	353 29 10.61	173 29 48.59	4.1032735

SEWELLSVILLE, BELMONT COUNTY.

Situated on the summit of a high, sharp hill in the village of Sewellsville, Kirkwood Township, on land owned by J. R. Shepherd.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 05' 46.19". Longitude 81° 12' 57.88".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Steele.....	5 46 28.38	185 45 53.85	4.1023371
Warehime.....	43 11 35.43	223 05 20.85	4.3052324
McBride.....	112 07 52.73	292 03 17.71	4.0377941
Tippecanoe.....	167 35 37.71	347 33 48.12	4.2714644
Prospect Hill.....	184 05 36.80	4 06 05.81	4.1729676
Deersville.....	186 18 29.97	6 19 40.88	4.3730446
Cadiz.....	219 59 50.71	40 08 03.66	4.4482271

SOUTHLAND, ATHENS COUNTY.

On a flat, cultivated ridge owned by W. A. Wagoner, 2 miles northeast of Broadwell post office, in east-central part of the county, one-fourth mile west of the Washington County line.

Station mark: A sandstone post 44 by 8 by 8 inches, set 40 inches in the ground, just south of fence, about 60 yards east of brick house and on opposite side of road. In center of top of post is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 22' 59.09". Longitude 81° 51' 21.13".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Fulton.....	50 35 57.22	230 29 38.61	4.2678598
White.....	85 47 06.32	265 39 11.18	4.2546960
Nolan.....	289 09 05.68	109 14 36.48	4.1212888
Bond.....	359 06 47.89	179 06 54.47	4.2068403

SPANGLER, FRANKLIN COUNTY.

Seven and one-half miles south of Columbus, on High Street extended. A bare hill, about 80 feet higher than surrounding country, commonly known as Spangler Hill from a former owner, but now owned by Mike Duff. Station is on the ridge about 350 feet east of the road, 80 feet south of fence, 100 feet north of and 6 feet lower than highest point of hill.

Station mark: Iron bench-mark post set 3 feet in ground.

Reference mark: Iron bench-mark post set 2 feet south of fence, 78.6 feet distant; true azimuth 181° 32'.

[Latitude, approximate U. S. standard, 39° 51' 18.36"; astronomic C. & G. S., 39° 51' 17.70". Longitude, approximate U. S. standard, 83° 00' 04.17"; astronomic C. & G. S., 82° 59' 53.50".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
South base.....	122 19 44.05	302 16 28.18	3.9339777
Asylum.....	158 19 50.71	338 17 47.73	4.0907165
Columbus.....	180 49 58.86	0 50 03.50	4.0721158
Baker.....	207 14 48.96	27 16 07.32	3.8021730

STEELE, BELMONT COUNTY.

Situated on a high, cleared hill in Warren Township, about 3 miles west of Barnesville and a few feet east of the Guernsey County line, on land owned by Isaac Steele.

Station mark: A stone post 36 by 6 by 6 inches set 30 inches in the ground and resting on solid rock. In center of top of post is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 58' 57.84". Longitude 81° 13' 51.50'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Calland.....	21 39 25.88	201 35 53.45	4.3293954
Tucker.....	46 59 57.57	226 53 52.54	4.2607725
Warehime.....	80 21 27.72	260 15 48.06	4.1047692
McBride.....	152 07 18.16	332 03 18.01	4.2763262
Sewellsville.....	185 45 53.85	5 46 28.38	4.1023371
Bryan.....	273 33 44.12	93 40 27.39	4.1738583
Beallsville.....	305 01 44.45	125 11 13.00	4.4179181
Newcastle.....	308 41 53.72	128 47 53.71	4.2323159
Wiedman.....	346 36 44.38	166 38 26.80	4.2146469

STONE CREEK, TUSCARAWAS COUNTY.

On a bald mound $1\frac{1}{4}$ miles southeast of the village of Stone Creek, 100 yards east of road.

Station mark: A sandstone post 36 by 6 by 6 inches set 34 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 22' 48.92". Longitude 81° 33' 04.48'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Widder.....	18 43 44.26	198 41 15.69	4.2281117
Wasen.....	105 39 23.20	285 37 30.42	3.6297872
Wainwright.....	244 04 51.38	64 08 46.51	3.9781630
Gilmore.....	314 48 21.35	134 52 35.59	4.1164240
Port Washington.....	334 22 50.00	154 24 37.00	3.9172000
Booth.....	359 22 03.72	179 22 08.98	4.2391088

SUMMERFIELD SCHOOLHOUSE, NOBLE COUNTY.

(Not occupied.)

Station mark: Center of schoolhouse in village of Summerfield.

[Latitude 39° 47' 55.47". Longitude 81° 20' 16.71'']

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Tucker.....	150 49 58.53	330 48 01.02	3.9516327
Calland.....	245 41 23.24	65 42 07.87	3.1498794

TANK, MONROE COUNTY.

On the highest knob 6 miles south of Woodsfield and 5 miles northeast of Graysville. There are two tanks on top of the knob; the one located is the farthest west and is painted white.

Station mark: Center of tank.

[Latitude $39^{\circ} 41' 34.6''$. Longitude $81^{\circ} 06' 43.7''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Glass.....	3 48 12	183 47 44	4.19380
Dillon.....	36 57 28	216 55 14	3.95543
Laws.....	51 27 48	231 21 39	4.24646

TIPPECANOE, HARRISON COUNTY.

Situated on the summit of a high, cleared hill in Washington Township, about 2 miles southeast of the village of Tippecanoe, on land owned by William Welch.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 15' 37.77''$. Longitude $81^{\circ} 15' 47.79''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
McBride.....	23 16 45.07	203 13 59.21	4.1873542
Bowerston.....	204 19 00.04	24 21 54.23	4.1880466
Deersville.....	231 40 46.25	51 43 47.10	3.9252612
Prospect.....	303 43 25.52	123 45 44.31	3.7857938
Sewellsville.....	347 33 48.12	167 35 37.71	4.2714644

TOWNSEND (2), ATHENS COUNTY.

In Athens Township, 3 miles by road south of Athens, on a flat, cultivated ridge owned by Mary Townsend. Station about 50 yards east of a north-south road and 32 feet west of line fence.

Station mark: A limestone post 30 by 6 by 6 inches set 28 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 17' 26.25''$. Longitude $82^{\circ} 05' 41.78''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
McKnight.....	29 45 53.05	209 42 32.43	4.1858081
Zaleski.....	81 38 31.23	261 26 53.85	4.4264864
McDaniel.....	118 57 19.04	298 48 45.11	4.3458525
Nebo.....	182 55 29.61	2 55 47.28	4.1162949
White.....	196 40 59.96	16 42 10.77	3.9691971
Fulton.....	283 25 56.81	103 28 43.53	3.8121631
Greenler.....	359 42 36.35	179 42 39.02	4.3021055

TUCKER, NOBLE COUNTY.

Situated on a partly cleared hill in Seneca Township, about 3 miles northeast of Mount Ephraim post office, on land owned by John Tucker.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 39° 52' 08.72". Longitude 81° 23' 20.21".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Fulda.....	8 19 49.89	188 18 59.48	4.1112795
Pleasant.....	32 16 48.80	212 14 38.28	3.9579200
Gregg.....	102 47 37.40	282 43 32.96	3.9679631
Warehime.....	185 11 04.50	5 11 30.20	4.0219463
Steele.....	226 53 52.54	46 59 57.57	4.2667725
Calland.....	321 58 40.51	142 01 12.68	3.9625705

UHRICHSVILLE, TUSCARAWAS COUNTY.

On a bald hill about 4 miles nearly east from Uhrichsville, 200 feet west of Ridge road, on land owned by Mr. Cox, and 200 yards north of his residence.

Station mark: The lone white-oak signal tree 14 inches in diameter.

Reference mark: A sandstone post 36 by 6 by 6 inches set 30 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio." Distance from tree, 26.6 feet; true azimuth, 56° 10' 30".

[Latitude 40° 22' 20.70". Longitude 81° 17' 00.20".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Gilmore.....	58 18 12.91	238 12 02.93	4.2004975
Wainwright.....	109 32 49.03	289 26 19.17	4.1775531
Baldwin.....	175 40 20.53	355 40 02.51	3.9386187
Bowerton.....	258 40 32.66	78 44 13.95	3.9146861
Tippecanoe.....	352 09 53.49	172 10 40.33	4.0986574

WAGNER, GALLIA COUNTY.

A bald hill in Greenfield Township, 1½ miles northwest of Cadmus post office; one-half mile south of the Gallia-Portsmouth pike, at a point 17 miles west of Gallia, on land owned by Jacob Wagner. A bunch of small locust trees on southwest side of hill interferes with view in that direction; in all other directions an extended view can be had.

Station mark: A sandstone post 30 by 15 by 15 inches set 28 inches in the ground; top dressed 9 by 9 inches, having cemented in its center a bronze triangulation tablet, "Ohio."

[Latitude 38° 47' 24.58". Longitude 82° 28' 21.88".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Davis.....	178 19 50.05	358 19 33.89	4.3278387
Leonard.....	219 25 58.48	39 34 55.56	4.5104457
Graham.....	236 58 47.15	57 07 05.39	4.3584636
Houck.....	314 20 05.14	134 25 23.87	4.2358550
Wray.....	357 15 02.72	177 15 29.58	4.3360952

WAINWRIGHT, TUSCARAWAS COUNTY.

In a field owned by the Wainwright Coal Co., and about $1\frac{1}{2}$ miles west of the mine and post office of same name.

Station mark: A sandstone post 36 by 6 by 6 inches set 34 inches in the ground in the center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 25' 03.52''$. Longitude $81^{\circ} 27' 01.78''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Stone Creek.....	64 08 46.51	244 04 51.38	3.9781630
Wasen.....	76 42 24.37	256 36 36.39	4.1142974
Baldwin.....	254 54 15.71	75 00 27.85	4.1462651
Uhrichsville.....	289 26 19.17	109 32 49.03	4.1775531
Gilmore.....	356 58 08.37	176 58 27.78	4.1267768

WAREHIME, GUERNSEY COUNTY.

