

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

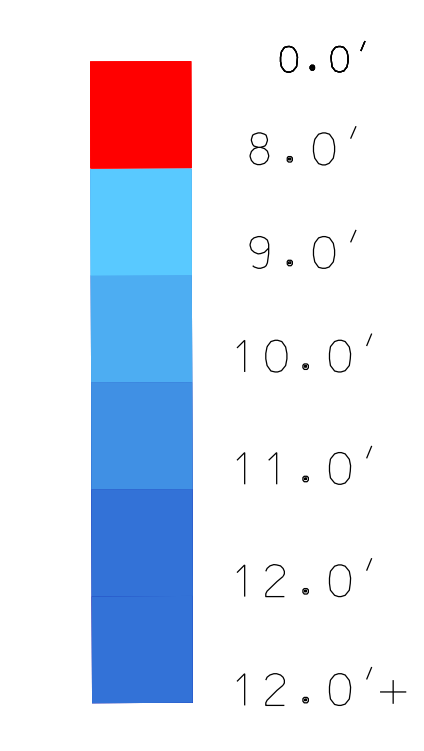
ALL SOUNDINGS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL I.G.L.D. 1985.

HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

THE GRAPHICS FOR THE RAILROAD BRIDGE ORIGINATE FROM THE 15 JULY 1992 GRAND HAVEN HARBOR SHEET 4 OF 4 AERIAL FLIGHT SURVEY ADMINISTERED BY THE DETROIT DISTRICT TECHNICAL SUPPORT SECTION. THESE AERIAL FLIGHTS ARE REFERENCED TO HIGH ACCURACY GPS BASED HORIZONTAL CONTROL OBSERVATIONS TAKEN AS PART OF THIS 1992 AERIAL FLIGHT CONTRACT.

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGUE MARK ALONG THE SHEET STEEL WALL IN THE GRAND HAVEN GOVERNMENT BASIN.

8' Legend



SURVEYED ON: 30 OCTOBER 2018
 POSITIONING METHOD: DGPS, USING C.G. BEACON CORRECTIONS
 VESSEL: SKIFF

PROJECT DEPTH 8 FT.
 CHANNEL LIMITS SHOWN THUS: _____
 8 FT. CONTOUR SHOWN THUS: _____

GRAND HAVEN ENTRANCE/ SPRING LAKE ENTRANCE CHANNEL LINE COORDINATES		
POINT	EASTING (X)	NORTHING (Y)
J	12,629,427.91	579,546.82
K	12,629,640.65	579,646.61
L	12,629,789.87	579,868.95
M	12,629,827.07	579,986.95
N	12,629,973.06	580,002.18
O	12,629,973.18	580,357.63
P	12,629,965.00	580,375.87
D	12,630,041.20	580,576.06
KK	12,629,650.06	579,411.89
LL	12,629,840.69	579,695.92
MM	12,629,922.90	579,956.74
NN	12,629,907.04	579,986.42
DD	12,630,009.73	580,324.44
PP	12,630,181.53	580,531.75

GRAND RIVER CHANNEL LINE COORDINATES		
POINT	EASTING (X)	NORTHING (Y)
CLL0	12,629,573.11	579,407.62
CLP0	12,629,455.00	579,392.93
CLR0	12,629,336.89	579,378.25
CLL1	12,630,253.36	579,189.82
CLP1	12,630,232.03	579,144.15
CLR1	12,630,210.70	579,089.48
CLL2	12,630,656.81	578,934.67
CLP2	12,630,620.39	578,898.55
CLR2	12,630,583.96	578,862.43
CLL3	12,630,986.33	578,403.94
CLP3	12,630,942.15	578,380.30
CLR3	12,630,897.98	578,356.66
CLL4	12,631,402.20	577,489.74
CLP4	12,631,357.56	577,467.11
CLR4	12,631,312.92	577,444.49

NO.	DATE	REVISION	BY
U.S. ARMY ENGINEER DISTRICT, DETROIT CORPS OF ENGINEERS DETROIT, MICHIGAN			
DRAWN BY		GRAND RIVER, MICHIGAN CONDITION OF CHANNEL OCTOBER 2018 GRAND HAVEN AREA OFFICE	
DESIGNED BY			
CHECKED BY			
REVIEWED:			
SUBMITTED:			
APPROVAL RECOMMENDED:		DATE	
CHIEF, PROJ. OPNS. SEC.		CHIEF, OTS BRANCH	
APPROVED		SCALE 1" = 100 FT.	
CHIEF, CONST. OPNS. DIVISION		CADD FILENAME: grand_river_10_2018.dgn DRAWING NUMBER	
		SHEET 1A OF 11	