8709
8710

Diag'd. on diag. ch; No. 6146

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric Air Photographic

Field No. ..... Office No. T-8709 - T-8710 - Acc'y Test

LOCALITY

State Oregon & Washington

General locality Columbia & Sandy Rivers

Locality Troutdale, Oregon & Washougal, Washington

194 6

CHIEF OF PARTY

R. A. Earle

LIBRARY & ARCHIVES

DATE January 28, 1948

B-1870-1 (1)

8709
8710

RECORD SHEET

Div. of Photogrammetry
Graphic Compilation Sect.

GENERAL LOCALITY Columbia River, Ore., Wash.

SHEET NO. T-8709

LOCALITY Washougal, Washington

PROJECT NO. CS-322

PHOTOS ORDERED August 1945 Nov. 1945 January 1946 REC'D Sept. 20, 1945 Oct. 1, 1945 Jan. 21, 1946 Feb. 8, 1946

SCALE 1:8000

PROJECTION ORDERED Jan. 1946 REC'D January 22, 1946

Joins None Ck ✓

Joins T-8685 Ck ✓

Joins None Ck ✓

Joins T-8710 Ck ✓

CONTROL:

COMPUTED Harris VERIFIED Bunce

PLOTTED Bunce VERIFIED Harris

PHOTO PREPARATION:

CONTROL Harris, Bunce, Jeter

AZIMUTHS Davison

PASS POINTS Bunce, Jeter

TEMPLETS Jeter, Bunce VERIFIED Harris

DATE OF PHOTOS See reverse side

RADIAL PLOT:

PLOTTED BY Harris, Jeter DATE 3-14-46

VERIFIED J.E. Deal, Jr. DATE 3-15-46

TIME OF PHOTOS See reverse side

COMPILATION:

DETAIL POINTS Jeter DATE 3-18-46 to 3-22-46

DETAIL BY Turner DATE 3-29-46 to 4-25-46

VERIFIED BY Deal DATE 5-13-46

STAGE OF TIDE See reverse side

COMPARISON WITH PREVIOUS SURVEYS; TOPO., HYDRO., AND CHARTS:

Due to scale difference only a visual comparison was made with the U.S.G.S. 15 min. Camas, Wash. - Ore. quadrangle - scale 1:62500. In general common planimetric detail is in fair agreement; however, the Sandy River as shown on the quadrangle has been diverted and follows the course of the Little Sandy River which is now called Sandy River. The old bed of the Sandy River has

(Continued on reverse side)

REMARKS

Field edit corrections and final compilation office review have been made.

FORWARDED TO Washington Office DATE July 5, 1946

filled and is a grassy meadow except during spring freshets.

Comparison was made with nautical chart no. 6156 by use of the vertical projector. The high water line shown on the chart is apparently much higher above Mean Low Water than that shown on the Map Manuscript. In general the bank line shown on the Map Manuscript agrees with the high water line of the chart. The west end of the small island shown on the chart at the mouth of the Sandy River has eroded. At Latitude 45°33'29.5" and Longitude 122°24'59" the west shore of the Sandy River has been built up. The old bed of the Sandy River is now filled except for a few small ponds.

PHOTOGRAPH DATA

Photo No.	Date	Time	Stage of Tide
750 to 755 Inc.	7-1-45	11:40	11.7 ft. above M.L.W.*
1199 to 1203 Inc.	7-2-45	11:10	11.0 ft. above M.L.W.
1340 to 1344 Inc.	7-4-45	10:30	10.3 ft. above M.L.W.
3613 to 3615 Inc.	11-21-45	14:00	4.9 ft. above M.L.W.
3623 to 3624 Inc.	11-21-45	14:00	4.9 ft. above M.L.W.

* Mean Low-Water as determined by the U.S. Engineers Portland Office at Government Moorings, Willamette River, St. Johns Bridge, is 1.29 ft. above Mean Sea Level.

Form T-1

DATA RECORD

T-8709

Quadrangle (II): Washougal, Washington (3 minute) Project No. (II): CS-322

Field Office: Portland, Oregon Chief of Party: R.A. Earle

Compilation Office: Portland, Ore. Chief of Party: R.A. Earle

Instructions dated (II III): July 12, 1946 Copy filed in ~~Descriptive~~ Div. Photog. Office files
Supplemental Instructions: Aug. 29, Sept. 10, ~~Report No. T-~~ (VI)
Oct. 25, Nov. 30 and Dec. 6, 1945.

Completed survey received in office: July, 1946

Reported to Nautical Chart Section: ✓

Reviewed: 24 July 1946 Applied to chart No. Date:

Redrafting Completed: 17 Jan. 1947

Registered: ~~6 Aug. 1947~~ 1/48 Published: 1947

Compilation Scale: 1:8000 Published Scale: 1:9600

Scale Factor (III): None

Geographic Datum (III): N.A. 1927 Datum Plane (III): * See Below

Reference Station (III): MILL, (WASH.), 1938 r 1945

Lat.: 45°35'51.579" (1592.4m) Long.: 122°22'39.780" (862.2m) Adjusted X Unadjusted

State Plane Coordinates (VI): Oregon North Grid (black) Washington South Grid (blue)

X = Y =

Military Grid Zone (VI)

* (M.H.W. = 6.29 ft. above Mean Sea Level) (M.L.W. = 1.29 ft. above Mean Sea Level) All elevations are on the Standard 1929 general adjustment of leveling in the U.S.A.

