

US Army Corps  
of Engineers  
Jacksonville District

WQC PERMIT PLATE  
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

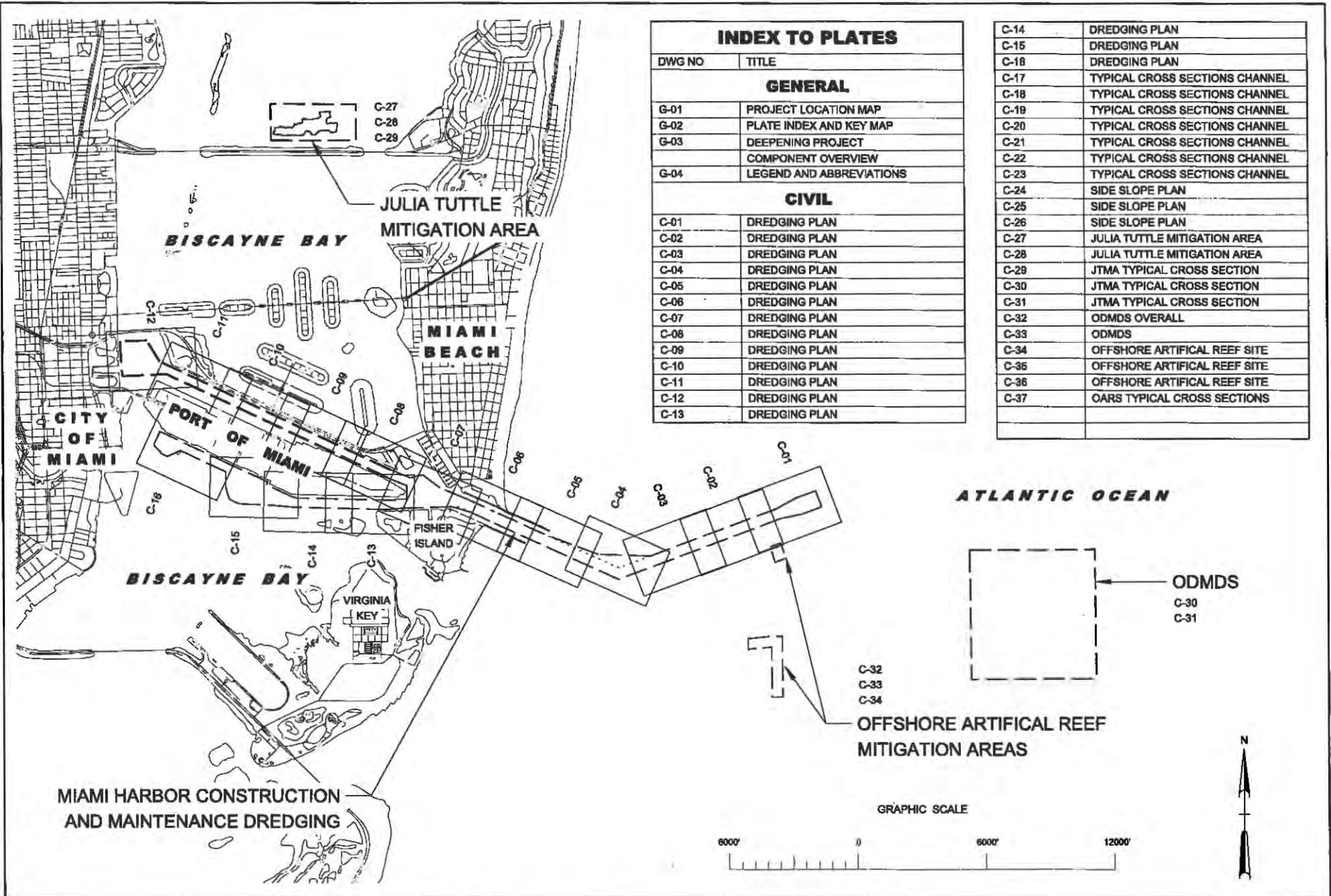
Des by: SRC  
Dwn by: MR2  
Ckd by: LRP  
Dated: JAN 2011  
Revised: JUL 2011

**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**PROJECT LOCATION MAP**

PLATE

**G-01**

PERMIT # 305721001



INDEX TO PLATES	
DWG NO	TITLE
<b>GENERAL</b>	
G-01	PROJECT LOCATION MAP
G-02	PLATE INDEX AND KEY MAP
G-03	DEEPENING PROJECT COMPONENT OVERVIEW
G-04	LEGEND AND ABBREVIATIONS
<b>CIVIL</b>	
C-01	DREDGING PLAN
C-02	DREDGING PLAN
C-03	DREDGING PLAN
C-04	DREDGING PLAN
C-05	DREDGING PLAN
C-06	DREDGING PLAN
C-07	DREDGING PLAN
C-08	DREDGING PLAN
C-09	DREDGING PLAN
C-10	DREDGING PLAN
C-11	DREDGING PLAN
C-12	DREDGING PLAN
C-13	DREDGING PLAN

C-14	DREDGING PLAN
C-15	DREDGING PLAN
C-18	DREDGING PLAN
C-17	TYPICAL CROSS SECTIONS CHANNEL
C-18	TYPICAL CROSS SECTIONS CHANNEL
C-19	TYPICAL CROSS SECTIONS CHANNEL
C-20	TYPICAL CROSS SECTIONS CHANNEL
C-21	TYPICAL CROSS SECTIONS CHANNEL
C-22	TYPICAL CROSS SECTIONS CHANNEL
C-23	TYPICAL CROSS SECTIONS CHANNEL
C-24	SIDE SLOPE PLAN
C-25	SIDE SLOPE PLAN
C-26	SIDE SLOPE PLAN
C-27	JULIA TUTTLE MITIGATION AREA
C-28	JULIA TUTTLE MITIGATION AREA
C-29	JTMA TYPICAL CROSS SECTION
C-30	JTMA TYPICAL CROSS SECTION
C-31	JTMA TYPICAL CROSS SECTION
C-32	ODMDS OVERALL
C-33	ODMDS
C-34	OFFSHORE ARTIFICAL REEF SITE
C-35	OFFSHORE ARTIFICAL REEF SITE
C-36	OFFSHORE ARTIFICAL REEF SITE
C-37	OARS TYPICAL CROSS SECTIONS



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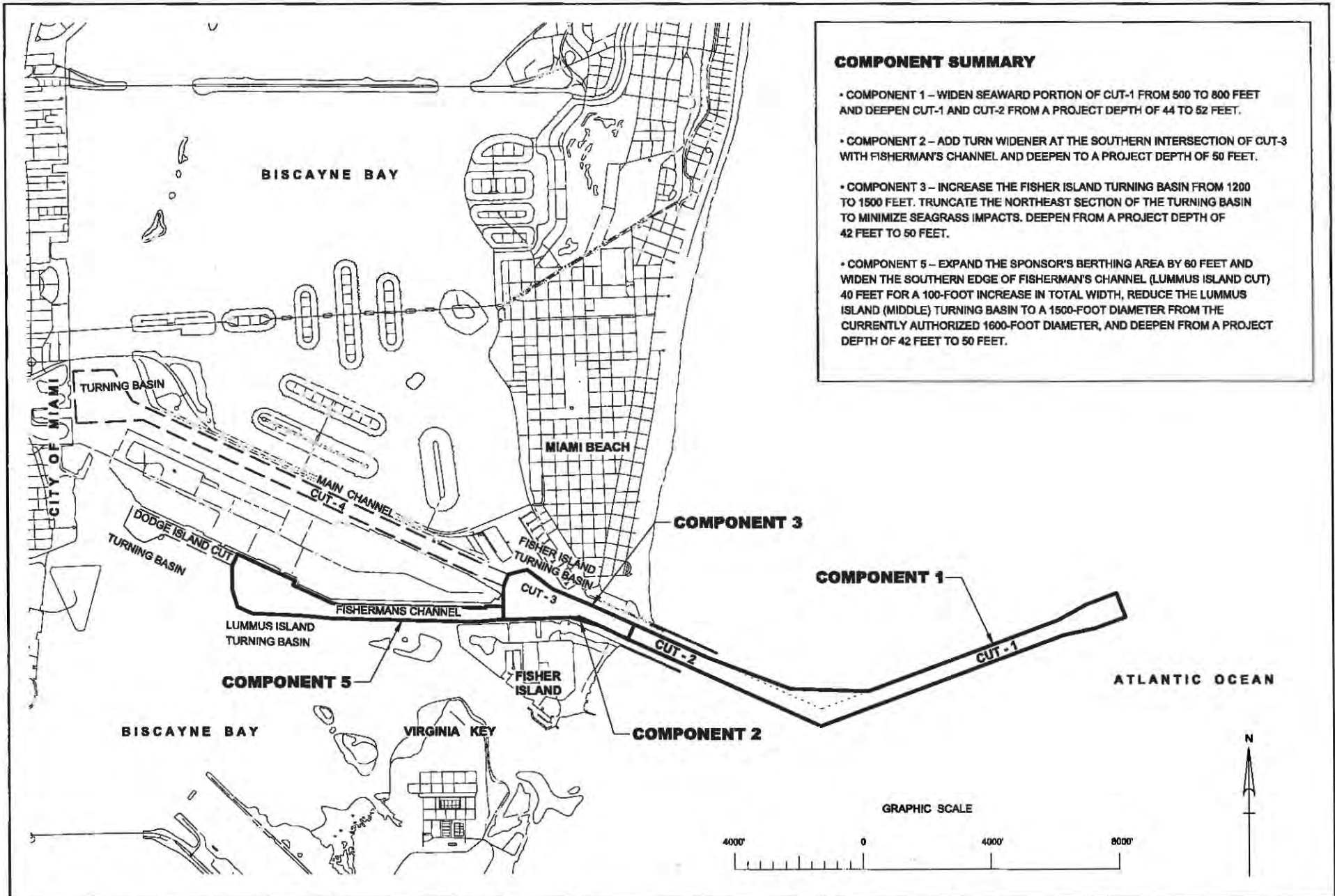
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**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**PLATE INDEX AND KEY MAP**

PLATE  
**G-02**

PERMIT # 30572100



**COMPONENT SUMMARY**

- COMPONENT 1 – WIDEN SEAWARD PORTION OF CUT-1 FROM 500 TO 800 FEET AND DEEPEN CUT-1 AND CUT-2 FROM A PROJECT DEPTH OF 44 TO 52 FEET.
- COMPONENT 2 – ADD TURN WIDENER AT THE SOUTHERN INTERSECTION OF CUT-3 WITH FISHERMAN'S CHANNEL AND DEEPEN TO A PROJECT DEPTH OF 50 FEET.
- COMPONENT 3 – INCREASE THE FISHER ISLAND TURNING BASIN FROM 1200 TO 1500 FEET. TRUNCATE THE NORTHEAST SECTION OF THE TURNING BASIN TO MINIMIZE SEAGRASS IMPACTS. DEEPEN FROM A PROJECT DEPTH OF 42 FEET TO 50 FEET.
- COMPONENT 4 – EXPAND THE SPONSOR'S BERTHING AREA BY 60 FEET AND WIDEN THE SOUTHERN EDGE OF FISHERMAN'S CHANNEL (LUMMUS ISLAND CUT) 40 FEET FOR A 100-FOOT INCREASE IN TOTAL WIDTH, REDUCE THE LUMMUS ISLAND (MIDDLE) TURNING BASIN TO A 1500-FOOT DIAMETER FROM THE CURRENTLY AUTHORIZED 1600-FOOT DIAMETER, AND DEEPEN FROM A PROJECT DEPTH OF 42 FEET TO 50 FEET.



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

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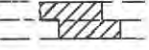
**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**

**DEEPENING PROJECT COMPONENT OVERVIEW**

PLATE  
**G-03**



LEGEND (PLATES C-01 THRU C-37)	
	= CORAL REEF
	= UNCONSOLIDATED SEDIMENTS
	= RUBBLE
	= ALGAE-COVERED RUBBLE
	= WORM ROCK RUBBLE
	= SEAGRASS
	= SEAGRASS
	= OTHER DELINEATIONS (INCLUDES ANY NON-PRISTINE BOTTOM SURFACE MATERIAL (I.E. PREVIOUSLY DREDGED MATERIAL) AND UNNAMED SAND BORROW AREAS)

LEGEND (PLATES C-01 THRU C-37)	
	PROJECT CHANNEL
	DREDGING AREAS
49.5	ELEVATION AND LOCATION

ABBREVIATIONS	
APPROX.	APPROXIMATE
C/L.	CENTERLINE
D/A	DISPOSAL AREA
DWG.	DRAWING
DMMA	DREDGED MATERIAL MANAGEMENT AREA
E.	EAST
EL. / ELEV.	ELEVATION (FEET)
HORZ.	HORIZONTAL
MLLW	MEAN LOWER LOW WATER
N.	NORTH
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NAD83	NORTH AMERICAN DATUM OF 1983
NO.	NUMBER
N.T.S.	NOT TO SCALE
ODMDS	OFFSHORE DREDGED MATERIAL DISPOSAL SITE
P.I.	POINT OF INTERSECTION
RGE.	RANGE
S.	SOUTH
STA.	STATION
VERT.	VERTICAL
W.	WEST

**SURVEY NOTES SEAGRASS:**

ENVIRONMENTAL RESOURCE SURVEYS CONSISTING OF FIELD INVESTIGATIONS (VIDEO SURVEYS AND DIVER SURVEYS) WERE PERFORMED BY DIAL CORDY AND ASSOCIATES IN AUGUST AND SEPTEMBER 2000. SURVEY TRANSECTS WITHIN THE STUDY AREA INCLUDED THE AREA 400 FEET SOUTH OF FISHERMAN'S CHANNEL, INCLUDING THE AREA WITHIN THE CRITICAL WILDLIFE AREA (CWA), THE AREA ADJACENT TO THE COAST GUARD STATION, THE ENTRANCE CHANNEL, AND THE AREA 500 FEET NORTH AND SOUTH OF THE OFFSHORE CHANNEL. TRANSECT END POSITIONS WERE LOCATED USING DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS).

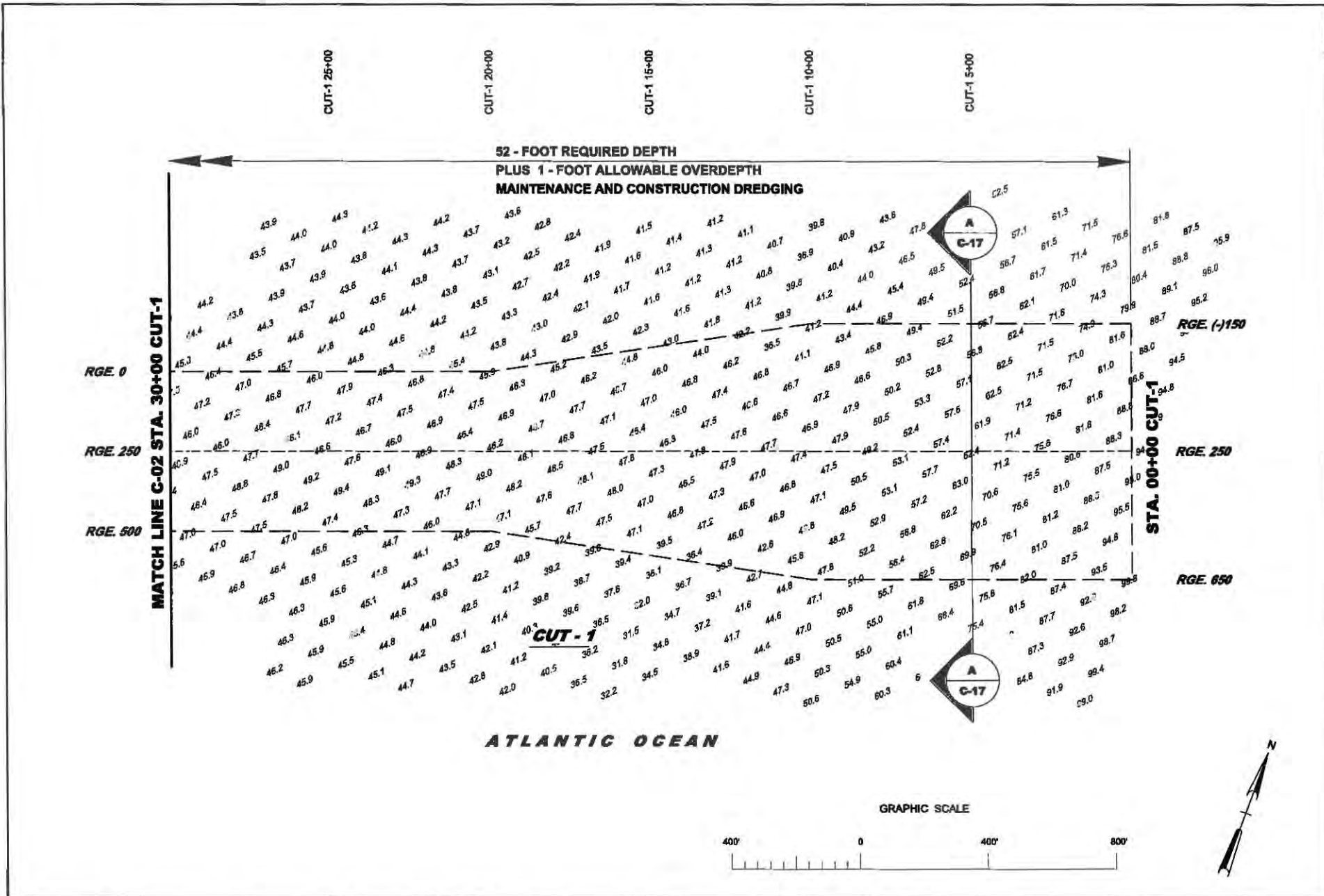
NOTE THAT IT IS ACTUALLY A 2000 SURVEY, NOT A 2002.

**SURVEY NOTES CHANNEL:**

1. SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) OF THE 1983-2001 TIDAL EPOCH.
2. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
3. TIDAL REDUCTIONS WERE OBTAINED UTILIZING REAL-TIME KINEMATIC GPS WITH A KINEMATIC TIDE DATUM MODEL CALLED "MIAMI-HBR&RV-03AUG2010.KTD". ANY THIRD PARTY ATTEMPT TO DUPLICATE THIS SURVEY SHALL OBTAIN THE LATEST KINEMATIC TIDE DATUM FILE (KTD FILE) AVAILABLE FROM CESAJ.
4. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83).
5. ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
6. SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC GPS FOR POSITIONING.

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	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA			

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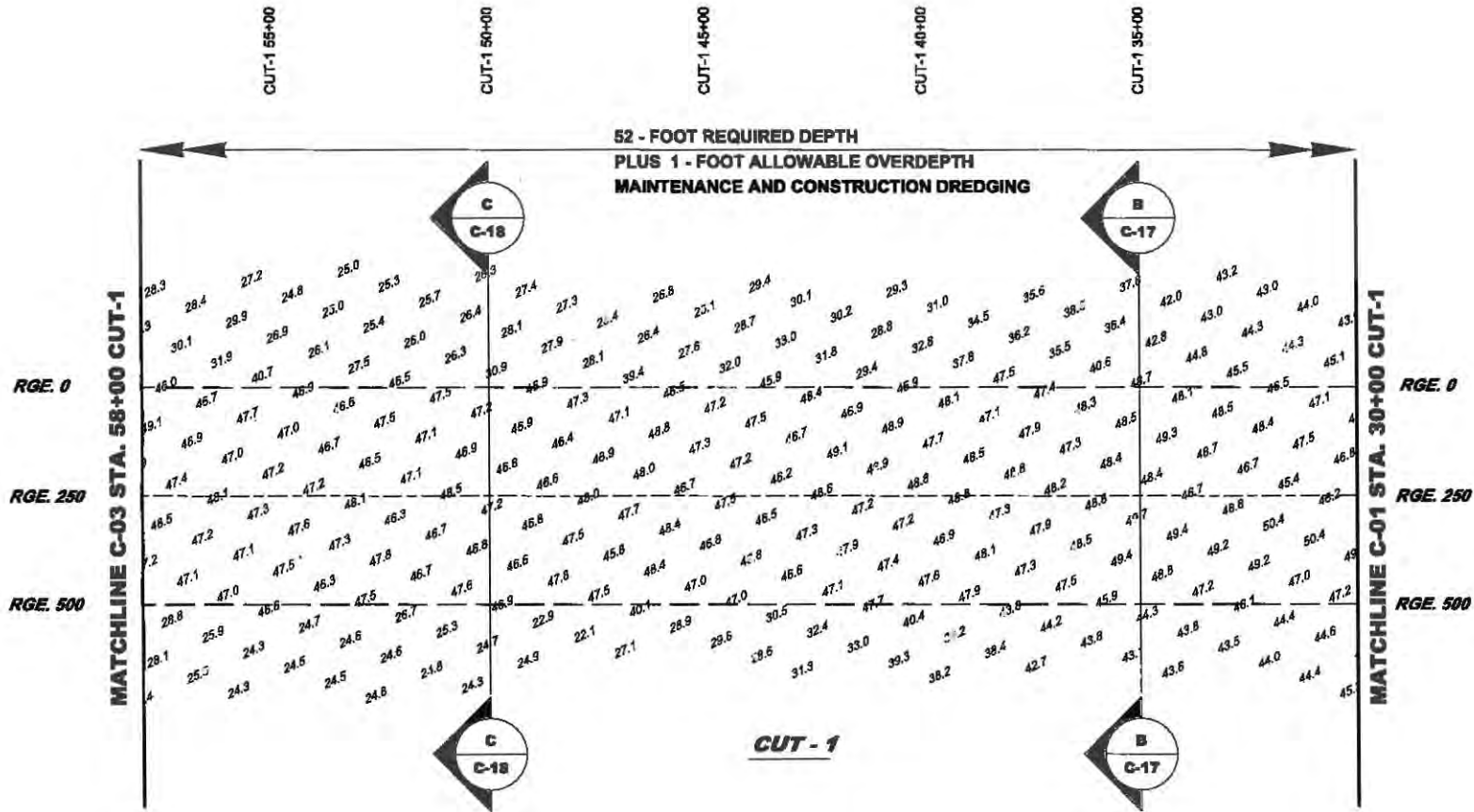
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**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**

**DREDGING PLAN**

PLATE  
**C-01**

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ATLANTIC OCEAN

GRAPHIC SCALE



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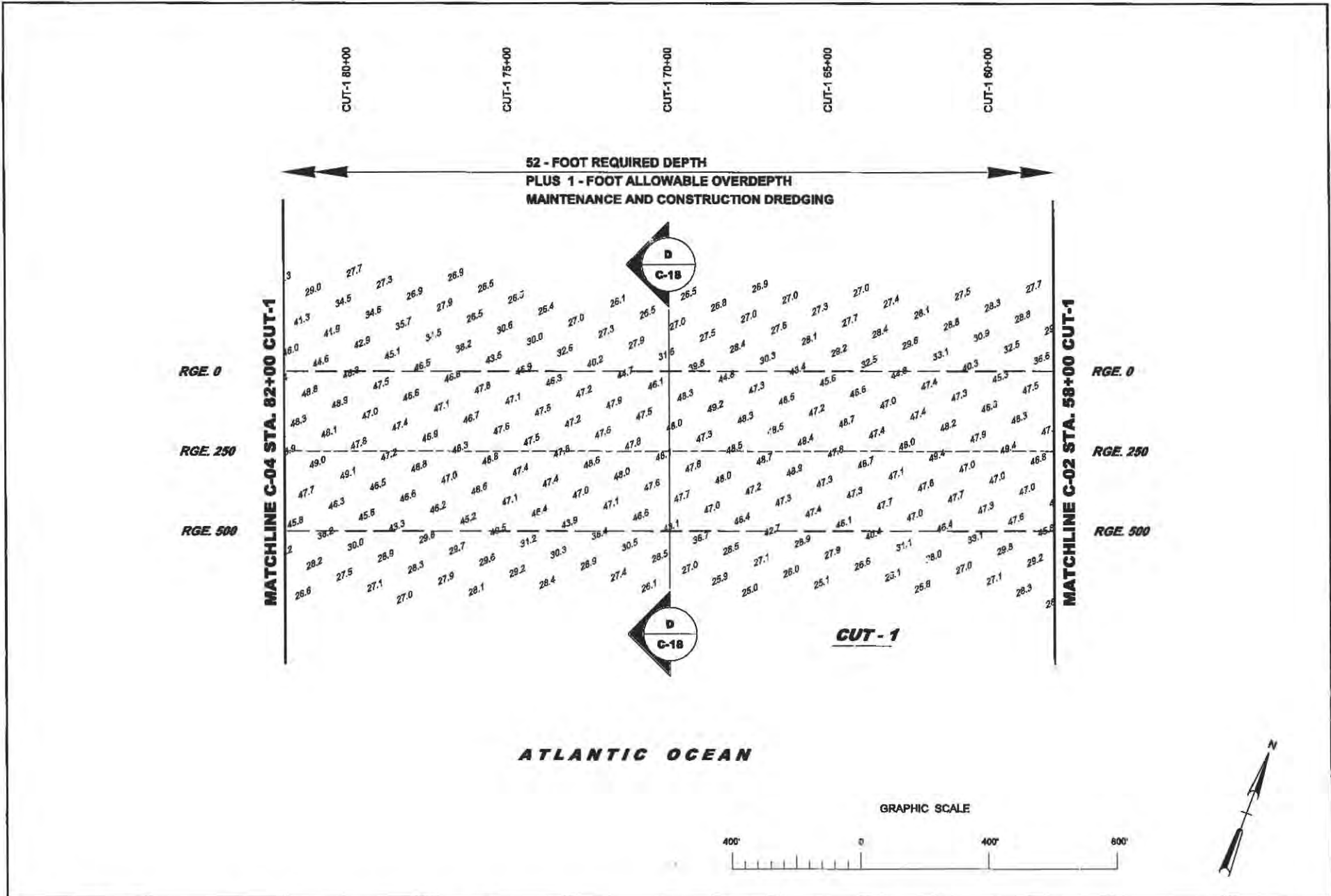
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MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
DREDGING PLAN

PLATE  
C-02

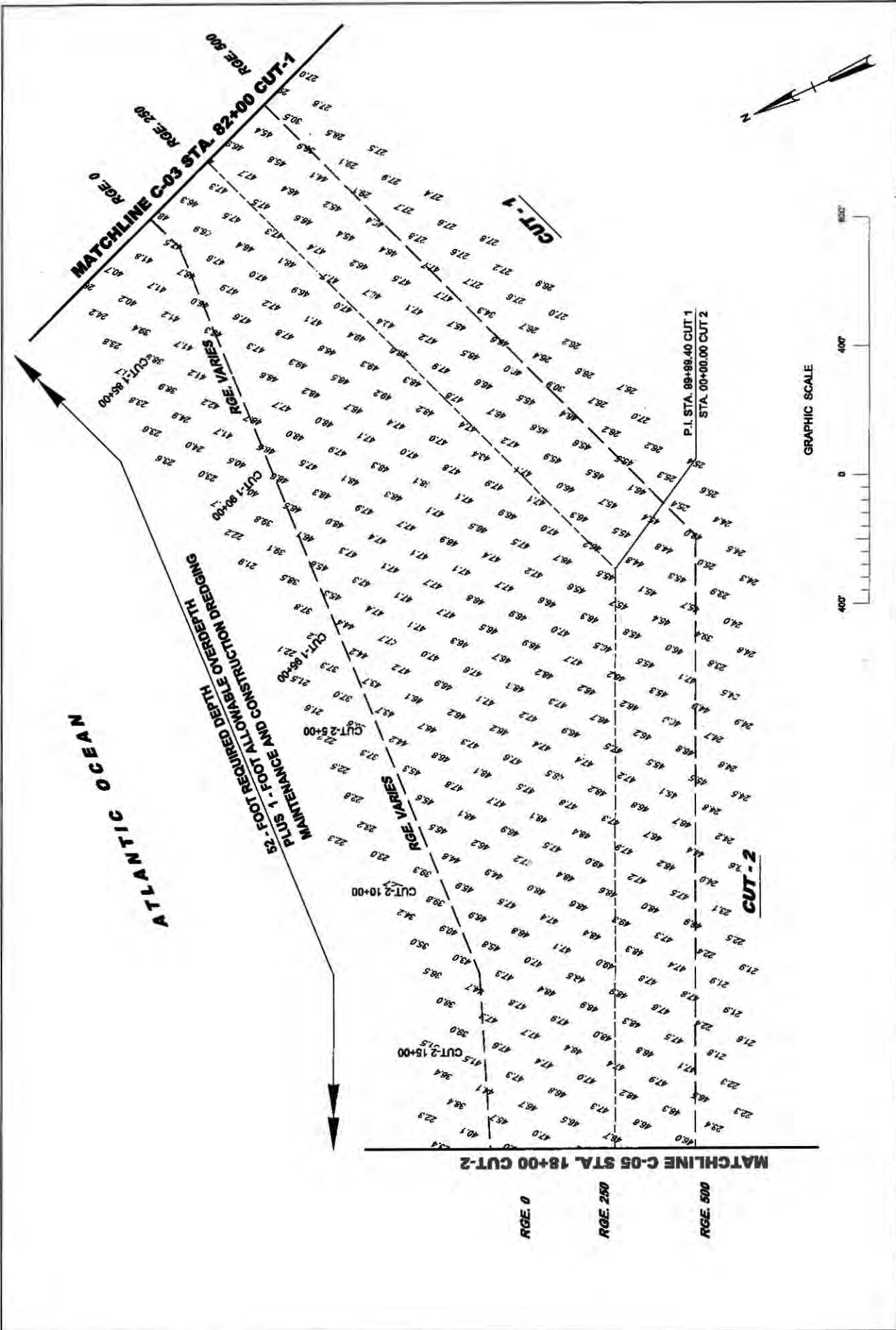
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	<b>DEPARTMENT OF THE ARMY</b> JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	Dwn by: MR2 Ckd by: LRP Dated: JANUARY 2011		

