

TP 00917

TP 00917

| | |
|---|------------------|
| NOAA FORM 76-35 (3-76) | |
| U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY | |
| DESCRIPTIVE REPORT | |
| THIS MAP EDITION WILL NOT BE FIELD EDITED. | |
| Map No. TP-00917 | Edition No. 1 |
| Job No. CM-7909 | |
| Map Classification CLASS III (FINAL) | |
| Type of Survey SHORELINE | |
| LOCALITY | |
| State MICHIGAN | |
| General Locality LAKE MICHIGAN | |
| Locality ST. JOSEPH AND BENTON HARBOR | |
| 1979 TO 19 | |
| REGISTRY IN ARCHIVES | |
| DATE | |

| | | | |
|--|--|--|--|
| NOAA FORM 76-36A (3-72) | | U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | |
| DESCRIPTIVE REPORT - DATA RECORD | | TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED | |
| PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center Norfolk, VA | | SURVEY TP. <u>00917</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>III (FINAL)</u> JOB <u>CM-7909</u> | |
| OFFICER-IN-CHARGE A. Y. Bryson, CDR | | LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB <u>PH.</u> MAP CLASS <u></u> SURVEY DATES: 19 <u></u> TO 19 <u></u> | |
| I. INSTRUCTIONS DATED | | | |
| 1. OFFICE | | 2. FIELD | |
| Aerotriangulation Office January 22, 1982 November 30, 1982 | | Horizontal Control (Photoidentification) February 15, 1980 | |
| II. DATUMS | | | |
| 1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN | | OTHER (Specify) | |
| 2. VERTICAL: <input type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL | | OTHER (Specify) International Great Lakes Datum (1955) Lake Michigan Low Water Datum | |
| 3. MAP PROJECTION Lambert Conformal | | 4. GRID(S) STATE Michigan ZONE South | |
| 5. SCALE 1:10,000 | | STATE ZONE | |
| III. HISTORY OF OFFICE OPERATIONS | | | |
| OPERATIONS | | NAME | |
| DATE | | | |
| 1. AEROTRIANGULATION METHOD: Analytic | | BY B. Thornton LANDMARKS AND AIDS BY D. Norman | |
| 2. CONTROL AND BRIDGE POINTS METHOD: Coradomat | | PLOTTED BY B. Thornton CHECKED BY D. Norman | |
| 3. STEREOSCOPIC INSTRUMENT COMPILATION | | PLANIMETRY BY P. Evans CHECKED BY R. Kravitz | |
| INSTRUMENT: Wild B-8 SCALE: 1:10,000 | | CONTOURS BY NA CHECKED BY NA | |
| 4. MANUSCRIPT DELINEATION METHOD: Smooth drafted | | PLANIMETRY BY P. Evans CHECKED BY F. Mauldin CONTOURS BY NA CHECKED BY NA | |
| SCALE: 1:10,000 | | HYDRO SUPPORT DATA BY P. Evans CHECKED BY F. Mauldin | |
| 5. OFFICE INSPECTION PRIOR TO FIELD Final Review | | BY F. Mauldin | |
| 6. APPLICATION OF FIELD EDIT DATA | | BY NA CHECKED BY NA | |
| 7. COMPILATION SECTION REVIEW | | BY F. Mauldin | |
| 8. FINAL REVIEW | | BY J. Hancock | |
| 9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH | | BY J. Hancock | |
| 10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH | | BY G. Fromm | |
| 11. MAP REGISTERED - COASTAL SURVEY SECTION | | BY <i>R. Kornegay</i> | |

NOAA FORM 76-36B
(3-72)

CM-7909

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TP-00917

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

| | | | | | |
|---|---------|---|----------|--|--|
| CAMERA(S) Wild RC-10(B) (B = 152.74 mm) | | TYPES OF PHOTOGRAPHY LEGEND | | TIME REFERENCE | |
| XXXXXXXXXXXX Water Level Gage <input type="checkbox"/> PREDICTED TIDES <input checked="" type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY | | (C) COLOR (P) PANCHROMATIC (I) INFRARED | | ZONE Eastern MERIDIAN 75th <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT | |
| NUMBER AND TYPE | DATE | TIME | SCALE | STAGE OF xxx Lake Level | |
| 79 B(C) 1076-1079 | 6/11/79 | 1424 | 1:30,000 | 579.89 feet* | |

REMARKS *The 1955 International Great Lakes Datum for Lake Michigan is 576.8 feet. Water levels at time of photography are indicated as they were recorded at the Holland Michigan water level gage.

