

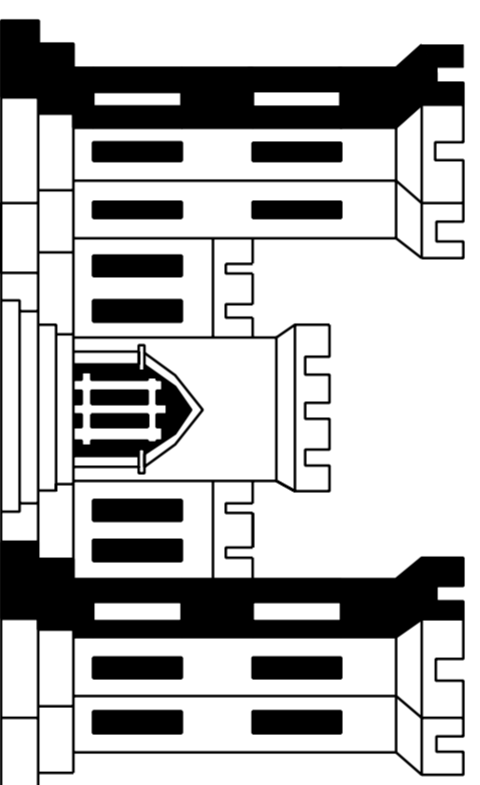
SAFETY ON THIS JOB  
DEPENDS ON YOU

VIRGINIA KEY

DADE COUNTY, FLORIDA

PLANS  
FOR

SHORELINE STABILIZATION  
PROJECT



DEPARTMENT OF THE ARMY

JACKSONVILLE DISTRICT, CORPS OF ENGINEERS

JACKSONVILLE, FLORIDA

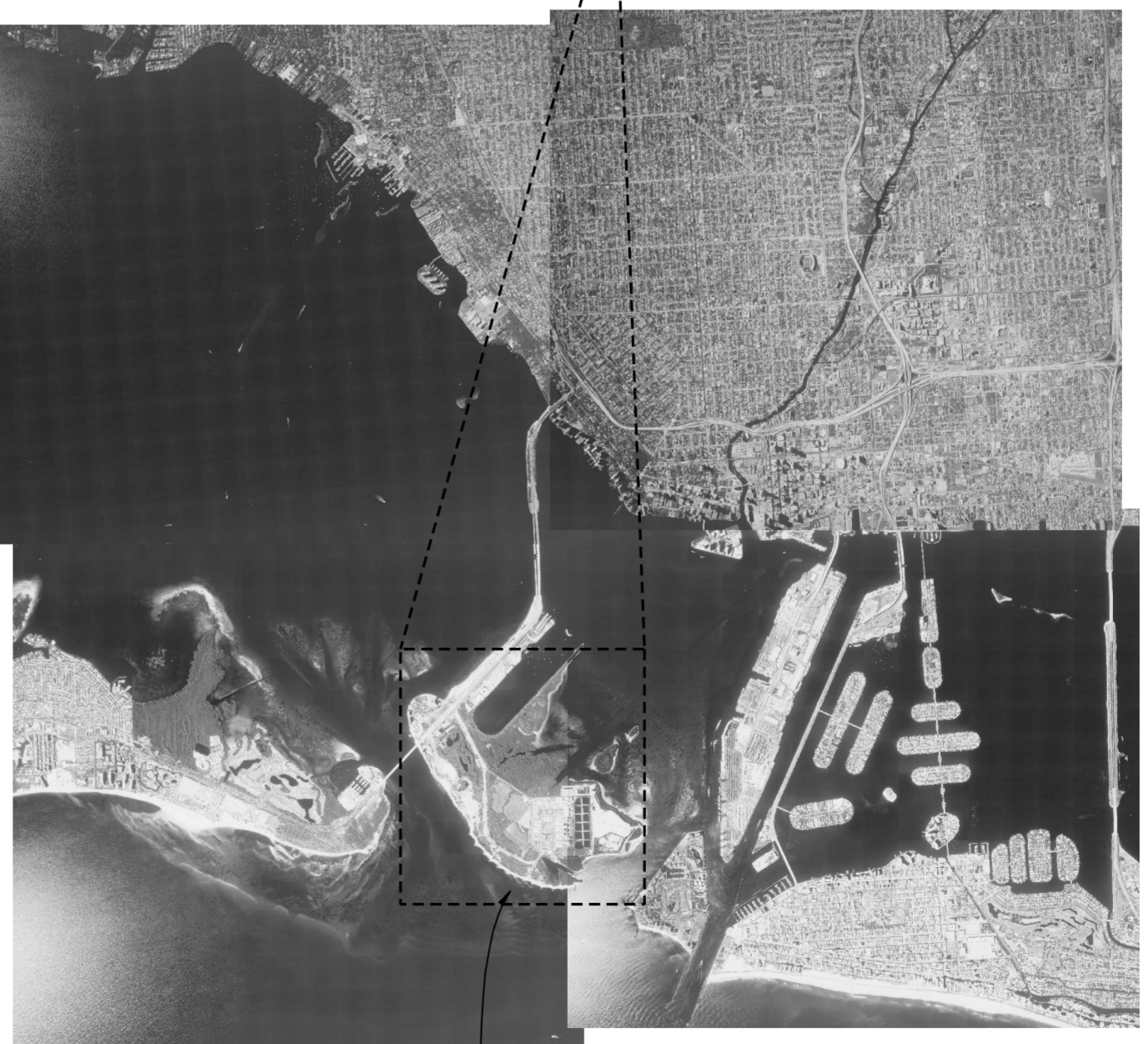
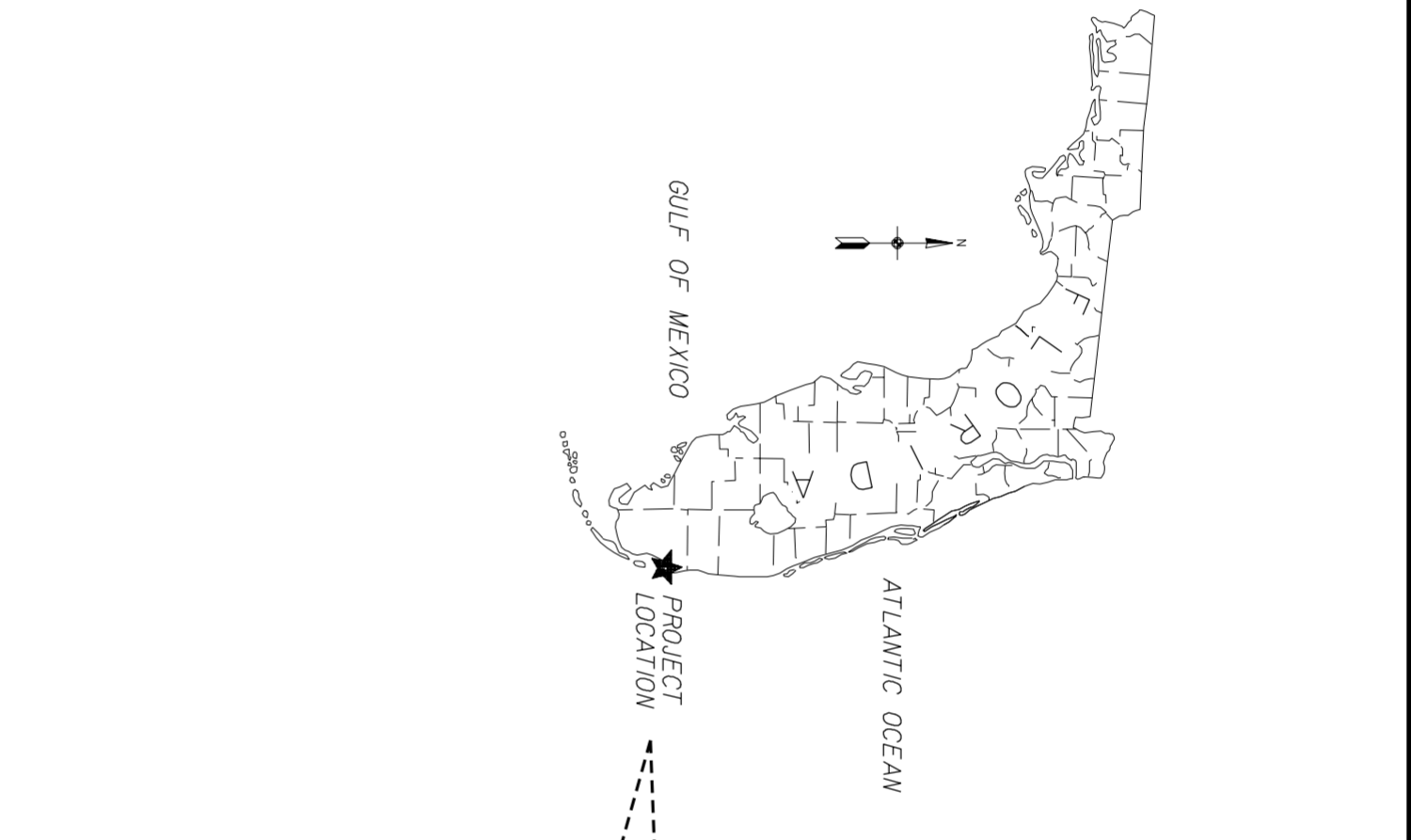
TO ACCOMPANY SOLICITATION  
NO. DACW17-02-R-0023

2002

Ⓢ "INCREASE PROFIT -- SUBMIT VECPS"

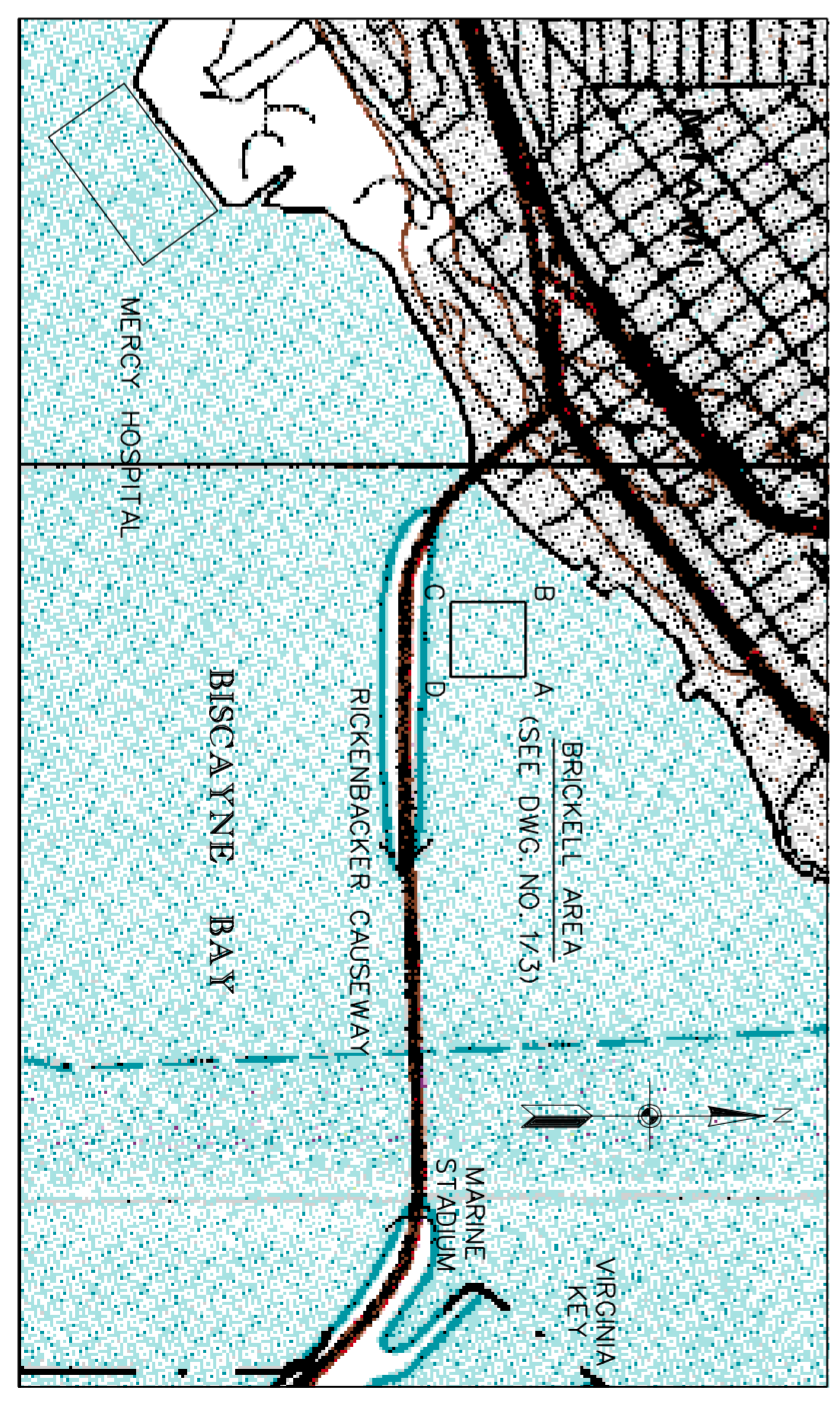
D. O. FILE NO. 24-38,277

DWG NO.	TITLE
<b>DRAWING INDEX</b>	
<b>GENERAL</b>	
1/1	INDEX AND LOCATION MAP
1/2	PROJECT LAYOUT
1/3	CONTROL DATA AND TYPICAL SECTION
<b>PLAN</b>	
2/1	AERIAL PHOTO PLAN NO. 1
2/2	AERIAL PHOTO PLAN NO. 2
<b>TIMBER GROINS</b>	
3/1	GROIN DETAILS
3/2	GROIN DATA
3/3	GROIN A,B, AND C
3/4	EXISTING AND PROPOSED PROFILES / GROIN NO. 1 THRU NO. 6
3/5	EXISTING AND PROPOSED PROFILES / GROIN NO. 7 THRU NO. 12
3/6	EXISTING AND PROPOSED PROFILES / GROIN NO. 13 THRU NO. 18
3/7	EXISTING AND PROPOSED PROFILES / GROIN NO. 19 THRU NO. 24
3/8	EXISTING AND PROPOSED PROFILE / GROIN NO. 25
<b>BEACH PROFILES WITH SAND DUNE</b>	
4/1	BEACH AERIAL PHOTO PLAN
4/2	STA. 0+00 THRU STA. 5+00
4/3	STA. 6+50 THRU STA. 13+15
4/4	SAND DUNE LOCATION PLAN
<b>BORROW AREAS</b>	
5/1	GROSS SECTIONS OF BORROW MOUND 2
5/2	GROSS SECTIONS OF BORROW MOUND 1



No.	Symbol	Zone	Description	Approved

**LOCATION MAP**



File name: VKRPR101.DGN  
 Reference files: BRDR.DGN  
 BRICK.TIF  
 GNE.TIF  
 GSW.TIF  
 GSE.TIF  
 GSW3.TIF

Designed by: B.N.H.  
 Date: XX XXX XXXX  
 Scale: AS SHOWN  
 Plot date:  
 Plot scale:  
 Dated: FEBRUARY 2002  
**D.O. FILE NO. 24-38,277**

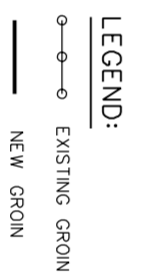
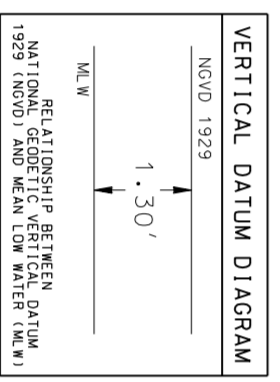
DEPARTMENT OF THE ARMY  
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
 JACKSONVILLE, FLORIDA

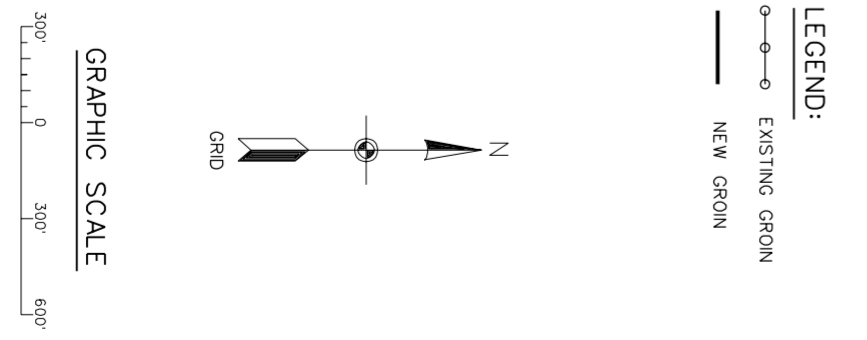
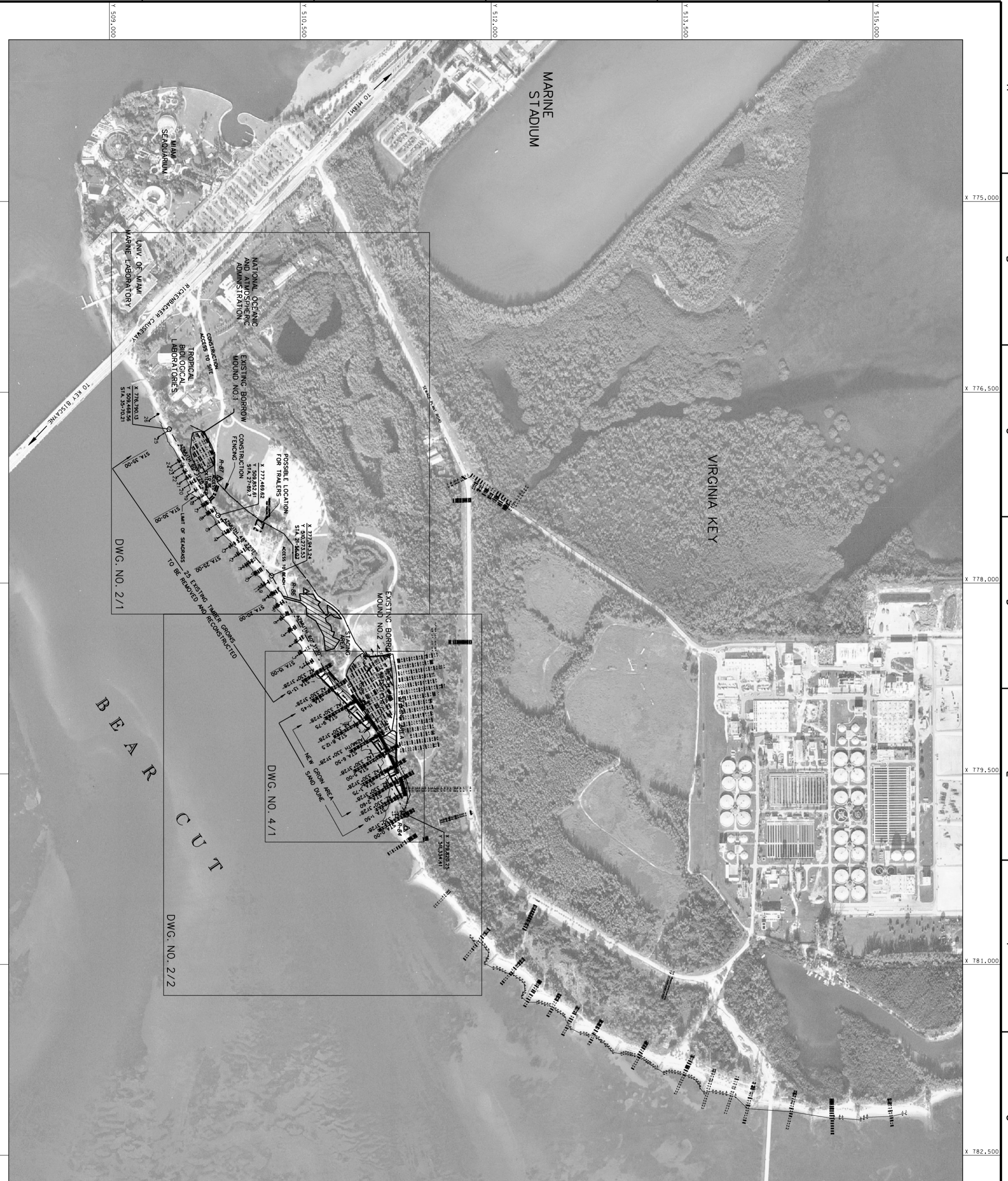
**US Army Corps of Engineers**  
 Jacksonville District  
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VIRGINIA KEY  
 DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
 GENERAL  
 INDEX AND LOCATION MAP