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**PLATE**  
**C-04**

**MIAMI HARBOR, FLORIDA**  
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ATLANTIC OCEAN

52 - FOOT REQUIRED DEPTH  
PLUS 1 - FOOT ALLOWABLE OVERDEPTH  
MAINTENANCE AND CONSTRUCTION DREDGING

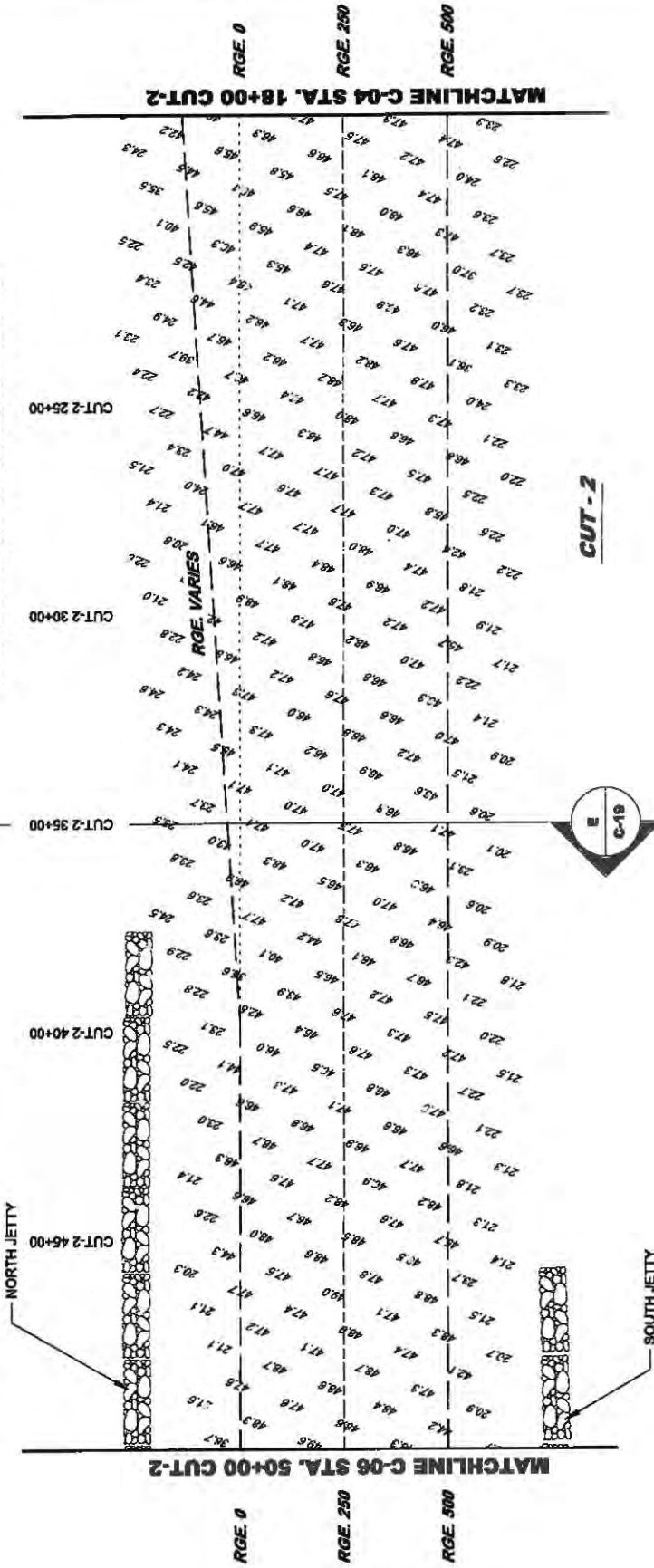


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**C-05**

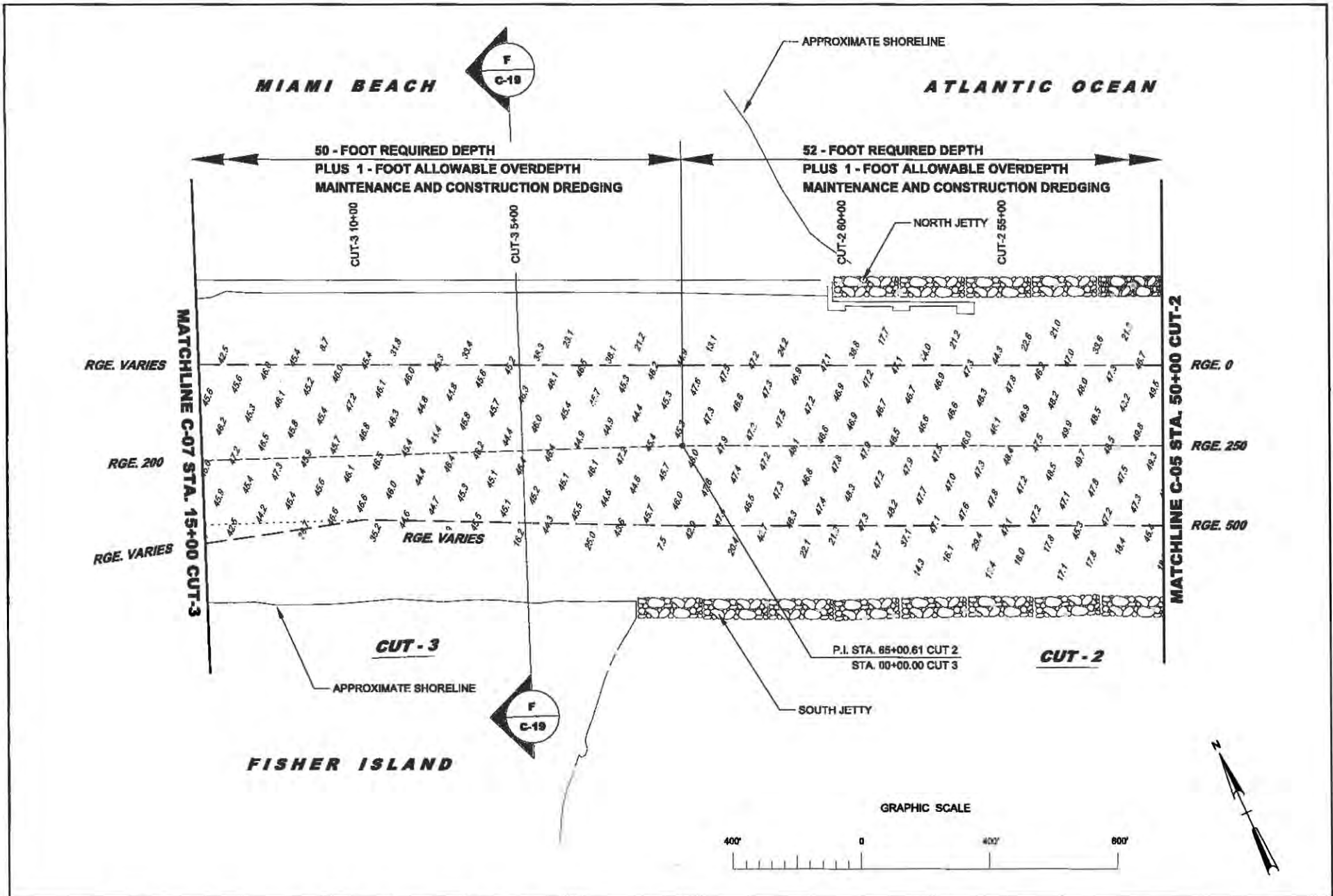
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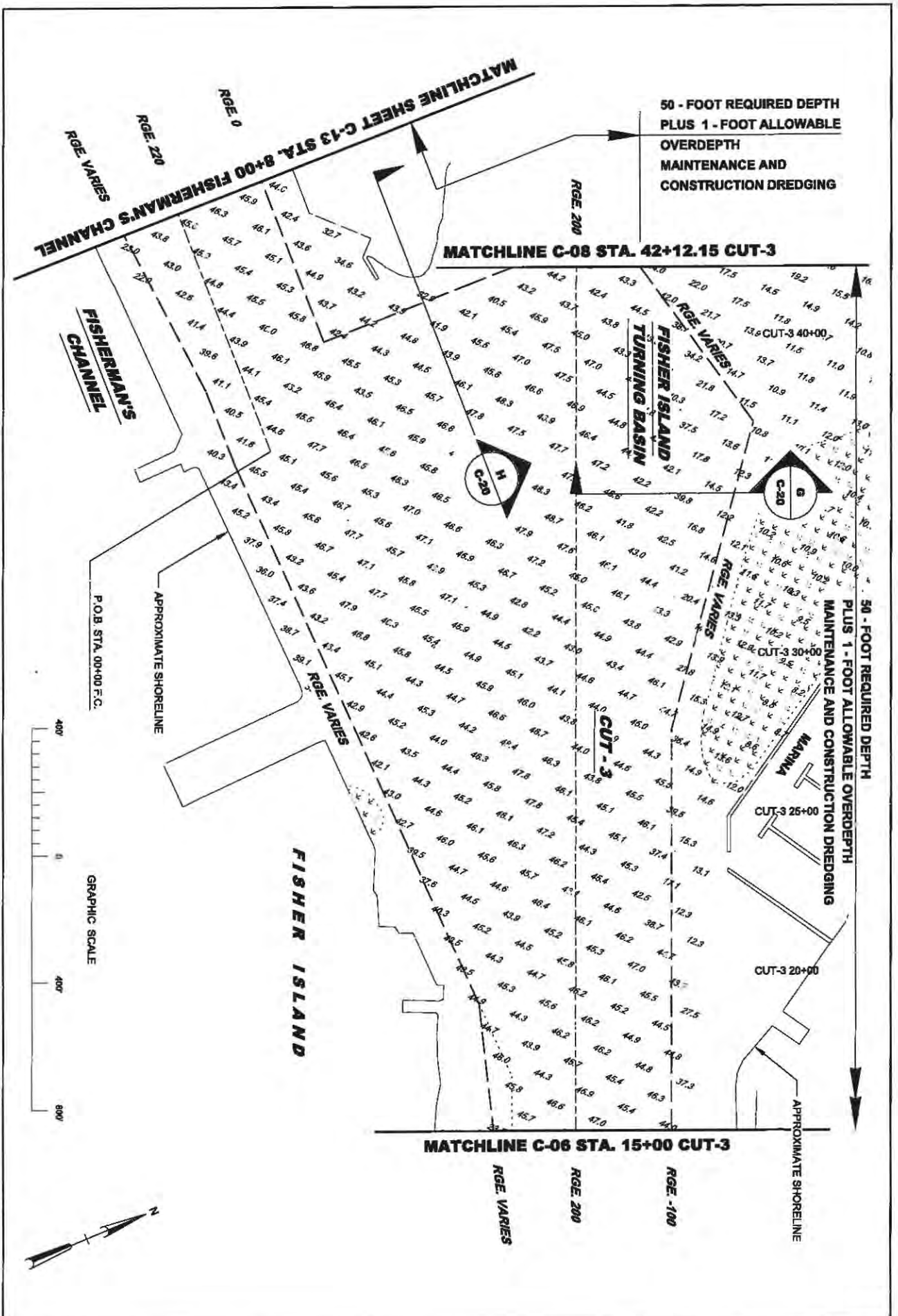
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MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
DREDGING PLAN

PLATE  
C-07



PERMIT # 305721003



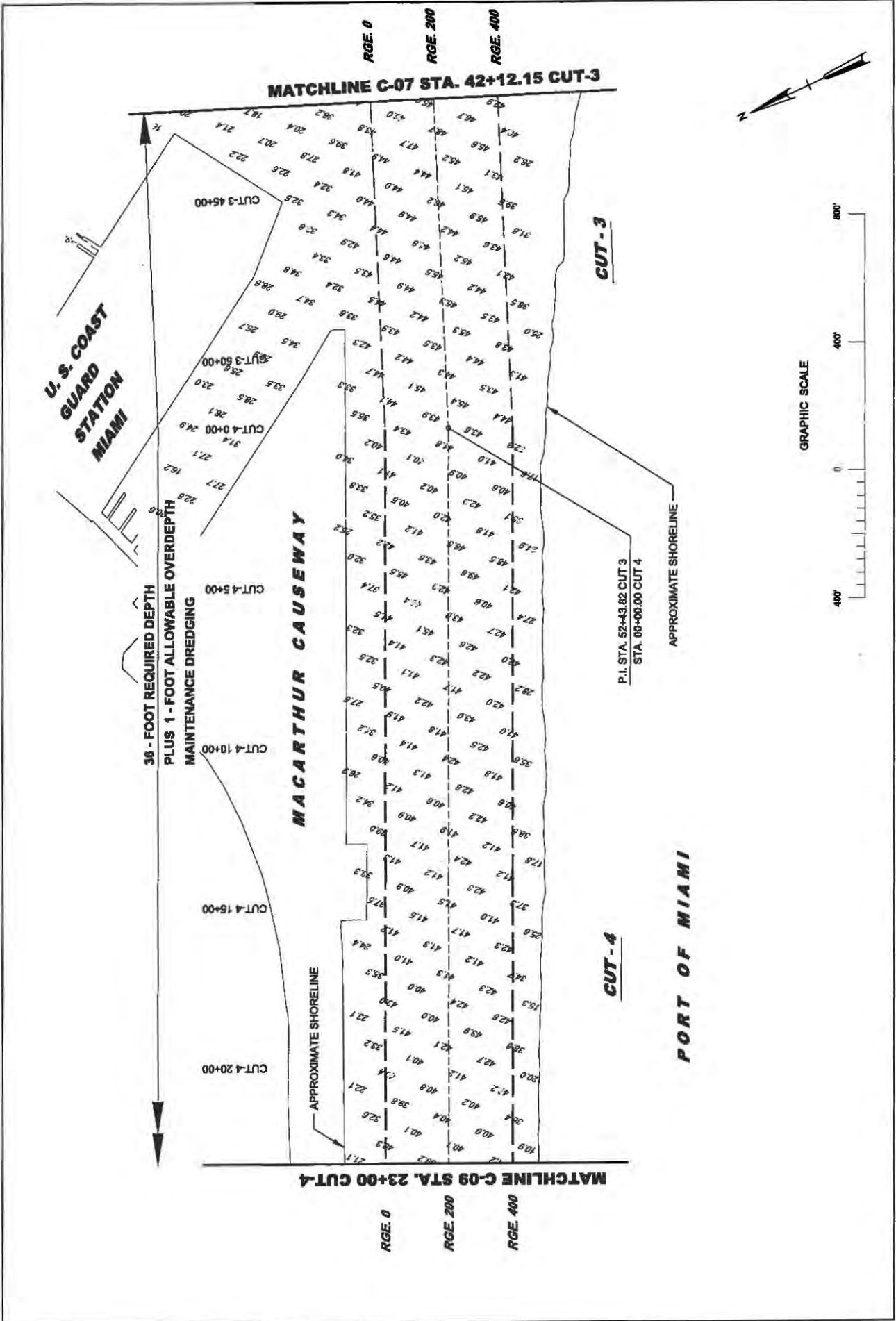


PLATE  
**C-08**

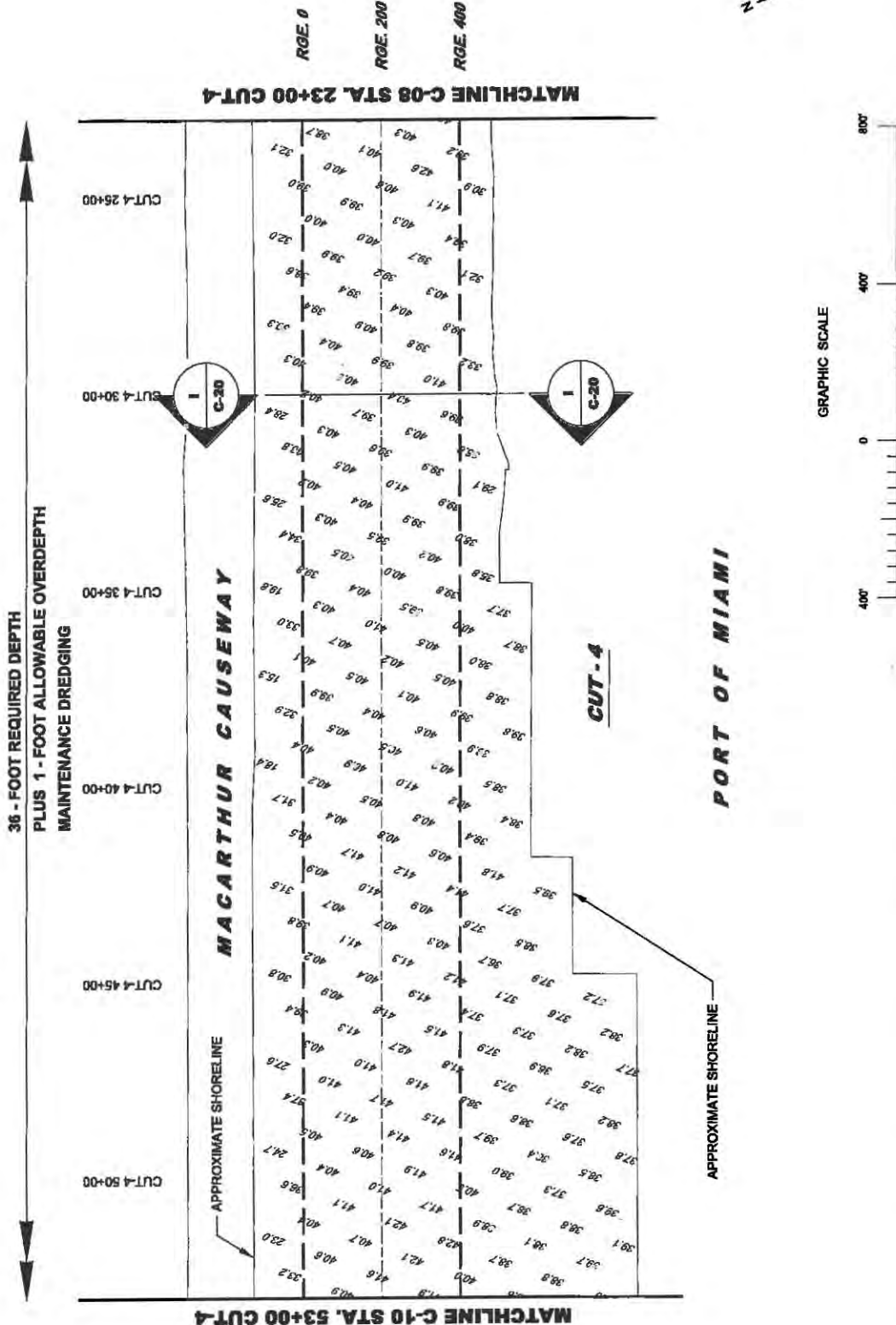
**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**DREDGING PLAN**

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 WQC PERMIT PLATE  
 DREDGING PLAN

PLATE  
 C-09

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MR2

Approved by:  
LPP

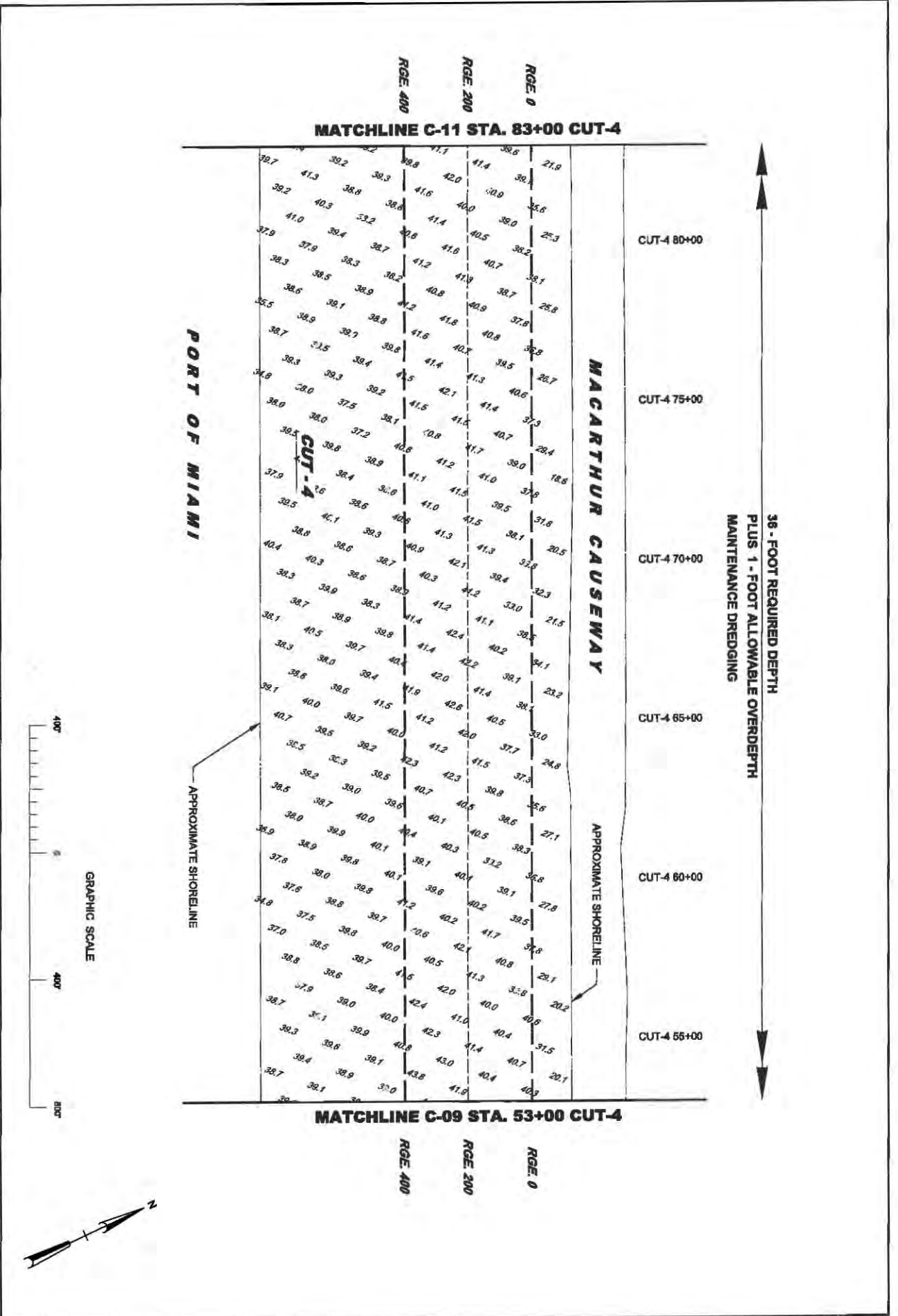
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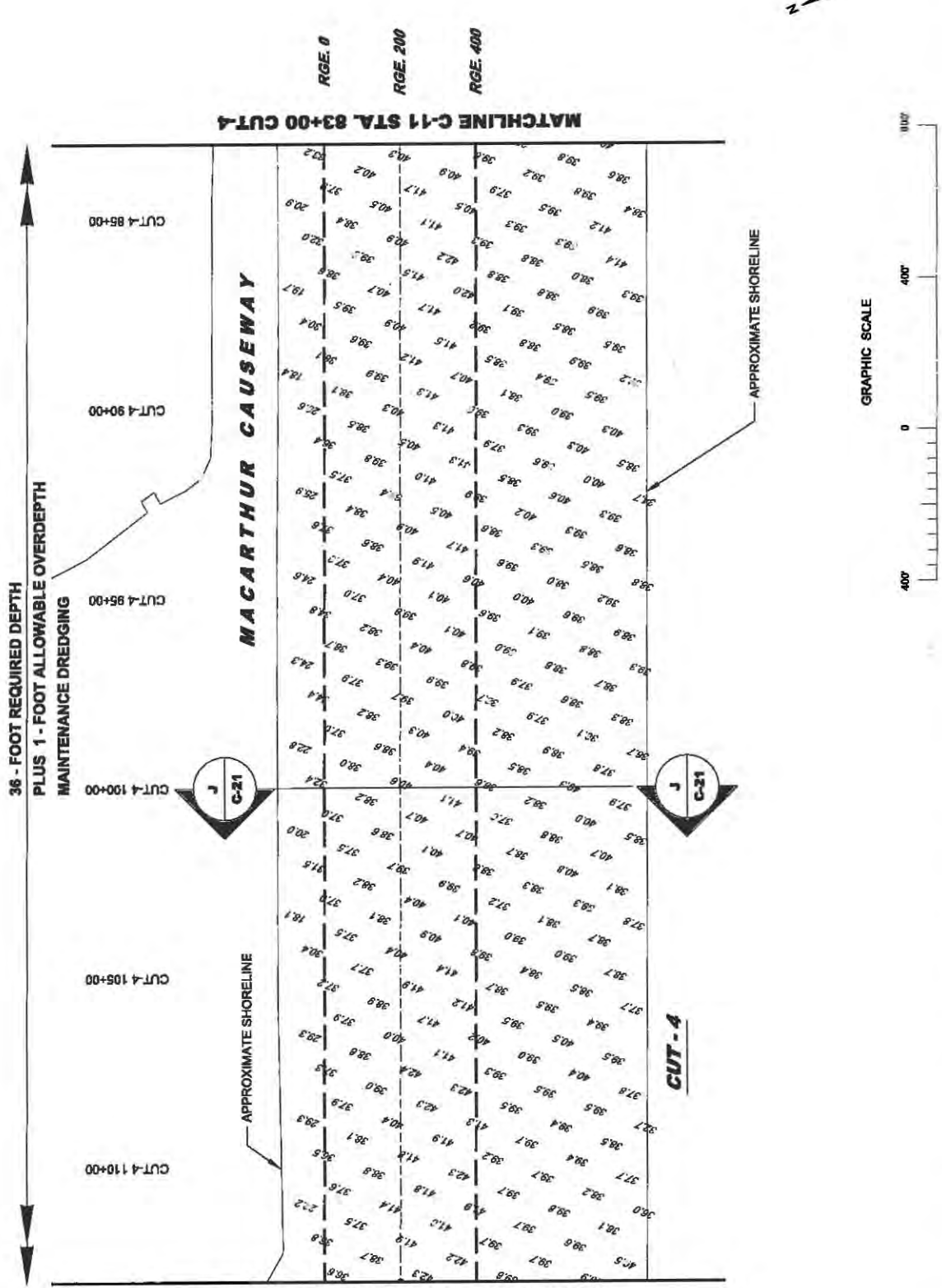
PLATE

C-10

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36 - FOOT REQUIRED DEPTH  
PLUS 1 - FOOT ALLOWABLE OVERDEPTH  
MAINTENANCE DREDGING

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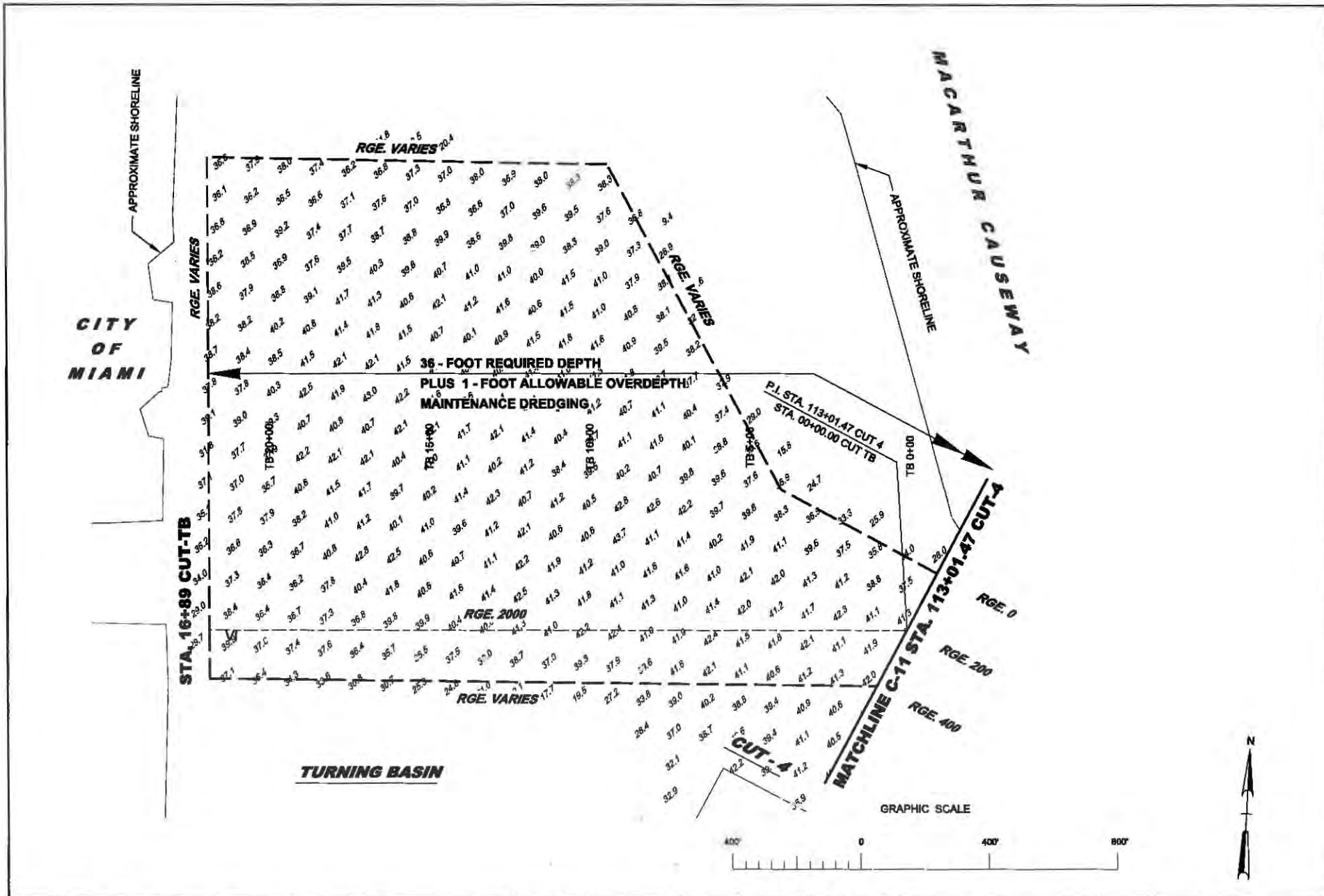
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 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE  
 DREDGING PLAN