Situated on a high, cleared hill in Richland Township, about $2\frac{1}{2}$ miles southeast of Gibson station on land owned by Albert Warehime.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 57' 48.36''$. Longitude $81^{\circ} 22' 40.22''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Tucker.....	5 11 30.20	185 11 04.50	4.0219463
Pleasant.....	17 43 25.93	197 40 49.35	4.2799538
Gregg.....	49 56 24.57	229 51 54.19	4.1165523
McBride.....	191 03 37.47	11 05 17.55	4.2832082
Sewellsville.....	223 05 20.85	43 11 35.43	4.3052324
Steele.....	260 15 48.06	80 21 27.72	4.1047692
Wiedman.....	310 06 46.06	130 14 07.62	4.3304252
Calland.....	345 08 11.50	165 10 18.15	4.2628296

WASEN, TUSCARAWAS COUNTY.

About $2\frac{1}{2}$ miles nearly west from the village of Stone Creek on a high knob in field 400 feet southeast from Mr. Wasen's residence.

Station mark: A sandstone post 36 by 6 by 6 inches set 36 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 23' 26.19''$. Longitude $81^{\circ} 35' 58.61''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Widder.....	4 22 43.79	194 22 07.82	4.2359074
Wainwright.....	256 36 36.39	76 42 24.37	4.1142974
Stone Creek.....	285 37 30.42	105 39 23.20	3.6297872
Port Washington.....	318 12 55.00	138 16 26.00	4.0618400
Booth.....	346 53 04.26	166 55 12.11	4.2784021

WHITE, ATHENS COUNTY.

On a small knob 4 miles northeast of Athens, near the corner of Athens, Canaan, Ames, and Dover townships. The station is in Canaan Township, on land owned by D. C. White, 5.5 feet east of the southeast corner of a private cemetery which occupies the summit of knob.

Station mark: A sandstone post 36 by 14 by 7 inches set 34 inches in the ground. In center of top is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 22' 15.58''$. Longitude $82^{\circ} 03' 50.06''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Townsend (2).....	16 42 10.77	196 40 59.96	3.9691971
McDaniel.....	94 42 43.35	274 32 58.10	4.3453947
Nebo.....	154 06 01.99	334 05 08.78	3.6620298
Southland.....	265 39 11.18	85 47 06.32	4.2546960
Bond.....	303 58 43.68	129 06 44.67	4.3696920
Fulton.....	340 47 47.32	160 49 23.38	4.0432222

WIDDER, COSHOCTON COUNTY.

On land owned by Mr. Charles Widder, $2\frac{1}{2}$ miles nearly south of New Comerstown, 50 feet west of north-south road, $1\frac{1}{2}$ miles west of Baptist Church, and 600 feet southwest of White schoolhouse.

Station mark: A sandstone post 36 by 6 by 6 inches set 36 inches in the ground, in center of top of which is countersunk and cemented a bronze triangulation tablet, "Ohio."

[Latitude $40^{\circ} 14' 09.67''$. Longitude $81^{\circ} 36' 54.11''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kennedy.....	32 21 19.42	212 17 49.89	4.1574000
Wason.....	184 22 07.82	4 22 43.79	4.2359074
Stone Creek.....	198 41 15.69	18 43 44.26	4.2281117
Port Washington.....	226 23 39.00	46 27 45.00	4.0942600
Gilmore.....	245 08 36.06	65 15 18.37	4.2095562
Booth.....	283 15 05.76	103 17 39.33	3.7615799
Midway.....	337 39 01.10	157 42 44.98	4.3353514

WIEDMAN, MONROE COUNTY.

Situated on a cleared hill in Malaga Township, about 1.5 miles northwest of village of Miltonsburg, on land owned by Mr. Wiedman.

Station mark: A stone post 40 by 6 by 6 inches set 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude $39^{\circ} 50' 20.74''$. Longitude $81^{\circ} 11' 11.82''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Calland.....	71 34 31.64	251 29 17.30	4.0901708
Tucker.....	100 57 09.79	280 49 22.91	4.2463136
Warehime.....	130 14 07.62	310 06 46.06	4.3304252
Steele.....	166 38 26.80	346 36 44.38	4.2146469
Newcastle.....	241 04 21.24	61 08 38.37	4.0370559
Bealsville.....	267 02 01.79	87 09 57.20	4.2471021

WINTERSVILLE, JEFFERSON COUNTY.

Situated 2 miles northwest of the village of Wintersville, on a cone-shaped hill, on land owned by Mr. Mayo. The Wintersville-New Richmond pike passes over east side of hill.

Station mark: A cut marble post 40 by 6 by 6 inches sunk 36 inches in the ground, in the center of top of which is cemented a bronze triangulation tablet, "Ohio."

[Latitude 40° 24' 05.70". Longitude 80° 43' 53.11".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Hopedale.....	53 36 19.99	233 31 31.07	4.1166735
Jefferson.....	94 42 21.10	274 33 35.99	4.2824762
Elder.....	156 33 37.87	336 29 21.35	4.3682786
Hammond.....	189 27 36.41	9 29 54.97	4.4836287
New Alexandria.....	344 06 30.92	164 08 12.73	4.1325490

WRAY, LAWRENCE COUNTY.

A station in the transcontinental belt of the United States Coast and Geodetic Survey on Johnson Ridge, 2½ miles east of Marion (Aid post office). Summit nearly cleared, giving a good view in all directions.

Station mark: A pottery pyramid buried 3 feet underground (no surface mark 1902).

Reference marks: Drain tile pipes 4 inches in diameter, 2 feet long, filled with concrete and buried 22 inches in ground—one north 5.93 feet distant; one south 5.99 feet; one east 5.98 feet; one west 5.92 feet.

[Latitude 38° 35' 42.24". Longitude 82° 27' 38.91".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Wagner.....	177 15 29.58	357 15 02.72	4.3360952
Hobek.....	229 30 22.22	49 35 13.43	4.1709604
Gebhardt.....	291 52 47.45	112 00 33.64	4.2904979

ZALESKI, VINTON COUNTY.

A knob locally well known as the Pinnacle, 1½ miles south of Zaleski railroad station. Nearly all timber was cut down and one chestnut tree left for signal. An extended view can be had in all directions, except north 30° east to north 55° east, which is limited by a flat, timbered ridge 2 miles distant.

Station mark: A marble post 30 by 6 by 6 inches set 20 inches in the ground, top marked

$$\begin{array}{c} \text{U} \\ \text{C} \text{ \& G } \text{ \& S} \\ \text{S} \end{array}$$

Reference mark: The chestnut signal tree; azimuth from station mark, 237° 08'; distance, 32.8 feet.

[Latitude 39° 15' 18.96". Longitude 82° 24' 03.47".]

To station—	Azimuth.	Back azimuth.	Log. distance..
	° ' "	° ' "	<i>Meters.</i>
Barton.....	158 09 14.12	338 05 36.66	4.3433070
McDaniel.....	205 26 11.15	25 29 15.51	4.2098137
Townsend (2).....	261 28 53.85	81 38 31.23	4.4264864
McKnight.....	296 27 23.36	116 35 39.29	4.3229316
Leonard.....	331 39 56.21	151 46 12.85	4.4807510

APPENDIX A.

PRIMARY TRIANGULATION BY THE UNITED STATES LAKE SURVEY.

Andover, Ashtabula, Bellevue, Berea, Bristolville, Chardon, Cleveland, Conneaut, Euclid, Maumee Bay, Mentor, Oak Harbor, Oberlin, Put-in-Bay, Sandusky, and Vermilion quadrangles.

ASHTABULA, CUYAHOGA, ERIE, GEAUGA, HURON, LAKE, LORAIN, LUCAS, OTTAWA, AND TRUMBULL COUNTIES.

The stations in the following list were established by the United States Lake Survey in 1876 to 1879, inclusive, and furnish partial control for the quadrangles named above:

ANDOVER, ASHTABULA COUNTY.

A station of the United States Lake Survey on the highest point of Owens Mound, in Andover township, 1 mile north of village of West Andover and $2\frac{1}{2}$ miles west of Andover railroad station. Height of station used was 113 feet.

Station mark: A stone post of usual form, $2\frac{1}{2}$ feet below surface, with a stone post set directly over it as a surface mark.

Reference marks: Three stone posts, one S. $73^{\circ} 59'$ E., distant 32.38 meters; one S. $4^{\circ} 04'$ E., distant 10.56 meters; one S. $75^{\circ} 07'$ W., distant 39 meters from geodetic station. Height of ground at station above mean level of Lake Erie is 308.9 feet.

[Latitude $41^{\circ} 37' 05.496''$. Longitude $80^{\circ} 36' 29.655''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Conneaut.....	179 06 33.44	359 06 19.49	4.4923125•
Edinboro.....	231 15 53.81	51 33 01.70	4.6593138

ASHTABULA BAPTIST CHURCH, ASHTABULA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 52' 02.45''$. Longitude $80^{\circ} 47' 00.61''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Conneaut.....	256 23 10.7	76 29 57.9	4.160407
Thompson.....	47 18 21.7	227 07 58.1	4.469080

BEREA METHODIST EPISCOPAL CHURCH, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 21' 46.50''$. Longitude $81^{\circ} 51' 11.57''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Royalton.....	293 15 04.0	113 19 42.6	4.028457
Olmsted.....	103 13 56.1	283 09 51.2	3.946640

BEREA CHAPEL SPIRE, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of chapel spire.

[Latitude $41^{\circ} 22' 05.83''$. Longitude $81^{\circ} 51' 05.37''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Olmsted.....	99 16 00.2	279 11' 51.2	3.947866
Royalton.....	296 27 48.1	116 32 22.6	4.033311

BLACK RIVER LIGHTHOUSE, LORAIN COUNTY.

