

DEPARTMENT OF THE INTERIOR  
UNITED STATES GEOLOGICAL SURVEY

GEORGE OTIS SMITH, DIRECTOR

**BULLETIN 563**

*CANCELLED.*

**RESULTS OF SPIRIT LEVELING  
IN MARYLAND**

**1896 TO 1911, INCLUSIVE**

R. B. MARSHALL, CHIEF GEOGRAPHER

Work done in cooperation with the State through the Maryland Geological Survey  
William Bullock Clark, State Geologist



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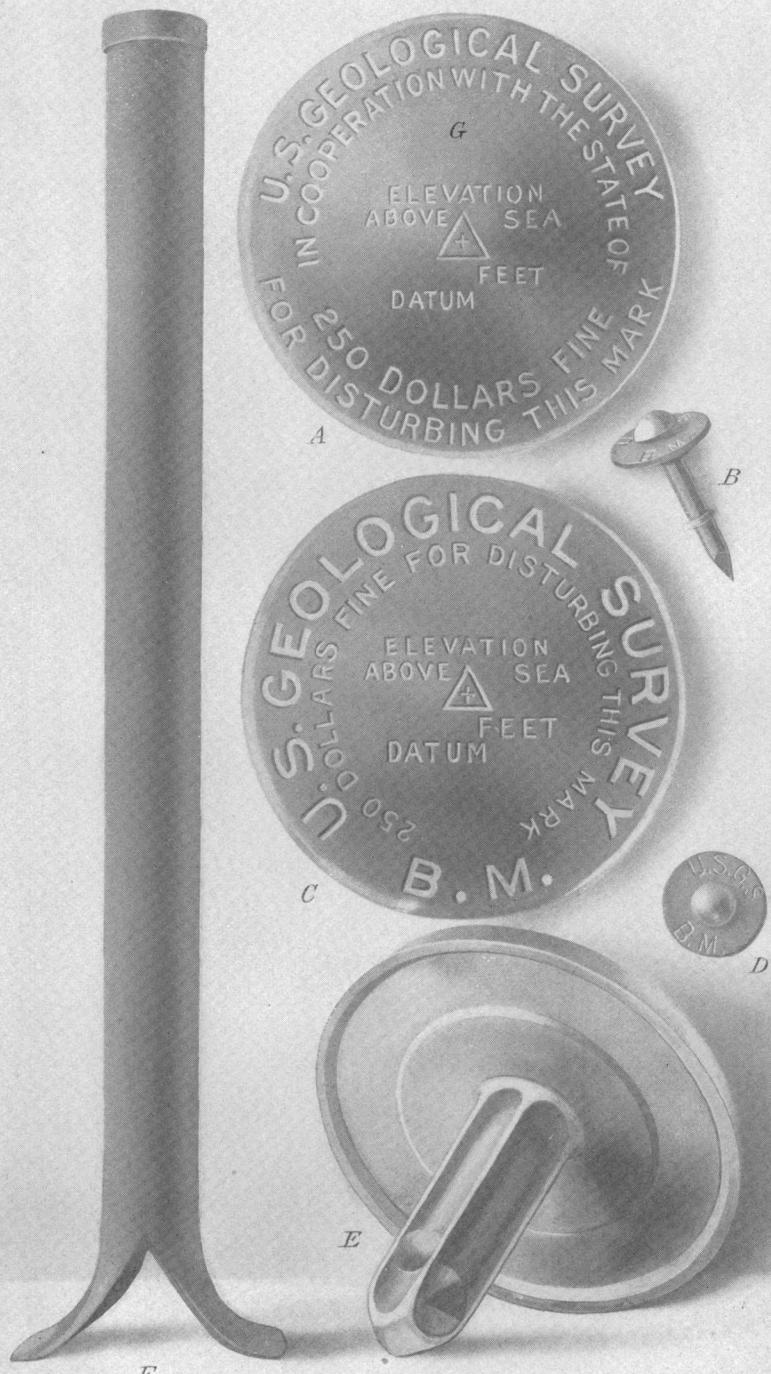
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## GEOLOGICAL SURVEY BENCH MARKS.

*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.

# RESULTS OF SPIRIT LEVELING IN MARYLAND, 1896 TO 1911, INCLUSIVE.

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R. B. MARSHALL, Chief Geographer.

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## INTRODUCTION.

*Cooperation.*—The State of Maryland contributed financially to the work from 1896 to 1911, inclusive. The State is now completely mapped and bench marks have been established in every county except Calvert and St. Marys.

*Previous publication.*—That part of the results of spirit leveling in Maryland previously published in Bulletin 434 (which comprised descriptions and elevations of bench marks established in Delaware, District of Columbia, Maryland, and Virginia, 1896 to 1909, inclusive, based on the 1903 adjustment) has been corrected to agree with the 1907 adjustment of precise leveling of the Coast and Geodetic Survey and is here republished together with results of spirit leveling by the United States Geological Survey in Maryland since 1909. The elevations by the 1907 adjustment were not changed by the 1912 adjustment and are not likely to be changed by any future adjustment of the level net.

*Personnel.*—The field work from 1896 to 1906, inclusive, was done under the direction of H. M. Wilson, geographer, and that from 1907 to 1911, inclusive, was done under Frank Sutton, geographer. The work since January, 1908, was done under the general direction of R. B. Marshall, chief geographer. Credit is given to the respective levelmen in the headings of the several lists. The office work of computation, adjustment, and preparation of lists was done mainly by S. S. Gannett, geographer, under the general direction of E. M. Douglas, geographer.

*Classification.*—The elevations are classified as precise or primary, according to the methods employed in their determination. The former are determined by lines of levels run either in both forward and backward directions or by simultaneous double-rodded lines, a high-grade instrument being used and special precautions being taken in observations and reduction to correct errors and make the line continuously good throughout. The latter or primary levels are determined with the Y level, precautions being taken against only the principal errors and the levels being run mostly in circuits of single

lines. The allowable limit of error observed on the precise work already done by the Geological Survey in this State is represented in feet by  $0.02 \sqrt{D}$  and that for the primary work by  $0.05 \sqrt{D}$ , in which  $D$  is the length of the circuit in miles.

*Bench marks.*—The standard bench marks are of two forms. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. I),  $3\frac{1}{2}$  inches in diameter and  $\frac{1}{4}$  inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock in the wall of some public building, a bridge abutment, or other substantial masonry structure. The second form (*F*, Pl. I), used where masonry or rock is not available, consists of a hollow wrought-iron post  $3\frac{1}{2}$  inches in outer diameter and 4 feet in length, which is set about 3 feet in the ground. The bottom is spread out to a width of 10 inches in order to give a firm bearing in the earth, and a bronze or aluminum-bronze cap is riveted upon the top of the post. A third style of bench mark, with abbreviated lettering (*B* and *D*, Pl. I), is used for unimportant points. This consists of a special copper nail  $1\frac{1}{2}$  inches in length driven through a copper washer  $\frac{1}{8}$  inch in diameter. The tablets as well as the caps on the iron posts are appropriately lettered, and cooperation by a State is indicated by the addition of the State name (*G*, Pl. I).

The numbers stamped on the bench marks described in the following pages represent the elevations to the nearest foot as determined by the levelman. These numbers are stamped with  $\frac{3}{16}$ -inch steel dies on the tablets or post caps, to the left of the word "Feet." The office adjustment of the notes and the reduction to mean sea level datum may so change some of the figures that the original markings are 1 or 2 feet in error. It is assumed that engineers and others who have occasion to use the bench-mark elevations will apply to the Director of the United States Geological Survey, at Washington, D. C., for the adjusted values, and will use the markings as identification numbers only.

*Datum.*—All United States Geological Survey elevations are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides were eliminated. This level is not the elevation determined from the mean of the highest and the lowest tides, nor is it the half sum of the mean of all the high tides and the mean of all the low tides, which is called the half-tide level. *Mean sea level is the average height of the water, all stages of the tide being considered.* It is determined from observations made by means of tidal gages placed at stations where local conditions, such as long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and

if accuracy is desired they must extend over several years. At ocean stations the half-tide level and the mean sea level usually differ but little. It is assumed that there is no difference between the mean sea levels determined from observations in the Atlantic Ocean, the Gulf of Mexico, and the Pacific Ocean.

The connection with tidal stations for bench marks in certain areas that lie at some distance from the seacoast is still uncertain, and this fact is indicated by the addition of a letter or word to the right of the word "Datum" on tablets or posts. For these areas corrections for published results will be made from time to time as the precise-level lines of the United States Geological Survey or other Government organizations are extended.

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

Accident (Md.-W. Va.-Pa.).	*East Washington (Md.-D. C.). <sup>7</sup>
Annapolis. <sup>1</sup>	Elkton (Md.-Del.-Pa.).
Antietam (Md.-Va.-W. Va.). <sup>2</sup>	Ellicott. <sup>8</sup>
Baltimore. <sup>3</sup>	Emmitsburg (Md.-Pa.).
Barclay (Md.-Del.). <sup>4</sup>	Flintstone (Md.-W. Va.-Pa.).
Belair (Md.-Pa.).	*Frederick (Md.-Va.). <sup>9</sup>
Betterton. <sup>5</sup>	Fredericksburg (Va.-Md.).
Bloodsworth Island. <sup>6</sup>	Frostburg (Md.-W. Va.-Pa.).
Brandywine. <sup>7</sup>	Grantsville (Md.-Pa.).
Cecilton (Md.-Del.). <sup>4</sup>	Green Run (Md.-Va.)
Chestertown. <sup>5</sup>	Gunpowder. <sup>5</sup>
Choptank. <sup>1</sup>	Hagerstown (Md.-Pa.).
Crapo. <sup>6</sup>	Hancock (W. Va.-Md.-Pa.).
Crisfield (Md.-Va.).	Harpers Ferry (Va.-W. Va.-Md.). <sup>2</sup>
Deal Island.	Havre de Grace (Md.-Pa.).
Denton.	Hurlock.
Dover (Del.-Md.-N. J.). <sup>4</sup>	Ijamsville. <sup>9</sup>
Drum Point. <sup>6</sup>	Indian Head.

\* Out of print.

<sup>1</sup> Annapolis, Oxford, St. Michaels, and Sharps Island sheets, on scale of 1:62500, have been reduced and form Choptank sheet, on scale of 1:125000.

<sup>2</sup> Antietam sheet shows part of Harpers Ferry quadrangle on larger scale.

<sup>3</sup> Baltimore, Ellicott, Laurel, and Relay sheets, on scale of 1:62500, have been reduced and form Patapsco sheet, on scale of 1:125000.

<sup>4</sup> Barclay and Cecilton sheets show parts of Dover quadrangle on larger scale.

<sup>5</sup> Betterton, Chestertown, Gunpowder, and North Point sheets, on scale of 1:62500, have been reduced and form Tolchester sheet, on scale of 1:125000.

<sup>6</sup> Bloodsworth Island, Crapo, Drum Point, and Point Lookout sheets show St. Marys quadrangle on larger scale.

<sup>7</sup> Brandywine, the east half of Washington, Owensville, and Prince Frederick sheets, on scale of 1:62500, have been reduced and form Patuxent sheet, on scale of 1:125000.

<sup>8</sup> Washington sheet shows the same area as East Washington and West Washington sheets.

<sup>9</sup> Ijamsville, Mount Airy, Rockville, and Seneca sheets show Frederick quadrangle on larger scale.

Laurel. <sup>1</sup>	Point Lookout (Md.-Va.) <sup>9</sup>
Leonardtown. <sup>2</sup>	Prince Frederick. <sup>7</sup>
Montross (Va.-Md.). <sup>2</sup>	Princess Anne (Md.-Va.).
Mount Airy. <sup>3</sup>	Relay. <sup>1</sup>
Mount Vernon (Va.-Md.-D. C.). <sup>4</sup>	Rockville (Md.-Va.). <sup>8</sup>
Nanjemoy.	Romney (W. Va.-Va.-Md.).
Nanticoke.	Salisbury (Md.-Del.).
Nomini (Md.-Va.). <sup>2</sup>	St. Marys (Md.-Va.). <sup>9</sup>
North Point. <sup>5</sup>	St. Michaels. <sup>8</sup>
Oakland (Md.-W. Va.). <sup>6</sup>	Seneca (Md.-Va.). <sup>8</sup>
Ocean City (Md.-Del.).	Sharps Island. <sup>8</sup>
Owensville. <sup>7</sup>	Snow Hill (Md.-Va.).
Oxford. <sup>8</sup>	Taneytown (Md.-Pa.).
Parkton (Md.-Pa.).	Tolchester. <sup>5</sup>
Patapsco. <sup>1</sup>	Washington (Md.-D. C.-Va.), double sheet. <sup>4 7 10</sup> 20 cents.
Patuxent (Md.-D. C.). <sup>7</sup>	Westminster (Md.-Pa.).
Pawpaw (Md.-W. Va.-Pa.).	*West Washington (Md.-D. C.-Va.). <sup>4 10</sup>
Piedmont (W. Va.-Md.). <sup>6</sup>	Wicomico (Md.-Va.). <sup>2</sup>
Piney Point (Md.-Va.). <sup>2</sup>	Williamsport (Md.-Pa.-W. Va.).
Pittsville (Md.-Del.).	

## PRECISE LEVELING.

## Washington quadrangle.

[Latitude  $38^{\circ} 45'$ - $39^{\circ}$ ; longitude  $76^{\circ} 45'$ - $77^{\circ} 15'$ .]

## MONTGOMERY COUNTY.

The elevations in the following list were determined by precise leveling and are based upon the elevation of bench mark "F" at Great Falls, Md., determined by precise leveling of the Coast and Geodetic Survey.

The work was done in November, 1910, by D. H. Baldwin.

\* Out of print.

<sup>1</sup> Baltimore, Ellicott, Laurel, and Relay sheets, on scale of 1:62500, have been reduced and form Patapsco sheet, on scale of 1:125000.

<sup>2</sup> Leonardtown, Montross, Piney Point, and Wicomico sheets, on scale of 1:62500, have been reduced and form Nomini sheet, on scale of 1:125000.

<sup>3</sup> Ijamsville, Mount Airy, Rockville, and Seneca sheets show Frederick quadrangle on larger scale.

<sup>4</sup> The west half of Washington sheet shows part of Mount Vernon quadrangle on larger scale.

<sup>5</sup> Betterton, Chestertown, Gunpowder, and North Point sheets, on scale of 1:62500, have been reduced and form Tolchester sheet, on scale of 1:125000.

<sup>6</sup> Oakland sheet shows part of Piedmont quadrangle on larger scale.

<sup>7</sup> Brandywine, the east half of Washington, Owensville, and Prince Frederick sheets, on scale of 1:62500, have been reduced and form Patuxent sheet, on scale of 1:125000.

<sup>8</sup> Annapolis, Oxford, St. Michaels, and Sharps Island sheets, on scale of 1:62500, have been reduced and form Choptank sheet, on scale of 1:125000.

<sup>9</sup> Bloodsworth Island, Crapo, Drum Point, and Point Lookout sheets show St. Marys quadrangle on larger scale.

<sup>10</sup> Washington sheet shows the same area as East Washington and West Washington sheets.

From Great Falls southeast along Chesapeake & Ohio Canal to Lock 8, near Cabin John Bridge.

	Feet.
Great Falls, near Lock 20, east side of spillway of dam, on top of parapet wall, between crane and gage rod; the surface within a chiseled angle (U. S. C. E. Intake b. m. 156.445)-----	157. 533
Great Falls, 155-foot mark on gage-----	156. 14
Great Falls, crest of dam near spillway (U. S. C. E. elevation 150.5)-----	151. 75
Great Falls, east end of dam, on northwest corner of next to top step of parapet wall; chiseled angle (U. S. C. E. b. m.)-----	155. 246
Great Falls, west wall of Lock 20, 0.2 meter west of edge and 1.65 meters south of north gate; bottom of a square cut  (C. & G. S. b. m. F)-----	166. 592
Great Falls, southwest corner of gate house, on projecting foundation stone, 1.2 feet south of southwest corner of water table; bronze tablet stamped "Prim. Trav. Sta. No. 1, 171"-----	171. 146
Great Falls, west entrance to gate house; chiseled angle (U. S. C. E. elevation 171.26)-----	172. 353
Lock 19, on west wall, 2 feet north of south end and about 5 feet east of west side of south end; chiseled cross painted "159"-----	158. 620
Lock 18, in top of west wall, at south end; end of broken tie bolt with "A" cut alongside, painted "150"-----	149. 672
Lock 17, in top of west wall, southwest corner of south end; chiseled square painted "142"-----	141. 640
Gateway between Locks 16 and 17, on west wall; shallow drill hole, painted "135"-----	135. 435
Locks 16 and 17, gateway between, on west wall; bottom of chiseled square  -----	135. 519
Lock 16, top of west wall, at south end, 2.25 feet north by 6.75 feet east of southwest corner; chiseled cross painted "134"-----	133. 509
Lock 15, on top of west wall, at south end, 2 feet 1 inch north by 3 feet 8 inches east of southwest corner; chiseled cross painted "126"-----	125. 577
Lock 15, 380 feet south of, west of towpath, on rock; chiseled square marked "120"-----	120. 461
Lock 15, 0.6 mile south of, 240 feet south of center of bridge over spillway, west of towpath, on ledge; chiseled triangle painted "121"-----	120. 617
Milepost 11, 1 mile south of, west of towpath, at bend in canal, on ledge; chiseled square painted "119"-----	119. 339
Milepost 11, west of towpath; marked point on top, painted "119"-----	119. 030
Milepost 10, south of towpath; marked point on top, painted "119"-----	119. 914
Milepost 10, 1,813 feet south of, under surface of slab over floodgate-----	119. 020
Lock 14, on north wall, on north stone of east end; bronze tablet stamped "117" (Prim. Trav. Sta. No. 2)-----	117. 826
Lock 13, on south wall, 1 foot from southeast corner of east end; chiseled square painted "109"-----	117. 374
Lock 12, on southwest wall; 2 feet northwest of southeast end and 4 feet northeast of southwest end; adjacent surface to chiseled cross, painted "102"-----	109. 254
Lock 11, on south wall, 2 feet west of east edge, 3 feet north of south edge; adjacent surface to chiseled cross, painted "93"-----	101. 574
Lock 10, on south wall, near east end; chiseled cross painted "85"-----	93. 454
	85. 268

	Feet.
Lock 9, on south wall, near east end, 2 feet west by 3 feet north of southeast corner; chiseled cross painted "77"-----	77. 460
Lock 8, on north wall, on north capstone of east end; bronze tablet stamped "69" (Prim. Trav. Sta. No. 3)-----	69. 034

### PRIMARY LEVELING.

**Barclay, Betterton, Cecilton, Chestertown, Choptank (30'), Crapo, Crisfield, Deal Island, Denton, Dover (30'), Drum Point, Harrington, Hurlock, Nanticoke, Ocean City, Oxford, Pittsville, Princess Anne, Salisbury, Seaford, Snow Hill, St. Michaels, and Tolchester (30') quadrangles.**

**CAROLINE, CECIL, DORCHESTER, KENT, QUEEN ANNES, SOMERSET, TALBOT, WICOMICO, AND WORCESTER COUNTIES.**

The elevations in the following list are based on heights derived by various gages of the Coast and Geodetic Survey and on checked levels of the Pennsylvania Railroad plus 0.64 foot, a mean correction derived through United States Geological Survey connections. For additional elevations in Dover, Harrington, and Seaford quadrangles see Delaware list (pp. 9, 10) bulletin 434; and for Franklin City, Va., in Snow Hill quadrangle, see Virginia list (p. 52) in same bulletin.

The leveling was done as follows: Cecilton and Barclay quadrangles, in 1896 by Charles Goldsborough and O. L. Pettibone; Barclay quadrangle additional work, in 1899 by T. D. Leonard and in 1904 by Ralph Hutchins; Betterton, Chestertown, and St. Michaels quadrangles, in 1899 by T. D. Leonard; Hurlock quadrangle, in 1899 by Leonard, in 1900 by George Bailey, and in 1904 by C. A. Clunet; Seaford quadrangle, in 1899 by Leonard and in 1904 by Clunet, in 1911 by J. H. Lefeaver, and in 1912 by J. M. Whitman; Denton and Harrington quadrangles, in 1899 by Leonard and in 1904 by B. J. Green; Oxford quadrangle, in 1900 by Bailey and J. W. Hodges, in 1902 by W. C. Palmer, and in 1904 by Clunet; Crapo quadrangle, in 1900 by Hodges and in 1904 by Clunet; Drum Point quadrangle, in 1904, by Clunet; Nanticoke quadrangle, in 1900, by Hodges, and in 1902 by Palmer; Salisbury, Princess Anne, and Pittsville quadrangles, in 1900 by Hodges and C. H. Semper; Crisfield and Deal Island quadrangles, in 1900 by Semper; Snow Hill and Ocean quadrangles, in 1900 by Hodges.

#### CECILTON (DOVER 30') QUADRANGLE.

[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $75^{\circ} 45' - 76^{\circ}$ .]

From Chesapeake City southwest via Cayots Corners to Earleville, thence south and west to Locust Grove.

	Feet.
Cayots Corners, at road forks; iron post stamped "83"-----	83. 612
Earleville, in stone in front of S. Duhamel's store; bronze tablet stamped "85"-----	85. 282

Fredericktown, bridge over Sassafras River; in face of northwest wing wall; bronze tablet stamped "5"-----  
 Locust Grove, 40 feet north of crossroads and east side of Beaston's house; iron post stamped "76"-----  
 77. 075

**From Locust Grove south to Chesterville.**

Blacks station, in front of store, on stone foundation of middle pillar of porch; highest point-----  
 70. 26  
 Chesterville, north corner of crossroads, at corner of brick storehouse; iron post stamped "55"-----  
 55. 829

**From Millington north along Philadelphia, Baltimore & Washington R. R. and highways to Bohemia Mills.**

Millington, northwest corner of Cypress and Sassafras streets, in doorsill of store; copper plug stamped "26"-----  
 27. 120  
 Massey, northwest corner of crossroads, in southeast corner of foundation of Walsberger's store; bronze tablet stamped "65"-----  
 65. 770  
 Massey, 3.5 miles east of, at Maryland-Delaware State line; top of boundary stone-----  
 68. 10  
 Sassafras, dwelling of Mr. Earnest; copper plug in step to back porch, stamped "U.S.G.S. b. m. 34"-----  
 34. 791

**BARCLAY (DOVER 30') QUADRANGLE.**

[Latitude  $39^{\circ} 39' 15''$ ; longitude  $75^{\circ} 45' 76''$ .]

**From Chesterville south to Benson Center, thence east to Sudlersville, thence north to Millington.**

Benton Corners, 1,000 feet west of, in northeast corner of foundation stone of farmhouse; bronze tablet stamped "60"-----  
 60. 911  
 Barclay, 1.5 miles north of, 50 feet west of railroad crossing, southwest corner of road; top of large stone-----  
 69. 85  
 Sudlersville, corner of Church and Main streets, northeast corner of stone foundation; bronze tablet stamped "66"-----  
 66. 798

**From Barclay southwest to Roberts, thence southeast to Goldsboro, thence northeast to Marydel.**

Roberts, at southeast corner of Scott's store; iron post stamped "78"-----  
 Ingleside, southwest corner of Beatty's yard; iron post stamped "62"-----  
 Hollingsworth, south corner of crossroads, outside of corner of garden fence; iron post stamped "66"-----  
 78. 469  
 62. 410  
 Goldsboro, on east corner of railroad station; bronze tablet stamped "63"-----  
 66. 954  
 63. 548  
 Marydel, south end of freight house; bronze tablet stamped "63" (reset 2 feet lower).-----

**From Crumpton southwest to McGinnes.**

McGinnes, 2.9 miles southwest of Crumpton, southeast corner of crossroads, 50 feet east of store, in northwest corner of Williams's yard; iron post stamped "72, 1904"-----  
 72. 381

**From Sudlersville east 4 miles.**

Peters Corners, 3.8 miles east of Sudlersville, northwest corner of crossroads, in base of chimney of private house; aluminum tablet stamped "66, 1904"-----  
 66. 108

**BETTERTON (TOLCHESTER 30') QUADRANGLE.**

[Latitude 39° 15'-39° 30'; longitude 76°-76° 15'.]

**From Locust Grove west to Stillpond, thence southwest to Fairlee.**

Stillpond, at east side of F. H. Harper's store; iron post stamped "79 Balto"	Feet. 78. 813
Hanesville, at road west, in front of post office; iron post stamped "62 Balto"	62. 167

**CHESTERTOWN (TOLCHESTER 30') QUADRANGLE.**

[Latitude 39°-39° 15'; longitude 76°-76° 15'.]

**From Fairlee southeast via Chestertown and Starkley Corner to Roberts.**

Fairlee, 60 feet east of S. D. Seaverton's boot and shoe shop, in large rock; aluminum tablet stamped "78 Balto"	78. 543
Chestertown courthouse; aluminum tablet stamped "22 Balto"	21. 918
Starkley Corner, at northeast corner of crossroads; iron post stamped "54 Balto"	54. 794

**From Fairlee south to Edesville, thence southeast to Centerville, thence east to Roberts.**

Edesville, just south of entrance to store of W. L. Sutton; iron post stamped "24 Balto"	24. 805
Hadaway's store, northeast of entrance, just under window; iron post stamped "18 Balto"	18. 738
Centerville, in southeast corner of courthouse yard, across path from State survey meridian monument; iron post stamped "60 Balto"	60. 70

**ST. MICHAELS (CHOPTANK 30') QUADRANGLE.**

[Latitude 38° 45'-39°; longitude 76°-76° 15'.]

**From Centerville south to Easton, thence east to Tanyard.**

Wye Mills, corner of Anthony's store, at the end of piazza; iron post stamped "21 Balto"	22. 121
Longwoods, at northeast corner of Callahan's store; iron post stamped "50 Balto"	51. 249
Easton, at south end of second step of courthouse; aluminum tablet stamped "37 Balto"	37. 545

**OXFORD (CHOPTANK 30') QUADRANGLE.**

[Latitude 38° 30'-38° 45'; longitude 76°-76° 15'.]

**From Easton south to Trappe.**

Trappe, corner of Easton Road and West Street, southeast corner of store of Clark & Kirby, in foundation stone; aluminum tablet stamped "55"	54. 746
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**From Aireys northwest to Cambridge, thence southeast to Bucktown.**

Cambridge, in southwest corner of courthouse, about 1 foot above ground; bronze tablet stamped "19 Balto"	20. 160
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**From Smithville northeast to Milton, thence southeast to Little Blackwater River.**

Milton (Woolford post office), north of road opposite road fork to Gum Swamp, in front yard of Baptist Church; iron post stamped "6 Adj"	5. 622
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## DENTON QUADRANGLE.

[Latitude  $38^{\circ} 45'-39^{\circ}$ ; longitude  $75^{\circ} 45'-76^{\circ}$ .]

From Goldsboro southwest along Pennsylvania R. R. to Queen Anne, thence south along highway to Griffin, thence east to Hobbs.