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
750 - 755 Inc.	7-1-45	11:40	(1:17000 contact) (1:8000 ratio)	11.7'above M.L.W.
1199 - 1203 "	7-2-45	11:10	" "	11.0'above M.L.W.
1340 - 1344 "	7-4-45	10:30	" "	10.3'above M.L.W.
3613 - 3615 "	11-21-45	14:00	" "	4.9'above M.L.W.
3623 - 3624 "	11-21-45	14:00	" "	4.9'above M.L.W.

Tide from (III): Daily readings of the U.S. Engineer tide gauge located at Government Moorings on the West Shore of the Willamette River just south of St.Johns Bridge. The 0400 of the gauge is M.L.W., Columbia River which is 1.29 ft. above Mean Sea Level.

Mean Range: Spring Range:

Camera: (Kind or source) K 17, focal length 12 inches.

Field Inspection by: See Remarks, page 3. date:

Field Edit by: F.H. Elrod, Prin.Photo. Aid date: May, 1946

Date of Mean High-Water Line Location (III): Nov. 21, 1945
Note: According to supplemental instructions dated Sept. 10, 1945, a high-water line of 5.0 ft. above Mean Low Water is to be shown on the Map Manuscripts. Photographs made on Nov. 21, 1945 were taken when the water level was at 4.9 ft. above M.L.W.

Projection and Grids ruled by (III) Washington Office date: Jan. 1946

" " " checked by: Washington Office date: Jan. 1946

Control plotted by: Eda H. Bunce date: Feb. 1946

Control checked by: James L. Harris date: Feb. 1946

Radial Plot by: James L. Harris and Fred P. Jeter date: Mar.14,1946

Detailed by: Albert C. Turner date: Apr.25,1946

Reviewed in compilation office by: J.E. Deal date: May 13,1946

Correction and changes after field edit by: A.C. Turner date: June 18, 1946

Review after changes due to field edit by: J.E. Deal date: June 19,1946

Elevations on Field Edit Sheet
checked by: Charles Hanavich, Photo. Engr. date: May, 1946

STATISTICS (III)

Land Area (Sq Statute Miles): 6.3

Shoreline (More than 200 meters to opposite shore): 13 Statute Miles

Shoreline (Less than 200 meters to opposite shore): 6 Statute Miles measured along the center line of streams and rivers.

Number of Recoverable Topographic Stations established: 3 (1 fixed aid to navigation, 1 interior landmark and 1 aero beacon).

Number of Temporary Hydrographic Stations located by radial plot: None.

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:

Field Inspection By:	W.J. Bushnell, Photo Aide (C. of C.)	Date: Feb.,1946
Shoreline Inspection By:	J.C. Lajoye, Prin Photo Aid	Date: Jan.,1946
Recovery of Horizontal Control By:	F.H. Elrod, Prin Photo Aid	Date: Jan.,1946
	J.C. Lajoye, Prin Photo Aid	Date: Jan.,1946
Recovery of Vertical Control By:	J.H. Winniford,Photo Aid(CofC)	Date: Jan.,1946
Investigation of Geographic Names and Civil Boundaries, by:	L.E. Ervast, Photo Aid (C.ofC.)	Date: Feb.,1946

RECORD SHEET

Div. of Photogrammetry
Graphic Compilation Sect.

GENERAL LOCALITY Multnomah County, Ore.

SHEET NO. T-8710

LOCALITY Troutdale, Oregon

PROJECT NO. C.S. 322

PHOTOS ORDERED Aug. 1945 Jan. 1946 REC'D Sept. 20, 1945 Oct. 1, 1945 Feb. 8, 1946

SCALE 1:8000

PROJECTION ORDERED Jan. 1946 REC'D Jan. 22, 1946

Joins T-8709 Ck

Joins T-8692 Ck

Joins None Ck

Joins None Ck

CONTROL:
COMPUTED Harris VERIFIED Bunce

PLOTTED Bunce VERIFIED Harris

PHOTO PREPARATION:
CONTROL Jeter, Bunce

AZIMUTHS Letson, Pomeroy

PASS POINTS Harris, Jeter, Bunce

TEMPLETS Jeter, Bunce VERIFIED Harris

DATE OF PHOTOS See reverse side.

RADIAL PLOT:
PLOTTED BY Jeter, Harris DATE 3/14/46

VERIFIED J.E. Deal, Jr. DATE 3/15/46

TIME OF PHOTOS See reverse side.

COMPILATION:
DETAIL POINTS Harris DATE 3/18/46 to 3/28/46

DETAIL BY Davidson DATE 3/29/46 to 4/25/46

VERIFIED BY Barron DATE 5/13/46

STAGE OF TIDE See reverse side.

COMPARISON WITH PREVIOUS SURVEYS; TOPO., HYDRO., AND CHARTS:

Due to scale difference only a visual comparison was made with the U.S.G.S. Camas, 15 min. quadrangle, scale 1:62500. In general common planimetric detail is in good agreement.

Comparison was made with nautical Chart No. 6156 by use of the vertical projector. The chart and the Map Manuscript are in very poor agreement. Many

(Continued reverse side)

REMARKS

Field edit corrections and final compilation office review have been made.

FORWARDED TO Washington Office DATE July 5, 1946

(COMPARISON continued)

changes have occurred in the shoreline of the Sandy River since the chart was made and a few roads shown on the chart are not in agreement with existing roads.