A station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 28' 23.67''$. Longitude $82^{\circ} 11' 07.39''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Elyria.....	332 29 22.5	152 30 58.0	3.860407
Brownhelm.....	47 23 11.8	227 18 20.3	4.143220

BROWNHelm, LORAIN COUNTY.

A station of the United States Lake Survey, situated near the center of Brownhelm township, about $1\frac{1}{2}$ miles southerly from the railway depot and one-half mile from corner of lots 44, 45, 52, and 53. Height of station was 124 feet.

Station mark: A stone post underground.

Reference marks: Three stone posts, one S. $87^{\circ} 31'$ E., distant 57.5 meters; one S. $10^{\circ} 06'$ W., distant 14.65 meters; and one S. $53^{\circ} 41'$ W., distant 42.35 meters. Height of ground at station above mean level of Lake Erie is 180.8 feet.

[Latitude $41^{\circ} 23' 18.241''$. Longitude $82^{\circ} 18' 27.890''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Elyria.....	257 31 43.28	77 38 09.97	4.1432552
Camden.....	355 36 14.11	175 36 41.86	4.1058799

CAMDEN, LORAIN COUNTY.

A station of the United States Lake Survey, situated near the north side of Camden township, one-half mile northeast of village of Kipton and one-third mile south of corner of lots 5 and 6 in Camden Township and 15 and 16 in Henrietta Township. Height of station was 106 feet.

Station mark: A brass wire leaded into the solid rock between the letters "U. S." cut therein, 2½ feet below surface. A stone post is directly over this as a surface mark.

Reference marks: Three stone posts, one N. 83° 18' E., distant 76.8 meters; one S. 8° 19' W., distant 99.8 meters; and one 37° 35' W., distant 44.4 meters. Height of ground at station above mean level of Lake Erie is 318.5 feet.

[Latitude 41° 16' 25.809". Longitude 82° 17' 45.864".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Elyria.....	218 42 43.52	38 48 42.01	4.3043293
Olmsted.....	247 10 30.62	67 23 58.57	4.4892901
Royalton.....	262 55 14.82	83 17 25.31	4.6743784
Grafton.....	285 00 17.09	105 12 14.95	4.4193410

CEDAR POINT, LUCAS COUNTY.

A station of the United States Lake Survey, near the end of Cedar Point, on the east side of Maumee Bay. Height of station used was 70 feet.

Station mark: A stone post projecting about 6 inches above the surface is set directly over the point as a surface mark.

Reference marks: Three stone posts, one S. 61° 05' E., distant 28.8' meters; one N. 61° E., distant 32 meters; and one N. 13° 28' E., distant 35.5 meters. Height of ground at station above mean level of Lake Erie is 4.5 feet.

[Latitude 41° 42' 37.595". Longitude 83° 20' 05.854".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Middle Sister.....	240 59 46.89	61 13 05.66	4.5000099
Locust Point.....	298 54 58.72	119 04 07.32	4.3390423

CEDAR POINT LIGHTHOUSE, ERIE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude 41° 29' 17.18". Longitude 82° 41' 36.54".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sandusky.....	28 39 29.2	208 37 13.2	3.997656
Kelleys.....	179 11 32.7	359 11 27.5	4.112967

CHESTER, GEAUGA COUNTY.

A station of the United States Lake Survey, in Chester Township, about three-fourths mile west of Chester crossroads and about 9 meters north of the east-west road from that place. The height of station used was 89 feet.

Station mark: A stone post below surface of ground.

Reference marks: Three stone posts, one S. $63^{\circ} 03'$ W., distant 19.25 meters; one S. $6^{\circ} 23'$ W., distant 9 meters; and one S. $59^{\circ} 30'$ E., distant 17.75 meters, from geodetic point. The height of ground at station above mean level of Lake Erie is 719.2 feet.

NOTE.—No station or reference marks could be found by the Geological Survey party in 1904.

[Latitude $41^{\circ} 32' 02.655''$. Longitude $81^{\circ} 21' 16.281''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Little Mountain.....	209 26 34.59	29 29 46.15	4.1331641
Claridon.....	277 20 25.67	97 29 49.77	4.2987786

CLARIDON, GEAUGA COUNTY.

A station of the United States Lake Survey, in lot 1, section 14, Claridon Township, $1\frac{1}{2}$ miles southerly from village of East Claridon, and 2 miles from railroad station. Height of station used was 100 feet.

Station mark: A stone post underground with a stone post directly over it as a surface mark.

Reference marks: Three stone posts, one S. $83^{\circ} 38'$ E., distant 87.8 meters; one S. $23^{\circ} 11'$ E., distant 65.5 meters; and one S. $3^{\circ} 41'$ W., distant 61.2 meters, from geodetic point. Height of ground at station above mean level of Lake Erie is 793 feet.

[Latitude $41^{\circ} 30' 39.379''$. Longitude $81^{\circ} 07' 05.334''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	197 36 36.74	17 39 35.20	4.3127774
Andover.....	254 11 08.39	74 31 26.31	4.6451302
Mesopotamia.....	304 00 32.45	124 05 18.71	4.0828488

CLEVELAND, POLISH CATHOLIC CHURCH, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station marks: East spire of Polish Catholic Church, Foreman and Tod streets; west spire of Polish Catholic Church, Foreman and Tod streets.

[Latitude, east spire $41^{\circ} 27' 31.45''$, west spire $41^{\circ} 27' 31.46''$. Longitude, east spire $81^{\circ} 38' 40.08''$, west spire $81^{\circ} 38' 40.78''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
New England Building.....	East 141 17 44.2	spire. 321 15 59.0	3.7703566
Warrensville.....	259 55 47.9	80 01 24.4	4.0782298
New England Building.....	West 141 25 07.4	spire. 321 23 22.6	3.7695984
Warrensville.....	259 56 38.5	80 02 15.5	4.0788111

CLEVELAND, BOHEMIAN CATHOLIC CHURCH, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Bohemian Catholic Church, Broadway and Forrest streets.

[Latitude $41^{\circ} 28' 44.26''$. Longitude $81^{\circ} 39' 49.48''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
New England Building.....	138 34 47.0	318 33 47.7	3.4964857
Warrensville.....	270 38 24.6	90 44 47.1	4.1271217

CLEVELAND, ST. PETERS CATHOLIC CHURCH, CUYAHOGA COUNTY.

A station of the United Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 30' 20.15''$. Longitude $81^{\circ} 40' 52.99''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
New England Building.....	44 49 25.7	224 49 08.5	2.93189
Marine Hospital (2).....	97 03 32.5	277 03 10.3	2.89406

CLEVELAND, CHURCH AT SUPERIOR AND ERIE STREETS, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of spire.

[Latitude $41^{\circ} 30' 22.51''$. Longitude $81^{\circ} 41' 19.89''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
New England Building.....	358 10 35.2	178 10 35.8	2.83207
Marine Hospital (2).....	98 45 06.0	278 45 01.6	2.19105

CLEVELAND LIGHTHOUSE, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of lighthouse on hill in city.

[Latitude $41^{\circ} 30' 01.40''$. Longitude $81^{\circ} 42' 08.68''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Rockport.....	60 49 05.5	240 45 31.7	3.933383
Willoughby.....	228 24 22.2	48 34 48.7	4.465275

CLEVELAND, ALMUCANTAR CASE SCHOOL OBSERVATORY, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of observatory.

[Latitude $41^{\circ} 30' 10.36''$. Longitude $81^{\circ} 36' 27.60''$.]

CONNEAUT, ASHTABULA COUNTY.

A station of the United States Lake Survey, situated on South Ridge, in southwest corner of Conneaut Township, about 5 miles southwest of village of Conneaut, 2 miles west of the village of South Ridge, and 3 miles east of the village of Kingsville, on north side of Ridge Road. Height of station used was 115 feet.

Station mark: A stone post of usual form, 2.6 feet below surface.

Reference marks: Three stone posts, one S. 75° 04' W., distant 29.56 meters; one S. 14° 05' E., distant 8.1 meters; and one S. 75° 43' E., distant 33.88 meters, from the geodetic point. Height of ground at station above mean level of Lake Erie is 308.9 feet.

[Latitude 41° 53' 52.375". Longitude 80° 36' 50.605".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Houghton.....	178 11 18.39	358 10 06.94	4.8845975
Erie.....	242 43 22.45	63 00 32.46	4.6002852
Edinboro.....	273 58 20.84	94 15 45.52	4.5583326

DANBURY, OTTAWA COUNTY.

A station of the United States Lake Survey, situated in Danbury Township, about 2 miles northeast of Danbury railroad station, on the Lake Shore & Michigan Southern Ry. and two-thirds of a mile southwest of corner of lots 3, 4, 9, and 10. Height of station used was 116 feet.

Station mark: A stone of usual form set so that its top is 3 feet below surface. Another stone is set directly over it as a surface mark.

Reference marks: Three stone posts, one S. 82° 20' E., distant 61.57 meters; one N. 57° 24' E., distant 67.57 meters; and one S. 3° 36' W., distant 9.84 meters from the geodetic point. Height of ground at station above mean level of Lake Erie is 21.4 feet.

[Latitude 41° 31' 11.744". Longitude 82° 50' 19.452".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kelleys Island.....	231 37 21.09	51 43 02.78	4.1822183
West Base.....	287 00 31.32	107 06 43.65	4.1345506
East Base.....	297 03 16.31	117 11 23.59	4.2827682
Sandusky.....	328 58 10.76	149 01 41.03	4.1555642

ELYRIA, LORAIN COUNTY.

A station of the United States Lake Survey, situated in the northwest corner of Elyria Township, about 4½ miles west of north of the village of Elyria and 1 mile west of the Baltimore & Ohio R. R. and within the fork of two public roads leading to Charleston and North Amherst. Height of station used was 116 feet.