	Feet.
Greensboro, 10 feet north of station, at edge of platform; iron post stamped "40 Balto"	40. 817
Ridgely, in lawn at northeast corner of Pennsylvania R. R. station, 4 feet from platform; iron post stamped "69 Adj. 1903"	69. 070
Hillsboro, at northeast corner of H. Williams's dwelling, on north foundation wall; aluminum tablet stamped "47 Adj. 1903"	46. 599
Griffin, at northeast corner of yard to W. H. Robinson's dwelling; iron post stamped "42 Adj. 1903"	41. 376
Denton, in courthouse yard, on top of south meridian post; bronze tablet	37. 916
Denton, on southeast corner of courthouse; aluminum tablet stamped "43 Adj. 1903"	42. 703

From Hobbs southwest along highway to Tanyard.

Williston, 30 feet east of southeast corner of store; iron post stamped "24 Adj. 1903"	24. 209
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From Tanyard east along highway to American Corners, thence north to Hobbs.

Tanyard, 1.5 miles west of, west end of Dover Bridge, at west end of C. H. Sinclair's house, north of road; iron post stamped "4 Balto"	4. 789
Newton, 50 feet east of store, at corner of crossroads; iron post stamped "40 Adj. 1903"	39. 678
Fowling Creek, in yard to W. H. Collins's dwelling, 50 feet west of M. E. Church; iron post stamped "48 Adj. 1903"	48. 567
American Corners, at crossroads, in corner of field in front of store; iron post stamped "55 Adj. 1903"	55. 107
Concord, 10 feet north of store, at southeast corner of yard to C. E. Todd's dwelling; iron post stamped "55 Adj. 1903"	55. 723
Hobbs, in southwest corner of yard to H. C. Hobbs's dwelling, 50 feet northeast of Hobbs station; iron post stamped "55 Adj. 1903"	54. 914

## HARRINGTON QUADRANGLE.

[Latitude  $38^{\circ} 45'-39^{\circ}$ ; longitude  $75^{\circ} 30'-75^{\circ} 45'$ .]

From Hobbs north along highways via Burrsburg and Whiteleysburg to Greensboro.

Burrsburg, 500 feet north of forks of road east, west of street in front of William Outtens's blacksmith shop; iron post stamped "58 Adj. 1903"	58. 545
Whiteleysburg, at northeast corner of Anthony's store; iron post stamped "63 Balto"	63. 175

## HURLOCK QUADRANGLE.

[Latitude  $38^{\circ} 30'-38^{\circ} 45'$ ; longitude  $75^{\circ} 45'-76^{\circ}$ .]

From Tanyard southeast to Federalsburg, thence southwest to Williamsburg, thence south to Rhodesdale, thence southwest to Linkwood.

Linchester, at west side of J. F. Tegar's store; iron post stamped "18 Balto"	18. 783
Federalsburg, at T. O. Jefferson's store; iron post stamped "10 Balto"	10. 621
Linkwood, in grass plat at intersection of roads at station; iron post stamped "21 Balto"	22. 284

**From Rhodesdale southeast to Brookview, thence north to Eldorado, thence east to Galestown.**

Rhodesdale, at northwest corner of post office; iron post stamped "40 Adj"	Feet. 40. 619
Brookview, at southeast corner of W. D. Murphy's store, 300 feet west of Marshyhope Creek; iron post stamped "24 Adj"	24. 105

#### SEAFORD QUADRANGLE.

[Latitude  $38^{\circ} 30' - 38^{\circ} 45'$ ; longitude  $75^{\circ} 30' - 75^{\circ} 45'$ .]

**From State line near Oak Grove, Del., southwest along highways to Reliance, thence southeast to State line.**

Oak Grove, 1.1 miles south of, 10 feet east of highway, in root of cedar tree; nail marked "46"	45. 88
Winwright School, in front of, in root of tree; nail marked "41"	40. 85
Winwright School, 0.1 mile south of, at crossroads, in root of oak tree; nail marked "38"	38. 08

**From Galestown north via Oak Grove to Federalsburg.**

Reliance, 1 mile south of, on top of Delaware-Maryland State line monument; cross mark	42. 94
Reliance, at northeast corner of crossroads, at southwest corner of Mrs. Phillips's house, opposite former post office; iron post stamped "45 Adj"	45. 064
Oak Grove, 0.25 mile west of, on top of Delaware-Maryland State line monument, 10 feet north of railroad; cross mark	47. 75
Oak Grove, in front of station; top of rail	46. 4

#### CRAPO QUADRANGLE.

[Latitude  $38^{\circ} 15' - 38^{\circ} 30'$ ; longitude  $76^{\circ} - 76^{\circ} 15'$ .]

**From Bucktown southeast to Bestpitch.**

Bucktown, in brick foundation at southwest corner of former post office; iron post stamped "4 Balto"	5. 310
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**From Bucktown southwest to Golden Hill.**

Bucktown, 4.5 miles west of, at southeast corner of road forks, 7 feet south of letter-box post of W. T. Elzy; iron post stamped "7 Adj"	6. 739
Gum Swamp, north of road, at wood-road fork north, opposite church and schoolhouse; iron post stamped "3 Adj"	3. 321
Golden Hill, at road fork at Louis Keene's store; iron post stamped "3 Adj"	2. 812

**From Golden Hill southeast to Wingate.**

Lakesville, 0.5 mile north of, 150 feet south of Nazareth M. E. Church, in northeast corner of schoolhouse foundation; bronze tablet stamped "3 Adj"	2. 589
Wingate, at junction of roads 100 yards north of post office, at southeast corner of road, just outside of fence in front of Mr. Wingate's house; iron post stamped "3 Adj"	2. 828

#### DRUM POINT QUADRANGLE.

[Latitude  $38^{\circ} 15' - 38^{\circ} 30'$ ; longitude  $76^{\circ} 15' - 76^{\circ} 30'$ .]

**From Golden Hill northwest to Smithville.**

Smithville, east of road in front of schoolhouse; iron post stamped "6 Adj"	5. 886
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## NANTICOKE QUADRANGLE.

[Latitude  $38^{\circ} 15'$ - $38^{\circ} 30'$ ; longitude  $75^{\circ} 45'$ - $76^{\circ}$ .]

From Bestpitch east via Drawbridge to Quantico.

Drawbridge, in brick foundation on south side of small store; bronze tablet stamped "3 Balto" ----- Feet. 4.130

From Rhodesdale south to Vienna, thence southeast via Mardela Springs to Quantico.

Vienna, in northwest face near north corner of brick house owned in 1902 by S. G. LeCompte, 60 feet southwest of road, 180 feet northwest of Nanticoke River, in foundation; bronze tablet stamped "14" ----- 14.288

Mardela Springs, 15 feet east of post-office building, 30 feet south of road, in grounds of J. L. Langdale; iron post stamped "27" ----- 26.685

From Quantico south-southwest to Whitehaven, thence east to Loretto.

Whitehaven, southwest side of house owned in 1902 by William Dolby, in brick foundation; bronze tablet stamped "5" ----- 4.576

## SALISBURY QUADRANGLE.

[Latitude  $38^{\circ} 15'$ - $38^{\circ} 30'$ ; longitude  $75^{\circ} 30'$ - $75^{\circ} 45'$ .]

From Delmar south along New York, Philadelphia &amp; Norfolk R. R. to Loretto.

Delmar, in northwest corner of Delmar National Bank; aluminum tablet stamped "Balto 56" ----- 57.249

Salisbury, in southwest corner of front face of courthouse; aluminum tablet stamped "22 Balto" ----- 23.200

Eden, in northwest corner of foundation of post office; aluminum tablet stamped "29 Balto" ----- 29.968

From Eden east to Longridge.

Longridge, at southeast corner of former post office; iron post stamped "50 Balto" ----- 50.727

From Quantico east to Salisbury.

Quantico, in corner of fence at Episcopal Church north of Quantico Street; iron post stamped "19 Balto" ----- 20.227

## PRINCESS ANNE QUADRANGLE.

[Latitude  $38^{\circ}$ - $38^{\circ} 15'$ ; longitude  $75^{\circ} 30'$ - $75^{\circ} 45'$ .]

From Loretto south along New York, Philadelphia &amp; Norfolk R. R. to Kingston.

Princess Anne, in front face of Somerset Savings Bank on Main street; bronze tablet stamped "17 Balto" ----- 18.130

Westover, at intersection of New York, Philadelphia & Norfolk R. R. and road leading to Cottage Grove, opposite M. E. Miles's store; iron post stamped "15 Balto" ----- 14.156

From Longridge south to Pocomoke City.

Whiteburg, at southeast corner of old store, inside of J. S. P. White's yard, in front of house; iron post stamped "30 Balto" ----- 29.674

From Westover east via Pocomoke City to Goodwill.

Pocomoke City, in doorsill of Pocomoke City Hotel, corner Front and Market streets; aluminum tablet stamped "8 Balto" ----- 7.523

## DEAL ISLAND QUADRANGLE.

[Latitude  $38^{\circ} 38' 15''$ ; longitude  $75^{\circ} 45' 76''$ .]

From Kingston southwest to Hopewell.

Marion, at southeast corner of A. Davis's drug store on Main street,  
60 feet east of railroad and 25 feet north of station; iron post  
stamped "7 Balto"-----

Feet.  
7.417

## CRISFIELD QUADRANGLE.

[Latitude  $37^{\circ} 45' - 38^{\circ}$ ; longitude  $75^{\circ} 45' - 76^{\circ}$ .]

At Crisfield.

Crisfield, J. W. Dishatoon's grocery store, face of doorsill; aluminum  
tablet stamped "5 Balto 1900" (elevation determined from Coast  
and Geodetic Survey tide gage)-----

4.920

## SNOW HILL QUADRANGLE.

[Latitude  $38^{\circ} 38' 15''$ ; longitude  $75^{\circ} 15' - 75^{\circ} 30'$ .]

From Franklin City northwest to Goodwill, thence northeast to Snow Hill,  
thence northwest via Coldbourne to Longridge.

Franklin City, 1 mile north of, on outskirts of Greenbackville, south-  
east corner of Virginia-Maryland boundary stone; marked "7"-----

6.72

Klej Grange, at intersection of roads from Mattaponi Landing and  
Snow Hill, on property of Drexel heirs, opposite former post office;  
iron post stamped "30 Balto"-----

29.283

Snow Hill, in sill of front entrance porch of courthouse, on northeast  
side of steps; tablet stamped "21 Balto"-----

20.552

Colbourne, opposite former post office, in northwest corner of J. E.  
Dickerson's front yard; iron post stamped "40 Balto"-----

40.046

## PITTSVILLE QUADRANGLE.

[Latitude  $38^{\circ} 15' - 38^{\circ} 30'$ ; longitude  $75^{\circ} 15' - 75^{\circ} 30'$ .]

From Snow Hill northeast to Berlin.

Newark, at southeast corner of Quenponco station of Philadelphia,  
Wilmington & Baltimore R. R.; iron post stamped "35 Balto"-----

35.151

From Wango north to Melson, thence west to Delmar.

Parsonsburg, at northeast corner of Riggins' grocery store, 100 feet  
north of road; iron post stamped "80"-----

79.651

From Melson east via Twilley to Campbell.

Twilley, in yard at northwest corner of C. W. Lynch's store; iron  
post stamped "40 Balto"-----

39.978

## OCEAN CITY QUADRANGLE.

[Latitude  $38^{\circ} 15' - 38^{\circ} 30'$ ; longitude  $75^{\circ} - 75^{\circ} 15'$ .]

From Campbell south to Berlin, thence west to Wango.

Campbell, inside of lot on the northwest intersection of roads, west  
of F. S. Campbell's store; iron post stamped "25 Balto"-----

24.775

Berlin, on southwest corner of front step of Exchange Savings Bank;  
bronze tablet stamped "45 Balto"-----

44.878

**Belair, Elkton, Havre de Grace, and Parkton quadrangles.****BALTIMORE, CECIL, AND HARFORD COUNTIES.**

The leveling was done in Elkton quadrangle in 1896 by O. L. Pettibone; in Havre de Grace quadrangle in 1899 by C. M. Smith; in Belair quadrangle in 1899 by Smith and George Bailey; in 1900 by J. W. Hodges; and in 1910 by C. H. Semper; in Parkton quadrangle in 1899 by Smith and Bailey; and in 1900 by Hodges, J. S. B. Daingerfield, and Hargraves Wood.

**ELKTON QUADRANGLE.**

[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $75^{\circ} 45' - 76^{\circ} .$ ]

**From Bohemia Mills north to Elkton.**

Chesapeake, entrance to George R. Ross's store, in north end of door-sill of hall; bronze tablet stamped "17"	Feet.
	17. 800
Elkton, on top of step of south entrance to courthouse; copper bolt marked "U.S.G.S. b. m. 28 ft."	28. 438
Elkton, in doorsill of railroad station; copper bolt	30. 00

**From Elkton north to Appleton, thence west via Fair Hill<sup>1</sup> to Calvert, thence south via Zion and Bayview<sup>1</sup> to Northeast post office, thence southwest to Charlestown.**

Strayhorn's mills, 2 miles northwest of Appleton, southeast corner of stone wall, foundation of wagon shed; bronze tablet stamped "173"	173. 813
Fairview, 3 miles east of, in front of Mahon's barn; top of land-boundary stone in center of road	410. 40
Calvert, in churchyard; top of land-boundary stone	441. 77
Calvert, in northwest corner of John E. Crother's store; bronze tablet stamped "441"	441. 720
Bayview, southwest corner of crossroads, foundation of W. L. Jones's boarding house; bronze tablet stamped "385"	385. 300
Bayview, 1.5 miles south of, on land-boundary stone west of road; highest point	204. 45
Leslie, in front of Baltimore & Ohio R. R. station; top of rail	143. 4
Charlestown station, 50 feet north of, in northwest corner of northwest cornerstone of cattle guards; copper bolt stamped "41"	41. 540
Charlestown, 390 feet south of railroad station, northeast corner of box culvert, on coping stone; copper bolt (Philadelphia, Baltimore & Washington R. R. b. m. 50)	41. 20

**HAVRE DE GRACE QUADRANGLE.**

[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $76^{\circ} - 76^{\circ} 15'.$ ]

**From Aberdeen northwest to Carsins, thence north via Darlington to Conowingo.**

Aberdeen, at east end of box culvert at milepost 65; copper bolt (Philadelphia, Baltimore & Washington R. R. b. m. 62)	67. 60
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<sup>1</sup> Cross lines were run from Bayview via Pleasant Hill to Cowentown and from Pleasant Hill to Fair Hill, but on these no standard bench marks were set.

Aberdeen, in upper foundation stone of First National Bank of Aberdeen, southeast corner; aluminum tablet stamped "79 Balto"-----	Feet. 80. 107
Darlington, 3 miles south of, in east foundation stone of Prospect schoolhouse; bronze tablet stamped "345 Balto"-----	346. 113
Conowingo, southwest bridge seat of county bridge; copper bolt (Philadelphia, Baltimore & Washington R. R. b. m. 11)-----	69. 11
Conowingo, in northwest corner of post office, in foundation stone 2 feet from ground; aluminum tablet stamped "76 Balto"-----	76. 944

**From Conowingo east to Rising Sun, thence south to Principio.**

Porter Bridge, in foundation stone 3 feet above ground, in southwest corner of J. W. Richard's mill; aluminum tablet stamped "89 Balto"-----	88. 987
Rising Sun, north side of Worthington's store, in foundation stone, 1 foot above ground; aluminum tablet stamped "387 Balto"-----	387. 265

**From Port Deposit northeast via Principio to Zion.**

Port Deposit, 0.9 mile south of, on northeast bridge seat of bridge 27; copper bolt (Pennsylvania R. R. b. m. 3)-----	5. 63
Port Deposit, in northwest corner foundation stone of Port Deposit post office and town hall building; aluminum tablet stamped "16 "Balto"-----	16. 431
Principio, in southwest corner of foundation stone of H. R. Lynch's store, 2.5 feet from ground; aluminum tablet stamped "302 Balto"-----	302. 327

**From Principio south to Principio Furnace, thence southwest to Havre de Grace.**

Principio Furnace, 0.7 mile west of post office, stone monument east of road at southwest corner of property owned by W. H. Currier; marked on fence post "211"-----	212. 00
Principio station, Philadelphia, Baltimore & Washington R. R., in doorsill; copper bolt (railroad b. m. 53)-----	67. 430
Havre de Grace, in southwest back wall of Susquehanna River Bridge; copper bolt (Philadelphia, Baltimore & Washington R. R. b. m. 57)-----	28. 92
Havre de Grace, in southwest corner of Philadelphia, Baltimore & Washington R. R. station, about 8 feet above tracks; aluminum tablet stamped "35 Balto"-----	35. 90

**BELAIR QUADRANGLE.<sup>1</sup>**[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $76^{\circ} 15' - 76^{\circ} 30'$ .]**From Pylesville north along Pennsylvania R. R. to Cardiff.**

Pylesville, in northeast corner of Pyles Mill, 4 feet above ground, in foundation stone; aluminum tablet stamped "356"-----	357. 528
Pylesville, in front of station, top of rail; b. m.-----	366. 7
Whiteford, 150 feet south of station, 30 feet north of road crossing, in west guard rail over culvert; top of of north bolt marked "U. S. B. M. 504"-----	503. 76
Whiteford, in front of station; top of rail-----	500. 4
Cardiff, in front of station; top of rail-----	418. 4

<sup>1</sup> For elevations in Belair quadrangle in Pennsylvania see Bull. 515.

**From Darlington west to Scarboro, thence south to Fountain Green.**

	Feet.
Allibone (Sandy Hook), 0.5 mile north of, in southeast corner of Mrs. Webster's spring house, 3 feet above ground; aluminum tablet stamped "209 Balto"-----	210. 899
Belair, in steps of courthouse; aluminum tablet stamped "394 Balto." (Elevation by a spur west from Fountain Green)-----	395. 500
<b>From Bradenbaugh along highway southeast to Federal Hill, thence northeast to point near Whiteford, then southeast via Macton to Scarboro.</b>	
Federal Hill, in southeast corner of foundation stone of J. F. Devoe's house, opposite former post office; aluminum tablet stamped "590 Balto"-----	591. 227
Pylesville, in foundation stone at northeast corner of Pyle's mill, about 4 feet above ground; aluminum tablet stamped "356 Balto"-----	357. 528
Macton, 0.1 mile south of, in foundation stone at northwest corner of J. M. McNabb's house, 4 feet above ground; aluminum tablet stamped "249 Balto"-----	250. 907

**From Taylor east along highway via High Point to Hickory.**

High Point, in foundation stone on north side of High Point schoolhouse; aluminum tablet stamped "536 Balto"-----	536. 714
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**PARKTON QUADRANGLE.**[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $76^{\circ} 30' - 76^{\circ} 45'$ .]**From Bentley east along highway to Bradenbaugh.**

Bentley, 1,300 feet south of, in northwest wing wall of bridge 53; copper bolt (Pennsylvania R. R. b. m. 33)-----	501. 820
Bentley, 0.5 mile north of, in northwest corner of Bentley Methodist Church; bronze tablet stamped "607 Balto" (reported out of place December 11, 1907)-----	607. 729
Trump, in north foundation of M. S. Van Trump's store, at edge of cellar; bronze tablet stamped "716 Balto"-----	716. 043
Shane, northwest corner of schoolhouse lot; stone marked "709"-----	709. 00
Bradenbaugh, in stone foundation of former post office, just to right of cellar entrance; bronze tablet stamped "Balto 604"-----	604. 879

**From Sparks east along highway to Taylor.**

Sparks (Philopolis), 0.1 mile east of station, in southwest corner of Union Chapel, 1 foot above ground; bronze tablet stamped "Balto 268"-----	268. 214
Taylor, in southwest corner of S. Phelps's blacksmith shop, about 2 feet above ground; bronze tablet stamped "583 Balto"-----	583. 654

**From Monkton west to Mount Carmel and return.**

Monkton, 0.5 mile north of, in center of east end of railroad box culvert; Pennsylvania R. R. b. m. 26-----	317. 53
Mount Carmel, in foundation stone of porch at northeast corner of Miller's store and post office; bronze tablet stamped "674 Balto"-----	673. 812

**From Sparks north to Bentley.<sup>1</sup>**

Whitehall, in northwest corner of post office, 2 feet above ground; bronze tablet stamped "348 Balto"-----	347. 979
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<sup>1</sup> Based on Pennsylvania R. R. elevation plus 0.39 foot.

## Annapolis, Baltimore, Ellicott, Laurel, Relay, and Westminister quadrangles.

## ANNE ARUNDEL, BALTIMORE, CARROLL, AND PRINCE GEORGES COUNTIES.

The elevations in the following list are based on various bench marks of the Baltimore & Ohio and the Pennsylvania railroads in this vicinity.

The leveling was done in Annapolis, Baltimore, Ellicott, and Westminister quadrangles in 1902 by W. C. Palmer and W. G. Coates; in Laurel and Relay quadrangles in 1904 and 1905 by J. W. Hodges and Ralph Hutchins; and in Laurel quadrangle in 1906 by G. S. Buckley.

## BALTIMORE QUADRANGLE.

[Latitude  $39^{\circ} 15'$ - $39^{\circ} 30'$ ; longitude  $76^{\circ} 30'$ - $76^{\circ} 45'$ .]

## At Catonsville.

Catonsville, State Insane Asylum, east face of southeast wing; bronze tablet stamped "396 Balto" -----	Feet: 395. 800
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## At Pikesville.

Pikesville, main building of Soldiers' Home, just east of main entrance, in southeast corner of foundation wall; bronze tablet stamped "516 Balto" -----	515. 918
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From Sherwood east along highways via Towson to a point 4.6 miles east, thence via Lavender Hill (Parkville) to Lauraville.

Sherwood, 100 feet south of station, in west end of east center of arch culvert; copper bolt (Pennsylvania R. R. b. m.) -----	284. 15
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Towson, on southeast cornerstone of courthouse porch; bronze tablet stamped "465 Balto" -----	465. 221
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Parkville, Kelchensten's store and post office, northeast corner of foundation wall; bronze tablet stamped "343 Balto" -----	343. 278
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Lauraville, near northeast corner of city boundary, J. C. Mann's wagon shop, on south end of doorsill; chiseled square-----	188. 83
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From Timonium east along highways to Bosley, thence southwest to Towson.

Timonium, 0.5 mile south of, 800 feet north of milepost 11, in west end of culvert; copper bolt (Pennsylvania R. R. b. m. 14) -----	357. 09
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Bosley, on southeast corner of Valley Hotel; bronze tablet stamped "223 Balto." -----	222. 825
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## At Mount Washington.

Mount Washington, bridge 5, over Western Run, at northeast side, on bridge seat; bronze tablet stamped "198 Baltimore 1900" -----	198. 744
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From point 0.4 mile north of Reistertown east along highways via Shawan to Cockeysville.

Shawan, F. G. Wheeler's store and residence, on southeast corner of foundation wall; bronze tablet stamped "439 Balto" -----	438. 948
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Cockeysville, 150 feet southeast of signal station, on northeast corner of culvert; copper bolt (Pennsylvania R. R. b. m. 17) -----	278. 68
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## ELLICOTT QUADRANGLE.

[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $76^{\circ} 45' - 77^{\circ}$ .]

From Ellicott City along Baltimore & Ohio R. R. and highways via Hollofield and Rockdale to Pikesville.

	Feet.
Ellicott City, southwest corner of courthouse (south face); aluminum tablet stamped "233 Balto"	233. 242
Oella, at W. J. Dickey & Son's woolen mills, west of tracks, south abutment of Baltimore & Ohio R. R. bridge over Patapsco River; chisel mark	149. 88
Oella, 1.6 miles northwest of, on southeast corner of west wing wall of Union Dam; copper bolt, stamped "187"	187. 609
Hollofield, 1.1 miles northwest of, on Quaker Hill, public school No. 2, on southwest corner of stone doorsill; chiseled shelf	456. 30

From Rockdale west along highways to Woodstock, thence north to Reisters-town.

Woodstock College, west of main entrance, over small window, on center stone; aluminum tablet stamped "415 Balto"	414. 987
Reisterstown, northwest corner stone of Russel's store; aluminum tablet stamped "735 Balto"	735. 258

From Woodstock southwest along highways to West Friendship, thence north via Sykesville to Gamber, thence east to point 3.8 miles south of Reisters-town.

West Friendship, just west of post office, on milestone 19 north of Frederick pike; bronze tablet stamped "476 Balto"	476. 023
Sykesville, in second step of Sykesville Bank; bronze tablet stamped "383 Balto"	382. 795
Gamber, on southeast corner of Mount Pleasant M. E. Church; bronze tablet stamped "606 Balto"	605. 568

## WESTMINSTER QUADRANGLE.

[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $76^{\circ} 45' - 77^{\circ}$ .]

From Reisterstown north along highways via Woodensburg and Fowblesburg to Hampstead, thence east to Mount Carmel.

Woodensburg, northeast corner of Methodist Church; top of corner stone, marked "A. D. 1888"	703. 16
Fowblesburg station, Argile's store and post office, in east foundation wall, opposite center of building; bronze tablet stamped "703 Balto"	702. 771
Hampstead, residence owned by C. W. Murray, in southwest corner of foundation wall; bronze tablet stamped "913 Balto"	913. 271
From Hampstead along highways to Melrose, thence east to Rockdale, thence south to Mount Carmel.	

Manchester, 0.5 mile northwest of, just over center of stone culvert at first stream to right; square cut on stone	857. 37
Rockdale, on northwest corner of paper mill; bronze tablet stamped "510 Balto"	508. 504
From Woodensburg southwest along highways to Finksburg, thence northwest to Westminster.	
Westminster, on fifth step of main entrance to courthouse; bronze tablet stamped "774 Balto"	774. 337

## ANNAPOLIS QUADRANGLE.

[Latitude  $38^{\circ} 45' - 39^{\circ}$ ; longitude  $76^{\circ} 15' - 76^{\circ} 30'$ .]At Annapolis.<sup>1</sup>

Annapolis, at Naval Academy, 8 feet southwest of observatory building; top of stone pier (C. & G. S. b. m. "Obs")-----	Feet.
	23.012
Annapolis, corner of State House; aluminum tablet stamped "58 Balto" -----	57.546

## RELAY QUADRANGLE.

[Latitude  $39^{\circ} - 39^{\circ} 15'$ ; longitude  $76^{\circ} 30' - 76^{\circ} 45'$ .]

## At Winans.

Winans, 780 feet south of Pennsylvania R. R. bench mark No. 101, east side of Baltimore & Ohio R. R. bridge-----	36.766
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From Relay east along highway to Pumphrey, thence along Maryland Electric Ry. to Elvaton, thence southwest along highway to Bowie.

