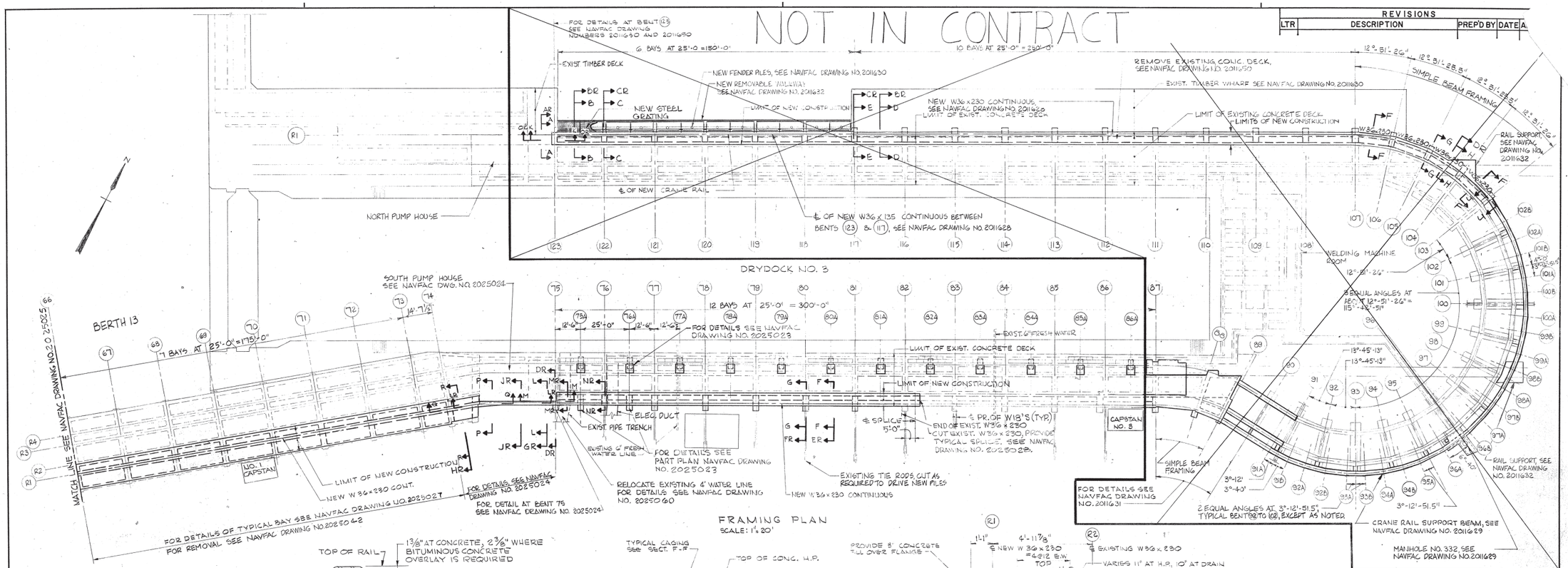
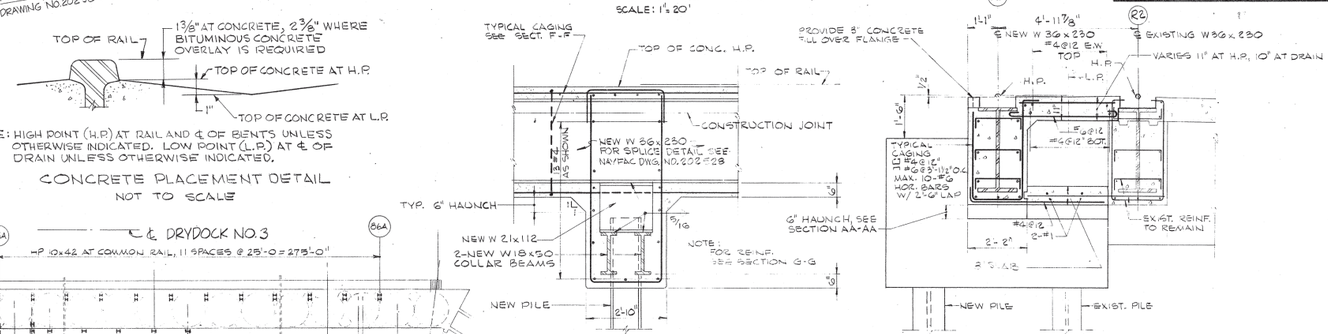
NOT IN CONTRACT

| REVISIONS | | | |
|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE |
| A | | | |




FRAMING PLAN
SCALE: 1" = 20'




NOTE: HIGH POINT (H.P.) AT RAIL AND ℄ OF BENTS UNLESS OTHERWISE INDICATED. LOW POINT (L.P.) AT ℄ OF DRAIN UNLESS OTHERWISE INDICATED.

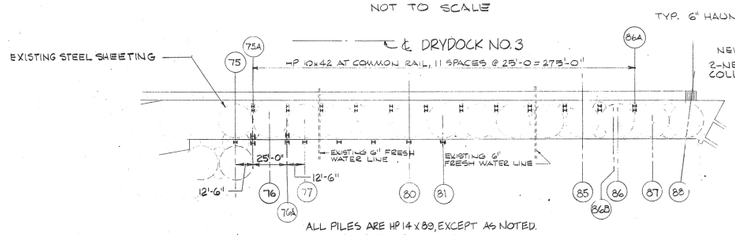
CONCRETE PLACEMENT DETAIL
NOT TO SCALE

SECTION AA-AA
SCALE: ½" = 1'-0"

SECTION F-F
SCALE: ½" = 1'-0"

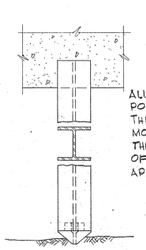
NOTES:

1. LOCATE ℄ OF NEW W36x230 BELOW ℄ RAIL (R1), FOR RAIL ALIGNMENT SEE NAVFAC DRAWING NO. 2025046.
2. FOR SECTIONS L-L THRU R-R SEE NAVFAC DRAWING NO. 2025024.
3. FOR REMOVAL SECTIONS DR-DR THRU NR-NR SEE NAVFAC DRAWING NO. 2025041.
4. FOR GENERAL PLAN SEE NAVFAC DRAWING NO. 2025019.
5. SECTION N-N NOT USED.



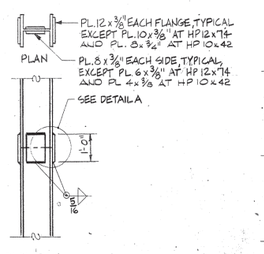

ALL PILES ARE HP 14 x 89, EXCEPT AS NOTED.

PILE PLAN
SCALE 1" = 40'-0"

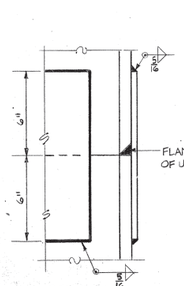


ALL STEEL PILES SHALL HAVE PILE POINT REINFORCEMENT WELDED TO THE PILE. MANUFACTURED PILE POINTS, MODEL 75750, AS MANUFACTURED BY THE ASSOCIATED PILE AND FITTING CORP. OF CLIFTON, NEW JERSEY OR AN APPROVED EQUAL MAY BE USED.

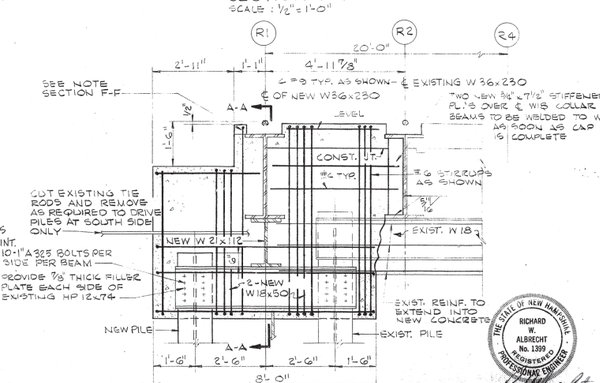
H-PILE POINT DETAIL
SCALE ½" = 1'-0"



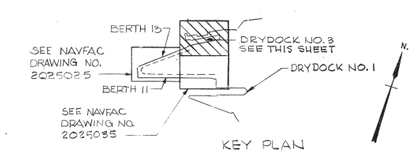

PILE SPLICE DETAIL
SCALE: ½" = 1'-0"




DETAIL "A"
SCALE: 3" = 1'-0"




SECTION G-G
SCALE: ½" = 1'-0"




KEY PLAN

GRAPHIC SCALES

½" = 1'-0"
1" = 20'
1" = 40'
3/8" = 1'-0"

CHECK GRAPHIC SCALES BEFORE USING

| | | | |
|---|---|---|---|
| FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS | DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHERN DIVISION | | |
| DES RES DR JSW CHK JGR | NAVAL BASE PHILADELPHIA, PA. | | |
| SUBMITTED BY DATE 4/3/74 | PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H. | | |
| DIRECTOR | ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13 | | |
| NORDIV HD. E.I.C. HD. DIR. | DRYDOCK NO. 3 | | |
| APPROVED DATE | DECK FRAMING PLAN AND DETAILS | | |
| OFFICER IN CHARGE | SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 2025022 |
| APPROVED DATE | | | CONSTR. CONTR. NO. N62472-76-C-0746 |
| NORDIV FOR COMMANDER NAVFAC | SCALE: AS SHOWN | SPEC. 04-76-0746 | SHEET 5 OF 53 |

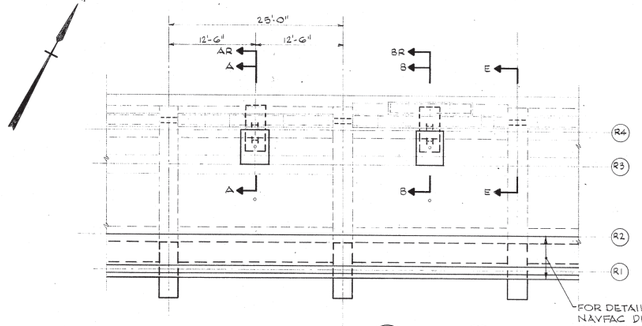
THE STATE OF NEW HAMPSHIRE RICHARD W. ALBRECHT No. 1309 REGISTERED PROFESSIONAL ENGINEER

SATISFACTORY TO: DATE

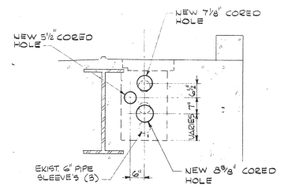
J.O.

TP-65D
18

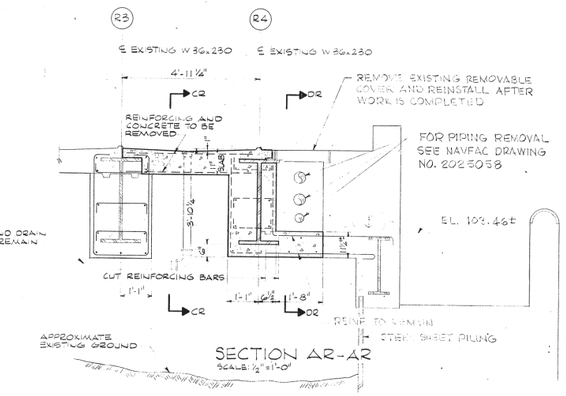
| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |



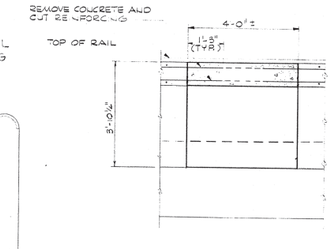

TYPICAL BAYS BENT (75A) TO (86A)
SCALE: 1/8"=1'-0"



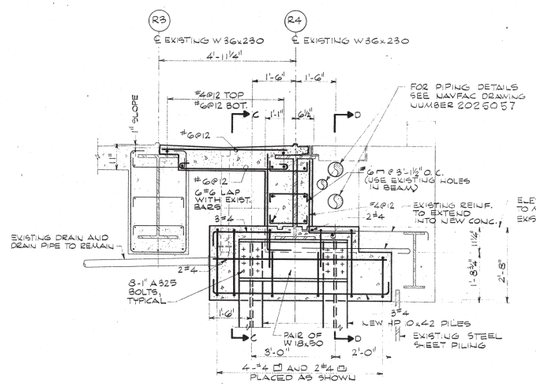

SECTION E-E
SCALE: 1/2"=1'-0"



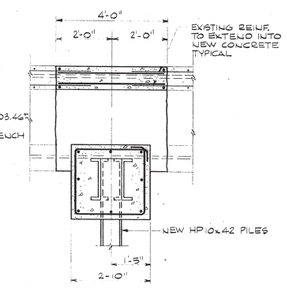

SECTION AR-AR
SCALE: 1/2"=1'-0"



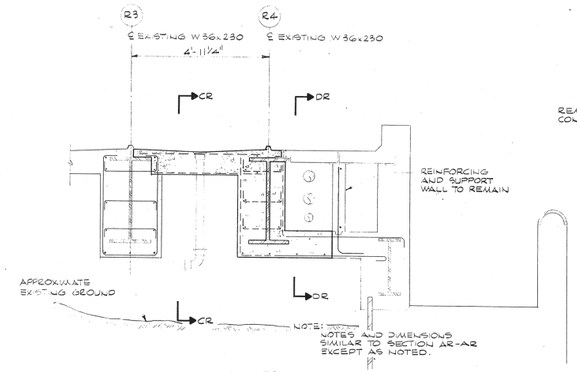

SECTION CR-CR
SCALE 1/2"=1'-0"



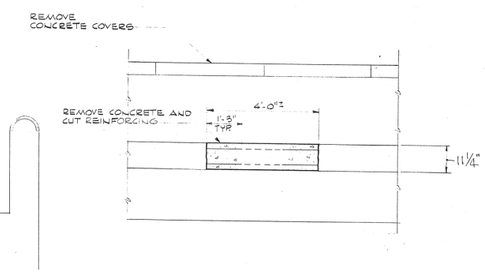

SECTION A-A
SCALE: 1/2"=1'-0"



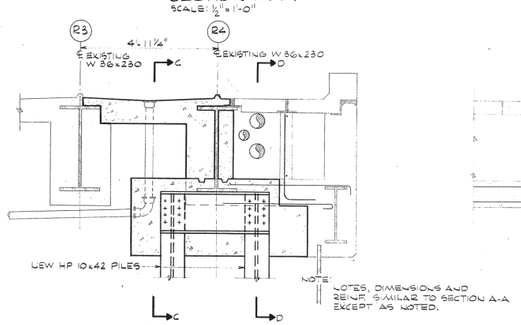

SECTION C-C
SCALE: 1/2"=1'-0"



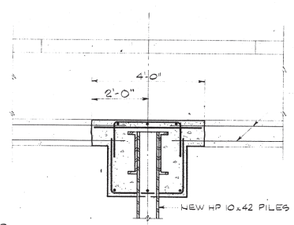

SECTION BR-BR
SCALE: 1/2"=1'-0"




SECTION DR-DR
SCALE: 1/2"=1'-0"



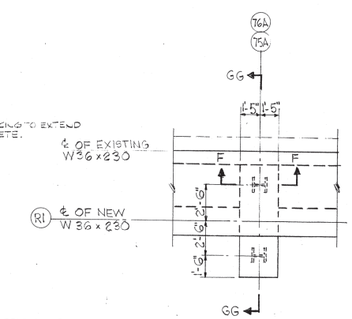

SECTION B-B
SCALE: 1/2"=1'-0"



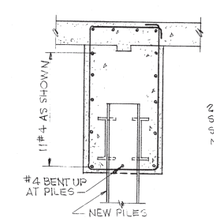

SECTION D-D
SCALE: 1/2"=1'-0"

NOTE:
PROVIDE TEMPORARY SUPPORTS FOR THE W18x50 BEAMS TO INSURE A TIGHT FIT TO THE W36 RAIL BEAM WHEN FIELD DRILLING BOLT HOLES.