2. SOURCE OF MEAN HIGH-WATER LINE:

The term "mean high water" is not applicable to this project. The shoreline was determined from the above listed 1979 photography and is defined as that line on the photography which marks the contact between land and the water surface.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

Not applicable

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

| SURVEY NUMBER | DATE(S) | SURVEY COPY USED | SURVEY NUMBER | DATE(S) | SURVEY COPY USED |
|---------------|---------|------------------|---------------|---------|------------------|
| | | | | | |

5. FINAL JUNCTIONS

| NORTH | EAST | SOUTH | WEST |
|-----------|-----------|-----------|-----------|
| No survey | No survey | No survey | No survey |

REMARKS

This is a one sheet project and does not junction with any known contemporary survey in the area.

NOAA FORM 76-36C
(3-72)CM-7909
TP-00917
HISTORY OF FIELD OPERATIONSU. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYI. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

| OPERATION | NAME | DATE |
|-------------------------------------|---|-----------|
| 1. CHIEF OF FIELD PARTY | James E. Dunford | July 1981 |
| 2. HORIZONTAL CONTROL | RECOVERED BY James E. Dunford | July 1981 |
| | ESTABLISHED BY None | |
| | PRE-MARKED OR IDENTIFIED BY James E. Dunford | July 1981 |
| 3. VERTICAL CONTROL | RECOVERED BY None | |
| | ESTABLISHED BY None | |
| | PRE-MARKED OR IDENTIFIED BY None | |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY James E. Dunford | July 1981 |
| | LOCATED (Field Methods) BY None | |
| | IDENTIFIED BY James E. Dunford | July 1981 |
| 5. GEOGRAPHIC NAMES INVESTIGATION | TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input checked="" type="checkbox"/> NO INVESTIGATION | |
| 6. PHOTO INSPECTION | CLARIFICATION OF DETAILS BY None | |
| 7. BOUNDARIES AND LIMITS | SURVEYED OR IDENTIFIED BY None | |

II. SOURCE DATA

| 1. HORIZONTAL CONTROL IDENTIFIED | | 2. VERTICAL CONTROL IDENTIFIED | |
|----------------------------------|--|--------------------------------|---------------------|
| | | None | |
| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
| 79B(C) 1077, 1078 | St. Joseph Lighthouse, 1932 (Sub Pts. A & B) | | |
| 79B(C) 1079 | Henley, 1932 (Sub Pts. A & B) | | |
| 79B(C) 1074 | Stephensville, 1932 (Sub Pts. A & B) | | |

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
|--------------|-------------|--------------|-------------|
| | | | |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

Field Report

1 Bound Notebook including 3 CSI Cards and field observations

NOAA FORM 76-36D
(3-72)CM-7909
TP-00917
RECORD OF SURVEY USEU. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

I. MANUSCRIPT COPIES

| COMPILATION STAGES | | | DATE MANUSCRIPT FORWARDED | |
|-------------------------|------------|--|---------------------------|---------------|
| DATA COMPILED | DATE | REMARKS | MARINE CHARTS | HYDRO SUPPORT |
| Compilation Complete, | April 1983 | Class III Manuscript | None | None |
| Final Review, Class III | May 1983 | Final Class III Map No field edit performed | Sept 20-83 | Sept 20-83 |
| | | | | |
| | | | | |

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

| NUMBER (pages) | CHART LETTER NUMBER ASSIGNED | DATE FORWARDED | REMARKS |
|-------------------|---------------------------------|-------------------|------------------------------|
| 2 | 84383 | Sept 20, 83 | Landmarks for Charts |
| 1 | " | " | Navigational Aids for Charts |
| | | | |
| | | | |
| | | | |
| | | | |