Pumphrey, in center of north foundation wall of station and store building; aluminum tablet stamped "51 Adj. 1903"-----	51.153
Glenburnie, 1.5 miles northeast of highway bridge over Furnace Branch, on top of northwest retaining wall; aluminum tablet stamped "8 Adj. 1903"-----	7.617
Glenburnie, on northwest abutment of Furnace Branch bridge; cut (Md. Geol. Survey b. m. 9)-----	7.511
Elvaton, in corner of dwelling 50 feet west of store; copper nail (Md. Geol. Survey b. m. 12 B)-----	75.979
Elvaton post office, 100 feet south of station, in north foundation of water tank; aluminum tablet stamped "69 Adj. 1903"-----	69.163
Benfield, in southeast foundation wall of D. L. Stone's house; aluminum tablet stamped "110 Adj. 1903"-----	109.197
Waterbury, 0.5 mile north of, in east wall of railway bridge over highway; aluminum tablet stamped "92 Adj. 1903"-----	91.504
Conaways, 0.3 mile northwest of highway bridge over Little Patuxent River, in southeast abutment wing wall; aluminum tablet stamped "53 Adj. 1903"-----	52.431
Conaways, 4 miles northwest of Philadelphia, Baltimore & Washington R. R. bridge over Little Patuxent River, in south abutment; copper bolt -----	74.945

At Jones Station on Maryland Electric Ry.<sup>2</sup>

Jones, in southeast corner of foundation of Mr. Jones's warehouse; aluminum tablet stamped "69 Adj. 1903"-----	68.100
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## At Odenton and Severn stations on Philadelphia, Baltimore &amp; Washington R. R.

Odenton, inside yard at station, northwest corner; iron post stamped "160 Adj. 1903"-----	160.089
Severn, 20 yards east of station, 410 feet south of milepost 110, east of track; iron post stamped "167 Adj. 1903"-----	166.820

<sup>1</sup> Coast and Geodetic Survey bench mark "Woods" was checked by two independent lines from bench mark "Obs" and appears to have settled 0.34 foot; the doorstep was badly out of plumb.

<sup>2</sup> Set from adjusted Maryland State Geological Survey levels.

## At Dorsey.

Dorsey, east of railroad, south of highway, in west foundation wall,  
at northwest corner of store; aluminum tablet stamped "121 Adj.  
1903"-----

Feet.  
120. 500

## LAUREL QUADRANGLE.

[Latitude  $39^{\circ} 30' 15''$ ; longitude  $76^{\circ} 45' 77''$ .]

## At Bowie.

Bowie, in south foundation wall of Imperial Hotel; aluminum tablet  
stamped "154 Adj. 1903"-----  
Bowie, on stone east of tower east of Philadelphia, Washington &  
Baltimore R. R. track; copper bolt-----

153. 820  
148. 600

Along Baltimore & Ohio R. R.<sup>1</sup>

Laurel, on southwest corner of Main Street and Washington Avenue,  
in east face at northeast corner of large brick store building, 3 feet  
above ground; aluminum tablet stamped "156 Adj. 1913."-----  
Waterloo, at northeast corner of crossroads, in southeast corner of  
south foundation wall of house; aluminum tablet stamped "232  
Adj. 1903"-----  
Annapolis Junction, overhead bridge, in east foundation wall of north  
abutment; copper bolt-----  
Annapolis Junction, warehouse of Alphonso Latchford, in southeast  
face of central brick foundation pier; aluminum tablet stamped  
"171 Adj."-----

155. 484  
231. 551  
174. 540  
170. 749

## From Ellicott City southwest along highway to Clarksville.

Columbia, in south foundation wall of post-office building; aluminum  
tablet stamped "402 Adj. 1904"-----  
Elioak, in southeast corner of foundation wall of store and post  
office; aluminum tablet stamped "433 Adj. 1904"-----  
Clarksville, in southeast corner of stone building, store and post  
office, 2 feet above ground; aluminum tablet stamped "487 Adj  
1904"-----

402. 378  
432. 697  
486. 700

From Ammendale west along highway to Fairland, thence north to Burtonsville,  
thence northwest to Ashton, thence northeast to Clarksville.

Ammendale, between Baltimore & Ohio R. R. tracks, opposite mile-  
post marked "Baltimore 26 miles;" vertical rail section-----  
Ammendale, in southeast corner of Lasalle Academy building;  
aluminum tablet stamped "182"-----  
Ammendale, 3.2 miles northwest of, at main crossroads in woods,  
15 feet east of roads; iron post stamped "279"-----  
Fairland, 50 feet east of road, southwest corner of frame house, in  
foundation; aluminum tablet stamped "414"-----  
Burtonsville, 0.3 mile northwest of, northwest corner of Liberty  
Grove Church; aluminum tablet stamped "482"-----  
Spencerville, 0.1 mile west of, 60 feet south of road, 2 feet from  
northwest corner of house, in stone; aluminum tablet stamped  
"516 B"-----

137. 839  
181. 970  
278. 918  
413. 896  
481. 889  
516. 364

<sup>1</sup> Bench marks set in 1905 and rechecked in 1906.

Ashton, 2.4 miles northeast of, Snell Bridge over Patuxent River, at south end of west abutment, in bridge seat; aluminum tablet stamped "294"-----Feet. 293.476

### Washington quadrangle.

#### MONTGOMERY COUNTY.

The elevations in the following list were determined by spirit leveling extended from the precise-level line run from Great Falls, Md., to Lock 8 along the Chesapeake & Ohio Canal. They are based upon Coast and Geodetic Survey bench mark F at Great Falls, the bottom of a square cut on the west wall of Lock 20, 0.2 meter west of edge and 1.65 meters south of north gate. The accepted elevation of this mark is 166.592 feet above mean sea level. The main line along the Chesapeake & Ohio Canal below Lock 8 was leveled twice with a Y level in one direction and once in the opposite direction with an alidade used as a level. Spur lines were run with a telescopic alidade; single to determine water-surface elevations, and double where gages were established.

The leveling was done in December, 1910, by C. E. Cooke.

#### WASHINGTON QUADRANGLE.<sup>1</sup>

[Latitude 38° 45'-39° ; longitude 76° 45'-77° 15'.]

**From Lock 8 southeast along Chesapeake & Ohio Canal to Chain Bridge (double run level line).**

Lock 8, on north wall, on north capstone of east end; bronze tablet stamped "69 Prim. Trav. Sta. No. 3"-----	Feet. 69.034
Lock 7, 0.4 mile southeast of, 150 feet southeast of little cottage with green blinds, 20 feet south of towpath, 3 feet above ground, in arched root of tree; copper nail-----	53.56
Lock 7, 0.9 mile southeast of, 10 feet west of towpath, in stump; copper nail-----	53.10
Lock 7, 1.1 miles southeast of, in stump; copper nail-----	54.16
Lock 5, 1,000 feet south of, 20 feet west of towpath, in small stump; copper nail-----	41.55

**Elevations along Potomac River determined by spur lines (double run where gages are connected with).**

Lock 14, 31 feet upstream from gage, on east bank of river, on rock; chiseled square-----	49.79
Lock 9, 0.2 mile southeast of, on west side of towpath, in stub of small tree; copper nail-----	69.49
Lock 8, 6.2 feet upstream from gage on east bank of river, in limb of tree; copper nail-----	50.61
Lock 7, opposite, on east bank of Potomac River, 6.5 feet downstream from gage, on rock; chiseled mark and painted circle-----	41.42
Lock 6, 0.4 mile northwest of, on east bank of river, 8 feet upstream from gage No. 3, in root of tree; copper nail-----	41.57

<sup>1</sup> For elevations in Washington quadrangle in Virginia see Bull. 562.

## Washington quadrangle.

## PRINCE GEORGES COUNTY.

The elevations in the following list are based upon bench marks of the Pennsylvania R. R. at Bennings, D. C., and bench mark G of the Coast and Geodetic Survey at Alexandria, Va.

The leveling was done in 1912 by R. C. Seitz.

## WASHINGTON QUADRANGLE.

From Bennings, D. C., north to Chesapeake Beach R. R., thence east along said railroad 5.5 miles to Ritchie, thence south along highways through Forestville and Camp Springs to Clinton, thence west through Friendly to Broad Creek, thence north and west to Alexandria, Va.

NOTE.—An error of 0.44 foot was distributed in this line.

Milepost marked "C. J. 3 M," about 700 feet east of, in support of overhead bridge; copper nail painted "150.2"	Feet. 150.15
Milepost marked "C. J. 4 M," in south side at base; spike painted "158.2"	158.08
Milepost marked "C. J. N. 5 M"; spike in base painted "190.8"	190.73
Chesapeake Junction, 2.8 miles east of, railroad bridge over private road, in east end of south guard rail; copper nail painted "163.7"	163.62
Ritchie, in front entrance to general store; aluminum tablet stamped "Prim. Trav. Sta. No. 2, 165, 1912, SZ"	165.08
Ritchie, 0.7 mile south of, west of road and about 50 feet north of gate, in stump of fallen tree; copper nail painted "261.9"	261.78
Forestville, in southwest angle of crossroads, in root of maple tree; spike painted "280.1"	279.90
Forestville, 1.75 miles south of, in west coping of small concrete culvert; aluminum tablet stamped "252, 1912, SZ"	251.891
Forestville, 2 miles south of, in southwest angle of crossroads, in root of oak tree; copper nail painted "268.1"	267.88
Camp Springs, 0.75 mile northeast of, at T road west, 25 feet west of house, in top of stump; copper nail painted "276.8"	276.58
Camp Springs, southwest corner of crossroads, in coping of culvert; aluminum tablet stamped "Prim. Trav. Sta. No. 3, 266, 1912, SZ"	265.56
Camp Springs, 1.5 miles south of, 200 feet north of T road east, in west coping of concrete culvert; chiseled square painted "248.9"	248.64
Clinton, 300 feet north of crossroads, in coping at north end of concrete culvert; aluminum tablet stamped "245, 1912, SZ"	244.46
Clinton, 0.8 mile west of, in west end of box culvert; spike painted "238.9"	238.68
Clinton, 2 miles southwest of, in north angle of T road northwest, in root of small cedar tree; copper nail painted "246.1"	245.83
Clinton, 2.8 miles west of, just east of Tinkers Creek, on south side of road, in top of fence post; copper nail painted "136.8"	136.28
Friendly, 1.5 miles northeast of, on north side of road at T road north, about 35 feet northeast of mail box, in small cedar near fence; copper nail painted "239.8"	239.26
Friendly, 1.5 miles northeast of, in triangular plot between roads, at T road north; iron post stamped "242, 1912"	241.389
Friendly, at T road south, in center of road, in red sandstone; chiseled square painted "231.0"	230.37

New Glatz, 1.25 miles south of, at T road east, in west end of small bridge; nail painted "10.4"-----	Feet. 9.54
New Glatz, 1.25 miles south of, bridge over Broad Creek, in south end of west abutment; aluminum tablet stamped "17, 1912, SZ"-----	16.183
Alexandria, Va., opposite, on east side of Potomac River, at water's edge, in top of D. C. line post; cross cut-----	2.94

## Indian Head, Nanjemoy, and Stafford quadrangles.

## CHARLES AND PRINCE GEORGES COUNTIES.

The elevations in the following list were determined by primary levels connecting Coast and Geodetic Survey gage bench marks at Clifton, Marshall Hall, and Posey's wharf, Md., and accord approximately with mean sea level.

The leveling was done by A. F. McNair in 1911.

INDIAN HEAD QUADRANGLE.<sup>1</sup>

[Latitude  $38^{\circ} 30' - 38^{\circ} 45'$ ; longitude  $77^{\circ} - 77^{\circ} 15'$ .]

From Marshall Hall south along highway to point near Port Tobacco, thence west to Posey's wharf.

Marshall Hall, near east side of wharf, in top of stone abutment, about 3 inches from northeast corner; cross cut (C. & G. S. b. m.)-----	Feet. 2.73
Marshall Hall, 0.9 mile south of, on west side of road at three corners, in root of oak tree; copper nail stamped "45.5"-----	45.49
Marshall Hall, 1.9 miles south of, on east side of road at three corners, in root of oak tree; copper nail stamped "39.1"-----	39.06
Marshall Hall, 2.7 miles south of, at east end of Oswold Thee's house, in north side of brick chimney, 3 feet above ground; aluminum tablet stamped "25 Md"-----	25.817
Marshall Hall, 3.1 miles south of, on east side of road, middle of hill, in root of oak tree; copper nail stamped "120"-----	120.33
Pomonkey, 2.3 miles north of, on east side of road at three corners, in root of pine tree; copper nail stamped "185"-----	185.04
Pomonkey, 1.4 miles north of, on east side of road at three corners, in root of stump used as corner fence post; copper nail stamped "180.3"-----	180.28
Pomonkey, 1.1 miles north of, on east side of road, 150 feet north of intersection at four corners; in root of oak tree; copper nail stamped "179.3"-----	179.28
Pomonkey, 0.5 mile north of, on east side of road at three corners, in root of pine tree; copper nail stamped "174.0"-----	173.97
Pomonkey, southwest corner foundation pier to schoolhouse, in west side of; aluminum tablet stamped "168 Md"-----	168.453
Pomonkey, near post office, on east side of road at three corners, in root of tree; copper nail stamped "161.6"-----	161.62
Pomonkey, forks in road south of, west side of road between store and blacksmith shop; chiseled cross on boulder, marked "175.3"-----	175.29
Pomonkey, 1.8 miles south of, at top of hill, on east side of road, in root of oak tree; copper nail stamped "172.3"-----	172.32

<sup>1</sup> For elevations in Indian Head quadrangle in Virginia see Bull. 562.

	Feet.
Pomonkey, 3 miles south of, on east side of road at three corners, in root of oak tree; copper nail stamped "150.2"	150.16
Pomonkey, 3.9 miles south of, in east side of brick stable belonging to Christian Jensen, at southeast corner, 4 feet above ground; aluminum tablet stamped "152 Md"	151.610
Pomonkey, 5.3 miles south of, west side of road, in root of oak tree, 5 feet from trunk; copper nail stamped "182.7"	182.70
Pomonkey, 6.4 miles south of, roads east-west-north, in root of oak tree on south side of road; copper nail stamped "170"	170.02
Pomonkey, 7.5 miles south of, roads north-south-west, on east side of road at edge of woods, in root of oak tree; copper nail stamped "162.1"	162.12
Port Tobacco, 1.6 miles west of, 1.1 miles north of four corners on Port Tobacco-Pisgah road, on west side of road, in woods; chiseled cross on top of boulder, marked "151.4"	151.34
Port Tobacco, 2.4 miles west of, in southwest corner of burned brick building formerly used as county house, 5 feet above ground; aluminum tablet stamped "181 Md"	180.590
Port Tobacco, 2.5 miles west of, on north side of road at four corners, in root of gum tree; copper nail stamped "171.1"	177.06
Port Tobacco, 3.6 miles west of, on south side of road, in root of large water-oak tree; copper nail stamped "166.5"	166.48
Pisgah, 2.5 miles east of, on south side of road at three corners, in root of oak tree; copper nail stamped "163.7"	163.72
Pisgah, 2 miles east of, on east side of road at three corners, in root of small oak tree; copper nail stamped "150"	149.82
Pisgah, 1.4 miles east of, in south side of southeast corner foundation pier to Smith's Chapel; aluminum tablet stamped "159 Md"	158.961
Pisgah, 0.4 mile east of, on north side of road at three corners, in root of water-oak tree; copper nail stamped "121.8"	121.78
Pisgah, in front of Hotel Braganier, in root of oak tree; copper nail stamped "123.6"	123.55
Pisgah, 0.8 mile west of, on south side of road at three corners, in root of red-oak tree; copper nail stamped "121.8"	121.80
Pisgah, 2.6 miles west of, at intersection of roads, in root of oak tree; copper nail stamped "86"	86.81
Pisgah, 2.9 miles west of, 15 feet south of center of road, in boulder; aluminum tablet stamped "34 Md"	34.398
Posey's wharf, 3.4 miles northeast of, on north side of road at three corners, in stump; copper nail stamped "105.9"	105.85
Posey's wharf, 2.2 miles northeast of, on west side of road at three corners, in root of oak tree; copper nail stamped "65.1"	65.01
Posey's wharf, 1.5 miles northeast of, at church at three corners, in root of pine tree; copper nail stamped "59.8"	59.75
Posey's wharf, 1.1 miles northeast of, on west side of road at three corners, in stump; copper nail stamped "12"	12.74
Posey's wharf, 35 paces east of shore end of wharf, in horizontal cut in root of maple tree, with three nails driven in flush (C. & G. S. No. 2.)	2.26
Posey's wharf, 16 paces southwest of shore end of wharf; horizontal cut in root of cherry tree, with three nails driven in flush (C. & G. S. No. 1)	7.590

From point 2 miles east of Pisgah south 1.75 miles along highway (part of line to Clifton Beach).

Hilltop, 1.9 miles north of, on west side of road at three corners, in top of old stump; copper nail stamped "140.4" ----- Feet. 140.41

From point 2.5 miles west of Port Tobacco south along highway 0.8 mile (part of double-run spur line to McConchie).

McConchie, 0.2 mile north of, at intersection of roads; painted square on large boulder, marked "162.5" ----- 162.52

#### NANJEMOY QUADRANGLE.

[Latitude 38° 15'-38° 30'; longitude 77°-77° 15'.]

From point near Hilltop west along highway to Ironsides, thence south to Grayton, thence to Clifton Beach.

Hilltop, 1.4 miles north of, in front of store at three corners, in root of water-oak tree; copper nail stamped "147.3" ----- 147.24

Hilltop, in house owned by Fred Davis, in south side of brick chimney, about 4 feet above ground; aluminum tablet stamped "133 Md" ----- 132.804

Hilltop, 0.7 mile southwest of, south side of road, at three corners, in top of post used in retaining wall; copper nail stamped "35.2" ----- 35.21

Hilltop, 1.7 miles west of, on north side of road at three corners, in root of stump; copper nail stamped "138.9" ----- 138.91

Hilltop, 2 miles west of, on southwest corner of intersection of roads, in root of small pine stump; copper nail stamped "142.6" ----- 142.55

Ironsides, in front of store, in root of small tree; copper nail stamped "126.0" ----- 125.97

Ironsides, 0.8 mile west of, on south side of road at three corners, in root of small tree; copper nail stamped "135.4" ----- 135.37

Ironsides, 1.1 miles southwest of, in woods, on east side of road at three corners, in root of stump; copper nail stamped "139.0" ----- 138.94

Mount Hope, 0.5 mile north of, on west side of road at angle, in root of double red-oak tree; copper nail stamped "119.1" ----- 119.09

Bethel, near Mount Hope Church, in south side of southeast corner of schoolhouse; aluminum tablet stamped "113 Md" ----- 113.094

Mount Hope, 1.6 miles south of, on south side of road, in root of red-oak tree; copper nail stamped "84.5" ----- 84.51

Mount Hope, 1.8 miles south of, on north side of road at three corners, in root of cedar tree; copper nail stamped "74.8" ----- 74.76

Cross Roads, at four corners, in northeast corner of roads, in root of water-oak tree; copper nail stamped "81.3" ----- 81.32

Grayton, in front of house owned by Price Gray, east side of top of highest concrete step; aluminum tablet stamped "70 Md 1911" ----- 70.138

Grayton, 1 mile south of, in forks of road, in root of oak tree; copper nail stamped "94.4" ----- 94.38

Clifton Beach, 3.2 miles east of, 150 feet west of run, on north side of road, in root of oak tree; copper nail stamped "20.7" ----- 20.63

Clifton Beach, 2.7 miles east of, 300 feet east of three corners, on south side of road, in root of large oak tree; copper nail stamped "77.5" ----- 77.50

Clifton Beach, 2 miles east of, on south side of road at intersection; painted square on boulder, marked "74.7" ----- 74.65

From point southwest of Port Tobacco along highway to point 1.8 miles south of McConchie (part of double-run spur line).

McConchie, 0.1 mile south of; on west side of road at three corners, in root of gum tree; four nails marked "144.4"	Feet.
McConchie, 1.8 miles south of, in middle of south side of house owned by W. J. Smythe, 4 feet above ground; aluminum tablet stamped "151 Md. 1911"	144.29
	150.809

#### STAFFORD QUADRANGLE.

[Latitude  $38^{\circ} 15' - 38^{\circ} 30'$ ; longitude  $77^{\circ} 15' - 77^{\circ} 30'$ .]

At Clifton Beach.

Clifton Beach, 208 feet northeast of shore end of old wharf, in root of small cedar tree; horizontal cut (C. & G. S. b. m. No. 2)	5.860
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Ijamsville, Mount Airy, Rockville, and Seneca quadrangles.

#### FREDERICK, HOWARD, AND MONTGOMERY COUNTIES.

The elevations in the following list are based on Baltimore & Ohio R. R. precise-level bench marks.

The leveling in Ijamsville, Mount Airy, and Seneca quadrangles was done in 1906 by R. A. Farmer; in Rockville quadrangle partly in 1904 by Ralph Hutchins and partly in 1906 by T. A. Green and W. O. Tufts.

#### MOUNT AIRY QUADRANGLE.

[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $77^{\circ} - 77^{\circ} 15'$ .]

From Cedar Grove northeast along highway to Mount Airy.

Damascus, Dr. B. F. Lansdale's house, southeast corner of foundation; tablet stamped "845"	845.632
Ridgeville, Nelson's Hotel, southeast corner of coping of yard; tablet stamped "817"	817.094

From Mount Airy northwest along highway to crossroads 1 mile north of New London, thence north to Libertytown, thence east to Winfield, thence south to Woodbine.

Libertytown, Mrs. Carter's house, northeast corner of foundation; tablet stamped "523"	523.854
Unionville schoolhouse, 8 feet east of main entrance, in stone foundation; tablet stamped "450 Maryland"	450.030
Taylorsville, 1.5 miles west of, in south wall of Franklin schoolhouse; primary-traverse station 46A, stamped "882"	882.782
Taylorsville schoolhouse, at northeast corner, in foundation; aluminum tablet stamped "819"	819.523
Day, in east foundation of church, at southeast corner, tablet stamped "768"	769.045

From Woodbine south along highway to Unity.

Lisbon, on east side of wagon road, at southwest corner of Mr. Lascey's house, in foundation; tablet stamped "591"	591.972
Florence, northeast corner of store, in foundation; tablet stamped "627"	627.846

## IJAMSVILLE QUADRANGLE.

[Latitude  $39^{\circ} 15'-39^{\circ} 30'$ ; longitude  $77^{\circ} 15'-77^{\circ} 30'$ .]

From Clarksburg northwest to Frederick Junction.

Hyattstown, south abutment of bridge over Little Bennetts Creek, southeast corner of bridge seat; tablet stamped "362"-----	Feet. 361.780
Urbana, near northwest corner of former post office, in west wall; tablet stamped "468"-----	467.661
Frederick Junction, highway bridge over Monocacy River, southwest corner of south abutment, in coping stone; tablet stamped "253"-----	253.067
Frederick Junction, Baltimore & Ohio R. R. bridge over Monocacy River, east abutment, northeast mud wall; copper bolt-----	266.147

From Frederick Junction north to Charlesville, thence east through Walkersville and Mount Pleasant to Libertytown.

Frederick, 300 feet east of station, about 15 feet south of track, in natural rock; copper nail (Baltimore & Ohio R. R. precise-level mark)-----	289.294
Frederick, south side of Church Street, between North Market and Court streets, Jacob Rohrback's residence and office, stoop to office, top step, southwest corner; tablet stamped "296"-----	295.665
Charlesville, bridge over Tuscarora Creek, southwest coping stone of south abutment; tablet stamped "367"-----	366.705
Walkersville, 2 miles west of, bridge over Monocacy River, north end of center pier, primary-traverse station 547; tablet stamped "283"-----	282.931
Walkersville, Walkersville Savings Bank, in front wall, 2 feet below window sill; tablet stamped "320"-----	319.664
Mount Pleasant, Clayton Zimmerman's brick store, 2 feet below window sill; tablet stamped "475"-----	475.191
Libertytown, 2.5 miles southwest of, crossroads at Chestnut Grove School No. 5, south foundation wall near west corner of school- house, 0.5 foot above ground; tablet stamped "619"-----	618.847

At crossroads 1.2 miles north of New London.

New London, 1.2 miles north of, at northwest corner of road crossing on Libertytown pike, in flint rock 1 by 2 by 3 feet; aluminum tablet stamped "519"-----	518.970
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## ROCKVILLE QUADRANGLE.

[Latitude  $39^{\circ}-39^{\circ} 15'$ ; longitude  $77^{\circ}-77^{\circ} 15'$ .]

From Ashton west to Sandy Spring and return.

Sandy Spring, 30 feet south of road, granite slab at entrance to the office of the Mutual Fire Insurance Co.; aluminum tablet stamped "484"-----	483.735
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From Clarksville west along highway to Germantown.

Clarksville, 3.9 miles southwest of, north of highway, at Patuxent River, 50 feet west of center of bridge, 2.5 feet from east end of large flat rock; aluminum tablet stamped "316 Adj. 1904"-----	315.800
Unity, 35 feet west of former post office, south of highway, in north- east foundation wall of Ernest Gregg's tenant house; aluminum tablet stamped "520 Adj. 1904"-----	520.000

	Feet.
Unity, 2.1 miles southwest of, at Hawlings River, in west end of northeast abutment, on bridge seat, 1.7 feet below floor surface; aluminum tablet stamped "457 Adj. 1904"-----	456. 962
Laytonsville, in south foundation wall of store and post office, at northwest corner of crossroads; aluminum tablet stamped "615 Adj. 1904"-----	615. 100
Goshen, in southwest corner of foundation wall of store; aluminum tablet stamped "425 Adj. 1904"-----	425. 069
Brink, in east foundation wall of W. T. Dowden's residence; aluminum tablet stamped "627 Adj 1904" (primary-traverse station)-----	627. 129

**From Brink north to Cedar Grove.**

Cedar Grove, in foundation at northwest corner of Upper Seneca Baptist Church, 1 foot above ground; tablet stamped "637"-----	637. 199
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**From Kensington north along highway by an indirect route to Olney, thence northwest to Laytonsville.**

Garrett Park, 60 feet south of road crossing; top of west rail-----	300. 0
Wheaton, on south side of store kept by J. C. Cissel; aluminum tablet stamped "459"-----	459. 090
Layhill, in south face at southeast corner of foundation of store kept by W. P. Beal; aluminum tablet stamped "438"-----	437. 640
Norbeck, south of road, west of forks, in north foundation wall of Arthur Stonestreet's store; aluminum tablet stamped "499"-----	498. 958
Olney, near southwest corner of town hall, in west face; aluminum tablet stamped "544"-----	543. 473
Olney, 2.6 miles northwest of, at road forks, in east face at northeast corner of house owned and occupied by Thomas Griffit; aluminum tablet stamped "523"-----	522. 675

**From Rockville southwest along highway to Great Falls.**

Rockville, top of corner stone in north side of courthouse, 12 feet east of entrance, in granite foundation, 1 foot below water table; aluminum tablet stamped "451"-----	450. 986
Rockville, 3.9 miles southwest of, at road forks east, in chimney on north side of schoolhouse; aluminum tablet stamped "420"-----	420. 060
Great Falls, on the capstone near west end of south wall of Lock 20, Chesapeake & Ohio Canal, 0.2 meter from extreme north and 0.45 meter from extreme east edge of lock, 1.65 meters from west gate; bottom of square (C. & G. S. b. m. F)-----	166. 592

**At Washington Grove and Gaithersburg.**

Washington Grove, between tracks, opposite milepost 21; rail (Baltimore & Ohio R. R. b. m.)-----	518. 824
Gaithersburg, R. A. Young's store, northwest corner Fredericksburg avenue and Chestnut street; primary-traverse tablet stamped "508"-----	507. 811

SENECA QUADRANGLE.<sup>1</sup>[Latitude  $39^{\circ} 39' 15''$ ; longitude  $77^{\circ} 15' 77'' 30'$ .]