PLATE  
**C-11**

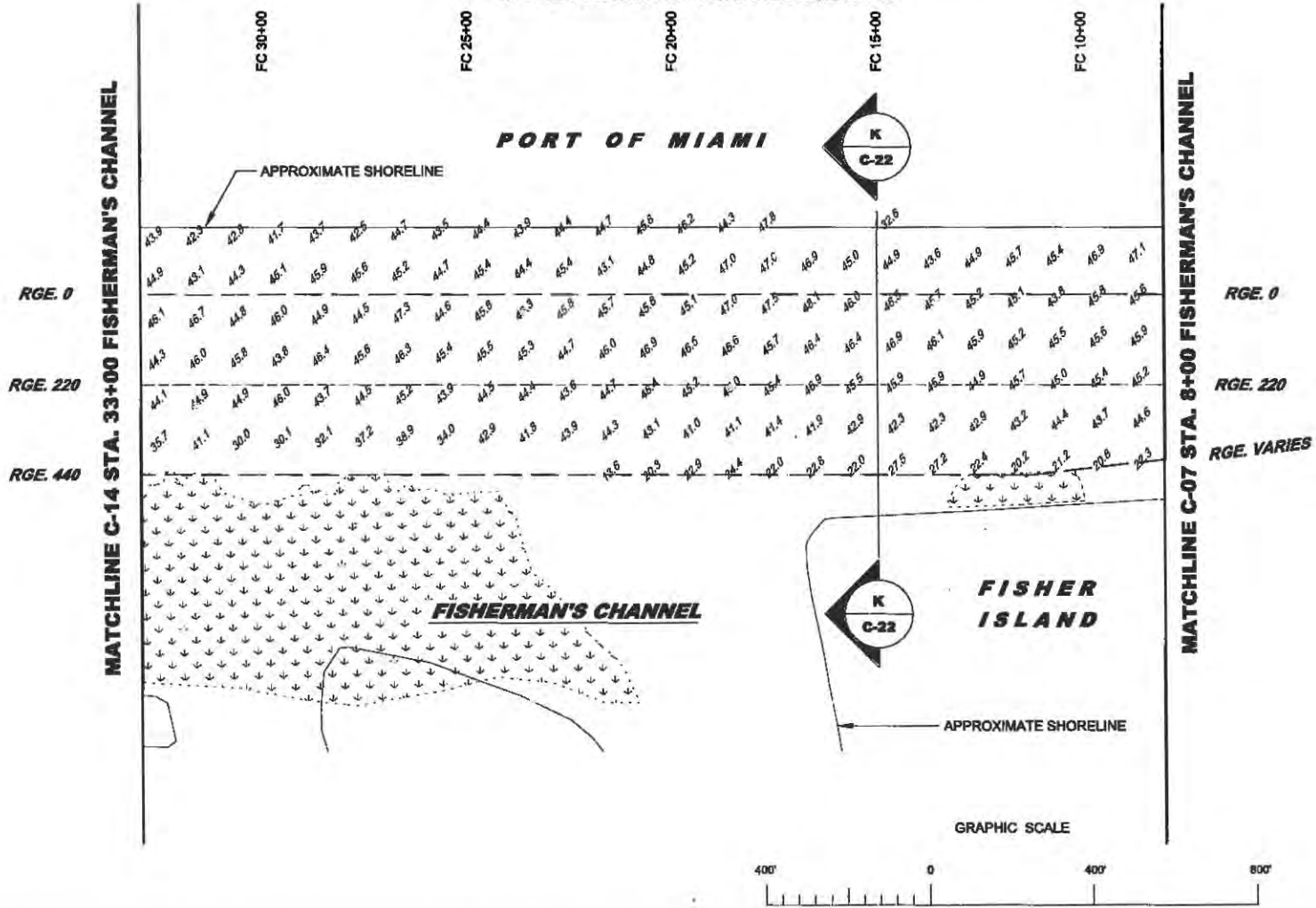
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	<b>DEPARTMENT OF THE ARMY</b> JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	Dwn by: MRZ		
	Ckd by: LHP			
	Dated: JANUARY 2011			

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50 - FOOT REQUIRED DEPTH  
 PLUS 1 - FOOT ALLOWABLE OVERDEPTH  
 MAINTENANCE AND CONSTRUCTION DREDGING



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 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE  
 DREDGING PLAN

PLATE  
 C-13

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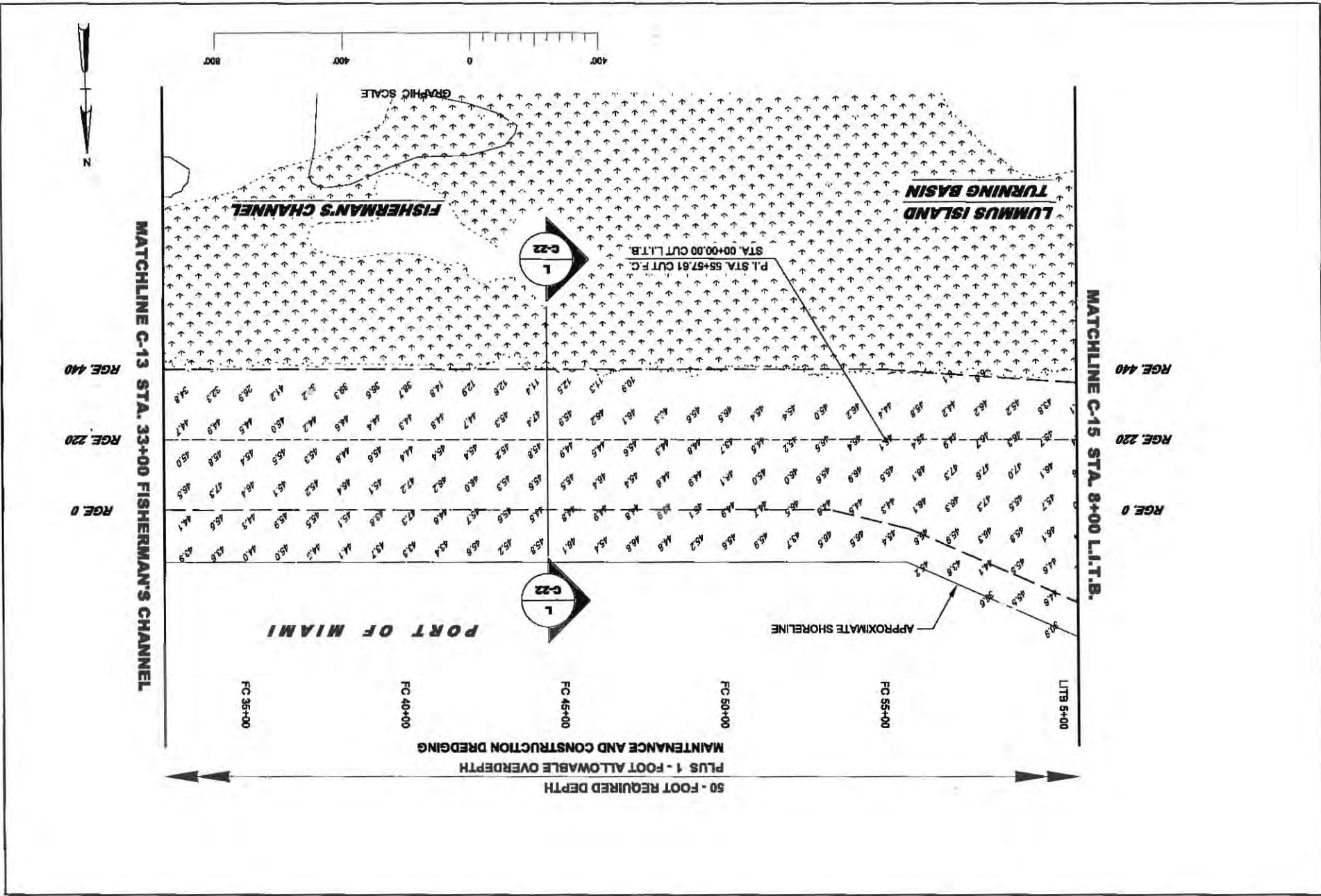
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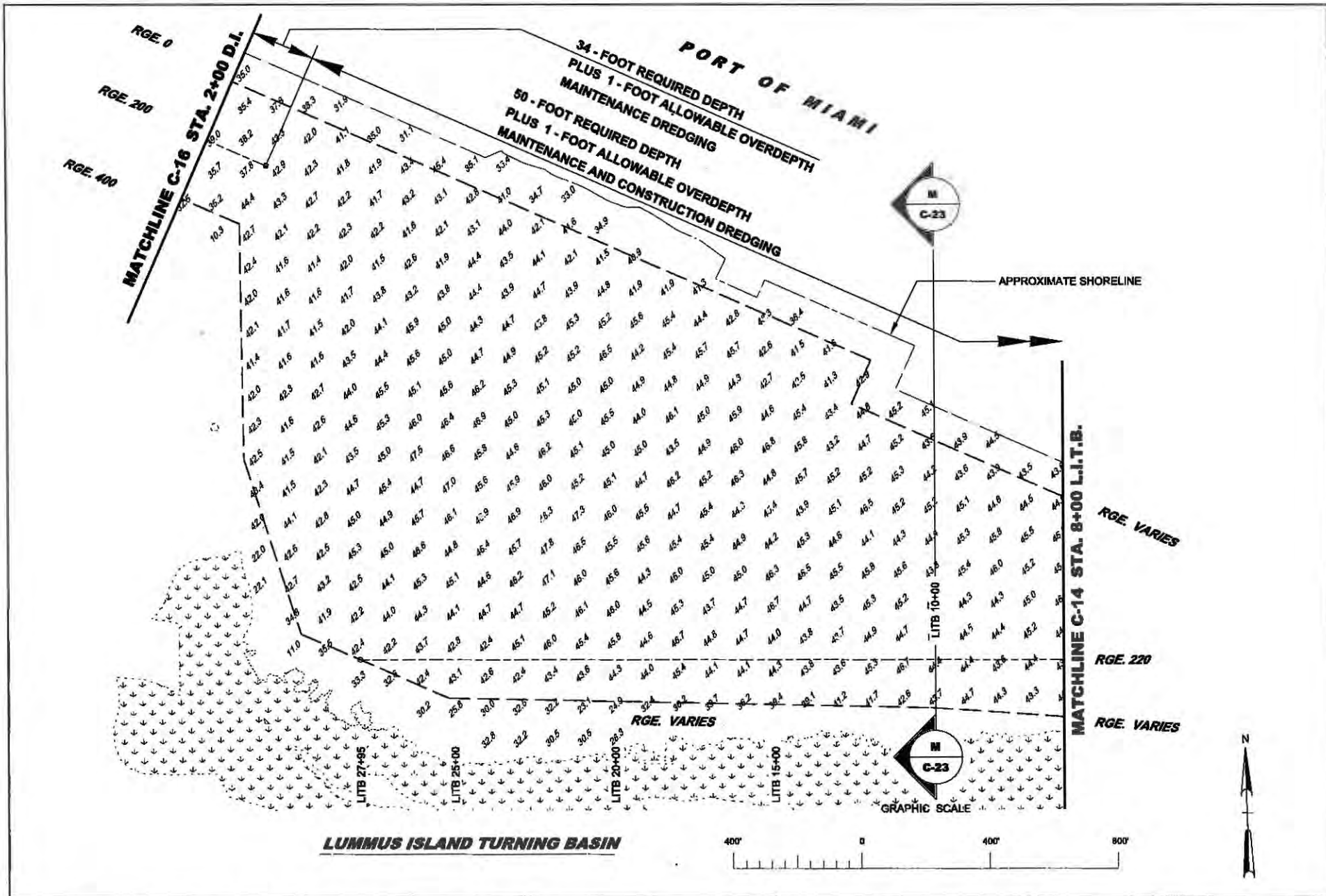
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C-14  
PLATE

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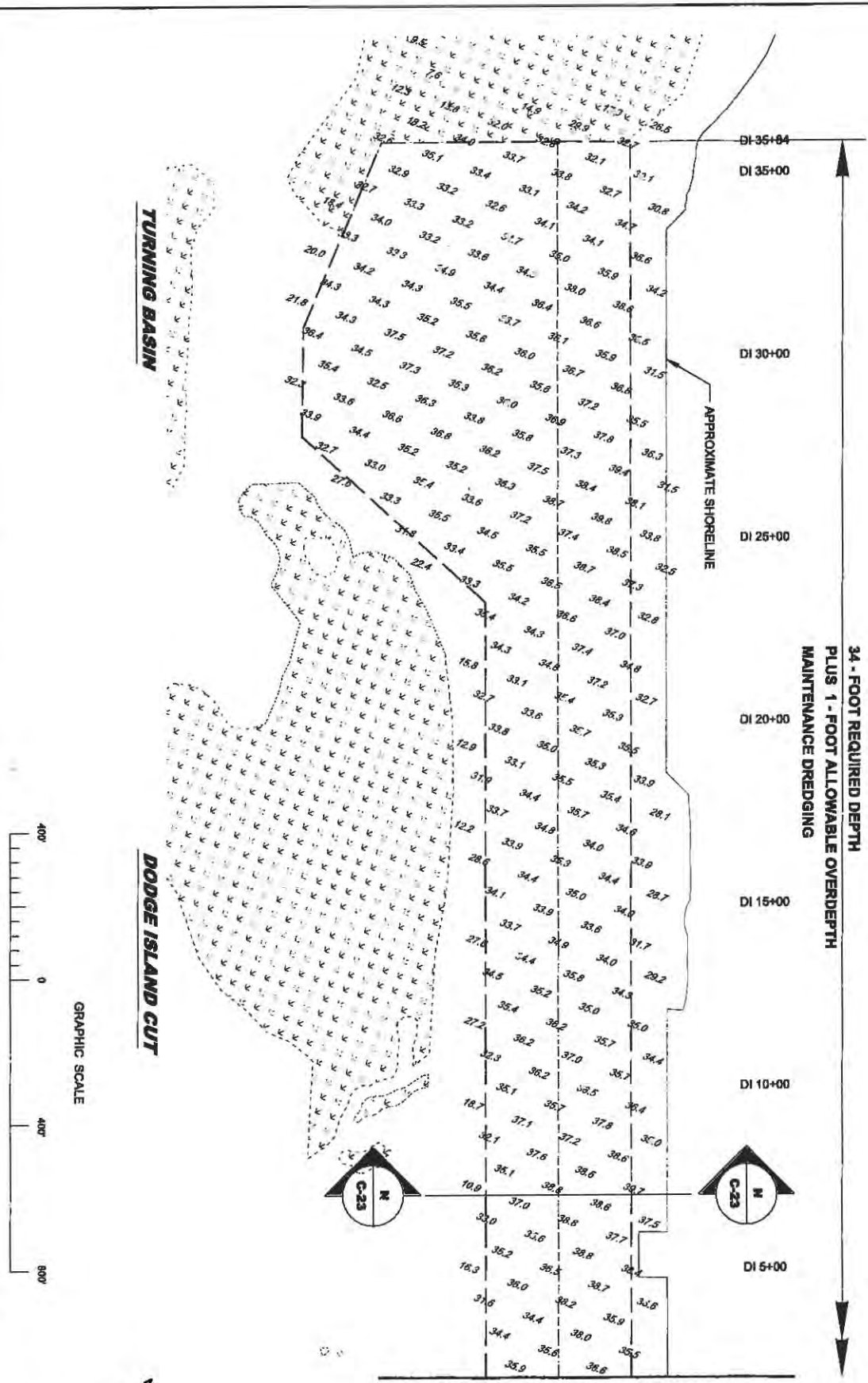
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CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
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PLATE  
**C-15**



**PART OF MIAMI**

**34 - FOOT REQUIRED DEPTH  
PLUS 1 - FOOT ALLOWABLE OVERDEPTH  
MAINTENANCE DREDGING**



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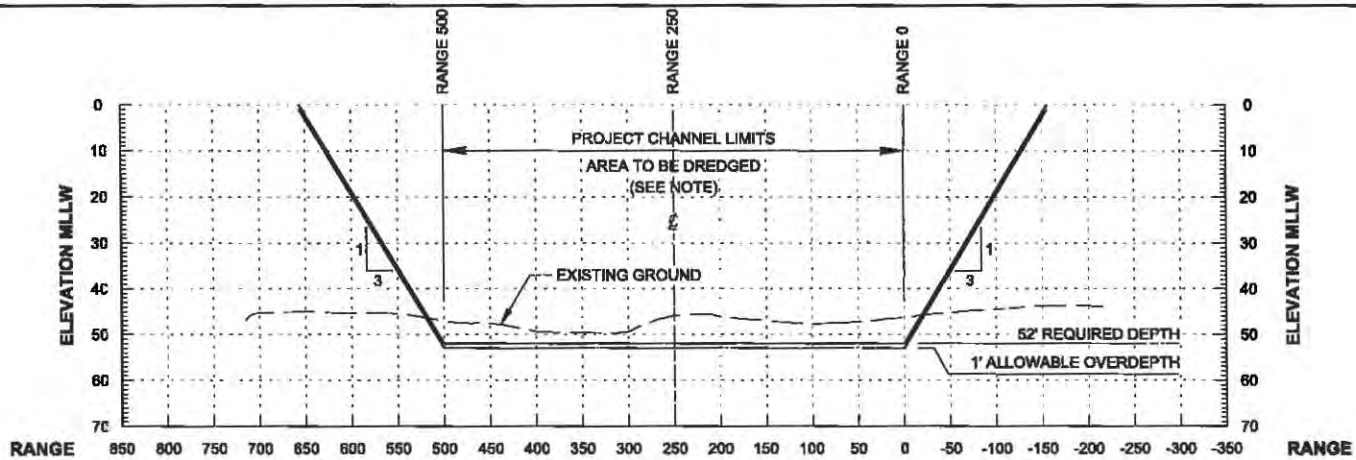
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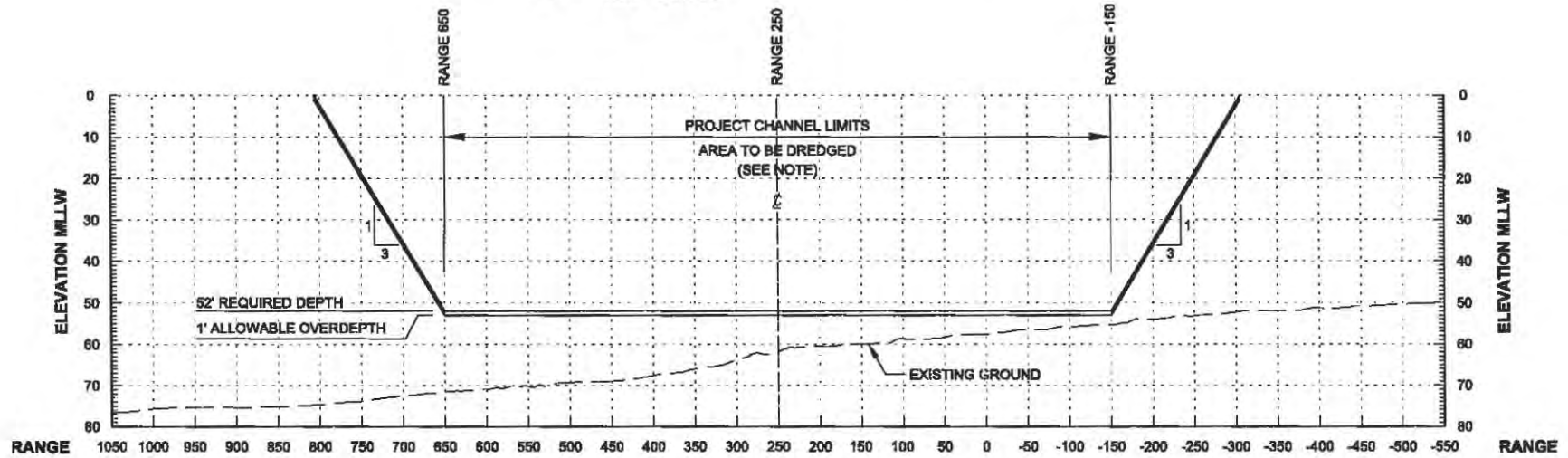
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CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
DREDGING PLAN

PLATE  
C-16

PERMIT # 305721001

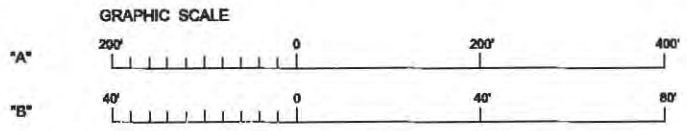


**B**  
**C-02** **TYPICAL CROSS SECTION CUT-1 35+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B



**A**  
**C-01** **TYPICAL CROSS SECTION CUT-1 5+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

NOTE:  
 1. SIDE SLOPES SHOWN ARE FOR CONTRACTUAL PAYMENT PURPOSES ONLY.  
 ACTUAL SLOPES VARY WITH THE NATURAL ANGLE OF REPOSE FOR THE ADJACENT MATERIAL.  
 2. SIDE SLOPES FOR MITIGATION PURPOSES WILL BE BASED ON THE 2004 AGREEMENT.



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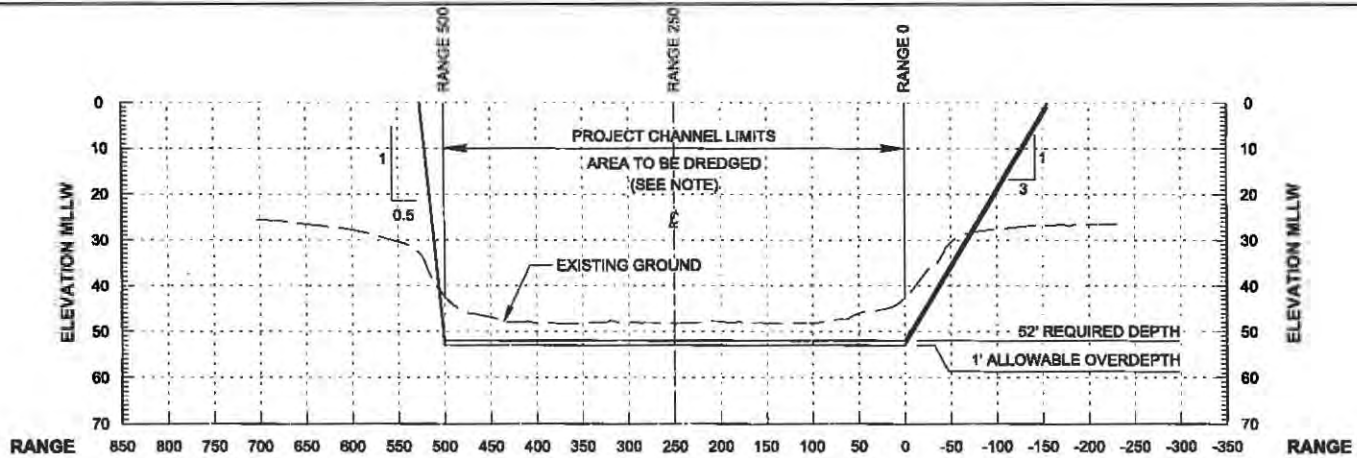
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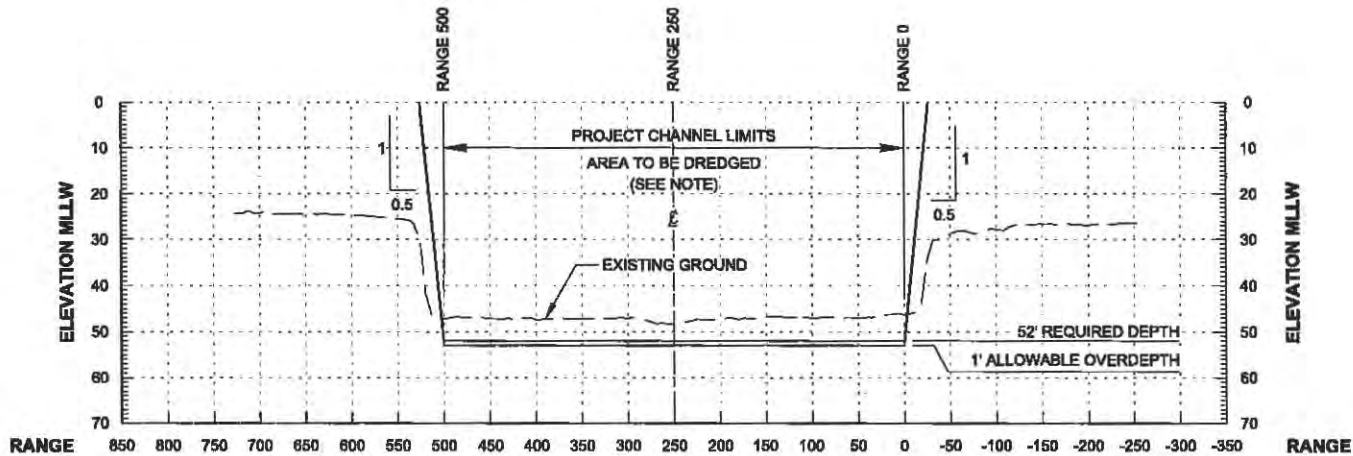
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**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**TYPICAL CROSS SECTIONS**

PLATE  
**C-17**





**D**  
**C-03** **TYPICAL CROSS SECTION CUT-1 70+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B



**C**  
**C-02** **TYPICAL CROSS SECTION CUT-1 50+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

NOTE:  
 1. SIDE SLOPES SHOWN ARE FOR CONTRACTUAL PAYMENT PURPOSES ONLY.  
 ACTUAL SLOPES VARY WITH THE NATURAL ANGLE OF REPOSE FOR THE ADJACENT MATERIAL.  
 2. SIDE SLOPES FOR MITIGATION PURPOSES WILL BE BASED ON THE 2004 AGREEMENT.