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

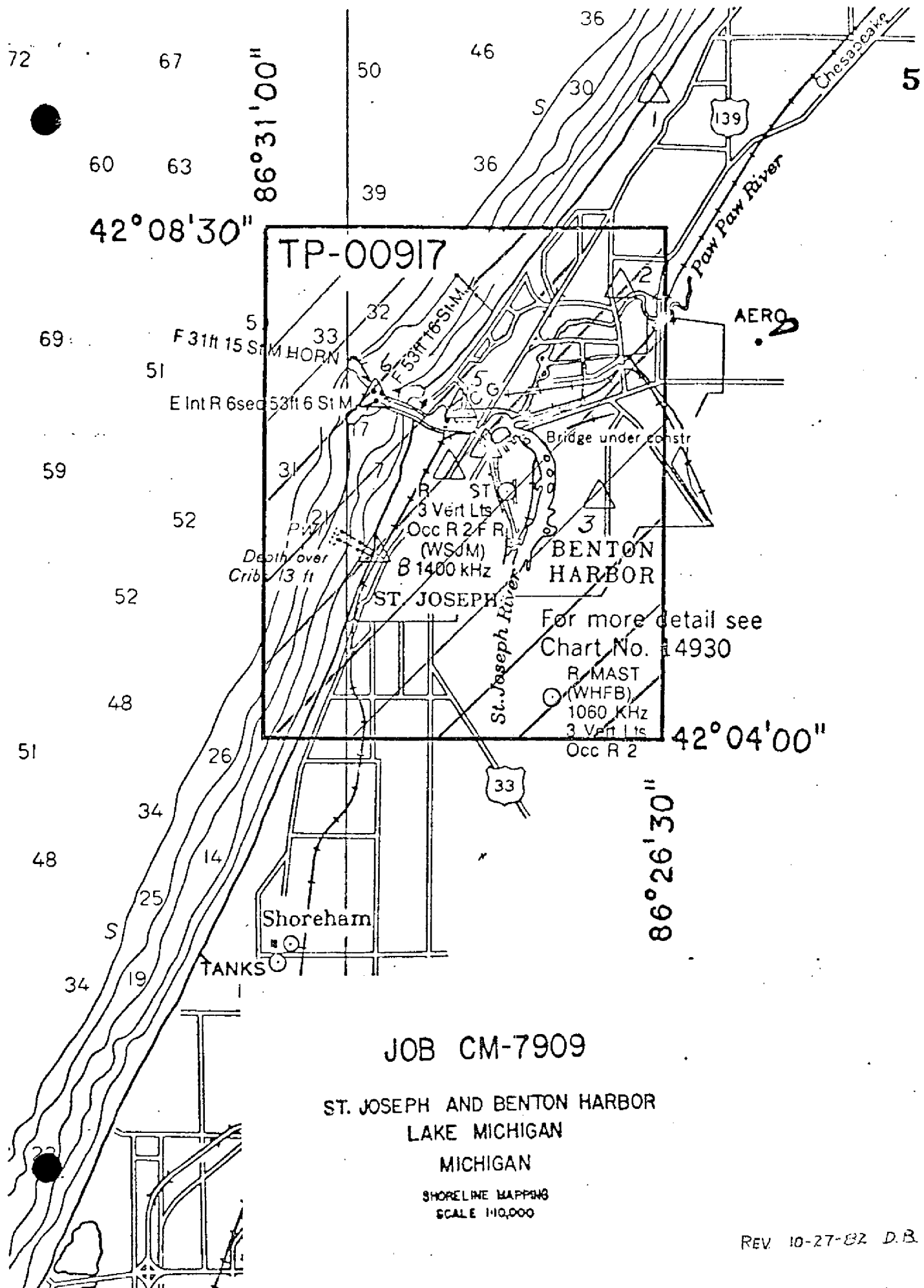
III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS ~~507~~ SUBMITTED BY FIELD PARTIES. 76-40
 3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: MARCH 1984

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

| | | | |
|-------------------|---------------------------------|--------------------------|---|
| SECOND EDITION | SURVEY NUMBER TP - _____ (2) | JOB NUMBER PH - _____ | TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
| | DATE OF PHOTOGRAPHY | DATE OF FIELD EDIT | |
| THIRD EDITION | SURVEY NUMBER TP - _____ (3) | JOB NUMBER PH - _____ | TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
| | DATE OF PHOTOGRAPHY | DATE OF FIELD EDIT | |
| FOURTH EDITION | SURVEY NUMBER TP - _____ (4) | JOB NUMBER PH - _____ | TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
| | DATE OF PHOTOGRAPHY | DATE OF FIELD EDIT | |



SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

CM-7909
TP-00917

This 1:10,000 scale final Class III shoreline map comprises project CM-7909, St. Joseph and Benton Harbor, Lake Michigan, Michigan.

The purpose of this project was to provide current charting information for nautical chart maintenance. No contemporary hydrographic activity was scheduled in conjunction with this mapping project; however, a "Notes to Hydrographer" print was prepared to assist in future surveys.

This final Class III map portrays a portion of Lake Michigan featuring the St. Joseph River and the shoreline along the port cities of St. Joseph and Benton Harbor, Michigan.

Photo coverage was adequately provided by one strip of natural color photography. These photographs were taken June 11, 1979, and exposed with the RC-10(B) camera at 1:30,000 scale.

Field work prior to compilation was accomplished in July 1981; this involved the establishment of horizontal control by field photo-identification methods specified to meet aerotriangulation requirements.