PHOTOGRAPH DATA

Photo. No.	Date	Time	Stage of Tide
746 to 750	7-1-45	11:40	11.7 ft. above M.L.W. *
1203 to 1207	7-2-45	11:10	11.0 ft. above M.L.W.
1344 to 1348	7-4-45	10:30	10.3 ft. above M.L.W.

* Mean Low Water as determined by the U. S. Engineers Portland Office at Government Moorings, Willamette River, St. John's Bridge, is 1.29 ft. above Mean Sea Level.

Form T-1

DATA RECORD

T-8710

Quadrangle (II): Troutdale, Oregon (3 minute) Project No. (II): CS-322

Field Office: Portland, Ore. Chief of Party: R.A. Earle

Compilation Office: Portland, Ore. Chief of Party: R.A. Earle

Instructions dated (II III): July 12, 1945 Copy filed in ~~Descriptive~~ Div. Photog. Office files (VI)
Supplemental Instructions & Letters: Aug. 29, ~~Report No. T-~~
Sept. 10, Oct. 25, Nov. 30 and Dec. 6, 1945.

Completed survey received in office: July 1946

Reported to Nautical Chart Section: ✓

Reviewed: 7 August 1945 Applied to chart No. Date:

Redrafting Completed: 14 Nov. 1946

Registered: ~~6 Aug. 1947~~ 1/48 Published: 1947

Compilation Scale: 1:8000 Published Scale: 1:9600

Scale Factor (III): None

Geographic Datum (III): N.A. 1927 Datum Plane (III): * See Below

Reference Station (III): HARLOW (ORE.) 1891, r 1938, r 1945

Lat.: 45°32'26.846" (828.8m) Long.: 122°22'33.040" (716.8m) Adjusted X
Unadjusted

State Plane Coordinates (VI): Oregon N. Grid (black)
Washington S. Grid (blue)

X = Y =

Military Grid Zone (VI)
* (M.H.W. = 6.29 ft. above Mean Sea Level) (M.L.W. = 1.29 ft. above Mean Sea Level)
All elevations are on the standard 1929 general adjustment of leveling in the U.S.A.

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
746 - 750 Inc.	7-1-45	11:40	(1:17000 contact) (1:8000 ratio)	11.7' above M.L.W.
1203 - 1207 "	7-2-45	11:10	" "	11.0' above M.L.W.
1344 - 1348 "	7-4-45	10:30	" "	10.3' above M.L.W.

Tide from (III): See Form T-1 for T-8709.

Mean Range: Spring Range:

Camera: (Kind or source) K 17, focal length 12 inches.

Field Inspection by: See Remarks, page 3. date:

Field Edit by: F.H. Elrod, Prin. Photo Aid date: May, 1946

Date of Mean High-Water Line Location (III): See Form T-1 for T-8709

Projection and Grids ruled by (III) Washington Office date: Jan. 1946

" " " checked by: Washington Office date: Jan. 1946

Control plotted by: Eda H. Bunce date: Feb. 1946

Control checked by: James L. Harris date: Feb. 1946

Radial Plot by: James L. Harris and Fred P. Jeter date: Mar. 14, 1946

Detailed by: Roy A. Davidson date: Apr. 25, 1946

Reviewed in compilation office by: Ree H. Barron date: May 13, 1946

Corrections and changes after field edit by: Ree H. Barron date: June 20, 1946

Review after changes due to field edit by: J.E. Deal date: June 21, 1946

Elevations on Field Edit Sheet checked by: Charles Hanavich, Photo Engr. date: May, 1946

STATISTICS (III)

Land Area (Sq Statute Miles): 7.8

Shoreline (More than 200 meters to opposite shore): None.

Shoreline (Less than 200 meters to opposite shore): 5.0 Statute Miles measured along the center line of the river.

Number of Recoverable Topographic Stations established: 4
(1 monumented section corner, 2 monumented donation land claim corners and 1 U.S.G.S. primary traverse station).
Number of Temporary Hydrographic Stations located by radial plot: None.

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:

Field Inspection By:	W.J. Bushnell, Photo Aid (C.of C.) F.H. Elrod, Prin Photo Aid	Date: Feb.,1946
Shoreline Inspection By:	J.C. Lajoye, Prin Photo Aid F.H. Elrod, Prin Photo Aid	Date: Feb.,1946
Recovery of Horizontal Control By:	J.C. Lajoye, Prin Photo Aid	Date: Jan.,1946
Recovery of Vertical Control By:	F.H. Elrod, Prin.Photo Aid	Date: Jan.,1946
Investigation of Geographic Names and Civil Boundaries by:	L.E. Ervast, Photo Aid (C.of C.)	Date: Feb.,1946

Amendment to File Data

Since project CS-322 was reviewed and registered, it was decided that a Completion Report for each project would be written and filed in the Bureau of Archives. This Completion Report should include all special reports, correspondence of probable future interest or importance, a project layout, a photo index, and a copy of the initial and supplementary project instructions.

A special file has been set up in the library for Division of Photogrammetry projects. The Completion Report and other special reports will be filed under the project number, and these will be arranged in numerical order.