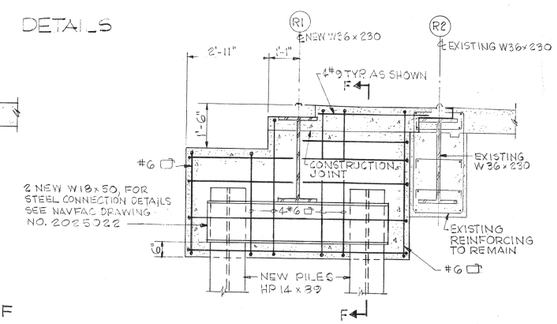
REMOVAL DETAILS




PART PLAN
SCALE: 1/4"=1'-0"




SECTION F-F
SCALE: 1/2"=1'-0"




SECTION GG-GG
SCALE: 1/2"=1'-0"

CHECK GRAPHIC SCALES BEFORE USING

GRAPHIC SCALES

1/8" = 1'-0" 5' 0' 5' 10' 15' 20' 25' 30' 35' 40'

1/2" = 1'-0" 1' 0' 1' 2' 3' 4' 5' 6' 7' 8' 9' 10'

1/4" = 1'-0" 5' 0' 5' 10' 15'

THE STATE OF NEW HAMPSHIRE
RICHARD W. ALBRECHT
No. 1309
PROFESSIONAL ENGINEER

Richard W. Albrecht

SATISFACTORY TO: DATE

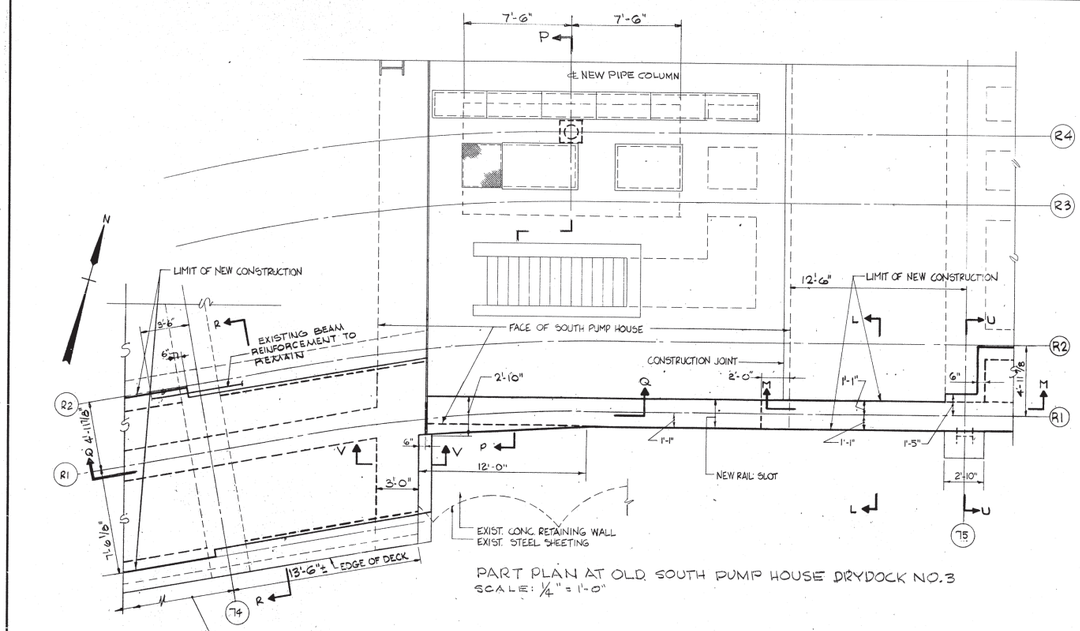
| | | | |
|---|---|---|---|
| FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS | DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHERN DIVISION | | |
| DES. R.E.G. DR. C. J. B. CHK. J.G.R. | NAVAL BASE PHILADELPHIA, PA. | | |
| SUBMITTED BY R. Albrecht DATE 4/7/77 | PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H. | | |
| DIRECTOR | ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13 | | |
| NORDIV HD. E.I.C. HD. DIR. | DRYDOCK NO. 3 | | |
| APPROVED DATE | CONCRETE FRAMING DETAILS-PART I | | |
| OFFICER IN CHARGE | SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 2025023 |
| APPROVED DATE | | | CONSTR. CONTR. NO. N62472-76-C-0746 |
| NORDIV FOR COMMANDER NAVFAC | SCALE: AS SHOWN | | SPEC. 04-76-0746 SHEET 6 OF 53 |

TP-65 D
19

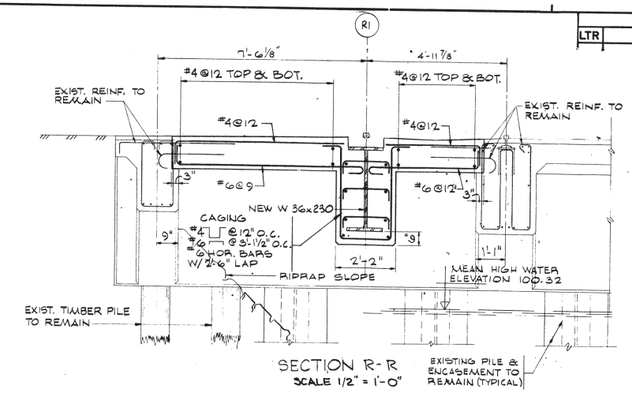


OCE-FST 08955-100-12-73

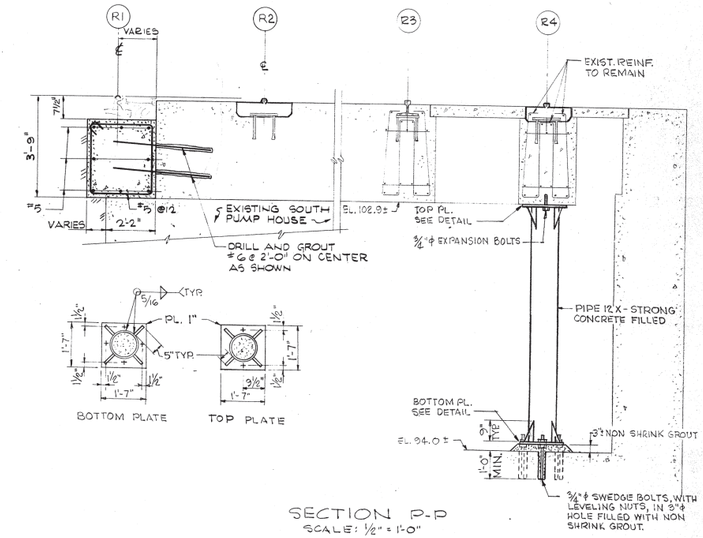
| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |




PART PLAN AT OLD SOUTH PUMP HOUSE DRYDOCK NO.3
SCALE: 1/4" = 1'-0"




SECTION R-R
SCALE 1/2" = 1'-0"



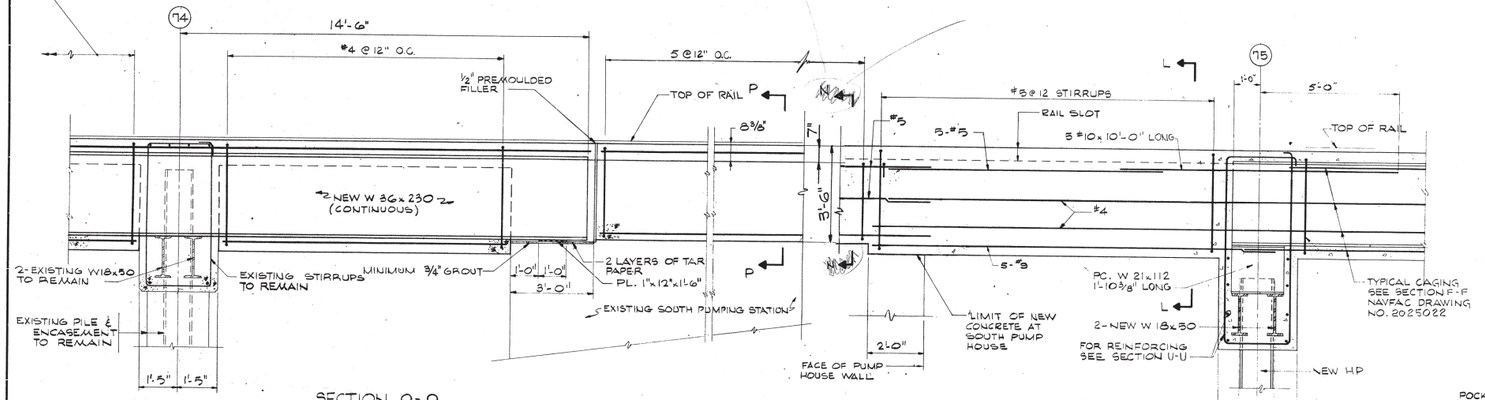

SECTION P-P
SCALE: 1/2" = 1'-0"




FOR TYPICAL BAY DETAILS AT BERTH 13 SEE NAVFAC DRAWING NO. 2025027

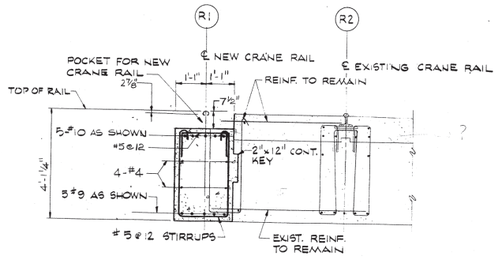
REMOVE SECTION MARKER 4/15/77 JGR

OUT ? CONFIRMED W/ P-P ??



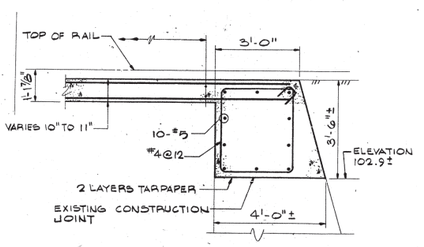

SECTION Q-Q
SCALE 1/2" = 1'-0"

SECTION M-M
SCALE: 1/2" = 1'-0"

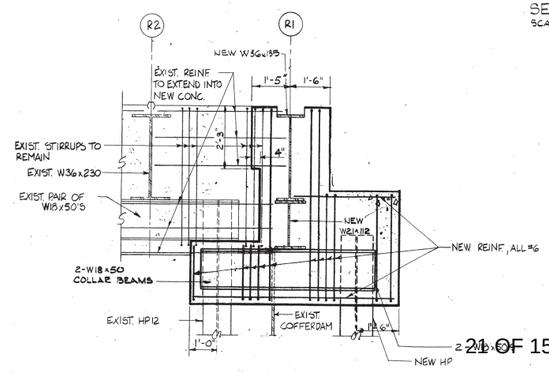



SECTION L-L
SCALE: 1/2" x 1'-0"

NOTES:
1. FOR CONCRETE PLACEMENT DETAIL, SEE NAVFAC DRAWING NO. 2025022.
2. FOR DECK DRAINAGE, SEE NAVFAC DRAWING NO. 2025052.
3. FOR CRANE RAIL ALIGNMENT, SEE NAVFAC DRAWING NO. 2025046.