Analytic aerotriangulation was adequately provided by the Washington Science Center in May 1982. Aerotriangulation activity also included ruling the base manuscript, determining ratio values for the photographs and locating various navigational aids.

Compilation based on photo interpretation was performed by the Coastal Mapping Unit at the Atlantic Marine Center in April 1983.

There was no field edit accomplished for this map.

Final review was performed at the Atlantic Marine Center in May 1983. A Chart Maintenance Print was prepared and forwarded to the Marine Chart Branch. Also a "Notes to Hydrographer" print was prepared for potential hydrographic activity.

This Descriptive Report contains all pertinent information used to compile this Final Class III map. The original base manuscript and all related data were forwarded to the Washington Science Center for final registration.

FIELD INSPECTION

TP-00917

CM-7909

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for the aerotriangulation of the project.

PROJECT REPORT

CM-7909
St. Joseph and Benton Harbor
Lake Michigan, Michigan

The Project was completed according to Project Instructions from OA/C3 - Roger Lanier, Dated 2/15/81.

Three horizontal control stations were photoidentified in the areas indicated on the control requirement diagram. Two substitute stations were established by 3rd order traverse for each station.

Field work was accomplished during this period 7/16/81 to 7/26/81, including driving time to Project from Norfolk.

All records and data sent to C-3415.

James E. Dunford
James E. Dunford

Photogrammetric Plot Report
St. Joseph & Benton Harbor, Michigan

CM-7909
May 1982

21. Area Covered

The area covered by this project is St. Joseph & Benton Harbor, Michigan. The area is covered by one 1:10,000 scale sheet, TP-00917.

22. Method

One strip of 1:30,000 scale photographs were bridged by analytical aerotriangulation methods. Control was field identified with additional office identified intersection stations used for check control. Ratios were determined for compilation.

The Michigan South, Lambert Conformal coordinate system was used to adjust the bridging strip. The manuscript will be plotted using the same coordinate system.

23. Adequacy of Control

Control checked well within NOS standards of map accuracy and is more than sufficient for the job. A copy of the Fit to Control is attached to this report.

24. Supplemental Data

USGS quadrangles were used to provide vertical control for strip adjustments.

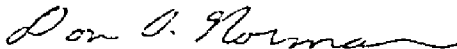
25. The coverage, overlap, and quality of the 1979B(C) photographs was adequate for the job.