DRAWING NO.  
**1/1**

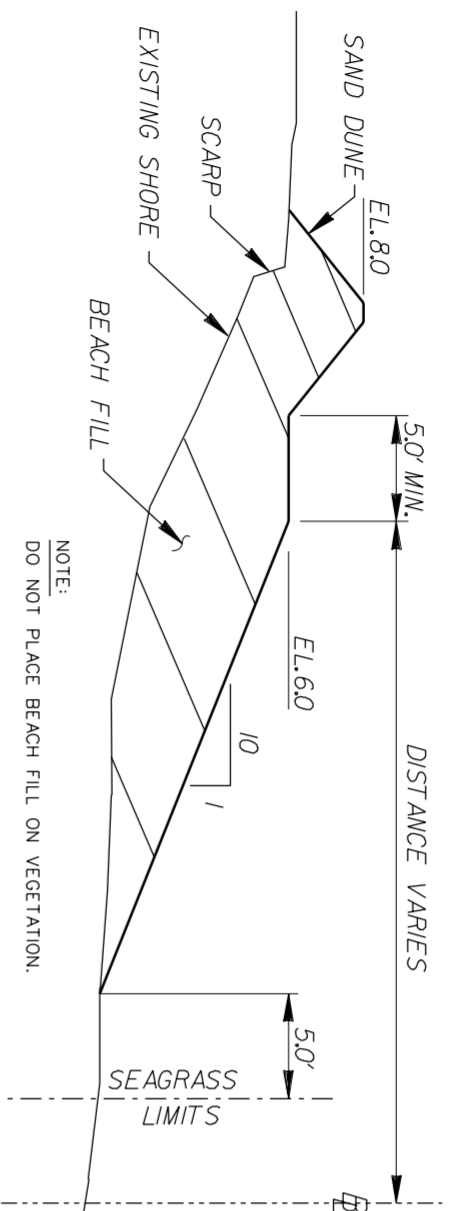
- SURVEY NOTES:**
- REFER TO SURVEY NO. 01-209.
  - THIS TOPOGRAPHIC/CHRODROGRAPHIC SURVEY WAS PERFORMED IN SEPTEMBER AND OCTOBER, 2001.
  - ALL AZIMUTHS ARE GRID, RECKONED CLOCKWISE FROM SOUTH.
  - THE COORDINATES SHOWN HEREON ARE IN FEET AND ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE (0901), TRANSVERSE MERCATOR PROJECTION, NORTH AMERICAN DATUM, 1927 (NAD27).
  - VERTICAL DATUMS REFERENCES MEAN LOW WATER WHICH IS 1.30 FEET BELOW THE NATIONAL GEODETIC VERTICAL DATUM (1929) AND ARE BELOW THE REFERENCE PLANE UNLESS PRECEDED BY A PLUS SIGN.
  - GROSS SECTIONS SHOWN HEREON WERE MADE BY REAL TIME KINEMATIC (RTK) GLOBAL POSITIONS SYSTEMS (GPS) COMBINED WITH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
  - UNDERGROUND IMPROVEMENTS OR UTILITIES WERE NOT LOCATED AS PART OF THIS SURVEY AND SHOULD BE FIELD VERIFIED PRIOR TO ANY DREDGING AND/OR CONSTRUCTION.
  - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF THE SURVEY ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME.
  - IMAGES SHOWN HEREON WERE PROVIDED BY THE UNITED STATES ARMY CORPS OF ENGINEERS.
  - REFER TO FIELD BOOK NUMBER - 2002 DADE COUNTY  
 NO. 467  
 NO. 468  
 NO. 469  
 NO. 470  
 NO. 471
  - REFER TO RAW FIELD DATA:  
 A. APP COMPUTER FILES: C20951-C209515.DGN  
 B. RTK DATA COLLECTOR FILE 3207-0C



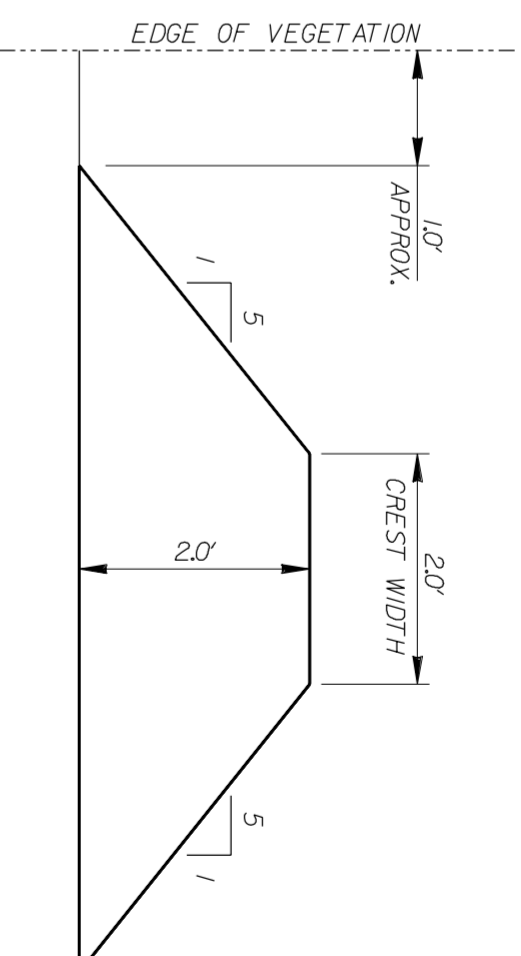


DRAWING NO.  <b>1/2</b>	VIRGINIA KEY DADE COUNTY, FLORIDA <b>SHORELINE STABILIZATION PROJECT</b> GENERAL PROJECT LAYOUT	File name: VKRP102.DGN	Designed by: B.N.H.	Inv. No. Date:	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	No.    Symbol    Zone    Description    Approved
		Reference files: C209BRDR.DGN C209CRN.DGN C209TOP.DGN SEAGRASS.DGN V102.DGN VKRP401.DGN GKRP102.TIF	Drawn by: R.L.H.	Ckd by: B.N.H.		
		Dated: FEBRUARY 2002 <b>D.O.F FILE NO. 24-38,277</b>				

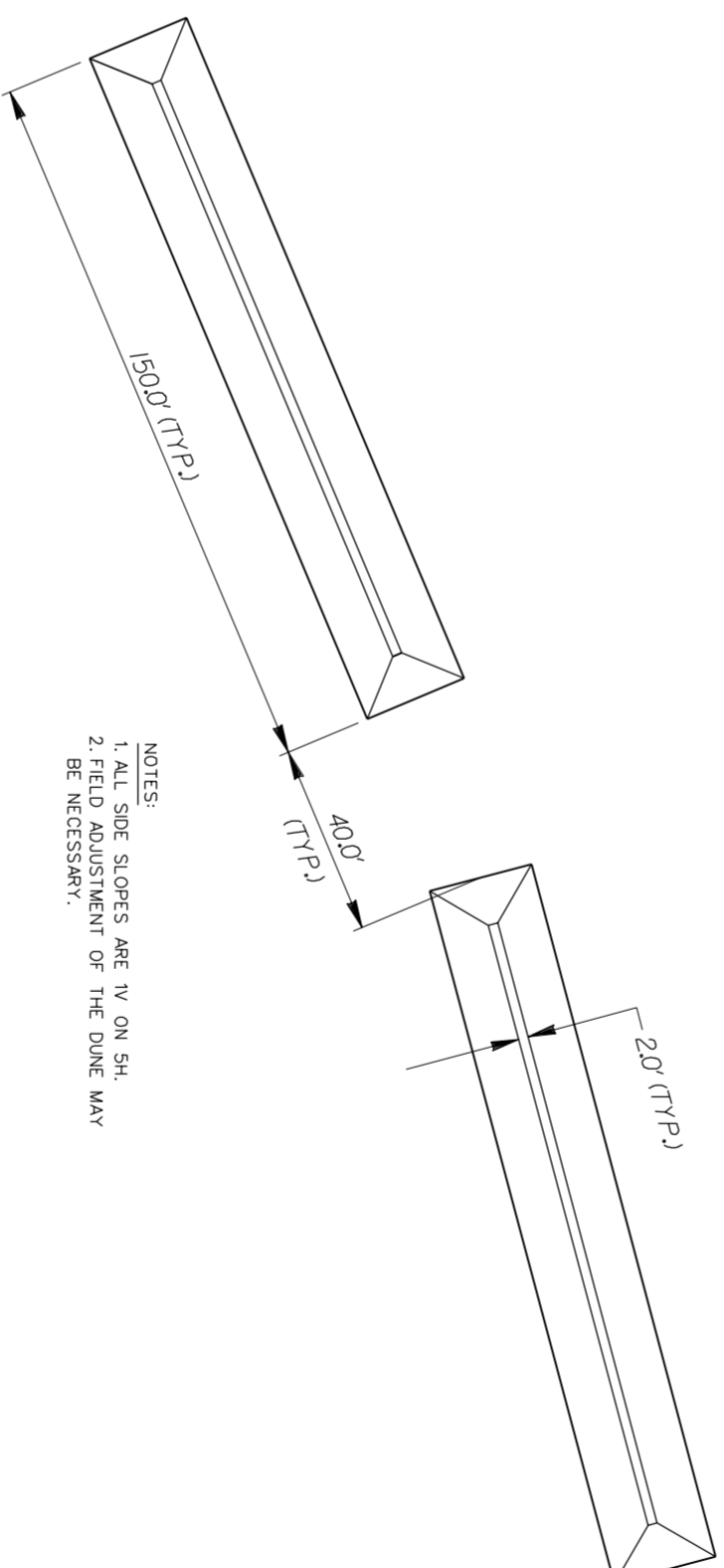
US Army Corps of Engineers  
 Jacksonville District  
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**BEACH FILL - TYPICAL SECTION**  
N.T.S.



**DUNE SECTION**  
N.T.S.



**DUNE SEGMENT PLAN (TYPICAL)**  
N.T.S.

CONTROL MONUMENTS			
NO.	COORDINATES		ELEVATION
	X	Y	NGVD 1929
R-84	779,927.26	511,328.82	5.08
R-85	778,943.69	510,000.51	5.71
R-86	778,065.30	510,539.99	3.36
R-87	777,177.76	509,860.53	5.36

BASELINE			
P.I.	COORDINATES		STATIONS
	X	Y	
1	779,820.25	511,334.41	0+00
2	777,943.24	510,273.53	21+56.07
3	777,469.62	509,852.61	27+89.70
4	776,790.13	509,946.56	35+70.21

BRICKELL OFFSHORE DISPOSAL AREA			
P.I.	COORDINATES		
	X	Y	
A	764,783	515,315	
B	765,996	515,315	
C	765,996	514,535	
D	764,783	514,535	

GROIN FIELD			
GROIN	STATION	REPLACEMENT WEST APPROXIMATE STATION	REMARKS
A	3+75	"	NEW GROIN
B	6+50	"	"
C	9+75	"	"
1	13+15	13+20	EXISTING GROIN
2	14+17	14+22	"
3	15+17	15+22	"
4	16+11	16+16	"
5	17+11	17+16	"
6	18+29	18+34	"
7	19+28	19+33	"
8	20+29	20+34	"
9	21+25	21+30	"
10	22+46	22+51	"
11	23+44	23+49	"
12	24+49	24+54	"
13	25+37	25+42	"
14	26+44	26+49	"
15	27+47	27+52	"
16	28+42	28+47	"
17	29+16	29+21	"
18	29+85	29+90	"
19	30+49	30+54	"
20	31+14	31+19	"
21	31+65	31+70	"
22	32+17	32+22	"
23	32+66	32+71	"
24	33+13	33+18	"
25	35+64	35+69	"

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
GENERAL CONTROL DATA AND TYPICAL SECTIONS

DRAWING NO. 1/3

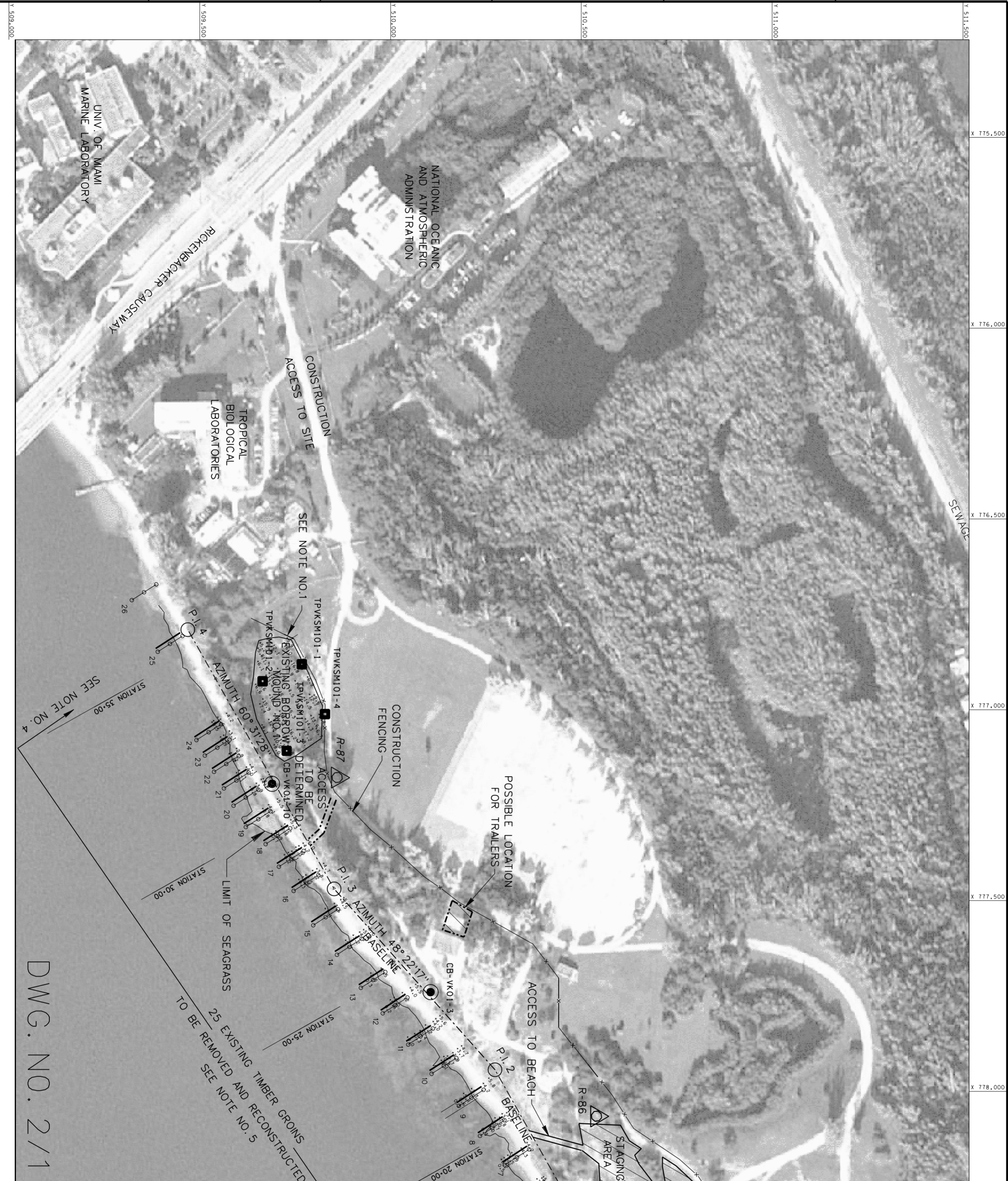
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Reference files: BRDR.DGN

Designed by: B.N.H.  
Dwn by: R.L.H.  
Ckd by: B.N.H.  
Date: [blank]  
Scale: AS SHOWN  
Plot date: [blank]  
Plot scale: [blank]  
Dated: FEBRUARY 2002  
**D.O.F FILE NO. 24-38,277**

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

No.	Symbol	Zone	Description	Approved

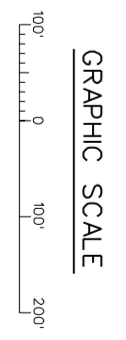
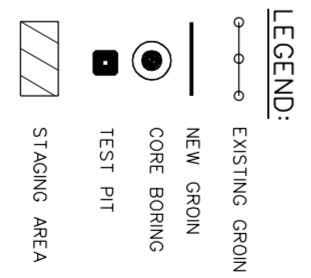
**U.S. Army Corps of Engineers**  
Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU



DWG. NO. 2/1

MATCH LINE DRAWING NO. 2/2

- NOTES:
1. CONSTRUCTION FENCING SHALL BE INTO EXISTING FENCE.
  2. SURVEY NOTES ARE SHOWN ON DRAWING NO. 1/1.
  3. CONTROL DATA IS SHOWN ON DRAWING NO. 1/2.
  4. GROIN CONSTRUCTION SHALL BEGIN FROM THE WEST (GROIN 29) AND PROCEED EASTWARD.
  5. FOR ACTUAL LOCATION OF EXISTING AND PROPOSED GROINS SEE DRAWING SERIES 3.



DRAWING NO. <b>2/1</b>	VIRGINIA KEY DADE COUNTY, FLORIDA <b>SHORELINE STABILIZATION PROJECT</b> PLAN AERIAL PHOTO PLAN NO.1	File name: VKRRP201.DGN	Designed by: B.N.H.	Inv. No. Date:	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	No. Symbol Zone Description Approved
		Reference files: BRDR.DGN SEAGRASS.DGN VKRRP2.DGN V209GRN.DGN V10PO.DGN VGRID.DGN VKRRCS.DGN GVKRRP201.TF	Dwn by: R.L.H.	Ckd by: B.N.H.		

US Army Corps of Engineers  
 Jacksonville District  
 SAFETY ON THIS JOB DEPENDS ON YOU

A B C D E F G H

1 2 3 4 5 6

X 775,500  
 X 776,000  
 X 776,500  
 X 777,000  
 X 777,500  
 X 778,000

Y 509,000  
 Y 509,500  
 Y 510,000  
 Y 510,500  
 Y 511,000  
 Y 511,500

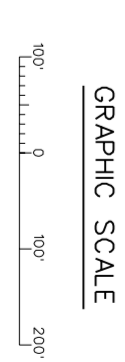
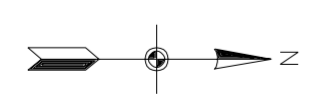