SECTION V-V
SCALE: 1/2" = 1'-0"




SECTION U-U
SCALE 1/2" = 1'-0"

GRAPHIC SCALES

1/4" = 1'-0" 0 1 2 3 4 5 10 15 20

1/2" = 1'-0" 0 1 5 10

CHECK GRAPHIC SCALES BEFORE USING

THE STATE OF NEW HAMPSHIRE — RICHARD W. ALBRECHT No. 1399 — REGISTERED PROFESSIONAL ENGINEER

R. Albrecht

SATISFACTORY TO: DATE

FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS

DES R.E.S. DR CHK J.G.R.
SUBMITTED BY R. Albrecht 4/7/77 DATE
DIRECTOR
NORDIV HD. E.I.C.
HD. DIR.
APPROVED DATE
OFFICER IN CHARGE
APPROVED DATE
NORDIV FOR COMMANDER NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
NAVAL BASE PHILADELPHIA, PA.
PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H.
ADDITIONAL CRANE RAIL SYSTEM
CONSTRUCTION, BERTHS 11 AND 13
DRYDOCK NO. 3
CONCRETE FRAMING DETAILS-PART 2

| SIZE | CODE IDENT. NO. | NAVFAC DRAWING NO. |
|---|---|---|
| F | 80091 | 2025024 |

CONSTR. CONTR. NO. N62472-76-C-0746
SCALE AS SHOWN SPEC. 04-76-0746 SHEET 7 OF 53

TP-65D-20

OCE-FST 0895-100-12-73

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |

SECTION A-A
TYPICAL CRANE RAIL SUPPORT BEAM
SCALE: 3/8" = 1'-0"

SECTION B-B
SCALE: 3/8" = 1'-0"

SECTION C-C
SCALE: 3/8" = 1'-0"

CRANE CROSSOVER PILE PLAN
SCALE: 1" = 40'-0"

CRANE RAIL PLAN BENT (A) TO (M)
NOT TO SCALE

PLAN
SCALE: 1" = 20'-0"

SECTION D-D
SCALE: 3/8" = 1'-0"

KEY PLAN

GRAPHIC SCALES

CHECK GRAPHIC SCALES BEFORE USING

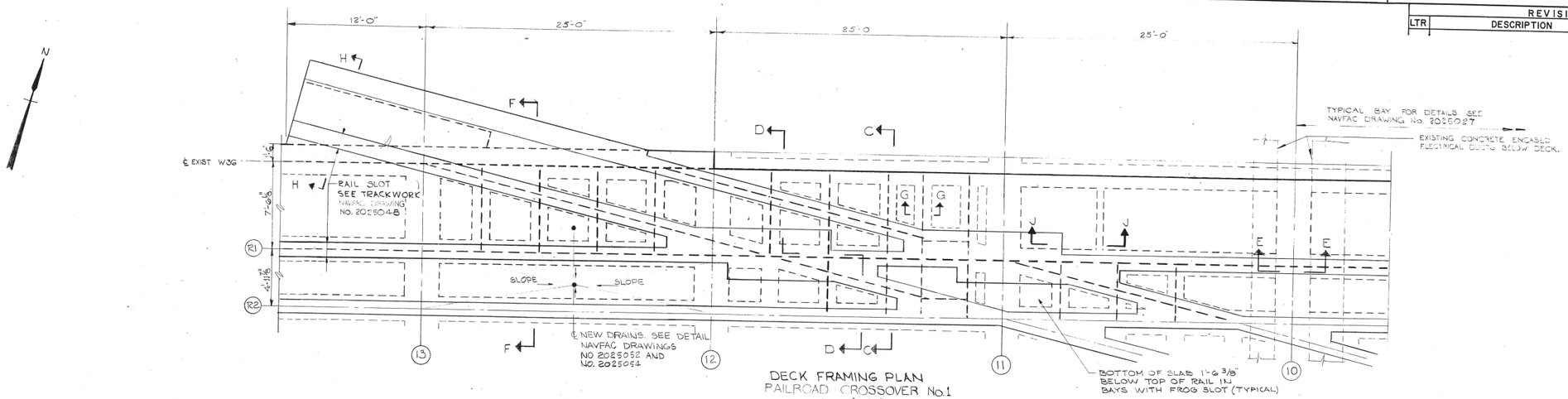
| | | | |
|---|---|---|---|
| FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS — ENGINEERS | DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHERN DIVISION | | |
| DES. U.G.R. / DR. M.R. / CHK. R.L.F. | NAVAL BASE PHILADELPHIA, PA. | | |
| SUBMITTED BY R. Albrecht DATE 4/7/77 DIRECTOR | PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H. | | |
| NORDIV HD. ____ HD. ____ DIR. ____ | ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13 BERTHS 11 AND 13 DECK FRAMING PLAN AND DETAILS | | |
| APPROVED DATE OFFICER IN CHARGE | SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 2025025 |
| APPROVED DATE NORDIV FOR COMMANDER NAVFAC | SCALE: AS SHOWN | CONSTR. CONTR. NO. N62472-76-C-0746 | SPEC. 04-76-0746 SHEET 8 OF 53 |

SATISFACTORY TO: DATE

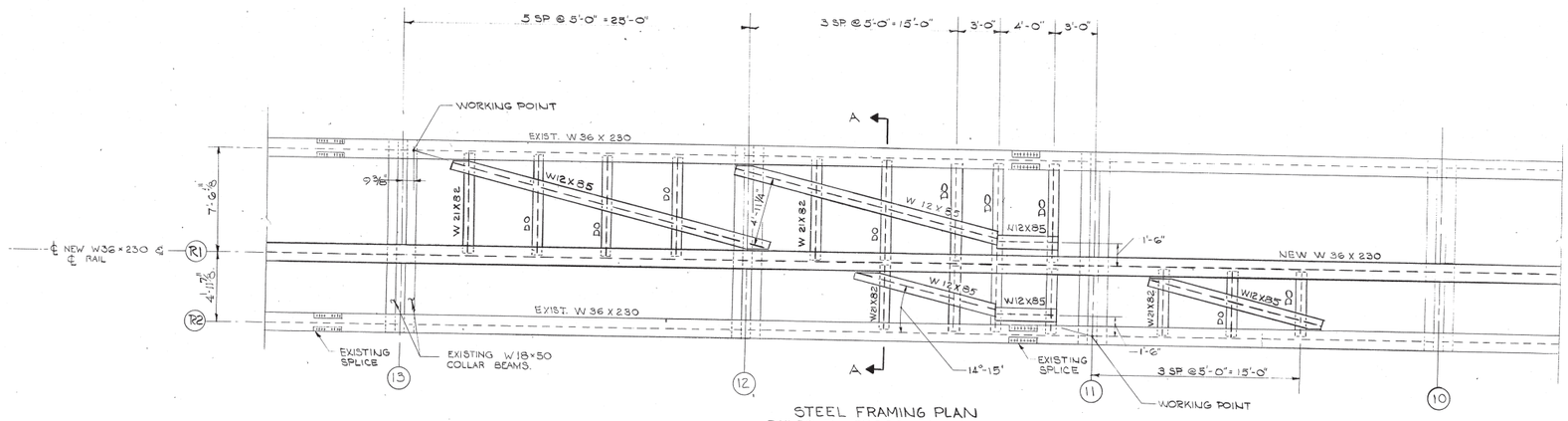
THE STATE OF NEW HAMPSHIRE RICHARD W. ALBRECHT No. 1399 REGISTERED PROFESSIONAL ENGINEER

TP-65D
21

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |




DECK FRAMING PLAN
RAILROAD CROSSOVER No.1
SCALE 1/4" = 1'-0"




STEEL FRAMING PLAN
RAILROAD CROSSOVER No. 1.
SCALE 1/4" = 1'-0"

NOTES 1: FOR SECTION A-A, SEE NAVFAC DRAWING NO. 2025028
2 FOR SECTIONS C-C THRU J-J SEE NAVFAC DRAWING No. 2025027

CHECK GRAPHIC SCALES BEFORE USING

FAY, SPOFFORD & THORNDIKE, INC.
BOSTON, MASS.
ARCHITECTS – ENGINEERS

DES R.E.B. DR M.P. CHK J.G.R.
SUBMITTED BY R. Albrecht DATE 4/7/77
DIRECTOR
NORDIV
HD. _____ E.I.C. _____
HD. _____ DIR. _____
APPROVED DATE
OFFICER IN CHARGE
APPROVED DATE

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL BASE NORTHERN DIVISION PHILADELPHIA, PA.
PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H.
ADDITIONAL CRANE RAIL SYSTEM
CONSTRUCTION, BERTHS 11 AND 13
BERTH 11-R.R. CROSSOVER NO. 1
CONCRETE AND STEEL FRAMING PLANS

| SIZE | CODE IDENT. NO. | NAVFAC DRAWING NO. |
|---|---|---|
| F | 80091 | 2025026 |

THE STATE OF NEW HAMPSHIRE
RICHARD W. ALBRECHT
No. 1399
REGISTERED PROFESSIONAL ENGINEER
R. Albrecht

SATISFACTORY TO: DATE

GRAPHIC SCALE
1/4" = 1'-0"
0 5' 10' 15' 20'

TP-65D
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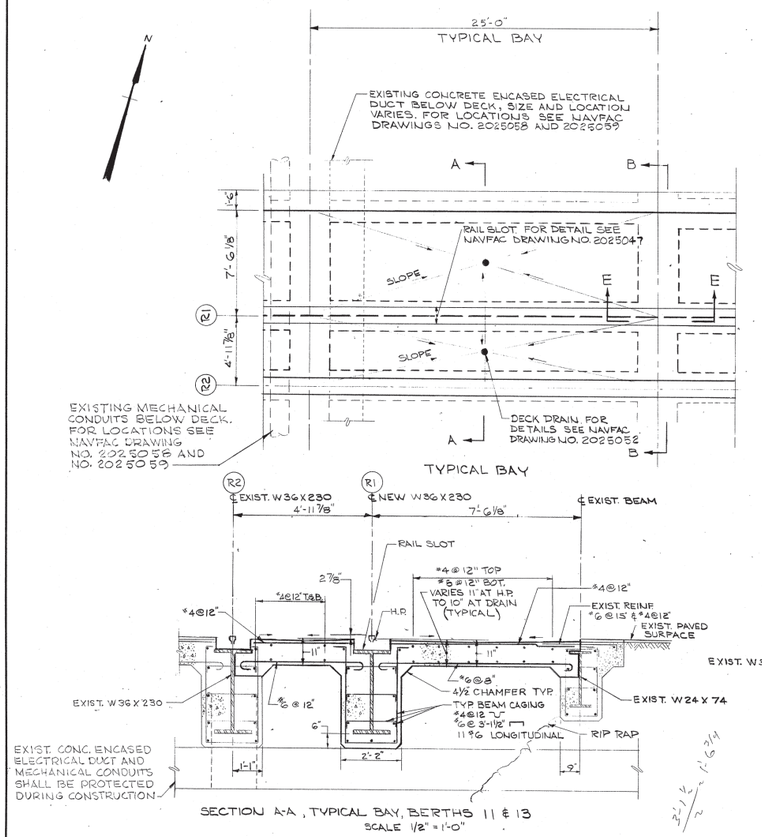
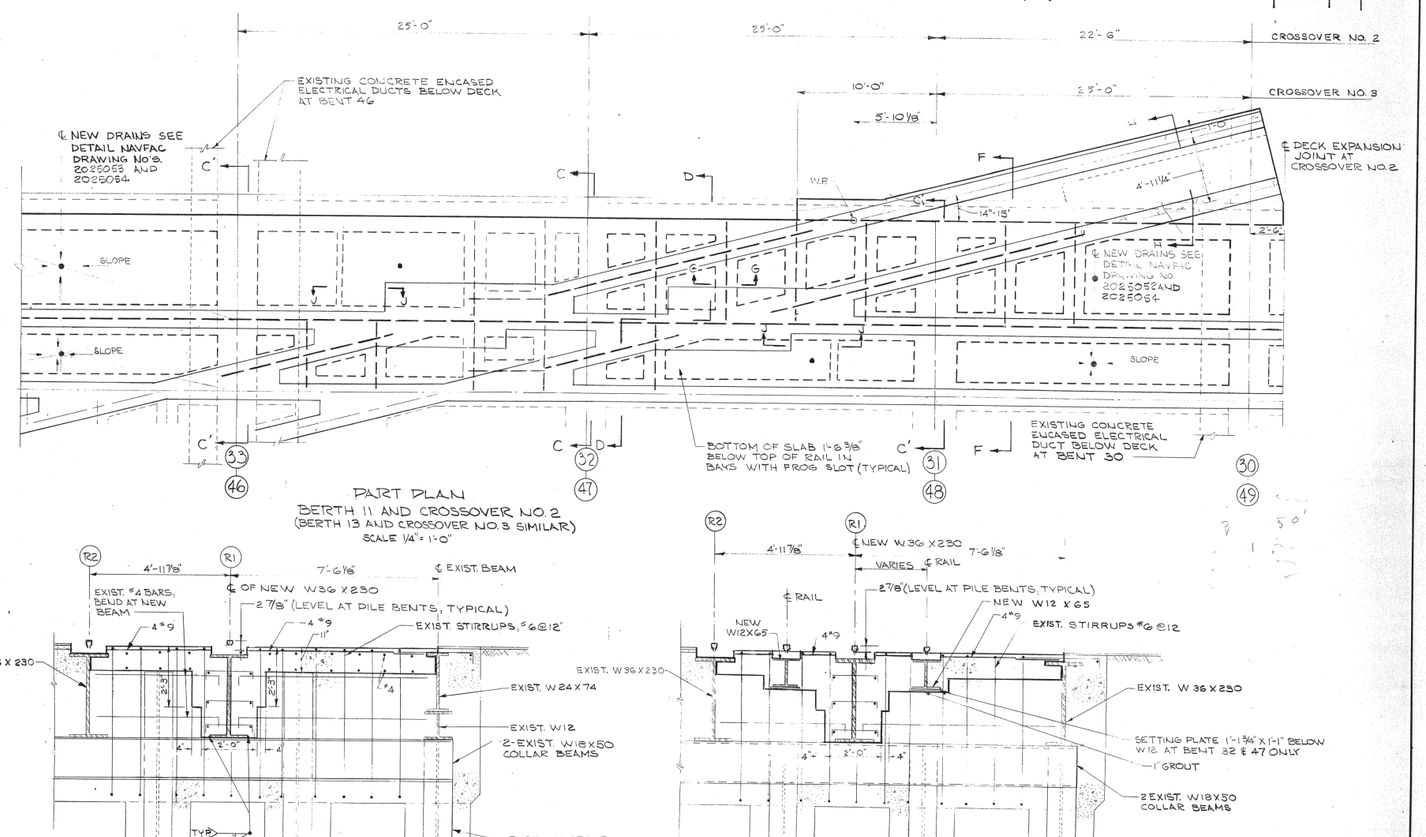
| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |

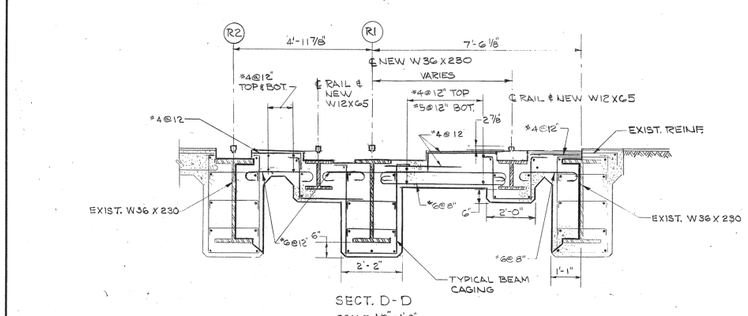


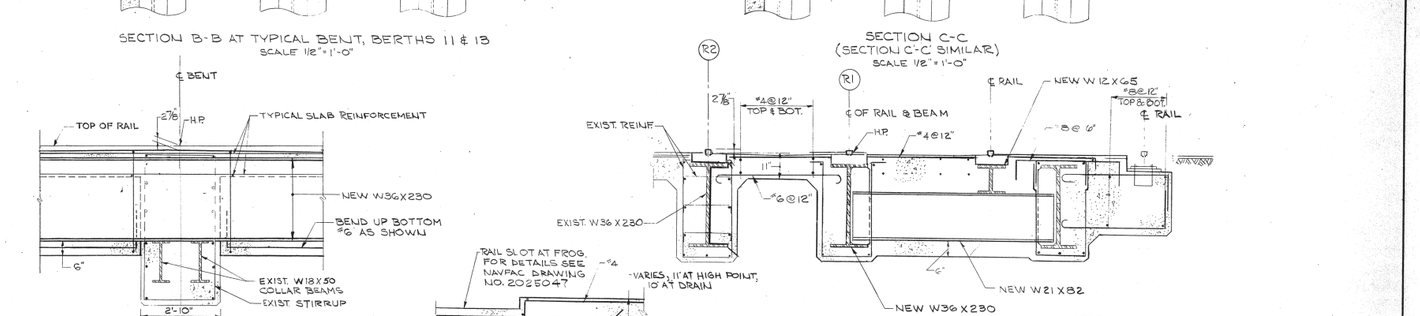



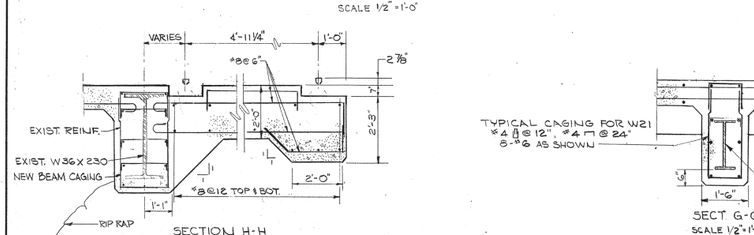


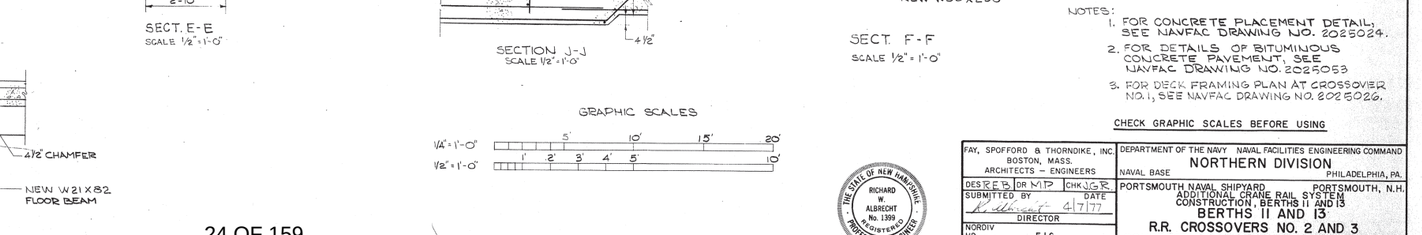





NOTES:

1. FOR CONCRETE PLACEMENT DETAIL, SEE NAVFAC DRAWING NO. 2025024.
2. FOR DETAILS OF BITUMINOUS CONCRETE PAVEMENT, SEE NAVFAC DRAWING NO. 2025053
3. FOR DECK FRAMING PLAN AT CROSSOVER NO. 1, SEE NAVFAC DRAWING NO. 2025026.

GRAPHIC SCALES

1/4" = 1'-0" 5' 10' 15' 20'

1/2" = 1'-0" 1' 2' 3' 4' 5' 10'

CHECK GRAPHIC SCALES BEFORE USING

THE STATE OF NEW HAMPSHIRE — RICHARD W. ALBRECHT No. 1399 — REGISTERED PROFESSIONAL ENGINEER

| | |
|---|---|
| FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS | DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHERN DIVISION NAVAL BASE PHILADELPHIA, PA. |
| DES R E B OR M T P CHK J G R | PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H. ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13 BERTHS 11 AND 13 R.R. CROSSOVERS NO. 2 AND 3 CONCRETE FRAMING PLAN AND DETAILS |
| SUBMITTED BY R. Albrecht DATE 4/7/77 DIRECTOR | |
| NORDIV HD. ____ E.I.C. ____ HD. ____ DIR. ____ | |
| APPROVED DATE OFFICER IN CHARGE | SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO. 2025027 |
| APPROVED DATE NORDIV FOR COMMANDER NAVFAC | CONSTR. CONTR. NO. N62472-76-C-0746 · SCALE: AS SHOWN · SPEC. 04-76-0746 · SHEET 10 OF 53 |

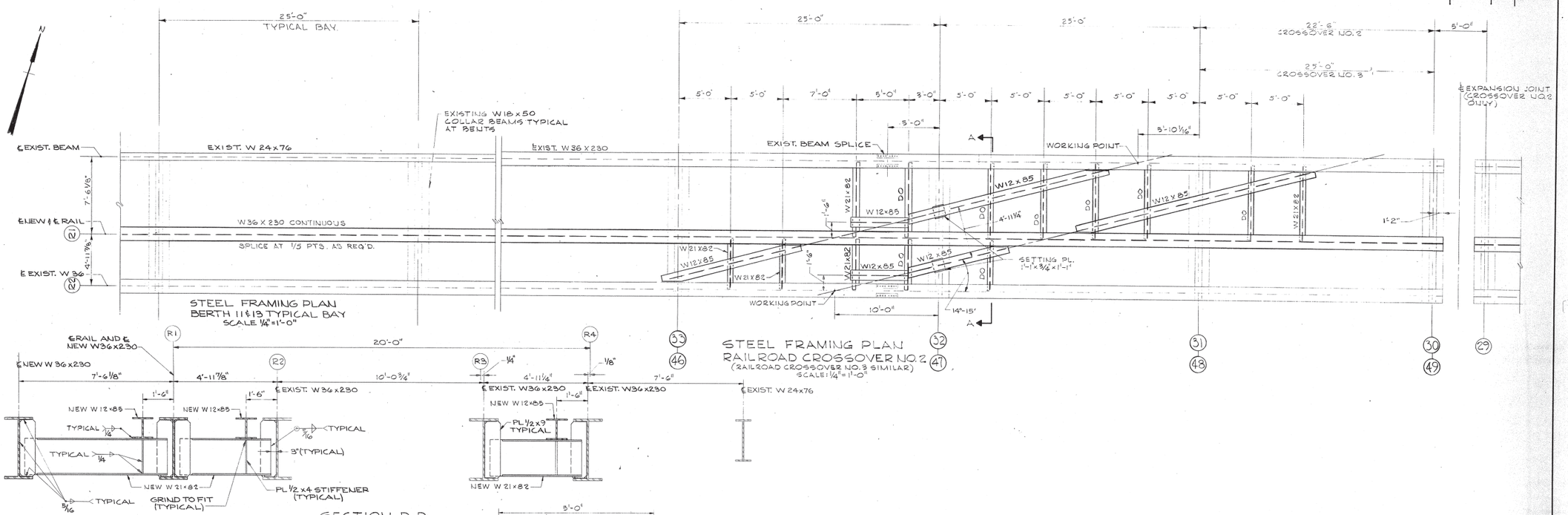
SATISFACTORY TO: DATE

TP-65D
23



DCC-PST 0995-100-12-72

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |




NOTES:

1. FOR LOCATIONS OF SECTIONS B-B THRU F-F, SEE NAVFAC DRAWING NO. 2025033.
2. LOCATE ℄ NEW W36x230 AT TYPICAL BAY BERTH 11 & 13 BELOW ℄ RAIL R1. FOR RAIL ALIGNMENT SEE NAVFAC DRAWING NO. 2025047.
3. FOR BERTH 11 & 13 TYPICAL BAY AND R.R. CROSSOVER NO. 2 AND 3 CONCRETE FRAMING PLANS SEE NAVFAC DRAWING NO. 2025027.
4. FOR LOCATION OF SECTION A-A AT CROSSOVER NO. 1 SEE NAVFAC DRAWING NO. 2025020

CHECK GRAPHIC SCALES BEFORE USING

THE STATE OF NEW HAMPSHIRE — RICHARD W. ALBRECHT No. 1399 — REGISTERED PROFESSIONAL ENGINEER

R. Albrecht

SATISFACTORY TO: DATE

NORDIV FOR COMMANDER NAVFAC

FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS — ENGINEERS

DES. R.E.B. | DR. M.P. | CHK. J.G.R.

SUBMITTED BY R. Albrecht 4/7/77 DATE

DIRECTOR

NORDIV HD. ____ E.I.C. ____ HD. ____ DIR. ____

APPROVED DATE

OFFICER IN CHARGE

APPROVED DATE

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

NORTHERN DIVISION

NAVAL BASE PHILADELPHIA, PA.

PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H.

ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13

BERTHS 11 AND 13

R.R. CROSSOVERS NO. 2 AND 3

STEEL FRAMING PLAN AND DETAILS

| SIZE | CODE IDENT. NO. | NAVFAC DRAWING NO. |
|---|---|---|
| F | 80091 | 2025028 |

CONSTR. CONTR. NO. N62472-76-C-0746

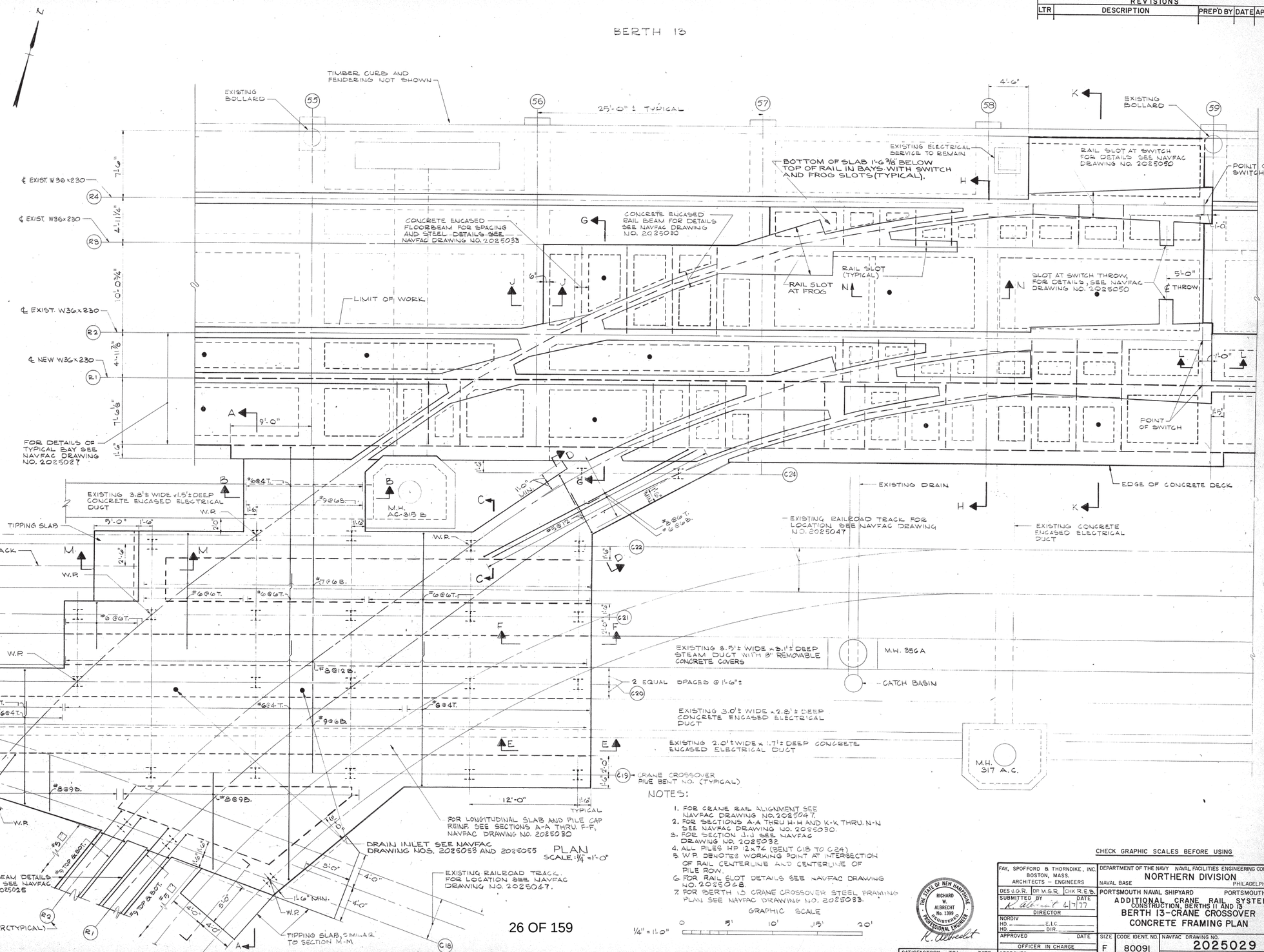
SCALE: AS SHOWN | SPEC. 04-76-0746 | SHEET 11 OF 53

J.O. ____

TP-65D 24

OCE/FST 09955-100-12-73

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |




NOTES:

1. FOR CRANE RAIL ALIGNMENT SEE NAVFAC DRAWING NO. 2025047.
2. FOR SECTIONS A-A THRU H-H AND K-K THRU. N-N SEE NAVFAC DRAWING NO. 2025030.
3. FOR SECTION J-J SEE NAVFAC DRAWING NO. 2025032.
4. ALL PILES HP 12x74 (BENT C18 TO C24)
5. W.P. DENOTES WORKING POINT AT INTERSECTION OF RAIL CENTERLINE AND CENTERLINE OF PILE ROW.
6. FOR RAIL SLOT DETAILS SEE NAVFAC DRAWING NO. 2025068.
7. FOR BERTH 13 CRANE CROSSOVER STEEL FRAMING PLAN SEE NAVFAC DRAWING NO. 2025033.