Station mark: A hole drilled in top of a stone post underground, with a stone post directly over it as a surface mark.

Reference marks: Three stone posts, one N. 19° 44' E., distant 27.1 meters; one N. 86° 16' E., distant 9.1 meters; and one S. 12° 35' E., distant 32.3 meters from the geodetic point. Height of ground at station above mean level of Lake Erie is 182.4 feet.

[Latitude 41° 24' 55.183". Longitude 82° 08' 43.174".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Olmsted.....	283 26 51.06	103 34 21.47	4.2114579
Grafton.....	330 33 38.13	150 39 38.73	4.4131222

EUCLID, CUYAHOGA COUNTY.

A station of the United States Lake Survey, situated 2 miles northwest of the village of Euclid, about 350 meters back from Lake Erie shore and 100 meters west of a north-south road leading to the lake.

Station mark: A single stone post.

Reference marks: Two stone posts, one N. $64^{\circ} 55'$ E., distant 318 feet, and one S. $89^{\circ} 55'$ E., distant 293 feet.

[Latitude $41^{\circ} 35' 37.09''$. Longitude $81^{\circ} 33' 04.27''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Rockport.....	54 11 53.8	234 02 18.9	4.394662
Willoughby.....	225 45 49.6	45 50 15.0	4.110432

FAIRPORT LIGHTHOUSE (ON BANK), LAKE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 45' 24.57''$. Longitude $81^{\circ} 16' 38.79''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	291 34 06.9	111 43 27.4	4.321094
Little Mountain.....	358 51 31.5	178 51 38.9	4.111008

FAIRPORT LIGHTHOUSE (ON PIER), LAKE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 45' 41.36''$. Longitude $81^{\circ} 16' 47.86''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	292 39 14.8	112 48 41.4	4.329090
Little Mountain.....	358 00 27.2	178 00 40.9	4.128274

GENEVA, ASHTABULA COUNTY.

A station of the United States Lake Survey, on the shore of Lake Erie, $4\frac{1}{2}$ miles northwesterly from village of Geneva, $10\frac{3}{4}$ miles from Ashtabula Harbor, and 16 miles from Fairport, on the farm of Jeremiah Seamens. Observations were made from a wooden post about 5 feet high.

Station mark: A hole drilled in top of a stone post set 3 feet below surface. A stone post is directly over it as a surface reference mark.

Reference marks: Three stone posts, one S. $46^{\circ} 30'$ E., distant 137 meters; one S. $1^{\circ} 31'$ W., distant 96.4 meters; and one S. $48^{\circ} 15'$ W., distant 136 meters, from the geodetic point. The station was 32 meters from the lake and 12 feet above it

[Latitude $41^{\circ} 51' 13.90''$. Longitude $80^{\circ} 59' 46.10''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Saybrook.....	252 38 01.6	72 44 36.8	4.155366
Thompson.....	12 01 31.3	191 59 37.7	4.276877

GRAFTON, LORAIN COUNTY.

A station of the United States Lake Survey, in northwest part of section 89, in southeast part of Grafton Township, 1 mile northwest of the village of Erhart, and 184.5 meters southwest of the track of the Baltimore & Ohio R. R. Height of station used was 110 feet.

Station mark: A hole drilled in the top of a stone post 27 inches below surface, with a stone post directly over it as a surface mark.

Reference marks: Three stone posts, one N. $46^{\circ} 18' W.$, distant 52 meters; one N. $9^{\circ} 04' E.$, distant 71.8 meters; and one S. $72^{\circ} 03' E.$, distant 43.6 meters, from geodetic point. The height of ground above mean level of Lake Erie is 380.7 feet.

[Latitude $41^{\circ} 12' 43.969''$. Longitude $81^{\circ} 59' 36.965''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Olmsted.....	189 29 14.97	9 30 44.00	4.2791382
Royalton.....	239 48 22.85	59 58 34.43	4.3970440

GREEN ISLAND LIGHTHOUSE, OTTAWA COUNTY.

A station of the United State Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 38' 43.75''$. Longitude $82^{\circ} 52' 03.22''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Locust Point.....	80 27 06.4	260 17 36.9	4.303806
Middle Sister.....	153 37 22.3	333 32 00.2	4.399982

HURON PRESBYTERIAN CHURCH SPIRE, ERIE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of spire.

[Latitude $41^{\circ} 23' 42.33''$. Longitude $82^{\circ} 33' 20.15''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Brownhelm.....	271 58 16.5	92 08 06.5	4.316866
Townsend.....	337 41 41.3	157 44 43.2	4.203348

HURON LIGHTHOUSE, ERIE COUNTY.

Station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 24' 02.85''$. Longitude $82^{\circ} 32' 50.24''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kelleys.....	151 23 18.6	331 17 24.6	4.412152
Brownhelm.....	273 51 00.7	94 00 30.9	4.302786

KELLEYS ISLAND, ERIE COUNTY.

A station of the United States Lake Survey, somewhat north and east of Kelleys Island, in an open piece of woods, about 670 meters south of bay, 243 meters south of east-west road, 1,080 meters east of road north from landing on south side of island. Height of station used was 76 feet.

Station mark: A brass wire leaded into the solid rock between the letters "U. S." cut into the rock, 16½ inches below surface. A stone post is set for a surface reference mark directly over it.

Reference marks: Three stone posts, one N. 20° 07' E., distant 32.7 meters; one S. 31° 32' E., distant 30.3 meters; and one N. 87° 11' W., distant 45.9 meters. Height of ground at station above mean level of Lake Erie is 41.1 feet.

[Latitude 41° 36' 17.571". Longitude 82° 41' 44.430".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Brownhelm.....	306 27 17.62	126 42 42.94	4.6057407
Townsend.....	334 55 59.60	155 04 25.61	4.6233951
East Base.....	344 15 44.26	164 18 10.52	4.2760813
West Base.....	355 22 25.44	175 22 56.51	4.1296298
Sandusky.....	328 58 10.76	149 01 41.03	4.1555642

LITTLE MOUNTAIN, LAKE COUNTY.

A station of the United States Lake Survey, situated on Little Mountain, in Mentor Township, 4 miles south of Mentor railway station. Height of station used was 104 feet.

Station mark: An iron bolt leaded into the solid rock.

Reference marks: Three stone posts, one N. 28° 11' E., distant 95 meters; one S. 81° 41' E., distant 97.3 meters; and one S. 5° 53' E., distant 124.2 meters, from the geodetic point. The height of ground at station above mean level of Lake Erie is 674.7 feet.

[Latitude 41° 38' 26.116". Longitude 81° 16' 27.676".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	254 50 12.90	74 59 25.41	4.2991879
Clardon.....	317 48 39.07	137 54 52.25	4.2882057

LOCUST POINT, OTTAWA COUNTY.

A station of the United States Lake Survey, on the south shore of Lake Erie, on Locust Point, about 10 meters back from the lake. Height of station used was 41 feet.

Station mark: A stone post of the usual form, 3 feet below the surface of the ground.

Reference marks: Three stone posts, one S. 64° 41' E., distant 45. meters; one S. 18° 26' W., distant 24.3 meters; and one N. 86° 30' W., distant 24.3 meters. The height of ground at station above Lake Erie is about 2 feet.

[Latitude 41° 36' 54.640". Longitude 83° 06' 20.540".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Middle Bass Island.....	251 04 19.37	71 17 01.25	4.4474880
Danbury.....	295 19 17.71	115 29 55.39	4.3918742

MARBLEHEAD LIGHTHOUSE, ERIE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 32' 10.75''$. Longitude $82^{\circ} 42' 42.56''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sandusky East Base.....	328 29 57.5	148 33 01.3	4.092897
Sandusky.....	12 56 32.4	192 55 00.1	4.159885

MESOPOTAMIA, TRUMBULL COUNTY.

A station of the United States Lake Survey in section 57, Mesopotamia Township, one-third mile east of the west line and one-half mile south of the center line of township, and 4 miles east of village of Middlefield. Height of station used was 70 feet.

Station mark: Marked in usual manner (a stone post underground, with a stone post over it as a surface mark (?)).

Reference marks: Three stone posts, one N. $23^{\circ} 23'$ W., distant 102.6 meters; one N. $9^{\circ} 51'$ E., distant 96 meters; and one S. $20^{\circ} 40'$ E., distant 129.4 meters, from the geodetic point. Height of ground at station above mean level of Lake Erie is 599.2 feet.

[Latitude $41^{\circ} 26' 59.746''$. Longitude $80^{\circ} 59' 53.152''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	171 50 33.52	351 48 45.12	4.4253533
Andover.....	239 59 55.10	60 15 25.71	4.5742703

MIDDLE ISLAND LIGHTHOUSE.

A station of the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 41' 00.02''$. Longitude $82^{\circ} 40' 47.15''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kelleys.....	8 39 18.7	188 38 40.6	3.945182
Middle Base.....	99 21 41.7	279 17 24.2	3.957722

MIDDLE BASS ISLAND, OTTAWA COUNTY.

A station of the United States Lake Survey situated on Middle Bass Island in western end of Lake Erie, on north side of island, 650 meters from eastern end. The height of station used was 75 feet.

Station mark: A nail leaded into the solid rock $2\frac{1}{2}$ feet below surface.

Reference marks: Two stone posts, one N. $79^{\circ} 26'$ E., distant 17.5 meters; and one S. $81^{\circ} 06'$ W., distant 23.05 meters, from the geodetic point. The height of ground at station above the mean level of Lake Erie is 7.8 feet.

[Latitude $41^{\circ} 41' 47.675''$. Longitude $82^{\circ} 47' 14.266''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Kelleys Island.....	323 07 12.41	143 10 51.61	4.1047186
West Base.....	339 41 25.96	159 45 36.01	4.4010292
Danbury.....	12 20 45.84	192 18 42.87	4.3028141

MIDDLE SISTER.