MATCH LINE DRAWING NO. 2/1

25 EXISTING TIMBER GROINS  
TO BE REMOVED AND RECONSTRUCTED  
SEE NOTE NO. 4

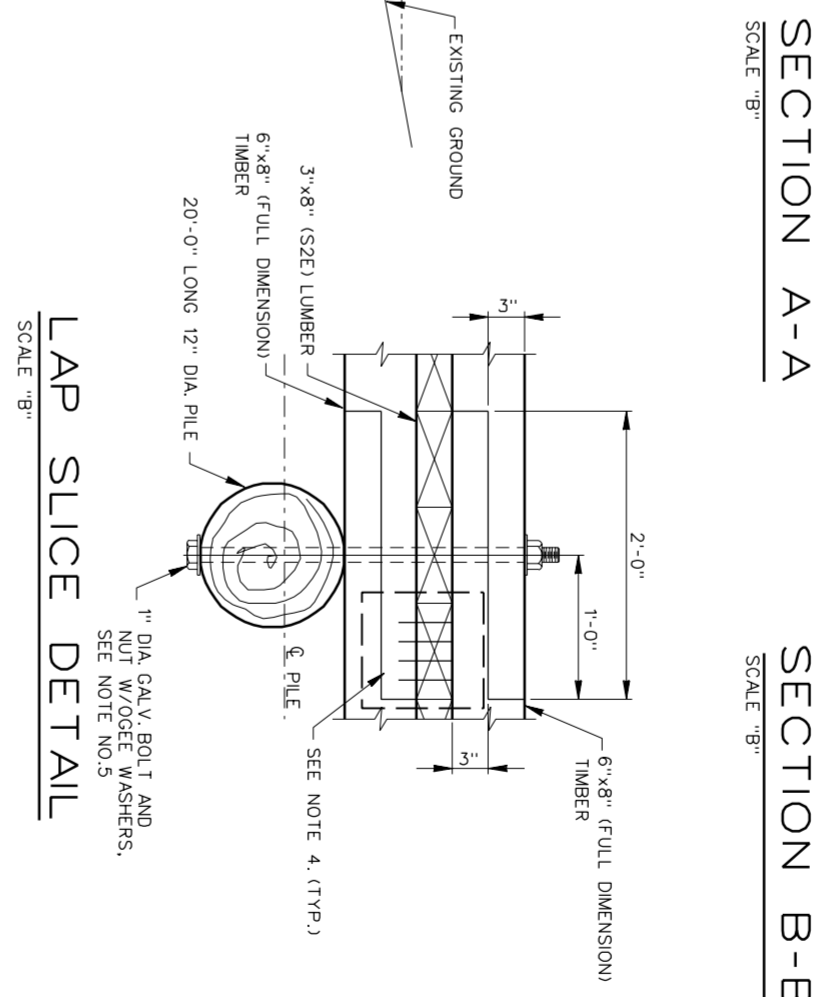
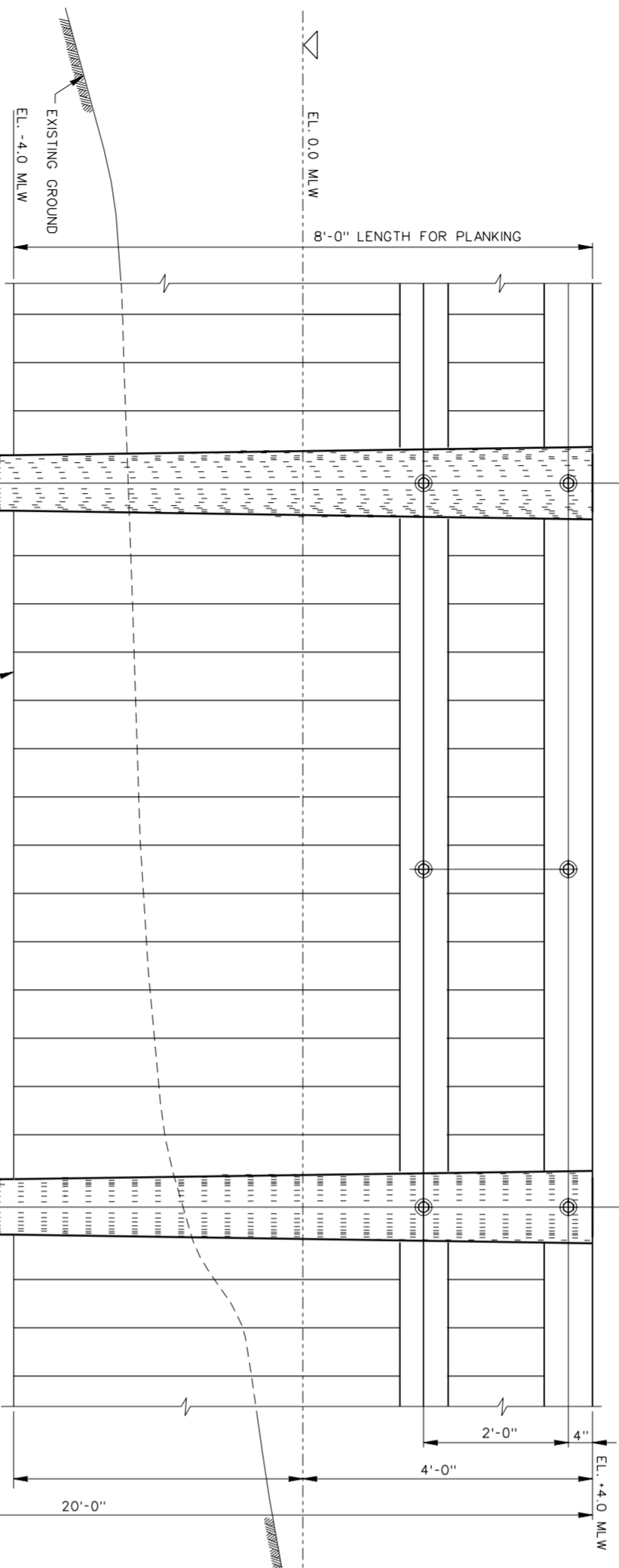
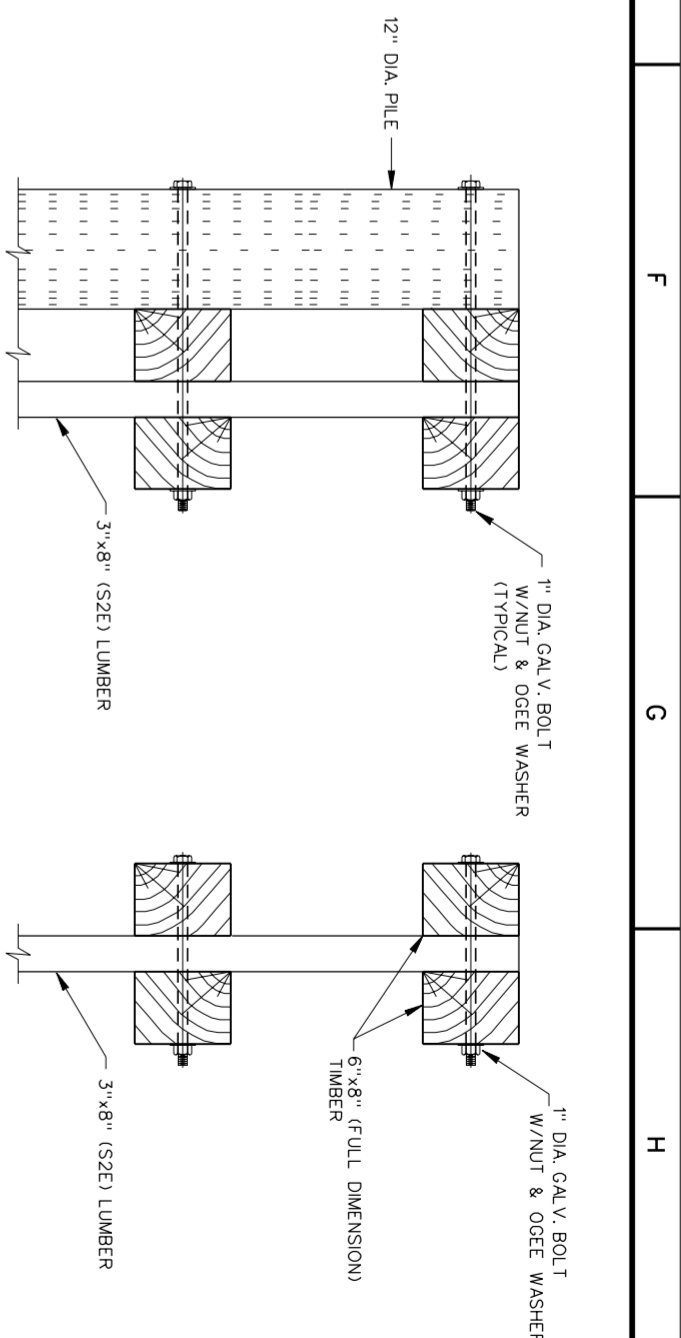
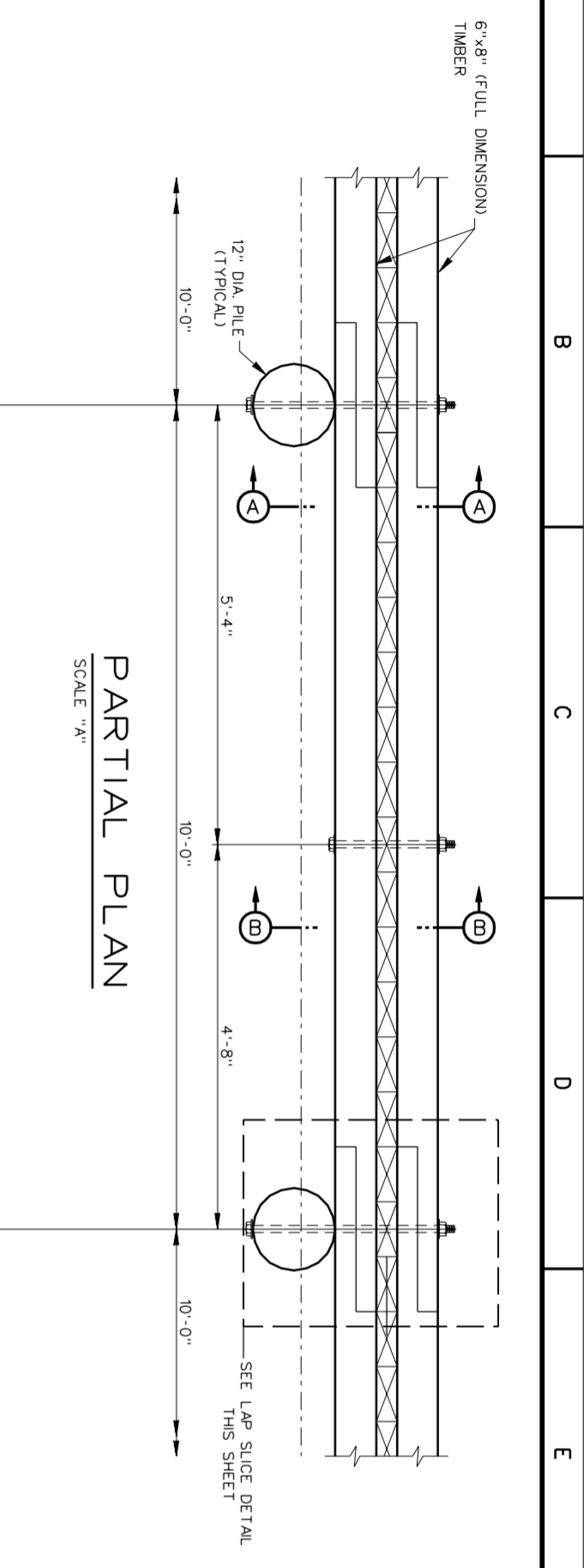
- NOTES:**
1. SURVEY NOTES ARE SHOWN ON DRAWING NO. 1/1.
  2. CONTROL DATA IS SHOWN ON DRAWING NO. 1/3.
  3. THE NURSERY AREA WILL BE IN USE BY OTHERS DURING CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALLOW ACCESS TO THE NURSERY AREA THROUGH FENCING OR PLACE CONSTRUCTION FENCING TO NOT PROHIBIT ACCESS.
  4. FOR ACTUAL LOCATION OF EXISTING AND PROPOSED GROINS, SEE DRAWING SERIES 3.

- LEGEND:**
- EXISTING GROIN
  - NEW GROIN
  - CORE BORING
  - TEST PIT
  - ▨ STAGING AREA



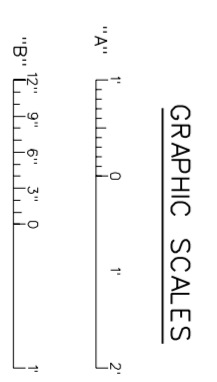
GRAPHIC SCALE

DRAWING NO. <b>2/2</b>	VIRGINIA KEY DADE COUNTY, FLORIDA <b>SHORELINE STABILIZATION PROJECT</b> PLAN AERIAL PHOTO PLAN NO. 2	File name: VKRP202.DGN Reference files: BRDR.DGN, V102.DGN, VKRP401.DGN, V205CR.DGN, VDRD.DGN, SEACRASS.DGN, VKRFB.DGN, GVKRP202.TF Designed by: B.N.H. Drawn by: R.L.H. Checked by: B.N.H. Date: FEBRUARY 2002 D.O.F FILE NO. 24-38,277	Inv. No.: Date: Scale: AS SHOWN Plot date: Plot scale:	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	No. Symbol Zone Description Approved
	U.S. Army Corps of Engineers Jacksonville District SAFETY ON THIS JOB DEPENDS ON YOU				



- NOTES:**
1. ALL TIMBER LUMBER AND PILES SHALL BE DUAL TREATED.
  2. ALL BOLTS, NUTS, WASHERS, SCREWS AND NAILS SHALL BE GALVANIZED.
  3. PILE DIAMETER SHALL BE A MINIMUM BUTT DIAMETER MEASURED 3' FROM THE BUTT END.
  4. USE FOUR 30d GALV. NAILS (ANNULAR OR RING SHANK) TO FASTEN VERTICAL PLANKS THAT ARE NOT BOLTED TO TIMBERS, PREDRILL PILOT HOLES (1/16" LESS THAN NAIL DIAMETER) TO PREVENT SPLITTING. OPTION TO USE THREE 6" LENGTH NO. 12 STEEL SQUARE DRIVE PRODUCTION SCREWS.
  5. SEALTITE WASHER HEAD TIMBER BOLT WITH SEALTITE WASHER NUT MAY BE USED INSTEAD OF STD BOLT WITH W/OGEE WASHER AND NUT.
  6. PLANKING FOR WALL SHALL BE CONSTRUCTED ON EAST SIDE OF PILES FOR ALL TIMBER GROINS.

**PARTIAL ELEVATION**  
SCALE "A"



**US Army Corps of Engineers**  
Jacksonville District  
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No.	Symbol	Zone	Description	Approved

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

Designed by: TRM  
Date: AS SHOWN  
Drawn by: R.L.H. Ckd by: B.N.H.  
Scale: AS SHOWN  
Plot date:  
Plot scale:  
Dated: FEBRUARY 2002  
D.O.F FILE NO. 24-38,277

File name: VKRP301.DGN  
Reference files: BRDR.DGN

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
TIMBER GROINS  
GROIN DETAILS

DRAWING NO.  
**3/1**

A B C D E F G H

EXISTING TIMBER GROIN FIELD DATA


TIMBER GROIN NO.	TOTAL VISIBLE LENGTH OF GROIN (FT.)	LENGTH OF TIMBER SECTIONS (FT.)	LENGTH OF KINGPILE SECTIONS (FT.)	MAX. DISTANCE INTO SEAGRASS (FT.)	DAMAGED TIMBER SECTIONS (FT.)	LENGTH OF KINGPILE TO BE REMOVED (FT.)	NUMBER OF KINGPILE TO BE REMOVED (FT.)	LENGTH OF SEAWARD END OF TIMBER GROIN TO BE SHORTENED (FT.)	ADDITIONAL LENGTH ADDED TO LANDWARD END	LENGTH OF TIMBER GROIN TO BE REBUILT (FT.)
TG1	50	50	0	20	40	0	0	20	30	60
TG2	50	50	0	0	50	0	0	0	20	70
TG3	50	50	0	0	30	0	0	0	20	70
TG4	50	50	0	0	40	0	0	0	10	60
TG5	50	50	0	0	10	0	0	0	10	60
TG6	62	50	12	5	20	12	2	0	0	50
TG7	74	50	24	5	20	24	3	0	0	50
TG8	50	50	0	10	40	0	0	10	20	60
TG9	72	60	12	25	40	12	2	20	20	60
TG10	80	80	0	30	40	0	0	30	20	70
TG11	72	60	12	20	40	12	2	10	20	70
TG12	62	50	12	15	30	12	2	10	20	60
TG13	54	30	24	15	10	24	3	0	20	50
TG14	44	20	24	5	0	24	3	(10)	10	40
TG15	54	30	24	0	0	24	3	(10)	0	40
TG16	44	20	24	0	0	24	3	(10)	0	30
TG17	44	20	24	0	0	24	3	(10)	0	30
TG18	40	40	0	0	10	0	0	0	0	40
TG19	30	30	0	0	10	0	0	0	0	30
TG20	30	30	0	0	10	0	0	0	0	30
TG21	30	30	0	0	10	0	0	0	0	30
TG22	30	30	0	0	10	0	0	0	0	30
TG23	30	30	0	0	10	0	0	0	0	30
TG24	40	40	0	0	20	0	0	0	0	40
TG25	30	30	0	0	10	0	0	0	0	30
TOTALS	1222	1030	192		500	192	26	100	220	1190

- NOTE:
- \* DENOTES THAT THE LANDWARD END OF GROIN IS BURIED, AND ADDITIONAL 10 FT. TIMBER SECTIONS MAY EXIST FURTHER LANDWARD.
  - ( ) INDICATES GROINS WHERE TIMBER SECTIONS WILL BE EXTENDED INTO REGIONS WHERE CONCRETE KINGPILE WERE FORMERLY LOCATED.
  - THE MOST SEAWARD PILE OF AN EXISTING GROIN SHOULD SERVE AS A REFERENCE FOR PLACEMENT OF A NEW GROIN.
  - NEW GROINS SHOULD BE ALIGNED PARALLEL TO THE CORRESPONDING EXISTING GROIN.

NEW TIMBER GROINS

TIMBER GROIN NO.	LENGTH OF GROIN (FT.)	ALIGNMENT	BEGINNING POINT
TGA	80	NORMAL TO BASELINE	BEHIND VEGETATION
TGB	100	NORMAL TO BASELINE	BEHIND VEGETATION
TGC	110	NORMAL TO BASELINE	BEHIND VEGETATION
TOTAL	290		

- NOTE:
- ALL 3 NEW TIMBER GROINS ARE NORMAL TO SHORELINE.
  - VEGETATION LINE GENERALLY RUNS ALONG THE SCARP LINE. EACH GROIN ANCHORED INTO THE SCARP BY VARYING AMOUNTS TO PREVENT FLANKING.


**US Army Corps of Engineers**  
 Jacksonville District  
 SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

Inv. No.	Date:
Des. by:	Scale: AS SHOWN
Drawn by:	Plot date:
Reference files:	Plot scale:
File name:	Dated: FEBRUARY 2002

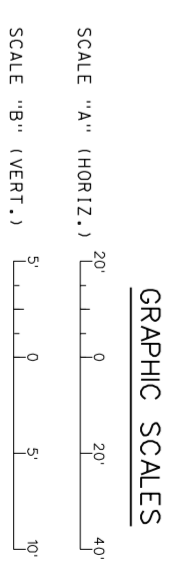
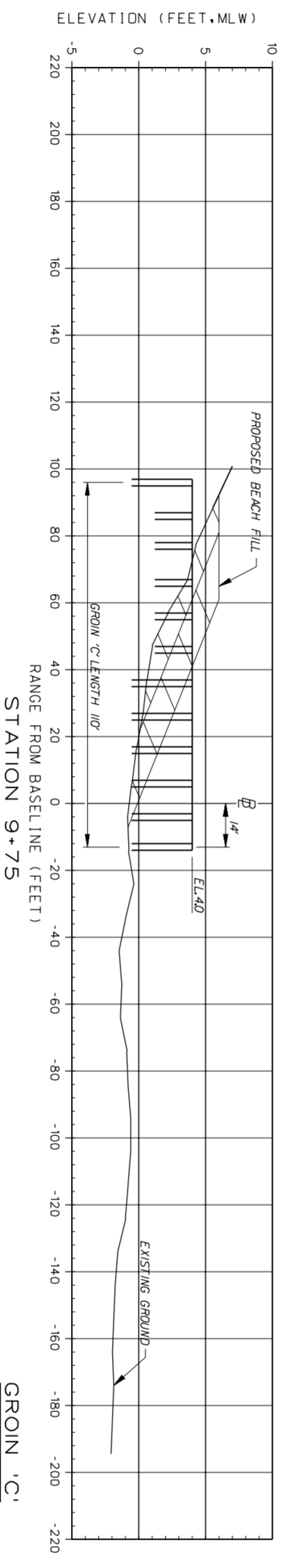
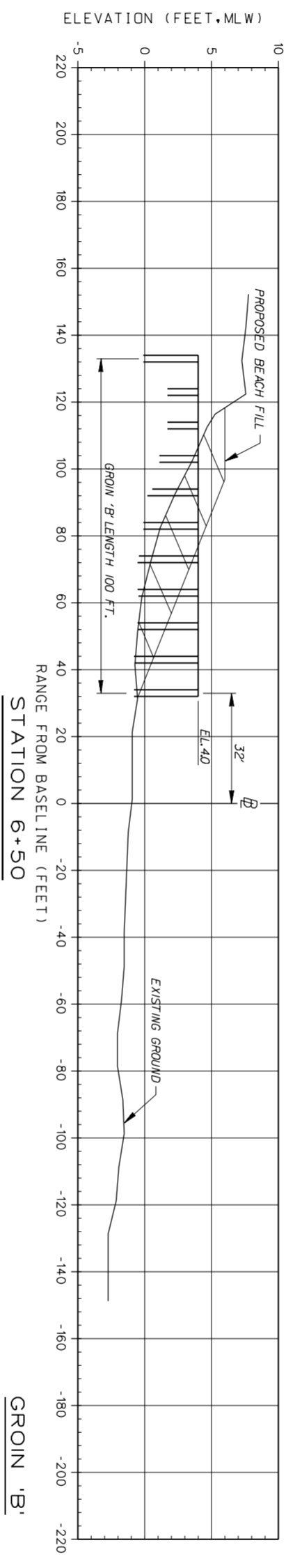
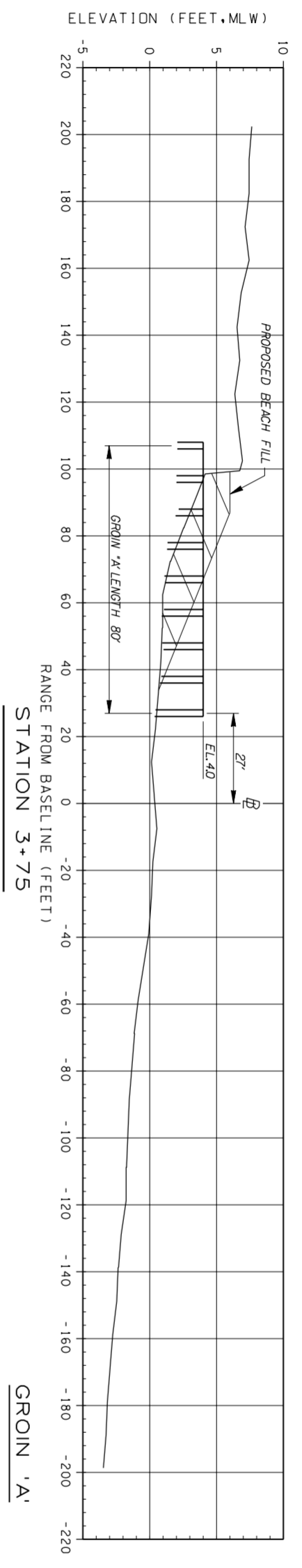
D.O.F FILE NO. 24-38,277

VIRGINIA KEY  
 DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
 TIMBER GROINS  
 GROIN DATA

DRAWING NO.  
**3/2**



A B C D E F G H



**US Army Corps of Engineers**  
 Jacksonville District  
 SAFETY ON THIS JOB  
 DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