The following reports and records for project CS-322 are now filed in the Bureau Archives, rather than according to the red notes in the Descriptive Reports:

		Access No.	
A.	Special Reports:		
	1. Investigation of Boundary Monuments and Land Lines for Radial Plots 1, 2, 3, and 4	CS-322 Rept.	1
	2. Radial Plots 1, 2, 3, and 4	" "	2
	3. Legal descriptions of boundaries	" "	3
	4. Field Inspection for plots 1, 2, 3, and 4	" "	4
B.	Computations: Triangulation and Traverse	943/0TZ	0-6785
C.	Field records:		
	1. Horizontal Angles (form 250) 12 vol.	943/0H	0-7082
	2. Traverse Measurements (form 590) 9 vol.	943/0B	0-7083
	3. Descriptions (form 525) and recoveries (form 526)	943/0A	0-6786
	4. Pricking cards (form H-962-1) for tri. and Trav.	Div. of Photogrammetry General File	
	5. Recoverable Topographic stations (form 524)	Div. of Photogrammetry General File	
D.	Recovery of bench marks (form 585)	Filed in Leveling Sec.	

E. Supplemental data: maps, plans —
These were transferred to the Map Section (Mr. Stanley, Chief), Division of Charts, to be selectively filed or discarded.

January 1951

COMPILATION REPORT

MAP MANUSCRIPTS NUMBERS T-8709 and T-8710

PROJECT CS-322

26. Control:

Eighteen horizontal control stations were recovered and fall in the area of these two map manuscripts. Seventeen of these were satisfactorily identified on the field photographs. These identified horizontal control stations were well spaced over the area and were adequate for use in controlling the photographs. 13 - T-8709 4 - T-8710

13 - 8709
4 - 8710

A complete tabulation of the horizontal control stations which were originally in the area of these two map manuscripts is attached to the "Field Inspection Report, Project CS-322, Area Of The First Radial Plot", ~~which is included with this descriptive report.~~ In Div. Photog. Gen. Files.

A complete tabulation of supplemental horizontal control stations which were established in 1945 and 1946 is attached to a special report, "Third-Order Triangulation and Traverse, Project CS-322, Area Of The First Radial Plot", which is being forwarded to the Washington Office. In Library under "G-6785"

27. Radial Plot:

The facts concerning the radial plot for the area of these two map manuscripts have been fully covered in the "Descriptive Report, First Radial Plot, Project CS-322", ~~which is attached.~~ Filed in Div. Photog. Gen. Files under "Sp'l. Repts."

28. Detailing:

Compilation was done in accordance with instructions for Project CS-322 and special instructions applicable to planimetric mapping.

The photography was adequate. The reflight photographs made on Nov. 21, 1945, were helpful in determining the high-water line and other shoreline details. They were not satisfactory for accurately determining the detail falling in the outer limits of the photograph or for orientation and use in the radial plotting of the minor pass points. In some cases it was difficult to interpret, from the ratio print, the correct shape and size of building. This was attributed to the loss of sharpness when the contact prints were enlarged.

When any item relative to the field inspection data was doubtful, it could be clarified by consultation with the field man who had done the

Special Report: Investigation of Boundary Monuments and Land Lines ...
Area of the First Radial Plot.
Filed in Div. of Photogram. Gen. Files under "Sp'l. Rep'ts."

inspection work. It was, therefore, unnecessary to make discrepancy overlays for the field edit work.

The classification symbols for tree or brush areas are placed on the inside of the curled line which denotes the limits of said areas. These curled lines and the letter symbols are in green acid ink.

All boundary and land claim lines are shown by appropriate symbols in red acid ink. A legend shown in the margin of each map manuscript identifies these lines.

Pertinent notes, relative to various items, have been lettered in the margins of the map manuscripts.

29. Supplemental Data:

The following maps or plans were used to supplement the photographs:

Industrial Map of Camas and Washougal, Scale 1" = 1000'
Aluminum Co. of America Plant Map, Scale 1" = 200'
Dabney State Park Map, Scale 1" = 100'
Sheets 45, 46, 47, 50, 51, and 52 of a set of 74 sheets published by the Multnomah County, Oregon, Assessor's Office, Scale 1" = 200'.

30. Mean High-Water Line:

The mean high-water line was detailed from information submitted by the field parties and from stereoscopic examination of the photographs. Most of the shoreline data is shown on field photographs taken on Nov. 21, 1945. The mean high-water line is shown by a continuous heavy-weight black acid ink line at a plane five feet above the U.S. Engineers low-water datum which is 1.29 ft. above mean sea level. There are no marsh areas immediately bordering the mean high-water line. The bank line at the normal flood stage of the river has been noted.

31. Low-Water and Shoal Lines:

The field inspection unit did not furnish any information on definite or indefinite low-water lines in the area of these two map manuscripts. Approximate shoal lines have been shown by a light dashed black acid ink line as indicated by the field inspection unit.

32. Details Offshore from the Mean High-Water Line:

The offshore details include rocks, boulder areas, and small islands. They have been shown in accordance with the data submitted by the field inspection parties.

33. Wharves and Shoreline Structures:

Piers, wharves, dolphins, etc., have been shown.

34. Landmarks and Aids to Navigation:

In the area of Map Manuscript No. T-8709, TANK (ELEV.) TROUTDALE ALUMINUM PLANT, 1945, is recommended as an interior landmark. Noted on Form 567 MGH 7/19/46 The below listed two aids to navigation, for which Form 567 is attached, fall in the area of T-8709:

PARKER LANDING LIGHT, F.G.
WASHOUGAL LIGHT, FL. R. 2.5 Sec.