GRAPHIC SCALE

1/4" = 1'-0"  0  5'  10'  15'  20'

CHECK GRAPHIC SCALES BEFORE USING

THE STATE OF NEW HAMPSHIRE — RICHARD W. ALBRECHT No. 1399 REGISTERED PROFESSIONAL ENGINEER — R. Albrecht

| | | | |
|---|---|---|---|
| FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS | DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHERN DIVISION | | |
| DES. J.G.R. DR. M.S.R. CHK. R.E.B. | NAVAL BASE PHILADELPHIA, PA. | | |
| SUBMITTED BY R. Albrecht DATE 4/7/77 DIRECTOR | PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H. ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13 BERTH 13-CRANE CROSSOVER CONCRETE FRAMING PLAN | | |
| NORDIV HD. ___ E.I.C. ___ HD. ___ DIR. ___ | | | |
| APPROVED DATE OFFICER IN CHARGE | SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 2025029 |
| APPROVED DATE NORDIV FOR COMMANDER NAVFAC | SCALE: AS SHOWN | CONSTR. CONTR. NO. N62472-76-C-0746 SPEC. 04-76-0746 | SHEET 12 OF 53 |

SATISFACTORY TO: DATE

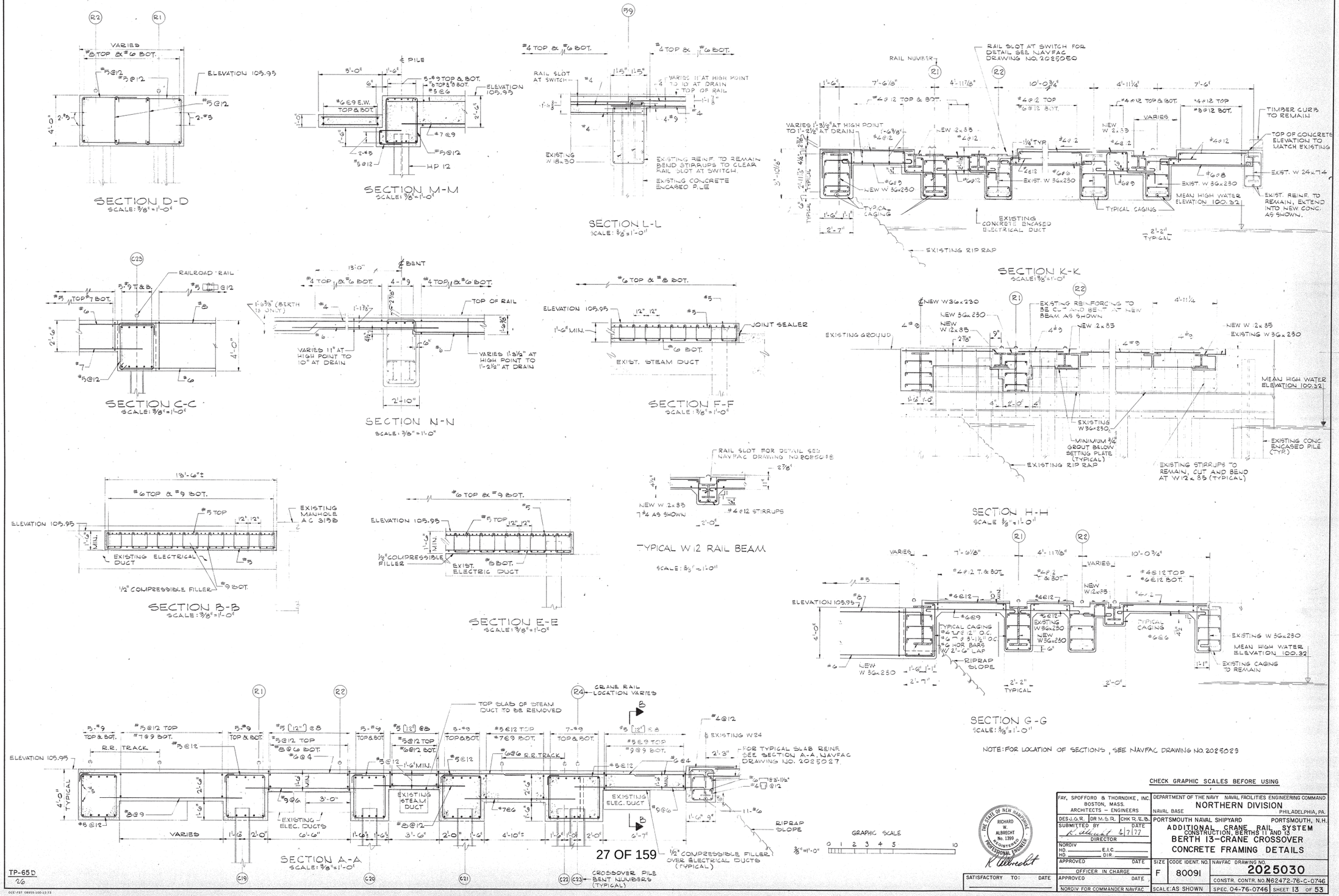
J.O. ___



TP-65D
25

OCE-FST 08955-100-12-73

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |

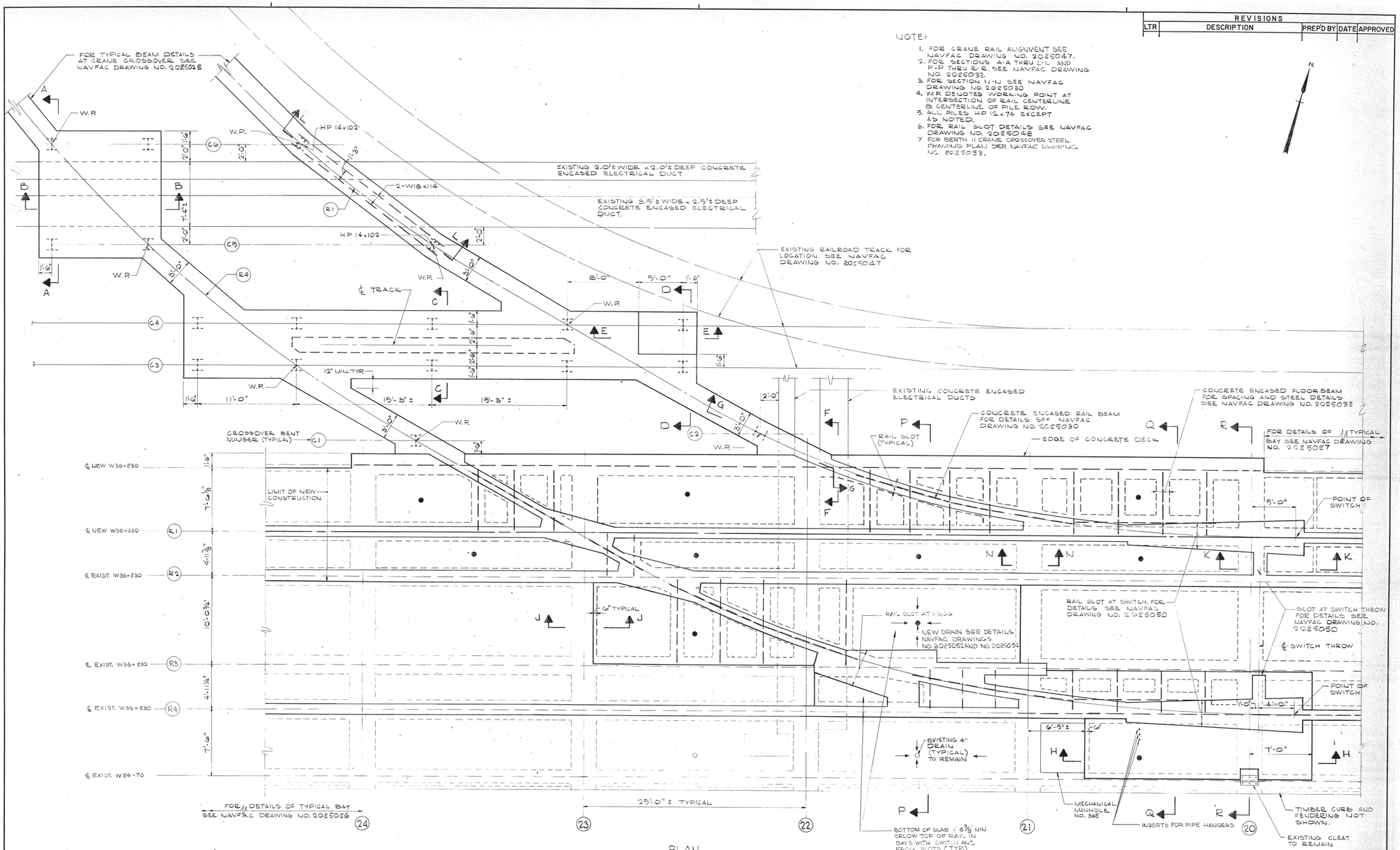



TP-65D
26

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |

NOTE:

1. FOR CRANE RAIL ALIGNMENT SEE NAVFAC DRAWING NO. 2025047.
2. FOR SECTIONS A-A THRU L-L AND P-P THRU R-R, SEE NAVFAC DRAWING NO. 2025032.
3. FOR SECTION N-N SEE NAVFAC DRAWING NO. 2025030
4. W.P. DENOTES WORKING POINT AT INTERSECTION OF RAIL CENTERLINE & CENTERLINE OF PILE ROW.
5. ALL PILES HP 12x74 EXCEPT AS NOTED.
6. FOR RAIL SLOT DETAILS SEE NAVFAC DRAWING NO. 2025048
7. FOR BERTH 11 CRANE CROSSOVER STEEL FRAMING PLAN SEE NAVFAC DRAWING NO. 2025033.




PLAN
SCALE: 1/4" = 1'-0"

CHECK GRAPHIC SCALES BEFORE USING

GRAPHIC SCALE
1/4" = 1'-0"
0 5' 10' 15' 20'

THE STATE OF NEW HAMPSHIRE — RICHARD W. ALBRECHT No. 1396 — REGISTERED PROFESSIONAL ENGINEER
R. Albrecht

SATISFACTORY TO: DATE

FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS

DES U.G.R. | DR M.S.R. | CHK R.E.B.

SUBMITTED BY R. Albrecht DATE 4/7/77

DIRECTOR

NORDIV HD. _____ E.I.C. _____
HD. _____ DIR. _____

APPROVED DATE

OFFICER IN CHARGE

APPROVED DATE

NORDIV FOR COMMANDER NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
NAVAL BASE PHILADELPHIA, PA.

PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H.