Submitted by,

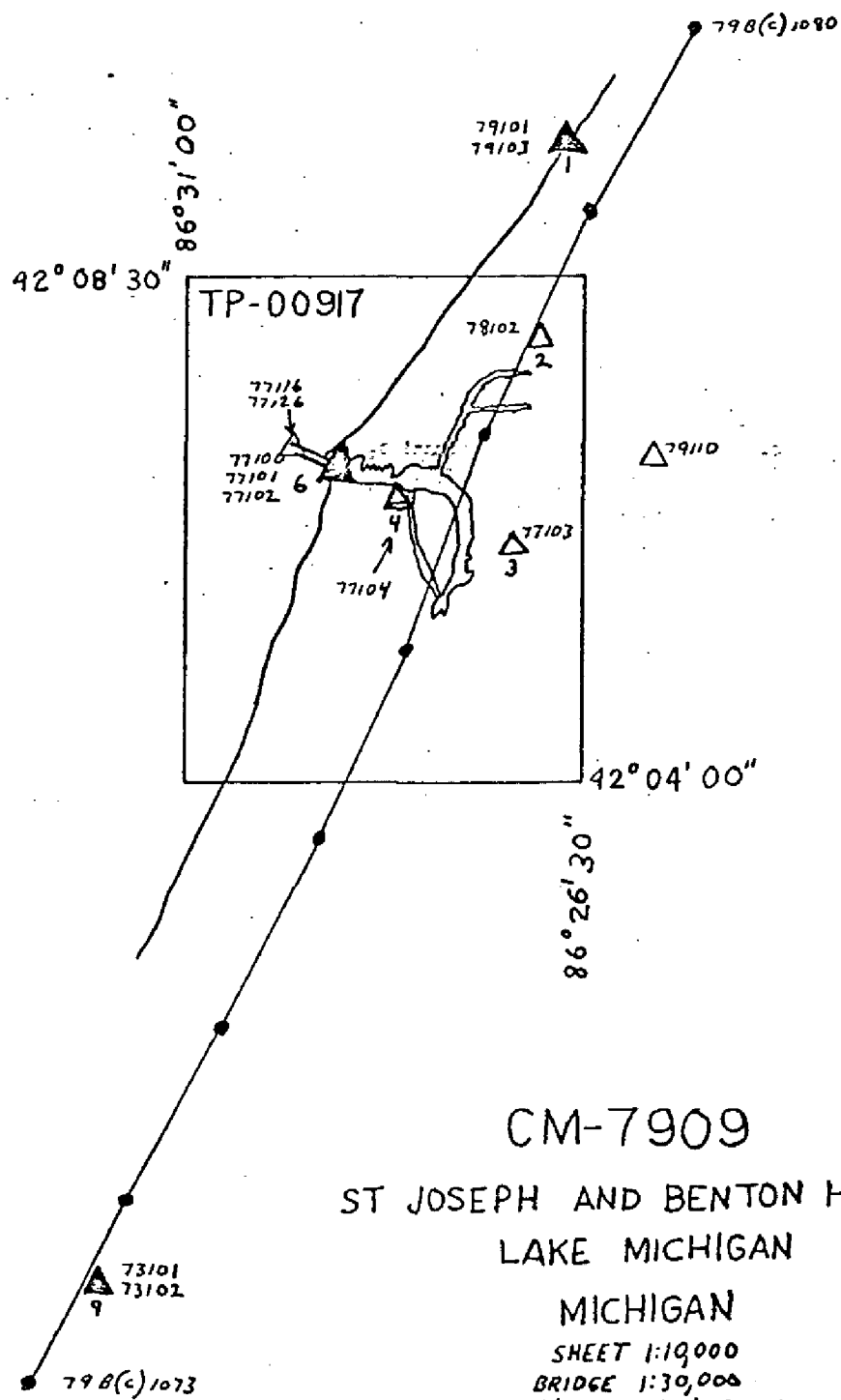


Brian Thornton

Approved and Forwarded:



Don O. Norman
Chief, Aerotriangulation Section



St. Joseph & Benton Harbor, Michigan

CM-7909

Fit to Control

| | <u>Point #</u> | <u>X-Error</u> | <u>Y-Error</u> |
|---------------------------------|----------------|----------------|----------------|
| ▲ Stephenville, 1932 Sub Pt. A | 73101 | -0.001 | -0.001 |
| " " B | 73102 | -2.112 | -0.902 |
| St. Joseph Lt. House, 1932 | 77100 | -1.816 | -0.624 |
| ▲ Sub Pt. A | 77101 | 0.007 | 0.004 |
| " " B | 77102 | -1.798 | 3.393 |
| Benton Harbor High School | | | |
| Stack, 32 | 77103 | -1.333 | -0.928 |
| St. Joseph Catholic Church | | | |
| Steeple, 32 | 77104 | -0.567 | -2.450 |
| St. Joseph Pierhead Front Range | | | |
| Lt., 32 | 77116 | -3.127 | -0.635 |
| St. Joseph South Pierhead | | | |
| Lt., 32 | 77126 | 0.238 | 0.727 |
| Benton Harbor, Baker Vawter Co. | | | |
| Stack, 32 | 78102 | -0.925 | -2.239 |
| Ross Field Airport Beacon, 1969 | 79110 | 1.125 | -2.503 |
| ▲ Henley, 1932 Sub Pt. A | 79101 | 0.066 | 1.073 |
| ▲ " " B | 79103 | -0.072 | -1.076 |