A station of the United States Lake Survey on west side of Middle Sister Island near western end of Lake Erie, 150 meters north of shore end of the island and 15 meters from the lake shore. Height of station used was 55 feet.

Station mark: A nail leaded into the solid rock, 1 or 2 feet below surface.

Reference marks: Two stone posts, one S. $39^{\circ} 57' W.$, distant 21.9 meters; one N. $33^{\circ} 49' E.$, distant 32.8 meters; and one S. $43^{\circ} 23' E.$, distant 21.9 meters. Height of ground at station above Lake Erie is about 10 feet.

[Latitude $41^{\circ} 50' 52.848''$. Longitude $83^{\circ} 00' 06.948''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Middle Bass Island.....	313 13 55.72	133 22 30.46	4.3895784
Locust Point.....	18 29 51.45	198 25 42.77	4.4355823

NORTH ROYALTON METHODIST EPISCOPAL CHURCH, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of spire.

[Latitude $41^{\circ} 19' 28.95''$. Longitude $81^{\circ} 44' 09.55''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Olmsted.....	108 50 50.08	288 42 07.2	4.289109
Royalton.....	168 14 04.8	348 14 04.6	1.349

NORTH ROYALTON BAPTIST CHURCH, CUYAHOGA COUNTY.

A station of the United States Lake Survey.

Station mark: Center of spire.

[Latitude $41^{\circ} 18' 53.33''$. Longitude $81^{\circ} 44' 09.83''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Olmsted.....	111 51 32.6	291 42 49.2	4.297426
Royalton.....	180 06 03.6	00 06 03.6	3.049525

OBERLIN CONGREGATIONAL CHURCH, LORAIN COUNTY.

A station of the United States Lake Survey.

Station mark: Center of spire.

[Latitude $41^{\circ} 17' 28.66''$. Longitude $82^{\circ} 13' 09.63''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Grafton.....	294 49 29.1	114 58 25.0	4.319307
Camden.....	73 14 29.3	253 11 27.1	3.827004

OLMSTED, CUYAHOGA COUNTY.

A station of the United States Lake Survey, in section 13, Olmsted Township, about 2 miles west of the village of Olmsted Falls, and one-third mile south of the corner of sections 8, 14, and 13. Height of station used was 119 feet.

Station mark: A stone post of usual form 2.3 feet below surface, with a stone post directly over it as a surface mark.

Reference marks: Three stone posts, one N. $8^{\circ} 10'$ W., distant 90.9 meters; one S. $80^{\circ} 26'$ E., distant 67.7 meters; and one S. $13^{\circ} 07'$ W., distant 71.7 meters, from geodetic point. The height of ground at station above mean level of Lake Erie is 221.5 feet.

[Latitude $41^{\circ} 22' 51.955''$. Longitude $81^{\circ} 57' 22.065''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Rockport.....	236 29 37.43	56 36 08.22	4. 2158948
Warrensville.....	254 03 20.27	74 21 18.60	4. 5947770
Royalton.....	288 38 43.19	108 47 26.67	4. 2888551

PAINESVILLE CONGREGATIONAL CHURCH, LAKE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 43' 25.76''$. Longitude $81^{\circ} 14' 43.37''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	283 33 05.8	103 39 09.4	4. 237763
Little Mountain.....	14 38 07.3	194 36 57.9	3. 980190

PAINESVILLE EPISCOPAL CHURCH, LAKE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 43' 40.98''$. Longitude $81^{\circ} 14' 35.16''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	285 11 11.4	105 19 09.4	4. 236066
Little Mountain.....	15 00 24.7	194 59 09.9	4. 002450

PERRY, LAKE COUNTY.

A station of the United States Lake Survey in a piece of woods near shore of Lake Erie, $2\frac{1}{2}$ miles nearly due north of Perry railroad station, and $7\frac{1}{2}$ miles east of Fairport. No station erected.

Station mark: A hole drilled in top of a stone post 27 inches below surface. Another post stands over it as a surface mark.

Reference marks: Three stone posts, one N. 78° E., distant 52 meters; one S. 42° E., distant 37.1 meters; and one S. 76° W., distant 17.6 meters from geodetic point. A rail fence running north and south is 123.5 meters distant east of station.

[Latitude 41° 48' 04.50". Longitude 81° 08' 54.65".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Thompson.....	325 21 19.7	145 25 31.4	4.187031
Little Mountain.....	30 26 54.4	210 21 52.9	4.315756

ROCKPORT, CUYAHOGA COUNTY.

A station of the United States Lake Survey in section 19, Rockport Township, 6 miles nearly west from Cleveland, one-half mile northwest of the village of Rockport, one-fourth mile northwest of the Lake Shore & Michigan Southern Ry. Intersection of Lake Shore & Michigan Southern and Rocky River railroads is 2,004.11 meters north and 3,124.98 meters east from station. Height of station used was 95 feet.

Station mark: A stone post of usual form, 27 inches below surface.

Reference marks: Three stone posts, one S. 52° 32' W., distant 364.1 meters; one N. 19° 19' W., distant 22.7 meters; and one N. 59° 47' E., distant 194.3 meters, from the geodetic point. Height of ground at station above mean level of Lake Erie is 208.5 feet.

[Latitude 41° 27' 45.704". Longitude 81° 47' 31.393".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Willoughby.....	231 09 22.61	51 23 22.98	4.5753660
Warrensville.....	266 00 15.29	86 11 43.63	4.3833783

ROYALTON, CUYAHOGA COUNTY.

A station of the United States Lake Survey in section 12, Royalton Township, one-half mile north of the village of Royalton on the east side of a north-south highway. Height of station used was 35 feet.

Station mark: A hole drilled in the top of a stone post 28 inches underground, a stone post being placed directly over it as a surface mark. Height of ground above Lake Erie is 699.1 feet.

Reference marks: Three stone posts, one N. 4° 14' W., distant 50.6 meters; one N. 80° 57' E., distant 73.2 meters; one S. 35° 28' W., distant 41.4 meters, from the geodetic point. The northwest corner of a church with a stone foundation is S. 11° 57' E., distant 17.7 meters.

[Latitude 41° 19' 29.658". Longitude 81° 44' 09.746".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Rockport.....	162 59 51.87	342 57 38.53	4.2042280
Warrensville.....	228 52 21.20	49 01 35.25	4.4117195

SANDUSKY, ERIE COUNTY.

A station of the United States Lake Survey about $3\frac{1}{2}$ miles southwest of Sandusky, near eastern border of Margaretta Township, $1\frac{1}{2}$ miles south of corner of Perkins and Portland townships. Height of station was 115 feet.

Station mark: A brass wire leaded into the solid rock, between the letters "U. S." cut in the rock, about 3 feet below surface. A stone post is set directly over this as a surface mark.

Reference marks: Three stone posts, one N. $3^{\circ} 34'$ W., distant 69 meters; one S. $69^{\circ} 12'$ E., distant 50.4 meters; and one S. $71^{\circ} 40'$ W., distant 43.3 meters. Sandusky courthouse is N. $33^{\circ} 37'$ E., distant 5,907 meters. Height of ground at station above mean level of Lake Erie is 59.3 feet.

[Latitude $41^{\circ} 24' 34.219''$. Longitude $82^{\circ} 45' 01.905''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
East base.....	250 01 30.77	70 06 07.41	4.0139954
Brownhelm.....	273 28 31.78	93 46 05.90	4.5694097
Townsend.....	306 07 18.33	126 17 54.79	4.4429095

SANDUSKY, COURTHOUSE, ERIE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of cupola.

[Latitude $41^{\circ} 27' 13.64''$. Longitude $82^{\circ} 42' 41.05''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sandusky east base.....	282 13 08.7	102 16 12.2	3.818583
Sandusky.....	33 38 11.2	213 36 38.0	3.771312

SANDUSKY EAST BASE, ERIE COUNTY.

A station of the United States Lake Survey. This station, marking the southeast end of the Sandusky base line, is situated on the northeast side of Cedar Point, northeasterly from Sandusky, $4\frac{1}{2}$ miles from the Cedar Point light, and 32 meters back from the lake shore. Height of station used was 65 feet.

Station mark: A stone post of the usual form set in a bed of brickwork 3 feet square and about 3 feet deep.

Reference marks: Three stone posts, one bearing S. $13^{\circ} 52'$ E., distant 29.87 meters; one S. $69^{\circ} 36'$ W., distant 24.78 meters; and one N. $50^{\circ} 57'$ W., distant 47.7 meters, from geodetic point. Height of ground at station above mean level of Lake Erie is 5.8 feet.

[Latitude $41^{\circ} 26' 28.366''$. Longitude $82^{\circ} 38' 03.803''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Elyria.....	273 51 37.75	94 11 02.70	4.6125925
Brownhelm.....	282 00 47.53	102 13 45.39	4.4461107
Townsend.....	327 30 53.62	147 36 53.04	4.3725430
East angle.....	137 23 44.40	317 23 01.91	3.3347585

SANDUSKY WEST BASE, ERIE COUNTY.

A station of the United States Lake Survey. This station, marking the northwest end of the Sandusky base line, is situated on the northeast side of Cedar Point, about 40 meters from the lake shore and 1,016 meters from the lighthouse at the end of Cedar Point. Height of station used was 70 feet.

Station mark: A stone post of usual form, set in a bed of brickwork 3 feet square and 4 feet deep.

Reference marks: Three stone posts, one S. $8^{\circ} 02' E.$, distant 26.3 meters; one S. $55^{\circ} 11' W.$, distant 19.5 meters; and one N. $64^{\circ} 21' W.$, distant 38.8 meters. An azimuth post line to East Base is S. $40^{\circ} 23' E.$, distant 46.91 meters, from geodetic point. Height of ground at station above mean level of Lake Erie is 6.6 feet.