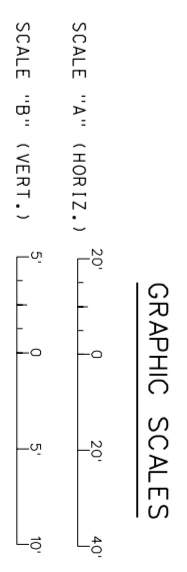
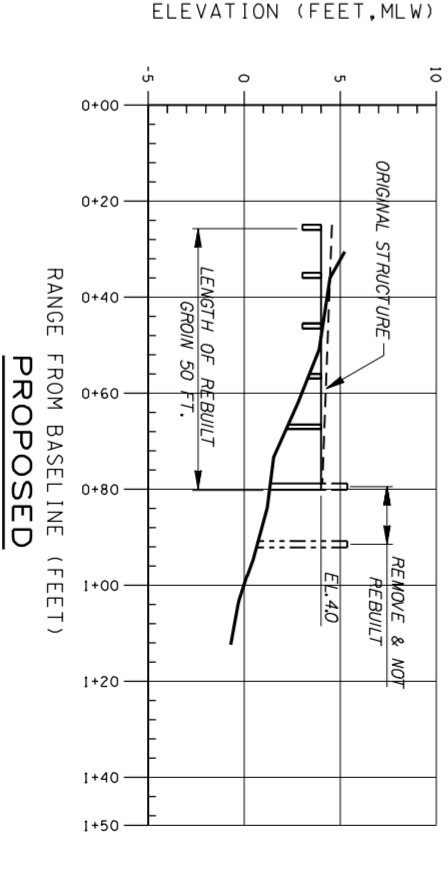
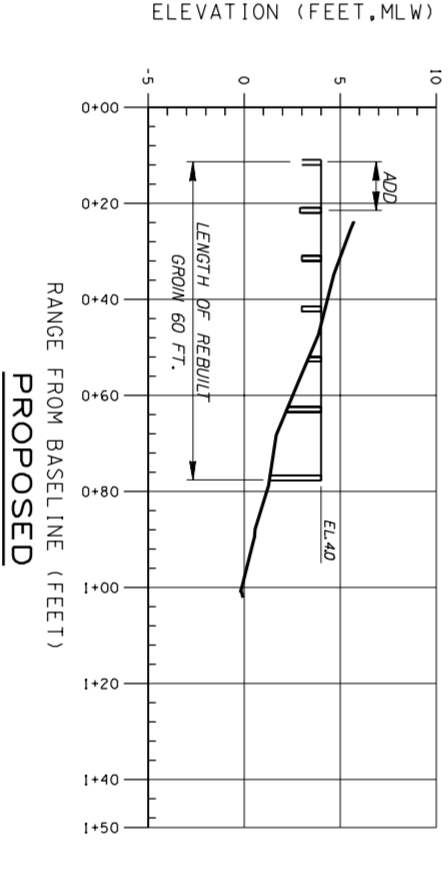
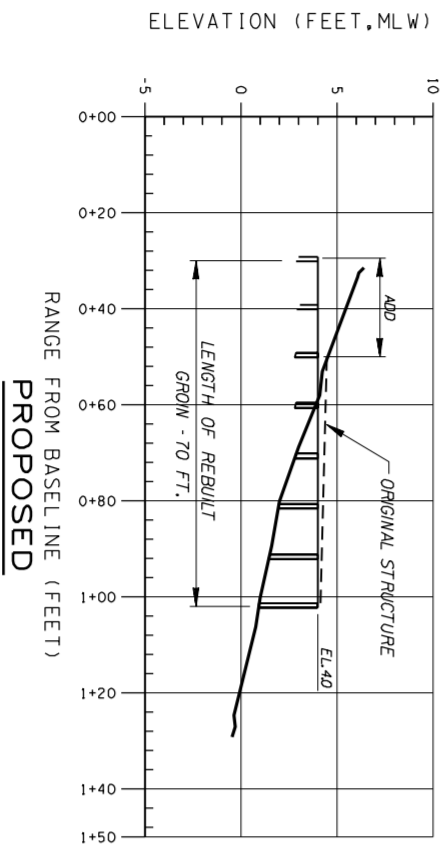
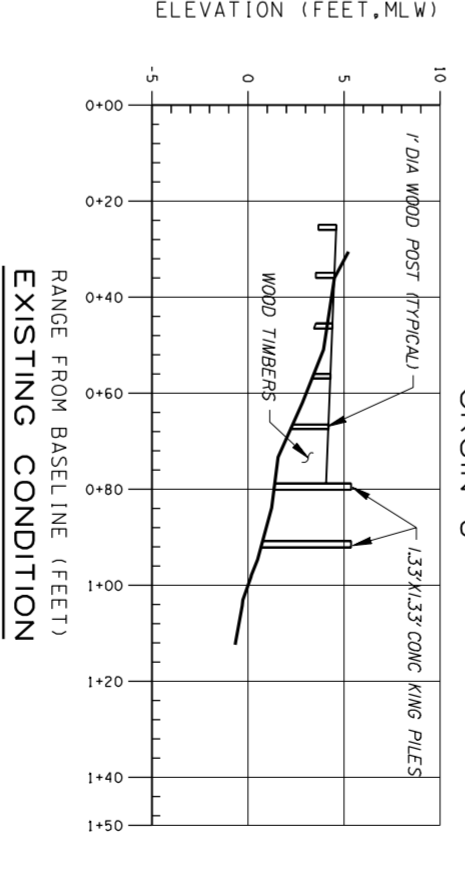
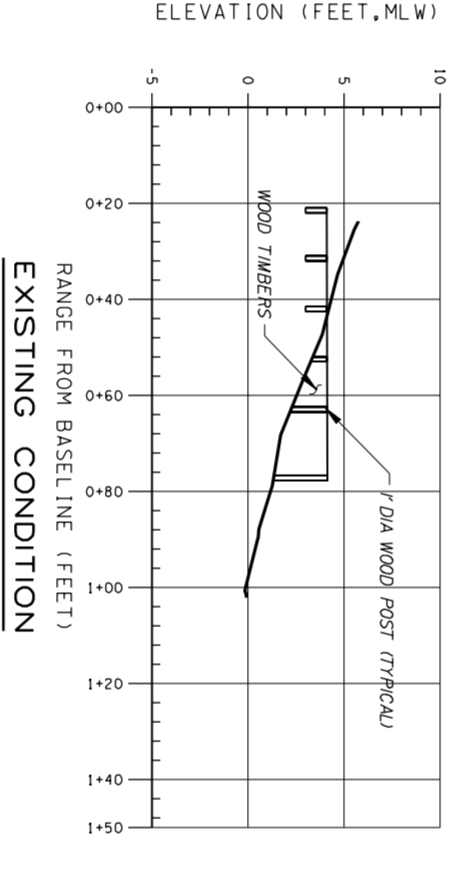
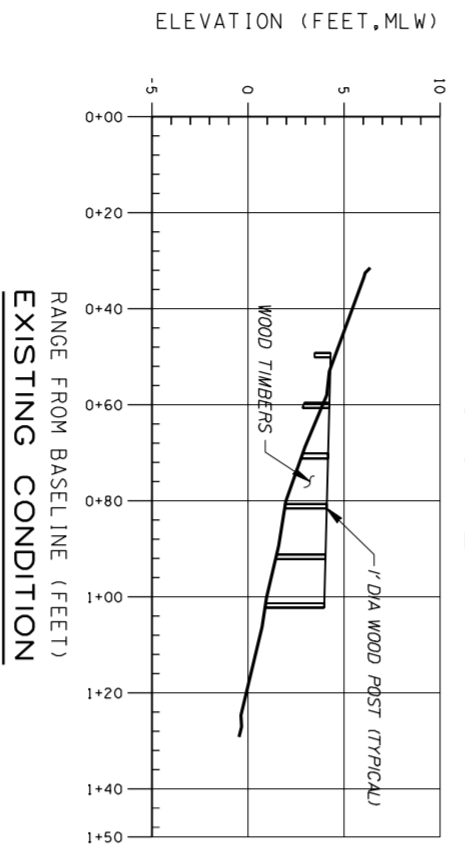
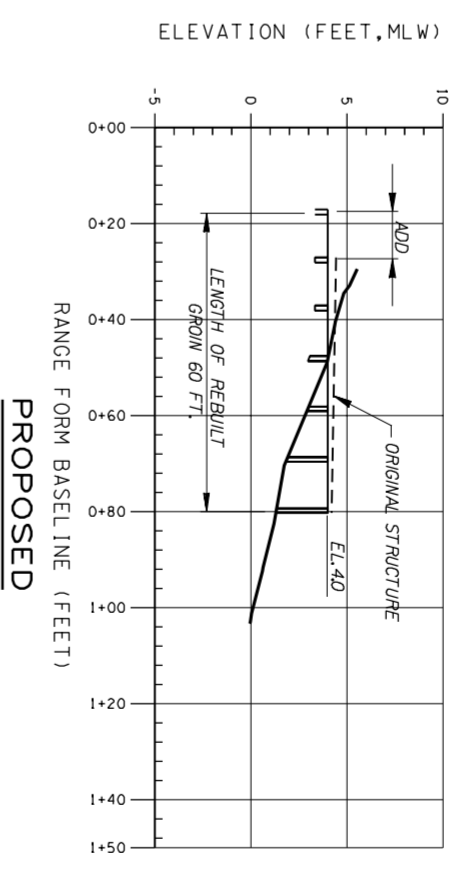
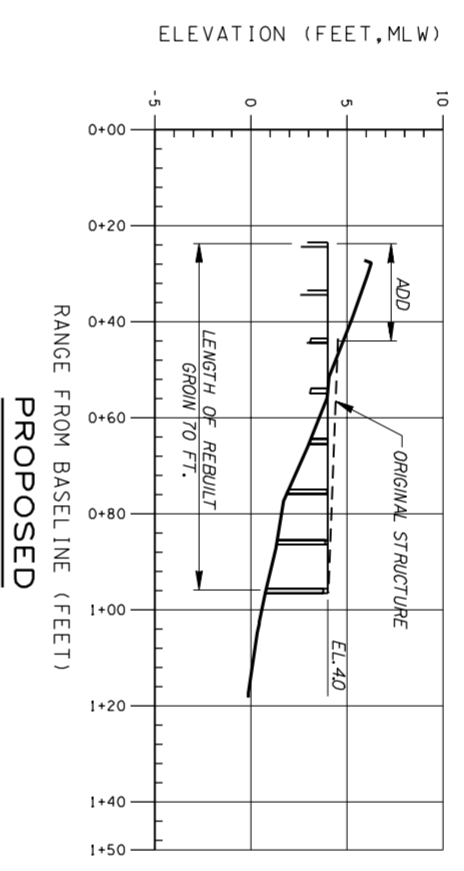
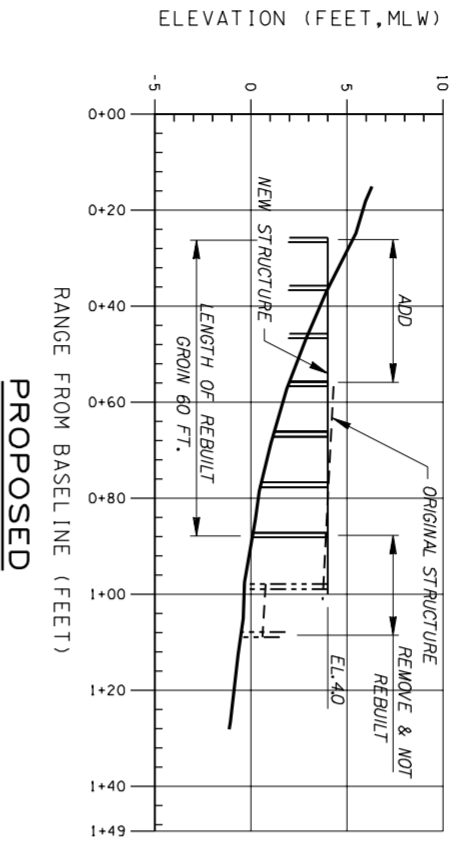
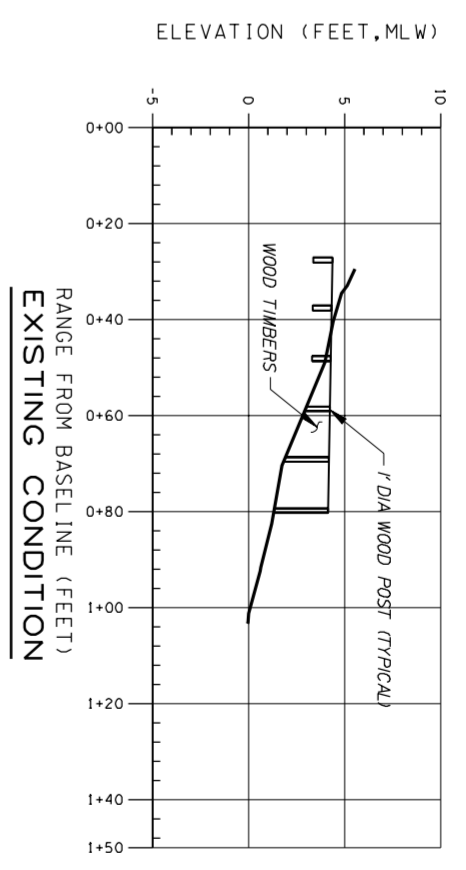
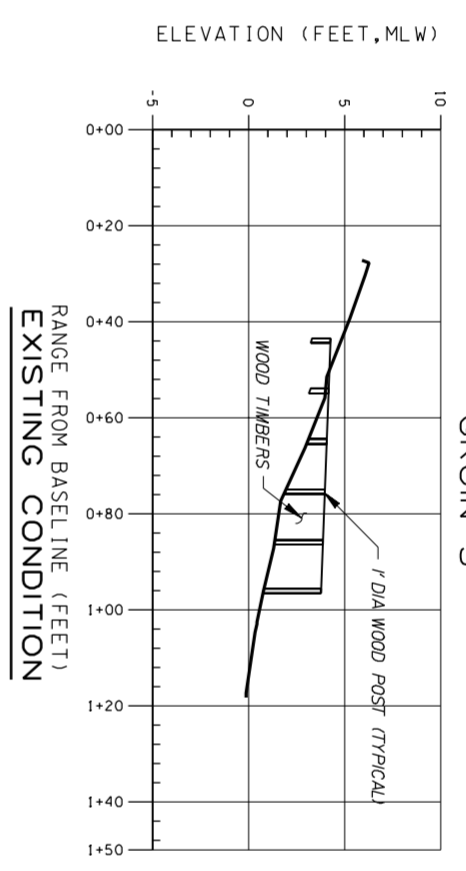
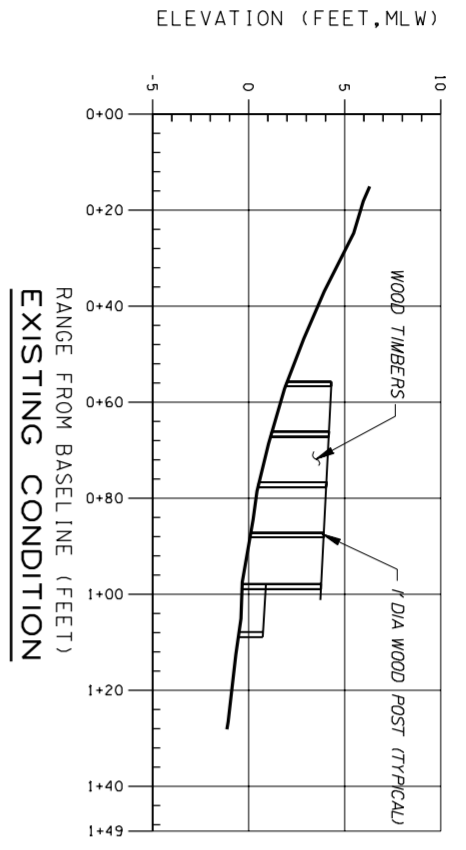
DEPARTMENT OF THE ARMY  
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
 JACKSONVILLE, FLORIDA

File name: VKRP303.DGN  
 Reference files:  
 Designed by: B.N.H.  
 Drawn by: R.L.H.  
 Ckd by: B.N.H.  
 Date: AS SHOWN  
 Scale: AS SHOWN  
 Plot date:  
 Plot scale:  
 Dated: FEBRUARY 2002  
 D.O.F FILE NO. 24-38,277

VIRGINIA KEY  
 DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
 TIMBER GROINS  
 GROINS 'A', 'B' AND 'C'

DRAWING NO.  
**3/3**

A B C D E F G H



US Army Corps of Engineers Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

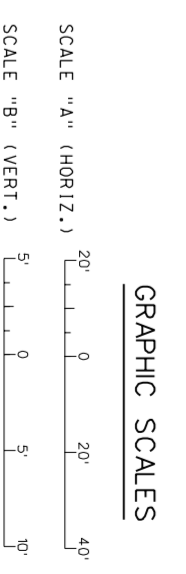
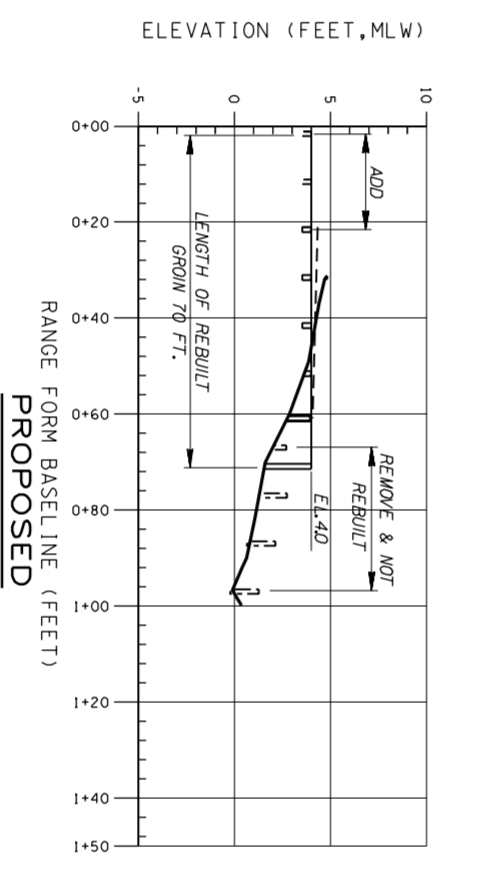
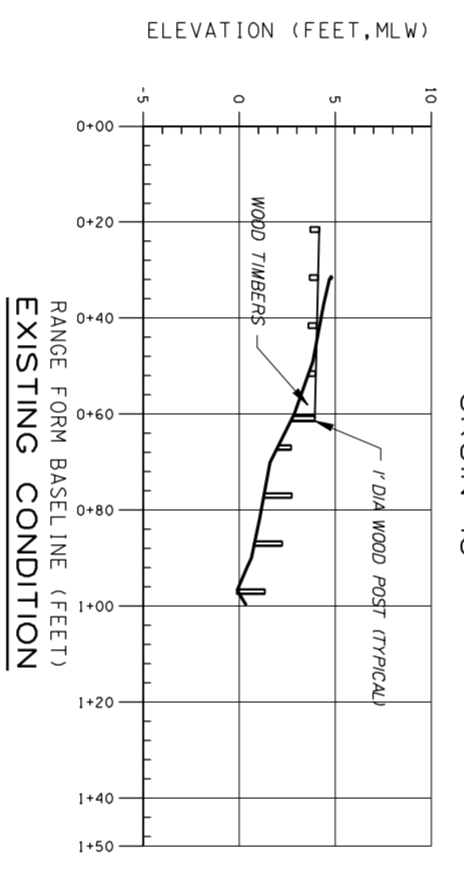
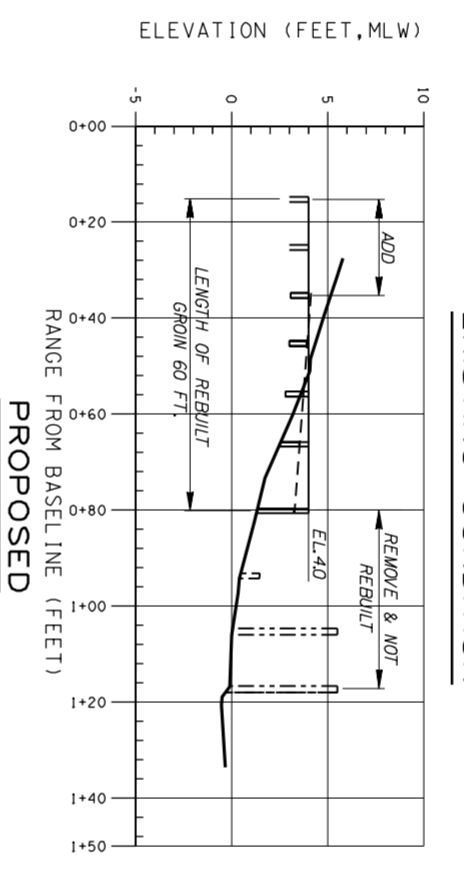
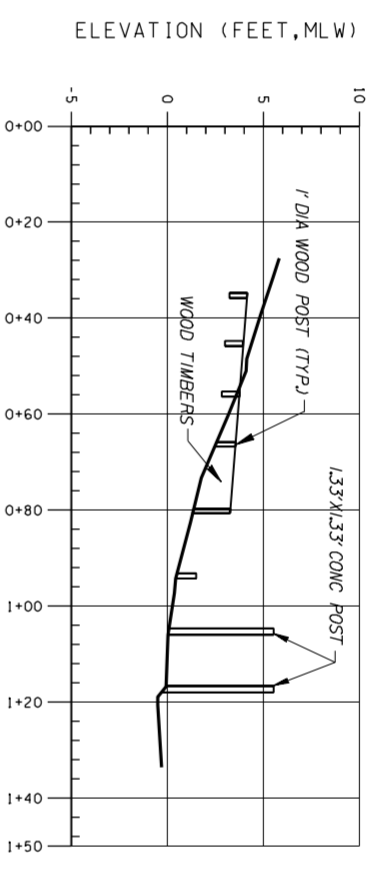
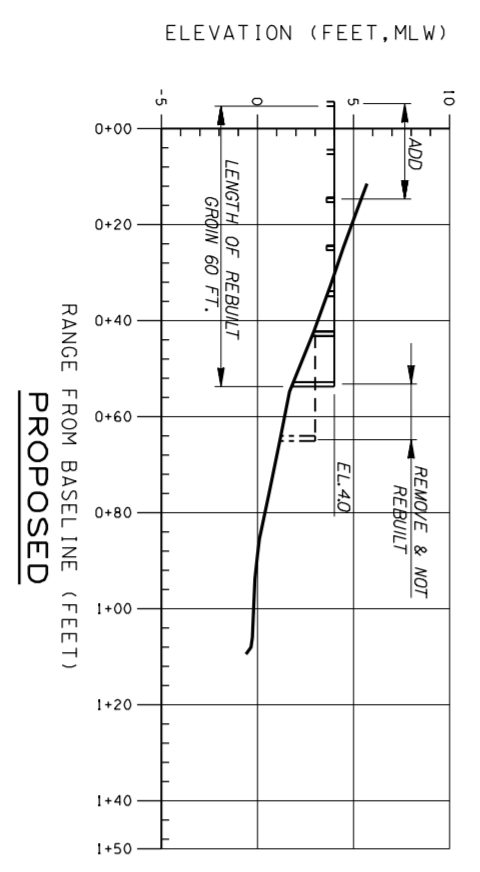
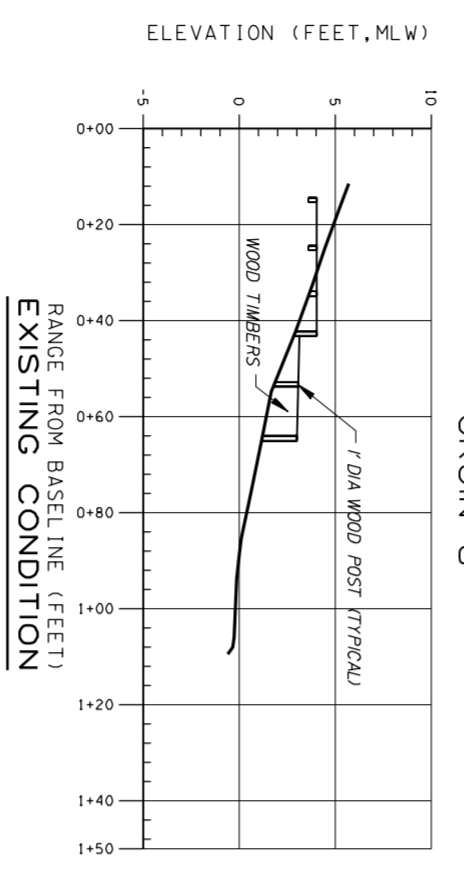
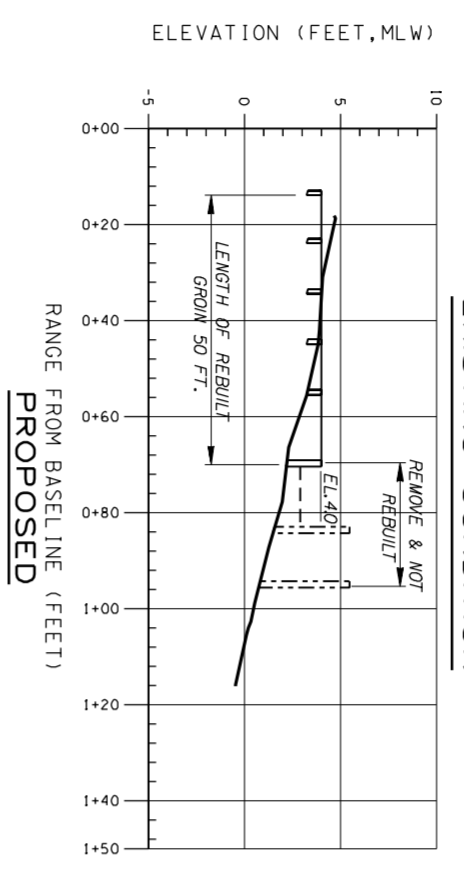
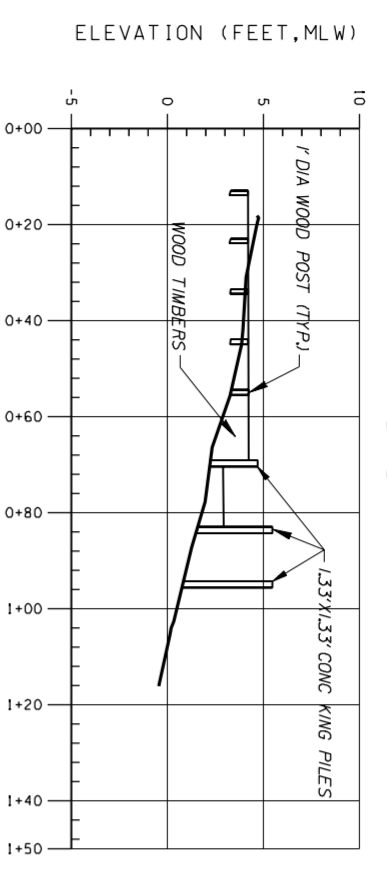
Designed by: B.N.H.  
Date: AS SHOWN  
Scale: AS SHOWN  
Drawn by: R.L.H.  
Ckd by: B.N.H.  
Plot date:  
Plot scale:  
Dated: FEBRUARY 2002  
D.O.F FILE NO. 24-38,277