## At Germantown.

Germantown, 50 feet south of bridge over railroad, west of road, in east face at northeast corner of house occupied by C. E. Keeper and owned by H. D. Waters; aluminum tablet stamped "449"-----  
 Germantown, in front of station; top of rail-----

Feet.  
449. 287  
429. 50

From Gaithersburg southwest to Darnestown, thence west to Poolesville, thence north to Barnesville.

Darnestown, Windsor store, in brick foundation to cellar door; tablet stamped "436"-----  
 Dawsonville, in north wall of Allnut ice house; tablet stamped "305"-----  
 Poolesville, in south wall of T. R. Hall's brick house; tablet stamped "415"-----

435. 800  
305. 200  
414. 589

## From Poolesville southwest to Edwards Ferry.

Edwards Ferry, Chesapeake & Ohio Canal, southwest corner, Lock 25; primary-traverse station 88, tablet stamped "207"-----

206. 365

## From Brink northwest to Clarksburg.

Clarksburg, near southwest corner of M. E. Church South, in west foundation wall; aluminum tablet stamped "658"-----

658. 452

## From Washington, D. C., to Washington Junction.

Milepost "W. 37," 225 feet west of, at southeast corner of culvert; copper bolt (b. m. 38)-----  
 Tuscarora, 150 feet west of milepost 39, south end of east wall of box culvert; copper bolt (b. m. 40A)-----

284. 448  
226. 092

## Antietam and Martinsburg quadrangles.

## FREDERICK AND WASHINGTON COUNTIES.

The following elevations are based on precise-level lines of the Coast and Geodetic Survey and the Baltimore & Ohio R. R.

The leveling was done mostly in 1907 by W. R. Winstead; but some work was done in each quadrangle in 1908 by J. M. Harris.

## ANTIETAM QUADRANGLE.

[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $77^{\circ} 30' - 77^{\circ} 45'$ .]

From Harpers Ferry east along Baltimore & Ohio R. R. to Brunswick, thence north along highway to Petersville, thence east to Jefferson, thence south to Point of Rocks.

Harpers Ferry, 0.6 mile east of, about 2.5 miles west of Weverton, about 400 feet east of Harpers Ferry tunnel, 300 feet west of milepost B. 81, in box culvert on south side of railroad, in southeast abutment; iron plug (Baltimore & Ohio R. R. b. m. 56)-----  
 Sandy Hook, south track, in front of station; top of south rail marked "270 U.S."-----

Feet.  
280. 268  
270. 0

<sup>1</sup> For elevations in Seneca quadrangle in Virginia see Bull. 562.

Sandy Hook, 0.5 mile east of, 170 feet west of milepost B. 80, in center of double track: iron rod with "X" on top driven in ground, marked "264 U.S.B.M."-----	Feet.
	264. 14
Weverton, 125 feet west of station, 50 feet west of road crossing, 15 feet north of track, in southwest pillar of Baltimore & Ohio R. R. water tower; aluminum tablet stamped "Maryland 260 Adj"-----	259. 595
Weverton, 2.8 miles east of, 1,000 feet west of Brunswick station, on northeast corner of north abutment of culvert; point marked "250 U.S.B.M."-----	249. 60
Brunswick, north track at street crossing; top of north rail marked "249.5 U.S."-----	249. 2
Brunswick, opposite post office, in southeast corner of Savings Bank; aluminum tablet stamped "Maryland 266 Adj"-----	266. 236
Petersville, 0.2 mile east of, at public road fork, in front face (east side) of Lutheran Church; aluminum tablet stamped "Md. 524 Adj"-----	523. 325
Petersville, 2.4 miles east of, at foot of hill, south side of east end of covered bridge over Catoctin Creek, on top of large iron bolt; point marked "291 U.S.B.M."-----	290. 54
Jefferson, 300 feet west of electric car station, at Frederick-Picke-Catoctin road fork, northwest corner of schoolhouse; aluminum tablet stamped "Maryland 583 Adj"-----	582. 787
Jefferson, 1.6 miles south of, at foot of hill at road fork to Catoctin station, in southwest abutment of iron bridge over stream; large iron bolt marked "417"-----	416. 58
Jefferson, 2.5 miles south of, at foot of hill, 600 feet west of brick house, on top of northeast abutment of bridge over creek; point marked "454"-----	453. 85
Jefferson, 3.9 miles south of, at foot of hill, about 1,000 feet north of W. C. Adams's residence, in west abutment of culvert over small stream; aluminum tablet stamped "Maryland 389 Adj"-----	388. 358
<b>From Weverton along highway north to point 2.7 miles north of Rohersville, thence east to Middletown, thence south to Jefferson.</b>	
Weverton, 1.7 miles north of, 400 feet north of stream, road fork west at top of hill, road fork east, on top of stone at blacksmith shop; point marked "545"-----	544. 53
Brownsville, at road fork east, northwest corner of post office; aluminum tablet stamped "533"-----	532. 182
Gapland, 100 feet north of station, on rock near telephone pole; point marked "619.5"-----	619. 11
Rohersville, 10 feet south of main entrance of post office, southeast corner of front face; aluminum tablet stamped "624"-----	623. 866
Rohersville, 1.8 miles north of, on northeast corner of southwest abutment of bridge over stream; point marked "480"-----	479. 71
Rohersville, 2.8 miles north of, 400 feet west of T road, 30 feet north of road, in stone; aluminum tablet stamped "Maryland 508 Adj"-----	507. 388
Rohersville, 5 miles northeast of, at top of mountain, in front of house at second-class crossroads, 4 feet north of road, on top of stone; point marked "1059"-----	1, 058. 45
Bolivar, at crossroads, at southwest corner of stone-arch bridge over stream, on top of rock; point marked "517"-----	516. 96

	Feet.
Bolivar, 1.1 miles northeast of, at foot of hill, at southwest end of culvert over small stream, in front of brick house, on top of land-line stone; point marked "445.6"	445.16
Middletown, in front face of post-office building; aluminum tablet stamped "Maryland 547 Adj"	546.623
Middletown, 2.7 miles south of, at foot of hill near small stream, 200 feet west of house, 250 feet north of creamery, 15 feet west of road, in top of large rock; aluminum tablet stamped "Maryland 482 Adj"	481.492
Middletown, 4.6 miles south of, at foot of hill, at second-class cross-roads, on northeast abutment of bridge over stream; point marked "432"	431.25

**From Harpers Ferry north to Antietam Creek.**

Harpers Ferry, 0.9 mile north of, 300 feet east of lock on canal, at second-class road fork northeast, 10 feet west of road, on top of large rock; point marked "276"	275.66
Harpers Ferry, 3.3 miles north of, at foot of hill, on northwest abutment of bridge over stream; point marked "422"	421.28
Harpers Ferry, 4.2 miles north of, at crossroads near schoolhouse and church, in front face of schoolhouse, 4 feet east of main entrance; aluminum tablet stamped "Maryland 623 Adj"	622.904
Harpers Ferry, 6.6 miles north of, on northwest corner of Chesapeake & Ohio Canal lock; point marked "300"	299.93
Harpers Ferry, 7.9 miles north of, at Antietam Creek, in northwest end of west abutment of Chesapeake & Ohio Canal aqueduct; aluminum tablet stamped "Md. 301 Adj"	300.270

**From Sharpsburg northeast to Keedysville, thence southeast to point 2.7 miles north of Rohersville.**

Sharpsburg, in front face of post-office building, 20 feet north of main entrance; aluminum tablet stamped "Maryland 413 Adj"	412.857
Sharpsburg, 1.4 miles northeast of, at foot of hill, 300 feet southwest of tollgate; nail in center of north side of iron bridge over Antietam Creek, marked "337"	336.73
Keedysville, 50 feet north of railroad, in front face of hotel; aluminum tablet stamped "Maryland 404 Adj"	403.467
Keedysville, 1 mile southeast of, at road fork north, at arch bridge over small stream; center of stone marked "402.5"	402.08

**From Myersville south to Middletown.**

Myersville, 2.3 miles south of, north-south road at T road east, in northeast corner between county road and railroad, on top of large rock; chiseled square marked "G.S.□644 B.M."	643.84
Mount Tabor, in front of station; top of rail	584.3
Mount Tabor, 330 feet southwest of, in northeast corner of Peter Leatherman's brick house; aluminum tablet stamped "588 Md"	587.538

**MARTINSBURG QUADRANGLE.<sup>1</sup>**

[Latitude 39° 15'-39° 30'; longitude 77° 45'-78°.]

**From Antietam west along highway to Shepherdstown, W. Va., thence northeast to Sharpsburg, thence north to Grimes.**

Shepherdstown, 1.3 miles northeast of, 150 feet west of second-class road crossing, 100 feet west of barn, on northwest abutment of culvert of Norfolk & Western Ry.; point marked "430"	429.36
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<sup>1</sup> For elevations in Martinsburg quadrangle in West Virginia see bulletin in preparation.

Grimes, 1.2 miles south of, 500 feet south of county-road crossing, west of railroad at cut, on large rock; chiseled square marked "G.S.□B.M. 415"	Feet. 414. 88
Grimes, 2.2 miles south of, on east side of railroad, in north mouth of cut, on top of rock; chiseled square marked "G.S.□B.M. 412"	411. 24
Mondel, in front of station; top of rail	418. 6
Mondel, 2 miles south of, on east side at north end of cut, on top of rock; chiseled square marked "G.S.□B.M. 458"	457. 17
Sharpsburg, in front face of post-office building, 20 feet north of main entrance; aluminum tablet stamped "Adj 413"	412. 857

**Emmitsburg, Hagerstown, Taneytown, and Williamsport quadrangles.****CARROLL, FREDERICK, AND WASHINGTON COUNTIES.**

The following elevations were determined by primary leveling extended from Baltimore to Hagerstown, and from the Baltimore & Ohio R. R. precise-level line from Relay to Washington Junction. The leveling was done in 1908, as follows: In Taneytown quadrangle and most of Emmitsburg quadrangle, by C. H. Semper; in Hagerstown and Williamsport quadrangles and part of Emmitsburg quadrangle, by J. M. Harris. Additional leveling was done by Semper in Hagerstown and Williamsport quadrangles in 1910.

**TANEYTOWN QUADRANGLE.<sup>1</sup>**

[Latitude 39° 30'-39° 45'; longitude 77°-77° 15'.]

**From Westminster west along Western Maryland Ry. to Detour.**

Westminster, in fifth step of main entrance to courthouse; bronze tablet stamped "774"	Feet. 774. 337
Spring Mills, in front of station sign; top of rail	607. 0
Spring Mills, 250 feet west of station, at east end of north side of railroad culvert, on top of mud wall; chiseled square marked "U.S.□B.M. 602"	602. 11
Avondale, in front of station; top of rail	560. 3
Avondale, 210 feet west of station, on north side of track, on top of railroad culvert; chiseled square marked "U.S.□B.M. 559"	558. 57
Medford, in northwest corner of foundation of C. E. Engle's building at station; aluminum tablet stamped "531"	531. 201
Medford, in front of station; top of rail	529. 8
Wakefield, in front of station; top of rail	515. 7
New Windsor, 1.4 miles east of, south of track, on top of railroad culvert; chiseled square marked "U.S.□B.M. 501"	500. 75
New Windsor, 0.3 mile east of, north side of east abutment of railroad bridge, in back wall; aluminum tablet stamped "453"	453. 225
New Windsor, in front of station; top of rail	445. 5
Linwood, in front of station; top of rail	415. 6
Union Bridge, 0.8 mile east of, north side of east abutment of railroad bridge, on top of retaining wall; chiseled square marked "U.S.□B.M. 405"	404. 36
Union Bridge, at railroad station, in front face at southeast corner of First National Bank; aluminum tablet stamped "402"	402. 004
Union Bridge, in front of station; top of rail	399. 0

<sup>1</sup> For elevations in Taneytown quadrangle in Pennsylvania see Bull. 515.

	Feet.
Middleburg, 1.5 miles east of, on north side of railroad culvert, in top of bridge seat of east abutment; aluminum tablet stamped "398"	398.180
Middleburg, in front of station; top of rail	461.4
Bruceville, in front of station; top of rail	452.9
Detour, in front of station; top of rail	348.9

**From Ladiesburg northeast along Northern Central Ry. to Kingsdale.**

Ladiesburg, in front of station; top of rail	482.3
Ladiesburg, 1.6 miles north of, south abutment of steel railway bridge, east of track, in top of retaining wall; aluminum tablet stamped "403"	402.880
Bruceville, 50 feet north of overhead crossing of Western Maryland Ry., 6 feet east of track, on concrete foundation to brick gasoline house; chiseled square marked "U.S.□B.M. 433"	433.22
Bruceville, in front of station; top of rail	433.9
Sharretts, in front of station sign; top of rail	418.7
Crabster, in front of station sign at crossing; top of rail	513.2
Taneytown, Baltimore Street crossing railroad, east of track, south of road, on foundation of railroad-crossing sign; chiseled square marked "U.S.□B.M. 501"	500.51
Taneytown, in southwest corner of Central Hotel; aluminum tablet stamped "524"	523.276
Taneytown, in front of station; top of rail	500.4
Taneytown, 1.9 miles north of, at railroad crossing, 10 feet east of track; north of road, in foundation of crossing sign; aluminum tablet stamped "494"	493.583
Galt, at station, west of track, south of road, on foundation of crossing sign; chiseled square marked "U.S.□B.M. 535"	534.27
Piney Creek, in front of station; top of rail	513.2

**From Kingsdale southeast to Union Mills.**

Kingsdale, 3.6 miles southeast of, on Baltimore Pike, in northwest corner of front face of F. T. Brown's brick house; aluminum tablet stamped "705"	704.372
Union Mills, in foundation on northwest side of Shriver's grain mill, 2 feet from corner; bronze tablet stamped "546"	544.345

**EMMITSBURG QUADRANGLE.<sup>1</sup>**

[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $77^{\circ} 15' - 77^{\circ} 30'$ .]

**From Walkersville northeast along Northern Central Ry. to Ladiesburg.**

McAleer, in front of station; top of rail	344.1
Woodsboro, in front of station; top of rail	409.9
Woodsboro, at railway station, in northeast corner of foundation of flour mill; aluminum tablet stamped "411"	411.102
Le Gore, in front of station; top of rail	434.0
New Midway, at station, at road crossing, 8 feet east of track, 6 feet north of highway, in foundation of railway crossing sign; aluminum tablet stamped "462"	461.456
New Midway, in front of station; top of rail	463.4

<sup>1</sup> For elevations in Emmitsburg quadrangle in Pennsylvania see Bull. 515.

From Detour west and northwest along Western Maryland Ry. to Thurmont and Buena Vista Spring.

	Feet.
Detour, 1,300 feet west of station, at road crossing, north of track, on outcrop; chiseled square marked "U.S.□B.M. 341"	340. 90
Detour, 0.35 mile north of, at railroad crossing, in east face about 6 feet from southeast corner of stone foundation to E. D. Diller's house; aluminum tablet stamped "Prim. Trav. Sta. No. 1, 447"	447. 116
Detour, 1.5 miles west of, on south wall of west abutment of railroad bridge over river; chiseled square marked "U.S.□B.M. 335"	334. 84
Detour, 2.7 miles west of, 20 feet north of track, east of overhead bridge, on large rock; chiseled square marked "U.S.□B.M. 407"	406. 39
Rocky Ridge, in front of station; top of rail	400. 2
Rocky Ridge, opposite railroad station, in northwest corner of foundation of Robert Biggs's brick house; aluminum tablet stamped "397"	396. 938
Loys, railroad crossing at station; top of rail	356.2
Graceham, 700 feet east of station, in west abutment to railroad bridge over county road; aluminum tablet stamped "442"	441. 698
Graceham, in front of station; top of rail	448. 5
Thurmont, 2.1 miles northwest of, high bridge 97; on top of south end of west abutment; chiseled square marked "U.S.□B.M. 715"	714. 32
Thurmont, 2.9 miles northwest of, steel bridge over Owens Creek, in top of mud wall at south side of west abutment; aluminum tablet stamped "779"	779. 048
Thurmont, 4 miles northwest of, at west end of switch, south of track, on large rock; chiseled square marked "U.S. □ B.M. 889"	888. 96
Deerfield, in front of station; top of rail	959. 6
Deerfield, 1.2 miles northwest of, railroad culvert, on top of mud wall at south end of west wall; chiseled square marked "U.S. □ B.M. 1064"	1, 063. 38
Sabillasville, in southeast corner of front face of St. Marks Lutheran Church; aluminum tablet stamped "1108"	1, 107. 481
Sabillasville, in front of station; top of rail	1, 139. 8
Highfield, in front of station; top of rail	1, 390. 0
Buena Vista Spring, in front of station; top of rail	1, 339. 7

From Thurmont south to Charlesville.

Thurmont, in front of station; top of rail	517.3
Thurmont, in east face at northeast corner of Thurmont National Bank Building; aluminum tablet stamped "Prim. Trav. Sta. No. 6, 523"	522. 880
Thurmont, 2 miles south of, at railroad crossing, 40 feet west of track, on north margin of road, on top of boulder; chiseled square marked "U.S. □ B.M. 454"	453. 97
Catoctin, in front face of stone furnace building, north side of door; aluminum tablet stamped "497"	496. 553
Lewistown, in front face at north corner of stone house just south of church; aluminum tablet stamped "402"	402. 034
Lewistown, in front of station; top of rail	378. 9
Lewistown, 1.1 miles south of, on top of mud wall at east end of south wall of concrete railroad culvert; chiseled square marked "U.S. □ B.M. 403"	402. 87

From Rocky Ridge north to Emmitsburg, thence west to Sabillasville.	Feet.
Motters, in front of station; top of rail-----	445. 0
Motters, in front of station, in southeast corner of foundation of hay scales; aluminum tablet stamped "445"-----	445. 052
Motters, 0.7 mile north of, cattle pass under railroad, on top of east side of south wall; chiseled square marked "U.S.□B.M. 438"-----	437. 31
Emmitsburg, in front of station; top of rail-----	416. 4
Emmitsburg, in front face of Dutch Reformed Church; aluminum tablet stamped "450"-----	449. 420
Emmitsburg, 1.4 miles west of, 50 feet east of crossroads at schoolhouse, on north side of road, on top of large boulder; chiseled square marked "U.S.□B.M. 442"-----	441. 46
Emmitsburg, 2.3 miles west of, 280 feet west of brick house, south side of road, on large boulder; chiseled square marked "U.S.□B.M. 643"-----	642. 66
Emmitsburg, 4.5 miles west of, 10 feet north of road, on top of large rock; chiseled square marked "U.S.□B.M. 1176"-----	1, 175. 09
Emmitsburg, 5.3 miles west of, at William Miller's house, in northeast corner of stone foundation; aluminum tablet stamped "1150 Md"-----	1, 149. 383
Emmitsburg, 5.5 miles west of, in forks of road, on top of small boulder; chiseled square marked "U.S.□B.M. 1082"-----	1, 081. 77
Emmitsburg, 6 miles west of, north of road, on top of large boulder; chiseled square marked "U.S.□B.M. 1008"-----	1, 007. 44
Emmitsburg, 7.1 miles west of, north of road, 900 feet west of stream, halfway up hill, on top of large boulder; chiseled circle marked "U.S.□B.M. 1041"-----	1, 040. 47

#### HAGERSTOWN QUADRANGLE.<sup>1</sup>

[Latitude 39° 30'-39° 45'; longitude 77° 30'-77° 45'.]

From Hagerstown north along Cumberland Valley R. R. to Maugansville.

Hagerstown, crossing of Cumberland Valley and Western Maryland railroads-----	590. 3
Hagerstown, 1.1 miles north of, under overhead bridge, west side of track; on rock marked "U.S.□B.M. 612"-----	611. 42
Hagerstown, 2.1 miles north of, 120 feet south of milepost 72, on east side of track; top of large stone marked "U.S.□B.M. 637"-----	637. 16
Maugansville, 0.6 mile south of, 212 feet south of milepost 71, 10.6 feet west of track, on top of large rock; aluminum tablet stamped "636"-----	636. 142
Maugansville, 0.2 mile south of station, west side of track; copper bolt in concrete culvert (railroad bench mark)-----	617. 671
Maugansville, in front of station; top of rail-----	614. 6

From Buena Vista Spring west along Western Maryland Ry. to Hagerstown.

Lake Royer, 0.3 mile west of Buena Vista Spring; surface of water May 22, 1908-----	1, 312. 8
Pen Mar, 175 feet east of, 10 feet south of track opposite store, on top of large boulder; chiseled square marked "U.S.□B.M. 1248"-----	1, 247. 18
Pen Mar, in front of station; top of rail-----	1, 244. 1
Blue Mountain, in front of station; top of rail-----	1, 177. 7

<sup>1</sup> For elevations in Hagerstown quadrangle in Pennsylvania see Bull. 515.

Blue Mountain, in northwest corner of brick railroad station; aluminum tablet stamped "1189 Md" _____	Feet. 1, 188. 613
Blue Mountain, 1 mile west of, 40 feet south of track, on top of large boulder; chiseled square marked "U.S.□B.M. 1106" _____	1, 106. 07
Blue Mountain, 2.1 miles west of, 6 feet south of track, on top of large boulder; chiseled square marked "U.S.□B.M. 1025" _____	1, 024. 86
Edgemont, in front of station; top of rail _____	965. 2
Edgemont, 225 feet west of station, 40 feet south of track, in north foundation wall of Bachtell's store and post office; aluminum tablet stamped "961 Md" _____	960. 128
Smithsburg, in front of station; top of rail _____	798. 0
Smithsburg, 150 feet west of station, in southeast corner of brick warehouse of Western Maryland Ry.; aluminum tablet stamped "800 Md" _____	799. 559
Cavetown, in front of station; top of rail _____	751. 0
Cavetown, 1 mile west of, 15 feet east of whistle post, 8 feet south of track, on top of large boulder; chiseled square marked "U.S.□B.M. 697" _____	697. 00
Cavetown, 1.7 miles west of, 8 feet south of track, 400 feet west of milepost 80, on rock in bank; chiseled square marked "U.S.□B.M. 651" _____	650. 93
Chewsville, in front of station; top of rail _____	632. 6
Chewsville, in north face at northwest corner of brick railroad station; aluminum tablet stamped "636 Md" _____	635. 514
Chewsville, 1.1 miles west of, 300 feet east of overhead road bridge, 4 feet north of track, on top of large boulder; chiseled square marked "G.S.□B.M. 580" _____	579. 12
Security, in front of station; top of rail _____	510. 1
Security, 0.4 mile west of, south of track, in top of east back wall of bridge over Marsh Run; aluminum tablet stamped "508 Md" _____	507. 747
Bissell, in front of station; top of rail _____	510. 5
Potomac Avenue, in front of station; top of rail _____	564. 2
North Junction, main line of Western Maryland Ry. and north-bound track of Altenwald cut-off, at frog point; top of rail _____	589. 3
North Junction, intersection of Cumberland Valley and Western Maryland railroads; top of rail _____	590. 2
Hagerstown, corner of Washington and Jonathan streets, on Jonathan Street side of courthouse; water table (C. & G. S. b. m. A) _____	552. 035

From Edgemont north along Western Maryland Ry. to Midvale.

Shockley, in front of sign; top of rail _____	778. 2
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From Smithsburg south to Myersville, thence northwest to Hagerstown.

Smithsburg, 2.5 miles south of, on top of Blue Mountain, in northwest corner of roads opposite a 2-story frame house, on top of large rock; chiseled square marked "G.S.□B.M. 1512" _____	1, 511. 06
Smithsburg, 3.5 miles south of, 150 feet west of road, at southeast corner of frame schoolhouse, in east face of stone foundation; aluminum tablet stamped "1335 Md" _____	1, 334. 073
Smithsburg, 4.6 miles south of, east of road, 50 feet north of 2-story stone house, on top of boulder; chiseled square marked "G.S.□B.M. 1117" _____	1, 116. 44

Smithsburg, 5.6 miles south of, west of road, 20 feet south of wooden bridge over stream, on top of flat rock; chiseled square marked "G.S.□B.M. 1035"	Feet. 1,034. 18
Wolfsville, in center of, in northwest corner of crossroads opposite J. M. Woolf's house, in face of large curbstone; aluminum tablet stamped "1044 Md"	1,043. 488
Wolfsville, 1.2 miles southeast of, west of road, 150 feet south of road forks, on top of large boulder; chiseled square marked "G.S.□B.M. 931"	930. 52
Middlepoint, 0.6 mile south of, west of road, in V of private road, on top of large flat rock; chiseled square marked "G.S.□B.M. 814"	813. 66
Middlepoint, 1.6 miles south of, under corner stone in southwest corner of south face of Grossnickles (Dunkard) Church; aluminum tablet stamped "740 Md"	739. 149
Middlepoint, 2.9 miles south of, under northeast corner of iron bridge over Catoctin Creek; chiseled square marked "G.S.□B.M. 663"	662. 31
Ellerton, 1.4 miles south of, west of road, in east side of stone foundation of Tilman Grossnickle's spring house; aluminum tablet stamped "582 Md"	581. 138
Myersville, 1.9 miles north of, on west end of north abutment of small wooden trestle over hollow; chiseled square marked "G.S.□B.M. 970"	969. 60
Wolfsville Crossing, at railroad crossing; top of rail	1,026. 3
Wolfsville Crossing, 0.2 mile north of, 80 feet west of railroad, on line with second-story windows in east side of John M. Fey's brick house; aluminum tablet stamped "1085 Md"	1,084. 295
Wolfsville Crossing, 2.5 miles north of, 5 feet east of trolley track, 390 feet south of railroad-crossing, on top of large rock; chiseled square marked "G.S.□B.M. 835"	834. 65
Wolfsville Crossing, 3.1 miles north of, in north end of east face of Hagerstown & Myersville R. R. Co.'s brick power house; aluminum tablet stamped "640 Md"	639. 243
Smoketown, at railroad crossing; top of rail	601. 6
Wagners Crossroads, in front of station; top of rail	518. 0
West Beaver, railroad crossing at south end of station; top of rail	493. 7
West Beaver Creek, iron bridge over Beaver Creek, north brace of bridge, west end of rivet on top; chiseled square marked "G.S.□B.M. 480"	479. 69
West Beaver Creek, 1.2 miles north of, on east side of road, at crossroads, in north end of west face of brick schoolhouse; aluminum tablet stamped "546 Md"	545. 736
Funkstown, at north end of, in north end of east brick wall of Red Man hall; aluminum tablet stamped "479 Md"	478. 837

## From Hagerstown south to St. James.

Hagerstown, 3.1 miles south of, 10 feet east of railroad, in northwest corner of large rock in bank; chiseled square marked "G.S.□B.M. 548"	547. 58
Hagerstown, 3.7 miles south of, 450 feet east of railroad, in west end of south face of Marsh Church, 2 feet above ground; aluminum tablet stamped "534 Md"	533. 332
Hagerstown, 5.3 miles south of, 10 feet west of railroad, opposite school buildings, on large rock in bank; chiseled square marked "G.S.□B.M. 487"	486. 85

From Hagerstown southwest 2 miles along Cumberland Valley R. R. (unchecked spur line).