35. Hydrographic Control:

See paragraph 12 of the field inspection report.

36. Landing Fields and Aeronautical Aids:

A part of the area of the Troutdale Airport falls in the northwest corner of Map Namuscript No. T-8710. Copies of Form 567 recommending the deletion of "Aero Beacon Troutdale - 1938" and the charting of "Aero Beacon Troutdale - 1945", are attached.

37. Geographic Names:

Only undisputed geographic names are shown on the map manuscripts. 814 Geographic names are the subject of special report, "Investigation of Geographic Names, Project CS-322, Area of the First Radial Plot", which is being submitted. Filed in Geog. Names Section, Coastal Surveys

38. Recoverable Topographic Stations:

Copies of Forms 524 are being submitted for the following:

T-8709
T 1N: R3, R4E; Sect. Cor. 1, 6, 7, 12
WASHOUGAL LIGHT, 1946
TANK (ELEV) TROUTDALE ALUMINUM PLANT, 1945 (Recommended Landmark)
AERO BEACON, TROUTDALE AIRPORT, 1945
PTS 22 (USGS) 1911, r 1945
T 1-N R 3-E Section Corner 23, 24, 25, 26, 1946
S. E. Cor. John Lewellyn, Donation Land Claim, 1946
N. W. Cor. Lewis Hale, Donation Land Claim, 1946 (south of T-8710)
T 1N - R3, 4E, ¼ cor. 25-30

39. Junctions:

Complete and satisfactory junctions have been made between Map Manuscripts Nos. T-8709 and T-8710, and with adjoining map manuscripts.

40. Bench Marks:

Bench marks have been detailed as identified by field inspection units. Each bench mark is indicated by a black acid ink cross with the name and elevation to the nearest 1/10 foot lettered nearby.

44. Comparison with Existing Topographic Surveys:

See record sheet which accompanies each map manuscript.

45. Comparison with Nautical Charts:

See record sheet which accompanies each map manuscript.

Approved and Forwarded:

Robert A. Earle
Chief of Party

Respectfully submitted:

June 19, 1946

J. Edward Deal Jr.

J. Edward Deal, Jr.
Photogrammetric Engineer

FIELD EDIT REPORT
T-8709 and T-8710
Project CS-322

46. Methods:
These map manuscripts were field edited in accordance with the Field Edit Instructions dated 24 August 1945. All corrections and additions have either been made accurately on the field edit print in colored ink or the place where a correction or addition is to be made has been marked with a note which refers to the field photograph. All features on the field edit print which are to be deleted have been crossed out in colored ink.

New buildings were located either by pacing or taping in the field and are shown on the field edit prints. A legend has been inked on each of these prints which will furnish a key to all symbols and to the different colored inks.

47. Adequacy of The Compilation:
The planimetry as delineated on the map manuscript may be considered as complete and adequate with respect to corresponding ground detail. It is accurate in regard to relative position, except for deletions, corrections, additions, and notations made on the field edit prints.

The boundary limits of the Lewis Bloch Park were changed because of the acquisition of additional land for the park. Oak Park Playground is a new park, which was acquired since the original field inspection. Both parks are in the City of Camas (T-8709).

If there seemed to be a discrepancy in the drafting of roads and streets, field measurements were taken and indicated on the field edit prints. In addition, any drafting of detail that seemed to be questionable was called to the attention of the compilers and reviewers by notes.

Major discrepancies in the classification of the vegetation were noted by the field editor. Shoreline features could not be accurately checked because of the extreme high-water caused by the spring freshet.

In accordance with the field edit instructions, the accuracy and completeness of the map manuscripts in regard to geographic names, boundaries, public land lines, and detail, were checked by Mr. B.G.Smith, City Engineer of Camas, Washington in T-8709 and by Mr. C.G.Powers, County Surveyor of Multnomah County, 627 Multnomah County Courthouse, Portland in T-8710. Mr. Lewis A. McArthur has, also, reviewed the geographic names shown on these sheets.

48. Accuracy Tests:
Results of the horizontal accuracy test on T-8710 are attached to the back of this report. For data on the traverse, refer to "Special Report, Base A(Temp.Sta.),1945 - SUNDER,1945 Traverse, Map Manuscripts T-8691, T-8692, and T-8710, Project CS-322." Filed in Div. Photog. Gen. Files, "Sp'l. Rep'ts."

The nearest map accuracy test to sheet T-8709, will be given in the field edit report on sheet T-8685.

These maps are believed to comply with the horizontal accuracy specifications.

49. Bench Mark Elevations:
The elevations of the bench marks indicated on the field edit prints have been checked.

Field Edit Reviewed By:

C. Hanavich
C. Hanavich
Photo. Engr.

Field Edited By:

F. H. Elrod
F.H. Elrod
Prin.Photo.Aid.

Date: May, 1946

Approved By:

R A Earle
R.A.Earle
Chief of Party

Applied by Compilation Office
Checked by: M. L. M.
July, 1946

HORIZONTAL ACCURACY TEST
Map Manuscript T-8710

Project CS-322

This test consists of a traverse between triangulation stations Base A (Temp. Sta.), 1945 and SUNDER, 1945. The traverse was 4.8 statute miles in length and the probable error was one part in 24,400. There are 25 test points available of which seven are within the limits of this Map Manuscript. In the tabulation, the geographic position from the traverse computation is referred to as T.P.No., and the scaled position from the map manuscript (Scale 1:8000) as M.M.No.