File name: VKRP304.DGN  
Reference files: BRDR.DGN

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
SHORELINE STABILIZATION  
PROJECTION  
TIMBER GROINS  
EXISTING AND PROPOSED PROFILES  
GROIN NO.1 THRU NO.6

DRAWING NO.  
3/4

A B C D E F G H



**US Army Corps of Engineers**  
Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

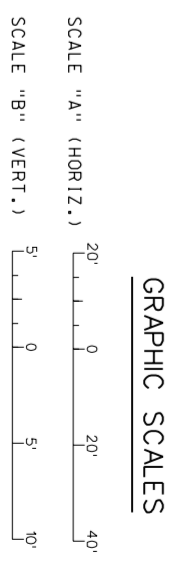
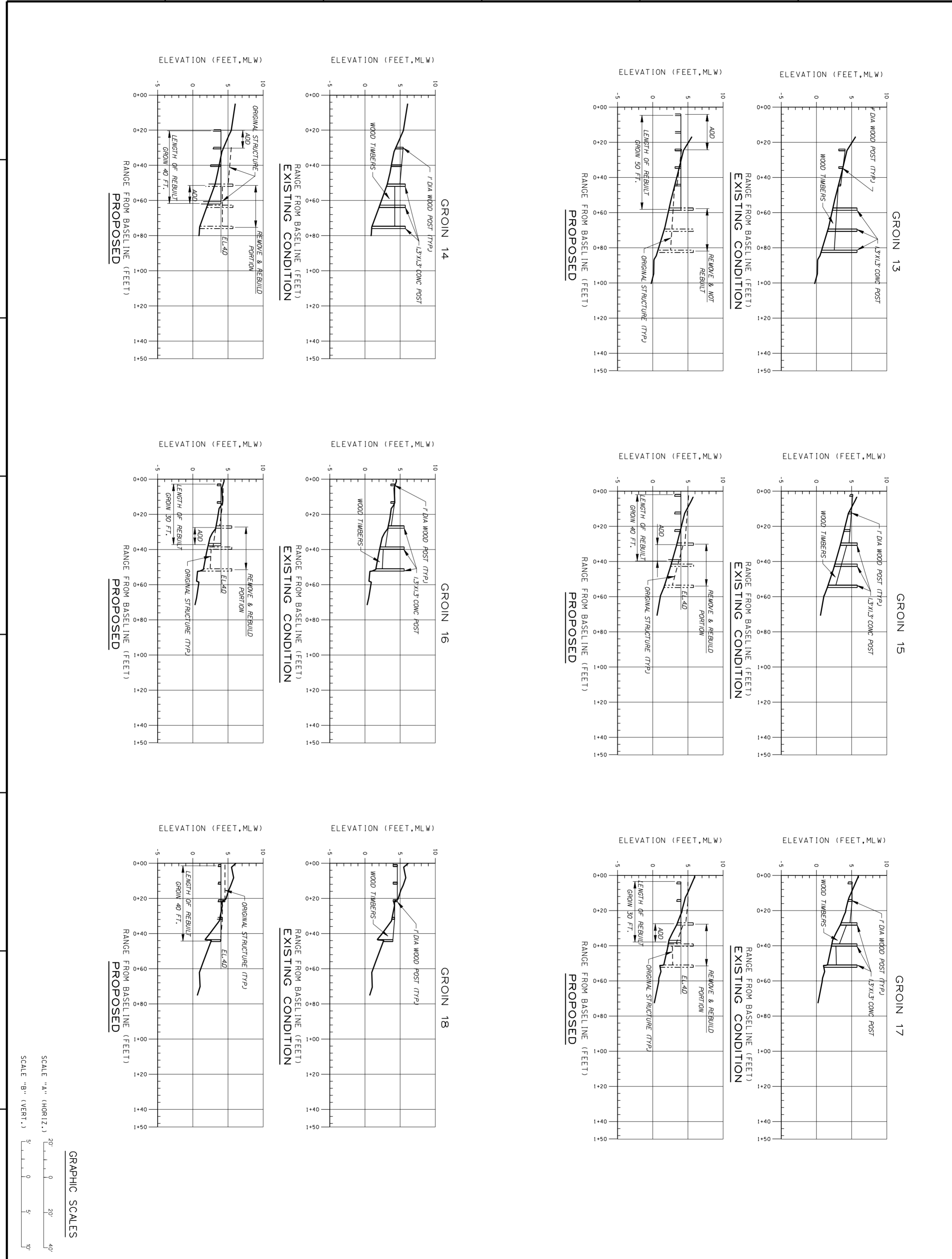
DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

File name: VKRP305.DGN  
Reference files: BRDR.DGN  
Designed by: B.N.H.  
Drawn by: R.L.H.  
Checked by: B.N.H.  
Date: AS SHOWN  
Scale: AS SHOWN  
Plot date:        
Plot scale:        
Date: FEBRUARY 2002  
D.O.F. FILE NO. 24-38,277

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
TIMBER GROINS  
EXISTING AND PROPOSED PROFILES  
GROIN NO.7 THRU NO.12

DRAWING NO.  
**3/5**

A B C D E F G H



**U.S. Army Corps of Engineers**  
 Jacksonville District  
 SAFETY ON THIS JOB  
 DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

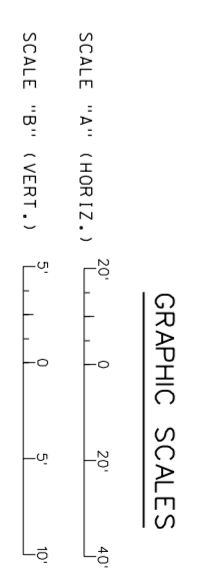
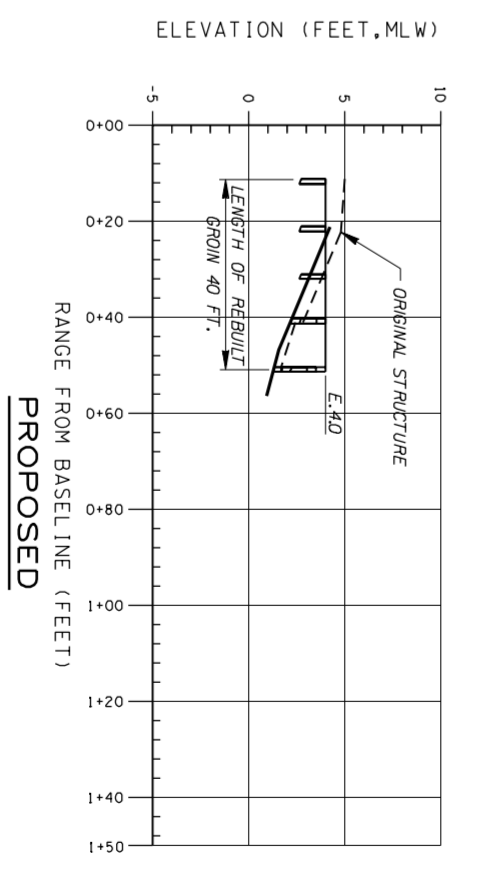
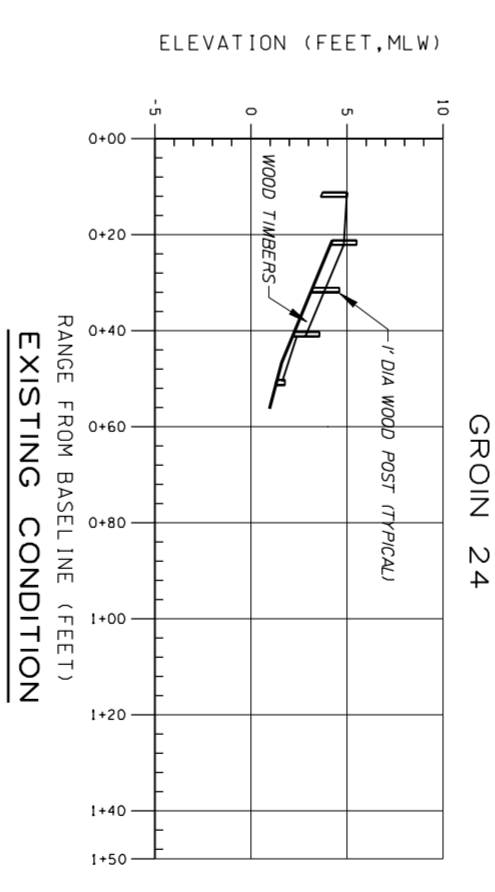
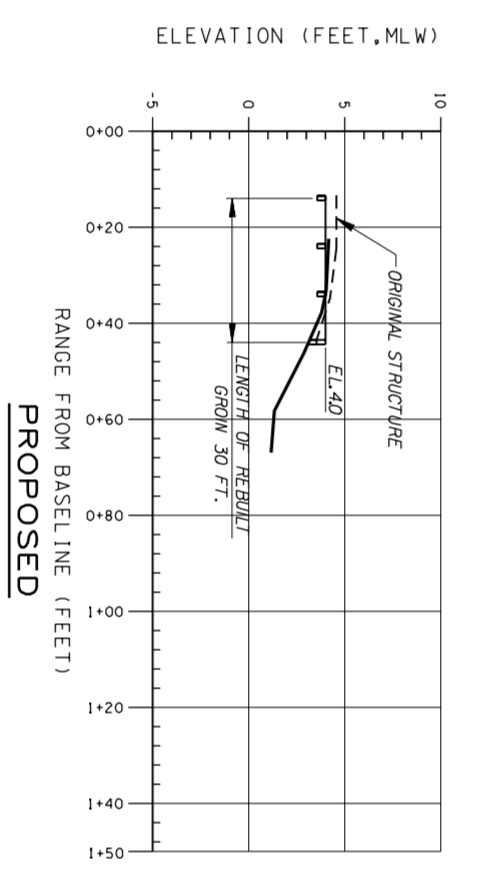
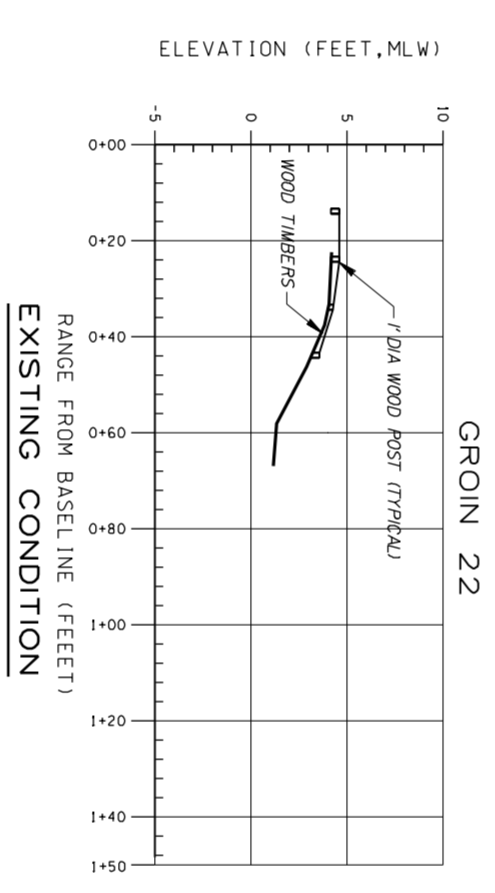
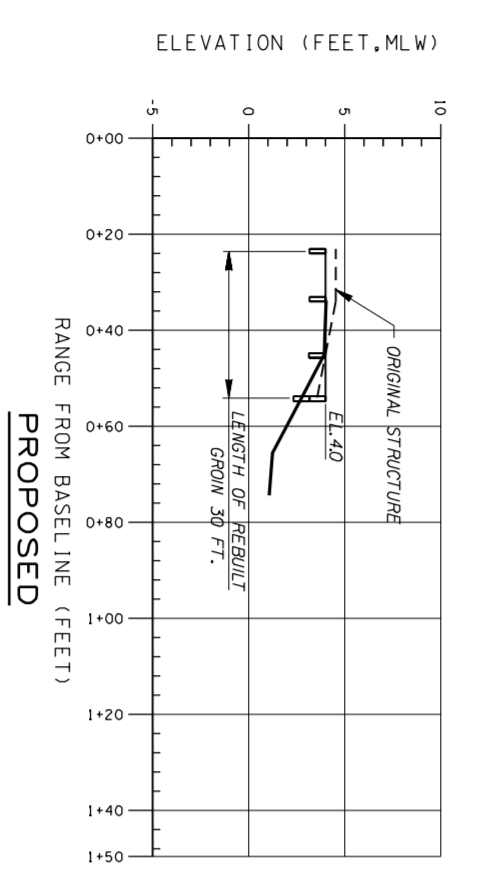
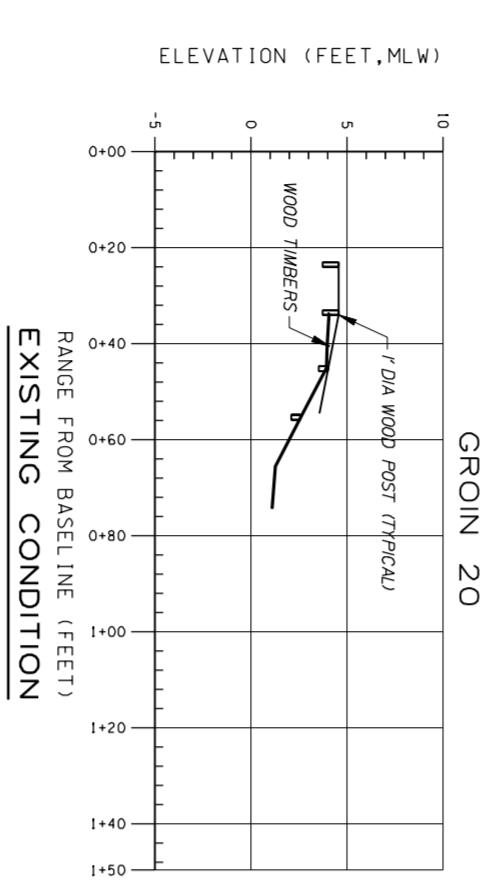
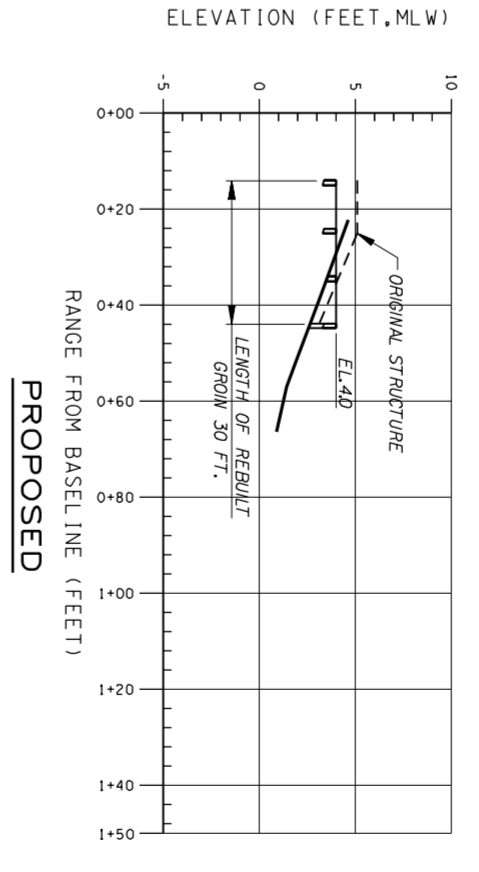
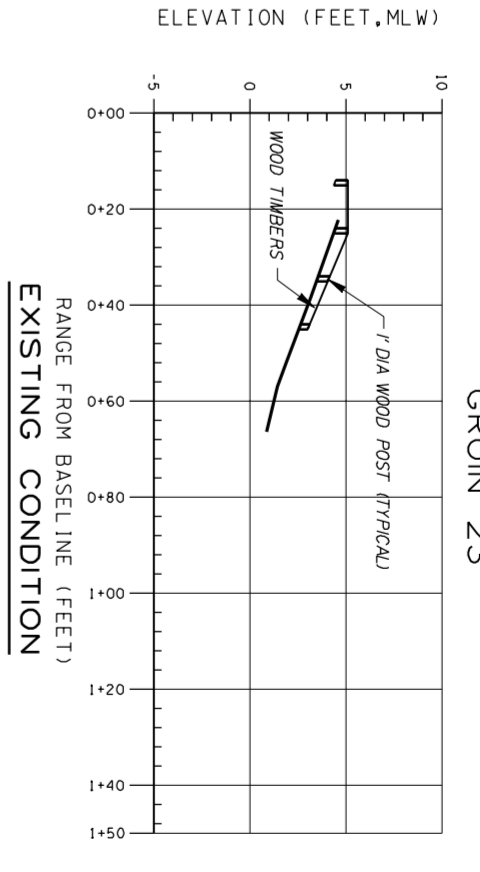
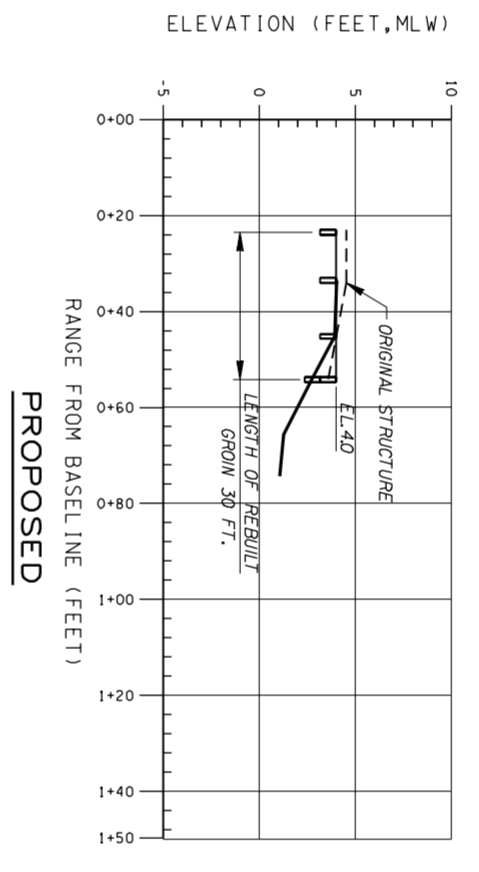
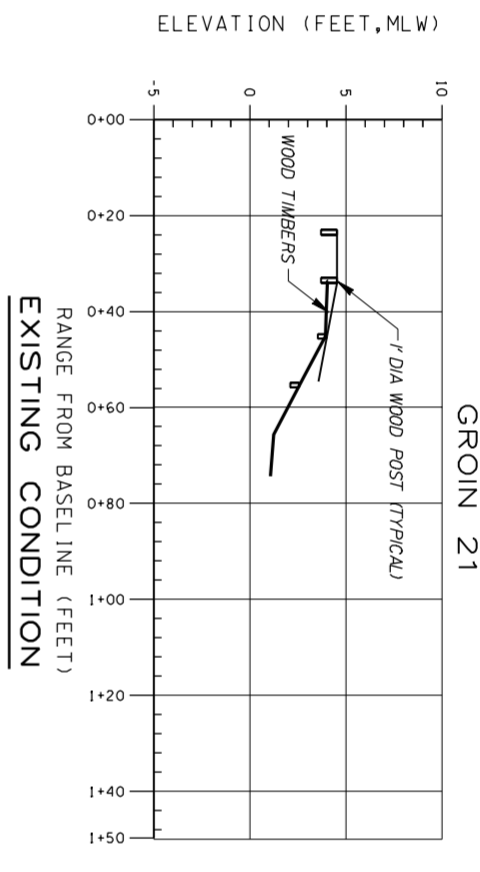
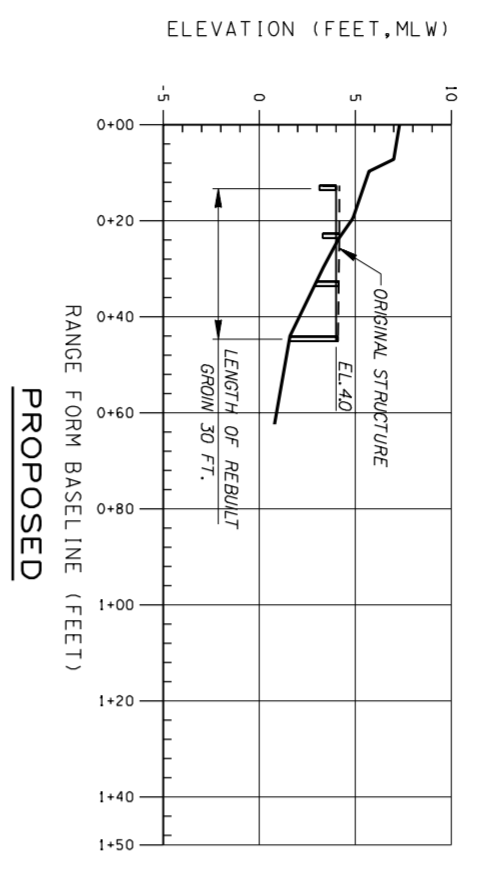
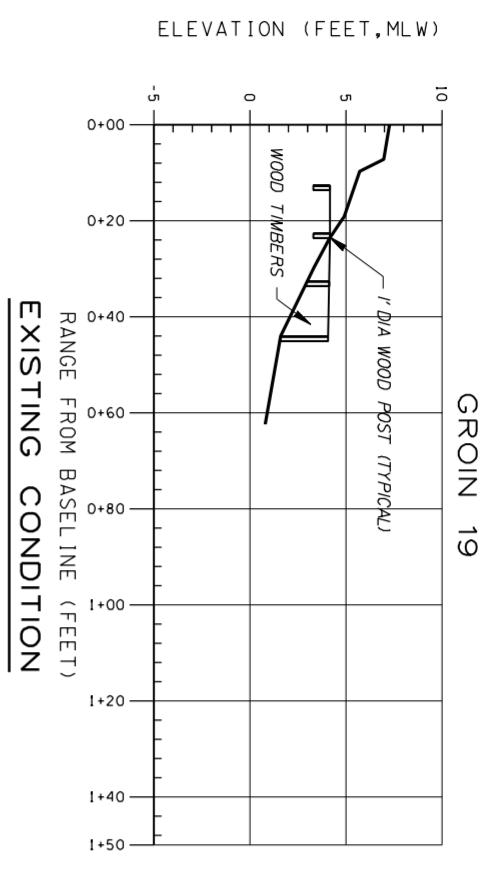
DEPARTMENT OF THE ARMY  
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
 JACKSONVILLE, FLORIDA

