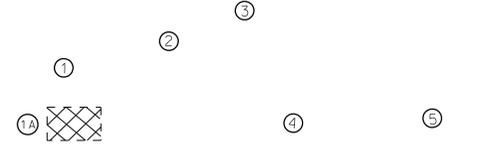


INDEX TO SHEETS  
GRAND RIVER



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 1-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.

MOST OF THE BASE MAP FEATURES DEPICTED ON THIS MAP WERE DIGITIZED FROM EXISTING LINE DRAWINGS DATED APRIL 1976 AND ARE OUTDATED AND INACCURATE. THE NAD83 GRID AND COORDINATE DATA USED FOR THIS DIGITIZING OF THE APRIL 1976 DATA WERE CONVERTED FROM NAD27 COORDINATES USING CORPSCON VERSION 3.01 SOFTWARE.

THE GRAPHICS FOR THE RAILROAD BRIDGE ORIGINATE FROM THE 19 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.

SURVEYED ON: 22 OCTOBER 2007  
POSITIONING METHOD: DGPS, USING C.G. BEACON CORRECTIONS  
VESSEL: LAUNCH 3033

PROJECT DEPTH 8 FT.  
CHANNEL LIMITS SHOWN THUS: - - - - -  
7 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	579,868.99
M	12,629,827.07	579,986.99
N	12,629,857.06	580,002.18
D	12,629,973.18	580,357.63
P	12,629,965.00	580,375.87
Q	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
OO	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)
CLLO	12,629,573.11	579,407.62
CLPO	12,629,495.00	579,392.93
CLRO	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
<b>U.S. ARMY ENGINEER DISTRICT, DETROIT</b> <b>CORPS OF ENGINEERS</b> DETROIT, MICHIGAN			
DRAWN BY		<b>GRAND RIVER, MICHIGAN</b> <b>CONDITION OF CHANNEL</b> <b>OCTOBER 2007</b> <b>GRAND HAVEN AREA OFFICE</b>	
DESIGNED BY			
CHECKED BY			
REVIEWED:		APPROVAL RECOMMENDED:	
SUBMITTED:		DATE:	
CHIEF, PROJ. DINS. SEC.		CHIEF, OTS BRANCH	
APPROVED		SCALE 1" = 100 FT.	
CHIEF, CONST. OPNS. DIVISION		CADD FILENAME: GRCIAG07.DGN DRAWING NUMBER	
		SHEET 1A OF 11	