St. Joseph & Benton Harbor, Michigan

CM-7909

Ratio value for 1:30,000 scale "B" camera color photographs

79B(C) 1072 to 1080

X 3.056

DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO. TP-00917 | JOB NO. CM-7909 | SOURCE OF INFORMATION (Index) | AEROTRI- ANGULATION POINT NUMBER | GEODETIC DATUM NA 1927 | | COORDINATES IN FEET STATE Michigan | | GEOGRAPHIC POSITION | | ORIGINATING ACTIVITY Coastal Mapping Unit, Atlantic Marine Center, Norfolk, VA | REMARKS |
|---|-------------------------|-------------------------------------|---|--|-------|---------------------------------------|-------|-------------------------|---------------------|--|---------|
| | | | | ZONE | South | STATION | South | ϕ LATITUDE | λ LONGITUDE | | |
| ST JOSEPH PIERHEAD FRONT RANGE LIGHT, 1932 | QUAD 420862 STA 1027 | 6 77116 | | X=1,413,635.22 | | | | ϕ 42°06'58.76" | | | |
| | | | | Y= 232,139.46 | | | | λ 86°29'40.42" | | | |
| ST JOSEPH LIGHTHOUSE, 1932 | QUAD 420862 STA 1025 | 6B 77100 | | X= | | | | ϕ 42°06'57.81" | | | |
| | | | | Y= | | | | λ 86°29'36.45" | | | |
| ST JOSEPH SOUTH PIERHEAD LIGHT, 1932 | QUAD 420862 STA 1028 | 77126 6A | | X= | | | | ϕ 42°06'54.84" | | | |
| | | | | Y= | | | | λ 86°29'39.35" | | | |
| BENTON HARBOR BAKER VAWTER CO STACK, 1932 | QUAD 420862 STA 1020 | 2 78102 | | X= | | | | ϕ 42°07'37.155" | | | |
| | | | | Y= | | | | λ 86°27'15.541" | | | |
| ST JOSEPH WHITCOMB HOTEL SPIRE ON DOME, 1932 | QUAD 420862 STA 1029 | 5B 77402* | | *Position listed for 77402 by computer is not shown here. 5B position listed because it is shown here because it is in the Quad 420862. | | | | ϕ 42°06'38.593" | | | |
| | | | | Y= | | | | λ 86°28'54.100" | | | |
| ST JOSEPH CATHOLIC CHURCH STEEPLE, 1932 | QUAD 420862 STA 1022 | 4A 77104 | | X= | | | | ϕ 42°06'30.546" | | | |
| | | | | Y= | | | | λ 86°28'39.738" | | | |
| BENTON HARBOR HIGH SCHOOL STACK, 1932 | QUAD 420862 STA 1018 | 3 77103 | | X= | | | | ϕ 42°06'08.50" | | | |
| | | | | Y= | | | | λ 86°27'26.54" | | | |
| ST JOE, 1932 | QUAD 420862 STA 1011 | 8 | | X= | | | | ϕ 42°05'45.678" | | | |
| | | | | Y= | | | | λ 86°29'38.768" | | | |
| ST JOSEPH CONGREGATIONAL CHURCH (USLS), 1874 | QUAD 420862 STA 1023 | 7 | | X= | | | | ϕ 42°06'18.839" | | | |
| | | | | Y= | | | | λ 86°28'59.509" | | | |
| | | | | X= | | | | ϕ | | | |
| | | | | Y= | | | | λ | | | |
| COMPUTED BY | | | DATE | COMPUTATION CHECKED BY | | | | | DATE | | |
| LISTED BY | P. L. Evans, Jr. | | DATE | LISTING CHECKED BY | | | | Carl Klein | DATE | 2/7/83 | |
| HAND PLOTTING BY | | | DATE | HAND PLOTTING CHECKED BY | | | | | DATE | | |

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT

TP-00917
CM-790931. DELINEATION

All delineation was by office interpretation of the 1:30,000 scale, 1979, color photographs using the Wild B-8 stereoplotting instrument. Refer to form 76-36B for a listing of the compilation photographs. The photography was adequate except for sun glare present in the southwest corner of each photograph. This sun reflection hindered the stereo viewing of the lake side shoreline, thus requiring monoscopic delineation of that feature.

The 1:30,000 scale compilation photographs were ratioed by a factor of 3.056 in order to review all delineation.

32. CONTROL

Horizontal control was adequate. Refer to the Photogrammetric Plot Report, dated May 1982.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours are not applicable to this project. Drainage was compiled by office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline and alongshore details were compiled from office interpretation of the mapping photographs as indicated in item #31. There appears to be numerous dead trees along the shoreline of the St. Joseph River; a description indicating these areas was compiled accordingly.

36. OFFSHORE DETAILS

Offshore details were compiled from office interpretation of the photographs. No unusual problems were encountered.

TP-00917

CM-7909

37. LANDMARKS AND AIDS

Appropriate 76-40 forms were submitted for the 17 charted landmarks and 3 navigational aids common to this map.

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

Refer to the Data Record Form 76-36B, item 5, of the Descriptive Report.

40. HORIZONTAL AND VERTICAL ACCURACY

See Item #32.

46. COMPARISON WITH EXISTING MAPS

A comparison was made with the following 1:24,000 scale U. S. Geological Quadrangles:

Benton Harbor, Michigan, 1970; photorevised 1980
Stevensville, Michigan, 1970
Benton Heights, Michigan, 1970

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following National Ocean Survey Charts:

14930, 1:10,000 scale, 20th edition, dated July 8, 1978
14905, 1:120,000 scale, 22nd edition, dated November 7, 1981

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by,


Paul L. Evans, Jr.

Cartographic Technician

Date: February 10, 1983

TP-00917
CM-7909

Approved,

James L. Byrd, Jr.