	Feet.
Hagerstown, Cumberland Valley R. R., in front of station; top of rail	573.2
Hagerstown, 0.6 mile west of, at railroad bridge 74; top of rail (Western Maryland Ry. 554.6)	575.3
Hagerstown, 1 mile west of, 300 feet west of water tank, south of railroad, on top of rock in bank; chiseled square marked "G.S. □B.M. 591"	590.739

#### WILLIAMSPORT QUADRANGLE.<sup>1</sup>

[Latitude 39° 30'-39° 45'; longitude 77° 45'-78°.]

From Maugansville along Cumberland Valley R. R. to Mason and Dixon.

Maugansville, 1.3 miles north of, 25 feet south of milepost 69, east side of track; face of rock cut marked "U.S. □B.M. 569"	568.70
Mason and Dixon, opposite station, in top of stone monument marking Maryland-Pennsylvania boundary, aluminum tablet stamped "570"	570.166

From Mason and Dixon along highway west and south to Chesapeake & Ohio Canal Lock 2.

Mason and Dixon, 1.1 miles west of, 950 feet west of Gabriel's house, on north side of road; spike in root of 5-foot oak tree marked "U.S.B.M. 559"	559.026
Mason and Dixon, 2.2 miles northwest of, 20 feet west and 15 feet south of Dunkard Church; in root of large oak tree; spike	531.88
Mason and Dixon, 3.6 miles northwest of, in patch of woods, at corner of wire fence; spike in base of gatepost, marked "U.S.B.M. 489"	488.44
Fairview, 0.6 mile southeast of, east end of bridge over Conococheague Creek, north end of top of abutment; aluminum tablet stamped "406"	405.685
Fairview, 0.8 mile west of, between two gates on north and south sides of road, on outcrop; square marked "U.S.B.M. 518"	517.40
Dryrun, in front face at northeast corner of brick schoolhouse; aluminum tablet stamped "609"	608.156
Dryrun, 1.4 miles south of, on east side of road; spike in telephone pole, marked "U.S.B.M. 554"	553.69
Dryrun, 2 miles south of, at crossroads, northeast corner of Crowe schoolhouse; spike in telephone pole, marked "U.S.B.M. 589"	588.24
Dryrun, 3.4 miles south of, Montpelier farm, in front face at southwest corner of brick farmhouse; aluminum tablet stamped "607"	606.927
Clear Spring 1.2 miles north of, north bridge abutment over Little Conococheague Creek, west side; top of bolt in bridge-seat plate, marked "U.S.B.M. 544"	543.40
Clear Spring, in west face at southwest corner of Potomac Hotel; aluminum tablet stamped "566"	565.970
Clear Spring, 0.8 mile south of; at top of hill, at bend in road to west; spike in telephone pole, marked "U.S.B.M. 542"	541.75
Big Spring, 100 feet north of junction with road leading under railroad, on east side of road; large rock, marked "U.S. □B.M. 426"	425.95

<sup>1</sup> For elevations in Williamsport quadrangle in West Virginia see bulletin in preparation.

	Feet.
Williamsport, 7.7 miles west of, two canal locks, 10 feet south of gate, in top of Lock 46, east wall; aluminum tablet stamped "372"-----	371. 309
Williamsport, 7.8 miles west of, on top course of stone of second canal lock above dam 5; chiseled square (Coast and Geodetic Survey bench mark No. VI)-----	371. 358

**From St. James School south to Grimes.**

St. James, in front of station; top of rail-----	469. 2
St. James, opposite station, 50 feet from track, under porch of two-story frame cottage; aluminum tablet stamped "473 Md"-----	472. 715
St. James, 0.9 mile south of, on northeast corner of south bridge seat of railroad bridge 717; chiseled square marked "G.S.□B.M. 431"-----	430. 81
Spielman, in front of station; top of rail-----	408. 2
Spielman, 0.2 mile south of, railroad bridge 712, on northeast corner of south bridge seat; chiseled square marked "G.S.□B.M. 404"-----	403. 45
Grimes, in front of sign; top of rail-----	386. 8
Grimes, 0.4 mile south of, railroad bridge 705, in west end of north bridge seat; aluminum tablet stamped "391 Md"-----	390. 628

**From Hagerstown southwest along Cumberland Valley R. R. to Potomac River bridge.**

Hagerstown, 3.3 miles west of, 15 feet north of railroad track, on top of large rock; chiseled square marked "G.S.□B.M. 548"-----	547. 440
Halfway, 150 feet west of railroad, in front face at southwest corner of R. P. Beckley's concrete store, on Williamsport pike; aluminum tablet stamped "539 Md"-----	538. 764
Halfway, in front of station; top of rail-----	542. 7
Halfway, 0.6 mile southwest of, 15 feet from track, on north side of cut between milepost 78 and semaphore, on top of rock; chiseled square marked "G.S.□B.M. 525"-----	524. 710
Halfway, 1.7 miles southwest of, 325 feet west of milepost 79, in north bank of cut, on top of large rock; chiseled square marked "G.S.□B.M. 487"-----	487. 159
Halfway, 2.9 miles southwest of, between county road and railroad, in center of south head wall of concrete box culvert under railroad; aluminum tablet stamped "447 Md"-----	446. 641
Williamsport station, in front of; top of rail-----	455. 0
Williamsport, 0.4 mile southwest of, north of railroad, about 300 feet west of milepost 81, on top of large rock in bank of cut; chiseled square marked "G.S.□B.M. 436"-----	436. 00
Williamsport, 1.3 miles southwest of, on south end of east abutment of back wall of Cumberland Valley R. R. bridge 82-1; chiseled square marked "G.S.□B.M. 382"-----	381. 744

**Accident, Flintstone, Frostburg, Grantsville, Hancock, Oakland, and Pawpaw quadrangles.****ALLEGANY, GARRETT, AND WASHINGTON COUNTIES.**

The elevations in the following list were determined by primary leveling extended from various bench marks of the Coast and Geodetic Survey transcontinental line.

The leveling in Frostburg and Flintstone quadrangles was done mostly in 1897 by Hargraves Wood; that in Grantsville, Oakland, Accident, and part of that in Pawpaw and Hancock quadrangles was done in 1898 by C. B. Bailey and Wood; and the remainder of the work in Pawpaw and Hancock quadrangles was done in 1899 by C. M. Smith.

#### HANCOCK QUADRANGLE.<sup>1</sup>

[Latitude  $39^{\circ} 30'$ - $39^{\circ} 45'$ ; longitude  $78^{\circ} - 78^{\circ} 15'$ .]

From Hancock west along Baltimore pike to Green Ridge.

Hancock, on coping stone at middle of north wall of Chesapeake & Ohio Canal aqueduct, about 600 feet east of bridge; Coast and Geodetic Survey bench mark stamped "1878 F"-----	Feet. 420. 714
Hancock, in front of bank, on stone doorsill; bronze tablet stamped "448 C"-----	448. 023
Hancock, 5.15 miles west of, 0.25 mile east of Harveys, 100 feet west of road to Woodmont, south of pike, in solid rock; bronze tablet stamped "946 C"-----	945. 453
From Lock 50 west to Clear Spring, thence north to Sylvan, <sup>1</sup> Pa. (double targeted spur line).	
Lock 50, Chesapeake & Ohio Canal, close to watch house, on west end of north side; cut in top stone-----	404. 232
Lock 50, Chesapeake & Ohio Canal, northeast wing; aluminum tablet stamped "402 C"-----	402. 235
Cherry Run, W. Va., 1.5 miles north and 0.75 mile west of, in south side of southwest corner of wing wall of Chesapeake & Ohio Canal viaduct over Licking Creek, 4 feet from west end of wall, about 2 feet below coping, in second tier of masonry under coping; aluminum tablet stamped "Maryland 402 C"-----	401. 800

#### PAWPAW QUADRANGLE.

[Latitude  $39^{\circ} 30'$ - $39^{\circ} 45'$ ; longitude  $78^{\circ} 15'$ - $78^{\circ} 30'$ .]

From Pratt along highway to Little Orleans.

Green Ridge, south of pike, west of road to Little Orleans, in small ledge of rock at top of ridge; bronze tablet stamped "1204 C"-----	1, 203. 897
Little Orleans, Chesapeake & Ohio Canal aqueduct over Fifteenmile Creek, in north end of east coping; bronze tablet stamped "459 C"-----	459. 262
Little Orleans, aqueduct over Fifteenmile Creek; square cut in coping stone (C. & G. S. b. m. XIII)-----	459. 685

#### FLINTSTONE QUADRANGLE.

[Latitude  $39^{\circ} 30'$ - $39^{\circ} 45'$ ; longitude  $78^{\circ} 30'$ - $78^{\circ} 45'$ .]

From Cumberland along old national pike to Pratt.

Sixmile House, in northeast corner of foundation; copper bolt stamped "881 C"-----	881. 501
Flintstone, Dr. Robinson's house, northwest corner of foundation; bronze tablet stamped "828 C"-----	828. 403

<sup>1</sup> For elevations in Hancock quadrangle in Pennsylvania see Bull. 515.

Flintstone, 2.75 miles east of top of Polish Mountain, opposite telegraph pole; stone stamped "1381"	Feet.
Pratt, 0.25 mile east of former post office, 150 feet west of Robinett's old house, south of road, in ledge of rock; aluminum tablet stamped "938 C"	1,381.95
	938.23

From Flintstone south along Oldtown road to Oldtown.

Flintstone, sixth crossing of Town Creek from, 2 feet above grade of creek; copper bolt in ledge west of road to Oldtown, about 0.06 mile northeast of L. T. Shryock's; stamped "666 C"	666.425
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From Lock 67 west along Chesapeake & Ohio Canal to Cumberland.

Lock 67 of Chesapeake & Ohio Canal, on coping stone; Coast and Geodetic Survey bench mark XV	540.393
Oldtown, 15 feet east of west end of Lock 70, in coping stone of south wall; copper bolt stamped "564 C"	564.208

#### FROSTBURG QUADRANGLE.<sup>1</sup>

[Latitude 39° 30'-39° 45'; longitude 78° 45'-79°.]

From Cumberland north and west along Cumberland & Pennsylvania R. R. via Mount Savage to Frostburg.

Cumberland, coping of feed lock of canal; Coast and Geodetic Survey bench mark stamped "I.B.M., U.S.C.&G.S., 1878"	623.766
Cumberland, northeast corner of courthouse, in top of stonework; bronze tablet stamped "688 C"	687.797
Mount Savage, 1,000 feet east of station, in southwest abutment of high bridge over Sulphur Creek; copper bolt stamped "1198 C"	1,198.048
Frostburg, 50 feet east of tunnel on Cumberland & Pennsylvania R. R., in south side of rock cut; bronze tablet stamped "1929 C"	1,928.718

From Frostburg south and east along Cumberland & Pennsylvania R. R. to Cumberland.

Vale Summit, 250 feet west of station and 100 feet south of Georges Creek & Cumberland R. R., in large boulder; copper bolt stamped "1993 C"	1,993.113
Clarysville; platform at station	1,637.5
Park station (Casino); Georges Creek & Cumberland R. R. platform	756.8

#### GRANTSVILLE QUADRANGLE.

[Latitude 39° 30'-39° 45'; longitude 79° -79° 15'.]

From Frostburg via Piney Grove, New Germany, and Crabtree to Bloomington.

Piney Grove, 0.5 mile east of, near east corner of large house north of pike, 200 feet west of Twomile Run; bronze tablet stamped "2424 C"	2,424.125
New Germany, 0.1 mile east of, 100 feet east of Poplar Lick Run, 20 feet south of road to Oakland at intersection of road to old mill, in ledge of rock; bronze tablet stamped "2472 C"	2,471.783
Floyd, 0.12 mile east of railroad station (known as Frankville), 0.09 mile west of milepost "214 to Baltimore," south of Baltimore & Ohio R. R., at east end of frame house, in large rock; bronze tablet stamped "1693"	1,693.121

<sup>1</sup> For elevations in Frostburg quadrangle in Pennsylvania see Bull. 515.

Floyd, 2.6 miles east of, 100 feet east of signal at station, south of Baltimore & Ohio R. R. bench mark in Laffey Rock; bronze tablet stamped "1380 C"----- Feet. 1,380.441

**From Piney Grove west through Grantsville to Keyser.**

Grantsville, Farmers' Hotel, in southeast corner stone, opposite mile-post marked "14 mi. to Frostburg" and "106 mi. to Wheeling"; aluminum tablet stamped "2299 C"----- 2,299.405  
Keyser, northeast corner of stone foundation wall of former post-office building; bronze tablet stamped "2879 C"----- 2,880.165

**ACCIDENT QUADRANGLE.**

[Latitude 39° 30'-39° 45'; longitude 79° 15'-79° 30'.]

**From New Germany southwest via Meadow Mountain Road to Thayerville.**

Thayerville, 5.8 miles east of, north of Meadow Mountain road, near Meadow Mountain Run, in rock 500 feet northeast of old sawmill site; bronze tablet stamped "2573"----- 2,573.506

**From Thayerville north through McHenry, Hoyes, and Accident to Keyser.**

Hoyes, southeast corner of foundation wall of Catholic Church; aluminum tablet stamped "2611 C"----- 2,611.818  
Accident, in northeast corner of foundation of English Lutheran Church; aluminum tablet stamped "2394 C"----- 2,395.001

**From McHenry through Sang Run, Friendsville, and Shelbysport to Somerfield, Pa., thence southeast to Keyser.**

Friendsville, southeast corner of First Avenue and Maple Street, in east foundation wall of building owned by L. E. Friend; aluminum tablet stamped "1501 C"----- 1,501.040  
Sang Run, in abutment of bridge over Youghiogheny River; bronze tablet stamped "1989 C"----- 1,988.409  
Oakton, Pennsylvania-Maryland boundary; base of monument----- 2,362.37

**OAKLAND QUADRANGLE.**

[Latitude 39° 15'-39° 30'; longitude 79° 15'-79° 30'.]

**From Oakland northeast to Thayerville.**

Oakland, 1.25 miles west of, top of southwest abutment of Baltimore & Ohio R. R. bridge over Youghiogheny River; Coast and Geodetic Survey bench mark K----- 2,375.518  
Oakland, in courthouse on top of south meridian stone, copper bolt stamped "2461 C"----- 2,460.369  
Oakland, southwest corner stone of courthouse; aluminum tablet stamped "2473 C"----- 2,472.387

**From Oakland south to Redhouse, thence east to Gorman, thence north through Kearney and Deer Park to Mountain Lake.**

Redhouse, southwest corner stone of school building; aluminum tablet stamped "2557 C"----- 2,556.966  
Redhouse, 2.6 miles east of, four corners on top of Backbone Mountain, 10 feet south of spring, on boulder; chiseled square----- 3,073.58  
Gorman, highway bridge over Potomac River, at west end of north abutment; aluminum tablet stamped "2312 C"----- 2,812.294

Kearney, 2.2 miles northeast of, 900 feet west of Taskers Corners, 600 feet east-southeast from barn in Jerry Tasker's upper field;	Feet.
aluminum tablet stamped "2720 C"	2,720.351
Deer Park, between two Baltimore & Ohio R. R. stations; 725 feet east of Deer Park Hotel station, top of southwest wing wall of abutment of stone culvert; aluminum tablet stamped "2447 C"	2,447.184
Mountain Lake, 3 miles east of Oakland railroad bridge over Little Youghiogheny River, on top of southwest corner of west abutment; point marked "B□M" (C. & G. S. b. m. XXII)	2,404.324

At Thayerville.

Thayerville, 700 feet from, south of Meadow Mountain road, 150 feet east of Thayerville-Oakland road, in boulder; bronze tablet stamped "2493 C"	2,493.463
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## APPENDIX A.

### ELEVATIONS ADJUSTED BY THE COAST AND GEODETIC SURVEY FROM PRECISE LEVELING.

Annapolis, Antietam, Baltimore, Betterton, Elk Garden, Elkton, Ellicott, Flintstone, Frostburg, Gunpowder, Hagerstown, Hancock, Havre de Grace, Ijamsville, Keyser, Laurel, Mount Airy, Oakland, Parkton, Pawpaw, Relay, Rockville, Seneca, Washington, and Williamsport quadrangles.

ALLEGANY, ANNE ARUNDEL, BALTIMORE, CARROLL, CECIL, FREDERICK, GARRETT, HARFORD, HOWARD, MONTGOMERY, PRINCE GEORGES, AND WASHINGTON COUNTIES.

The following descriptions and elevations are taken from reports of the Coast and Geodetic Survey and from lists furnished by the Baltimore & Ohio and Pennsylvania railroads; the data taken from the Coast and Geodetic Survey reports are republished by permission of the superintendent of that bureau. The bench marks were established by the Coast and Geodetic Survey, by the Baltimore & Ohio R. R., and by the Pennsylvania R. R., from precise leveling, and their elevations are in agreement with the 1912 adjustment of the Coast and Geodetic Survey.

#### ANNAPOLIS QUADRANGLE.

[Latitude  $38^{\circ} 45' - 39^{\circ}$ ; longitude  $76^{\circ} 15' - 76^{\circ} 30'$ .]

##### At Annapolis.

Annapolis, Naval Academy, on front doorsill of house No. 5 Stribling Row, $7\frac{1}{2}$ inches from west doorframe, 2 inches from edge of step, 14 inches from west end of step (C. & G. S. b. m. 5 S. R.)-----	Feet. 9.409
Annapolis, at northwest corner of house No. 1 Stribling Row, about 1 meter above ground; on projecting base (C. & G. S. b. m. 1 S. R.)-----	17.203
Annapolis, 8 feet southwest of front of observatory building; on center of top of stone pier (C. & S. b. m. Obs.)-----	23.012
Annapolis, on northeast side of base of Herndon Monument, midway of length, about 2 inches out from face of shaft, about 3 feet above ground (C. & S. b. m. Hern.)-----	29.196
Annapolis, on southwest corner of fourth granite block supporting iron fence around the governor's house, counting northeast from southwest corner; cross cut in stone (C. & G. S. b. m. No. XIII)-----	41.378
Annapolis, opposite Washington Street market, west doorsill of church on West Street; cut in east corner (C. & G. S. b. m. No. XII)-----	42.854

## ANTIETAM QUADRANGLE.

[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $77^{\circ} 30' - 77^{\circ} 45'$ .]

## Near Keedysville.

Keedysville, 0.5 mile south of, on south abutment of Baltimore & Ohio R. R. bridge 26, on northwest corner of west capstone; cross cut (C. & G. S. b. m. B)-----

Feet.  
391. 564

From point near Washington Junction along Baltimore & Ohio R. R. to Harpers Ferry.

Washington Junction, 0.9 mile east of, south side of tracks near milepost marked "Washington, 42 miles"; top of vertical rail section (B. & O. R. R. b. m. 43)-----

234. 107

Point of Rocks, south side of tracks, in foundation arch at east end of Point of Rocks tunnel; copper bolt (B. & O. R. R. b. m. 44A)---

233. 156

Catoctin, 1 mile southeast of, opposite milepost marked "Baltimore, 70 miles"; top of vertical rail section between tracks (B. & O. R. R. b. m. 45)-----

238. 257

Catoctin, opposite milepost 71; top of vertical rail section between tracks (B. & O. R. R. b. m. 46)-----

239. 068

Catoctin, 1 mile northwest of, opposite milepost 72; top of vertical rail section between tracks (B. & O. R. R. b. m. 47)-----

242. 644

Catoctin, 2 miles west of, 2 miles east of Brunswick, opposite milepost 73; top of vertical rail section between tracks (B. & O. R. R. b. m. 48)-----

245. 721

Brunswick, 1.5 miles from, opposite milepost 74, at east end of Brunswick yards; top of vertical rail section between tracks (B. & O. R. R. b. m. 49)-----

247. 545

Brunswick, 0.5 mile east of, in Brunswick yards, opposite milepost 75; top of vertical rail section between tracks (B. & O. R. R. b. m. 50)-----

247. 713

Brunswick, 0.5 mile west of, in southwest corner of culvert 39 G; copper bolt (B. & O. R. R. b. m. 51)-----

250. 426

Knoxville, 1 mile east of, opposite milepost 77; top of vertical rail section between tracks (B. & O. R. R. b. m. 52)-----

259. 530

Knoxville, north side of tracks near milepost 78; top of vertical rail section (B. & O. R. R. b. m. 53)-----

258. 044

Weverton, 2 miles west of, west end of north end wall of culvert 39 I; copper bolt (B. & O. R. R. b. m. 54)-----

258. 087

Weverton, 1.3 miles west of, 100 feet east of milepost 80, on north side of tracks, in native rock; copper bolt (B. & O. R. R. b. m. 55)-----

263. 323

Weverton, 2.5 miles west of, near Harpers Ferry, 400 feet east of Harpers Ferry tunnel, in box culvert 300 feet west of milepost 81; copper bolt (B. & O. R. R. b. m. 56)-----

280. 268

From point near Doubs along Baltimore & Ohio R. R. to Washington Junction.

Doubs, near, 300 feet west of milepost 66, in west capstone of south coping of arch culvert; copper bolt (B. & O. R. R. b. m. 160)-----

290. 387

Washington Junction, near, opposite milepost 67, between tracks; top of vertical rail section (B. & O. R. R. b. m. 161)-----

286. 676

Washington Junction, 0.8 mile east of, opposite milepost 68, between tracks; top of vertical rail section (B. & O. R. R. b. m. 162)-----

257. 545

Adamstown, near, at east end of first cut from Adamstown, on stone (granite) west of culvert; bottom of square hole (C. & G. S. of culvert; copper bolt (B. & O. R. R. b. m. 163)-----	Feet. 284. 950
Doubs, 2 miles from, on Adamstown cut-off, 1,000 feet south of large arch culvert, in south end of west coping of small culvert; copper bolt (B. & O. R. R. b. m. 164)-----	270. 636
Washington Junction, 1.5 miles from, on Adamstown cut-off, at north end of first large cut from Metropolitan branch, in north end of west coping of culvert; copper bolt (B. & O. R. R. b. m. 165)-----	252. 073
Washington Junction, on south side of tracks, 150 feet east of old signal tower; top of vertical rail section (B. & O. R. R. b. m. 44)-----	235. 885

**BALTIMORE QUADRANGLE.**[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $76^{\circ} 30' - 76^{\circ} 45'$ .]

In the vicinity of Baltimore.

West Baltimore, between tracks; top of vertical rail section (B. & O. R. R. b. m. 36)-----	72. 352
Baltimore, corner of West Ostend and Sharp streets, on Locust Point line of Baltimore & Ohio R. R., 500 feet east of railroad junction, in middle of south coping on eastern one of two small culverts; copper bolt (B. & O. R. R. b. m. 39)-----	9. 134
Baltimore, corner of Howard Street and Fifth Avenue, in step at entrance to Fifth Regiment armory; copper bolt (city b. m. 1288)-----	127. 060
Baltimore, at Mount Royal station, between third and fourth bents of train shed from Mount Royal entrance to tunnel, in coping of retaining wall; copper bolt (B. & O. R. R. b. m. 41)-----	70. 876
Mount Royal station, Baltimore, 0.5 mile north of, in end of north abutment of bridge over Pennsylvania tracks; copper bolt (B. & O. R. R. b. m. 42)-----	93. 707
Baltimore, about 400 feet west of milepost 3, in south end of west abutment of small bridge; copper bolt (B. & O. R. R. b. m. 43)-----	149. 370
Baltimore, Belt Line R. R. bridge over Jenkins Lane, in south bridge seat of east abutment; copper bolt (city b. m. 1240)-----	142. 395
Baltimore, on north side of Fort McHenry, east of quartermaster's wharf, at first angle in sea wall; cross cut on top of wall ("Tidal 1")-----	4. 442
Baltimore, on north side of Fort McHenry, on top of sea wall, in center of fourth capstone west from quartermaster's wharf; cross cut within a circle ("Tidal 2")-----	4. 626
Baltimore, at southeast corner of storehouse, south of quartermaster's wharf, highest point of knob of an old cannon set in ground with muzzle downward ("Tidal 3")-----	9. 098
Baltimore, at Fort McHenry, at intersection of roads leading to fort entrance and quartermaster's wharf, on corner diagonally opposite the colonel's office; highest point of knob of an old cannon set in ground with muzzle downward ("Tidal 4")-----	27. 536
Baltimore, at corner of Fort Avenue and Towson Street, at Fort Avenue entrance to Church of Our Lady of Good Counsel, in west end of top step; bottom of square hole (city 1181)-----	30. 623
Baltimore, on corner of Randall and Covington streets, northeast entrance to Riverside Park, in top of large granite gatepost on south side of path, close to corner of post; bottom of square hole (C. & G. S. b. m. L)-----	69. 921

Baltimore, at corner of Sharp and Ostend streets, on north end of west one of two small railroad culverts; in top of first coping Adamstown cut-off, not far from Doubs, in east end of north coping b. m. M)	Feet.
	8. 993
Baltimore, 300 feet from south end of Belt Line cut, at approach to Camden station, in extreme south end of eastern offset to west retaining wall for elevated tracks; copper bolt (B. & O. R. R. b. m. 40)	25. 141
Mount Winans, 0.3 mile northeast of, on west abutment of bridge 3A, set vertically in south capstone; copper bolt (B. & O. R. R. b. m. 38)	21. 631
Mount Winans, near northeast end of station platform, between tracks; top of vertical rail section (B. & O. R. R. b. m. 37)	36. 765
From N-I tower along Pennsylvania R. R. to Arbutus.	
N-I tower, 60 feet south of, in northeast coping of box culvert; copper bolt (P. R. R. b. m. 84)	34. 72
Milepost 91, 2,700 feet south of, in southwest coping of arch; copper bolt (P. R. R. b. m. 85)	44. 40
Milepost 92, 420 feet south of, Baltimore & Ohio R. R. crossing overhead bridge; on shelf (P. R. R. b. m. 86)	58. 37
Philadelphia Turnpike (Baltimore), in northeast coping of iron pipe; copper bolt (P. R. R. b. m. 86a)	60. 40
Patterson Park Avenue Bridge (Baltimore), in northwest bridge seat; copper bolt (P. R. R. b. m. 88)	85. 32
Broadway Bridge (Baltimore), north end pedestal; no mark (P. R. R. b. m. 88a)	77. 52
Union railroad tunnel (Baltimore), north end, west side; on shelf (P. R. R. b. m. 89)	92. 87
Union railroad tunnel (Baltimore), south end, west side; on shelf (P. R. R. b. m. 90)	53. 46
St. Paul Street Bridge (Baltimore), south end, east pier; copper bolt (P. R. R. b. m. 91)	60. 22
Baltimore station, 1,924 feet south of, north end, east side Baltimore & Potomac R. R. tunnel; on shelf (P. R. R. b. m. 92)	66. 20
Pennsylvania Avenue station (Baltimore), in south step; copper bolt (P. R. R. b. m. 93)	133. 15
Lafayette, 2,273-foot north of, southwest wing of Baltimore & Potomac R. R. tunnel (Baltimore); on shelf (P. R. R. b. m. 94)	162. 31
Lafayette, 1,856 feet south of, southwest back wall, Franklin Street undergrade (Baltimore); square (P. R. R. b. m. 95 A)	143. 45
Calverton, 1,961 feet south of, northwest back wall Gwynn's Falls Bridge; copper bolt (P. R. R. b. m. 96)	140. 50
Frederick Road, east side retaining wall; shelf (P. R. R. b. m. 97)	157. 32
Louden Park, west side of track, on cemetery wall; square (P. R. R. b. m. 98)	146. 50
Louden Park, 1,944 feet south of, overhead bridge, on southwest pedestal; square (P. R. R. b. m. 98a)	154. 26
From Baltimore station north along Pennsylvania R. R. to milepost 17.	
Milepost 2, 930 feet north of, in southeast bridge seat; copper bolt (P. R. R. b. m. 1)	116. 58
Woodberry, west center of arch; copper bolt (P. R. R. b. m. 2)	138. 80
Woodberry, east center of arch; copper bolt (P. R. R. b. m. 3)	155. 93

	Feet.
Milepost 4, 360 feet south of, south side of track, on city-line stone; square (P. R. R. b. m. 4)	174.73
Melvale, 840 feet north of, northeast back wall; copper bolt (P. R. R. b. m. 5)	182.01
Cylburn, 500 feet north of, northwest abutment; shelf (P. R. R. b. m. 6)	199.53
Mount Washington, 60 feet south of, northwest seat of bridge No. 5; copper bolt (P. R. R. b. m. 7)	198.69
Milepost 7, 870 feet north of, southwest seat of bridge No. 6; copper bolt (P. R. R. b. m. 8)	230.69
Baltimore water supply; surface of water in lake (P. R. R. determination)	226.0
Lake, 600 feet south of station, west side of track, in coping of arch; copper bolt (P. R. R. b. m. 9)	229.70
Lake, opposite station, east side of track, in rock; copper bolt (P. R. R. b. m. 9a)	250.73
Ruxton, 240 feet south of, northwest abutment of overhead road bridge; shelf (P. R. R. b. m. 10)	269.70
Sherwood, 300 feet south of, east center of arch; copper bolt (P. R. R. b. m. 11)	284.15
Milepost 9, 2,000 feet north of, northwest wing of bridge No. 7; copper bolt (P. R. R. b. m. 12)	291.20
Lutherville, station step; copper bolt (P. R. R. b. m. 13)	328.73
Milepost 11, 810 feet north of, west center of coping on box culvert; copper bolt (P. R. R. b. m. 14)	357.09
Milepost 12, 2,000 feet north of, northeast wing of bridge No. 11; copper bolt (P. R. R. b. m. 15)	365.40
Texas, station step; copper bolt (P. R. R. b. m. 16)	329.54
Cockeysville, 120 feet south of tower V, northeast coping of box culvert; copper bolt (P. R. R. b. m. 17)	278.68
Milepost 16, 240 feet south of, west center of arch; copper bolt (P. R. R. b. m. 18)	261.51

From Baltimore along Baltimore & Ohio R. R. to milepost marked "Baltimore 11 miles."