File name: VKRP306.DGN  
 Reference files: BRDR.DGN  
 Designed by: B.N.H.  
 Drawn by: R.L.H. / Ckd by: B.N.H.  
 Date: AS SHOWN  
 Scale: AS SHOWN  
 Plot date:  
 Plot scale:  
 Dated: FEBRUARY 2002  
 D.O.F FILE NO. 24-38,277

VIRGINIA KEY  
 DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
 TIMBER GROINS  
 EXISTING AND PROPOSED PROFILES  
 GROIN NO. 13 THRU NO. 18

DRAWING NO.  
**3/6**

A B C D E F G H



US Army Corps of Engineers Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

File name: VKRP307.DGN  
Reference files: BRDR.DGN  
Designed by: B.N.H.  
Date: AS SHOWN  
Drawn by: R.L.H.  
Ckd by: B.N.H.  
Scale: AS SHOWN  
Plot date:  
Plot scale:  
Date: FEBRUARY 2002  
D.O. FILE NO. 24-38,277

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
TIMBER GROINS  
EXISTING AND PROPOSED PROFILES  
GROIN NO.19 THRU NO.24

DRAWING NO. **3/7**

A

B

C

D

E

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G

H

6

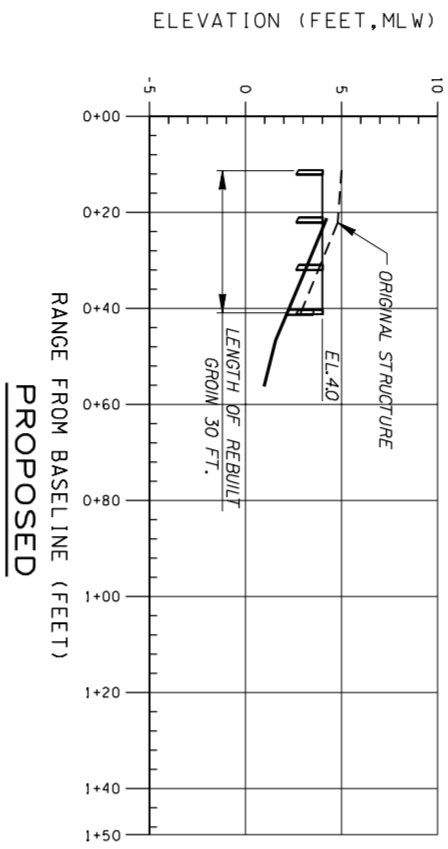
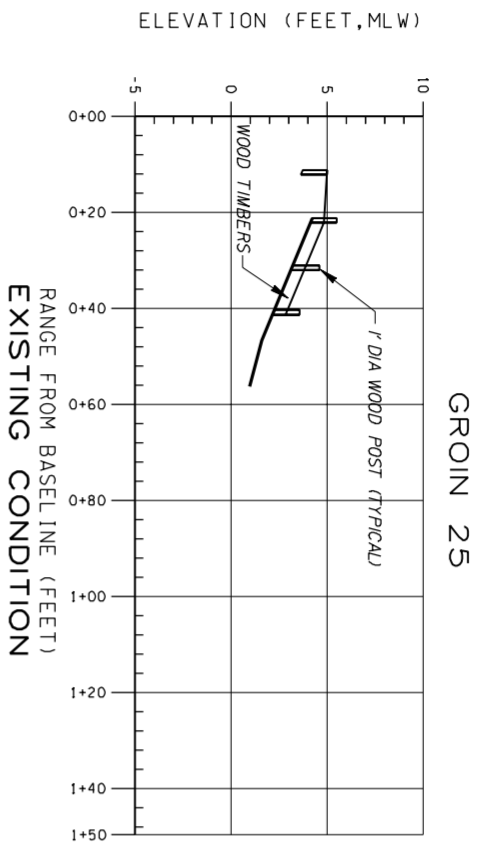
5

4

3

2

1





  
 US Army Corps of Engineers  
 Jacksonville District  
 JACKSONVILLE DISTRICT  
 SAFETY ON THIS JOB  
 DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

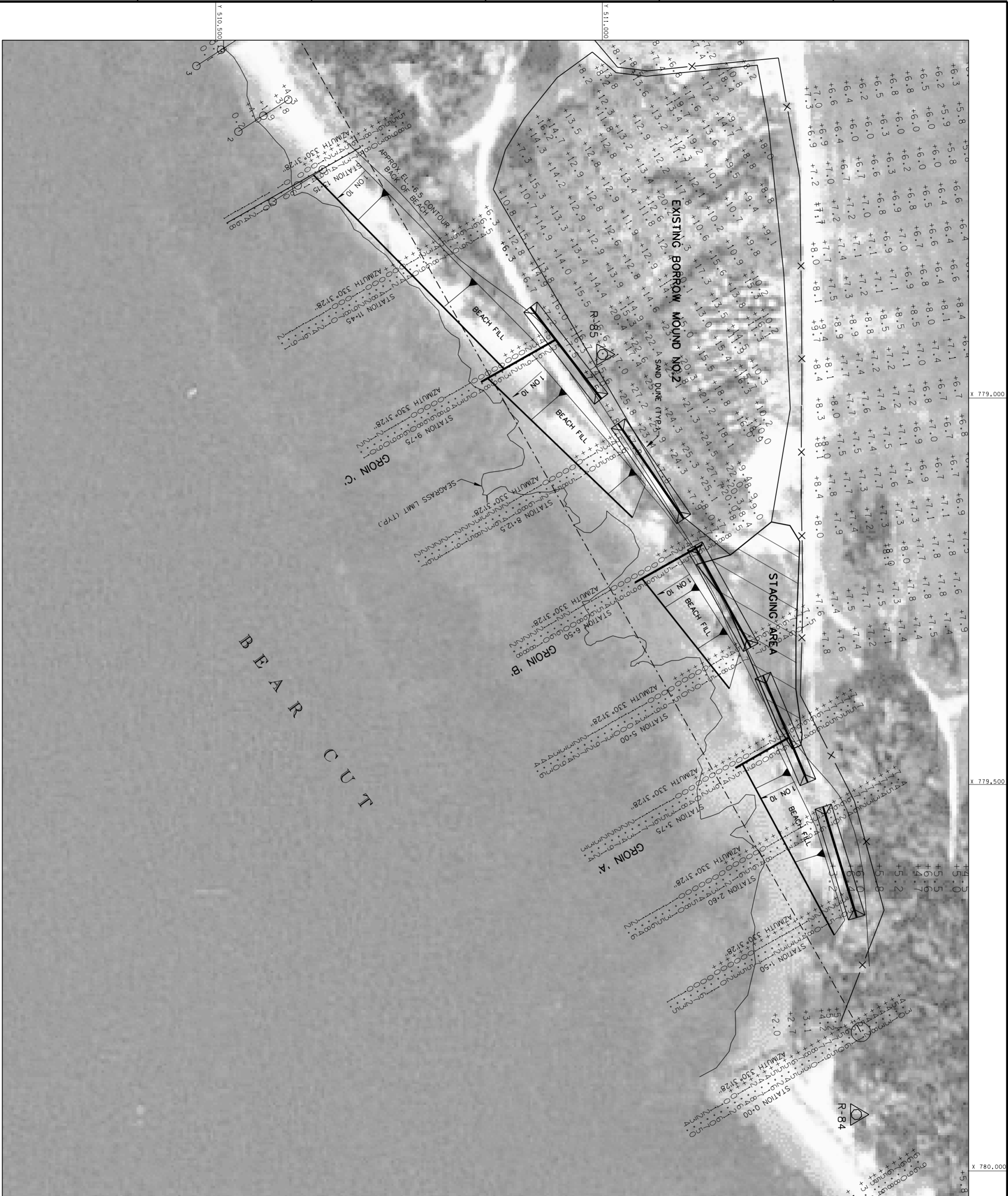
DEPARTMENT OF THE ARMY  
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
 JACKSONVILLE, FLORIDA

File name: VKRP308.DGN	Designed by: B.N.H.	Inv. No.
Reference files: BRDR.DGN	Dwn by: R.L.H.	Date:
	Ckd by: B.N.H.	Scale: AS SHOWN
		Plot date:
		Plot scale:
Dated: FEBRUARY 2002		
D.O.F FILE NO. 24-38,277		

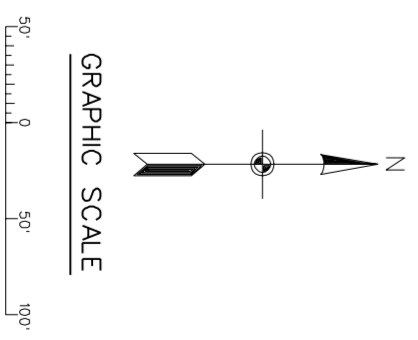
VIRGINIA KEY  
 DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
 TIMBER GROINS  
 EXISTING AND PROPOSED PROFILE  
 GROIN NO. 25

GRAPHIC SCALES  
 SCALE "A" (HORIZ.)  
  
 SCALE "B" (VERT.)  


DRAWING NO.  
**3/8**



NOTE:  
SOME FIELD ADJUSTMENT OF THE SAND DUNES  
MAY BE NECESSARY TO INSURE DUNES ARE  
CONSTRUCTED ON THE UPLAND EDGE OF  
BEACH.



**US Army Corps of Engineers**  
Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

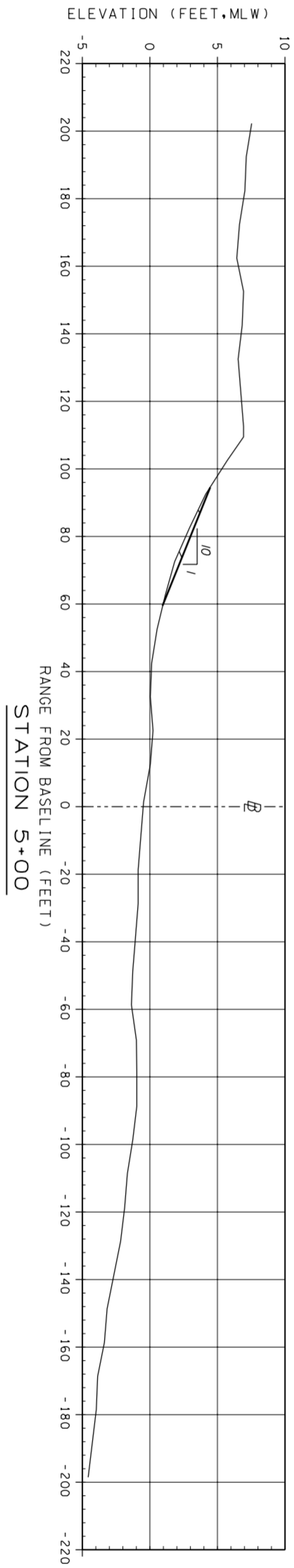
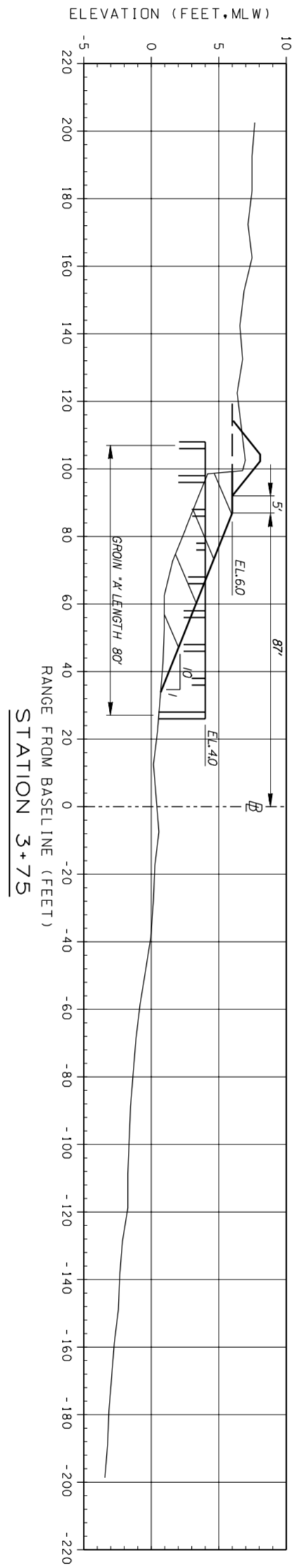
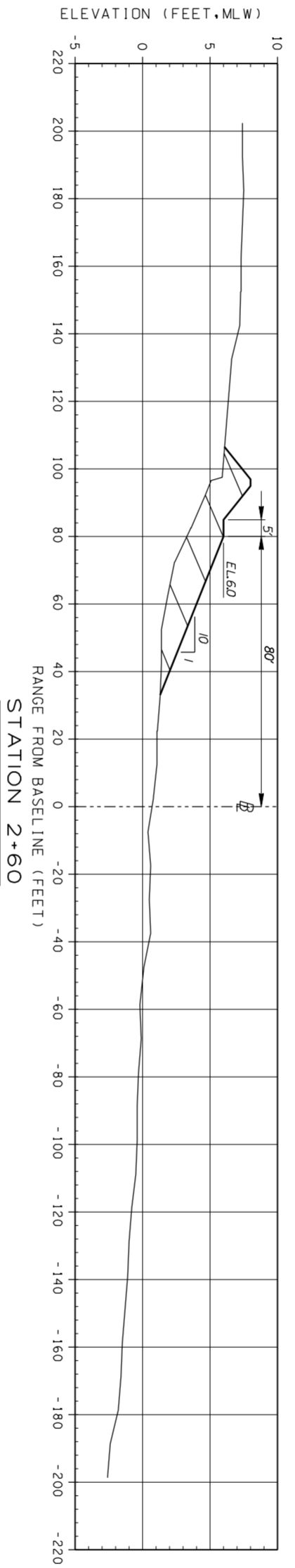
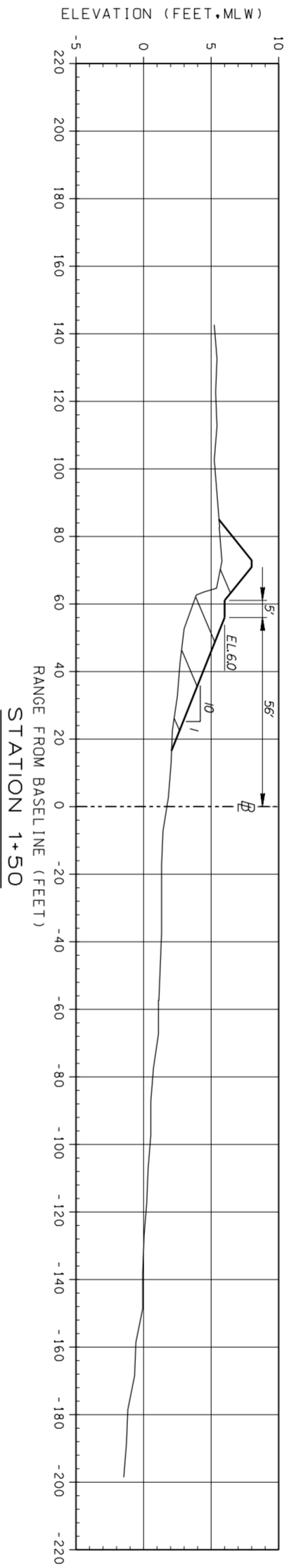
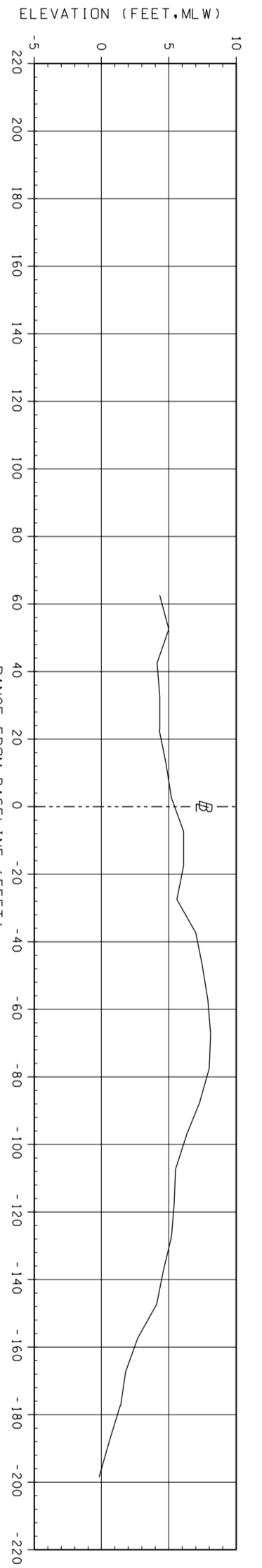
File name: VKRP401.DGN  
Reference files: BRDR.DGN, V102.DGN, SEAGRASS.DGN, VTOP0.DGN, VGRD.DGN, GVKRP401.TIF  
Designed by: B.N.H.  
Dwn by: R.L.H.  
Ckd by: B.N.H.  
Date: FEBRUARY 2002  
D.O.F FILE NO. 24-38.277

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
BEACH PROFILES WITH SAND DUNE  
BEACH AERIAL PHOTO PLAN

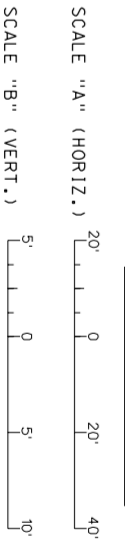
DRAWING NO.  
**4 / 1**

A B C D E F G H

CROSS SECTIONS PROPOSED GROIN AREA



GRAPHIC SCALES



NOTES:  
1. REFER TO SURVEY NO. 01-209.  
2. REFER TO SHEET NO. 1 FOR NOTES.

