



REFERENCE TIES

STATION	BEARING	DIST.	LATITUDE	DEPARTURE
MON. 548	S 50° 03' E	100	N 707 807.3	E 232 280.3
L-38	S 50° 03' E	100	N 707 807.3	E 232 280.3
MON. 548	S 30° 36' E	1155	N 708 284.9	E 233 314.9
L-37	S 30° 36' E	1155	N 708 284.9	E 233 314.9
PROP. MON.			N 708 730.0	E 233 373.7
MON. 2842	S 8° 39' E	1337	N 708 617.0	E 234 451.1
L-36			N 708 617.0	E 234 451.1

HARBOR LINES

STATION	BEARING	DIST.	LATITUDE	DEPARTURE
L-33	S 80° 54' W	358.0	N 710 231.8	E 223 284.4
L-34	S 80° 54' W	324.8	N 708 874.4	E 223 340.2
L-35	S 80° 48' W	688.5	N 709 787.0	E 223 809.2
L-36	S 80° 48' W	1098.1	N 709 484.8	E 223 647.2
L-37	S 41° 40' W	1302.8	N 707 070.0	E 223 387.7
L-38	S 39° 45' W	1642.1	N 708 291.6	E 223 182.1
R-18	S 80° 39' W	1298.4	N 708 473.3	E 223 888.7
R-19	S 52° 55' W	435.1	N 708 912.1	E 223 350.8
R-20	S 33° 56' W	1348.1	N 701 532.2	E 223 460.8
R-21	S 30° 24' W	440.0	N 708 401.7	E 223 331.4
R-22	S 53° 47' W	1521.0	N 703 502.9	E 223 287.1
R-23				

REFERENCE LINES

STATION	BEARING	DIST.	LATITUDE	DEPARTURE
A	S 48° 41' W	1148.7	N 702 852.2	E 223 683.3
B	S 48° 41' W	1148.7	N 702 852.2	E 223 683.3
C	S 45° 47' W	212.2	N 708 654.0	E 223 300.0
D	N 8° 42' E	917.9	N 704 587.8	E 223 251.8
E	N 8° 42' E	917.9	N 704 587.8	E 223 251.8
F	N 8° 42' E	917.9	N 704 587.8	E 223 251.8
G	N 8° 42' E	917.9	N 704 587.8	E 223 251.8
H	S 31° 12' W	1095.5	N 702 382.2	E 223 409.3
I	S 31° 12' W	1095.5	N 702 382.2	E 223 409.3
J	S 88° 39' W	278.7	N 707 751.8	E 223 370.9
K	N 52° 10' E	287.9	N 709 168.8	E 223 304.2
L	N 52° 10' E	287.9	N 709 168.8	E 223 304.2
M	N 81° 08' E	822.0	N 708 375.4	E 223 352.2
N	N 82° 48' E	474.5	N 708 878.1	E 223 385.7
O	N 82° 48' E	474.5	N 708 878.1	E 223 385.7
P	S 54° 51' W	1109.6	N 708 178.8	E 223 278.2
Q	S 54° 51' W	1109.6	N 708 178.8	E 223 278.2

REFERENCE LINES

STATION	BEARING	DIST.	LATITUDE	DEPARTURE
U.S. MON. 1	N 37° 24' E	200.0	N 706 891.5	E 223 328.1
U.S. MON. 2	N 37° 24' E	1320.8	N 703 891.5	E 223 328.1
U.S. MON. 3	N 37° 24' E	780.1	N 708 503.1	E 223 343.8
U.S. MON. 4				
U.S. MON. 5	N 57° 57' E	144.8	N 708 244.1	E 223 285.7
U.S. MON. 6	N 57° 57' E	234.2	N 708 350.8	E 223 304.0
U.S. MON. 7	N 57° 57' E	300.1	N 708 648.8	E 223 384.8
U.S. MON. 8				