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 NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY  
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 JACKSONVILLE, FLORIDA

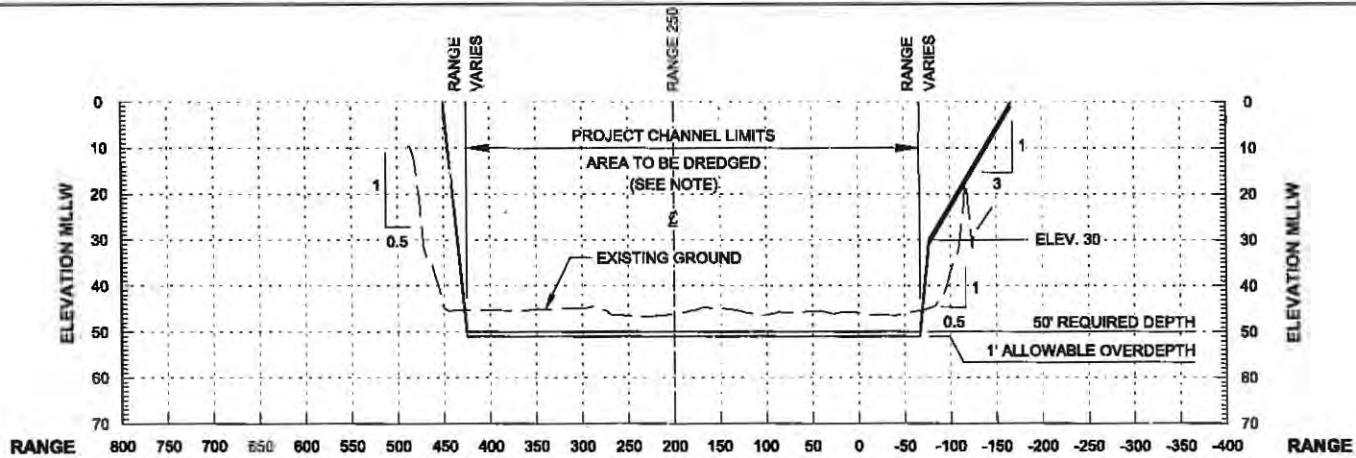
Desn by:  
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 Dwn by:  
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 Ckd by:  
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 Dated:  
 JANUARY 2011

MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE  
 TYPICAL CROSS SECTIONS

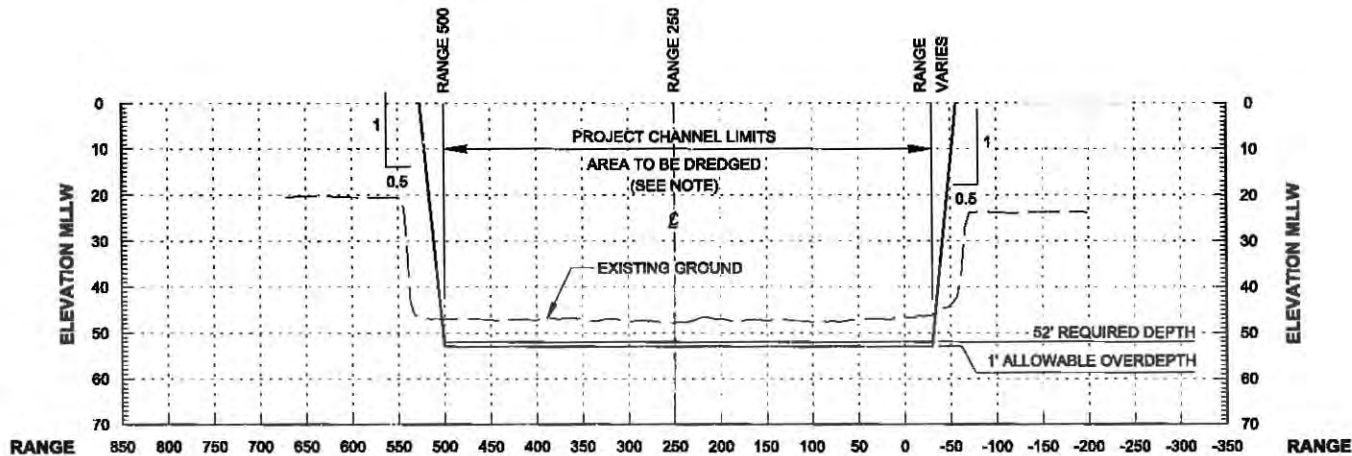
PLATE

C-18

PERMIT # 305721001

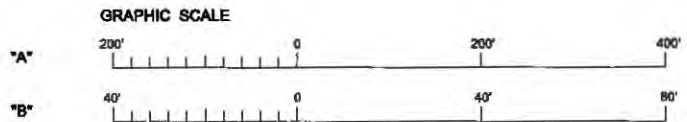


**F**  
**C-06** **TYPICAL CROSS SECTION CUT-3 5+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B



**E**  
**C-05** **TYPICAL CROSS SECTION CUT-2 35+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

NOTE:  
 1. SIDE SLOPES SHOWN ARE FOR CONTRACTUAL PAYMENT PURPOSES ONLY.  
 ACTUAL SLOPES VARY WITH THE NATURAL ANGLE OF REPOSE FOR THE ADJACENT MATERIAL.  
 2. SIDE SLOPES FOR MITIGATION PURPOSES WILL BE BASED ON THE 2004 AGREEMENT.



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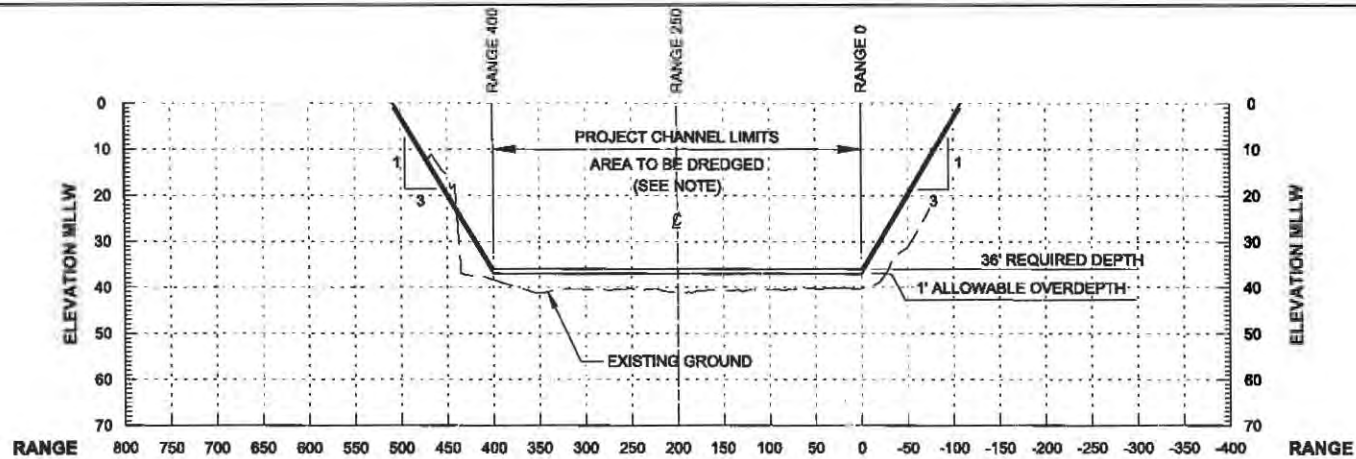
MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE

TYPICAL CROSS SECTIONS

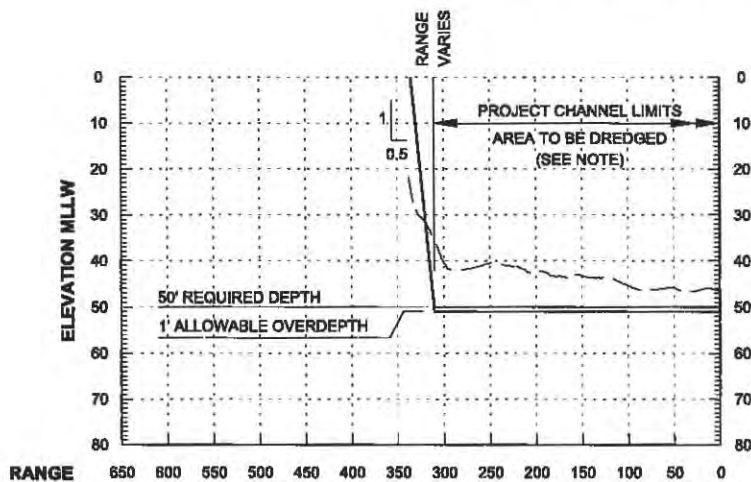
PLATE

C-19

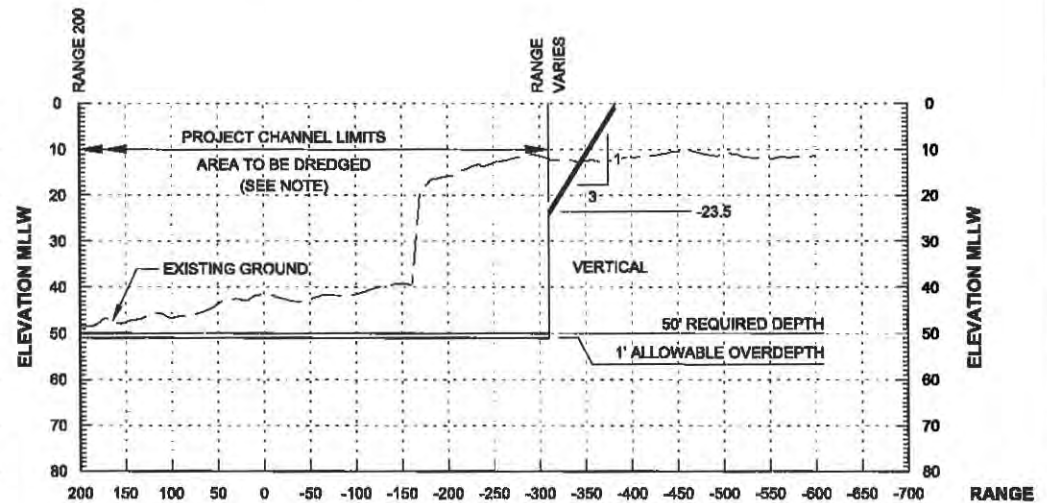
PERMIT # 305721001



**1**  
**C-09** **TYPICAL CROSS SECTION CUT-4 30+00**  
HORZ = SCALE: A  
VERT = SCALE: B



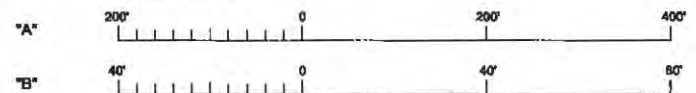
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**C-07** **TYPICAL CROSS SECTION**  
HORZ = SCALE: A  
VERT = SCALE: B



**G**  
**C-07** **TYPICAL CROSS SECTION CUT-3 35+00**  
HORZ = SCALE: A  
VERT = SCALE: B

NOTE:  
1. SIDE SLOPES SHOWN ARE FOR CONTRACTUAL PAYMENT PURPOSES ONLY.  
ACTUAL SLOPES VARY WITH THE NATURAL ANGLE OF REPOSE FOR THE ADJACENT MATERIAL.  
2. SIDE SLOPES FOR MITIGATION PURPOSES WILL BE BASED ON THE 2004 AGREEMENT.

GRAPHIC SCALE



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Dated: JANUARY 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE

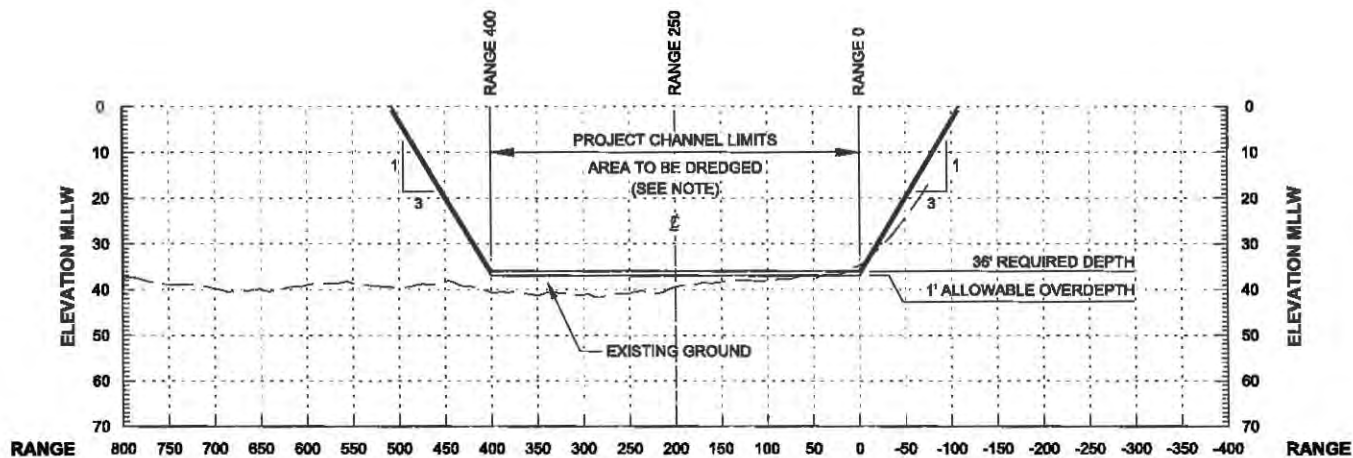
TYPICAL CROSS SECTIONS

PLATE

C-20

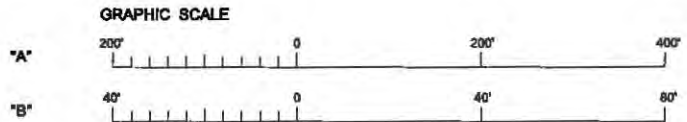
PERMIT # 305721001





**J**  
**C-11** **TYPICAL CROSS SECTION CUT-4 100+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

- NOTE:
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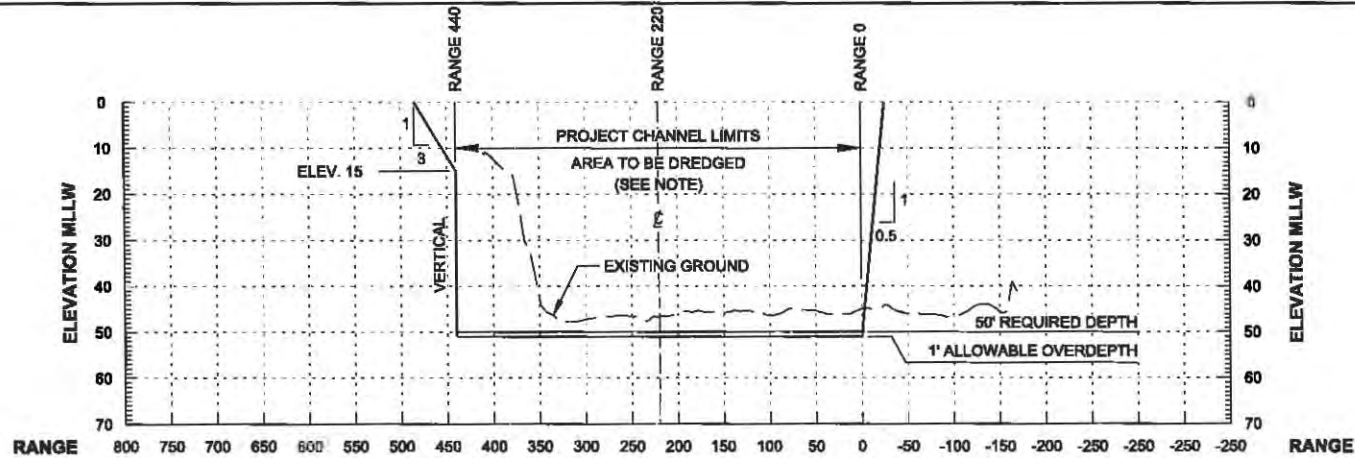
MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE  
 TYPICAL CROSS SECTIONS

PLATE

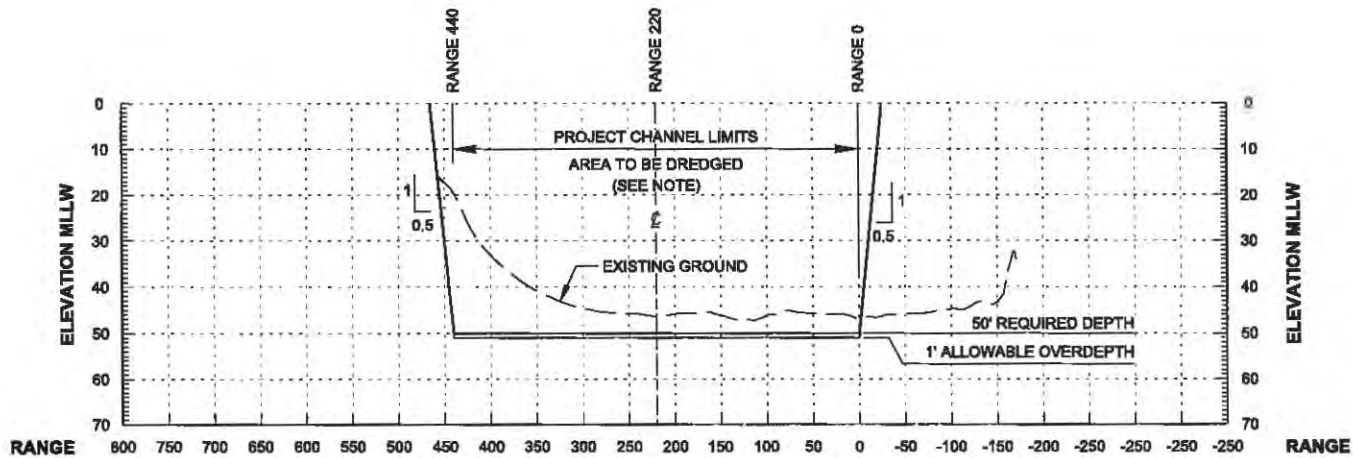
C-21

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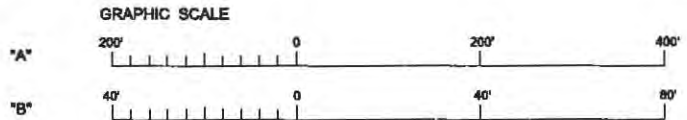


**L**  
**C-14** **TYPICAL CROSS SECTION FC 45+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B



**K**  
**C-13** **TYPICAL CROSS SECTION FC 15+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

NOTE:  
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 Dated:  
 JANUARY 2011

MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE

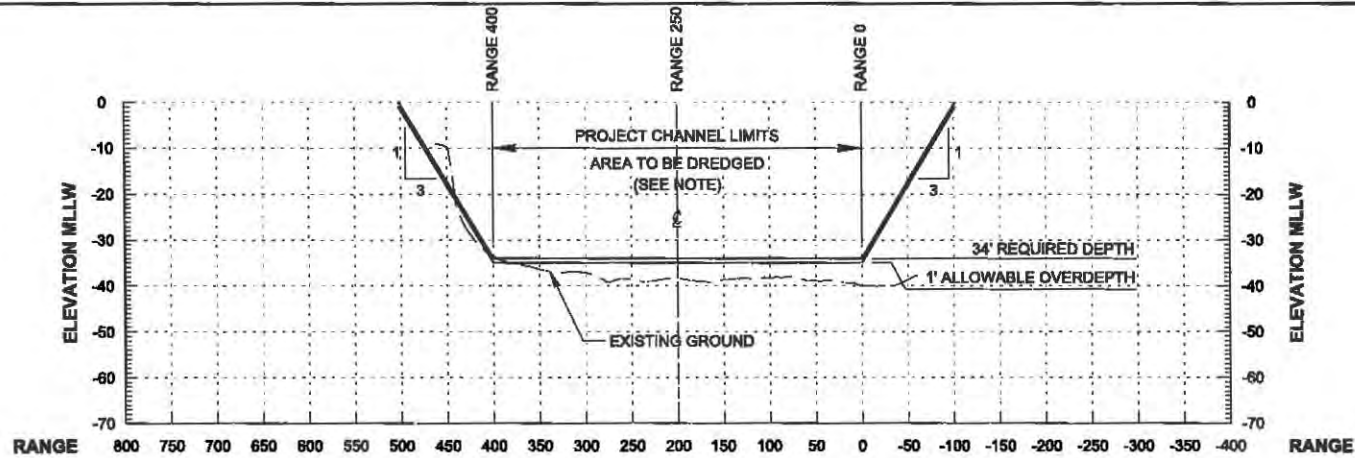
TYPICAL CROSS SECTIONS

PLATE

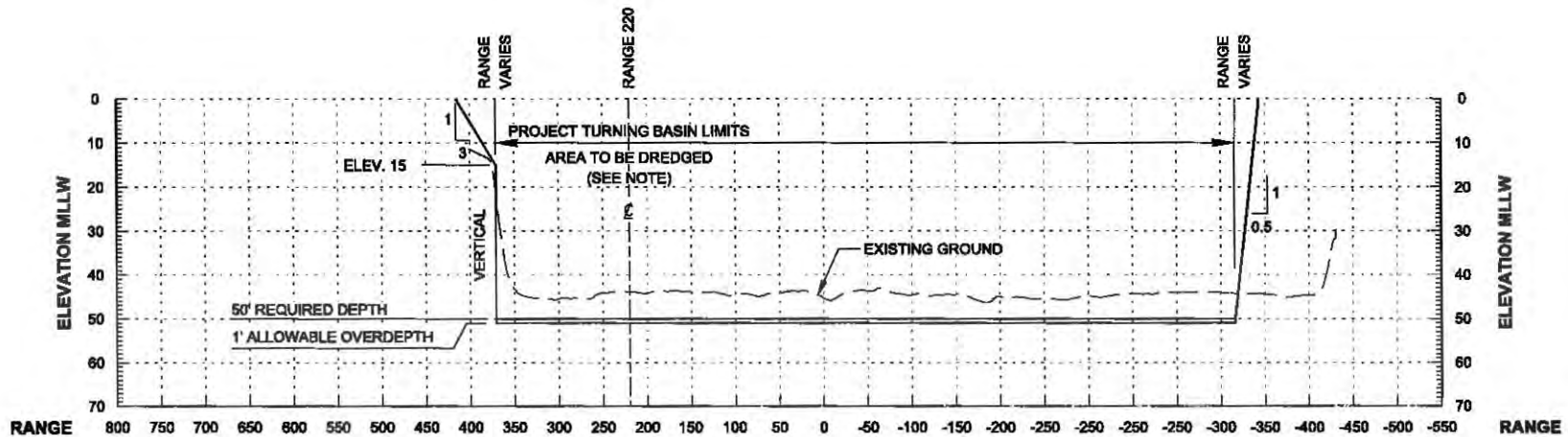
C-22

PERMIT # 305721001

PERMIT # 305721001

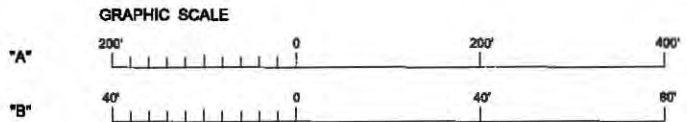


**N**  
**C-16** **TYPICAL CROSS SECTION DI 7+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B



**M**  
**C-15** **TYPICAL CROSS SECTION LITB 10+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

NOTE:  
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 MR2  
 Ckd by:  
 LRP  
 Dated:  
 JANUARY 2011

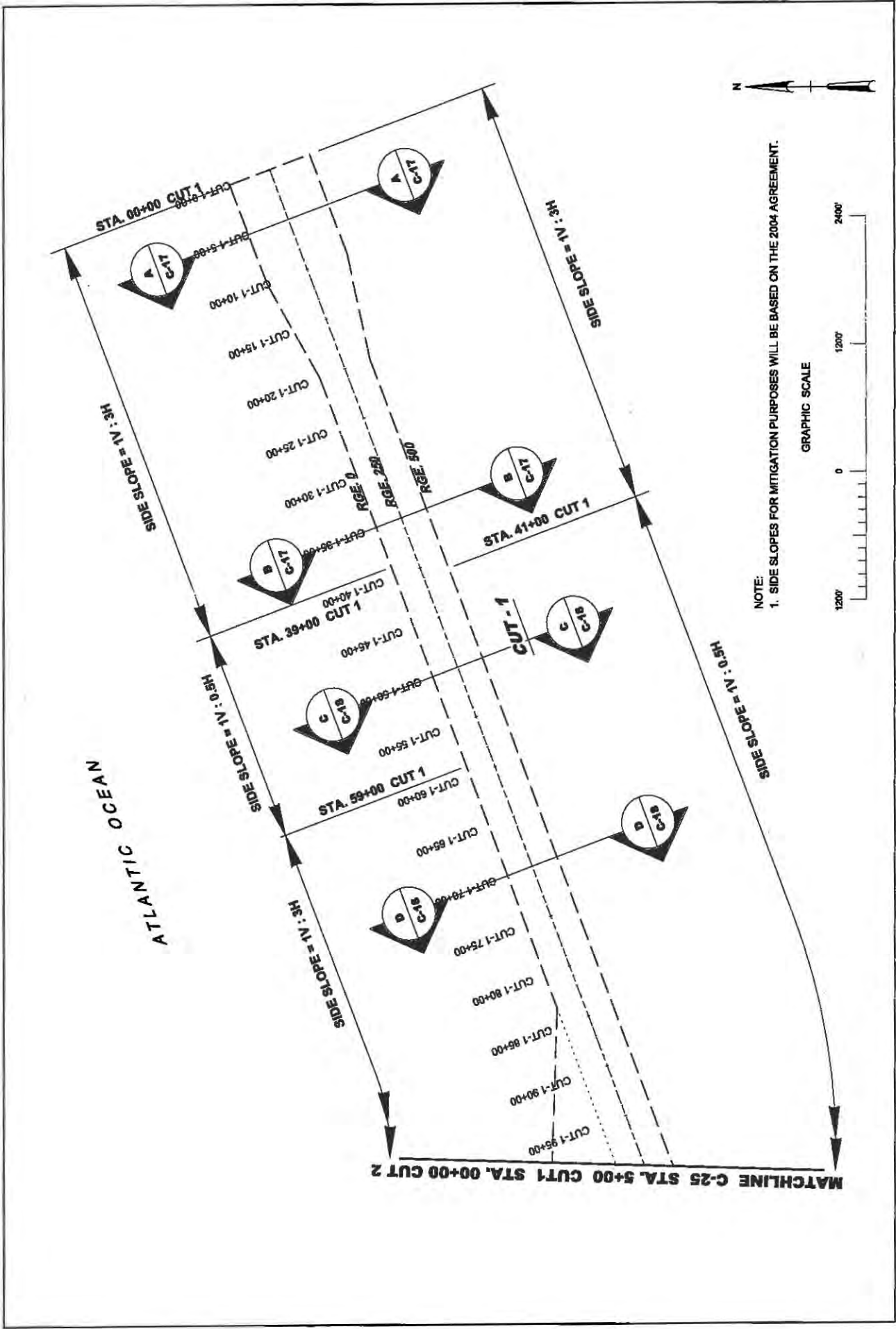
MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE

TYPICAL CROSS SECTIONS

PLATE

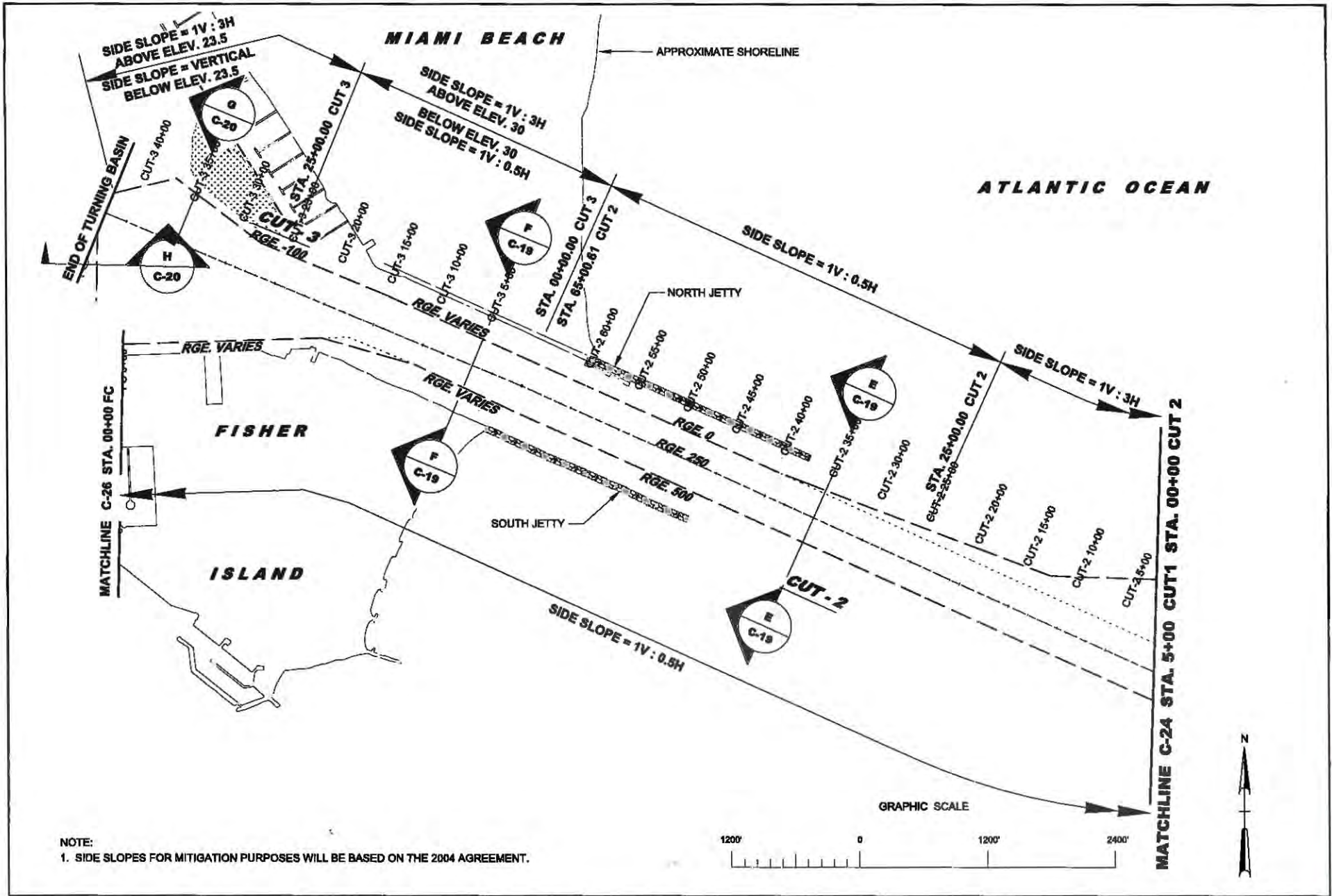
C-23

PERMIT # 30572100



 US Army Corps of Engineers Jacksonville District	WQC PERMIT PLATE NOT FOR CONSTRUCTION	Drawn by: SRC MR2 Checked by: LFP Date: JANUARY 2011	MIAMI HARBOR, FLORIDA CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING WQC PERMIT PLATE SIDE SLOPE PLAN	PLATE <b>C-24</b>
	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA			



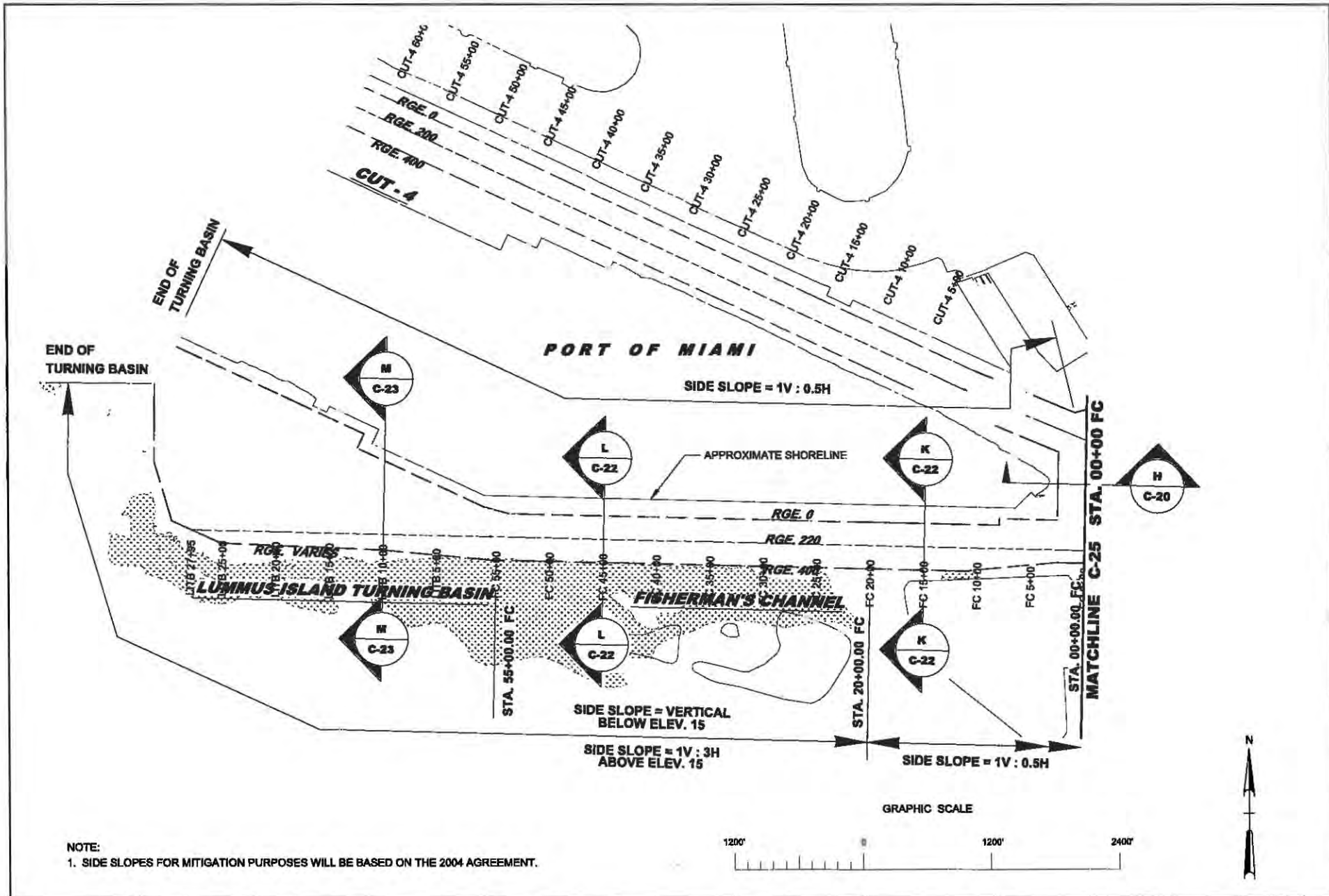


PERMIT # 05721001

 <p>US Army Corps of Engineers Jacksonville District</p>	<p>WQC PERMIT PLATE NOT FOR CONSTRUCTION</p> <p>DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA</p>	<p>Desn by: SRC Dwn by: MR2 Crd by: LRP Dated: JANUARY 2011</p>	<p>MIAMI HARBOR, FLORIDA CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING WQC PERMIT PLATE SIDE SLOPE PLAN</p>	<p>PLATE C-25</p>
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PERMIT # 805721001





NOTE:  
 1. SIDE SLOPES FOR MITIGATION PURPOSES WILL BE BASED ON THE 2004 AGREEMENT.