ADDITIONAL CRANE RAIL SYSTEM
CONSTRUCTION, BERTHS 11 AND 13
BERTH 11 – CRANE CROSSOVER
CONCRETE FRAMING PLAN

| SIZE | CODE IDENT. NO. | NAVFAC DRAWING NO. |
|---|---|---|
| F | 80091 | 2025031 |

CONSTR. CONTR. NO. N62472-76-C-0746

SCALE: AS SHOWN SPEC. 04-76-0746 SHEET 14 OF 53

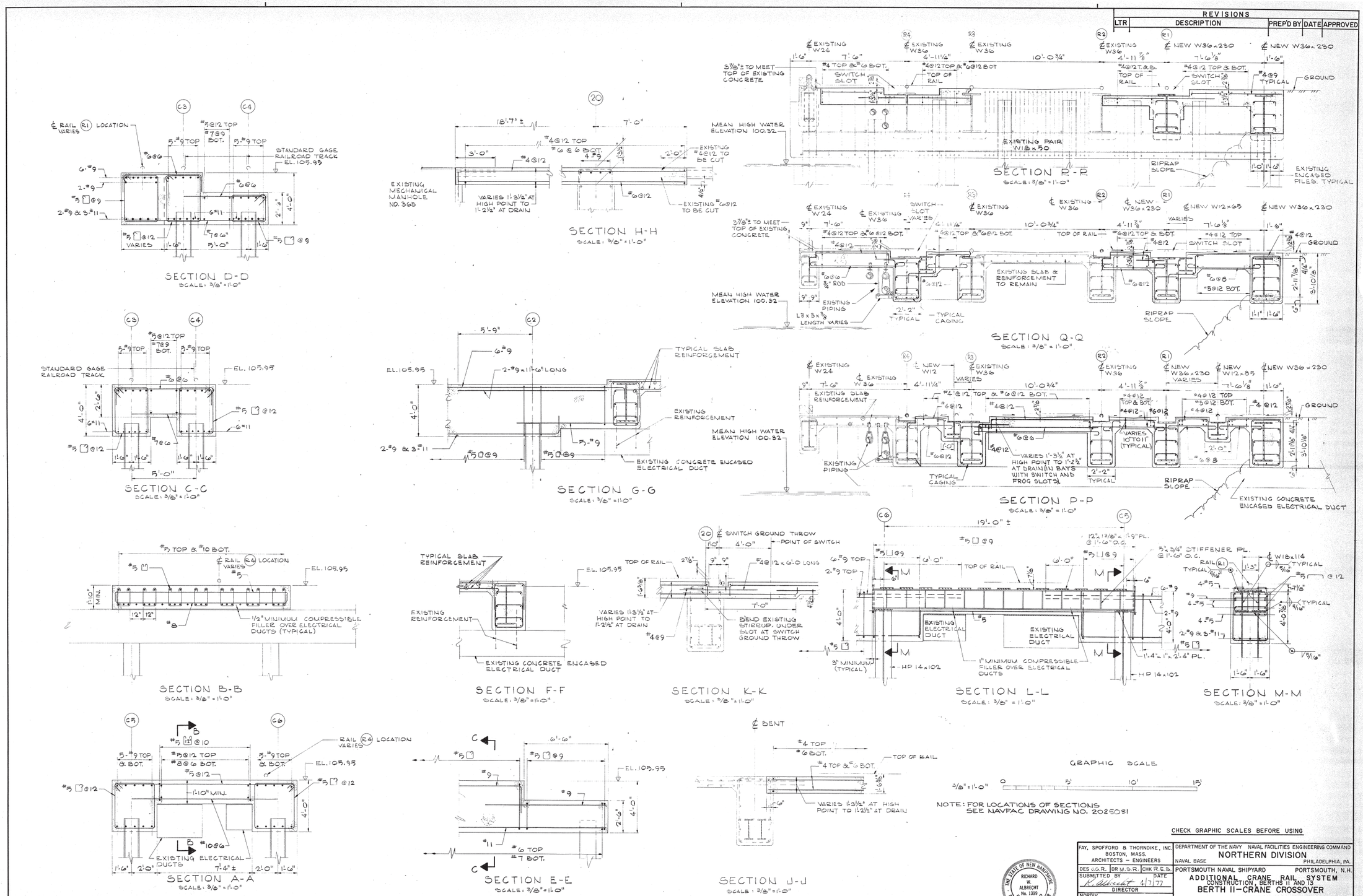
J.O. _____

TP-65 D
27

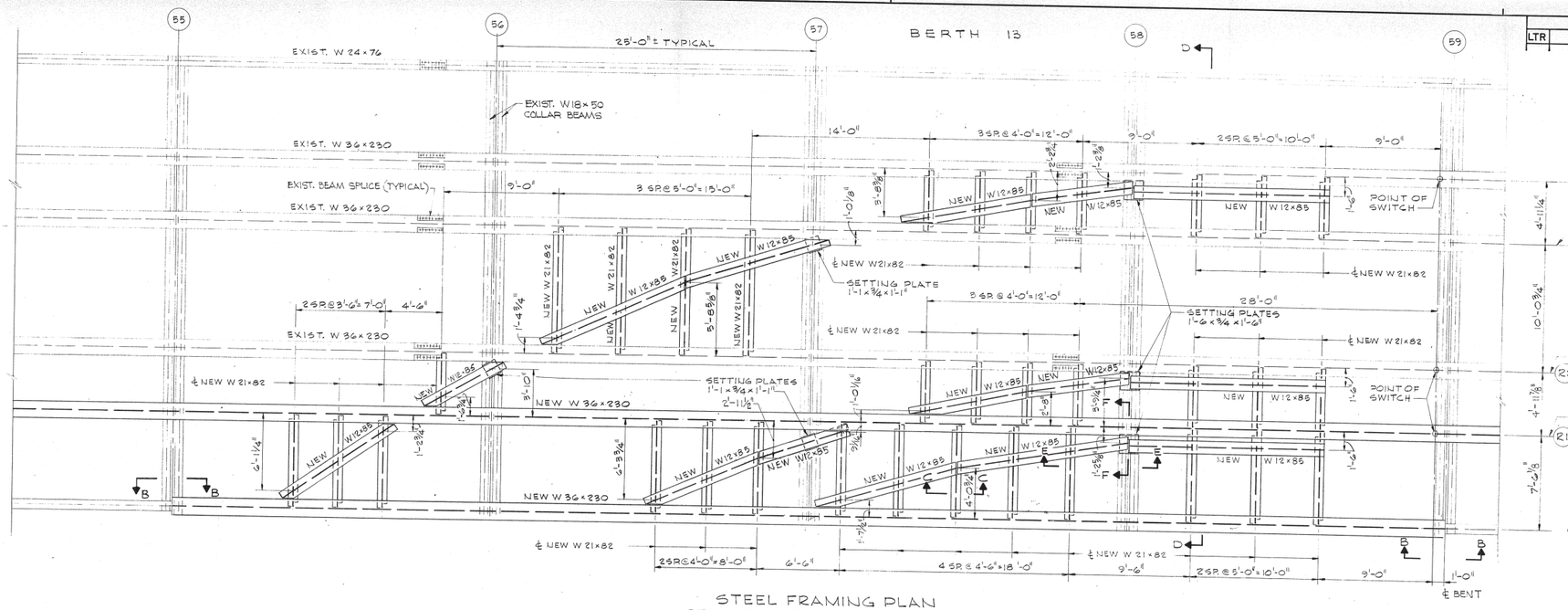


OCC-FST 08955-100-12-73

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |




TP-65D
28




STEEL FRAMING PLAN
CRANE CROSSOVER BERTH 13
SCALE: 1/4" = 1'-0"

STEEL FRAMING PLAN
CRANE CROSSOVER BERTH 11
SCALE: 1/4" = 1'-0"

NOTE: FOR SIMILAR DETAILS SEE STEEL FRAMING PLAN, CRANE CROSSOVER BERTH 13.

NOTE:
1. FOR SECTIONS B-B THRU F-F, SEE NAVFAC DRAWING NO. 2025028.
2. FOR BERTH 11 CRANE CROSSOVER CONCRETE FRAMING PLAN SEE NAVFAC DRAWING NO. 2025031
3. FOR BERTH 13 CRANE CROSSOVER CONCRETE FRAMING PLAN SEE NAVFAC DRAWING NO. 2025029

GRAPHIC SCALE
1/4" = 1'-0" 0 1' 2' 3' 4' 5' 10' 15' 20'

CHECK GRAPHIC SCALES BEFORE USING

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |

FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS
DES J.G.R. | DR A.D. | CHK R.E.B.
SUBMITTED BY R. Albrecht DATE 4/7/77
DIRECTOR
NORDIV HD. ____ E.I.C. ____ HD. ____ DIR. ____
APPROVED DATE
OFFICER IN CHARGE
APPROVED DATE
NORDIV FOR COMMANDER NAVFAC

THE STATE OF NEW HAMPSHIRE RICHARD W. ALBRECHT No. 1399 REGISTERED PROFESSIONAL ENGINEER
R. Albrecht

SATISFACTORY TO: DATE

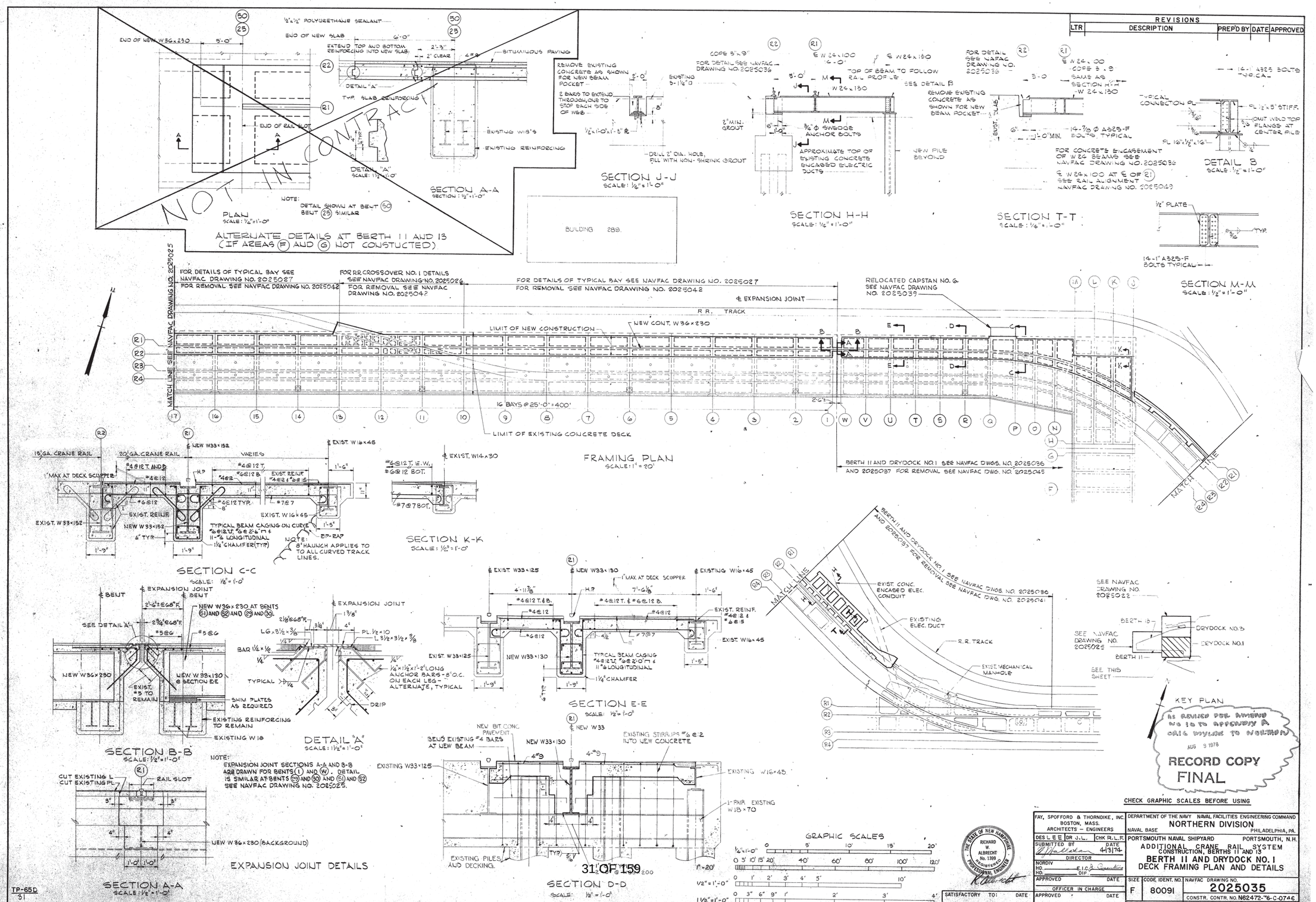
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL BASE NORTHERN DIVISION PHILADELPHIA, PA.
PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H.
ADDITIONAL CRANE RAIL SYSTEM
CONSTRUCTION, BERTHS 11 AND 13
BERTHS 11 AND 13 CRANE CROSSOVER
STEEL FRAMING PLANS