James L. Byrd, Jr.
Chief, Coastal Mapping Unit

REVIEW REPORT TP-00917
SHORELINE

61. GENERAL STATEMENT:

Refer to the Summary included in this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A comparison was made with the following 1:24,000 scale U.S.G.S. quadrangles:

Benton Harbor, Michigan, dated 1970, photorevised 1980
Benton Heights, Michigan, dated 1970
Stevensville, Michigan, dated 1970

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

No contemporary hydrographic survey was conducted in the area common to this map.

A copy of the final Class III map was prepared and submitted as "Notes to Hydrographer" in the event of future hydrographic activity.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following NOS charts:

14930, 20th edition, July 8, 1978, 1:10,000 scale
14905, 22nd edition, November 7, 1981, 1:120,000 scale

A "Chart Maintenance Print" was prepared and forwarded to the Marine Charts Branch.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This map complies with the Project Instructions and meets the requirements for National Standards of Map Accuracy.

Submitted by,

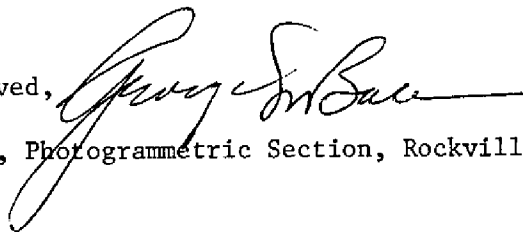
Gerry L. Hancock
Gerry L. Hancock
Final Reviewer

Approved for forwarding,

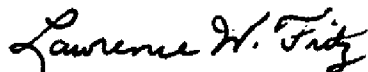
Billy H. Barnes
Billy H. Barnes
Chief, Photogrammetric Section, AMC

REVIEW REPORT TP-00917
SHORELINE

Approved,



Chief, Photogrammetric Section, Rockville



Chief, Photogrammetry Branch

May 2, 1983

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7909 (Lake Michigan, St. Joseph and Benton Harbor, Mich.)

TP-00917

Benton Harbor (locale)

Chesapeake and Ohio (RY)

Conrail (RR)

Fair Plain (locale)

Hickory Creek

Higman Park (locale)

Lake Michigan

Morrison Channel

Ox Creek

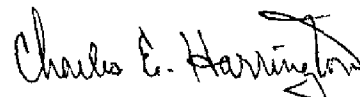
Paw Paw River

Radio Island

St. Joseph

St. Joseph River

Approved by:



Charles E. Harrington
Chief Geographer
Nautical Charting Division

DISSEMINATION OF PROJECT MATERIAL
CM-7909
ST. JOESPH AND BENTON HARBOR, LAKE MICHIGAN, MICHIGAN

NATIONAL ARCHIVES/FEDERAL RECORD CENTER

Brown Jacket

Field Notebook: Containing CSI Cards and Field
Observations

Bridging Photographs
Computer Printout

Project Completion Report

BUREAU ARCHIVES

Registration Copy of Map
Descriptive Report of Map

REPRODUCTION DIVISION

8X Reduction Negative of Map

OFFICE OF STAFF GEOGRAPHER

Geographic Names Standard

| NOAA FORM 76-40 (8-74) Replaces C&GS Form 567. | | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | | | | ORIGINATING ACTIVITY | |
|---|---|--|---------------|---|---------------|---|----------------|
| <input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED | | REPORTING UNIT (Field Party, Ship or Office) | STATE | LOCALITY | DATE | <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel) | |
| The following objects HAVE <input type="checkbox"/> HAVE NOT <input checked="" type="checkbox"/> been inspected from seaward to determine their value as landmarks. | | JOB NUMBER | | DATUM | | | |
| OPR PROJECT NO. | | SURVEY NUMBER | | METHOD AND DATE OF LOCATION (See instructions on reverse side) | | CHARTS AFFECTED | |
| CM-7909 | | TP-00917 | | NA 1927 | | | |
| CHARTING NAME | DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses) | LATITUDE | | LONGITUDE | | OFFICE | FIELD |
| | | ° / | ' D.M. Meters | ° / | ' D.P. Meters | | |
| TANK* | | 42 07 | 37.72 | 86 27 | 14.29 | 79 B(C) 1078 6/11/79 | 14930 14905 |
| STACK | (Benton Harbor Baker Vawter Co. Stack, 1932) | 42 07 | 37.155 | 86 27 | 15.541 | 79 B(C) 1078 6/11/79 | 14930 14905 |
| TANK* | | 42 07 | 09.06 | 86 27 | 32.34 | 79 B(C) 1078 6/11/79 | 14930 14905 |
| TANK* | | 42 06 | 48.50 | 86 28 | 47.30 | 79 B(C) 1077 6/11/79 | 14930 14905 |
| RTR | At Coast Guard Sta. | 42 06 | 48.62 1500 | 86 29 | 08.14 187 | 79 B(C) 1077 6/11/79 | 14930 14905 |
| CUP* | (St. Joseph Whitecomb Hotel Spire on Dome, 1932) | 42 06 | 38.593 | 86 28 | 54.100 | 79 B(C) 1077 6/11/79 | 14930 14905 |
| RTR* | | 42 06 | 34.99 | 86 28 | 35.60 | 79 B(C) 1077 6/11/79 | 14930 14905 |
| SPIRE | (St. Joseph Catholic Church Steeple, 1932) | 42 06 | 30.546 | 86 28 | 39.738 | 79 B(C) 1077 6/11/79 | 14930 14905 |
| SPIRE | | 42 06 | 22.69 700 | 86 28 | 56.93 1308 | 79 B(C) 1077 6/11/79 | 14930 14905 |
| | *Aerotriangulation position | | | | | | |