TABULATION OF TEST POINTS

Description of Point	Test Point Number	Latitude	Longitude	Displacement in mm
Inter. of cross Rds.,90 degrees	T.P.No.14	45 31 282.3	122 23 1087.3	.18
	M.M.No.14	45 31 284.0	122 23 1088.0	
Inter. of T-rd 90 degrees	T.P.No.15	45 30 1465.9	122 23 1216.8	.13
	M.M.No.15	45 30 1464.9	122 23 1217.6	
Inter. of rd & stream,85 degrees	T.P.No.16	45 30 1367.3	122 23 1216.3	.39
	M.M.No.16	45 30 1363.5	122 23 1217.1	
Inter. of T-rd. 90 degrees	T.P.No.17	45 30 1077.7	122 23 1212.4	.16
	M.M.No.17	45 30 1076.6	122 23 1211.3	
Inter. of T-rd. 90 degrees	T.P.No.18	45 30 784.1	122 23 1208.1	.45
	M.M.No.18	45 30 788.5	122 23 1207.3	
Inter. of X-rds. 90 degrees	T.P.No.19	45 30 549.2	122 23 1203.8	.20
	M.M.No.19	45 30 550.9	122 23 1204.9	
Inter. of T-rd. 90 degrees	T.P.No.D-10	45 30 391.5	122 23 1203.4	.29
	M.M.No.D-10	45 30 394.4	122 23 1203.4	

Test point No. 16 is a less well defined point and the remaining test points are well defined.

All the points were found to be well within the accuracy requirements.

Approved by:

R. A. Earle
Chief of Party

Respectfully submitted:

C. Hanavich
Photogrammetric Engineer

GEOGRAPHIC NAMES

Survey No. T-8709-8710

1 Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Both Sheets:										1
Oregon									USGB	2
Multnomah County										3
Sandy River										4
Troutdale Airport										5
T-8710:										6
Union Pacific										7
U.S. 30		(Columbia River Highway)								8
U.S. 30 Alt		(In part Base Line Road								9
Willamette Base Line										10
Broughton Bluff									USGB	11
Troutdale										12
~~Troutdale Airport~~										13
Beaver Creek										14
Kelley Creek		(not Kelly)								15
Cedar School		(District No. 10)								16
Dabney State Park										17
Douglass Cemetery										18
										19
										20
T-8709:										21
Columbia River									USGB	22
Washington									"	23
Clark County										24
Sundial Beach										25
Company Lake		(a small part of it here)								26
Gary Island			"							27

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GEOGRAPHIC NAMES

Survey No. T-8709-8710

2 Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
T-8709, continued:										1
Ough Reef										2
Washougal										3
Parkersville										4
Parker Landing										5
Oak Park										6
Washougal River										7
Camas										8
Lacamas Creek									USGB	9
Lady Island									"	10
Woodburn Hill										11
U.S. No. 830										12
Spokane, Portland and Seattle										13
Washington No. 8B		(apparently Main St. in Washougal and then to NE)								14
Troutdale Aluminum Plant										15
Camas City Cemetery										16
Louis Bloch Park										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red approved by L. Heck on 10/29/46

M 234

Form 567
(Rev. April 1942)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

PROJECT C. S. 322
T-8710

LANDMARKS FOR CHARTS (AERONAUTICAL)

~~NO BE CHARTED~~ TO BE DELETED } STRIKE OUT ONE

Portland, Oregon May, 1946

I recommend that the following objects which [redacted] (have not) been inspected from seaward to determine their value as landmarks, be [redacted] (deleted from) the charts indicated.

The positions given have been checked after listing. JEW.

R. A. Earle *Chief of Party.*

GENERAL LOCALITY Troutdale, Multnomah County, Oregon

NAME AND DESCRIPTION	POSITION LATITUDE °	'	D. M. METERS	LONGITUDE °	'	D. P. METERS	DATUM	METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
AERO BEACON, Troutdale Fl. ev. 10 Sec. "1"	45	32	1762.8	122	23	359.1	N.A. 1927	Triangulation	1938		X		Aeronautical Chart, Portland, W-2 and #6156

NOTE:

The above listed beacon was torn down.

See Form #567 for new AERO BEACON, Troutdale, falling in the area of Map Manuscript T-8709.

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and [illegible] by individual field survey sheets. Information under each column heading should be given.

U. S. GOVERNMENT PRINTING OFFICE 16—27869-1

Form 567
(Rev. April 1942)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

PROJECT C. S. 322
T-8709

LANDMARKS FOR CHARTS (AERONAUTICAL)

TO BE CHARTED } STRIKE OUT ONE
~~TO BE DELETED~~ }

Portland, Oregon, May, 1946

I recommend that the following objects which ~~have~~ (have not) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing. JED

R. A. Earle, *Chief of Party.*

GENERAL LOCALITY: Troutdale, Multnomah County, Oregon	POSITION											
NAME AND DESCRIPTION	LATITUDE			LONGITUDE			DATUM	METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	°	′	D. M. METERS	°	′	D. P. METERS							
AERO BEACON, Troutdale Airport, 1945	45	33	(1757.3) 95.1	122	23	(166.8) 1134.7	N.A. 1927	Radial Plot	1946		X		Aeronautical Chart W-1 and Nautical Chart #6156

NOTE:

See Form 567, Map Manuscript T-8710 for deletion of AERO Fl. ev. 10 Sec. "1", which was located to the east of the above beacon and has been torn down.