US Army Corps of Engineers Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

Designed by: B.N.H.  
Date: AS SHOWN  
Scale: AS SHOWN  
Plot date:  
Plot scale:  
Dated: FEBRUARY 2002  
D.O.F FILE NO. 24-38,277

File name: VKRP402.DGN  
Reference files: C209BRDR.DGN

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
SHORELINE STABILIZATION PROJECT  
BEACH PROFILES WITH SAND DUNE  
STA. 0+00 THRU STA. 5+00

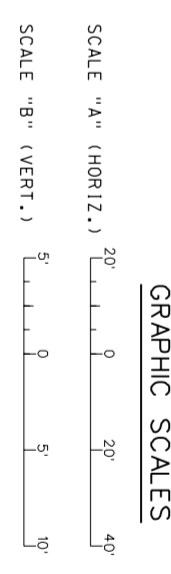
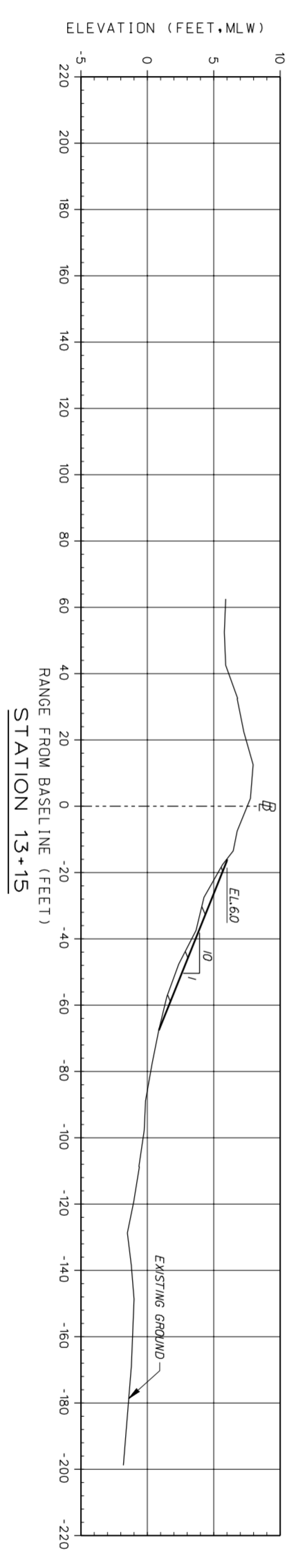
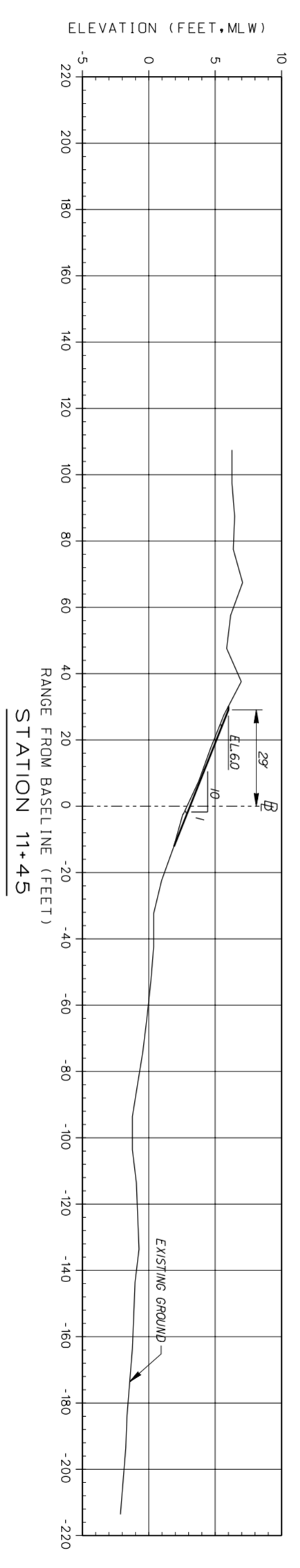
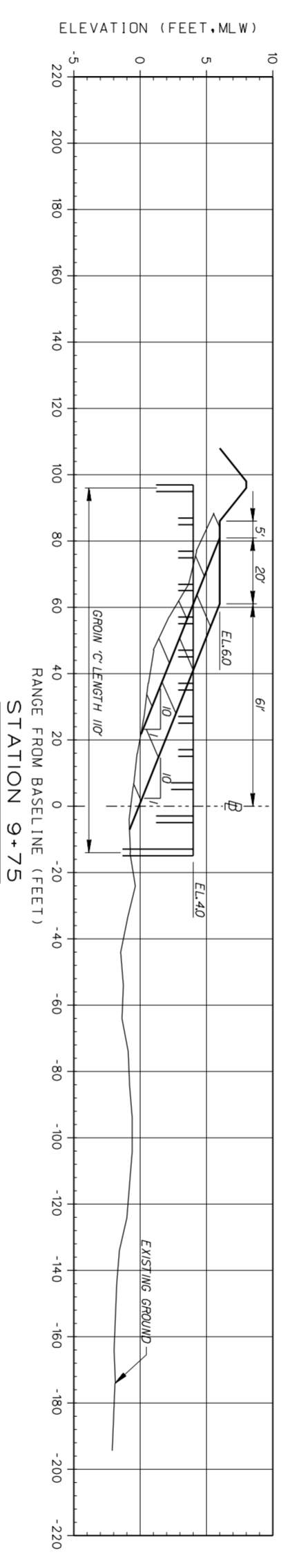
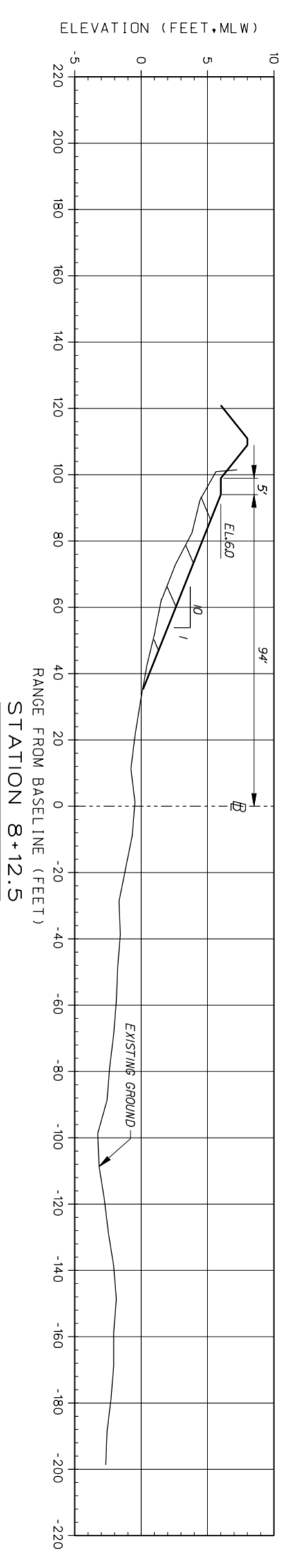
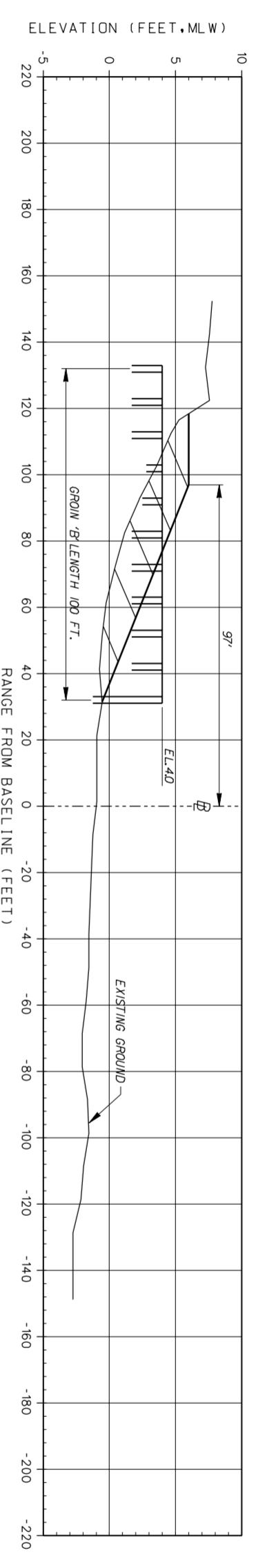
DRAWING NO.

4/2



A B C D E F G H

CROSS SECTIONS PROPOSED GROIN AREA



NOTES:  
1. REFER TO SURVEY NO. 01-298.  
2. REFER TO SHEET NO. 1 FOR NOTES.

DRAWING NO.  
**4/3**

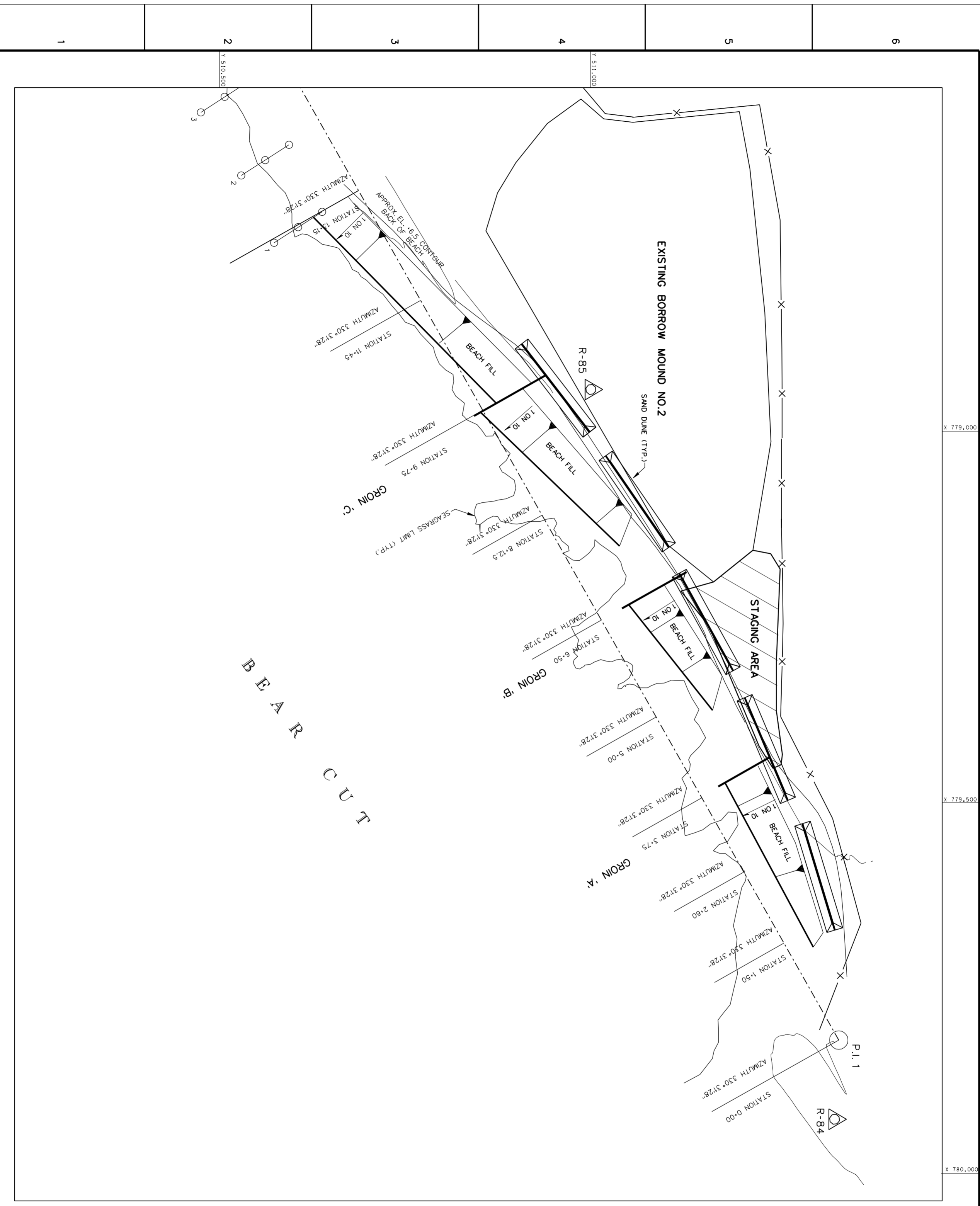
VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION PROJECT**  
BEACH PROFILES WITH SAND DUNE  
STA. 6+50 THRU STA. 13+15

File name: VKRP403.DGN  
Designed by: B.N.H.  
Drawn by: R.L.H. Ckd by: B.N.H.  
Reference files: C209BRDR.DGN  
Inv. No.:  
Date: AS SHOWN  
Scale: AS SHOWN  
Plot date:  
Plot scale:  
Dated: FEBRUARY 2002  
D.O.F FILE NO. 24-38,277

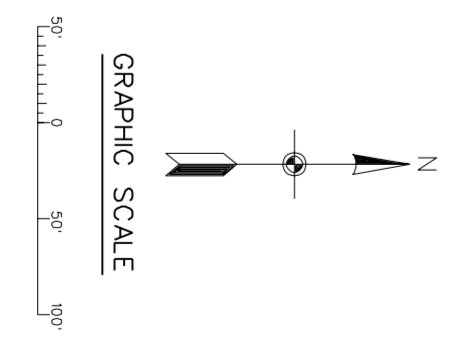
DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

No.	Symbol	Zone	Description	Approved

US Army Corps of Engineers Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU



BEAR CUT



DRAWING NO. <b>4/4</b>	VIRGINIA KEY DADE COUNTY, FLORIDA <b>SHORELINE STABILIZATION PROJECT</b> BEACH PROFILES WITH SAND DUNE SAND DUNE LOCATION PLAN	File name: VKRP401.DGN Reference files: BRDR.DGN VKRIP.DGN VKRP401.DGN V102.DGN SEAGRASS.DGN	Designed by: BANH Drawn by: R.L.H. Ckd by: B.N.H. Date: FEBRUARY 2002 D.O.F FILE NO. 24-38.277	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	No.    Symbol    Zone    Description    Approved
	U.S. Army Corps of Engineers Jacksonville District SAFETY ON THIS JOB DEFENDS ON YOU				

A B C D E F G H

X 779,000 X 779,500 X 780,000

Y 511,000 Y 511,500

1

2

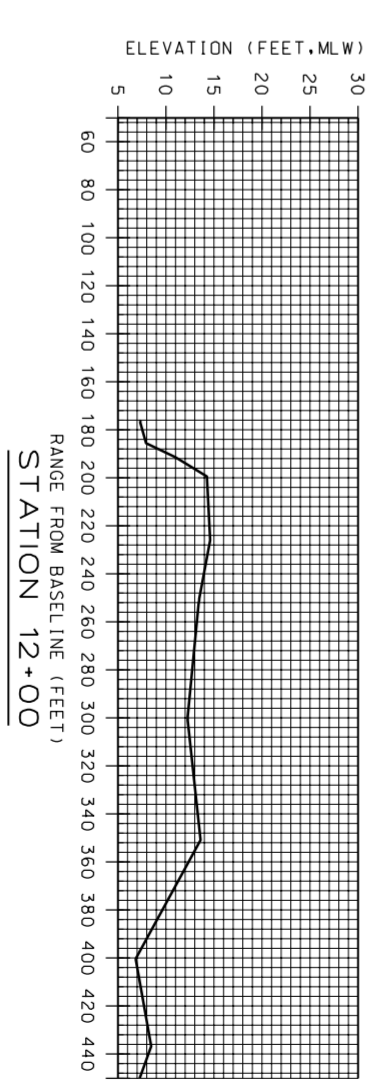
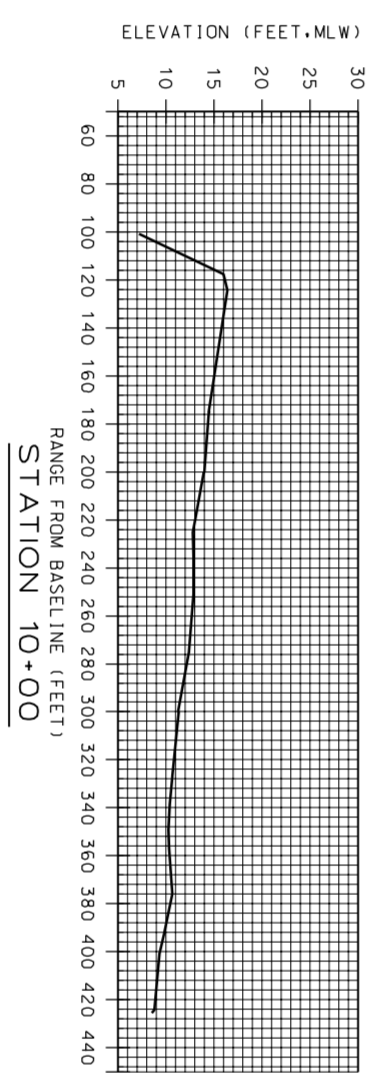
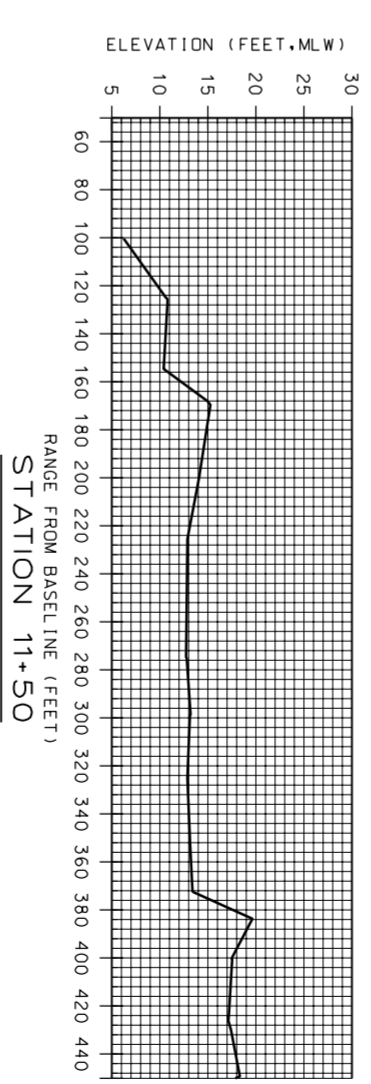
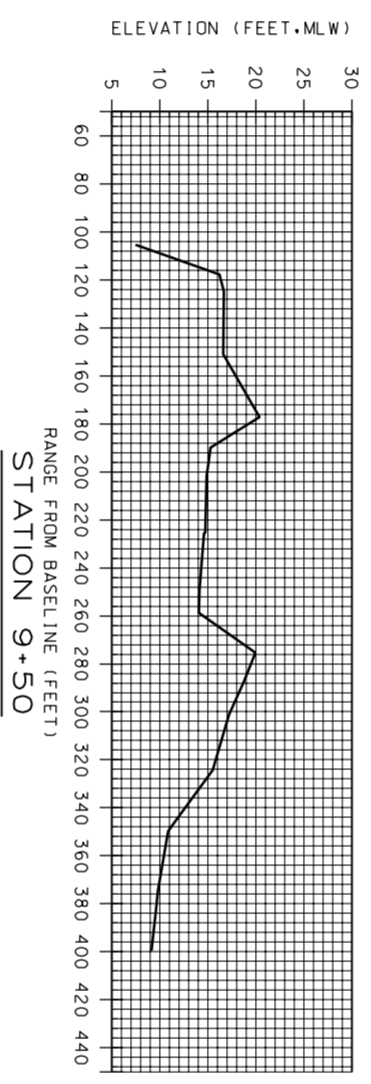
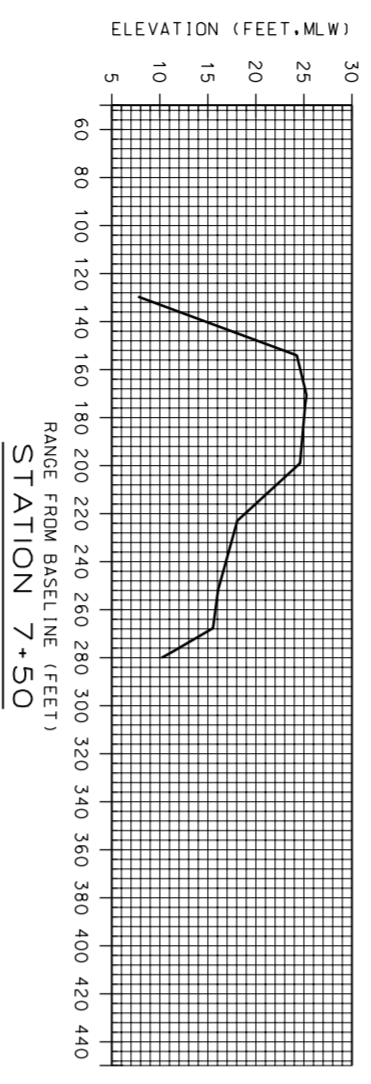
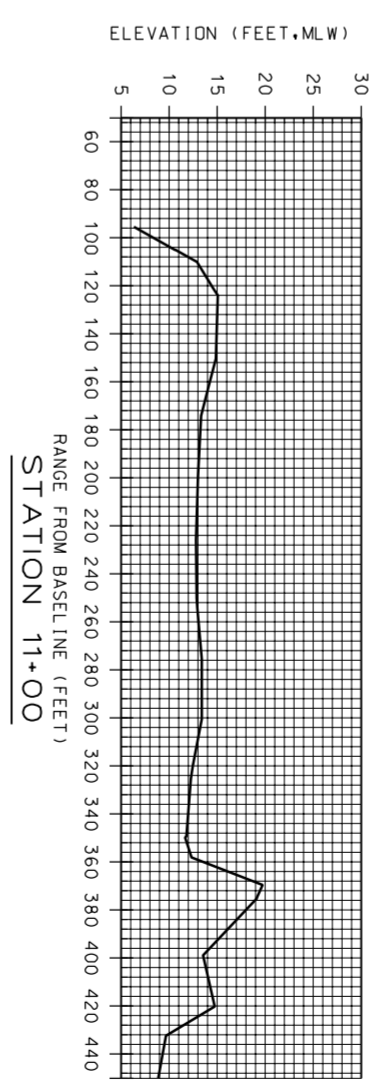
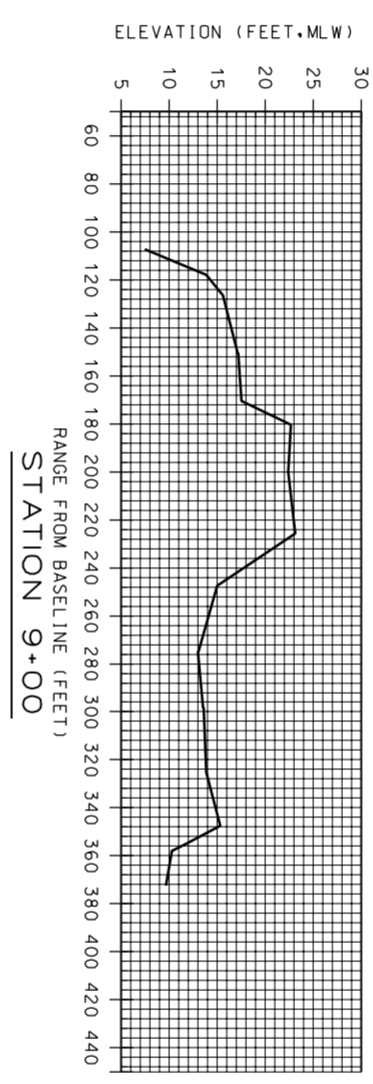
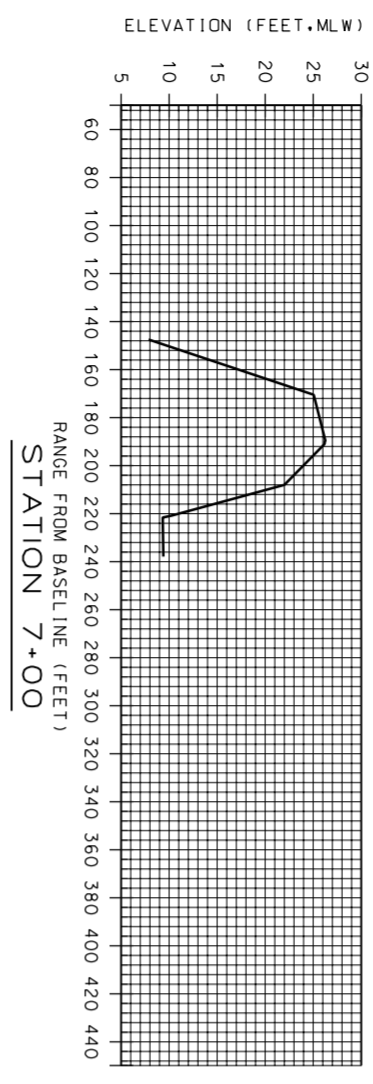
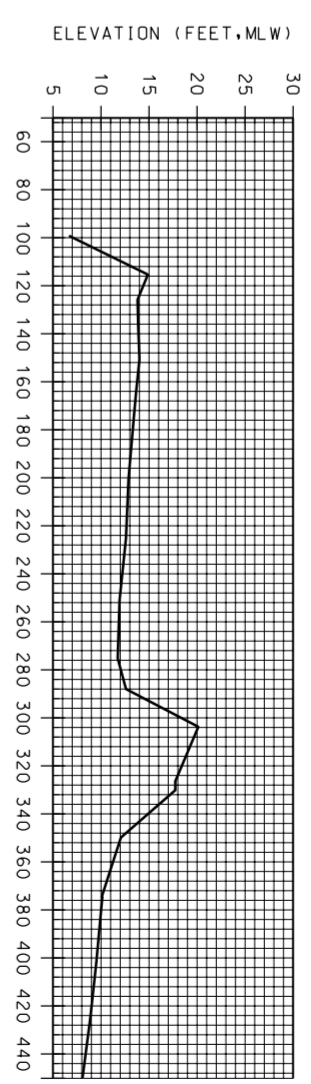
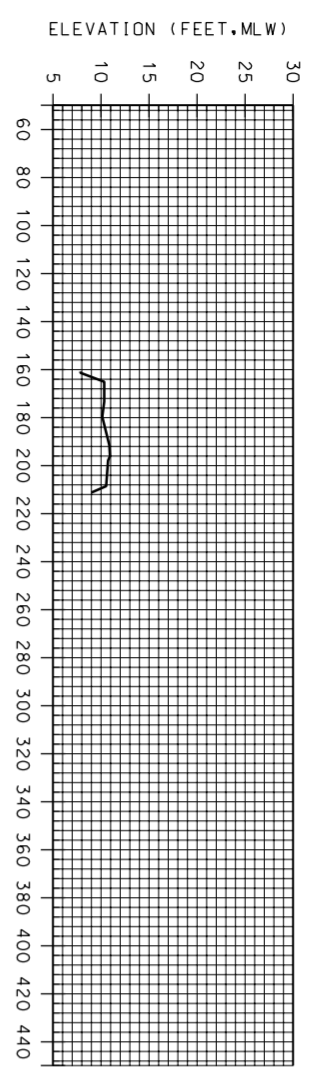
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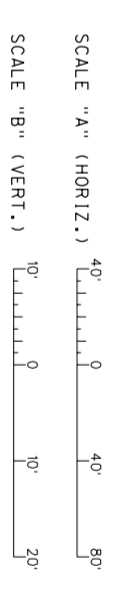
5

6

A B C D E F G H



GRAPHIC SCALES



- NOTES:
1. REFER TO SURVEY NO. 01-209.
  2. REFER TO SHEET NO. 1 FOR NOTES.
  3. SEE DWG. NO. 2/1 AND 2/2 FOR STATION LOCATION.