P. 1/1

| RESPONSIBLE PERSONNEL | |
|---|---|
| TYPE OF ACTION | NAME |
| OBJECTS INSPECTED FROM SEAWARD | |
| POSITIONS DETERMINED AND/OR VERIFIED | P. L. Evans, Jr. |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES | <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify) |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' | |
| (Consult Photogrammetric Instructions No. 64.) | |
| OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75 | FIELD (Cont'd) B. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982 |
| FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 | III. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 II. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods. |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. | |

| RESPONSIBLE PERSONNEL | |
|---|--|
| TYPE OF ACTION | NAME |
| OBJECTS INSPECTED FROM SEAWARD | |
| POSITIONS DETERMINED AND/OR VERIFIED | P. L. Evans, Jr. |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES | |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' | |
| (Consult Photogrammetric Instructions No. 64.) | |
| OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75 | FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982 |
| FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 | III. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 II. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods. |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. | |

| NOAA FORM 76-40 (8-74) Replaces C&GS Form 567. | | | | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | | | | ORIGINATING ACTIVITY | | | |
|---|--|---------------|-------|--|-------|---------------------|--|---|--|--------------------|--|
| NONFLOATING AIDS FOR CHARTS | | | | NONFLOATING AIDS ON LANDMARKS FOR CHARTS | | | | <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel) | | | |
| REPORTING UNIT (If field party, ship or office) | | STATE | | LOCALITY | | DATE | | METHOD AND DATE OF LOCATION (See instructions on reverse side) | | CHARTS AFFECTED | |
| COASTAL Mapping Unit Atlantic Marine Center Norfolk, VA | | Michigan | | St. Joseph and Benton Harbor | | 11/4/82 | | | | | |
| JOB NUMBER | | SURVEY NUMBER | | DATUM | | POSITION | | | | | |
| CM-7909 | | TP-00917 | | NA 1927 | | | | | | | |
| CHARTING NAME | | DESCRIPTION | | LATITUDE | | LONGITUDE | | OFFICE | | FIELD | |
| (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses) | | | | ° / ' " D.M. Meters | | ° / ' " D.P. Meters | | | | | |
| LIGHT* | St. Joseph North Pierhead Light (St. Joseph Pierhead Light, Range Light, 1932) | 42 06 | 86 29 | 58.76 | 40.42 | | | 79 B(C) 1077 6/11/79 | | 14930 14905 | |
| LIGHT* | St. Joseph North Pier Inner Light (St. Joseph Lighthouse, 1932) | 42 06 | 86 29 | 57.81 | 36.45 | | | 79 B(C) 1077 6/11/79 | | 14930 14905 | |
| LIGHT* | St. Joseph South Pierhead Light (St. Joseph South Pierhead Light, 1932) | 42 06 | 86 29 | 54.84 | 39.35 | | | 79 B(C) 1077 6/11/79 | | 14930 14905 | |
| | | | | | | | | | | | |
| | *Aerotriangulation position | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

444

| RESPONSIBLE PERSONNEL | |
|---|--|
| TYPE OF ACTION | NAME |
| OBJECTS INSPECTED FROM SEAWARD | |
| POSITIONS DETERMINED AND/OR VERIFIED | P. L. Evans, Jr. |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES | <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify) |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' | |
| (Consult Photogrammetric Instructions No. 64.) | |
| OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75 | FIELD (Cont'd) 8. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982 |
| FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 | III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods. |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. | |