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonflo[illegible]g aids to navigation, if redetermined, shall be reported on this form. The data should b[illegible]onsidered for the charts of the area and [illegible] by individual field survey sheets. Information under each column heading should be gi[illegible]

U. S. GOVERNMENT PRINTING OFFICE 16—27869-1

Form 567
(Rev. April 1942)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

FIXED AIDS TO NAVIGATION
PROJECT C.S. 322
T-8709

LANDMARKS FOR CHARTS

[redacted] STRIKE OUT ONE

Portland, Oregon May, 1946

The following Fixed Aids to Navigation [redacted] have [redacted] been inspected from seaward [redacted] on [redacted] the charts indicated.

The positions given have been checked after listing. J.E.D.

R. A. Earle
Chief of Party.

GENERAL LOCALITY Columbia River, Washougal, Washington												
NAME AND DESCRIPTION	POSITION						METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	LATITUDE			LONGITUDE								
	°	′	D. M. METERS	°	′	D. P. METERS	DATUM					
PARKER LANDING LIGHT, F. G.	45	34	(515.9) 1336.5	122	22	(201.6) 1099.3	N.A. 1927	Triangulation	1939, r1946		X	#6156
WASHOUGAL LIGHT, Fl.R. 2.5 Sec.	45	34	(1417.8) 434.6	122	21	(594.3) 706.7	N.A. 1927	Radial Plot	1946		X	#6156
The geographic positions shown above agree well with the charted position on Chart #6156.												
* TANK (ELEV.) TROUTDALE ALUMINUM Plant	45	33	(959.5) 892.9	122	23	(203.5) 1097.8	NA 1927	Radial Plot	1945		X	#6156

* Station has been recommended as an interior landmark (Tank is 150' high)

M. Musulin
Review Section, Div of Photogrammetry

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonflo[illegible]g aids to navigation, if redetermined, shall be reported on this form. The data should b[illegible] considered for the charts of the area an[illegible] by individual field survey sheets. Information under each column heading should be gi[illegible]

U. S. GOVERNMENT PRINTING OFFICE 16—27869-1

Division of Photogrammetry

Review Report

Planimetric Map Manuscript T-8709

This was the first map manuscript in project CS-322 to be completed and forwarded to this office for review. A very careful review was performed to determine if any phase of future surveys in this project would have to be revised and to assure compliance with project specifications.

An ozalid copy of the map manuscript was marked to show questionable features and was forwarded to the Portland, Oregon, Photogrammetric Office for clarification or completion. This ozalid copy was corrected and returned and has been applied to the map manuscript.

Items not discussed in this review report have been adequately covered in other parts of the descriptive report.

26. Control.-

There is an adequate distribution of horizontal control over the area of this map manuscript.

27. Radial Plot.-

Each of the photographs falling on this map manuscript was reoriented under the manuscript and independent photographic points intersected. The points intersected cut in very well and each photograph checked well on control and secondary points.

28. Detailing.-

The detailing of this map manuscript was acceptable, although some change had to be made in the shoreline in the vicinity of the Washougal River. Since the shoreline as interpreted by the field inspector had been transfered to the office photographs inaccurately, the reviewer noting these errors transfered the detail points to the field inspection photographs, and using these photographs, corrected the shoreline to agree with the field inspector's interpretation of it.

38. Comparison with Previous Topographic Surveys.-

The planimetric features of the following U.S.C.& G.S. surveys are superseded by T-8709 in their common areas:

T-2522	1:10,000	1900
T-2577	1:10,000	1901

A comparison was made with U.S.G.S. Camas, Wash.-Ore. (15") edition of 1942, reprinted in 1946, by the Portland Photogrammetric Office and also by the reviewer. For details of this comparison, see the sheet record at the front of this descriptive report.

45. Comparison with Nautical Charts.-

Nautical chart No. 6156, scale 1:40,000, 1942, was used for comparison with this map manuscript by the Portland Photogrammetric Office and by the reviewer. Discrepancies are noted in the sheet record attached to the front of this descriptive report.

49. General Land Office and Donation Land Claim Data.-

The General Land Office and Donation Land Claim data have been applied to this map manuscript. The General Land Office information has been omitted within the Donation Land Claims except that monumented section corners have been shown. In this regard, see letter from Lt. Comdr. Robert A. Earle dated 25 September 1946, subject, Review of Map Manuscript T-8709, added at the back of this descriptive report.

This map has not been applied to the nautical chart as of the date of this review, 26 November 1946.

Reviewed by:

Michael G. Mpulia
Photogrammetrist

Inspected by:

S. V. Griffith 11/25/46
Chief, Review Section

APPROVED BY:

B. G. Jones, Technical Asst.
Div. of Photogrammetry

Chief, Nautical Chart Br.
Div. of Charts

K. T. Adams
Chief, Div. of Photogrammetry

E. K. Green
Chief, Div. of Coastal Surveys

KTA

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
c/o Swan Island Postal Station
Portland, 18, Oregon

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

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September 25, 1946

To: Chief, Division of Photogrammetry
U. S. Coast & Geodetic Survey
Washington, D. C.

Make this letter a part of the report on T8709.