[Latitude $41^{\circ} 29' 02.111''$. Longitude $82^{\circ} 40' 57.571''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sandusky.....	34 28 59.88	214 26 18.15	4.0010200
Elyria.....	279 27 03.54	99 48 24.02	4.6584185
Brownhelm.....	288 34 45.11	108 49 38.30	4.5195943
East base.....	319 36 42.87	139 38 37.93	3.7941893
Townsend.....	325 50 28.53	145 58 22.96	4.4736216

SAYBROOK, ASHTABULA COUNTY.

A station of the United States Lake Survey, on the shore of Lake Erie, about $1\frac{1}{2}$ miles west of Ashtabula Harbor. It is in a small clump of woods between highway and lake. No station erected.

Station mark: A hole drilled in the top of a stone post set 20 inches below surface, with another post set directly over it as surface mark.

Reference marks: Three stone posts, 1 foot above ground, one N. $82^{\circ} E.$, distant 76.5 meters; one S. $63^{\circ} E.$, distant 19.5 meters; and one S. $51^{\circ} W.$, distant 75.8 meters, from geodetic point. In 1876 station was back 42 meters from lake shore, which was a clay bluff rapidly wearing away, so that the station can exist only a few years.

[Latitude $41^{\circ} 53' 31.82''$. Longitude $80^{\circ} 49' 54.04''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Conneaut.....	267 55 00.2	88 03 43.4	4.256988
Thompson.....	37 47 42.6	217 39 14.4	4.459007

THOMPSON, GEAUGA COUNTY.

A station of the United States Lake Survey, situated in Thompson township, one-half mile east of village of Thompson, on Thompson Ledge, 313 meters south along the ledge from road leading east from Thompson. Height of station used was 88.3 feet.

Station mark: A brass rod leaded into the solid rock, 6 inches below surface of coarse, compact, pebbly soil.

Reference marks: Five stone posts, one N. $34^{\circ} 02' W.$, distant 85.4 meters; one N. $81^{\circ} 42' E.$, distant 6.2 meters; one S. $25^{\circ} 06' E.$, distant 36 meters; one S. $19^{\circ} 34' W.$, distant 342 meters; one S. $77^{\circ} 02' W.$, distant 35 meters, from geodetic point.

The bluff is distant 12 meters on the east. The height of ground at station above mean level of Lake Erie is 734.5 feet.

[Latitude $41^{\circ} 41' 14.129''$. Longitude $81^{\circ} 02' 36.527''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Conneaut.....	236 37 00.44	56 54 10.70	4.6301944
Andover.....	281 48 03.58	102 05 24.95	4.5688943

TOLEDO, ST. MARY'S CHURCH, LUCAS COUNTY.

A station of the United States Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 39' 32.853''$. Longitude $83^{\circ} 32' 02.895''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Bedford.....	158 37 54.43	338 34 33.09	4.2823242
Cedar Point.....	250 58 01.65	71 05 58.51	4.2439356

TOLEDO STONE LONGITUDE POST, LUCAS COUNTY.

A station of the United States Lake Survey.

Station mark: Center of post.

[Latitude $41^{\circ} 39' 04.36''$. Longitude $83^{\circ} 32' 31.''$.]

TOWNSEND, HURON COUNTY.

A station of the United States Lake Survey, in lot 56, Townsend township, one-half mile northeast of the village of Collins, and one-eighth mile south of the corner of lots 41, 42, 55, and 56. Height of station used was 105 feet.

Station mark: A brass bolt leaded into the solid rock between the letters "U. S." cut therein, about $2\frac{1}{2}$ feet below the surface of the ground.

Reference marks: Three stone posts, one S. $14^{\circ} 10'$ W., distant 42.1 meters; one N. $9^{\circ} 10'$ W., distant 64 meters; and one N. $82^{\circ} 52'$ E., distant 44.1 meters. Height of ground at station above mean level of Lake Erie is 349.6 feet.

[Latitude $41^{\circ} 15' 43.256''$. Longitude $82^{\circ} 28' 59.773''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Brownhelm.....	226 15 22.22	46 22 19.47	4.3079552
Camden.....	265 09 15.93	85 16 40.43	4.1970359

VERMILION, GERMAN LUTHERAN CHURCH, ERIE COUNTY.

A station of the United States Lake Survey.

Station mark: Center of church spire.

[Latitude $41^{\circ} 25' 12.50''$. Longitude $82^{\circ} 21' 58.54''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Sandusky east base.....	96 03 02.7	275 52 23.9	4.352840
Brownhelm.....	305 44 54.1	125 47 13.4	3.780341

WARRENSVILLE, CUYAHOGA COUNTY.

A station of the United States Lake Survey, in Warrensville Township, about 3 miles northeast of Randall station on the Erie Railroad. Height of station used was 92 feet.

Station mark: A stone post of the usual form, set 20 inches underground.

Reference marks: Three stone posts, one S. $73^{\circ} 46'$ E., distant 56.7 meters; one S. $89^{\circ} 13'$ W., distant 75.5 meters; and one N. $55^{\circ} 54'$ E., distant 66.4 meters, from the geodetic point. Height of ground at station above mean level of Lake Erie is 641.5 feet.

[Latitude $41^{\circ} 28' 39.006''$. Longitude $81^{\circ} 30' 11.962''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Willoughby.....	193 29 42.56	13 32 13.27	4.3524100
Chester.....	243 07 28.26	63 13 23.25	4.1436933

WEST SISTER ISLAND LIGHTHOUSE, LUCAS COUNTY.

Station located by the United States Lake Survey.

Station mark: Center of lighthouse.

[Latitude $41^{\circ} 44' 12.94''$. Longitude $83^{\circ} 06' 38.15''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Locust Point.....	358 16 21.3	178 16 33.0	4.131245
Cedar Point.....	81 07 13.6	260 58 16.0	4.276440

WILLOUGHBY, LAKE COUNTY.

A station of the United States Lake Survey, situated on the shore of Lake Erie near the mouth of Chagrin River on the west side, and about 3 miles west of north of Willoughby railroad station, in Willoughby Township. Height of station used was 107 feet.

Station mark: A stone post underground.

Reference marks: Three stone posts, one S. $86^{\circ} 4'$ E., distant 10.1 meters; one N. $74^{\circ} 44'$ E., distant 45.6 meters; and one N. $13^{\circ} 25'$ W., distant 27 meters, from the geodetic point. The lake shore on the northwest is distant 80 meters. Height of ground at station above mean level of Lake Erie is 39.7 feet.

[Latitude $41^{\circ} 40' 28.492''$. Longitude $81^{\circ} 26' 24.852''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Little Mountain.....	285 13 38.66	105 20 15.59	4.1560578
Chester.....	335 22 10.08	155 25 34.97	4.2346119

APPENDIX B.

PRIMARY TRIANGULATION BY THE UNITED STATES COAST AND GEODETIC SURVEY.

Athalia, Bethel, Georgetown, Greenup, Ironton, Peebles, Vanceburg, and West Union quadrangles.

ADAMS, BROWN, CLERMONT, DARKE, HAMILTON, LAWRENCE, SCIOTO, AND WILLIAMS COUNTIES.

The stations in the following list were established by the Coast and Geodetic Survey in 1885 to 1887 inclusive and furnish partial control for the quadrangles named above. In this list are included also the positions of three monuments along the Indiana-Ohio boundary line located by astronomic observations.

ASH RIDGE, BROWN COUNTY.

A Coast and Geodetic Survey station situated about 1 mile north of the small village of Carlisle (Ash Ridge post office), on land of Dr. Evans, of Georgetown, Ohio. It is on a rise of ground clear of trees, nearly northwest from the church on the turnpike of Carlisle, and less than 0.25 mile distant. The nearest railroad station is Macon on the Norfolk & Western Ry., 3 miles north, which has telegraph and express service.

Station mark: Center is a glass bottle filled with cement, sunk 3 feet below surface of ground, over which is placed a 6-inch draitile pipe, 2 feet long and filled with hydraulic-cement concrete, and reaching to the surface.

Reference marks: Four 4-inch draitile pipe sections, each 2 feet long and filled with concrete, are sunk nearly level with the surface of the ground, at the following distances and directions: North (true), distant 6.03 feet; south (true), distant 6.02 feet; east (true), distant 6.21 feet; west (true), distant 5.94 feet.

The bearings in azimuth of surrounding points are Carlisle church $327^{\circ} 10'$, Carlisle schoolhouse $309^{\circ} 33'$, John Schwallies's house $226^{\circ} 06'$, James M. Parker's house 153° , Russellville spire $25^{\circ} 41' 43''$.

[Latitude $38^{\circ} 55' 13.430''$. Longitude $83^{\circ} 45' 22.093''$.]

To station—	Azimuth.	Back azimuth.	I.og. distance.
	° ' "	° ' "	<i>Meters.</i>
Peach Mount.....	274 30 47.22	94 45 38.23	4.5352201
Cherry Ridge.....	320 27 37.25	140 37 53.24	4.5722181

BOUNDARY POST ON INDIANA-OHIO STATE LINE, DEARBORN COUNTY, IND., HAMILTON COUNTY, OHIO.

Station mark: Indiana-Ohio State-line post near Elizabethtown, Hamilton County, Ohio.

[Latitude $39^{\circ} 08' 53.54''$. Longitude $84^{\circ} 49' 13.40''$. Astronomic value.]

BOUNDARY POST ON INDIANA-OHIO STATE LINE, DE KALB COUNTY, IND., WILLIAMS COUNTY, OHIO.

Station mark: Indiana-Ohio State-line post near Butler, De Kalb County, Ind.

[Latitude $41^{\circ} 26' 13.73''$. Longitude $84^{\circ} 48' 08.60''$. Astronomic value.]

BOUNDARY POST ON INDIANA-OHIO STATE LINE, RANDOLPH COUNTY, IND., DARKE COUNTY, OHIO.

Station mark: Indiana-Ohio State-line post near Union City, Ind.