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
**SHORELINE STABILIZATION  
PROJECT**  
BORROW AREAS  
CROSS SECTIONS - BORROW MOUND 2

DRAWING NO.  
**5/1**

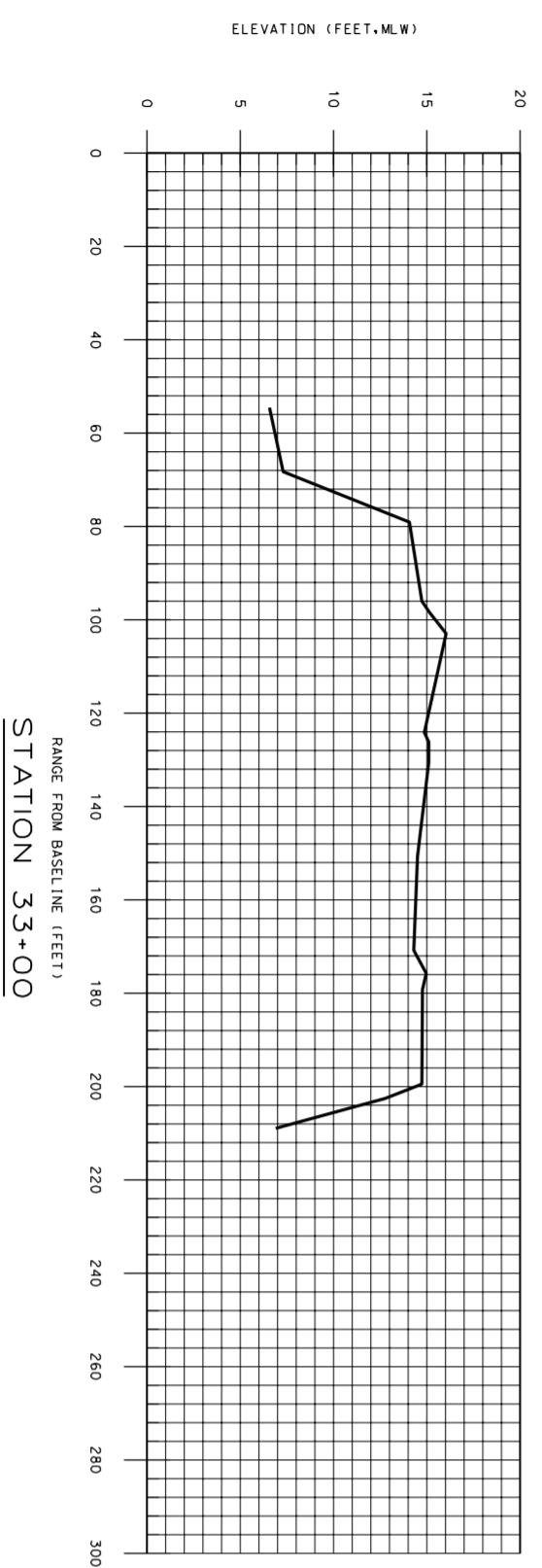
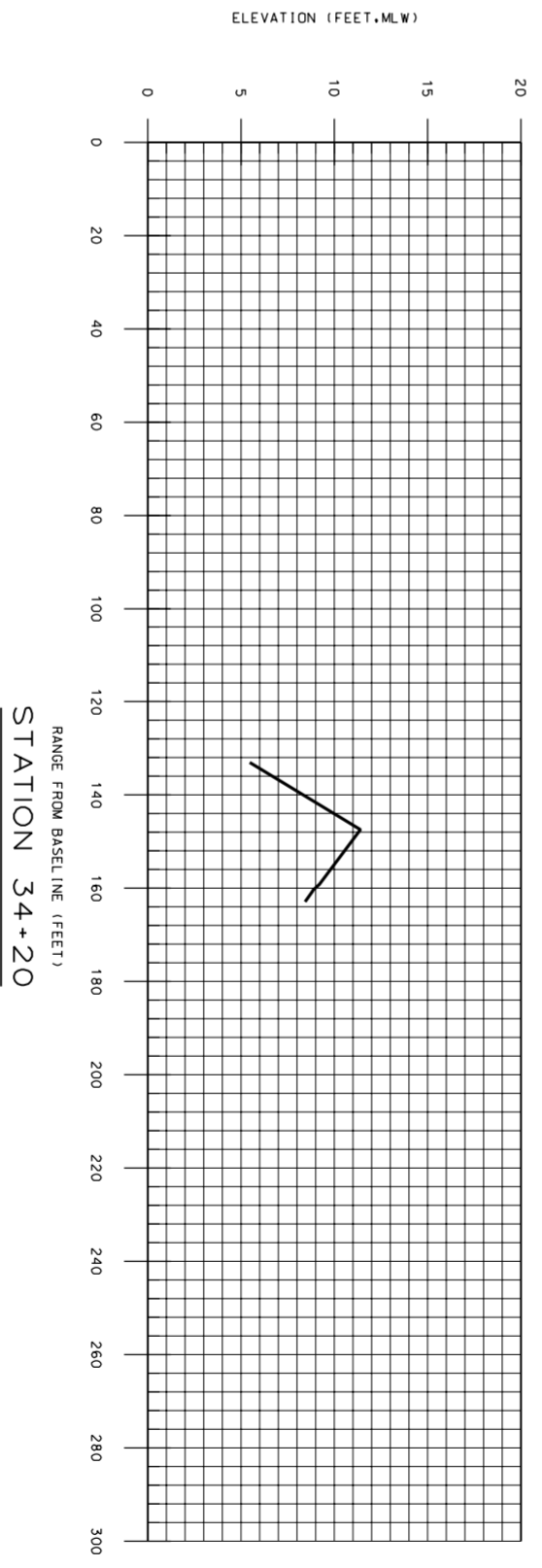
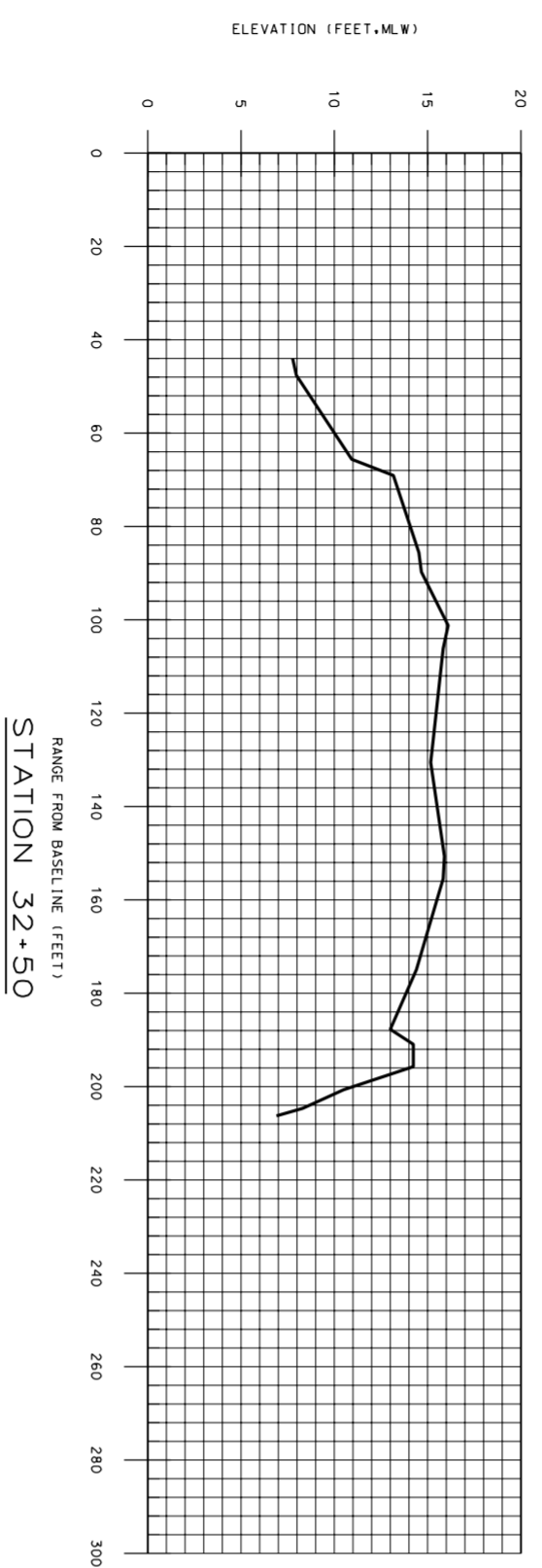
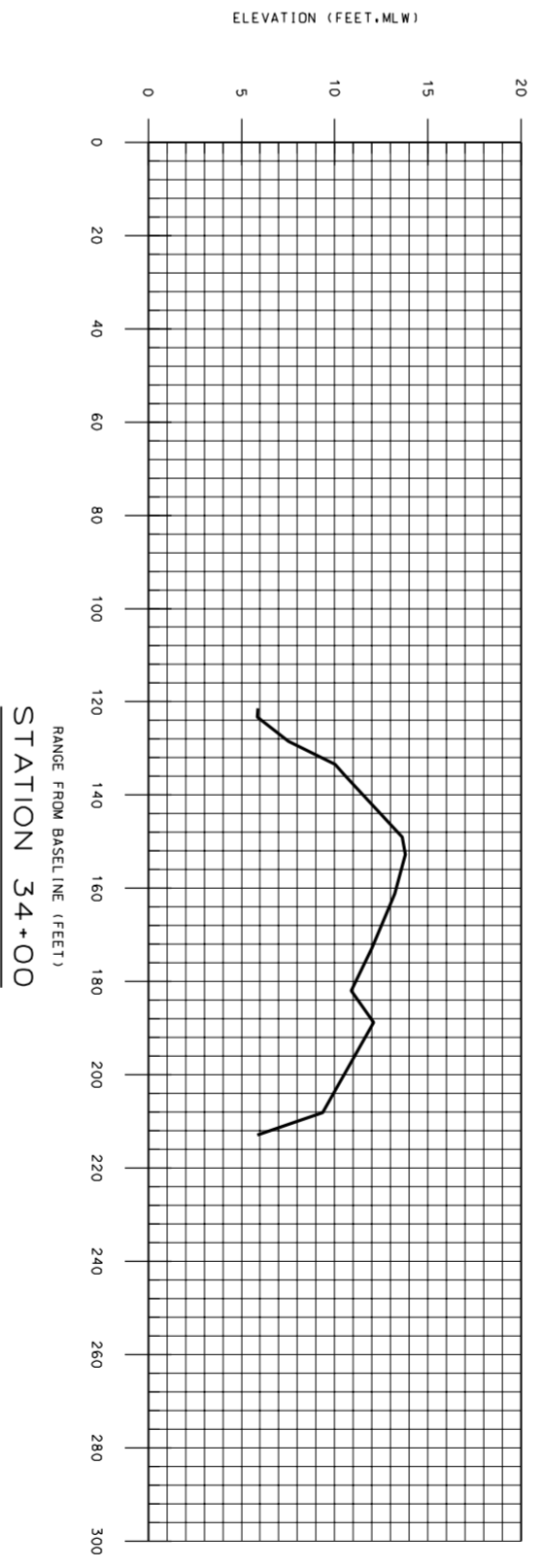
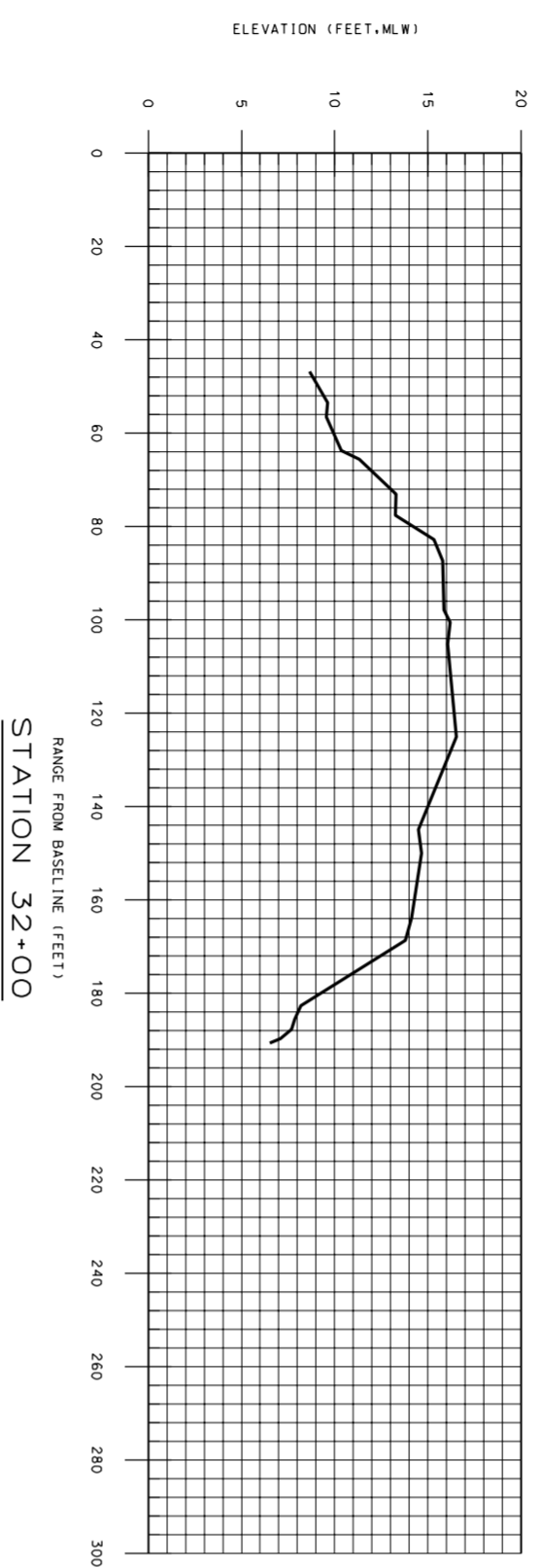
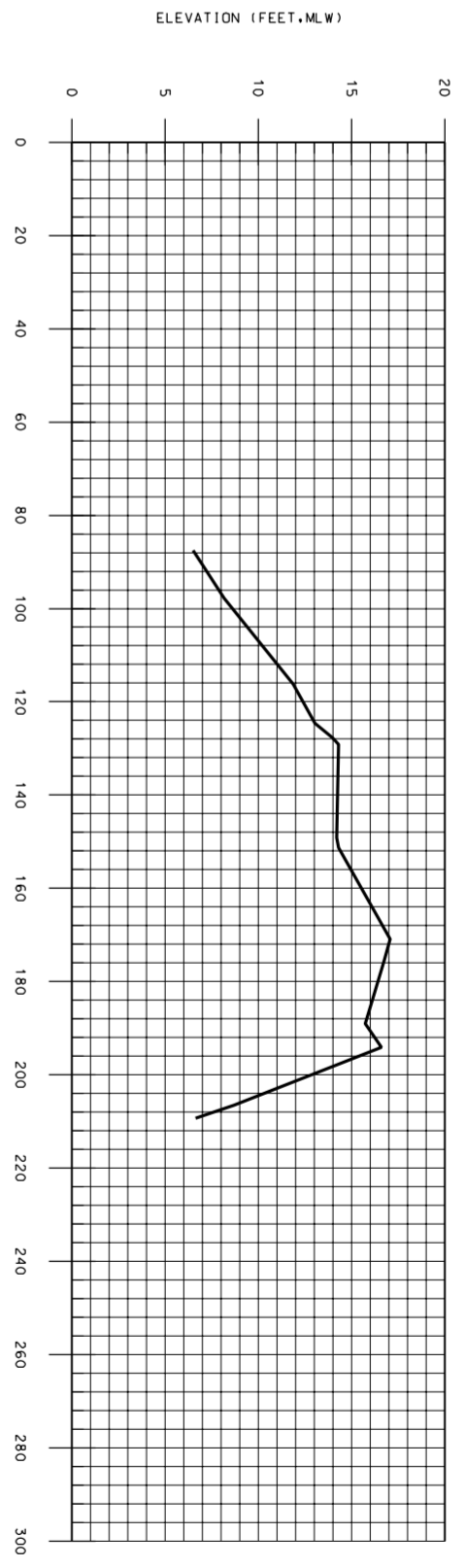
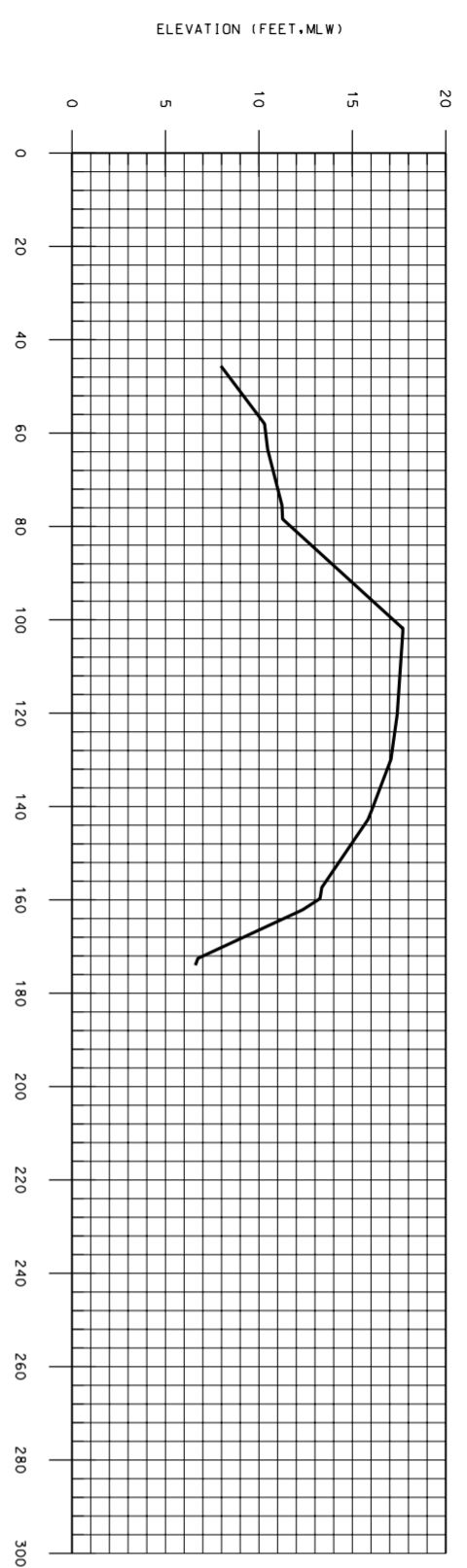
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Reference files: C209BRDR.DGN  
Designed by: B.N.H.  
Drawn by: R.L.H. Cld by: B.N.H.  
Inv. No.:  
Date: AS SHOWN  
Scale: AS SHOWN  
Plot date:  
Plot scale:  
Dated: FEBRUARY 2002  
D.O. FILE NO. 24-38,277

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

No.	Symbol	Zone	Description	Approved

**U.S. Army Corps of Engineers**  
Jacksonville District  
SAFETY ON THIS JOB  
DEPENDS ON YOU

A B C D E F G H



- NOTES:
1. REFER TO SURVEY NO. 01-209.
  2. REFER TO SHEET NO. 1 FOR NOTES.
  3. SEE DWG. NO. 2/1 AND 2/2 FOR STATION LOCATION.

US Army Corps of Engineers Jacksonville District  
SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

Designed by: B.N.H.  
Date: AS SHOWN  
Scale: AS SHOWN  
Drawn by: R.L.H.  
Ckd by: B.N.H.  
Plot date:  
Plot scale:  
Dated: FEBRUARY 2002  
D.O.F FILE NO. 24-38,277

File name: VKRRP502.DGN  
Reference files: C209BRDR.DGN

VIRGINIA KEY  
DADE COUNTY, FLORIDA  
SHORELINE STABILIZATION PROJECT  
BORROW AREAS  
CROSS SECTIONS - BORROW MOUND 1

DRAWING NO.  
5/2