| SIZE | CODE IDENT. NO. | NAVFAC DRAWING NO. |
|---|---|---|
| F | 80091 | 2025033 |

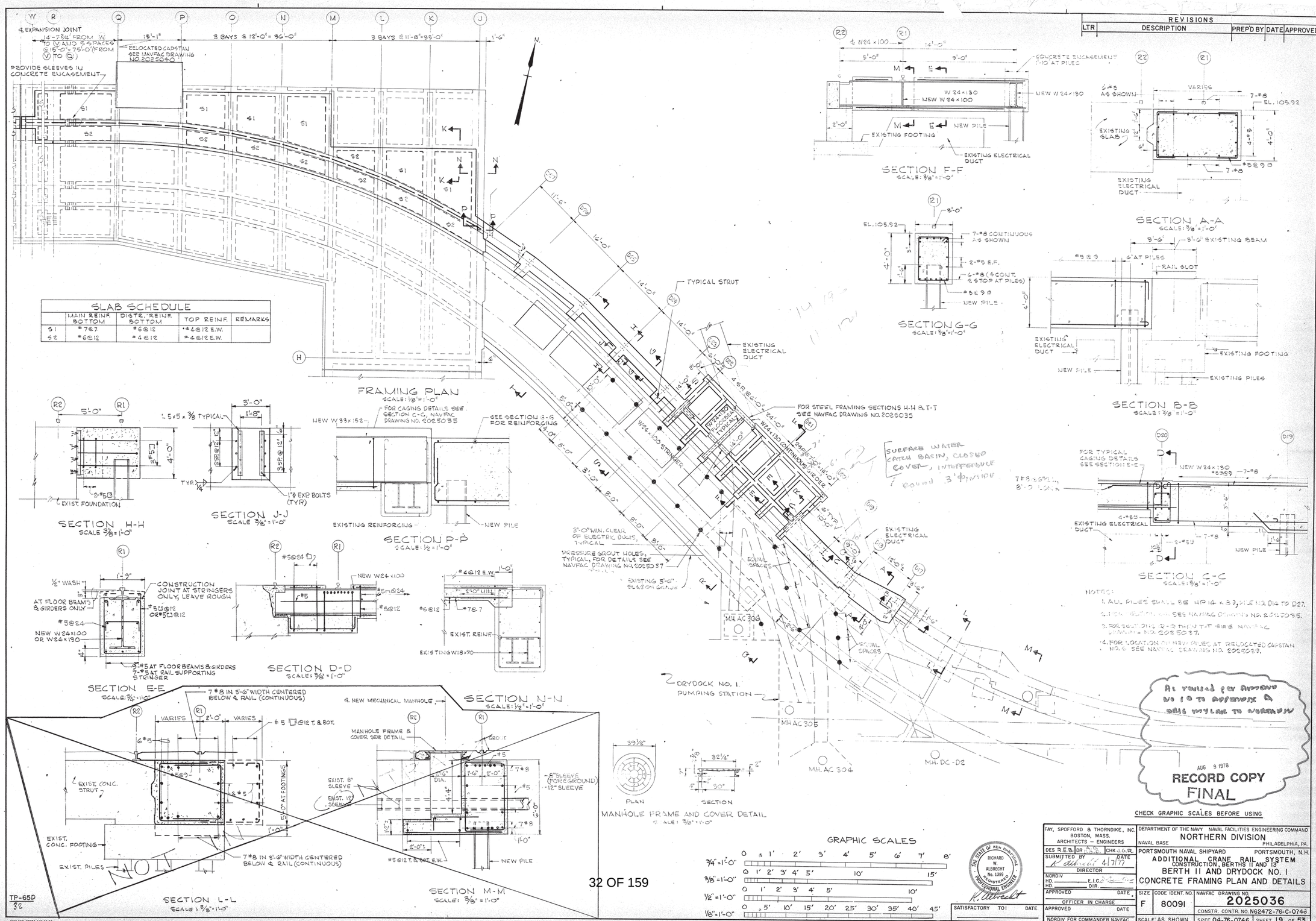
CONSTR. CONTR. NO. N62472-76-C-0746

TP-65 D
29

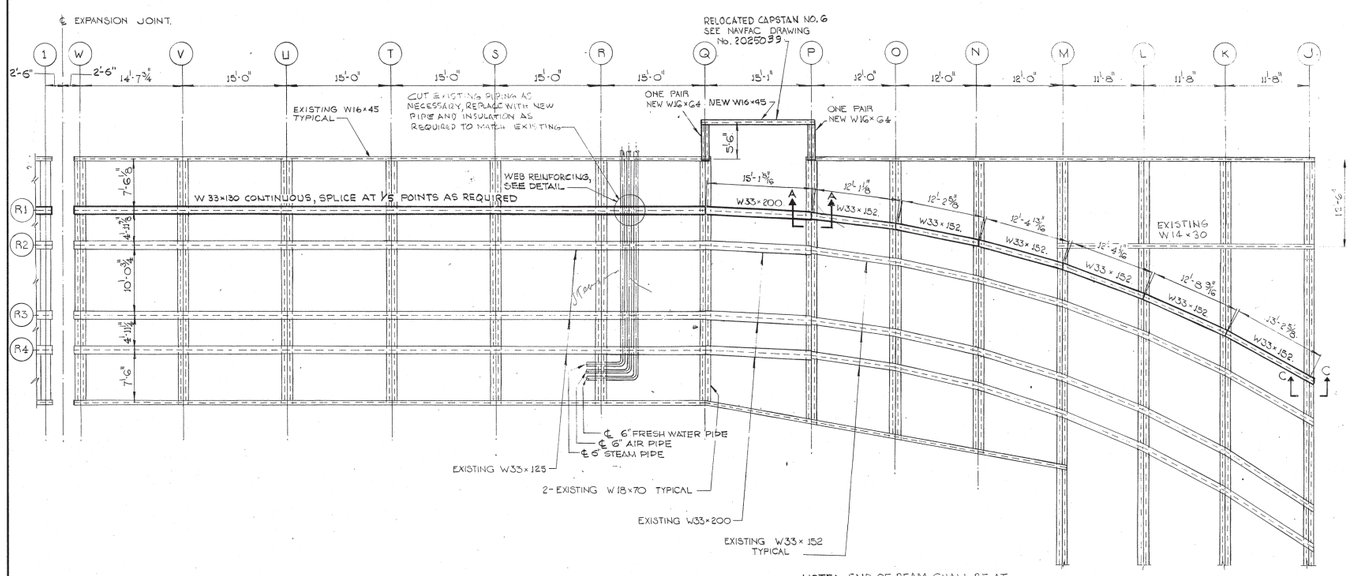
| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |



| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |

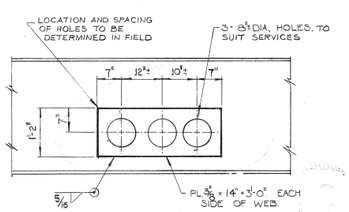


| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |
| | | | | |

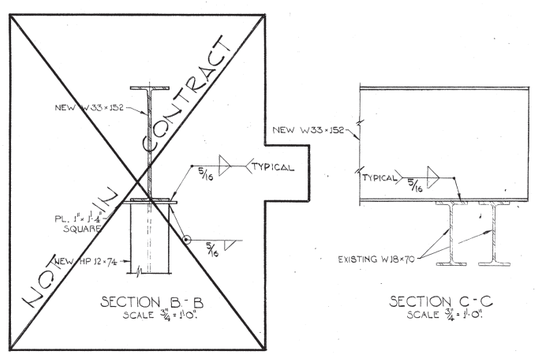



NOTE: END OF BEAM SHALL BE AT ℄ RAIL ON ℄ BENTS.

STRUCTURAL STEEL PLAN BENT J TO W
SCALE: 1/8"=1'-0"



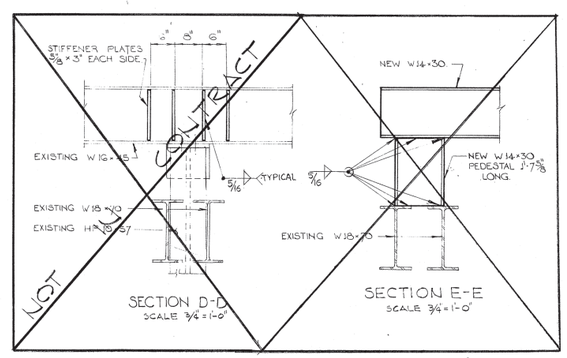

WEB REINFORCING DETAIL.
SCALE 3/4"=1'-0".




SECTION B-B
SCALE 3/4"=1'-0".

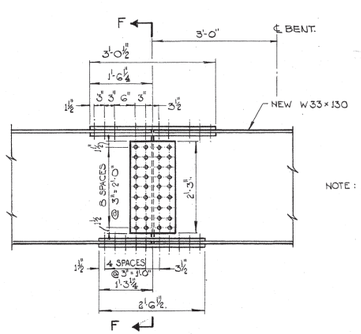



SECTION C-C
SCALE 3/4"=1'-0".

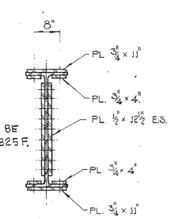



SECTION D-D
SCALE 3/4"=1'-0"

SECTION E-E
SCALE 3/4"=1'-0"

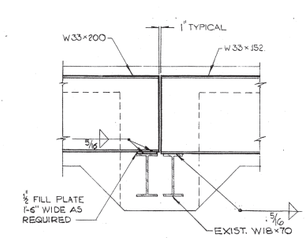



TYPICAL W33×130 SPLICE DETAIL
SCALE 3/4"=1'-0".



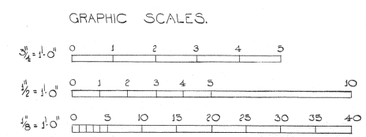

NOTE: ALL BOLTS SHALL BE 7/8" DIAMETER, A325 F.

SECTION F-F




SECTION A-A
SCALE 3/4"=1'-0".

GRAPHIC SCALES.




CHECK GRAPHIC SCALES BEFORE USING

THE STATE OF NEW HAMPSHIRE RICHARD W. ALBRECHT No. 1399 REGISTERED PROFESSIONAL ENGINEER
R. Albrecht

SATISFACTORY TO: DATE

FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS

DES. LEE DR. JL. CHK. R. L. F.
SUBMITTED BY R. Albrecht DATE 4/7/77
DIRECTOR
NORDIV HD. ____ E.I.C. ____ HD. ____ DIR. ____
APPROVED DATE
OFFICER IN CHARGE
APPROVED DATE
NORDIV FOR COMMANDER NAVFAC

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
NAVAL BASE PHILADELPHIA, PA.
PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H.
ADDITIONAL CRANE RAIL SYSTEM
CONSTRUCTION, BERTHS 11 AND 13
BERTH 11
STEEL FRAMING PLAN AND DETAILS

| SIZE | CODE IDENT. NO. | NAVFAC DRAWING NO. |
|---|---|---|
| F | 80091 | 2025038 |
| | | CONSTR. CONTR. NO. N62472-76-C-0746 |
| SCALE: AS SHOWN | | SPEC. 04-76-0746 SHEET 21 OF 53 |

J.O. ____

TP-65 D
34

| REVISIONS | | | | |
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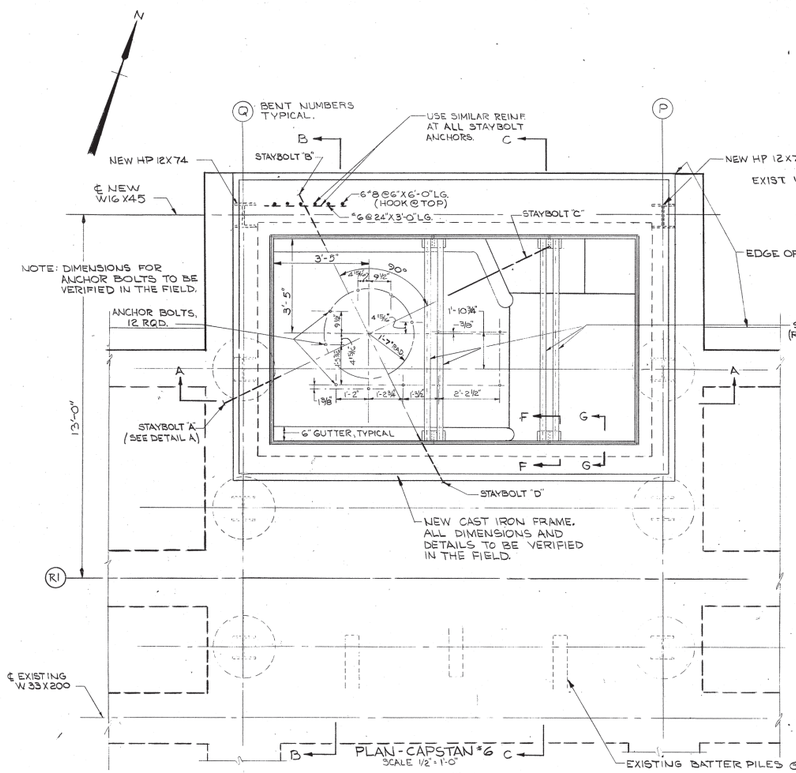
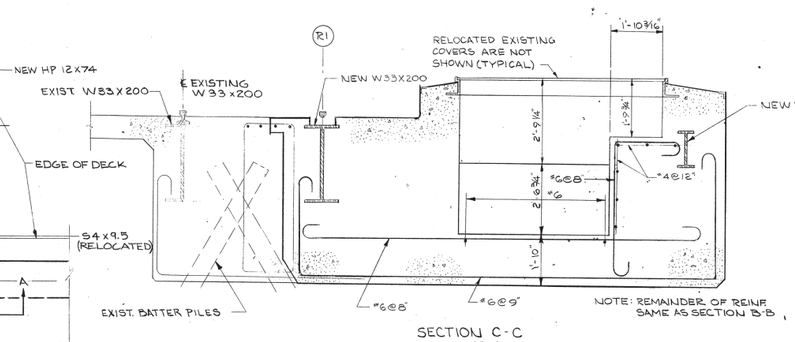
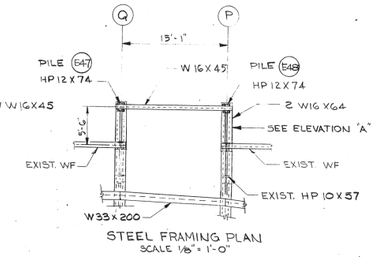
| LTR | DESCRIPTION | PREP'D BY | DATE | APPROVED |



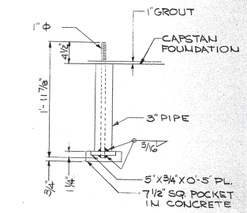

PLAN - CAPSTAN #6
SCALE 1/2" = 1'-0"



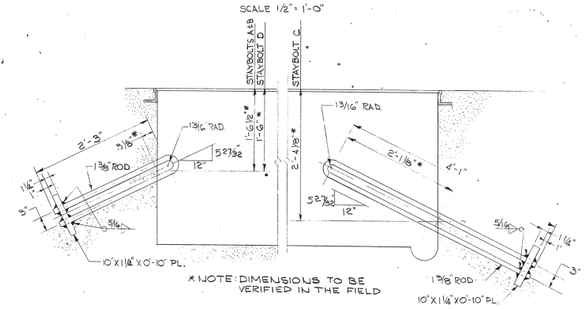

SECTION C-C
SCALE 1/2" = 1'-0"



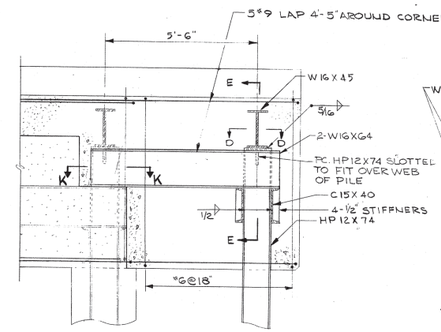

STEEL FRAMING PLAN
SCALE 1/8" = 1'-0"



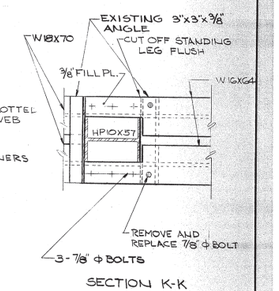

ANCHOR BOLT DETAIL
SCALE: 1" = 1'-0"



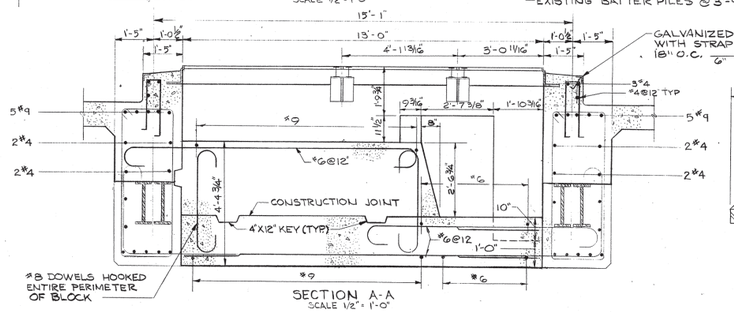

DETAIL A
(SECTION ON ℄ OF STAYBOLTS)
SCALE 1" = 1'-0"



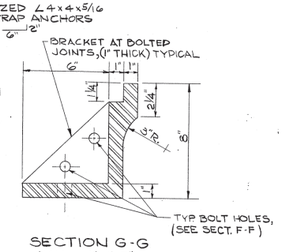

ELEVATION "A"
SCALE 1/2" = 1'-0"