Baltimore, at telegraph pole 92-8, in north end of bridge seat of east abutment of large iron bridge; copper bolt (B. & O. R. R. b. m. 44)	133.396
Baltimore, Gay Street station, south side of tracks, on bridge seat of west abutment of bridge; copper bolt (B. & O. R. R. b. m. 45)	150.445
Baltimore, opposite telegraph pole 90-11, on bridge seat of west abutment of Duncans Lane Bridge, between tracks; copper bolt (B. & O. R. R. b. m. 46)	108.518
Baltimore, Bay View station, 100 feet west of telegraph pole 89-20, on north end of bridge seat of east abutment of bridge over Philadelphia road; copper bolt (B. & O. R. R. b. m. 47)	72.669
Herring Run, at telegraph pole 88-13, in east abutment of bridge 3b; copper bolt (B. & O. R. R. b. m. 48)	30.280
Rosedale, opposite milepost B 9; vertical rail section between tracks (B. & O. R. R. b. m. 49)	45.662
Milepost marked "Balto. 10 mi." between tracks; top of vertical rail section (B. & O. R. R. b. m. 50)	58.430

## BETTERTON QUADRANGLE.

[Latitude 39° 15'-39° 30'; longitude 76°-76° 15'.]

From Belcamp along Baltimore &amp; Ohio R. R. to point near Stepney.

Belcamp, 0.5 mile east of Sewell, in southeast capstone of bridge 22 A; copper bolt (B. & O. R. R. b. m. 67)	Feet. 22.998
Belcamp, 0.2 mile east of, opposite milepost 28, between tracks; top of vertical rail section (B. & O. R. R. b. m. 68)	36.444
Stepney, near, at telegraph pole 67-27, in southeast capstone of bridge 23 A; copper bolt (B. & O. R. R. b. m. 68 A)	34.434
Stepney, near, at telegraph pole 66-22, in north end of west abutment of bridge 25 A; copper bolt (B. & O. R. R. b. m. 69)	18.365
Stepney, 0.8 mile west of, opposite milepost 30, between tracks; top of vertical rail section (B. & O. R. R. b. m. 70)	43.968

From milepost 65 along Pennsylvania R. R. to Bush River.

Milepost 65, in east end of box culvert; copper bolt (P. R. R. b. m. 62)	67.60
Milepost 66, 810 feet south of, in northeast abutment of open bridge; copper bolt (P. R. R. b. m. 63)	64.10
Milepost 68, 660 feet north of, in northeast coping of box culvert; copper bolt (P. R. R. b. m. 64)	43.75
Perrymansville, in step of station; copper bolt (P. R. R. b. m. 65)	44.12
Milepost 70, 460 feet north of, in southeast coping of box culvert; copper bolt (P. R. R. b. m. 66)	35.01
Milepost 70, 4,200 feet south of, in northeast coping of box culvert; copper bolt (P. R. R. b. m. 67)	16.89
Bush River, wooden sill of tower (P. R. R. b. m. 68)	11.93
Bush River, south end of bridge over, in northwest coping of box culvert; copper bolt (P. R. R. b. m. 69)	7.62

## ELK GARDEN QUADRANGLE.

[Latitude 39° 15'-39° 30'; longitude 79°-79° 15'.]

Near Swanton.

Swanton, near, on abutment of small Baltimore & Ohio R. R. bridge; cut, marked "B□M" (C. & G. S. b. m. XXV)	2,274.619
---	-----------

From point near Bloomington along Baltimore &amp; Ohio R. R. to point near Altamont.

Bloomington, 0.2 mile east of, on bridge 79 over Potomac River, second step from top, in north bridge abutment; copper bolt (B. & O. R. R. b. m. 29)	1,008.860
Bloomington, near, opposite milepost 209, between tracks; top of vertical rail section (B. & O. R. R. b. m. 30)	1,093.561
Black Bear, near, opposite milepost 210, between tracks; top of vertical rail section (B. & O. R. R. b. m. 31)	1,210.024
Black Bear, near, southwest side of southeast portal of Everett's tunnel; square cut in foundation (B. & O. R. R. b. m. 31 A)	1,279.824
Black Bear, near, at telegraph pole 210-30, in foundation at northeast side of northwest portal of Everett's tunnel, copper bolt (B. & O. R. R. b. m. 32)	1,291.802

Bond station, 1.2 miles east of, 2.6 miles east of Frankville, 100 feet east of signal station, south side of Baltimore & Ohio R. R.; bronze tablet set in rock (U. S. G. S. b. m.)-----	Feet.
	1, 380. 440
Bond station, 0.5 mile east of, opposite milepost 212, between tracks; top of vertical rail section (B. & O. R. R. b. m. 33)-----	1, 445. 351
Crabtree, opposite milepost 213, between tracks; top of vertical rail section (B. & O. R. R. b. m. 34)-----	1, 564. 118
Frankville, near, 45 feet east of telegraph pole 213-39, south side of track, in rock; copper bolt (B. & O. R. R. b. m. 35)-----	1, 670. 354
Frankville, near, 30 feet northeast of telegraph pole 215-03, on south side of track, in rock; copper bolt (B. & O. R. R. b. m. 36)-----	1, 804. 097
Frankville, 1.5 miles southwest of, northwest of tracks, near milepost 216, 500 feet northeast of Hitchcock tunnel, in southwest end of retaining wall; copper bolt (B. & O. R. R. b. m. 37)-----	1, 910. 921
Frankville, 2.5 miles southwest of, opposite milepost 217, between tracks; top of vertical rail section (B. & O. R. R. b. m. 38)-----	2, 027. 378
Swanton, 1 mile northeast of, at telegraph pole 218-13½, in abutment of bridge 80, north side of track; copper bolt (B. & O. R. R. b. m. 39)-----	2, 185. 475
Swanton, 0.2 mile northeast of, at telegraph pole 219-5½, in northwest end of bridge seat of northeast abutment of bridge 83; copper bolt (B. & O. R. R. b. m. 40)-----	2, 271. 557
Swanton, 0.2 mile southwest of, at telegraph pole 219-21, on bridge 84, in bridge seat of abutment toward Wheeling; copper bolt (B. & O. R. R. b. m. 40 A)-----	2, 297. 299
Swanton, 1.2 miles southwest of, at telegraph pole 220-19, in bridge seat of abutment toward Wheeling; copper bolt (B. & O. R. R. b. m. 41)-----	2, 381. 425
Swanton, 1.8 miles southwest of, opposite milepost 221, between tracks; top of vertical rail section (B. & O. R. R. b. m. 42)-----	2, 435. 851

## ELKTON QUADRANGLE.

[Latitude 39° 30'-39° 45'; longitude 75° 45'-76°.]

From Delaware-Maryland boundary line along Pennsylvania R. R. to mile-post 56.

Delaware-Maryland boundary stone; top of new stone marked "tangent 1849" (P. R. R. b. m. 36 A)-----	117. 99
Iron Hill, 200 feet south of station, in northeast coping of box culvert; copper bolt (P. R. R. b. m. 37)-----	121. 31
Milepost 43, 2,400 feet north of, in center of east coping of culvert; copper bolt (P. R. R. b. m. 38)-----	88. 20
Milepost 43, 3,000 feet south of, in southeast coping of twin arch; copper bolt (P. R. R. b. m. 39)-----	57. 34
Big Elk Creek, at southwest corner of bridge 54, in back wall; copper bolt (P. R. R. b. m. 40)-----	33. 60
Elkton, in doorsill of station; copper bolt (P. R. R. b. m. 41)-----	30. 00
Milepost 46, 500 feet south of, in southwest back wall of bridge 55; copper bolt (P. R. R. b. m. 42)-----	19. 50
Milepost 47, 1,200 feet north of, northwest coping of culvert; copper bolt (P. R. R. b. m. 43)-----	23. 59
Milepost 48, 1,560 feet north of, in northeast wing of arch bridge; copper bolt (P. R. R. b. m. 44)-----	56. 47

	Feet.
Milepost 48, 900 feet south of, in northeast wing of 20-foot arch; copper bolt (P. R. R. b. m. 44a)	71. 06
Bacon Hill, in northeast corner of coping of box culvert; copper bolt (P. R. R. b. m. 45)	76. 15
Milepost 50, 1,020 feet south of, in southeast coping of arch; copper bolt (P. R. R. b. m. 46)	71. 78
Northeast, 1,800 feet north of; copper bolt (P. R. R. b. m. 47)	48. 80
Milepost 52, 180 feet north of, in southeast coping of arch; copper bolt (P. R. R. b. m. 48)	28. 58
Milepost 52, 1,300 feet south of, in east pier of overhead bridge; copper bolt (P. R. R. b. m. 48a)	31. 61
Milepost 53, 1,800 feet north of, 12-foot arch in northeast end of coping; copper bolt (P. R. R. b. m. 48b)	21. 57
Milepost 53, 150 feet north of, northeast end of coping, Broad Creek arch; copper bolt (P. R. R. b. m. 49)	24. 94
Milepost 53, 1,350 feet south of, box culvert in northeast end of coping; copper bolt (P. R. R. b. m. 48a)	27. 96
Charlestown, 390 feet south of, northwest coping of box culvert; copper bolt (P. R. R. b. m. 50)	41. 20
Milepost 55, 150 feet north of, northwest coping of box culvert; copper bolt (P. R. R. b. m. 51)	57. 11

**From Foys Hill along Baltimore & Ohio R. R. to point near Newark, Del.**

Milepost 45, opposite, between tracks; vertical rail section (B. & O. R. R. b. m. 85)	209. 473
Milepost 46, 10 feet east of, in outcropping rock; copper bolt (B. & O. R. R. b. m. 86)	182. 858
Leslie, 0.5 mile west of, in north end of west abutment to bridge 42 A; copper bolt (B. & O. R. R. b. m. 87)	164. 278
Milepost 48, opposite, between tracks; vertical rail section (B. & O. R. R. b. m. 88)	138. 779
Eder, 1 mile east of Leslie, bridge 44 C over creek, in north end of bridge seat of west abutment; copper bolt (B. & O. R. R. b. m. 89)	118. 520
Eder, 0.2 mile east of, mud wall of bridge 45 B, in north coping stone of west abutment; copper bolt (B. & O. R. R. b. m. 90)	137. 852
Eder, 0.8 mile east of, open culvert, in north capstone of west abutment; copper bolt (B. & O. R. R. b. m. 90 A)	138. 536
Childs, 0.5 mile west of, in north end of west abutment of bridge 47 B; copper bolt (B. & O. R. R. b. m. 91)	136. 394
Childs, 0.2 mile east of, at Singerly, in north capstone of west abutment of bridge 47 F; copper bolt (B. & O. R. R. b. m. 92)	136. 447
Baldwin, at Singerly Tower, in north capstone of west abutment of bridge 49 A; copper bolt (B. & O. R. R. b. m. 93)	163. 735
Baldwin, 0.2 mile east of, at Barkesdale, bridge 50 A over Elk Creek, in north capstone of west abutment of; copper bolt (B. & O. R. R. b. m. 94)	142. 576
Barkesdale, 0.4 mile east of, in north capstone of west abutment of bridge 51 C; copper bolt (B. & O. R. R. b. m. 95)	163. 195
Maryland-Delaware State line, 0.1 mile west of, in north capstone of west abutment of bridge 52 A; copper bolt (B. & O. R. R. b. m. 96)	135. 984

## ELLIOTT QUADRANGLE.

[Latitude  $39^{\circ} 15'$ - $39^{\circ} 30'$ ; longitude  $76^{\circ} 45'$ - $77^{\circ}$ .]

From Ilchester along Baltimore &amp; Ohio R. R. to point near Hoods Mill.

Ilchester, in mud wall of west abutment of bridge out of Ilchester tunnel, between tracks; copper bolt (B. & O. R. R. b. m. 104)-----	Feet. 109.173
Gray, opposite milepost 14 on old line, between tracks; top of vertical rail section (B. & O. R. R. b. m. 105)-----	121.486
Ellicott City 600 feet west of, south side of tracks, in native rock; copper bolt (B. & O. R. R. b. m. 106)-----	144.376
Oella, 400 feet east of, in center of north coping of arch culvert; copper bolt (B. & O. R. R. b. m. 106 A)-----	148.034
Oella, 0.8 mile west of, on west side of tracks, 40 feet south of telegraph pole 16-10, in native rock; copper bolt (B. & O. R. R. b. m. 107)-----	168.438
Hollofield, 1.5 miles south of, in southeast corner of west wing wall of Union dam; copper bolt (B. & O. R. R. b. m. 108)-----	187.532
Hollofield, near, in east coping of culvert, 125 feet north of milepost 18, 6 feet from south end of coping; copper bolt (B. & O. R. R. b. m. 109)-----	192.624
Hollofield, culvert near target at tower, in north end of east coping; copper bolt (B. & O. R. R. b. m. 110)-----	199.996
Hollofield, 0.8 mile northwest of, on south side of tracks, at telegraph pole 19-34, in large rock; copper bolt (B. & O. R. R. b. m. 111)-----	215.712
Alberton; 0.2 mile west of, in Baltimore County, on west abutment of bridge 17, between tracks; copper bolt (B. & O. R. R. b. m. 112)-----	222.352
Alberton, near, at Dorseys Run, in center of southeast coping of arch culvert; copper bolt (B. & O. R. R. b. m. 113)-----	237.053
Alberton, near, 0.4 mile west of Dorseys Run, in center of north coping of arch culvert 21; copper bolt (B. & O. R. R. b. m. 114)-----	244.826
Davis, near, 1 mile west of Dorseys Run, in center of north coping of arch culvert 22; copper bolt (B. & O. R. R. b. m. 115)-----	249.406
Davis, in center of west coping of arch culvert 23; copper bolt (B. & O. R. R. b. m. 116)-----	258.759
Woodstock, 500 feet east of, in south end of small culvert; copper bolt (B. & O. R. R. b. m. 117)-----	271.564
Woodstock, near, at milepost 26, between tracks; top of vertical rail section (B. & O. R. R. b. m. 118)-----	288.221
Marriottsville, near, 2 miles northwest of Woodstock, in retaining wall on east side of tracks, 20 feet west of telegraph pole 26-28; copper bolt (B. & O. R. R. b. m. 119)-----	291.600
Marriottsville, in north end of west mud wall of bridge 25; copper bolt (B. & O. R. R. b. m. 120)-----	292.841
Henryton, near, 300 feet east of Henryton tunnel, in bridge seat of west abutment of bridge 26; between tracks; copper bolt (B. & O. R. R. b. m. 121)-----	299.160
Gorsuch, near, 100 feet west of milepost 29, in north end of small box culvert; copper bolt (B. & O. R. R. b. m. 122)-----	310.944
Gorsuch, in north end of west abutment of culvert 27; copper bolt (B. & O. R. R. b. m. 123)-----	323.638
Sykesville, near, opposite milepost 31, between tracks; top of vertical rail section (B. & O. R. R. b. m. 124)-----	351.072

	Feet.
Sykesville, 100 feet west of station, in center of south coping of culvert; copper bolt (B. & O. R. R. b. m. 125)-----	375. 944
Gaither, near, in seat of bridge at west end of Sykesville tunnel, between tracks; copper bolt (B. & O. R. R. b. m. 126)-----	408. 779
Gaither, 0.2 mile southwest of, in north end of west abutment of bridge 28; copper bolt (B. & O. R. R. b. m. 127)-----	419. 235

#### FLINTSTONE QUADRANGLE.

[Latitude 39° 30'-39° 45'; longitude 78° 30'-78° 45'.]

From point near Little Orleans to point near Cumberland.

LITTLE ORLEANS, 14 miles southwest of, at north end of canal tunnel, a short distance below level of towpath; square cut on stone foundation (C. & G. S. b. m. No. XIV)-----	532. 357
Oldtown, 5 miles east of, on coping stone of Chesapeake & Ohio Canal Lock 67; square cut (C. & G. S. b. m. No. XV)-----	540. 393
Cumberland, 9.2 miles east of, on coping stone of Lock 72 of Chesapeake & Ohio Canal; square cut (C. & G. S. b. m. No. XVI)-----	587. 676

From point near North Branch along Baltimore & Ohio R. R. to point near Evitts Creek.

North Branch, 0.5 mile southeast of, opposite milepost 172, between tracks; top of vertical rail section (B. & O. R. R. b. m. 147)-----	598. 307
North Branch, bridge over north branch of Potomac River, in bridge seat of west abutment, between tracks; copper bolt (B. & O. R. R. b. m. 147 A)-----	602. 514
North Branch, 0.5 mile northwest of, opposite milepost 173, between tracks; top of vertical rail section (B. & O. R. R. b. m. 148)-----	625. 176
North Branch, 1.5 miles northwest of, opposite milepost 174, between tracks; top of vertical rail section (B. & O. R. R. b. m. 149)-----	637. 056
Evitts Creek, 1 mile southeast of, opposite milepost 175, between tracks; top of vertical rail section (B. & O. R. R. b. m. 150)-----	629. 429

#### FROSTBURG QUADRANGLE.

[Latitude 39° 30'-39° 45'; longitude 78° 45'-79°.]

From Cumberland southwest 12 miles.

Cumberland, at western terminus of Chesapeake & Ohio Canal, on coping stone of feed lock; cut marked "I B□M U.S.C.S. 1878" (C. & G. S. b. m. I)-----	623. 766
Cumberland, 5.5 miles southwest of, on abutment of small drain on Baltimore & Ohio R. R.; cut marked "B□M" (C. & G. S. b. m. No. XVII)-----	647. 393
Cumberland, 12 miles southwest of, at southwest angle of drain on Baltimore & Ohio R. R.; cut on foundation stone, marked "B□M" (C. & G. S. b. m. No. XVIII)-----	693. 992

From point near Evitts Creek along Baltimore & Ohio R. R. to point 2 miles south of Cooks Mills.

Evitts Creek, 0.1 mile west of, opposite milepost 176, between tracks; top of vertical rail section (B. & O. R. R. b. m. 151)-----	638. 435
Cumberland, 1 mile east of, opposite milepost 177, between tracks; top of vertical rail section (B. & O. R. R. b. m. 152)-----	648. 129

## ELEVATIONS BY THE COAST AND GEODETIC SURVEY.

57

	Feet.
Cumberland, opposite milepost 178, between tracks; top of vertical rail section (B. & O. R. R. b. m. 153)-----	632. 601
Cumberland, Queen City Hotel, in front of railing to right of stairway leading to relief department, in top of wall; copper bolt (B. & O. R. R. b. m. 153 A)-----	639. 762
Cumberland, Grafton Line, at east end of viaduct bridge, on south side of tracks; copper bolt (B. & O. R. R. b. m. 154)-----	644. 338
Cumberland, 1.5 miles west of, on south side of tracks, in foundation of overhead foot bridge; copper bolt (B. & O. R. R. b. m. 155)-----	653. 430
Cumberland, 2.5 miles west of, Pennsylvania R. R. overhead crossing at the Narrows, in south end of east pier of north span; copper bolt (B. & O. R. R. b. m. 156)-----	656. 199
Mount Savage Junction, east abutment of first bridge east of, between tracks; copper bolt (B. & O. R. R. b. m. 157)-----	681. 468
Mount Savage Junction, east abutment of bridge 1 of Connellsville Division, between tracks; copper bolt (B. & O. R. R. b. m. 158)-----	710. 440
Ellerslie, in bridge seat of east abutment of bridge 2½, between tracks; copper bolt (B. & O. R. R. b. m. 160 A)-----	727. 971

## From point near Cumberland along Baltimore &amp; Ohio R. R. to point near Dawson.

Cumberland, near Green Street station, overhead bridge 180 C, in north end of extension of west abutment; copper bolt (B. & O. R. R. b. m. 1)-----	647. 699
Robert station, near, 700 feet south of milepost 181, in west end of south wall of small culvert; copper bolt (B. & O. R. R. b. m. 3)-----	652. 911
Robert station, 0.1 mile south of, at telegraph pole 182-7, on small arch culvert, in north coping; copper bolt (B. & O. R. R. b. m. 4)-----	657. 475
Cedar Cliff, near, on culvert at telegraph pole 183-11, in north coping; copper bolt (B. & O. R. R. b. m. 5)-----	648. 532
Cedar Cliff, near, at telegraph pole 184-6, stone culvert, in north end of west coping; square cut (B. & O. R. R. b. m. 6)-----	647. 706
Brady, near, at telegraph pole 184-22, north side of abutment to bridge 71; copper bolt (B. & O. R. R. b. m. 6 A)-----	647. 277
Brady, 0.1 mile southwest of, at telegraph pole 185-10, in east end of north coping of culvert; copper bolt (B. & O. R. R. b. m. 7)-----	660. 150
Brady, 1 mile southwest of, at telegraph pole 186-2, west of tracks, in native rock; copper bolt (B. & O. R. R. b. m. 7A)-----	666. 668
McKenzie station, 0.5 mile east of, at telegraph pole 186-37, on undergrade highway bridge crossing, in north abutment; copper bolt (B. & O. R. R. b. m. 8)-----	680. 759
Potomac station, on undergrade highway bridge, in north abutment; copper bolt (B. & O. R. R. b. m. 9)-----	688. 345
Pinto, near, 500 feet northeast of milepost 189, on arch culvert, in north coping; copper bolt (B. & O. R. R. b. m. 10)-----	672. 482
Lowndes, near, 150 feet southwest of milepost 190, on culvert, in north coping; copper bolt (B. & O. R. R. b. m. 11)-----	683. 240
Cresap, near, at telegraph pole 190-23, on culvert ,in north abutment; copper bolt (B. & O. R. R. b. m. 12)-----	698. 825
Rawlings, 800 feet southwest of, on bridge 75, opposite telegraph pole 191-23, in bridge seat of abutment toward Wheeling; copper bolt (B. & O. R. R. b. m. 13)-----	703. 575
Rawlings, near, opposite milepost 193, between tracks; top of vertical rail section (B. & O. R. R. b. m. 14)-----	718. 319

	Feet.
Black Oak, near, opposite milepost 194, between tracks; top of vertical rail section (B. & O. R. R. b. m. 15)-----	724. 961
Black Oak, 200 feet southwest of, opposite milepost 195, between tracks; top of vertical rail section (B. & O. R. R. b. m. 16)-----	743. 804
Black Oak, 0.9 mile southwest of, at telegraph pole 195-30, Western Maryland Ry. bridge, in northwest end of northeast abutment; copper bolt (B. & O. R. R. b. m. 17)-----	740. 252

**GUNPOWDER QUADRANGLE.**

[Latitude  $39^{\circ} 15'$ - $39^{\circ} 30'$ ; longitude  $76^{\circ} 15'$ - $76^{\circ} 30'$ .]

From milepost 74 along Pennsylvania R. R. to N-I tower.

Milepost 74, 1,530 feet north of, southeast coping of box culvert; copper bolt (P. R. R. b. m. 70)-----	21. 84
Milepost 74, 1,450 feet south of, southeast coping of cattle yard; copper bolt (P. R. R. b. m. 71)-----	24. 34
Milepost 75, 390 feet south of, east coping of box culvert; copper bolt (P. R. R. b. m. 72)-----	20. 80
Milepost 76, 75 feet north of, southeast coping of box culvert; copper bolt (P. R. R. b. m. 73)-----	30. 16
Magnolia, doorstep of water station; copper bolt (P. R. R. b. m. 74)-----	26. 78
Milepost 78, 960 feet south of, northwest coping of box culvert; copper bolt (P. R. R. b. m. 75)-----	11. 54
Harewood Park, 780 feet north of, southeast coping of box culvert; copper bolt (P. R. R. b. m. 76)-----	8. 32
Milepost 81, 3,330 feet south of, northeast coping of box culvert; copper bolt (P. R. R. b. m. 77)-----	24. 60
Milepost 82, 880 feet south of, northeast coping of arch; copper bolt (P. R. R. b. m. 78)-----	15. 20
Milepost 83, 400 feet south of, southwest coping of box culvert; copper bolt (P. R. R. b. m. 79)-----	30. 96
Middle River, station step; no mark (P. R. R. b. m. 79a)-----	32. 23
Milepost 86, 1,590 feet south of, northwest coping of iron pipe; no mark (P. R. R. b. m. 80)-----	39. 04
Stemmer's Run, 150 feet south of, northwest back wall of undergrade road bridge; no mark (P. R. R. b. m. 81)-----	22. 92
Milepost 88, southeast coping of arch; copper bolt (P. R. R. b. m. 82)-----	12. 80
Milepost 89, 1,170 feet south of, northwest coping of box culvert; copper bolt (P. R. R. b. m. 83)-----	19. 40

From milepost 11 along Baltimore & Ohio R. R. to Belcamp.