WQC PERMIT PLATE  
 NOT FOR CONSTRUCTION

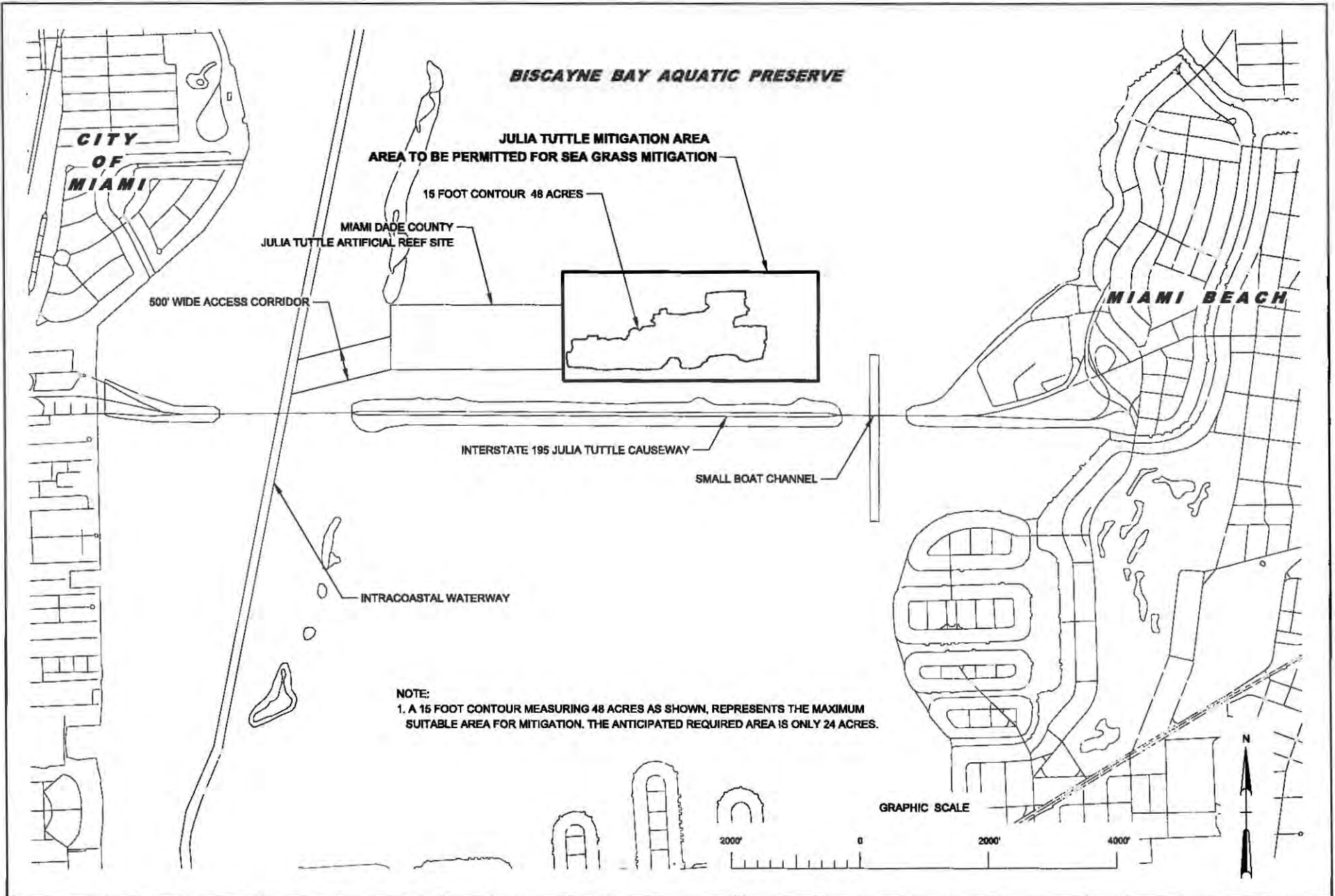
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 Dwn by: MR2  
 Ckd by: LRP  
 Dated: JANUARY 2011

MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE  
 SIDE SLOPE PLAN

PLATE  
 C-26

PERMIT # 305721001



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JACKSONVILLE, FLORIDA

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Dwn by:  
MR2  
Ckd by:  
LRP  
Dated: JAN 2011  
Revised: OCT 2011

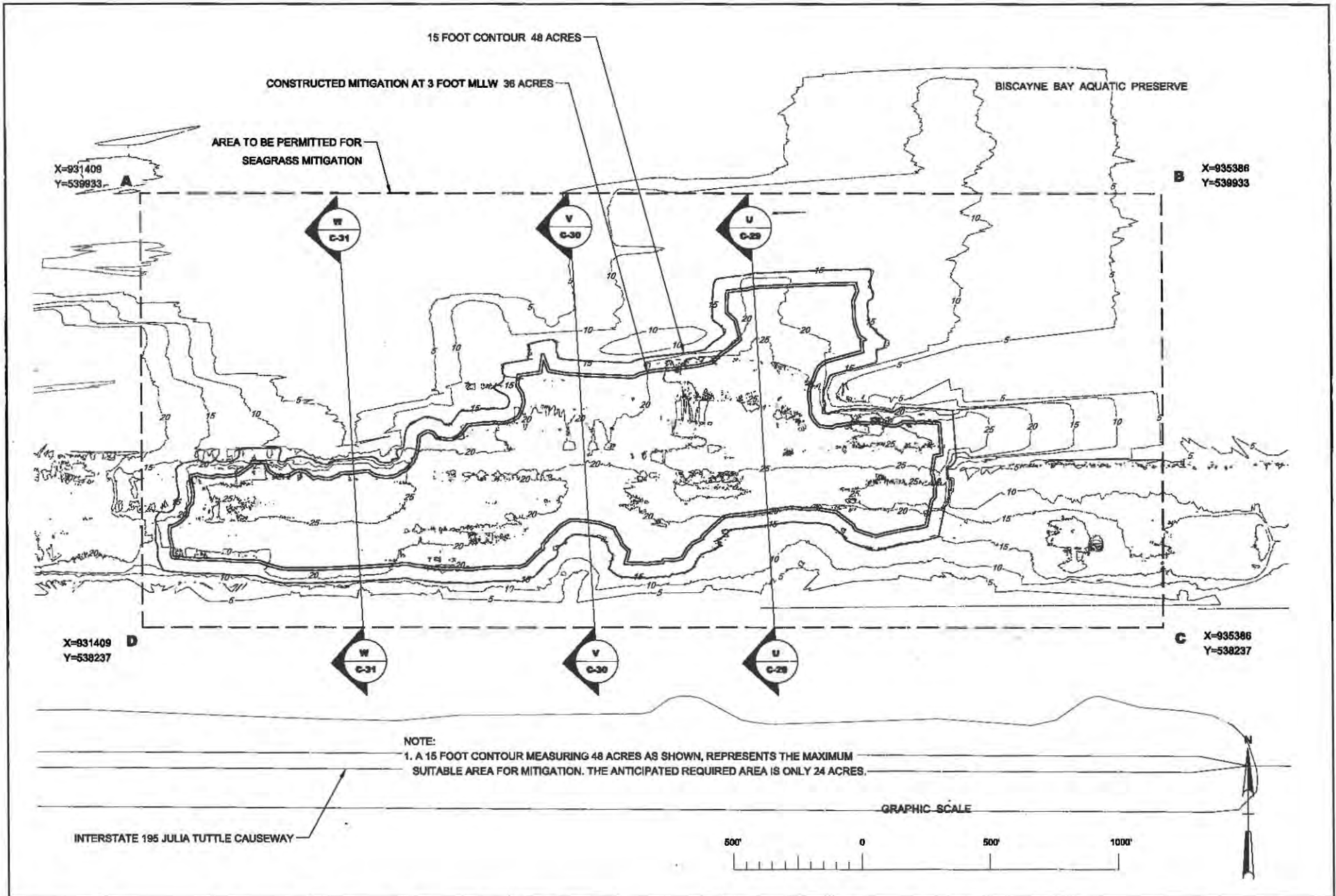
**MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE**

**JULIA TUTTLE MITIGATION AREA**

PLATE

**C-27**

PERMIT # 305721001



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NOT FOR CONSTRUCTION

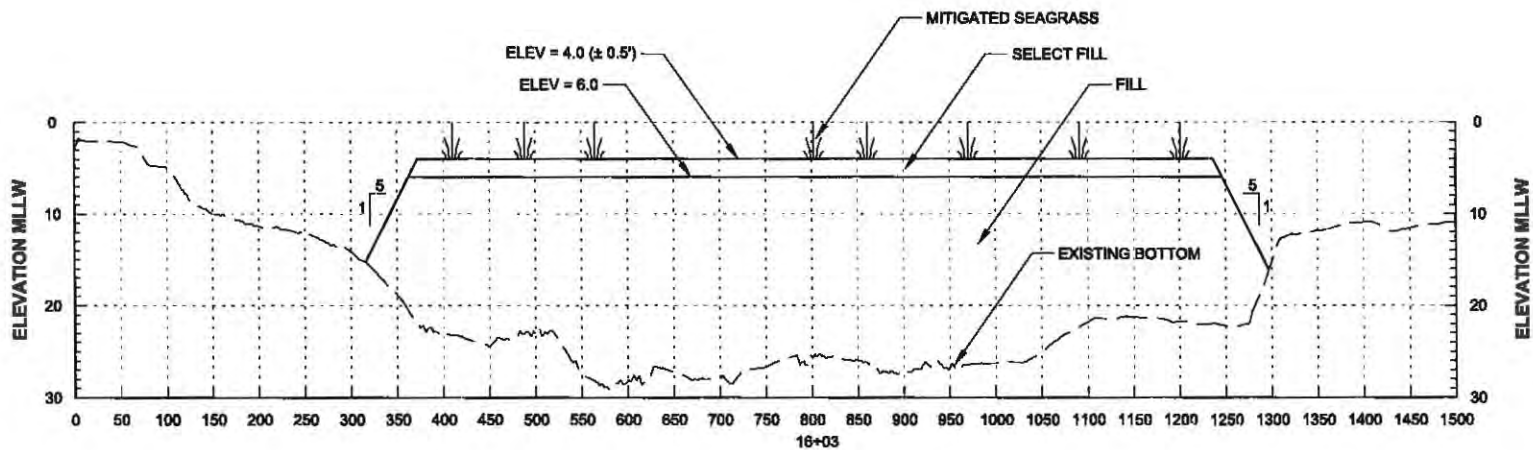
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JACKSONVILLE, FLORIDA

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Dwn by: MRZ  
Ckd by: LRP  
Datd: JANUARY 2011

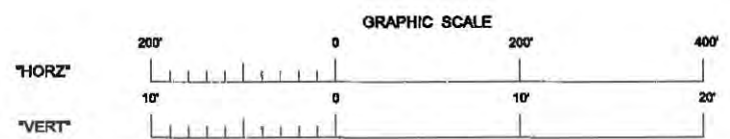
MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
JULIA TUTTLE MITIGATION AREA

PLATE  
C-28

PERMIT # 805721001



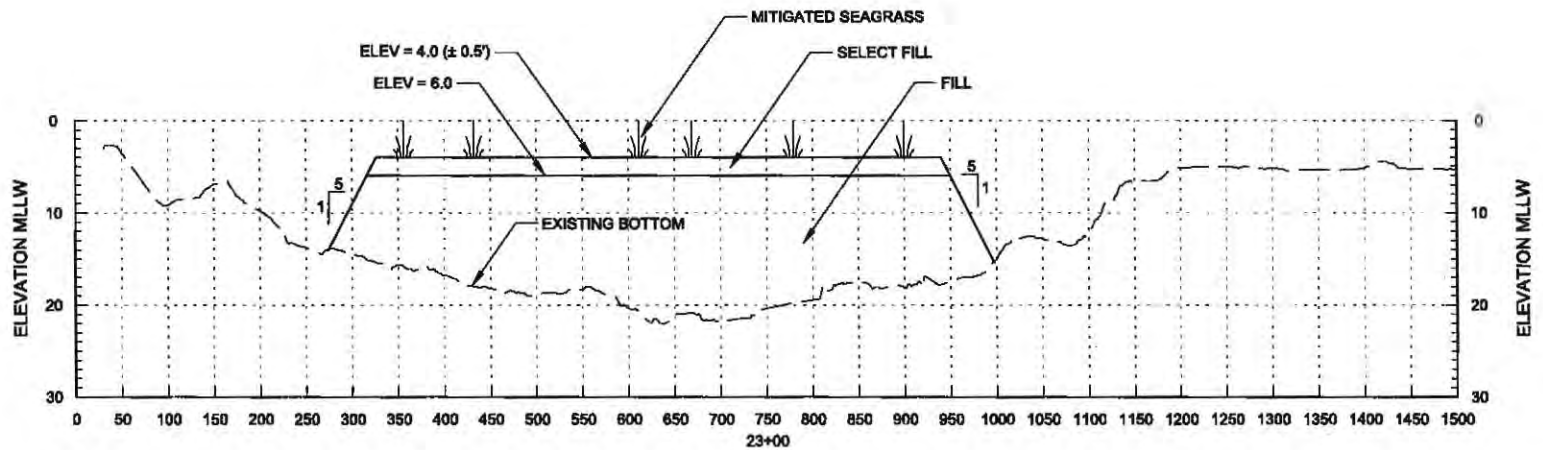
U  
C-28
**CROSS SECTION**  
**JULIA TUTTLE MITIGATION AREA**



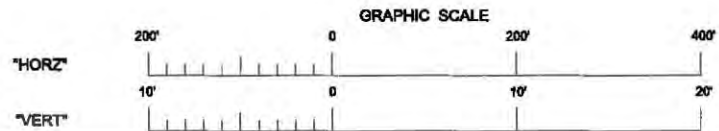
 US Army Corps of Engineers Jacksonville District	<b>WQC PERMIT PLATE          NOT FOR CONSTRUCTION</b>  <b>DEPARTMENT OF THE ARMY</b> JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	Des by: SRC Dwn by: MR2 Ctd by: LRP Dated: JAN 2011 Rev'd: OCT 2011	<b>MIAMI HARBOR, FLORIDA</b> <b>CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING</b> <b>WQC PERMIT PLATE</b> <b>JULIA TUTTLE MITIGATION AREA</b> <b>TYPICAL CROSS SECTION</b>	PLATE <b>C-29</b>
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V  
C-28
**CROSS SECTION**  
**JULIA TUTTLE MITIGATION AREA**



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JACKSONVILLE, FLORIDA

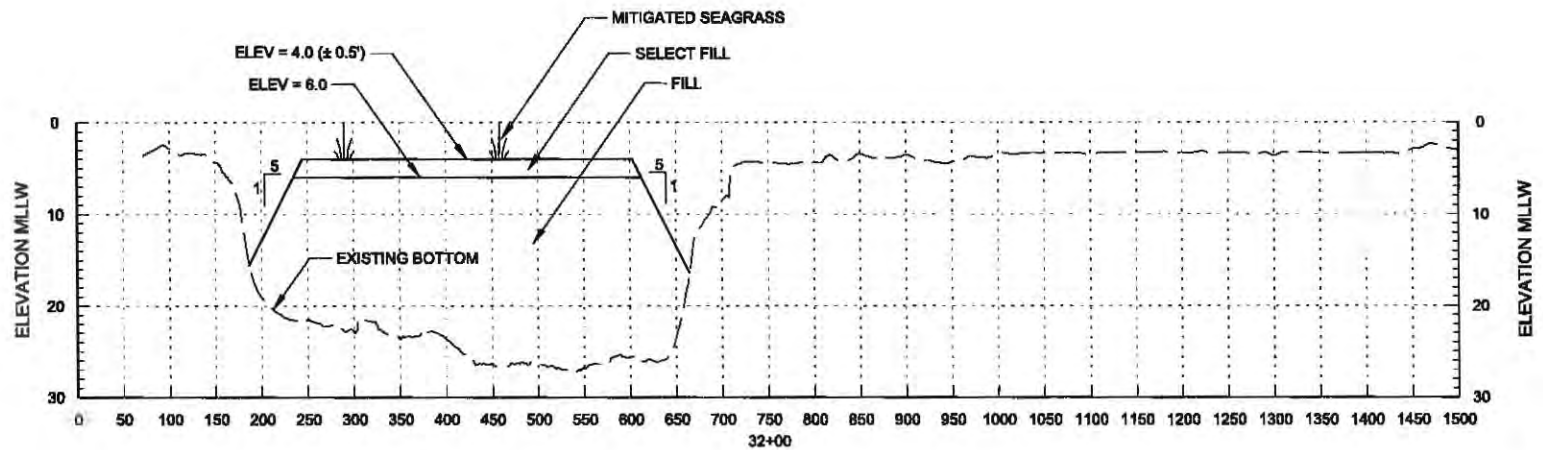
Desn by:  
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Dwn by:  
MRZ  
Ckd by:  
LRP  
Dated: JAN 2011  
Revised: OCT 2011

**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**JULIA TUTTLE MITIGATION AREA**  
**TYPICAL CROSS SECTIONS**

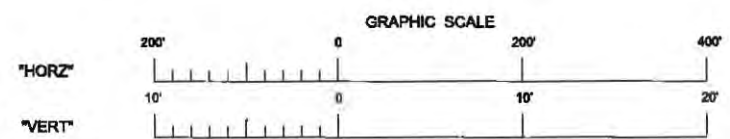
PLATE

**C-30**

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W  
C-28
**CROSS SECTION**  
**JULIA TUTTLE MITIGATION AREA**



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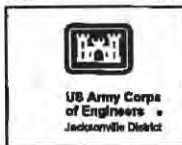
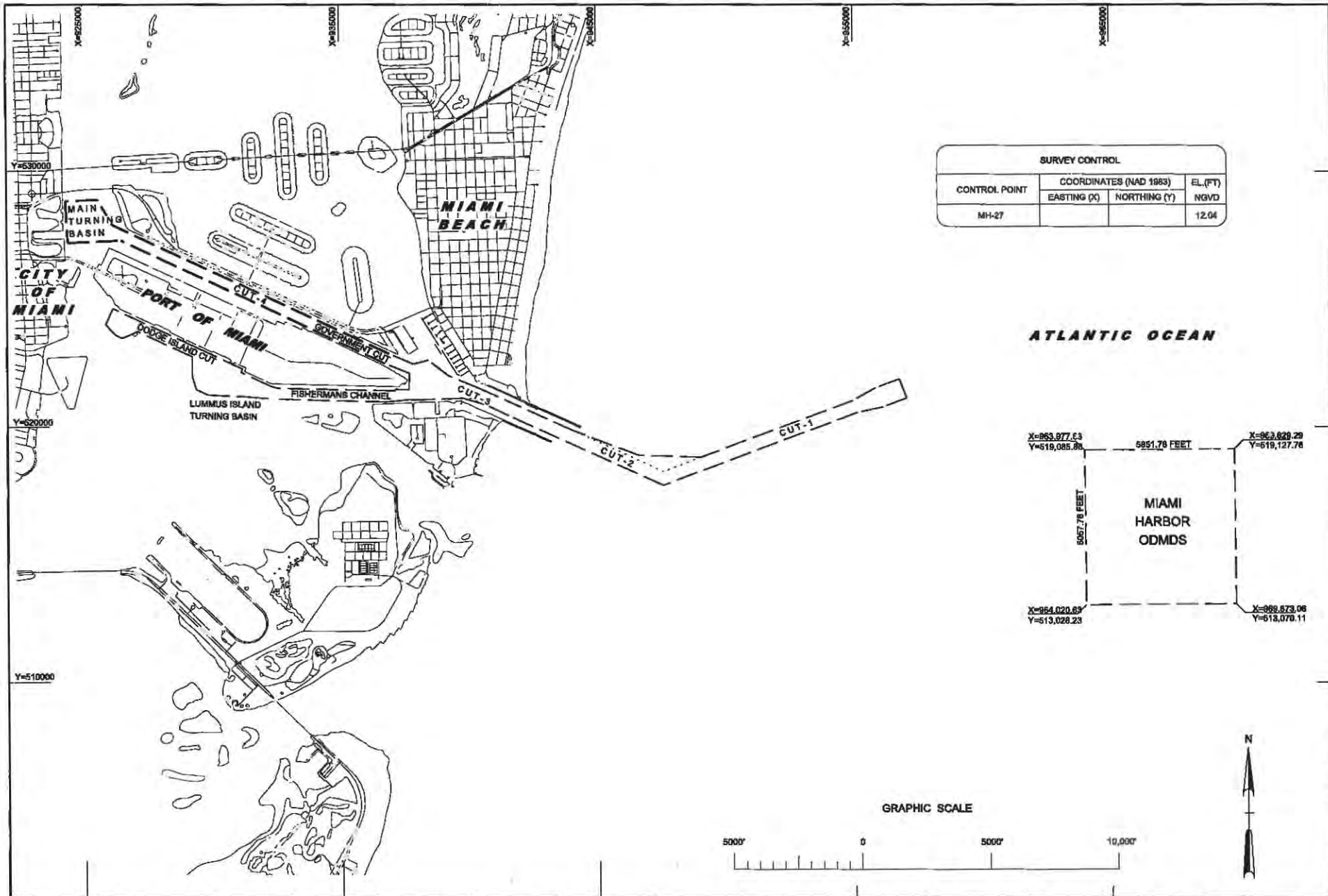
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 Ckd by: LRP  
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 Revised: OCT 2011

**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**JULIA TUTTLE MITIGATION AREA**  
**TYPICAL CROSS SECTIONS**

PLATE  
**C-31**

PERMIT # 305721001



**WQC PERMIT PLATE  
NOT FOR CONSTRUCTION**

**DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA**

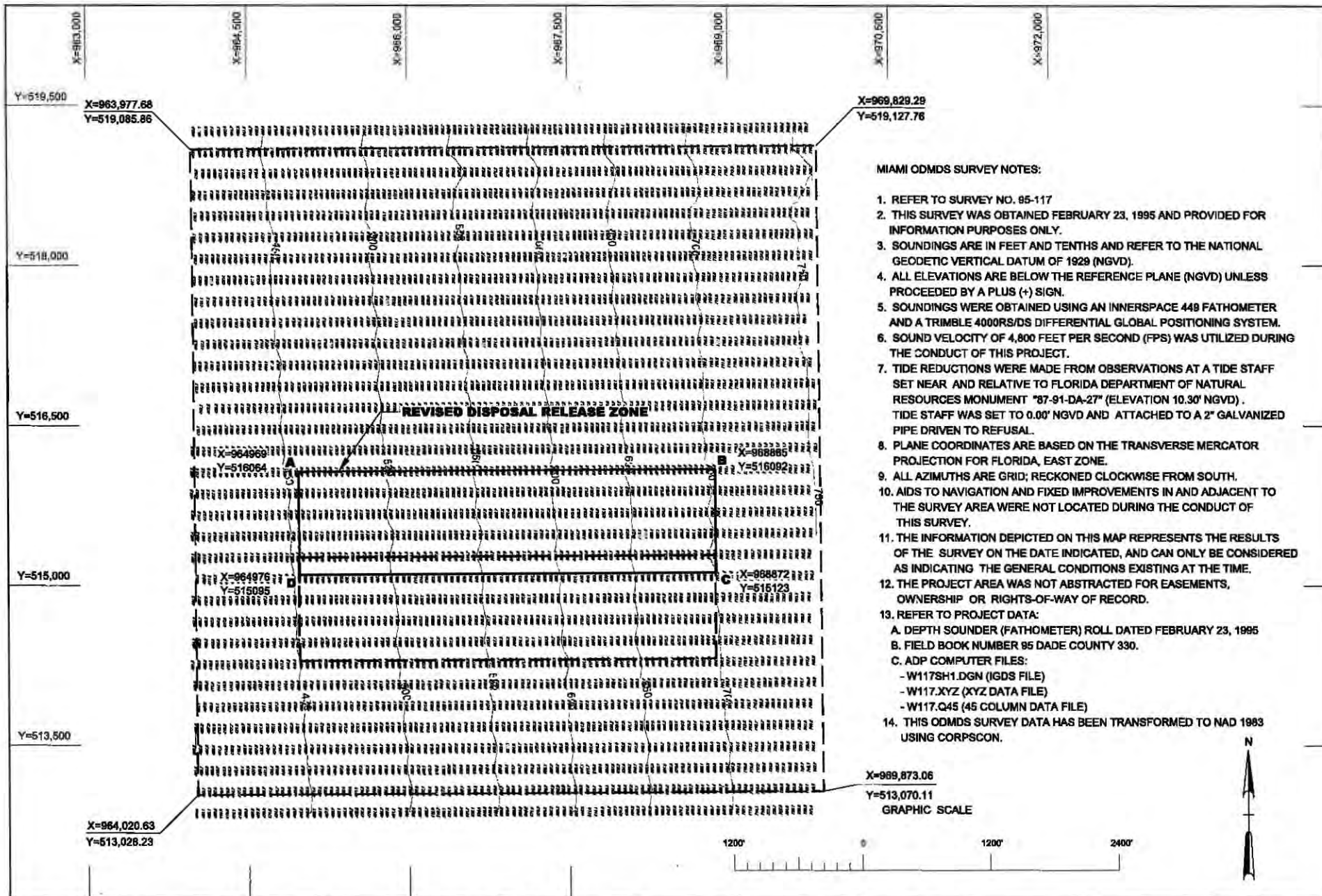
Desn by: SRC  
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Ckd by: LRP  
Dated: JANUARY 2011

**MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
ODMS OVERALL**

PLATE  
**C-32**

PERMIT # 305721001





**MIAMI ODMS SURVEY NOTES:**

1. REFER TO SURVEY NO. 95-117
2. THIS SURVEY WAS OBTAINED FEBRUARY 23, 1995 AND PROVIDED FOR INFORMATION PURPOSES ONLY.
3. SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD).
4. ALL ELEVATIONS ARE BELOW THE REFERENCE PLANE (NGVD) UNLESS PROCEEDED BY A PLUS (+) SIGN.
5. SOUNDINGS WERE OBTAINED USING AN INNSPACE 449 FATHOMETER AND A TRIMBLE 4000RS/DS DIFFERENTIAL GLOBAL POSITIONING SYSTEM.
6. SOUND VELOCITY OF 4,800 FEET PER SECOND (FPS) WAS UTILIZED DURING THE CONDUCT OF THIS PROJECT.
7. TIDE REDUCTIONS WERE MADE FROM OBSERVATIONS AT A TIDE STAFF SET NEAR AND RELATIVE TO FLORIDA DEPARTMENT OF NATURAL RESOURCES MONUMENT "87-91-DA-27" (ELEVATION 10.30' NGVD). TIDE STAFF WAS SET TO 0.00' NGVD AND ATTACHED TO A 2" GALVANIZED PIPE DRIVEN TO REFUSAL.
8. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR FLORIDA, EAST ZONE.
9. ALL AZIMUTHS ARE GRID; RECKONED CLOCKWISE FROM SOUTH.
10. AIDS TO NAVIGATION AND FIXED IMPROVEMENTS IN AND ADJACENT TO THE SURVEY AREA WERE NOT LOCATED DURING THE CONDUCT OF THIS SURVEY.
11. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF THE SURVEY ON THE DATE INDICATED, AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME.
12. THE PROJECT AREA WAS NOT ABSTRACTED FOR EASEMENTS, OWNERSHIP OR RIGHTS-OF-WAY OF RECORD.
13. REFER TO PROJECT DATA:
  - A. DEPTH SOUNDER (FATHOMETER) ROLL DATED FEBRUARY 23, 1995
  - B. FIELD BOOK NUMBER 95 DADE COUNTY 330.
  - C. ADP COMPUTER FILES:
    - W117SH1.DGN (IGDS FILE)
    - W117.XYZ (XYZ DATA FILE)
    - W117.Q45 (45 COLUMN DATA FILE)
14. THIS ODMS SURVEY DATA HAS BEEN TRANSFORMED TO NAD 1983 USING CORPSCON.