REFERENCE TIES

STATION	BEARING	DIST.	LATITUDE	DEPARTURE
MON. 2845	S 33° 17' E	108.8	N 710 655.9	E 223 377.2
L-33	S 80° 54' W	358.0	N 710 231.8	E 223 284.4
MON. 2846	S 21° 01' E	67.5	N 708 857.4	E 223 338.0
MON. 2847	S 21° 01' E	67.5	N 708 857.4	E 223 338.0
L-34	S 80° 54' W	324.8	N 708 874.4	E 223 340.2
L-35	S 80° 48' W	688.5	N 709 787.0	E 223 809.2
MON. 139	S 17° 33' E	77.6	N 709 757.0	E 223 809.2
L-36	S 80° 48' W	1098.1	N 709 484.8	E 223 647.2
L-37	S 41° 40' W	1302.8	N 707 070.0	E 223 387.7
L-38	S 39° 45' W	1642.1	N 708 291.6	E 223 182.1
MON. 2833	N 21° 23' W	390.2	N 708 348.5	E 223 384.8
MON. 442	N 21° 23' W	390.2	N 708 348.5	E 223 384.8
R-27	N 21° 23' W	900	N 707 503.3	E 223 440.8
MON. 2834	N 31° 38' W	900	N 708 348.5	E 223 384.8
R-22	N 31° 38' W	900	N 708 468.7	E 223 334.1
JUL				
AUG				
SEP				
OCT				
NOV				
DEC				
MON. 281				
MON. 282				
MON. 283				
MON. 284				
MON. 285				
MON. 286				
MON. 287				
MON. 288				
MON. 289				
MON. 290				
MON. 291				
MON. 292				
MON. 293				
MON. 294				
MON. 295				
MON. 296				
MON. 297				
MON. 298				
MON. 299				
MON. 300				

WAR DEPARTMENT  
OFFICE OF THE CHIEF OF ENGINEERS  
WASHINGTON, D. C. JANUARY 16 1940.

IT IS RECOMMENDED THAT THE HARBOR LINES AS SHOWN AND DESCRIBED ON THIS MAP BE ESTABLISHED BY THE SECRETARY OF WAR BY HIS APPROVAL HEREOF SUBJECT TO THE PROVISIONS OF SECTION II OF THE RIVER AND HARBOR ACT APPROVED MARCH 3 1889 THIS MAP TO SUPERSEDE ALL HARBOR LINE MAPS FOR THESE SHORES PREVIOUSLY APPROVED BY THE SECRETARY OF WAR.

MAJOR GENERAL CHIEF OF ENGINEERS

WAR DEPARTMENT  
WASHINGTON, D. C. JANUARY 11 1940.

APPROVED:

SECRETARY OF WAR

NOTE:  
ELEVATIONS AS SHOWN ARE ON MEAN SEA LEVEL DATUM 4TH ED. ADJ. (BRIE) OR ON MEAN SEA LEVEL PLANE COORDINATES IN SPECIAL PUBLICATION NO. 1030 OF THE U.S. DEPT. OF COMMERCE COAST AND GEODETIC SURVEY SURVEYS WERE MADE BY THE U.S. ENGINEER OFFICE ST. PAUL, MINN. IN 1838 AND 1840.  
HARBOR LINES AS SHOWN ARE THE BULK HEAD AND PIER BUILDINGS WHICH DEFINE THE CITY MONUMENTS ARE OF GRANITE 8' SQUARE ON TOP AND 24" LONG.  
U.S. MONUMENTS ARE 8" x 8" CONCRETE MONUMENTS SET BY THIS SURVEY WITH 3" IRON PIPE AND BRONZE CAPS.  
FIELD NOTES AND TIES TO REFERENCE MONUMENTS ARE IN FIELD BOOK 9-2-2-1.  
COMPUTATIONS ARE IN BOOK 9-2-2-2.  
HARBOR LINES ARE SHOWN THIS:

OLD #4

6 5  
+  
7 8

MISSISSIPPI RIVER  
ST. PAUL HARBOR LINE

SHEET NO. 4  
SCALE 1:2400  
U.S. ENGINEER OFFICE ST. PAUL MINN. AUGUST 1939  
SUBMITTED BY *[Signature]* PRINCIPAL ENGINEER  
APPROVED BY *[Signature]* MAJOR GENERAL CHIEF OF ENGINEERS  
DRAWN BY *[Signature]* F.K.  
TRACED BY *[Signature]* F.K.  
ONCE IN PRINT  
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