From: Lt. Comdr. Robert A. Earle

Subject: Review of Map Manuscript T-8709

Reference: Your Letter, 78-RCR, dated 12 September 1946 on Above Subject.

In accordance with the above reference a study, which included a thorough field investigation, was made of the questionable points relative to map manuscript T-8709. The discrepancy print of the manuscript has been corrected, or appropriate reference notes added, and the following information is submitted.

1. The position of the range line between ranges 3 and 4 was corrected in purple ink on the map ozalid. This correction was made possible by the recovery of the monumented corner common to sections 1-6-7-12 in Township 1 N, Range 3 and 4. An extensive search was required to find this corner which was located about 6 meters ESE of an old fence corner and 11 meters SE of an old and original bearing tree in a heavily wooded area. The mark was covered by moss and flush with the ground but is in good condition. With the aid of the G.L.O. plats, which were unavailable when the original field investigation of this area was made, and by a more comprehensive search the monumented ¼ section corner common to sections 25-30, was also recovered.

Fm. 524 filed

It is to be noted that the distance indicated in the G.L.O. plats between these two monumented and recovered corners is 280 chains or about 5633 meters. The distance as scaled roughly from the ozalid prints of map manuscripts T-8709 and T-8710 shows an error of about 198 meters. The corner common to sections 13-18-19-24 in Township 1 N, Range 3 and 4 was never set.

Form 524 and a pricking card is being submitted for each of these two recovered corners.

2. The western and northern edge of the D.C.Parker Donation Land Claim, which lies east of the city of Camas, has been corrected in green ink on the discrepancy print.

The northern edge of the Calvin Reed Donation Land

Claim (North of the Troutdale Aluminum Plant) should be corrected in accordance with the notes indicated in red and circled in green on the ozalid print.

3. The field investigation of the shoreline along the Columbia River (Including Multnomah Channel) from the city of Camas, Wash. in the east to St Helens, Oregon in the north, was done during a period when the average water level was about two feet below the mean high water datum adopted for this project. In view of this fact a correction of minus two feet is applicable to all bank heights indicated on the field photographs of these areas. Along the Willamette River, bank heights will be indicated as shown on the field photographs as the field inspection was done when the water level was around the MHW datum.

It should be remembered that bank heights are estimated or approximate heights and may be in error from two to three feet on low banks and relatively more on high bluffs. In accordance with my note in the lower right hand corner of the ozalid print, it is also felt that elevations of banks cannot be checked by pictures taken during a time when the rivers are at flood stages. This is due to the fact that water may back up into creeks and rivers, at points between fifteen and twenty miles from a tide gage in an uneven or irregular manner; in other words the gradient flow of the river is temporarily destroyed.

4. The location, including the vertical clearance, of the power line which crosses the Washougal River south of Camas, has been indicated on contact print number 753. This river is not navigable.

Except for the changes and corrections noted on the ozalid print, all the D.L.C. and section lines have been verified and are believed to be correct. The corrected print was further verified by Mr B. G. Smith, Surveyor for the County Assessors Office and by Mr C.G.Powers, Multnomah County Surveyor. It should be noted that some of the changes and corrections extend into quadrangles T-8685 and T-8710, and should be applied to these sheets.

All data relative to this additional study is listed on the attached transmitting letter and forwarded herewith.

Robert A. Earle

Robert A. Earle
Chief of Party

Division of Photogrammetry

Review Report

Planimetric Map Manuscript T-8710

Items not discussed in this review report are adequately covered in other parts of this descriptive report.

28. Detailing.-

The detailing of this map manuscript is, in general, accurate, except that the shoreline along the Sandy River had to be corrected in those places where the shoreline detail was obscured by dark shadows. The field inspector in attempting to delineate the shoreline along these shadowed places had not followed the shoreline exactly. The reviewer, using a stereoscope, was able to see the shoreline better and has corrected the shoreline in all of these places.

38. Comparison with Previous Topographic Surveys.-

There are no U.S.C.& G.S. topographic surveys covering the area of this map manuscript.

U.S.G.S. quadrangle Camas, Wash.-Ore. (15") edition of 1942, reprinted in 1946, has been compared with this map manuscript by the Portland Photogrammetric Office and by the reviewer. For details of this comparison, see the sheet record at the front of this descriptive report.

39. Comparison with Contemporary Hydrographic Surveys.-

There are no contemporary hydrographic surveys falling within the limits of this map manuscript.

45. Comparison with Nautical Charts.-

Nautical chart No. 6156, scale 1:40,000, 1942, was used for comparison with this map manuscript. Discrepancies are noted in the sheet record attached to the front of this descriptive report.

49. Accuracy Tests.-

A horizontal accuracy test was made in T-8710 and all of the points tested were found to be within the limits of accuracy requirements. A tabulation of the tested points is attached to this descriptive report.

Reviewed by: Inspected by:

Michael G. Misulia 11/28/46

Photogrammetrist Chief, Review Section

APPROVED:

B. G. Jones 1/48

B. G. Jones, Technical Asst. Chief, Nautical Chart Br.
Div. of Photogrammetry Div. of Charts

K. T. Adams C. K. Green

Chief, Div. of Photogrammetry Chief, Div. of Coastal Surveys

NAUTICAL CHARTS BRANCH

T-8709

SURVEY NO. T-8710

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
23 Aug 50	6156	Nichols	~~Before~~ After Verification and Review
			Complete application.
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.