X=969,873.06  
Y=513,070.11  
GRAPHIC SCALE



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Desn by: SRC  
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Ckd by: LRP  
Dated: JANUARY 2011

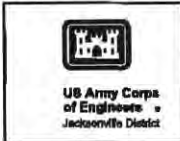
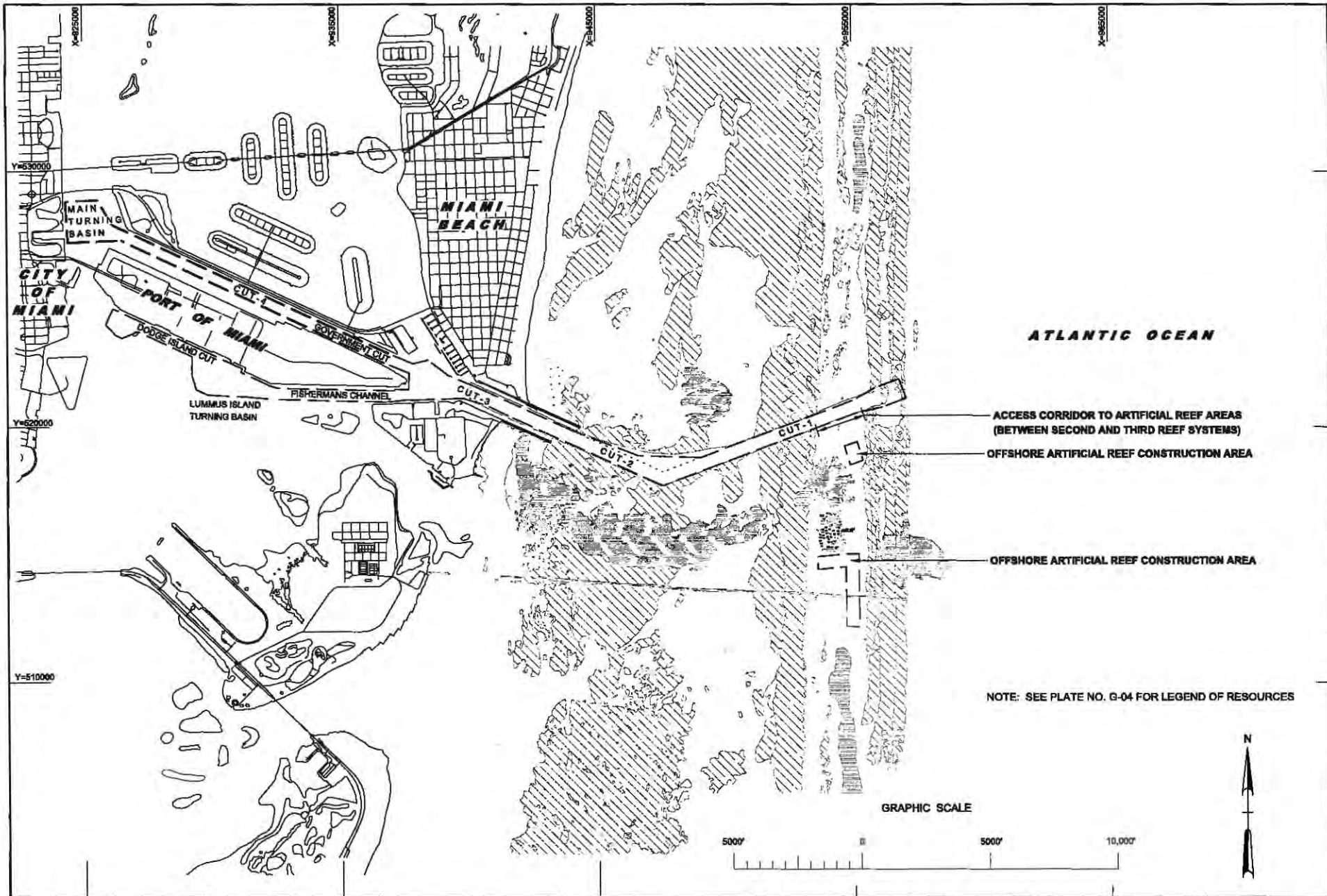
**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**

**ODMS PLAN**

PLATE  
**C-33**

**PERMIT # 305721001**





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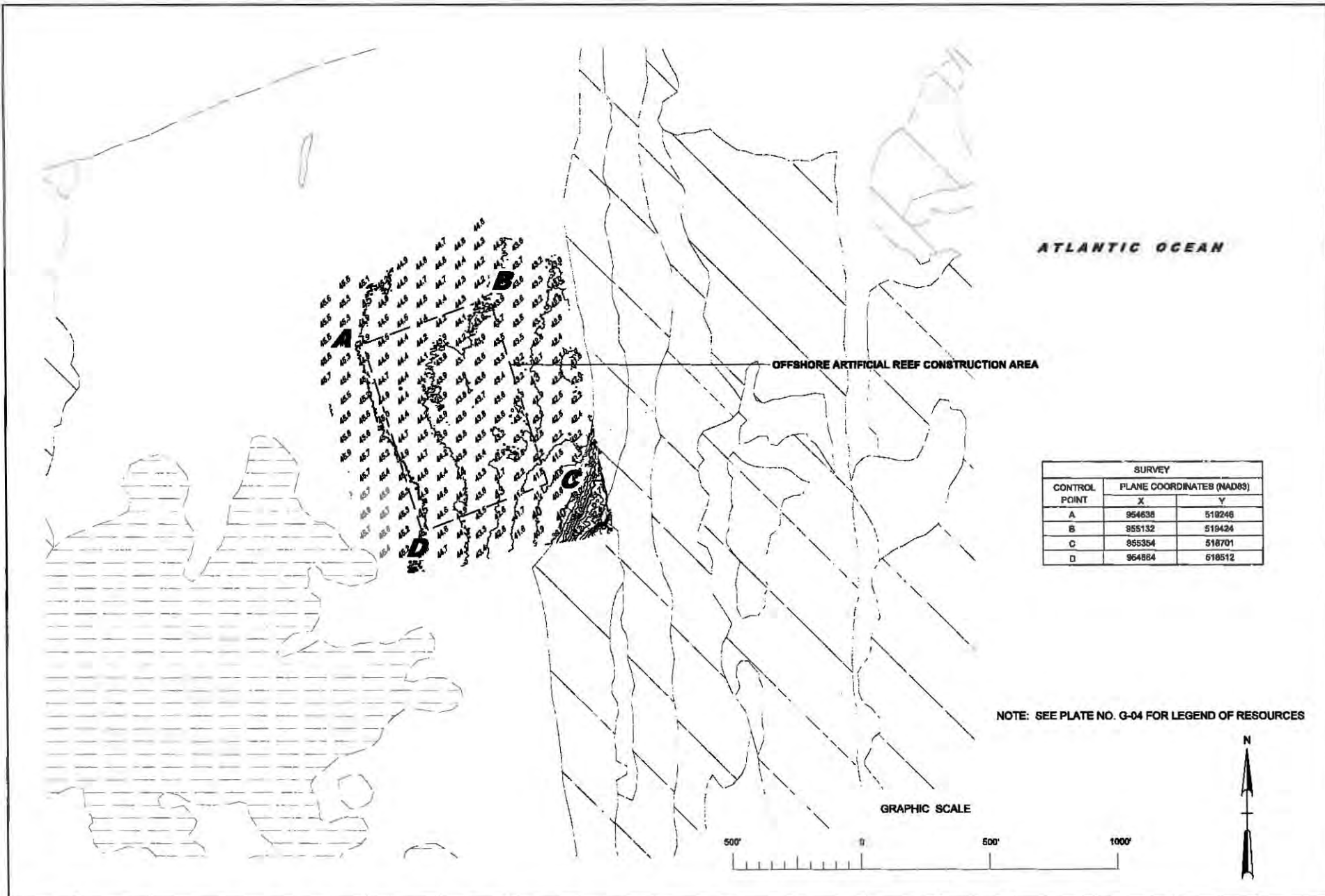
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Ckd by: LRP  
Dated: JAN 2011  
Rev'd: OCT 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
OFFSHORE ARTIFICIAL REEF SITES

PLATE  
C-34

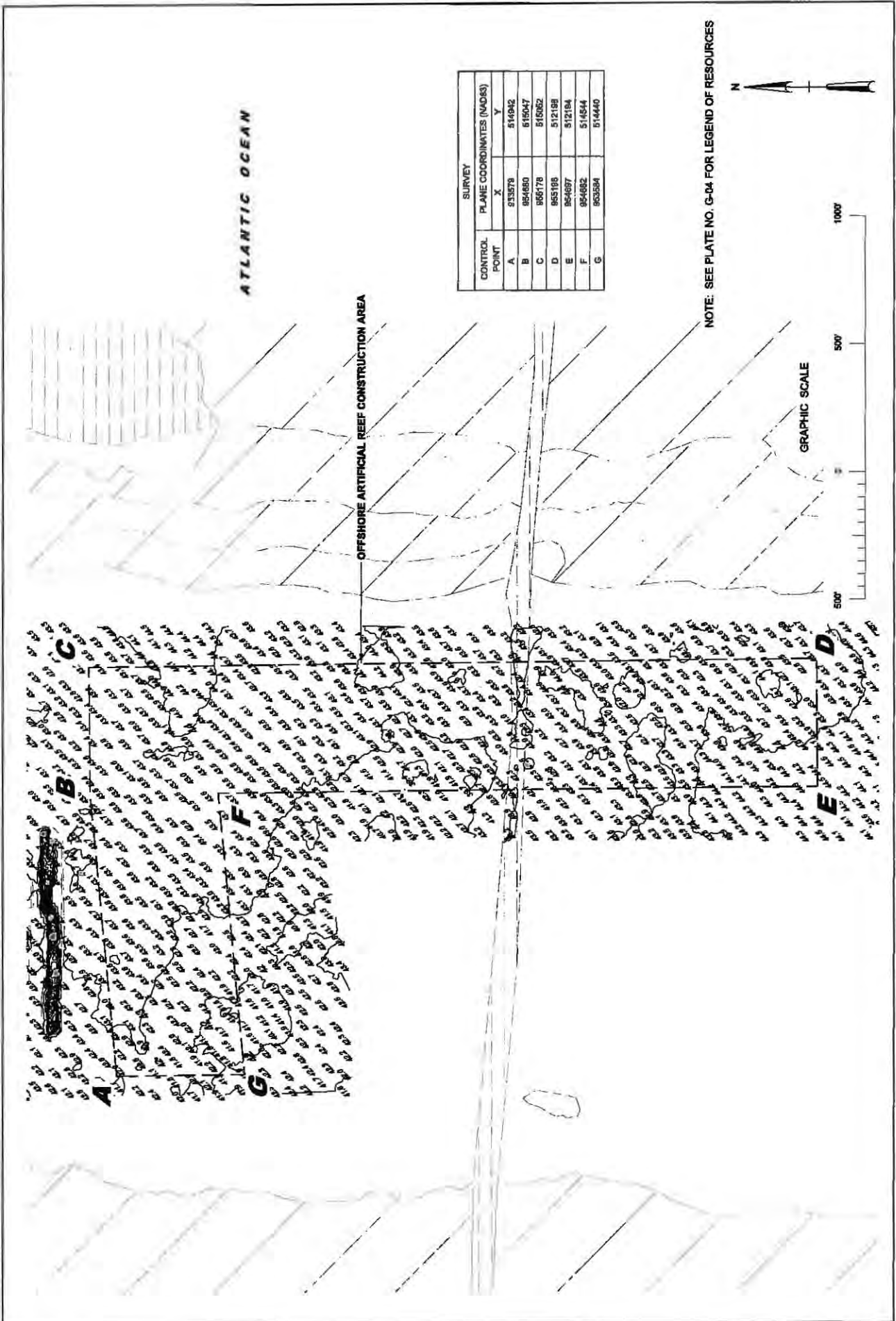
PERMIT # 305721001



 US Army Corps of Engineers Jacksonville District	<b>WQC PERMIT PLATE NOT FOR CONSTRUCTION</b>  <b>DEPARTMENT OF THE ARMY</b> JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	Plan by: SRC Dwn by: MR2 Ckd by: LRP Dated: JAN 2011 Revised: JUN 2011	<b>MIAMI HARBOR, FLORIDA</b> <b>CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING</b> <b>WQC PERMIT PLATE</b>  <b>OFFSHORE ARTIFICIAL REEF SITE</b>	PLATE  <b>C-35</b>
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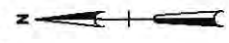
PERMIT # 305721001





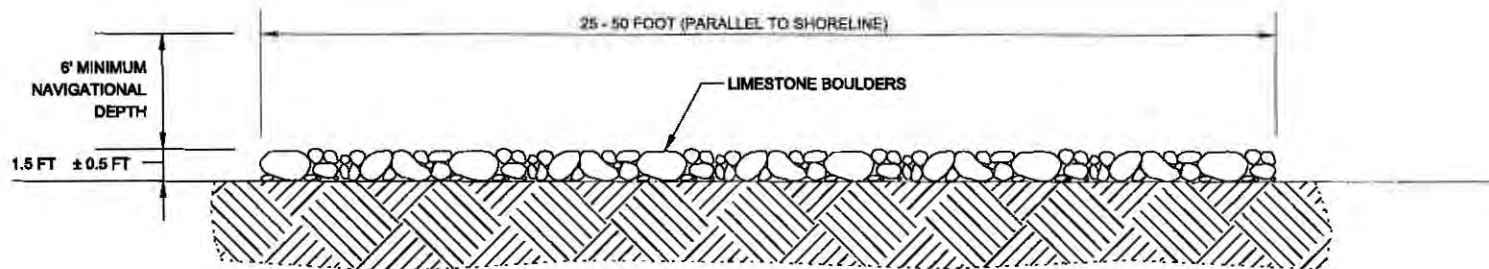
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	X	Y
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B	954980	519047
C	965778	516862
D	965185	512158
E	954697	512184
F	954682	514544
G	953594	514440

NOTE: SEE PLATE NO. C-04 FOR LEGEND OF RESOURCES

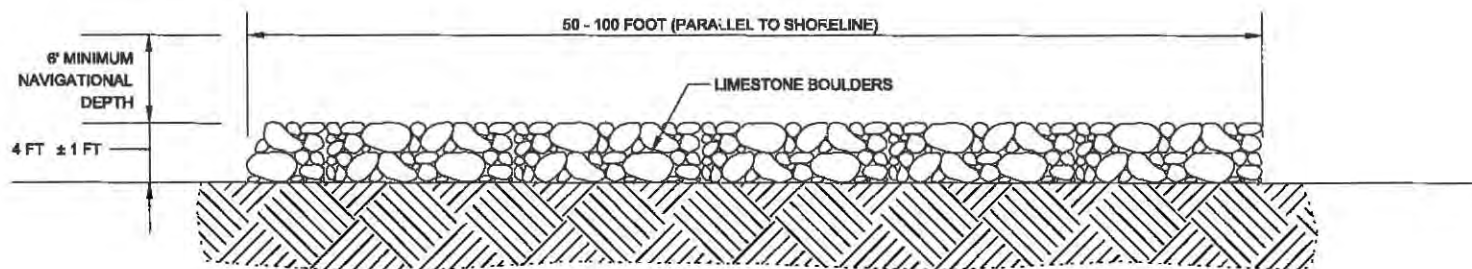


 US Army Corps of Engineers Jacksonville District	WQC PERMIT PLATE NOT FOR CONSTRUCTION	MIAMI HARBOR, FLORIDA CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING WQC PERMIT PLATE	PLATE <b>C-36</b>
	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	OFFSHORE ARTIFICIAL REEF SITE	DEN BY: SBC DWN BY: MRS CDD BY: LRP DATED: JAN 2011 REVISED: JUN 2011

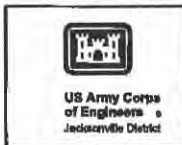
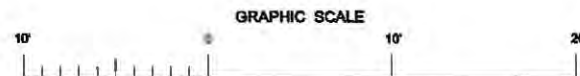
PERMIT # 305721001



TYPICAL CROSS SECTION  
**LOW-RELIEF, LOW COMPLEXITY ARTIFICIAL REEF SECTION**



TYPICAL CROSS SECTION  
**HIGH-RELIEF, HIGH COMPLEXITY ARTIFICIAL REEF SECTION**



WQC PERMIT PLATE  
 NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY  
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
 JACKSONVILLE, FLORIDA

Des by: SRC  
 Dwn by: MR2  
 Cld by: LRP  
 Dated: JANUARY 2011

MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE

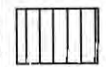
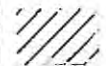



OFFSHORE ARTIFICIAL REEF TYPICAL CROSS SECTIONS

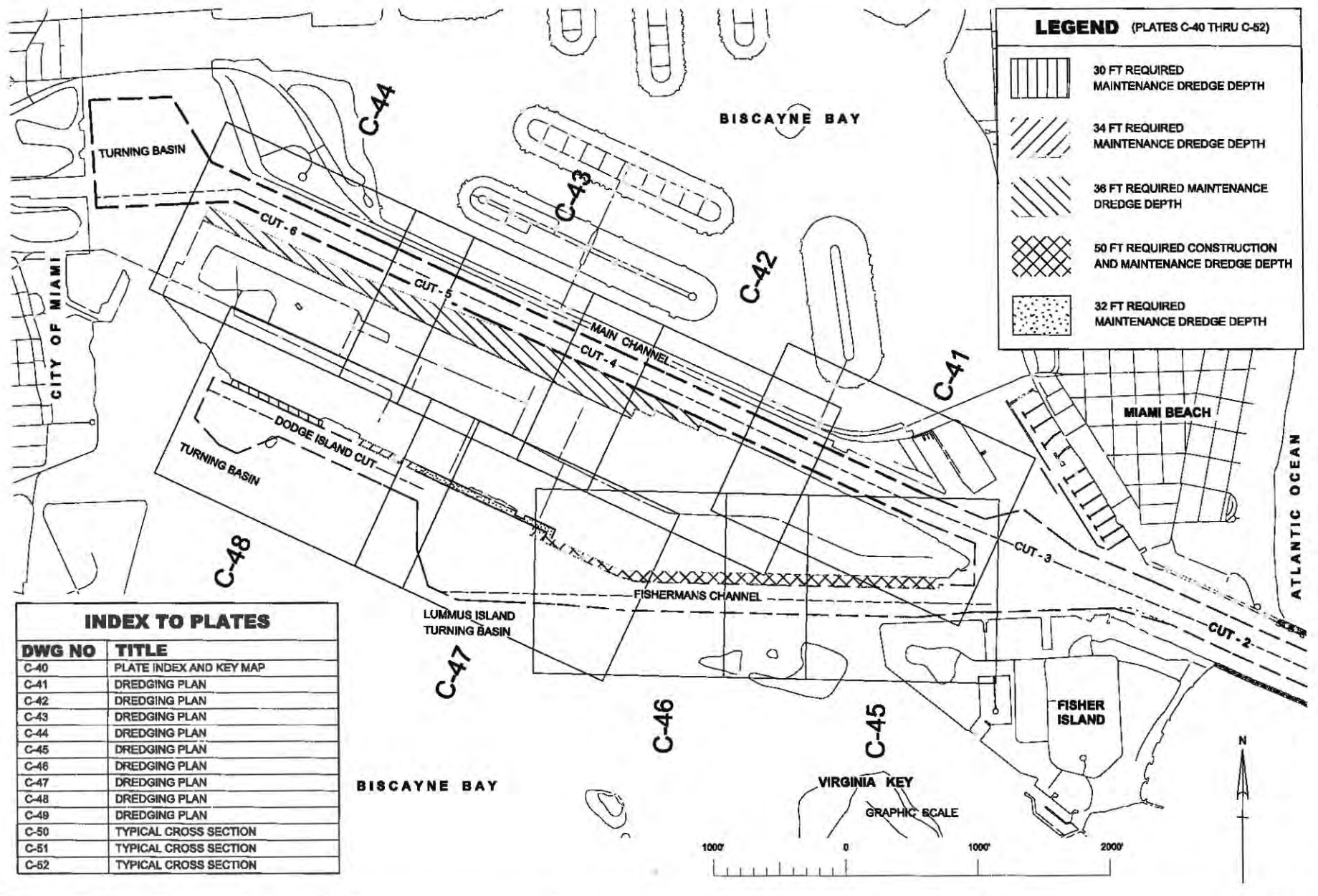
PLATE  
**C-37**

PERMIT # 305721001



**LEGEND** (PLATES C-40 THRU C-52)

	30 FT REQUIRED MAINTENANCE DREDGE DEPTH
	34 FT REQUIRED MAINTENANCE DREDGE DEPTH
	36 FT REQUIRED MAINTENANCE DREDGE DEPTH
	50 FT REQUIRED CONSTRUCTION AND MAINTENANCE DREDGE DEPTH
	32 FT REQUIRED MAINTENANCE DREDGE DEPTH



**INDEX TO PLATES**

DWG NO	TITLE
C-40	PLATE INDEX AND KEY MAP
C-41	DREDGING PLAN
C-42	DREDGING PLAN
C-43	DREDGING PLAN
C-44	DREDGING PLAN
C-45	DREDGING PLAN
C-46	DREDGING PLAN
C-47	DREDGING PLAN
C-48	DREDGING PLAN
C-49	DREDGING PLAN
C-50	TYPICAL CROSS SECTION
C-51	TYPICAL CROSS SECTION
C-52	TYPICAL CROSS SECTION



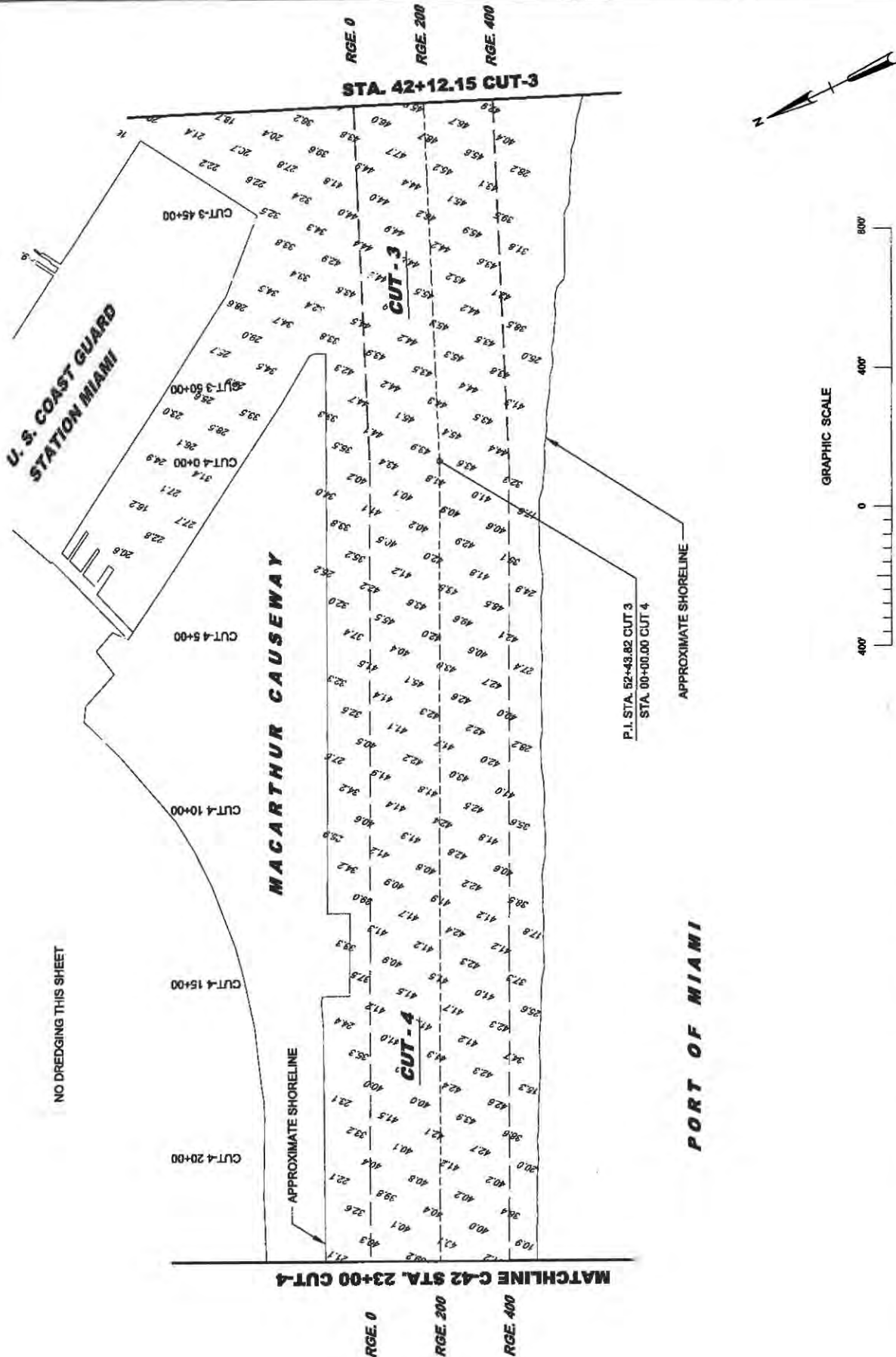
WQC PERMIT PLATE  
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Ctd by: LRP  
Dated: JAN 2011  
Revised: JUL 2011