[Latitude $40^{\circ} 11' 51.84''$. Longitude $84^{\circ} 48' 24.41''$. Astronomic value.]

CAVE HILL, ADAMS COUNTY.

A Coast and Geodetic Survey station on Cave Hill, about 4 miles northwest of West Union, the county seat of Adams County, on land owned by John Drennan. The hill is not so high by 8 feet as Clark Hill, 0.25 mile farther west, but it is clear of trees, and all stations could be seen from it without cutting except Minerva and Ash Ridge, which required lines to be opened through trees on Clark Hill. To reach Cave Hill follow the North Liberty pike from West Union about 2.5 miles to the second road north, about 0.5 mile beyond the bridge. Follow this road past the schoolhouse on the slope of Cave Hill and about 0.5 mile farther to the station.

Station mark: Center is marked by a pottery pyramid sunk 3 feet; over this is a drain tile pipe 6 inches in diameter, filled with hydraulic-cement concrete, with a spike marking the center.

Reference marks: Four drain tile pipes 4 inches in diameter filled with concrete were sunk level with the surface of ground at the following distances and directions: North (true), distant 6.65 feet; south (true), distant 6.70 feet; east (true), distant 6.75 feet; west (true), distant 7.13 feet.

[Latitude $38^{\circ} 50' 58.103''$. Longitude $83^{\circ} 35' 52.857''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Minerva.....	60 47 44.08	240 35 41.44	4.5043022
Peach Mount.....	255 56 14.99	76 05 08.08	4.3243321
Cherry Ridge.....	334 27 55.00	154 32 14.18	4.3659205

ECKMANSVILLE CHURCH SPIRE, ADAMS COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of church spire at Eckmansville.

[Latitude $38^{\circ} 51' 50.03''$. Longitude $83^{\circ} 38' 34.63''$. No check on this position.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Peach Mount.....	261 44 27.6	81 55 02.3	4.391358
Cherry Ridge.....	328 18 35.2	148 24 35.7	4.423271

ELIZABETHTOWN ASTRONOMIC STATION, HAMILTON COUNTY.

A Coast and Geodetic Survey station situated about 1 mile east of the State line and about 200 meters northwest of the Cleveland, Cincinnati, Chicago & St. Louis Railway station. The longitude and latitude piers are both built of stone picked up near by, laid in cement; they have foundations $2\frac{1}{2}$ feet in the ground, and rise 3 feet

above ground. The longitude pier is about in center line, and the latitude pier is 50 inches due west. The property east is owned by Mr. Tabow, and that west by Zunn Hayhurst. A meridian line was laid out and marked by two stones 130.65 meters apart, and the magnetic declination as shown by Mr. Haire's (surveyor) compass at 10.45 a. m. October 16, 1891, was $1^{\circ} 30' E$.

Station was referred to a large cylindrical monument on the State line, marked "1837," about 8 feet tall, with a conical top, by direct measurement along traverse lines, with steel tape twice, and Brumm theodolite No. 68, a 6-inch repeating instrument.

Distances measured from transit: To fence east 2.83 meters; to fence south 5.27 meters; to fence west 17.11 meters; first meridian stone 60.37 meters; second meridian stone 191.02 meters; State-line monument west 1,222.68 meters; State line monument south 1,079.21 meters; Methodist Episcopal Church 28.39 meters west; Methodist Episcopal Church 50.07 meters north; Presbyterian Church 102.06 meters west; Presbyterian Church 302.17 meters north; public school 24.16 meters east; public school 209.88 meters north.

[Latitude $39^{\circ} 09' 32.2''$, longitude $84^{\circ} 48' 21.5''$; approximate U. S. Standard. Latitude $39^{\circ} 09' 28.54''$, longitude $84^{\circ} 48' 22.48''$; astronomic value.]

FELICITY TOWN HALL, CLERMONT COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of cupola on town hall at Felicity.

[Latitude $38^{\circ} 50' 25.130''$. Longitude $84^{\circ} 05' 48.208''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Flaughter.....	44 37 02.79	224 31 51.58	4.2326288
Tate.....	163 56 08.62	343 54 44.92	4.0645943
Minerva.....	313 17 07.88	133 23 49.66	4.3282657

FRADD, LAWRENCE COUNTY.

A station of the Coast and Geodetic Survey near line between Lawrence and Aid townships, in Lawrence County, and about 100 yards south of Marion-Vesuvius Furnace road, about 3 miles from Marion, and very near 1 mile west of white school-house on hill. The station is on land belonging to Charles Fradd, who lives in hollow about 0.3 mile southwest from station. There is a 45-foot tripod and scaffold at this station, standing on a bare hill.

Station mark: Earthen pyramid sunk $2\frac{1}{2}$ feet in the ground, and above it a 6-inch tile pipe 2 feet long filled with cement. A 6-inch spike marks the center.

Reference marks: Four 4-inch tile pipes 2 feet long filled with cement. The tops of the pipes are level with ground. A nail in center of each is point to which the following measurements were made: North (true), 7.63 feet; east (true), 6.00 feet; south (true), 6.50 feet; west (true), 6.00 feet.

[Latitude $38^{\circ} 35' 46.927''$. Longitude $82^{\circ} 33' 06.031''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Oakland.....	18 00 13.70	197 56 37.88	4.4352799
Gebhardt.....	285 51 33.48	106 02 43.60	4.4324666

GEORGETOWN COURTHOUSE, BROWN COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of dome of courthouse.

[Latitude $38^{\circ} 51' 56.326''$. Longitude $83^{\circ} 54' 14.766''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Minerva.....	4 06 52.91	184 06 20.41	4.2423524
Flaughter.....	62 33 20.02	242 20 54.23	4.5104910
Ash Ridge.....	244 37 03.53	64 42 37.97	4.1523932

GOULD, SCIOTO COUNTY.

A station of the Coast and Geodetic Survey situated on hills east of Ohio River, about 1.5 miles (air line) from the river at Franklin Furnace landing. The land formerly belonged to O. B. Gould, but was sold in 1884 to Means, Kyle & Co., of Hanging Rock. The hill is covered with large timber of second growth, and a tripod 65 feet high with scaffold was erected to see above trees. To reach station from Franklin Furnace take road to Powellsville 1 mile, and turn to right at Mr. Howard's house, following old road to Junior Furnace 0.25 mile; turn to right here up hill to station about 0.5 mile.

Station mark: Pottery pyramid sunk 3 feet below surface. Above this is a piece of sewer pipe 6 inches in diameter, filled with concrete, with nail in its center. Other pieces of sewer pipe 4 inches in diameter, filled with concrete, are sunk at following distances and directions: North (true), 6.08 feet; south (true), 6.11 feet; east (true), 5.78 feet; west (true) is a brass rod one-fourth inch in diameter, driven into smooth top of an oak stump and surrounded by a triangle of nails, distant 5.77 feet.

[Latitude $38^{\circ} 38' 27.582''$. Longitude $82^{\circ} 49' 56.728''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Fradd.....	281 21 56.10	101 32 26.91	4.3970300
Buena Vista.....	355 09 35.66	175 10 34.86	4.4368167

NORTH MERIDIAN, SCIOTO COUNTY.

A Coast and Geodetic Survey station. The angle Springville-Scioto was measured here to check closing only. A line was then laid off, making an angle of $40^{\circ} 47' 20''$ with Springville and $108^{\circ} 33' 35''$ with Scioto, which is due south from North Meridian, within a few seconds. This meridian line is for the use of the county, and was laid off at the request of the county commissioners, in the grounds of the Children's Home, in the southeastern part of the city of Portsmouth. The ends of this meridian line are marked by large stone posts 12 by 12 inches on top and 8 feet long. The northern one projects about 3.5 feet above the ground and the southern one about 2 feet. Brass bolts are inserted to mark the center.

[Latitude $38^{\circ} 44' 38.845''$. Longitude $82^{\circ} 58' 41.303''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Springville.....	40 47 18.42	220 46 25.62	3.4942173
Scioto.....	108 33 31.80	288 30 47.59	3.8248232

PEACH MOUNT, ADAMS COUNTY.

A Coast and Geodetic Survey station on the ridge northwest of Mineral Springs and about 2 miles distant by road. It is on land of James Miller a short distance northwest of his house. To reach station from the Mineral Springs railroad station, take the road running to the Springs Hotel, and 0.8 mile before reaching the hotel take road west (old road to Jacktown) to Mr. Miller's house, about 1.25 miles.

Station mark: A pottery pyramid sunk 3 feet, and above this, reaching to the surface of the ground, a section of 6-inch draitile pipe, filled with concrete.

Reference marks: Four 5-inch draitile pipes, 2 feet long, sunk level with the surface at the following distances and directions: North (true), distant 6.02 feet; south (true), distant 6.085 feet; east (true), distant 6.95 feet; west (true), distant 6.685 feet.

[Latitude $38^{\circ} 53' 43.525''$. Longitude $83^{\circ} 21' 43.441''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Scioto.....	298 24 44.26	118 36 26.39	4.4876884
Twin Creek.....	341 54 01.03	161 57 02.59	4.3529044

PORTSMOUTH COURTHOUSE, SCIOTO COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of dome of courthouse.

[Latitude $38^{\circ} 44' 06.18''$. Longitude $83^{\circ} 00' 01.74''$. No check on this position.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Springville.....	4 01 28.2	184 01 25.7	3.133157
Scioto.....	125 30 04.2	305 28 10.4	3.731911

PORTSMOUTH FIRST PRESBYTERIAN CHURCH, SCIOTO COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of spire on First Presbyterian Church at Third and Court streets.

[Latitude $38^{\circ} 43' 56.21''$. Longitude $83^{\circ} 00' 03.98''$. No check on this position.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Springville.....	2 15 37.6	182 15 36.5	3.020714
Scioto.....	128 25 00.9	308 23 08.5	3.743176

SCIOTO, SCIOTO COUNTY.