Milepost 11, opposite, between tracks; vertical rail section (B. & O. R. R. b. m. 51)-----	48. 793
Rossville, at telegraph pole 84-30, on east abutment of bridge 6 B, in south end of bridge seat; copper bolt (B. & O. R. R. b. m. 51 A)-----	37. 322
Rossville, near, at telegraph pole 83-24, in bridge seat on east abutment of bridge 8 A, between westbound track and siding; copper bolt (B. & O. R. R. b. m. 52)-----	70. 380
Poplar, opposite milepost 13; vertical rail section between tracks (B. & O. R. R. b. m. 53)-----	96. 455
Poplar, near, opposite milepost 14, between tracks; vertical rail section (B. & O. R. R. b. m. 54)-----	65. 759

	Feet.
Cowenton, near, in north end of east abutment of bridge 10 A, at telegraph pole 81-24; copper bolt (B. & O. R. R. b. m. 54 A)-----	51. 615
Cowenton, 500 feet west of station, in southwest capstone of bridge 11 A; copper bolt (B. & O. R. R. b. m. 55)-----	30. 688
Cowenton, near, opposite milepost 16, between tracks; vertical rail section (B. & O. R. R. b. m. 56)-----	49. 537
Loreley, opposite milepost 17, between tracks; vertical rail section (B. & O. R. R. b. m. 57)-----	92. 300
Loreley, 0.2 mile east of, in capstone at south end of west abutment of bridge 13 B; copper bolt (B. & O. R. R. b. m. 58)-----	84. 152
Big Gunpowder bridge, at east end of, in east end of south coping; copper bolt (B. & O. R. R. b. m. 58 A)-----	63. 900
Bradshaw, near milepost 19, in south end of west abutment of bridge 14 B; copper bolt (B. & O. R. R. b. m. 59)-----	54. 638
Joppa, 0.5 mile east of Bradshaw, north end of east abutment of bridge 150; copper bolt (B. & O. R. R. b. m. 60)-----	44. 007
Clayton Tower, opposite milepost 21, at Joppa, between tracks; vertical rail section (B. & O. R. R. b. m. 61)-----	89. 301
Clayton, 0.2 mile west of, opposite milepost 22, between tracks; top of vertical rail section (B. & O. R. R. b. m. 62)-----	102. 201
Milepost 23, opposite, between tracks; top of vertical rail section (B. & O. R. R. b. m. 63)-----	60. 573
Van Bibber, 0.5 mile west of, in east end of south coping of east abutment of bridge 19 A; copper bolt (B. & O. R. R. b. m. 63 A)-----	40. 418
Milepost 24, east of Van Bibber, between tracks; top of vertical rail section (B. & O. R. R. b. m. 64)-----	26. 596
Bush River, opposite milepost 25, between tracks; top of vertical rail section (B. & O. R. R. b. m. 65)-----	40. 222
Sewell, 0.5 mile west of station, opposite milepost 26, between tracks; top of vertical rail section (B. & O. R. R. b. m. 66)-----	62. 727

**HAGERSTOWN QUADRANGLE.**[Latitude  $39^{\circ} 30'$ - $39^{\circ} 45'$ ; longitude  $77^{\circ} 30'$ - $77^{\circ} 45'$ .]**At Hagerstown.**

Hagerstown, at corner of Washington and Jonathan streets, on Jonathan Street side of courthouse; cut on water table (C. & G. S. b. m. A)-----	552. 033
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**HANCOCK QUADRANGLE.**[Latitude  $39^{\circ} 30'$ - $39^{\circ} 45'$ ; longitude  $78^{\circ} 78^{\circ} 15'$ .]**From Cherry Run to point near Hancock.**

Cherry Run, nearly opposite station of Baltimore & Ohio R. R., on coping stone at upper end of "overflow" at "Big Pool," Chesapeake & Ohio Canal; square cut (C. & G. S. b. m. VII)-----	405. 474
Hancock, 8 miles east of Chesapeake & Ohio Canal aqueduct over Licking Creek, cut on coping stone, lettered "E.B.□M.,U.S.C.S., 1878" (C. & G. S. b. m. E)-----	404. 623
Hancock, 1 mile east of, on coping stone at southeast end of Lock 52, Chesapeake & Ohio Canal; square cut (C. & G. S. b. m. VIII)-----	418. 224
Hancock, on middle of north side of Chesapeake & Ohio Canal aqueduct, on coping stone; cut lettered "F.B.□M.,U.S.C.S., 1878" (C. & G. S. b. m. F)-----	420. 714

## HAVRE DE GRACE QUADRANGLE.

[Latitude 39° 30'-39° 45'; longitude 76°-76° 15'.]

From milepost 56 along Pennsylvania R. R. to milepost 64.

	Feet.
Milepost 56, 2,070 feet north of, in southeast coping of box culvert; copper bolt (P. R. R. b. m. 52)	74.97
Principio, doorsill of station; copper bolt (P. R. R. b. m. 53)	67.43
Milepost 5.7, 1,800 feet south of, in stone monument north of cattle guard; copper bolt (P. R. R. b. m. 54)	62.54
Milepost 59, 2,070 feet south of, on northwest wing wall of overhead road crossing; copper bolt (P. R. R. b. m. 55)	36.40
Perryville, northwest back wall of Susquehanna River bridge; copper bolt (P. R. R. b. m. 56)	27.38
Havre de Grace, southwest back wall of Susquehanna River bridge; copper bolt (P. R. R. b. m. 57)	28.92
Milepost 61, 90 feet north of, southeast back wall; copper bolt (P. R. R. b. m. 58)	24.34
Milepost 62, 240 feet south of, in southeast wall of cattle guard; copper bolt (P. R. R. b. m. 59)	44.82
Oakington, 1,050 feet north of, in southwest parapet of arch; copper bolt (P. R. R. b. m. 60)	49.98
Milepost 64, 180 feet north of, northeast coping of Swan Creek arch; copper bolt (P. R. R. b. m. 61)	53.13

From Perryville along Pennsylvania R. R. to point near Haines.

M Frenchtown, at south end of Baltimore & Ohio R. R. pier, east of track; shelf (P. R. R. b. m. 1)	26.12
Milepost 3, 550 feet east of, 20 feet north of track, in rock; copper bolt (P. R. R. b. m. 2)	20.93
Milepost 4, 1,980 feet east of, in northeast seat of bridge 27; copper bolt (P. R. R. b. m. 3)	5.63
Milepost 5, 570 feet east of, in southeast parapet of open box culvert; copper bolt (P. R. R. b. m. 4)	8.47
Milepost 6, 870 feet west of, in southwest back wall of open box culvert; copper bolt (P. R. R. b. m. 5)	21.27
Milepost 7, 330 feet east of, in southeast back wall of open box culvert; copper bolt (P. R. R. b. m. 6)	29.07
Milepost 8, 720 feet east of, in southwest back wall of open box culvert; copper bolt (P. R. R. b. m. 7)	31.83
Milepost 9, 270 feet west of, in southwest seat of first bridge west of Octoraro; copper bolt (P. R. R. b. m. 8)	35.63
Milepost 10, 360 feet east of, southeast coping of box culvert; copper bolt (P. R. R. b. m. 9)	44.64
Milepost 11, 210 feet west of, on rock north of track; shelf (P. R. R. b. m. 10)	58.80
Conowingo, southwest seat of county bridge; copper bolt (P. R. R. b. m. 11)	69.11
Milepost 13, 1,470 feet east of, on rock south of track; shelf (P. R. R. b. m. 12)	77.18
Milepost 13, 2,160 feet west of, on rock north of track; shelf (P. R. R. b. m. 13)	76.70
Milepost 15, 2,310 feet east of, in southwest parapet of arch; copper bolt (P. R. R. b. m. 14)	80.48

From point near Stepney along Baltimore & Ohio R. R. to point near Foys Hill.

	Feet.
Milepost 31, vertical rail section (B. & O. R. R. b. m. 71)-----	64. 320
Aberdeen, south end of west abutment of bridge 27 A, at telegraph pole 64-13; copper bolt (B. & O. R. R. b. m. 72)-----	71. 510
Aberdeen, 0.2 mile east of, in north end of east abutment of bridge 28 A; copper bolt (B. & O. R. R. b. m. 73)-----	82. 547
Milepost 34, opposite, between tracks; vertical rail section (B. & O. R. R. b. m. 74)-----	65. 857
Osborne, west of station, in south end of west abutment of bridge 30 B; copper bolt (B. & O. R. R. b. m. 75)-----	71. 387
Milepost 36, opposite, between tracks; vertical rail section (B. & O. R. R. b. m. 76)-----	75. 910
Havre de Grace, 0.2 mile west of, opposite milepost 37, between tracks; vertical rail section (B. & O. R. R. b. m. 77)-----	103. 025
Susquehanna River bridge, in south end of west abutment; copper bolt (B. & O. R. R. b. m. 78)-----	94. 647
Aiken, in south end of bridge seat on east abutment of Susquehanna River bridge; copper bolt (B. & O. R. R. b. m. 79)-----	91. 018
Aiken, 0.5 mile east of, at milepost 40, between tracks; vertical rail section (B. & O. R. R. b. m. 80)-----	115. 730
Aiken, 1 mile east of, in north capstone of west abutment of bridge 36 A; copper bolt (B. & O. R. R. b. m. 80 A)-----	129. 046
Jackson, 0.4 mile west of, at milepost 41, between tracks; vertical rail section (B. & O. R. R. b. m. 81)-----	147. 723
Belvedere, 0.5 mile east of Jackson, in north end of west abutment of bridge 37; copper bolt (B. & O. R. R. b. m. 82)-----	149. 351
Milepost 43, opposite, between tracks; vertical rail section (B. & O. R. R. b. m. 83)-----	179. 349
Foys Hill, opposite milepost 44, between tracks; vertical rail section (B. & O. R. R. b. m. 84)-----	217. 372

#### IJAMSVILLE QUADRANGLE.

[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $77^{\circ} 15' - 77^{\circ} 30'$ .]

From point near Monrovia along Baltimore & Ohio R. R. to point near Doubs.

Monrovia, near, opposite milepost 49, between tracks; top of vertical rail section (B. & O. R. R. b. m. 142)-----	473. 502
Monrovia, 300 feet west of, in east bridge seat, between tracks; copper bolt (B. & O. R. R. b. m. 143)-----	427. 254
Monrovia, near, in north end of east seat of bridge, 40 feet east of milepost 51; copper bolt (B. & O. R. R. b. m. 144)-----	391. 024
Monrovia, near, in center of north coping of arch culvert, telegraph pole 51-23; copper bolt (B. & O. R. R. b. m. 145)-----	377. 146
Ijamsville, near, north end of small culvert, 20 feet east of telegraph pole 52-19; copper bolt (B. & O. R. R. b. m. 146)-----	360. 117
Ijamsville, near, opposite milepost 53, between tracks; top of vertical rail section (B. & O. R. R. b. m. 147)-----	351. 925
Ijamsville, 0.8 mile west of, between tracks, east seat of bridge near milepost 54; copper bolt (B. & O. R. R. b. m. 148)-----	329. 561
Ijamsville, near, between tracks, in west seat of new bridge at west end of Ijamsville tunnel; copper bolt (B. & O. R. R. b. m. 149)-----	315. 046
Reels Mill, 1 mile east of, in west seat of bridge, between tracks; copper bolt (B. & O. R. R. b. m. 150)-----	291. 808

	Feet.
Reels Mill, in foundation stone, southwest corner of coal chute; copper bolt (B. & O. R. R. b. m. 151)-----	274. 062
Frederick Junction, Monocacy River bridge, in north end of mud wall of east abutment; copper bolt (B. & O. R. R. b. m. 152)-----	266. 147
Frederick Junction, 1 mile from, in south end of west coping of culvert; copper bolt (B. & O. R. R. b. m. 152 A)-----	284. 950
Frederick, 1.8 miles from, in outcropping limestone, east side of track, 7 telegraph poles south of milepost marked "Frederick 2," at north end of cut; copper bolt (B. & O. R. R. b. m. 152 B)-----	302. 577
Frederick, 300 feet south of station, in native rock west of tracks; copper bolt (B. & O. R. R. b. m. 152 C)-----	289. 294
Frederick Junction, 1 mile west of, 50 feet east of telegraph pole 58-34, in west end of south coping of culvert; copper bolt (B. & O. R. R. b. m. 153)-----	252. 234
Frederick Junction, 1.5 miles west of, in west end of north coping of culvert 36; copper bolt (B. & O. R. R. b. m. 153 A)-----	251. 244
Lime Kiln, near, opposite milepost 60, between tracks; top of vertical rail section (B. & O. R. R. b. m. 154)-----	271. 897
Lime Kiln, 0.5 mile west of, opposite milepost 61, between tracks; top of vertical rail section (B. & O. R. R. b. m. 155)-----	283. 687
Buckeystown station, 0.3 mile east of, opposite milepost 62, between tracks; top of vertical rail section (B. & O. R. R. b. m. 156)-----	277. 526
Buckeystown station, in west end of north coping of culvert; copper bolt (B. & O. R. R. b. m. 156 A)-----	282. 160
Buckeystown, near, opposite milepost 63, between tracks; top of vertical rail section (B. & O. R. R. b. m. 157)-----	299. 146
Adamstown, 0.2 mile east of, opposite milepost 64, between tracks; top of vertical rail section (B. & O. R. R. b. m. 158)-----	310. 328
Doubs, 500 feet east of, in center of north coping of culvert 36½, 275 feet west of milepost 65; copper bolt (B. & O. R. R. b. m. 159)-----	285. 522
<b>From point near Tuscarora along Baltimore &amp; Ohio R. R. to point near Washington Junction.</b>	
Tuscarora, 0.3 mile east of, in south end of east wall of box culvert, 150 feet west of milepost marked "Washington 39 miles"; copper bolt (B. & O. R. R. b. m. 40 A)-----	226. 092
Tuscarora, 0.7 mile west of, on south side of tracks, near milepost 40, on top of vertical rail section; cross (B. & O. R. R. b. m. 41)-----	226. 746
Tuscarora, 1.7 miles west of, south side of tracks, near milepost 41; top of vertical rail section (B. & O. R. R. b. m. 42)-----	226. 827

#### KEYSER QUADRANGLE.

[Latitude  $39^{\circ} 15'$ - $39^{\circ} 30'$ ; longitude  $78^{\circ} 45'$ - $79^{\circ}$ .]

In the vicinity of Dawson.

Dawson, 0.5 mile northeast of, at telegraph pole 196-24½, south side of track, in rock; copper bolt (B. & O. R. R. b. m. 18)-----	756. 077
Dawson, near, west of tracks, 30 feet north of telegraph pole 197-30, in native rock; copper bolt (B. & O. R. R. b. m. 19)-----	772. 837
Dawson, near, on arch 76, telegraph pole 198-11½, in north coping; copper bolt (B. & O. R. R. b. m. 20)-----	776. 177
Dawson, near, on northwest abutment of bridge 77, opposite telegraph pole 199-17, near twenty-first bridge station, in bridge seat between tracks; copper bolt (B. & O. R. R. b. m. 21)-----	790. 231

## LAUREL QUADRANGLE.

[Latitude  $39^{\circ} - 39^{\circ} 15'$ ; longitude  $76^{\circ} 45' - 77^{\circ}$ .]

## At Bowie.

Bowie, at Baltimore & Potomac R. R. station, on sill of danger signal (C. & G. S. b. m. VII)	Feet.
	148. 595
<b>From point near Branchville along Baltimore &amp; Ohio R. R. to point near Dorsey.</b>	
Branchville, 0.2 mile north of, at telegraph pole 29-24, in south end of east coping of box culvert; copper bolt (B. & O. R. R. b. m. 10)	65. 680
Branchville, 0.8 mile northeast of, opposite milepost 29, between tracks; top of vertical rail section (B. & O. R. R. b. m. 11)	77. 546
Sunnyside, 0.5 mile north of, telegraph pole 27-24, in middle of east coping of culvert; copper bolt (B. & O. R. R. b. m. 12)	101. 331
Beltsville, 0.6 mile north of, at telegraph pole 26-20, in west end of bridge seat, on north abutment of bridge; copper bolt (B. & O. R. R. b. m. 13)	125. 437
Ammendale, near, opposite milepost 26, between tracks; top of vertical rail section (B. & O. R. R. b. m. 14)	137. 839
Muirkirk, near, opposite telegraph pole 25-7, in middle of south coping of culvert; copper bolt (B. & O. R. R. b. m. 14 A)	152. 634
Muirkirk, 0.1 mile southwest of, overhead bridge at Muirkirk furnace, in southwest end of foundation of southeast abutment; copper bolt (B. & O. R. R. b. m. 15)	157. 667
Contee, 0.4 mile southwest of, opposite milepost 24, between tracks; top of vertical rail section (B. & O. R. R. b. m. 16)	179. 271
Contee, 0.3 mile northeast of, at telegraph pole 23-11, in northwest end of bridge seat, on northeast abutment of bridge; copper bolt (B. & O. R. R. b. m. 17)	175. 921
Oak Crest, 0.2 mile northeast of, at telegraph pole 22-24, in center of southeast coping of culvert; copper bolt (B. & O. R. R. b. m. 17 A)	169. 683
Laurel, 0.5 mile southwest of, at telegraph pole 21-30, in southeast end of northeast abutment of bridge 7; copper bolt (B. & O. R. R. b. m. 18)	155. 117
Laurel, near, in Anne Arundel County, on northeast abutment of bridge 6, in southeast end of bridge seat; copper bolt (B. & O. R. R. b. m. 19)	149. 215
Savage station, near, about on Anne Arundel-Howard county line, opposite milepost 20, between tracks; top of vertical rail section (B. & O. R. R. b. m. 20)	172. 896
Savage station, 0.1 mile east of, in south end of east abutment of bridge 5, telegraph pole 19-8; copper bolt (B. & O. R. R. b. m. 21)	154. 302
Annapolis Junction, 0.5 mile northeast of, northwest abutment of overhead bridge, in northeast end of foundation; copper bolt (B. & O. R. R. b. m. 22)	174. 540
Bridewell, 0.5 mile south of, opposite milepost 17, between tracks; top of vertical rail section (B. & O. R. R. b. m. 23)	170. 354
Bridewell, 0.1 mile east of, arch in front of State building, in west end of north coping; copper bolt (B. & O. R. R. b. m. 24)	168. 671

	Feet.
Jessups, near, opposite milepost 15, between tracks; top of vertical rail section (B. & O. R. R. b. m. 25)	158. 318
Montevideo, near, opposite milepost 14, between tracks; top of vertical rail section (B. & O. R. R. b. m. 26)	137. 135

**From Arundel along Pennsylvania R. R. to Bowie.**

Arundel, 850 feet north of, south seat of bridge 12; copper bolt (P. R. R. b. m. 117)	75. 15
Arundel, 5,320 feet south of, southeast box culvert; copper bolt (P. R. R. b. m. 118)	124. 23
Bowie, 2,910 feet north of, east side of track; stone marker (P. R. R. b. m. 119)	165. 67
Bowie, at tower, east side of track; stone marker (P. R. R. b. m. 120)	148. 60

**MOUNT AIRY QUADRANGLE.**[Latitude  $39^{\circ} 15' - 39^{\circ} 30'$ ; longitude  $77^{\circ} - 77^{\circ} 15'$ .]**From point near Hoods Mill along Baltimore & Ohio R. R. to point near Monrovia.**

Hoods Mill, near, 100 feet west of milepost 34, in south end of small culvert; copper bolt (B. & O. R. R. b. m. 128)	428. 096
Hoods Mill, at dam, on south side of tracks, in large rock; copper bolt (B. & O. R. R. b. m. 129)	441. 836
Morgan, near, opposite milepost 36, between tracks; top of vertical rail section (B. & O. R. R. b. m. 130)	460. 741
Woodbine, near, opposite milepost 37, between tracks; top of vertical rail section (B. & O. R. R. b. m. 131)	485. 970
Woodbine, 300 feet west of, in northeast corner of small culvert; copper bolt (B. & O. R. R. b. m. 131 A)	495. 871
Woodbine, near, opposite milepost 38, between tracks; top of vertical rail section (B. & O. R. R. b. m. 132)	513. 733
Watersville, near, in bridge seat of east abutment of bridge, at east end of Mount Airy cut-off, between tracks; copper bolt (B. & O. R. R. b. m. 133)	550. 512
Watersville, 0.2 miles west of, on Mount Airy cut-off, in north coping of culvert; copper bolt (B. & O. R. R. b. m. 134)	593. 519
Watersville, 1 mile west of, at east end of cut on Mount Airy cut-off, in west end of south coping of culvert; copper bolt (B. & O. R. R. b. m. 135)	622. 060
Watersville, at east end of Mount Airy tunnel, between tracks; top of vertical rail section (B. & O. R. R. b. m. 136)	703. 202
Watersville, near, in Frederick County, at west end of Mount Airy tunnel, between tracks; top of vertical rail section (B. & O. R. R. b. m. 136 A)	679. 926
Plane No. 4, near, 0.2 mile east of Mount Airy Junction, 0.5 mile west of Mount Airy tunnel, in east end of south coping of culvert; copper bolt (B. & O. R. R. b. m. 137)	657. 334
Plane No. 4, 250 feet east of, in east end of north coping of arch; copper bolt (B. & O. R. R. b. m. 138)	581. 314
Bartholows, 0.3 mile east of, on south side of tracks, 500 feet west of milepost 47, in east end of small culvert; copper bolt (B. & O. R. R. b. m. 139)	550. 150

Bartholows, 300 feet west of, in west end of north coping of arch road crossing; copper bolt (B. & O. R. R. b. m. 140)-----	Feet. 528. 403
Monrovia, near, in north end of small culvert, 400 feet west of crossing of old and new tracks; copper bolt (B. & O. R. R. b. m. 141)-----	489. 494

**OAKLAND QUADRANGLE.**[Latitude  $39^{\circ} 15'$ - $39^{\circ} 30'$ ; longitude  $79^{\circ} 15'$ - $79^{\circ} 30'$ .]**From point near Deer Park west to Huttons Switch.**

Deer Park, a short distance north of, on top stone of cattle guard; cut marked "B.□M." (C. & G. S. b. m. XXIII)-----	2, 455. 959
Oakland Park, 3 miles east of, on west abutment of small bridge (Baltimore & Ohio R. R.); cut marked "B.□M." (C. & G. S. b. m. XXII)-----	2, 404. 324
Oakland, 1.2 miles west of, southwest corner of Baltimore & Ohio R. R. bridge over Youghiogheny River; cut on abutment lettered "K. B.□M., U. S. C. S., 1878" (C. & G. S. b. m. K)-----	2, 375. 518
Huttons Switch station, Baltimore & Ohio bridge over small run; square cut on abutment (C. & G. S. b. m. XXIV)-----	2, 434. 343

**From point near Altamont west along Baltimore & Ohio R. R. to point near Hutton.**

Altamont, 1.2 miles northeast of, opposite milepost 222, between tracks; top of vertical rail section (B. & O. R. R. b. m. 43)-----	2, 541. 970
Altamont, 0.2 mile east of, opposite milepost 223, about at summit, between tracks; top of vertical rail sections (B. & O. R. R. b. m. 44)-----	2, 627. 936
Altamont, 0.8 mile west of, opposite milepost 224, between tracks; top of vertical rail section (B. & O. R. R. b. m. 45)-----	2, 578. 503
Deer Park, 1 mile east of, opposite milepost 225, between tracks; top of vertical rail section (B. & O. R. R. b. m. 46)-----	2, 526. 474
Deer Park, 200 feet east of station, opposite milepost 226, between tracks; top of vertical rail section (B. & O. R. R. b. m. 47)-----	2, 473. 496
Deer Park, 500 feet northeast of station for Deer Park Hotel, at telegraph pole 226-14½; in southwest corner of culvert; copper bolt (B. & O. R. R. b. m. 47 A)-----	2, 449. 099
Deer Park, near, 0.6 mile southwest of station for Deer Park Hotel, opposite milepost 227, between tracks; top of vertical rail section (B. & O. R. R. b. m. 48)-----	2, 436. 892
Mountain Lake Park, 1.2 miles east of, opposite milepost 228, between tracks; top of vertical rail section (B. & O. R. R. b. m. 49)-----	2, 422. 405
Mountain Lake Park, 0.2 mile east of, at telegraph pole 229-6½, on west abutment of bridge S6, in west end of north wing; copper bolt (B. & O. R. R. b. m. 50)-----	2, 404. 683
Mountain Lake Park, 0.3 mile west of, at telegraph pole 229-29, in north abutment of bridge; copper bolt (B. & O. R. R. b. m. 51)-----	2, 396. 994
Oakland, 1 mile south of, opposite milepost 231, between tracks; top of vertical rail section (B. & O. R. R. b. m. 52)-----	2, 383. 138
Oakland, 300 feet southeast of station, on bridge, in abutment toward Wheeling, 7 feet below grade; copper bolt (B. & O. R. R. b. m. 53)-----	2, 370. 924
Oakland, 0.5 mile northwest of, opposite telegraph pole 232-22, on northeast abutment of highway bridge, in northeast end of south east wing; copper bolt (B. & O. R. R. b. m. 53 A)-----	2, 377. 119

Oakland, 1.5 miles northwest of, on bridge 88 over Youghiogheny River, in bridge seat of abutment toward Wheeling; copper bolt (B. & O. R. R. b. m. 54)	Feet. 2,377.707
Oakland, 2 miles northwest of, opposite milepost 234, between tracks; top of vertical rail section (B. & O. R. R. b. m. 55)	2,402.333
Oakland, 3 miles west of, opposite milepost 235, between tracks; top of vertical rail section (B. & O. R. R. b. m. 56)	2,442.714
Skipnish, near, opposite milepost 236, between tracks; top of vertical rail section (B. & O. R. R. b. m. 57)	2,454.449
Hutton, 0.5 mile southeast of, opposite milepost 237, between tracks; top of vertical rail section (B. & O. R. R. b. m. 58)	2,482.274
Hutton, 0.5 mile northwest of, opposite milepost 238, between tracks; top of vertical rail section (B. & O. R. R. b. m. 59)	2,445.563

**PARKTON QUADRANGLE.**

[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $76^{\circ} 30' - 76^{\circ} 45'$ .]

From milepost 17 along Pennsylvania R. R. to milepost 37.