**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**BERTHING AREAS**  
**PLATE INDEX AND KEY MAP**

PLATE  
**C-40**



NO DREDGING THIS SHEET

PLATE  
**C-41**

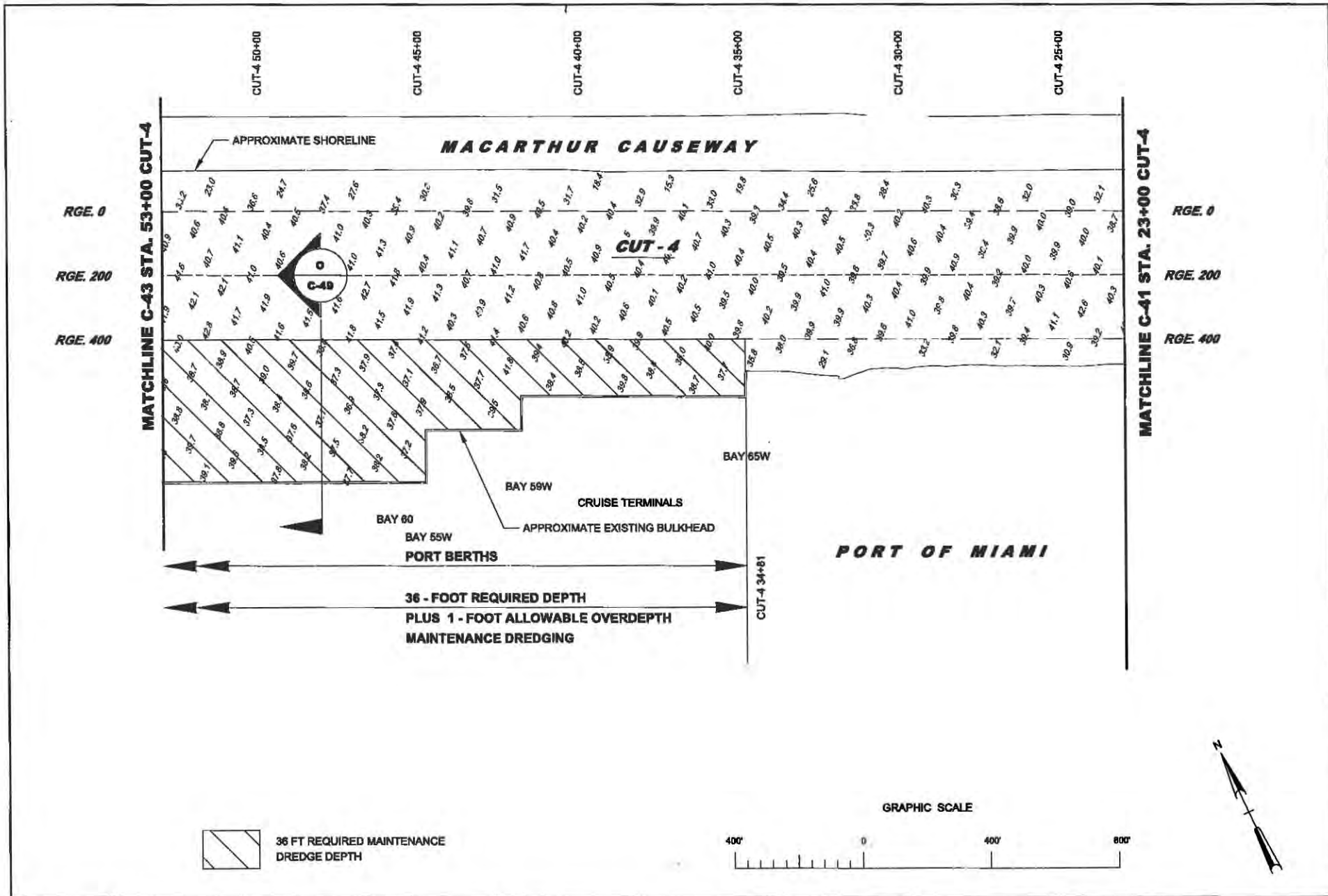
**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**BERTHING AREAS**  
**DREDGING PLAN**

Draw by: SRC  
 Dam by: MRZ  
 Ctd by: LRP  
 Dated: JANUARY 2011

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 NOT FOR CONSTRUCTION  
**DEPARTMENT OF THE ARMY**  
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 JACKSONVILLE, FLORIDA




PERMIT # 305721001



CUT-4 50+00      CUT-4 45+00      CUT-4 40+00      CUT-4 35+00      CUT-4 30+00      CUT-4 25+00

RGE. 0  
RGE. 200  
RGE. 400

RGE. 0  
RGE. 200  
RGE. 400

 36 FT REQUIRED MAINTENANCE DREDGE DEPTH



**WQC PERMIT PLATE NOT FOR CONSTRUCTION**

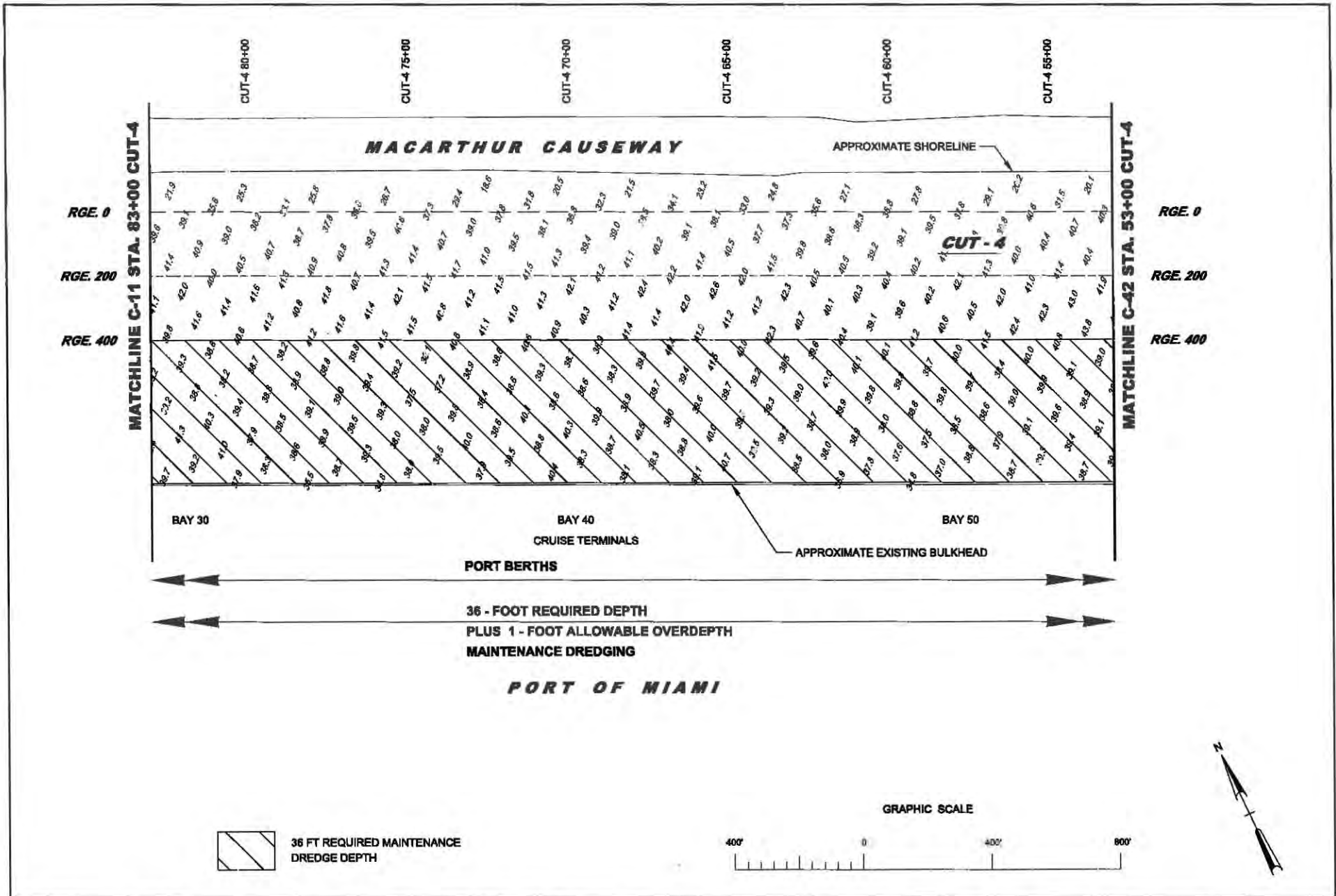
**DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA**

Desn by: SRC  
Dwn by: MR2  
Ckd by: LRP  
Dated: JANUARY 2011

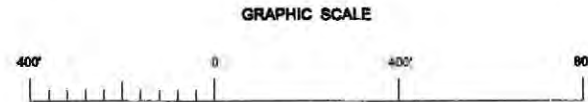
**MIAMI HARBOR, FLORIDA CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING WQC PERMIT PLATE BERTHING AREAS DREDGING PLAN**

PLATE  
**C-42**

**PERMIT # 305721001**



 36 FT REQUIRED MAINTENANCE DREDGE DEPTH



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LRP

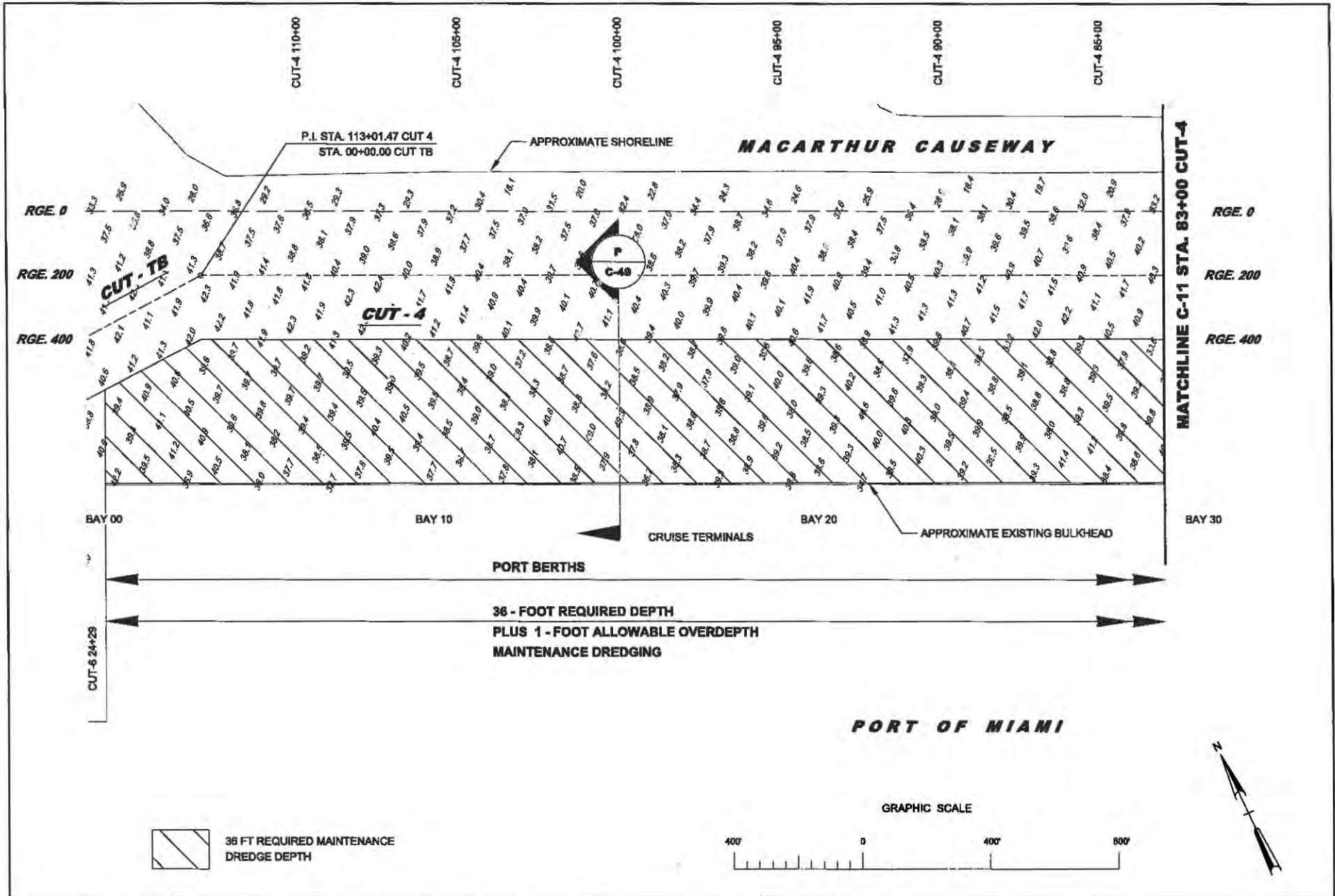
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Revised: OCT 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
BERTHING AREAS  
DREDGING PLAN

PLATE  
C-43

PERMIT # 305721001





US Army Corps  
of Engineers  
Jacksonville District

WQC PERMIT PLATE  
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

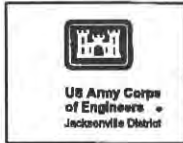
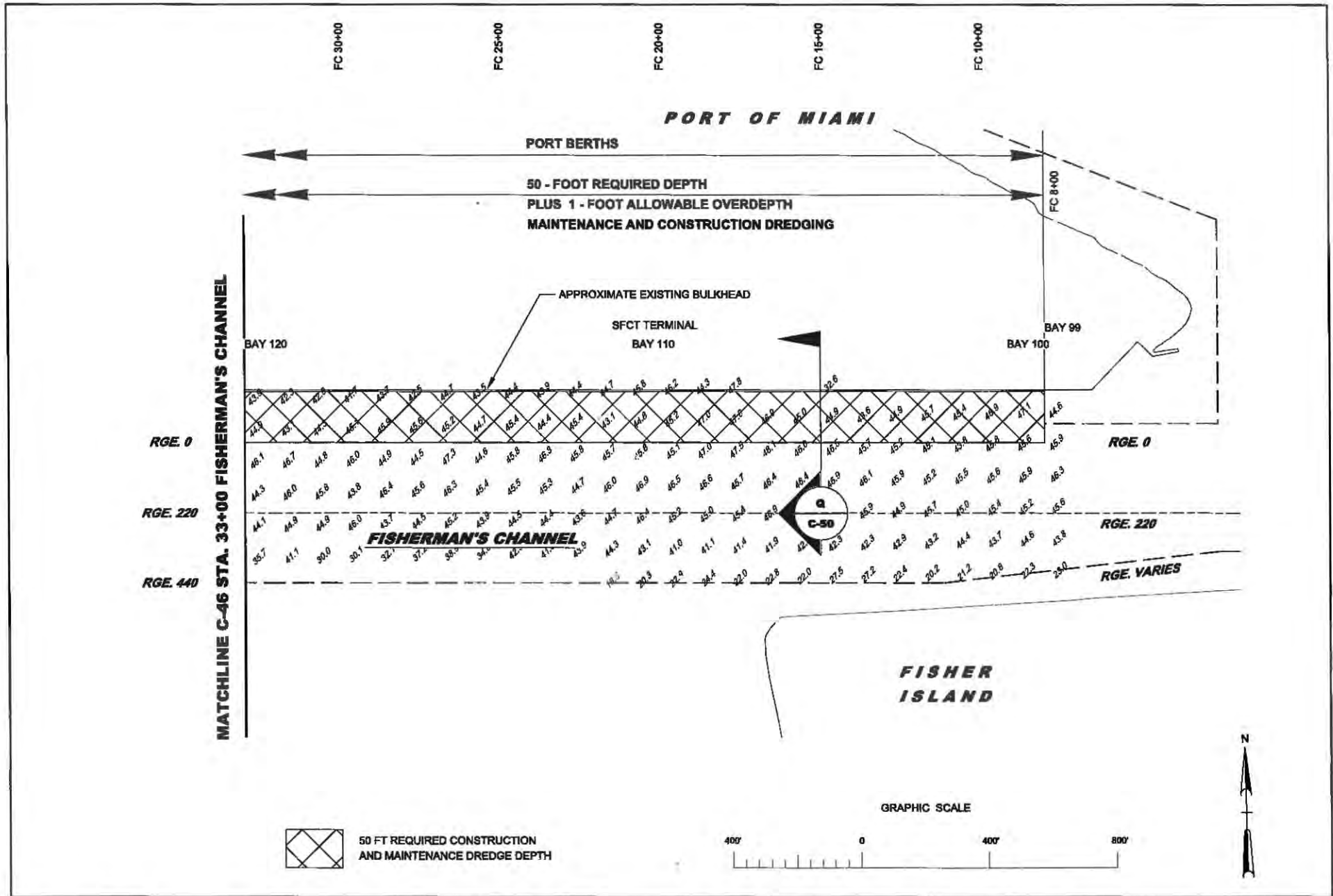
Desn by:  
SRC  
Dwn by:  
MR2  
Ckd by:  
LRP  
Dated:  
JANUARY 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
BERTHING AREAS  
DREDGING PLAN

PLATE

C-44

PERMIT # 305721001



WQC PERMIT PLATE  
NOT FOR CONSTRUCTION

**DEPARTMENT OF THE ARMY**  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

Desn by: SRC  
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Ckd by: LRP  
Dated: JAN 2011  
Revised: OCT 2011

**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**BERTHING AREAS**  
**DREDGING PLAN**

PLATE  
**C-45**

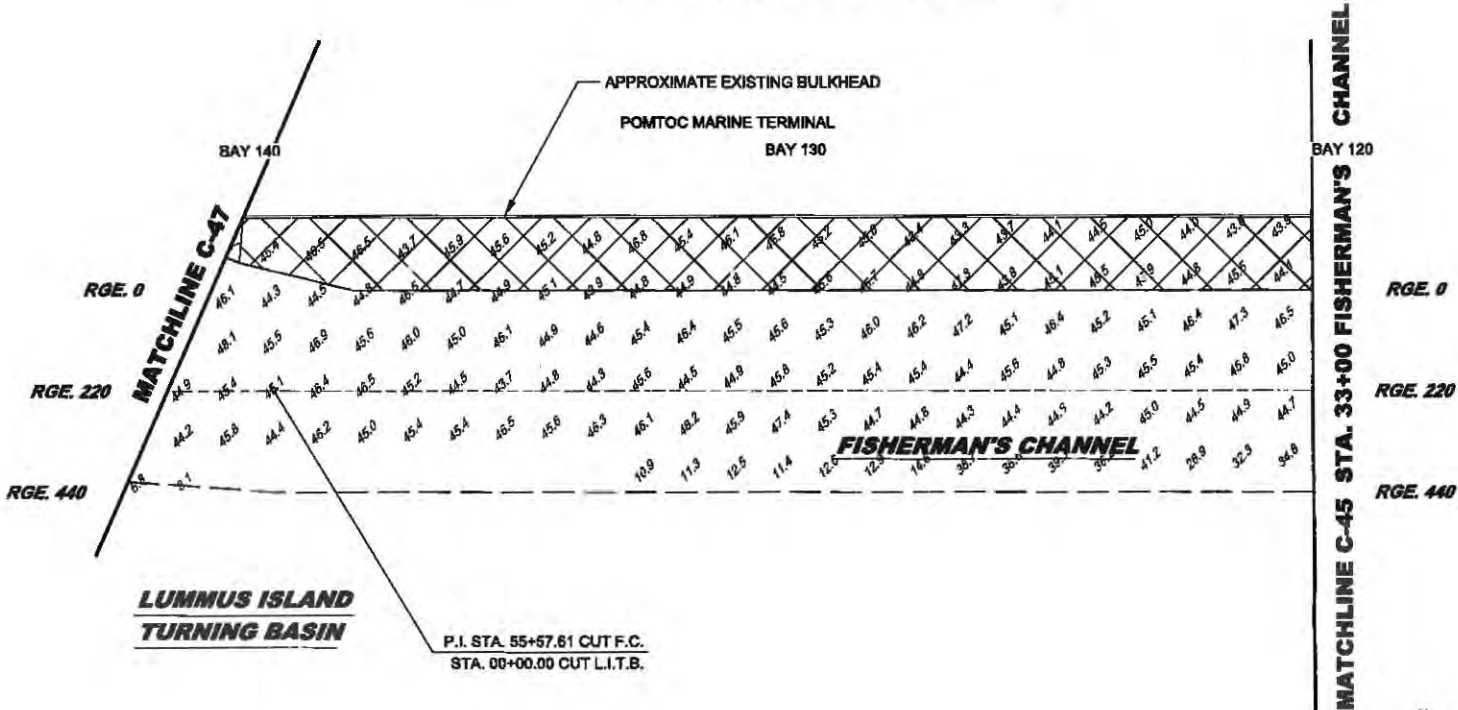
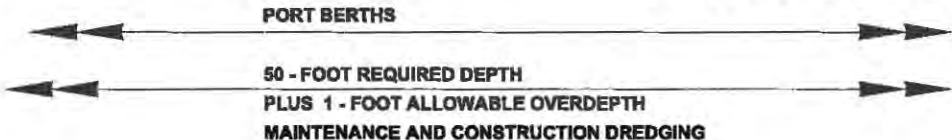
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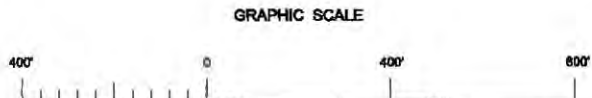
FC 40+00

FC 35+00

### PORT OF MIAMI



 50 FT REQUIRED CONSTRUCTION AND MAINTENANCE DREDGE DEPTH



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WQC PERMIT PLATE  
NOT FOR CONSTRUCTION

**DEPARTMENT OF THE ARMY**  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

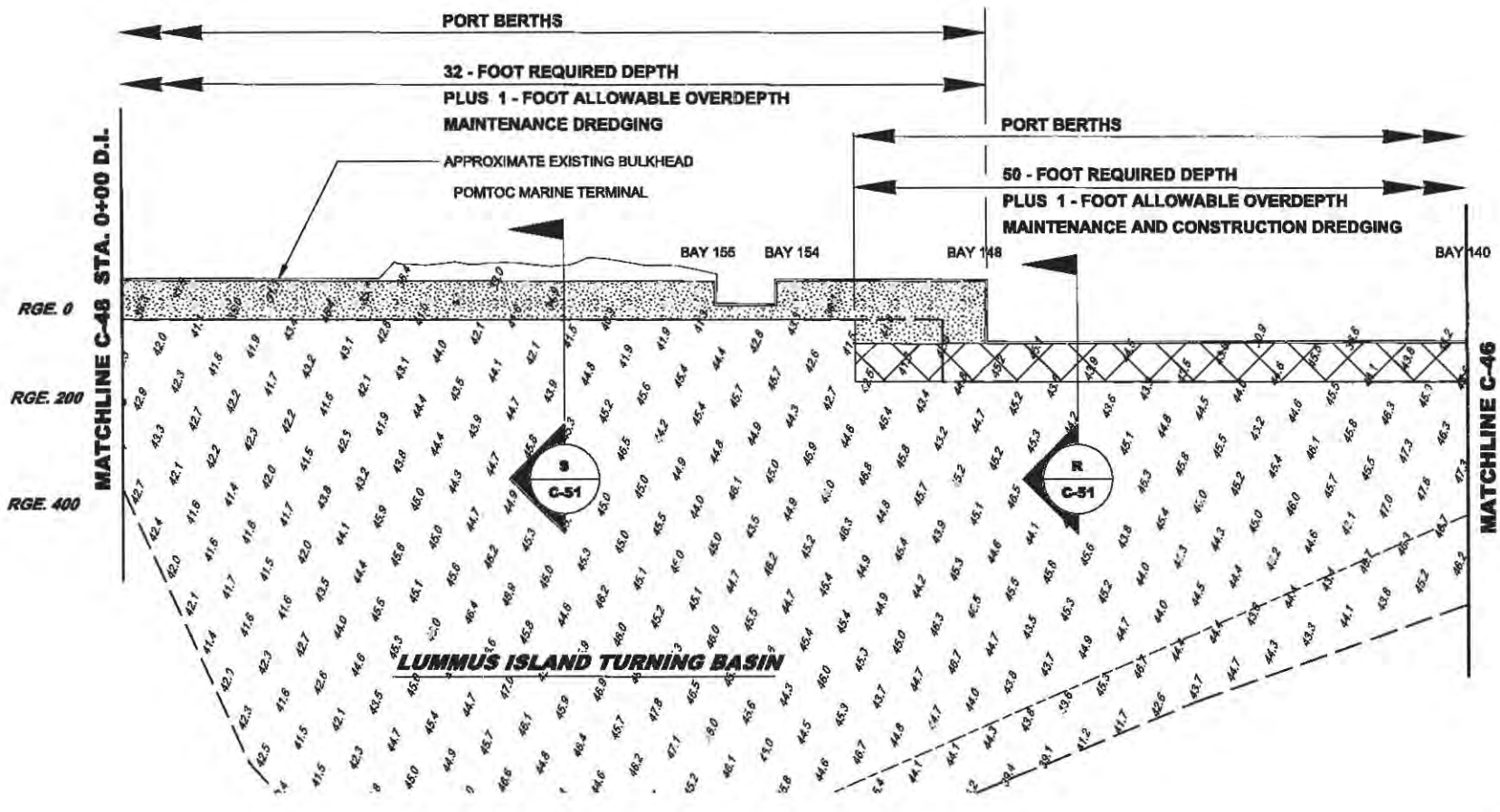
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Ckd by: LRP  
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Revised: OCT 2011



**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**BERTHING AREAS**  
**DREDGING PLAN**

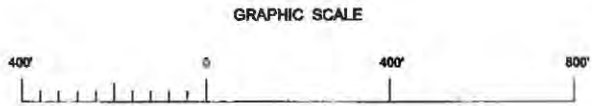
PLATE  
**C-46**

PERMIT # 30572100

**PORT OF MIAMI**



 50 FT REQUIRED CONSTRUCTION AND MAINTENANCE DREDGE DEPTH  
 32 FT REQUIRED MAINTENANCE DREDGE DEPTH



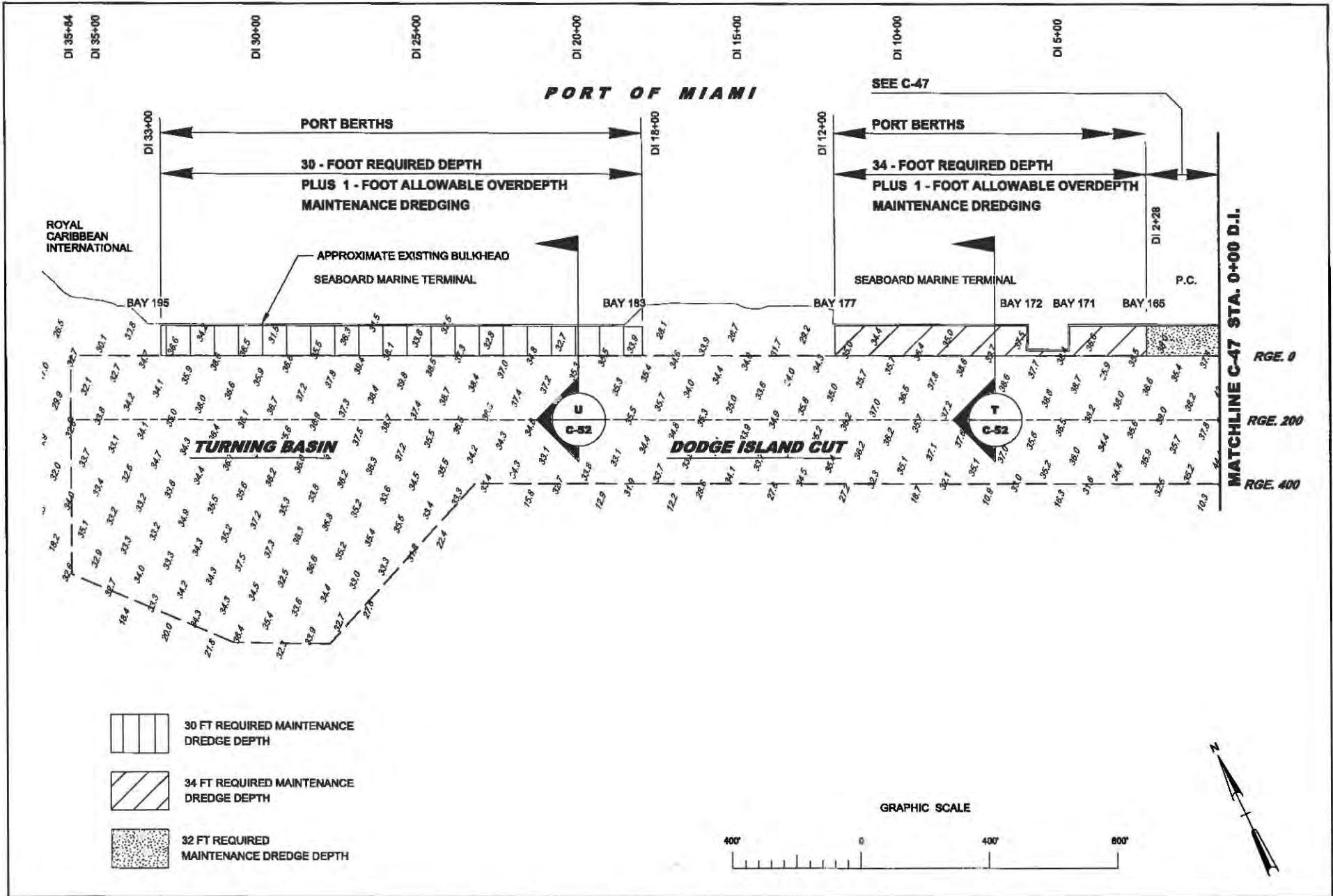
**WQC PERMIT PLATE  
 NOT FOR CONSTRUCTION**  
**DEPARTMENT OF THE ARMY**  
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 JACKSONVILLE, FLORIDA

Desn by: SRC  
 Dwn by: MR2  
 Ctd by: LRP  
 Dated: JANUARY 2011

**MIAMI HARBOR, FLORIDA**  
**CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING**  
**WQC PERMIT PLATE**  
**BERTHING AREAS**  
**DREDGING PLAN**

PLATE  
**C-47**





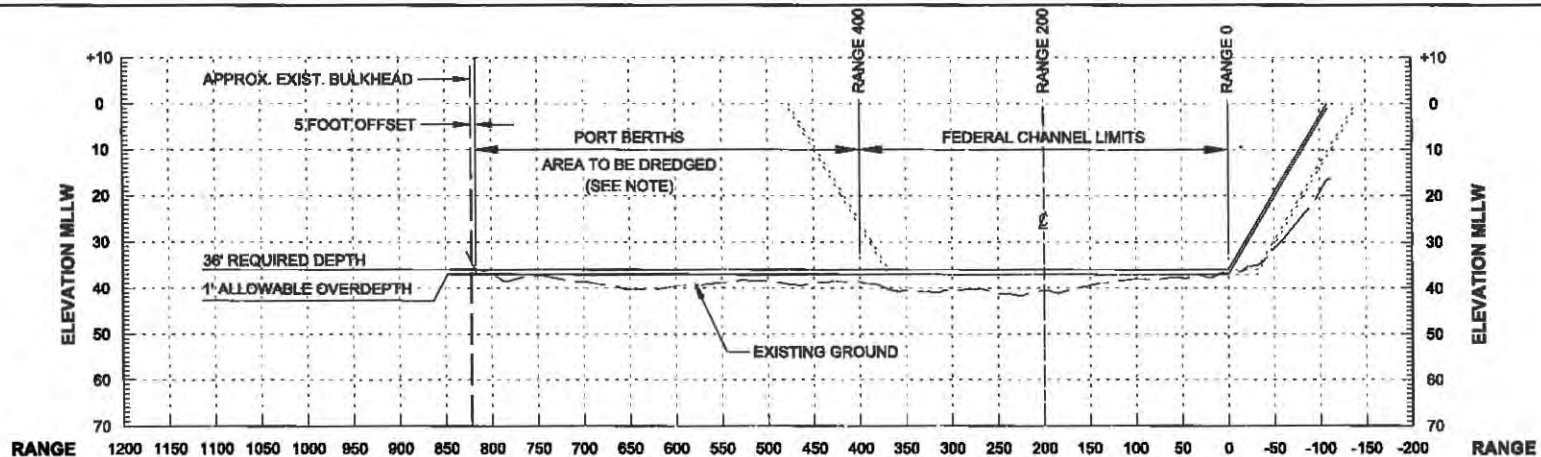
WQC PERMIT PLATE  
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

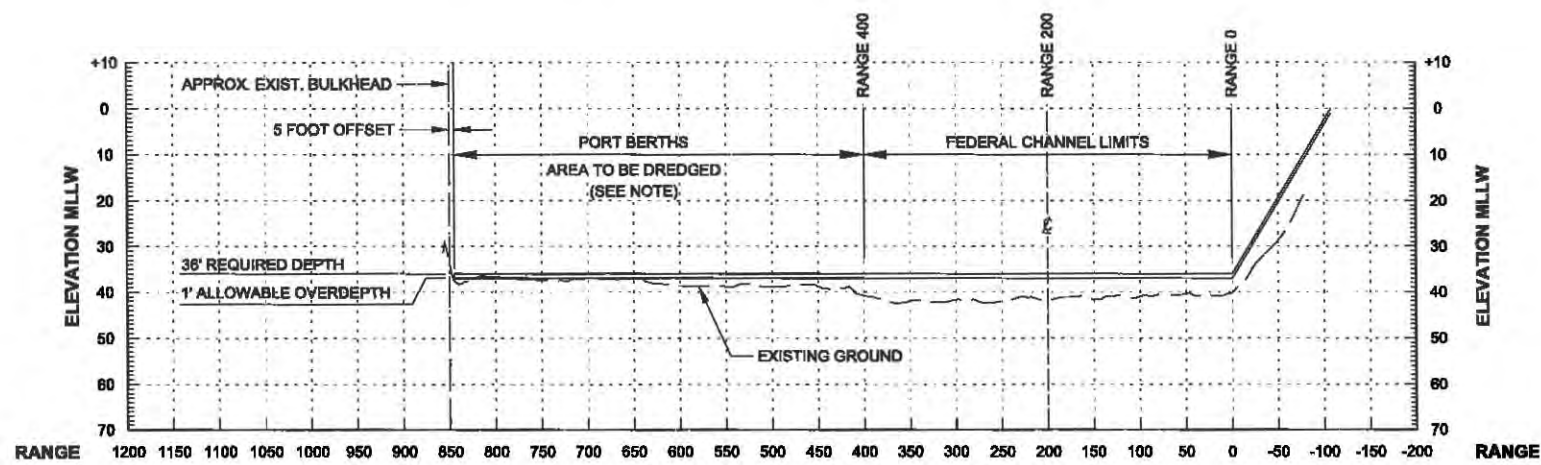
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Dated: JANUARY 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
BERTHING AREAS  
DREDGING PLAN

PLATE  
C-48

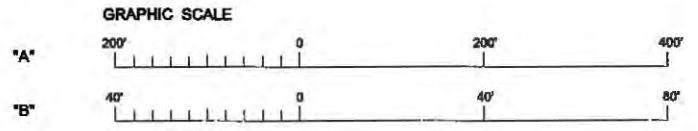


**P**  
**C-44** **TYPICAL CROSS SECTION CUT-4 100+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B



**O**  
**C-42** **TYPICAL CROSS SECTION CUT-4 48+00**  
 HORZ = SCALE: A  
 VERT = SCALE: B

NOTE:  
 1. SEE DETAIL ON PLATE C-50.