A Coast and Geodetic Survey station on land of George Davis, about 1.5 miles west of his distillery, on the west side of the Scioto River, at a point about 1.5 miles northwest of Portsmouth. Station can be reached from Union Mills (west side) by wagon road up Hygean Creek about 0.8 mile to the last of the row of frame houses, from that point by a very rough road along the side hill northward 0.5 mile to the foot of the main ridge, thence by a very steep rough road up this ridge to top, and thence along top of ridge about a mile to station.

Signal: Floor of scaffold 96 feet high. Theodolite elevated 100 feet from ground. Lines were opened to Peach Mount station (19 miles) by cutting on five ridges, and to Twin Creek station (13 miles) by cutting on two ridges. Fradd, Gould, Howland, Round Top, and Springville stations and the whole of the city of Portsmouth are open.

Station mark: A pottery pyramid sunk below the surface, over which was placed a 6-inch drain tile pipe, 2 feet long, filled with concrete. Center is marked by an iron spike.

Reference marks: A 4-inch pipe north 6.29 feet, and similar pipes south, east, and west, 6.18, 6.25, and 6.11 feet distant, respectively, from station. These four pipes were filled with concrete and a nail marks the center of each.

[Latitude 38° 45' 47.719". Longitude 83° 03' 03.622".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Round Top.....	39 13 21.31	219 07 22.42	4.3418228
Fradd.....	292 56 07.10	113 14 50.55	4.6742640
Gould.....	305 26 57.47	125 35 09.49	4.3684959
Howland.....	339 58 48.81	160 01 08.36	4.1978529

TATE, CLERMONT COUNTY.

A Coast and Geodetic Survey station on the boundary fence separating the land of J. Hibbets on the north from that of Salt on the south, 0.5 mile east of the Tate-Monroe township line and 1.25 miles north of Saltair, a small hamlet of three or four houses at the crossroads, with post office.

Station marks: A pottery pyramid sunk 3 feet below surface of the ground. Over this is placed a section of sewer pipe 2 feet long and 6 inches in diameter, filled with hydraulic-cement concrete, and reaching to the surface of the ground. The station center is marked by a 4-inch iron spike in the concrete.

Reference marks: Four drain tile pipes 4 inches in diameter filled with concrete and placed at the following distances and directions: North (true), distant 6.05 feet; south (true), distant 6.01 feet; east (true), distant 6.09 feet; west (true), distant 6 feet.

[Latitude 38° 56' 26.711". Longitude 84° 08' 01.532".]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Ash Ridge.....	273 49 44.66	94 03 58.90	4.5161741
Minerva.....	323 58 19.89	144 06 25.69	4.5028566

	Distance.	Azimuth.
	Miles.	° ' "
Felicity town hall	8.0	21 11 53
E. Frazer's white wood cottage, east gable	0.5	35 12 30
Salt's brick house, west gable	0.3	41 10
John Tatman's house, east gable	0.5	106 35
Chimney of J. Hibbet's house	0.25	214 40
Williamsburg white spire	8	264 51 22
Bethel Baptist Church spire	4	280 50 30
Saltair village	1.2	62 25

TWIN CREEK, ADAMS COUNTY.

A Coast and Geodetic Survey station on the dividing ridge between the headwaters of Upper Twin Creek and Lower Twin Creek, flowing into the Ohio River, and those of Churn Creek, flowing into Brush Creek, and thence into the Scioto. It is on land about 0.5 mile northwest of the house of Wash McGraw, which is on the road along Upper Twin Creek and at the foot of the ridge over which the road passes from Buena Vista to Mineral Springs. In order to reach this house leave the Ohio River turnpike (Portsmouth to Rome) at the bridge over Upper Twin Creek, about 2.5 miles east of Buena Vista, and follow up the creek to McGraw's, 7 miles. The road is rough, but it can be driven over in a wagon.

Signal: An 80-foot scaffold was erected in order to see Scioto and Peach Mount. Cutting to open lines to Scioto was necessary on ridge owned by C. A. Barton, of Portsmouth, about 6 miles from Scioto near Odells Creek.

Station mark: A pottery pyramid sunk 2.5 feet below surface of ground. Over this was placed a 6-inch drain tile pipe filled with concrete as a surface mark.

Reference marks: Four 5-inch drain tile pipes sunk in ground at the following distances from the center pipe: North (by compass), distant 7.48 feet; south (by compass), distant 7.12 feet; east (by compass), distant 6.98 feet; west (by compass), distant 7.25 feet.

[Latitude $38^{\circ} 42' 08.710''$. Longitude $83^{\circ} 16' 53.681''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Scioto.....	251 18 44.51	71 27 23.87	4.3254307
Round Top.....	328 55 54.36	143 58 34.20	4.0790769

UNITY CHURCH SPIRE, ADAMS COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Church spire at Unity.

[Latitude $38^{\circ} 53' 30.09''$. Longitude $83^{\circ} 31' 18.12''$. No check on this position.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Cave Hill.....	54 44 20.7	234 41 28.3	3.909220
Peach Mount.....	268 14 12.7	88 20 13.5	4.141629

WEST UNION CHILDREN'S HOME, ADAMS COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of cupola on West Union Children's Home.

[Latitude $38^{\circ} 47' 42.631''$. Longitude $83^{\circ} 32' 08.862''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	Meters.
Cave Hill.....	138 08 39.20	318 06 18.78	3.9082209
Peach Mount.....	233 31 26.24	53 37 58.53	4.2728575
Cherry Ridge.....	342 53 47.20	162 55 46.09	4.1937670

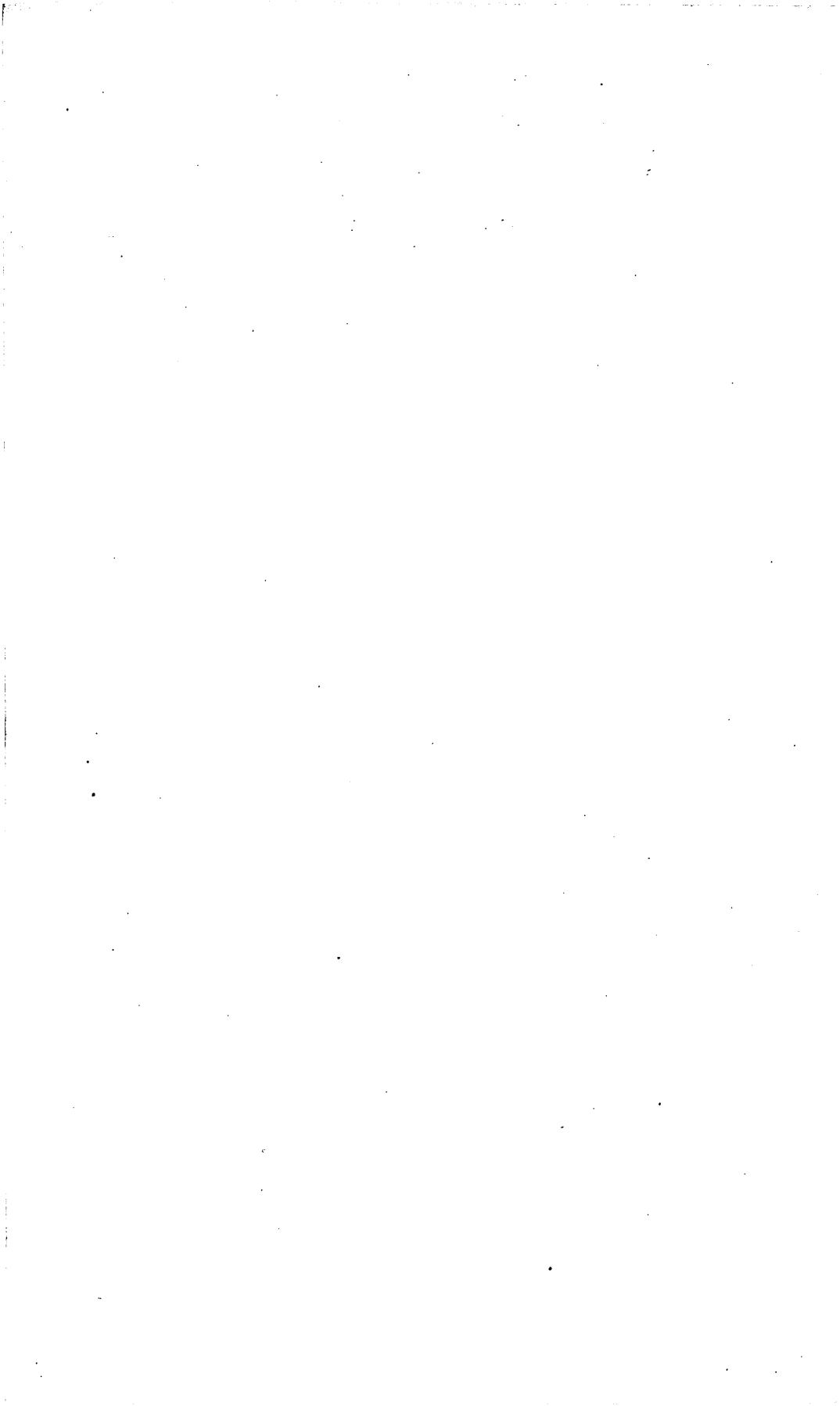
WEST UNION COURTHOUSE, ADAMS COUNTY.

Located by the Coast and Geodetic Survey.

Station mark: Center of dome on courthouse at West Union.

[Latitude $38^{\circ} 47' 42.978''$. Longitude $83^{\circ} 32' 46.122''$.]

To station—	Azimuth.	Back azimuth.	Log. distance.
	° ' "	° ' "	<i>Meters.</i>
Cave Hill.....	143 11 41.0	323 09 43.9	3.8760066
Peach Mount.....	235 06 58.9	55 13 54.5	4.2893215
Cherry Ridge.....	339 48 25.5	159 50 47.7	4.2019667



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