Milepost 17, 990 feet south of, northeast wing of bridge 18; copper bolt (P. R. R. b. m. 19)	254.59
Phoenix, northwest wing of bridge 20; copper bolt (P. R. R. b. m. 20)	244.15
Milepost 19, 1,800 feet south of, southeast coping of bridge 23; copper bolt (P. R. R. b. m. 21)	254.85
Sparks, west center of arch; copper bolt (P. R. R. b. m. 22)	253.93
Milepost 20, 1,230 feet north of, east center of arch; copper bolt (P. R. R. b. m. 23)	256.62
Milepost 21, 3,420 feet north of, southwest back wall of bridge 27; copper bolt (P. R. R. b. m. 24)	290.03
Corbett, 1,650 feet north of, southeast back wall of bridge 28; copper bolt (P. R. R. b. m. 25)	309.58
Milepost 23, 2,400 feet north of, east center of box culvert; copper bolt (P. R. R. b. m. 26)	317.52
Blue Mount, 700 feet south of, southeast seat of bridge 30; copper bolt (P. R. R. b. m. 27)	313.28
Milepost 26, 900 feet south of, southwest wing of bridge 35; copper bolt (P. R. R. b. m. 28)	332.18
Milepost 27, 270 feet south of, southeast back wall; copper bolt (P. R. R. b. m. 29)	353.77
Milepost 28, 300 feet north of, 60 feet east of track, in rock; copper bolt (P. R. R. b. m. 30)	393.70
Parkton, 300 feet south of station, 175 feet east of track, in rock; copper bolt (P. R. R. b. m. 31)	419.49
Bentley, 1,300 feet south of, northwest wing of bridge 53; copper bolt (P. R. R. b. m. 33)	501.82
Milepost 32, 2,370 feet north of, northwest wing of bridge 57; copper bolt (P. R. R. b. m. 34)	552.58
Milepost 34, 960 feet south of, southwest seat of bridge 60; copper bolt (P. R. R. b. m. 35)	647.69
Milepost 35, 600 feet south of, east center of arch bridge 62; copper bolt (P. R. R. b. m. 36)	726.30
Milepost 35, 2,760 feet north of, northwest arch of bridge 65; copper bolt (P. R. R. b. m. 37)	779.99

## PAWPAW QUADRANGLE.

[Latitude  $39^{\circ} 30'$ - $39^{\circ} 45'$ ; longitude  $78^{\circ} 15'$ - $78^{\circ} 30'$ .]

From point near Hancock to point near Little Orleans.

	Feet.
Hancock, 6 miles west of, on coping stone of Lock 53, Chesapeake & Ohio Canal; square cut (C. & G. S. b. m. IX)	427. 073
Hancock, 10 miles west of, cut on coping stone of Chesapeake & Ohio Canal Lock 55, at Dam 6; lettered "G.B.□M., U.S.C.S., 1878" (C. & G. S. b. m. G)	443. 810
Hancock, 12.2 miles west of, on coping stone at north end of Chesapeake & Ohio Canal Lock 56; square cut (C. & G. S. b. m. X)	451. 616
Little Orleans, 4.8 miles east of, at south side and east end of Chesapeake & Ohio Canal Lock 57, on top of wing wall; square cut (C. & G. S. b. m. XI)	458. 134
Little Orleans aqueduct of Chesapeake & Ohio Canal over Fifteen-mile Creek, on coping stone; square cut (C. & G. S. b. m. XII)	459. 685
Little Orleans, 3 miles west of, on coping of Chesapeake & Ohio Canal Lock 58; square cut (C. & G. S. b. m. XIII)	467. 601
Little Orleans, 12 miles southwest of, 2 miles east of canal tunnel, on coping of Lock 61; cut lettered "H.B.□M., U.S.C.S., 1878" (C. & G. S. b. m. H)	492. 308

## RELAY QUADRANGLE.

[Latitude  $39^{\circ}$ - $39^{\circ} 15'$ ; longitude  $76^{\circ} 30'$ - $76^{\circ} 45'$ .]

From point near Dorsey along Baltimore &amp; Ohio R. R. to West Baltimore.

Dorsey, 0.2 mile east of, 400 feet southwest of milepost 13, in southwest end of northwest coping of culvert; copper bolt (B. & O. R. R. b. m. 27)	176. 778
Harwood, 0.3 mile east of, about 450 feet east of milepost 12, in middle of south coping of arch culvert; copper bolt (B. & O. R. R. b. m. 28)	83. 215
Hanover, 0.5 mile east of, opposite milepost 11, between tracks; top of vertical rail section (B. & O. R. R. b. m. 29)	80. 853
Elk Ridge, 0.2 mile southeast of, east side of tracks, 30 feet south of milepost 10, in coping of retaining wall; copper bolt (B. & O. R. R. b. m. 30)	71. 105
Relay, at east end of viaduct bridge on south side of tracks, in center of top of stone post; copper bolt (B. & O. R. R. b. m. 31)	71. 715
St. Denis, 0.1 mile east of, in middle of south coping of arch culvert; copper bolt (B. & O. R. R. b. m. 31 A)	67. 691
St. Denis, 0.8 mile east of, at east end of north abutment of overhead public-road bridge, in foundation on first course of stone; copper bolt (B. & O. R. R. b. m. 32)	73. 896
Halethorpe, 0.1 mile east of, near telegraph pole 5-20, in south end of west wall of culvert; copper bolt (B. & O. R. R. b. m. 33)	67. 800
Winans, 780 feet south of, in east end of Baltimore & Ohio R. R. bridge; shelf cut (P. R. R. b. m. 101)	36. 767
Lansdowne, opposite milepost 4, on top of vertical rail section; cross (B. & O. R. R. b. m. 34)	68. 931
Lansdowne, 0.5 mile north of, south end of west abutment of overhead bridge, in large coping stone of retaining wall; copper bolt (B. & O. R. R. b. m. 35)	79. 112

## From Relay along Baltimore &amp; Ohio R. R. to Ilchester.

	Feet.
Relay, 0.5 mile east of, in northwest corner of culvert; copper bolt (B. & O. R. R. b. m. 100)-----	66. 632
Vineyard, in east end of south coping of bridge 10; copper bolt (B. & O. R. R. b. m. 101)-----	70. 972
Vineyard, near, in east end of west offset of south coping of bridge; copper bolt (B. & O. R. R. b. m. 102)-----	77. 056
Orange Grove, 0.2 mile northwest of, on north side of tracks, 250 feet northwest of milepost 12, near large white-poplar tree, in native rock; copper bolt (B. & O. R. R. b. m. 103)-----	94. 988

## From Arbutus along Pennsylvania R. R. to point near Arundel.

Arbutus, 2,050 feet north of, west side of track; stone marker (P. R. R. b. m. 99)-----	114. 41
Halethorpe, 429 feet north of, west coping of box culvert; copper bolt (P. R. R. b. m. 100)-----	58. 82
Winans, 780 feet south of, on east Baltimore & Ohio R. R. bridge; shelf (P. R. R. b. m. 101)-----	36. 767
Patapsco, 2,407 feet north of, southeast coping; copper bolt (P. R. R. b. m. 102)-----	30. 19
Patapsco, southeast back wall of undergrade bridge; square (P. R. R. b. m. 103a)-----	33. 95
Patapsco, 5,066 feet south of, in west coping of box culvert; copper bolt (P. R. R. b. m. 104)-----	44. 88
Stony Run, 1,390 feet south of, in west coping of box culvert; copper bolt (P. R. R. b. m. 105)-----	68. 79
Harman, 4,210 feet north of, in east center coping of arch; copper bolt (P. R. R. b. m. 106)-----	84. 24
Harman, east side of track; stone marker (P. R. R. b. m. 107)-----	126. 66
Severn, east side of track; stone marker (P. R. R. b. m. 108)-----	167. 00
Severn, 3,640 feet south of, in northeast coping of box culvert; copper bolt (P. R. R. b. m. 109)-----	136. 62
Severn, 5,650 feet south of, on bridge 9, in southwest coping of arch; copper bolt (P. R. R. b. m. 110)-----	118. 72
Odenton, 2,250 feet north of, in southeast coping of box culvert; copper bolt (P. R. R. b. m. 111)-----	137. 12
Odenton, 150 feet north of, in southwest end parapet of box culvert; copper bolt (P. R. R. b. m. 112)-----	148. 93
Odenton, 3,500 feet south of, on east side of track; stone marker (P. R. R. b. m. 113)-----	166. 61
Patuxent, 4,070 feet north of, in northeast bridge seat of bridge 10; copper bolt (P. R. R. b. m. 114)-----	106. 05
Patuxent, 1,700 feet north of, in southwest bridge seat of bridge 11; copper bolt (P. R. R. b. m. 115)-----	82. 51
Patuxent, 2,540 feet south of, on east side of track, at Patuxent tower; stone marker (P. R. R. b. m. 116)-----	121. 42

## ROCKVILLE QUADRANGLE.

[Latitude  $39^{\circ} - 39^{\circ} 15'$ ; longitude  $77^{\circ} - 77^{\circ} 15'$ .]

## From point near Linden along Baltimore &amp; Ohio R. R. to Waring.

Linden, 0.3 mile east of, opposite milepost marked "Washington 9 miles," between tracks; top of vertical rail section (B. & O. R. R. b. m. 10)-----	320. 165
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	Feet.
Capitol View, 0.4 mile east of, opposite milepost 10, between tracks; top of vertical rail section (B. & O. R. R. b. m. 11)-----	309. 663
Kensington, opposite milepost 11, between tracks; top of vertical rail section (B. & O. R. R. b. m. 12)-----	300. 703
Garrett Park, 0.4 mile east of, opposite milepost 12, between tracks; top of vertical rail section (B. & O. R. R. b. m. 13)-----	285. 524
Windham, 0.3 mile east of, opposite milepost 13, between tracks; top of vertical rail section (B. & O. R. R. b. m. 14)-----	318. 216
Halpine, 0.7 mile east of, opposite milepost 14, between tracks; top of vertical rail section (B. & O. R. R. b. m. 15)-----	372. 713
Halpine, 0.3 mile west of, opposite milepost 15, between tracks; top of vertical rail section (B. & O. R. R. b. m. 16)-----	393. 836
Rockville, 0.5 mile east of, opposite milepost 16, between tracks; top of vertical rail section (B. & O. R. R. b. m. 17)-----	421. 685
Rockville, 0.5 mile west of, opposite milepost 17, between tracks; top of vertical rail section (B. & O. R. R. b. m. 18)-----	442. 277
Westmore, 0.3 mile west of, opposite milepost 18, between tracks; top of vertical rail section (B. & O. R. R. b. m. 19)-----	457. 265
Derwood, opposite milepost 19, between tracks; top of vertical rail section (B. & O. R. R. b. m. 20)-----	475. 563
Washington Grove, 0.7 mile east of, opposite milepost 20, between tracks; top of vertical rail section (B. & O. R. R. b. m. 21)-----	497. 156
Gaithersburg, 0.6 mile east of, opposite milepost 21, between tracks; top of vertical rail section (B. & O. R. R. b. m. 22)-----	518. 824
Ward, 0.1 mile east of, on south side of tracks, near milepost 22, top of vertical rail section (B. & O. R. R. b. m. 23)-----	490. 668
Ward, 0.9 mile west of, south side of track near milepost 23; top of vertical rail section (B. & O. R. R. b. m. 24)-----	446. 261
Clopper, 0.2 mile east of, south side of track near milepost 24; top of vertical rail section (B. & O. R. R. b. m. 25)-----	404. 372

**At Great Falls.**

Great Falls, 1.65 meters from west gate of Lock 20, Chesapeake & Ohio Canal, on capstone of south wall, 0.2 meter from extreme north and 0.45 meter from extreme east edge; bottom of square cut (C. & G. S. b. m. F)-----	166. 592
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**SENECA QUADRANGLE.**

[Latitude  $39^{\circ} - 39^{\circ} 15'$ ; longitude  $77^{\circ} 15' - 77^{\circ} 30'$ .]

**From Waring along Baltimore & Ohio R. R. to point near Tuscarora.**

Waring, south side of track near milepost marked "Washington 25 miles"; top of vertical rail section (B. & O. R. R. b. m. 26)-----	364. 414
Germantown, 0.5 mile east of, south side of tracks near milepost 26; top of vertical rail section (B. & O. R. R. b. m. 27)-----	399. 898
Germantown, 0.5 mile west of, on south side of tracks near milepost 27; top of vertical rail section (B. & O. R. R. b. m. 28)-----	442. 132
Darby, 1.5 miles west of, on south side of tracks near milepost 28; top of vertical rail section (B. & O. R. R. b. m. 29)-----	422. 575
Boyd, 0.1 mile east of, on south side of tracks, near milepost 29; top of vertical rail section (B. & O. R. R. b. m. 30)-----	417. 066
Buck Lodge, 0.5 mile east of, south side of tracks, near milepost 30; top of vertical rail section (B. & O. R. R. b. m. 31)-----	481. 852

	Feet.
Buck Lodge, 0.5 mile west of, south side of tracks, near milepost 31; top of vertical rail section (B. & O. R. R. b. m. 32)-----	441. 610
Barnesville, 1.1 miles east of, on south side of tracks, near milepost 32; top of vertical rail section (B. & O. R. R. b. m. 33)-----	494. 929
Barnesville, 0.1 mile east of, south side of tracks, near milepost 33; top of vertical rail section (B. & O. R. R. b. m. 34)-----	508. 940
Barnesville, 0.9 mile west of, south side of tracks, near milepost 34; top of vertical rail section (B. & O. R. R. b. m. 35)-----	452. 827
Dickerson, 0.7 mile east of, south side of tracks, near milepost 35; top of vertical rail section (B. & O. R. R. b. m. 36)-----	396. 949
Dickerson, 0.3 mile west of, south side of tracks, near milepost 36; top of vertical rail section (B. & O. R. R. b. m. 37)-----	344. 318
Dickerson, 1.3 miles west of, 225 feet west of milepost 37, in bridge seat of culvert, on south end of east side; copper bolt (B. & O. R. R. b. m. 38)-----	284. 448
Tuscarora, 1.3 miles east of, south side of tracks, near milepost 38; top of vertical rail section (B. & O. R. R. b. m. 39)-----	254. 848

From Seneca to Whites Ferry.

Seneca, on southeast side of capstone on southwest end of Aqueduct Bridge, 0.165 meter from iron guard rail, 0.397 meter from extreme edge of capstone, and 0.06 meter from end of lower wooden beam of guard rail crossing the bridge; bottom of square cut (C. & G. S. b. m. E)-----	198. 392
Whites Ferry, about 20 meters east of bridge crossing Chesapeake & Ohio Canal, on south bank, on capstone of culvert under canal, 0.178 meter from extreme south edge of capstone; square cut (C. & G. S. b. m. V)-----	207. 247

WASHINGTON QUADRANGLE.

[Latitude 38° 45'-39° ; longitude 76° 45'-77° 15'.]

From point near Silver Spring to point near Woodside.

Silver Spring, 0.5 mile east of, opposite milepost marked "Washington 7 miles," between tracks; top of vertical rail section (B. & O. R. R. b. m. 8)-----	327. 571
Woodside, 0.3 mile east of, opposite milepost 8, between tracks; top of vertical rail section (B. & O. R. R. b. m. 9)-----	323. 370

From Rives along Baltimore & Ohio R. R. to point near Branchville.

Rives, 100 feet southwest of milepost 35, southeast side of tracks, in northeast end of coping of foundation for overhead bridge; copper bolt (B. & O. R. R. b. m. 5)-----	59. 734
Hyattsville, 0.5 mile southwest of, in west corner of southeast capstone, northeast abutment, bridge 34 A; copper bolt (B. & O. R. R. b. m. 6)-----	34. 704
Alexandria Junction, opposite milepost 33, between tracks; top of vertical rail section (B. & O. R. R. b. m. 7)-----	49. 209
Riverdale, 600 feet north of, in west end of north wall of culvert; copper bolt (B. & O. R. R. b. m. 7 A)-----	51. 982
Riverdale, near, in north end of east coping of small culvert, about 400 feet north of milepost 32; copper bolt (B. & O. R. R. b. m. 8)-----	53. 206
College Park, 0.5 mile north of, in west end of north abutment of bridge; copper bolt (B. & O. R. R. b. m. 9)-----	52. 959

Berwyn, 0.2 mile south of, in west end of bridge seat, north abutment of small bridge at telegraph pole 30-17; copper bolt (B. & O. R. R. b. m. 9 A)-----

Feet.  
53.037

From Bowie along Pennsylvania R. R. to District line.

Bowie, 1,820 feet south of, west side of track; stone marker (P. R. R. b. m. 121a)-----	142.13
Springfield, east side of track; stone marker (P. R. R. b. m. 122)-----	167.47
Glendale, east side of track; stone marker (P. R. R. b. m. 123)-----	150.45
Seabrook, 2,820 feet north of, east side of track; stone marker (P. R. R. b. m. 124)-----	150.44
Seabrook, 3,110 feet south of, northeast coping of bridge 14; copper bolt (P. R. R. b. m. 125)-----	135.66
Lanham, 1,960 feet south of, west coping of culvert; copper bolt (P. R. R. b. m. 126)-----	129.79
Ardwick, 1,430 feet south of, northwest wing of bridge 15; copper bolt (P. R. R. b. m. 127)-----	67.42
Landover, 170 feet north of, top step of northeast wing of bridge 17; copper bolt (P. R. R. b. m. 128)-----	56.84
Magruder Avenue, bridge over Magruder Branch, east abutment, bottom step of north wing; copper bolt (P. R. R. b. m. 129)-----	43.40
Magruder, 1,865 feet south of, northeast wing of bridge 18, at level of bridge seat; copper bolt (P. R. R. b. m. 130)-----	21.19
Magruder, 4,980 feet south of (Maryland and District of Columbia boundary line), west side of track; stone monument (P. R. R. b. m. 130a)-----	48.30

WILLIAMSPORT QUADRANGLE.

[Latitude  $39^{\circ} 30' - 39^{\circ} 45'$ ; longitude  $77^{\circ} 45' - 78^{\circ}$ .]

From Williamsport along Chesapeake & Ohio Canal to Cherry Run.

Williamsport, on west side of aqueduct of Chesapeake & Ohio Canal over Conococheague River, on top surface of stone; square cavity marked "BB□M., U.S.C.S., 1878"-----	357.750
Williamsport, 7 miles west of; cut on coping stone of Dam No. 5, Potomac River, lettered "CB□M., U.S.C.S., 1878"-----	371.630
Williamsport, 7.8 miles west of, on top layer of stone of second lock above Dam No. 5, in Chesapeake & Ohio Canal; square cut lettered "No.VIB□M., U.S.C.S., 1878"-----	371.358
Williamsport, 9.2 miles west of, on top layer of stone at west end of sixth lock above Dam No. 5; square cut lettered "DB□M., U.S.C.S., 1878"-----	404.241

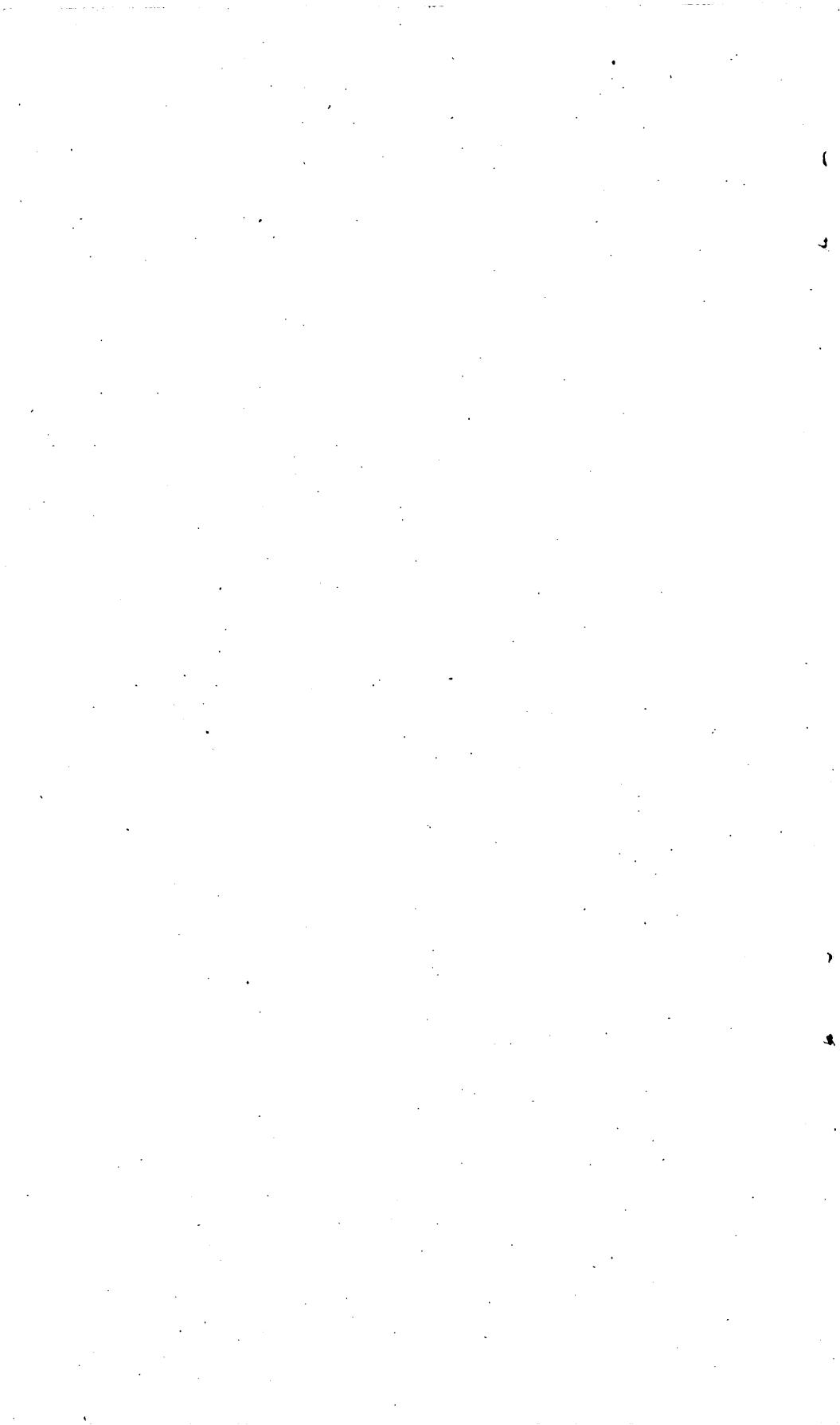
## APPENDIX B.

### SECONDARY ELEVATIONS.

Secondary elevations from records and topographic maps of the United States Geological Survey, including altitudes of well-known summits and other useful elevations, are given below. These elevations are approximate only and should not be used for accurate work.

Locality.	Quadrangle.	County.	Eleva-tion.
			Feet.
Abingdon.....	Gunpowder.....	Harford.....	160
Backbone Mountain, the highest point in Maryland.	Oakland.....	Garrett.....	3,340
Boyer Knob, triangulation station.....	Flintstone.....	Allegany.....	1,564
Braddock Heights.....	Antietam.....	Frederick.....	899
Brandywine.....	Brandywine.....	Prince Georges.....	233
Breakneck Hill.....	Flintstone.....	Allegany.....	1,872
Bull Mountain.....	Elkton.....	Cecil.....	306
Black Hill.....	do.....	do.....	311
Dans Rock, triangulation station.....	Frostburg.....	Allegany.....	2,898
Darlington.....	Havre de Grace.....	Harford.....	324
Davidsonville.....	Owensville.....	Anne Arundel.....	185
Denton.....	Denton.....	Caroline.....	37
Druid Lake, water surface.....	Baltimore.....	Baltimore.....	217
Eagle Rock.....	Oakland.....	Garrett.....	3,162
East New Market.....	Hurlock.....	Dorchester.....	43
Egg Hill.....	Elkton.....	Cecil.....	442
Elbow Ridge.....	Hancock.....	Washington.....	995
Eldersburg.....	Ellicott.....	Carroll.....	642
Fairview Mountain, triangulation station.....	Williamsport.....	Washington.....	1,700
Federalsburg.....	Hurlock.....	Caroline.....	29
Forest Hill.....	Belair.....	Harford.....	544
Fox Gap.....	Antietam.....	Frederick-Washington	1,064
George Hill.....	Accident.....	Garrett.....	3,004
Granite.....	Ellicott.....	Baltimore.....	461
Grays Hill, triangulation station.....	Elkton.....	Cecil.....	268
Gyndon.....	Ellicott.....	Baltimore.....	695
Henderson.....	Barclay.....	Caroline.....	58
High Knob.....	Ijamsville.....	Frederick.....	1,531
High Rock.....	Hagerstown.....	Washington.....	1,822
High Rock, triangulation station.....	Grantsville.....	Garrett.....	3,000
Hunting Hill.....	Rockville.....	Montgomery.....	461
Kempton.....	Mount Airy.....	Frederick.....	688
Knobly Mountain.....	Frostburg.....	Allegany.....	1,959
Lambs Knoll.....	Antietam.....	Frederick - Wash-ing-ton.....	1,772
Leitersburg.....	Hagerstown.....	Washington.....	595
Manchester.....	Westminster.....	Carroll.....	953
Marsh Hill.....	Accident.....	Garrett.....	3,073
Maryland Heights.....	Antietam.....	Washington.....	1,468
Meadow Mountain, triangulation station.....	Grantsville.....	Garrett.....	3,031
Mechanicsville.....	Leonardtown.....	St. Mary.....	165
Middleburg.....	Taneytown.....	Carroll.....	473
Montebello Lake, water surface.....	Baltimore.....	Baltimore.....	163
Mount Airy.....	Mount Airy.....	Carroll.....	810
Mount Pleasant.....	Taneytown.....	do.....	816

Locality.	Quadrangle.	County.	Elevation. Feet.
Nebo Mountain.....	Grantsville.....	Garrett.....	2,604
Nicholas Mountain.....	Flintstone.....	Allegany.....	1,506
Observatory Hill.....	Oakland.....	Garrett.....	2,767
Owensville.....	Owensville.....	Anne Arundel.....	182
Pine Rock.....	Antietam.....	Frederick.....	1,125
Pleasantville.....	Belair.....	Harford.....	530
Poolesville.....	Seneca.....	Montgomery.....	400
Quirauk Mountain, triangulation station.....	Hagerstown.....	Washington.....	2,145
Randallstown.....	Ellicott.....	Baltimore.....	585
Ridge Hill.....	Ijamsville.....	Frederick.....	1,260
Ridgely.....	Denton.....	Caroline.....	67
Ringgold.....	Hagerstown.....	Washington.....	769
Roland Lake.....	Baltimore.....	Baltimore.....	225
Roundtop.....	Hancock.....	Washington.....	1,388
St. John Rock.....	Frostburg.....	Garrett.....	2,930
Sampson Rock, triangulation station.....	do.....	do.....	2,942
Savage.....	Laurel.....	Howard.....	153
Shriver Ridge.....	Flintstone.....	Allegany.....	1,522
Sideling Hill, triangulation station.....	Pawpaw.....	Washington.....	1,635
Silver Run.....	Taneytown.....	Carroll.....	707
Stratford Ridge.....	Flintstone.....	Allegany.....	831
Sugarloaf Mountain, triangulation station.....	Ijamsville.....	Frederick.....	1,281
Timonium.....	Baltimore.....	Baltimore.....	392
Truesdale Heights.....	Oakland.....	Garrett.....	2,809
Uniontown.....	Taneytown.....	Carroll.....	659
Upper Marlboro.....	Washington.....	Prince Georges.....	39
Warrior Mountain.....	Flintstone.....	Allegany.....	2,135
West Elkridge.....	Relay.....	Howard.....	228
Winding Ridge.....	Accident.....	Garrett.....	2,866
Wolf Rock.....	Frostburg.....	Allegany.....	2,796



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