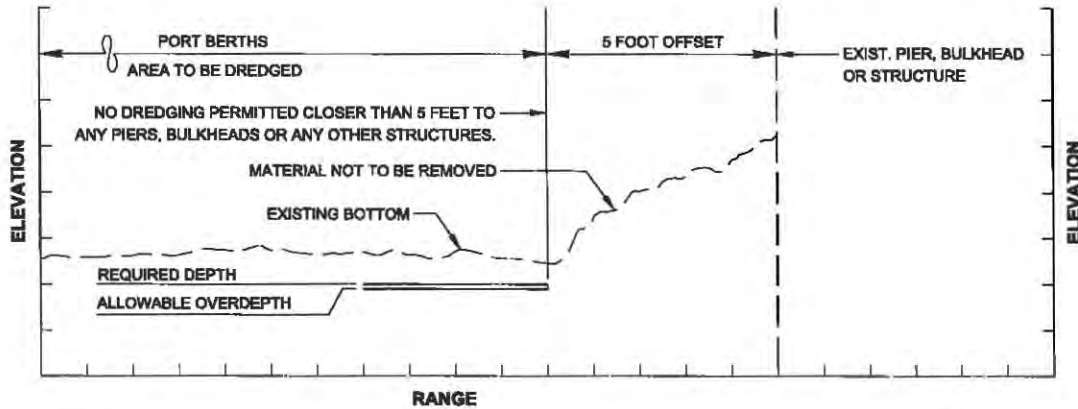
WQC PERMIT PLATE  
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 JACKSONVILLE, FLORIDA

Des by: SRC  
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 Ckd by: LRP  
 Dated: JAN 2011  
 Rev'd: OCT 2011

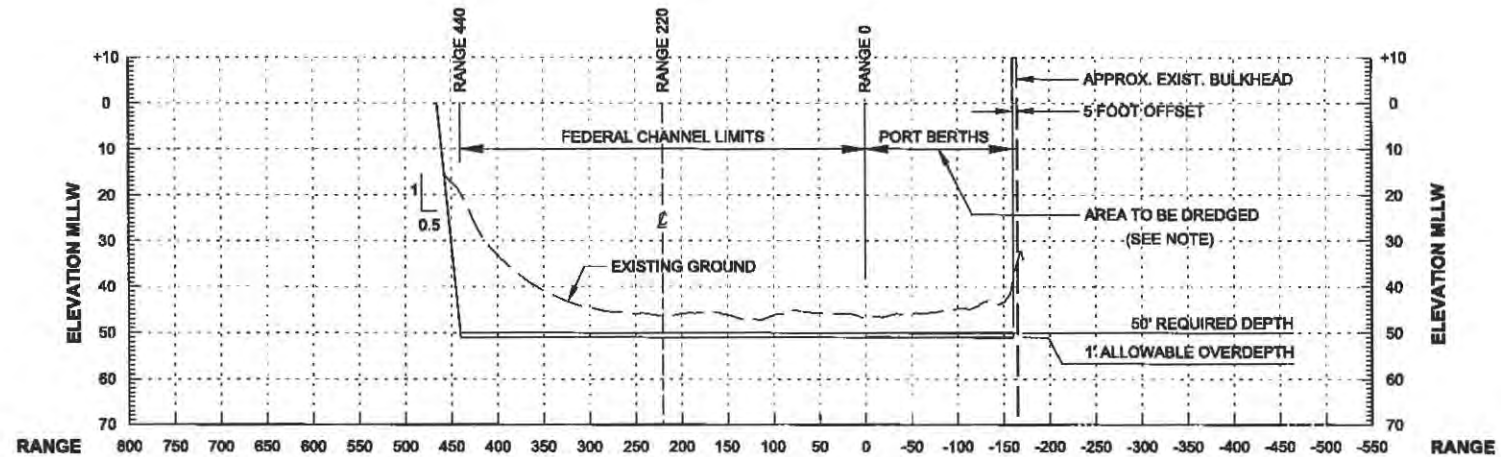
MIAMI HARBOR, FLORIDA  
 CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
 WQC PERMIT PLATE  
 BERTHING AREAS  
 TYPICAL CROSS SECTIONS

PLATE  
**C-49**

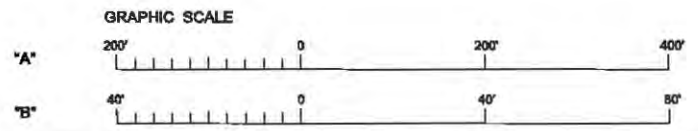
PERMIT # 305721001



**DETAIL SHOWING DREDGING RESTRICTIONS ADJACENT TO BULKHEAD AND PIERS**  
NOT TO SCALE



**TYPICAL CROSS SECTION FC 15+00**  
C-45  
HORZ = SCALE: A  
VERT = SCALE: B



NOTE:  
1. SEE DETAIL, THIS PLATE



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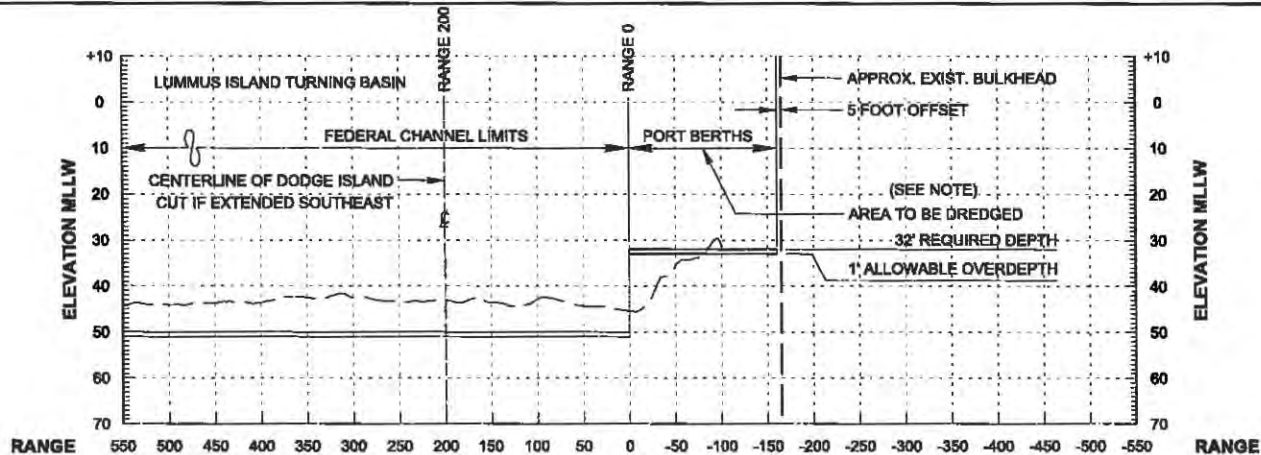
Des by: SRC  
Dwn by: MR2  
Ckd by: LRP  
Dated: JANUARY 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
BERTHING AREAS  
TYPICAL CROSS SECTIONS

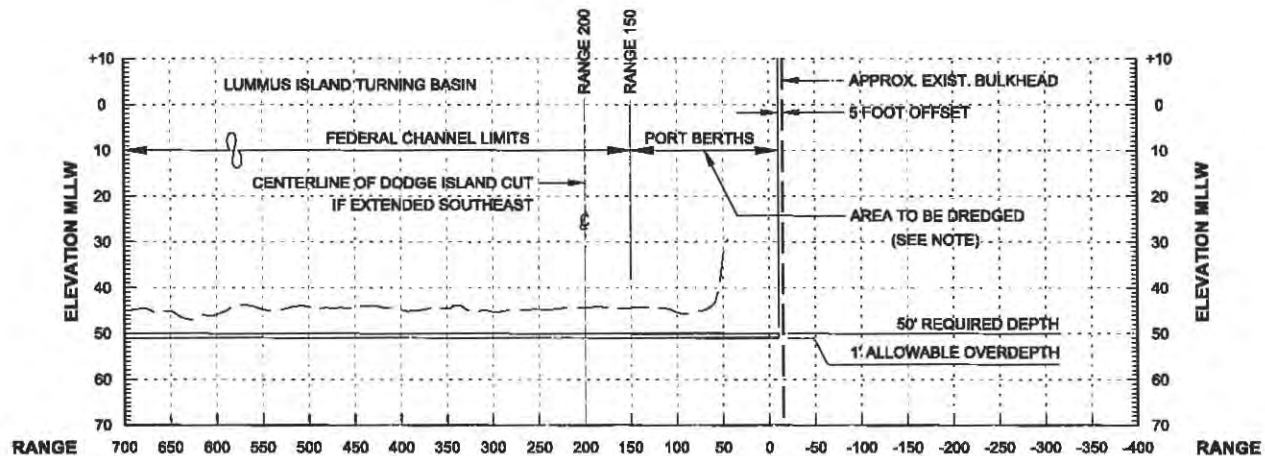
PLATE  
C-50

PERMIT # 305721



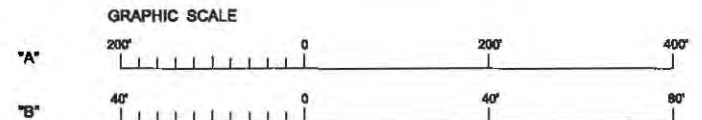


**S**  
C-47  
**TYPICAL CROSS SECTION DI 7+00**  
HORZ = SCALE: A  
VERT = SCALE: B



**R**  
C-47  
**TYPICAL CROSS SECTION LITB 10+00**  
HORZ = SCALE: A  
VERT = SCALE: B

NOTE:  
1. SEE DETAIL ON PLATE C-50.



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MR2  
Ckd by:  
LRP  
Dated:  
JANUARY 2011

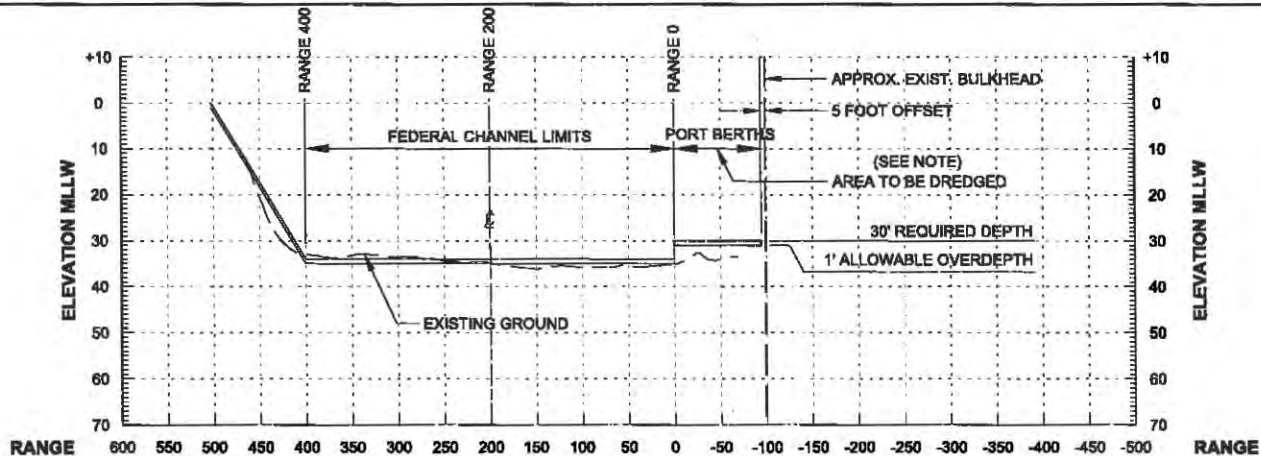
MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
BERTHING AREAS  
TYPICAL CROSS SECTIONS

PLATE

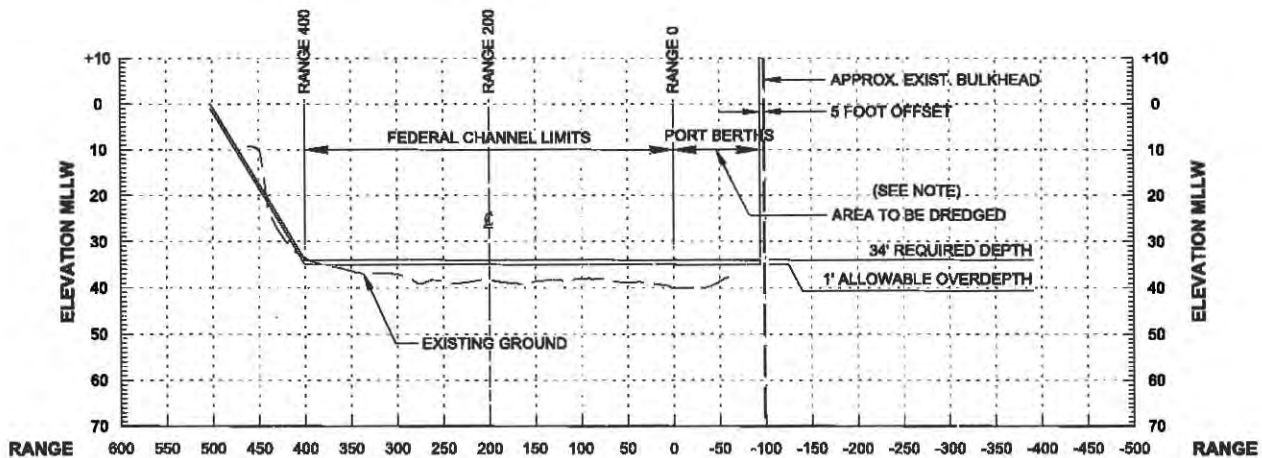
C-51

PERMIT # 305721001





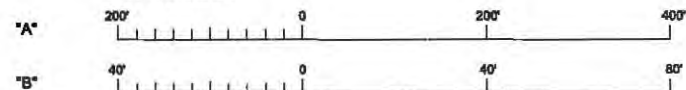
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C-48 **TYPICAL CROSS SECTION DI 7+00**  
HORZ = SCALE: A  
VERT = SCALE: B



**T**  
C-48 **TYPICAL CROSS SECTION DI 7+00**  
HORZ = SCALE: A  
VERT = SCALE: B

NOTE:  
1. SEE DETAIL ON PLATE C-50.

GRAPHIC SCALE



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DEPARTMENT OF THE ARMY  
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JACKSONVILLE, FLORIDA

Desn by:  
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MR2  
Ckd by:  
LRP  
Dated: JAN 2011  
Revised: OCT 2011

MIAMI HARBOR, FLORIDA  
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING  
WQC PERMIT PLATE  
BERTHING AREAS  
TYPICAL CROSS SECTIONS

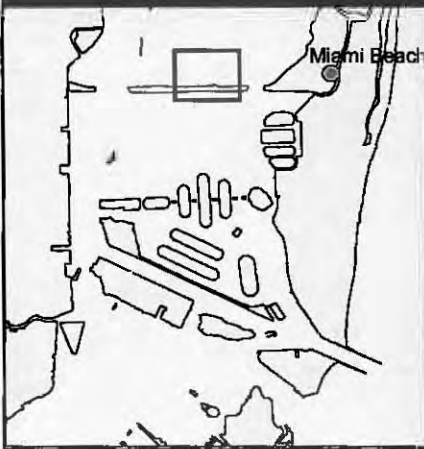
PLATE

C-52

PERMIT # 305721001 PERMIT # 305721001

# Legend

- 3-foot contour
- 5-foot contour
- 15-foot contour

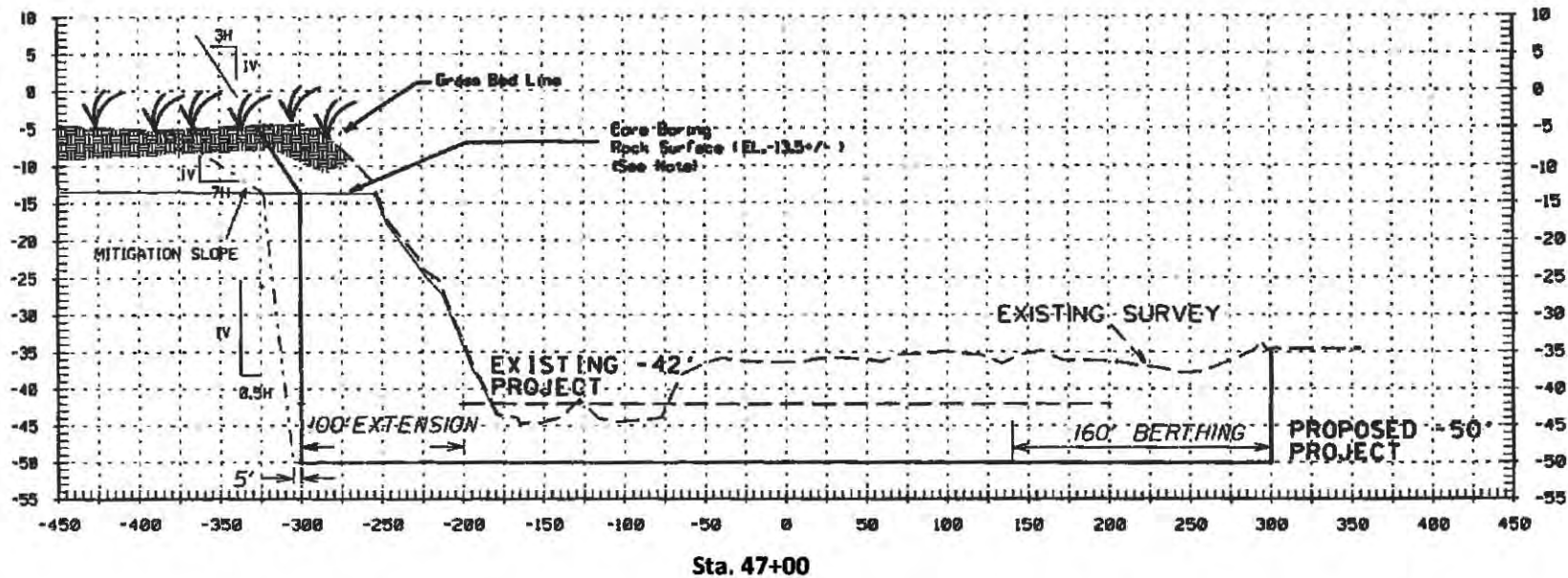


Seagrass Mitigation Site Details		US Army Corps of Engineers Jacksonville District
Detailed Mitigation Plan		
Miami Harbor Phase III Federal Expansion and Maintenance Dredging		
Appendix B	Figure 1	
Scale: As Shown		

PERMIT # 805721001


SOUTH

NORTH



NOTE: Approximate rock elevations estimated from core borings located in the vicinity of the typical sections. The approximate average elevation along Fisherman's Channel is estimated at El. -13 MLLW

Fisherman's Channel Typical Section	
Detailed Mitigation Plan	
Miami Harbor Phase III Federal Expansion and Maintenance Dredging	
Appendix B	Figure 2
Scale: As Shown	



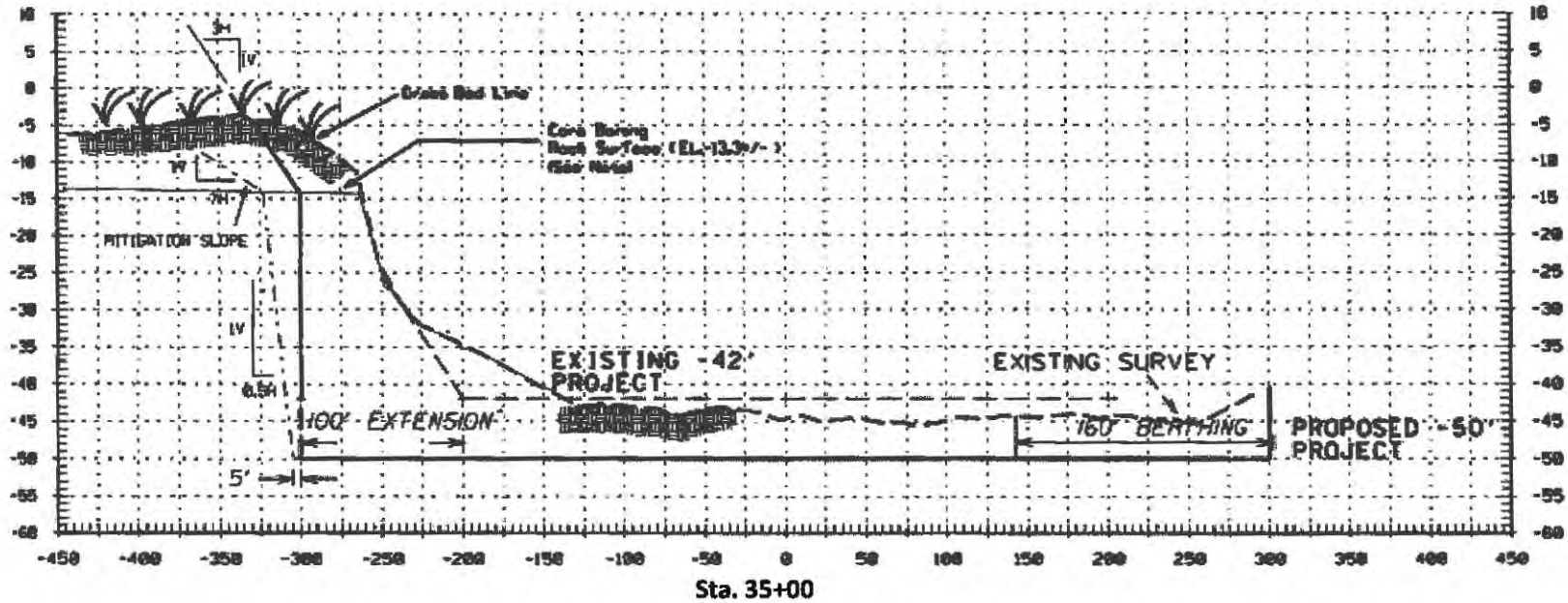
US Army Corps of Engineers  
Jacksonville District

PERMIT # 305721001




SOUTH

NORTH



NOTE: Approximate rock elevations estimated from core borings located in the vicinity of the typical sections. The approximate average elevation along Fisherman's Channel is estimated at El. -13 MLLW

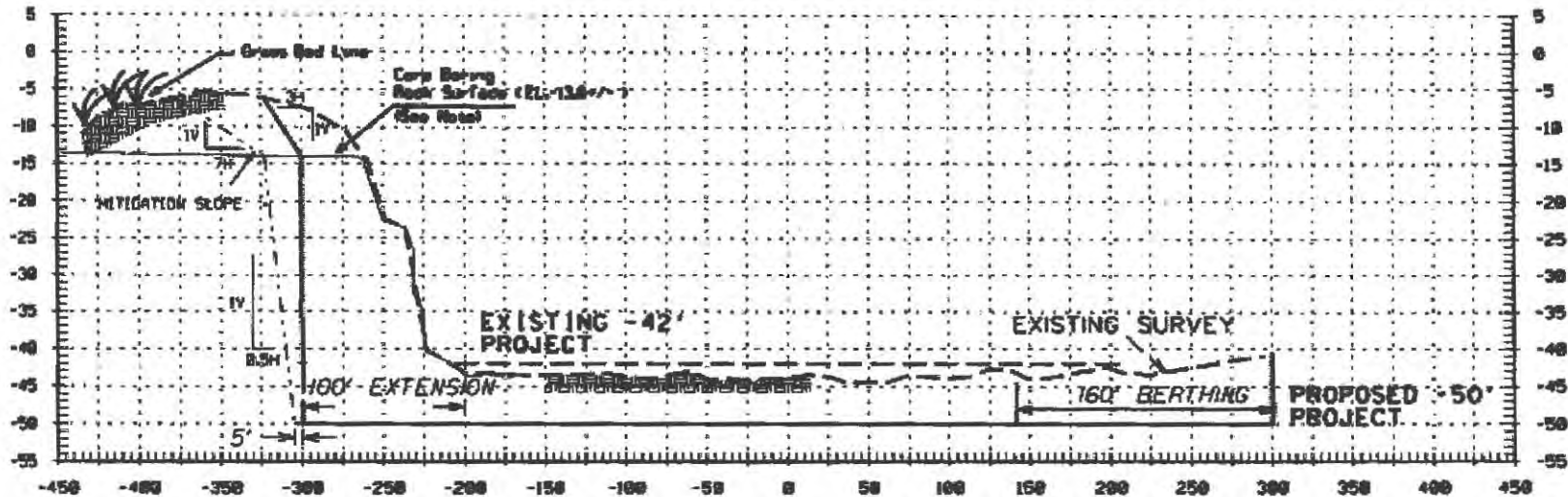
Fisherman's Channel Typical Section		 US Army Corps of Engineers Jacksonville District
Detailed Mitigation Plan		
Miami Harbor Phase III Federal Expansion and Maintenance Dredging		
Appendix B	Figure 3	
Scale: As Shown		

PERMIT # 305721001




SOUTH

NORTH



Sta. 28+00

NOTE: Approximate rock elevations estimated from core borings located in the vicinity of the typical sections. The approximate average elevation along Fisherman's Channel is estimated at El. -13 MLLW

Fisherman's Channel Typical Section		 US Army Corps of Engineers Jacksonville District
Detailed Mitigation Plan		
Miami Harbor Phase III Federal Expansion and Maintenance Dredging		
Appendix B	Figure 4	
Scale: As Shown		

PERMIT # 805721001