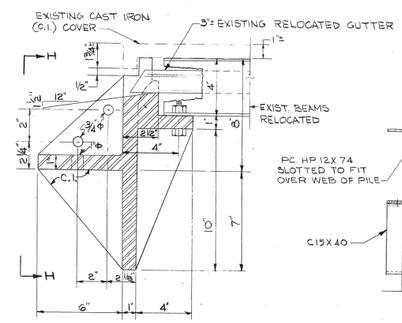

SECTION K-K
SCALE: 1" = 1'-0"



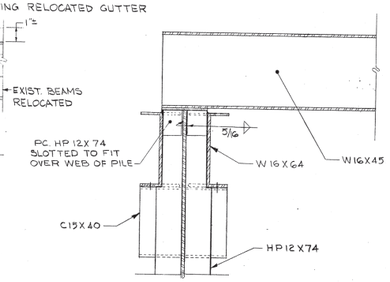

SECTION A-A
SCALE 1/2" = 1'-0"



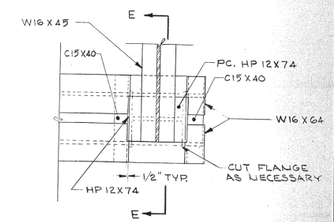

SECTION G-G
SCALE 3" = 1'-0"



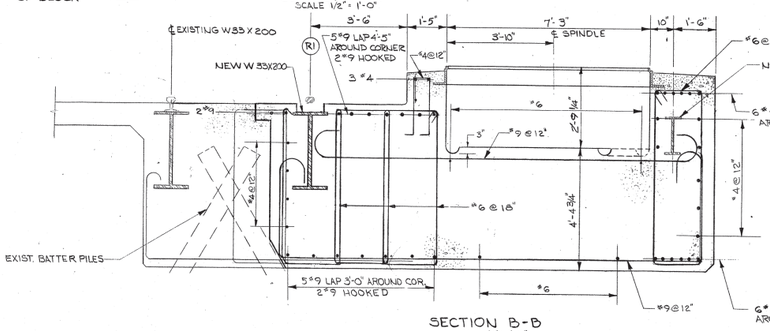

SECTION F-F
SCALE 3" = 1'-0"



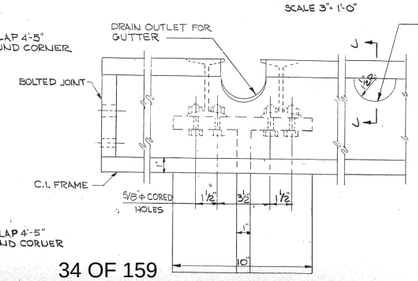

SECTION E-E
SCALE 1" = 1'-0"




SECTION D-D
SCALE 1" = 1'-0"

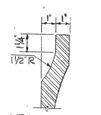



SECTION B-B
SCALE 1/2" = 1'-0"




RECESSES IN FRAME FOR FINGER-GRIPS AT EACH SIDE OF COVER PLATE. SEE SECTION J-J. 12 GRIPS REQUIRED. VERIFY IN THE FIELD.

SECTION H-H
SCALE 3" = 1'-0"



SECTION J-J
SCALE 3" = 1'-0"

GRAPHIC SCALES

1/8" = 1'-0" 0 5' 10' 15' 20' 25' 30' 35' 40' 45'
1/2" = 1'-0" 0 1' 2' 3' 4' 5' 10'
1" = 1'-0" 0 1' 2' 3' 4' 5' 6'
3" = 1'-0" 0 1' 2' 3' 6" 9" 1' 2'

CHECK GRAPHIC SCALES BEFORE USING

THE STATE OF NEW HAMPSHIRE RICHARD W. ALBRECHT No. 1369 PROFESSIONAL ENGINEER

| | | | |
|---|---|---|---|
| FAY, SPOFFORD & THORNDIKE, INC. BOSTON, MASS. ARCHITECTS – ENGINEERS | DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHERN DIVISION NAVAL BASE PHILADELPHIA, PA. | | |
| DES LEE / DR M.P. / CHK R.L.F. | PORTSMOUTH NAVAL SHIPYARD PORTSMOUTH, N.H. | | |
| SUBMITTED BY / DATE: R. Albrecht 4/7/77 DIRECTOR | ADDITIONAL CRANE RAIL SYSTEM CONSTRUCTION, BERTHS 11 AND 13 CAPSTAN NO. 6 RELOCATION FOUNDATIONS | | |
| NORDIV HD. E.I.C. HD. DIR. | | | |
| APPROVED / DATE | SIZE: F | CODE IDENT. NO.: 80091 | NAVFAC DRAWING NO.: 2025039 |
| OFFICER IN CHARGE | | | CONSTR. CONTR. NO. N62472-76-C-0746 |
| APPROVED / DATE | SCALE: AS SHOWN | SPEC. 04-76-0746 | SHEET 22 OF 53 |
| NORDIV FOR COMMANDER NAVFAC | | | |

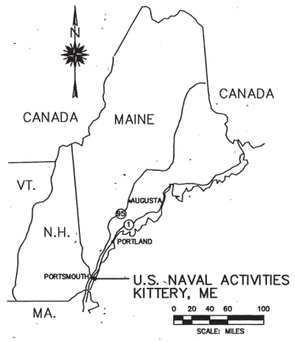
SATISFACTORY TO: DATE

J.O.

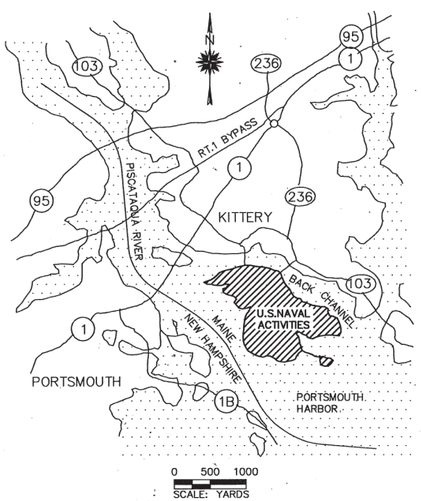
TP-65 D
35

# PORTSMOUTH NAVAL SHIPYARD
# KITTERY, ME

## STRUCTURALLY REPAIR BERTH 11
## CONTRACT NO. N62472-98-C-6547




**AREA MAP**




**VICINITY MAP**

| TIDAL DATA: | MLLW DATUM | PNSY DATUM |
|---|---|---|
| ESTIMATED 100 YR FLOOD ELEVATION (STILLWATER) | 13.0 | 104.9 |
| HIGHEST OBSERVED WATER LEVEL (2/7/78) | 12.78 | 104.72 |
| ESTIMATED ANNUAL HIGH WATER (EAHW) | 10.5± | 102.4± |
| MEAN HIGHER HIGH WATER (MHHW) | 8.90 | 100.84 |
| MEAN HIGH WATER (MHW) | 8.46 | 100.40 |
| NGVD 1929 | 4.11 | 96.05 |
| MEAN LOW WATER (MLW) | 0.33 | 92.27 |
| MEAN LOWER LOW WATER (MLLW) (1960–1978 TIDAL EPOCH) | 0.00 | 91.93 |
| ESTIMATED ANNUAL LOW WATER | −1.8± | 90.1± |
| LOWEST OBSERVED WATER LEVEL (12/10/77) | −3.00 | 88.94 |

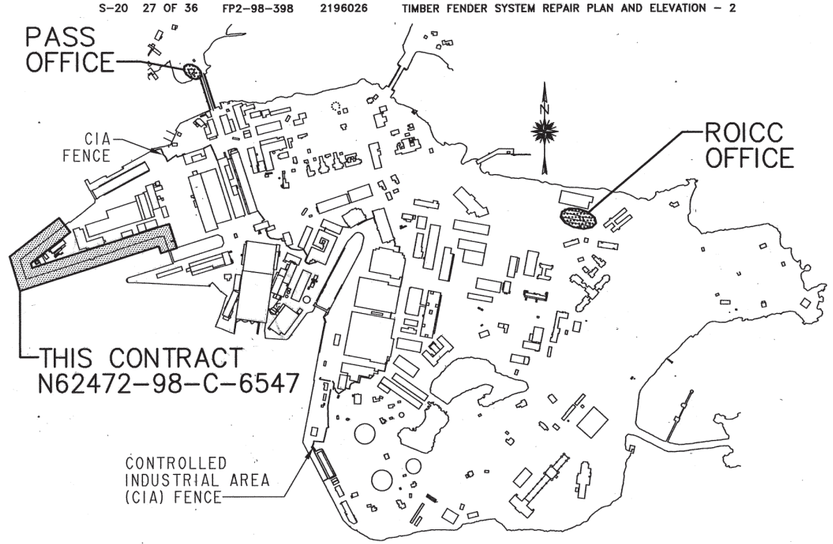
NOTES:
1. TIDAL FLUCTUATIONS PRODUCE SIGNIFICANT EBB & FLOOD CURRENTS AT THIS SITE. SURFACE CURRENT SPEEDS AT BERTH 12 HAVE BEEN MEASURED AT 1 KNOT AND MAY APPROACH 2 KNOTS DURING EXTREME TIDAL RANGES.
2. VESSEL NAVIGATION NEAR WHARVES PRODUCE VESSEL WAKES.

REFERENCE: NOAA/NOS TIDE STATION #841 9870, PNSY, SEAVEY ISLAND

AE(1243A)/FP2-372.DWG

## LIST OF DRAWINGS

| SHEET | SHT NO. | PUBLIC WORKS DWG. NO. | NAVFAC DWG. NO. | DRAWING TITLE |
|---|---|---|---|---|
| | | | | GENERAL |
| G-1 | 1 OF 46 | FP2-98-372 | 2196000 | COVER SHEET |
| G-2 | 2 OF 36 | FP2-98-373 | 2196001 | GENERAL NOTES |
| G-3 | 3 OF 36 | FP2-98-374 | 2196002 | DESIGN CRITERIA |
| | | | | CIVIL |
| C-1 | 4 OF 36 | FP2-98-375 | 2196003 | EXISTING CONDITIONS PLAN |
| C-2 | 5 OF 36 | FP2-98-376 | 2196004 | HYDROGRAPHIC PLAN |
| C-3 | 6 OF 36 | FP2-98-377 | 2196005 | SUBSURFACE PLAN |
| C-4 | 7 OF 36 | FP2-98-378 | 2196006 | BULKHEAD REPAIR PLANS AND DETAILS |
| | | | | STRUCTURAL |
| S-1 | 8 OF 36 | FP2-98-379 | 2196007 | EXISTING PILE AND FRAMING PLAN |
| S-2 | 9 OF 36 | FP2-98-380 | 2196008 | EXISTING FENDER SYSTEM ELEVATIONS |
| S-3 | 10 OF 36 | FP2-98-381 | 2196009 | TYPICAL WHARF SECTIONS |
| S-4 | 11 OF 36 | FP2-98-382 | 2196010 | MIDSPAN AND BATTER PILE PLAN |
| S-5 | 12 OF 36 | FP2-98-383 | 2196011 | MIDSPAN PILE SECTION AND DETAILS |
| S-6 | 13 OF 36 | FP2-98-384 | 2196012 | MIDSPAN PILE DETAILS |
| S-7 | 14 OF 36 | FP2-98-385 | 2196013 | BATTER PILE SECTION AND DETAILS |
| S-8 | 15 OF 36 | FP2-98-386 | 2196014 | SUPPORT PILE SECTION AND DETAILS |
| S-9 | 16 OF 36 | FP2-98-387 | 2196015 | DECK REPAIR PLAN |
| S-10 | 17 OF 36 | FP2-98-388 | 2196016 | DECK REPAIR SECTIONS AND DETAILS |
| S-11 | 18 OF 36 | FP2-98-389 | 2196017 | FENDER / SHUTTER SYSTEM PLAN AND ELEVATION – 1 |
| S-12 | 19 OF 36 | FP2-98-390 | 2196018 | FENDER / SHUTTER SYSTEM PLAN AND ELEVATION – 2 |
| S-13 | 20 OF 36 | FP2-98-391 | 2196019 | FENDER / SHUTTER SYSTEM SECTION AND DETAILS |
| S-14 | 21 OF 36 | FP2-98-392 | 2196020 | FENDER / SHUTTER SYSTEM DETAILS |
| S-15 | 22 OF 36 | FP2-98-393 | 2196021 | FENDER / SHUTTER SYSTEM STEEL REACTION FRAME DETAILS – 1 |
| S-16 | 23 OF 36 | FP2-98-394 | 2196022 | FENDER / SHUTTER SYSTEM STEEL REACTION FRAME DETAILS – 2 |
| S-17 | 24 OF 36 | FP2-98-395 | 2196023 | MOORING FIXTURES AND MISCELLANEOUS DETAILS |
| S-18 | 25 OF 36 | FP2-98-396 | 2196024 | TIMBER FENDER SYSTEM EXISTING CONSTRUCTION |
| S-19 | 26 OF 36 | FP2-98-397 | 2196025 | TIMBER FENDER SYSTEM REPAIR PLAN AND ELEVATION – 1 |
| S-20 | 27 OF 36 | FP2-98-398 | 2196026 | TIMBER FENDER SYSTEM REPAIR PLAN AND ELEVATION – 2 |
| | | | | CATHODIC PROTECTION |
| CP-1 | 28 OF 36 | FP2-98-399 | 2196027 | CORROSION PROTECTION LAYOUT PLAN |
| CP-2 | 29 OF 36 | FP2-98-400 | 2196028 | CORROSION PROTECTION SECTIONS |
| | | | | UTILITY |
| U-1 | 30 OF 36 | FP2-98-401 | 2196029 | EXISTING UTILITIES AND REMOVAL PLAN |
| U-2 | 31 OF 36 | FP2-98-402 | 2196030 | UTILITY REMOVAL SECTIONS |
| U-3 | 32 OF 36 | FP2-98-403 | 2196031 | UTILITY REMOVAL DETAILS |
| U-4 | 33 OF 36 | FP2-98-404 | 2196032 | PURE WATER DUCT PLAN AND SECTIONS |
| U-5 | 34 OF 36 | FP2-98-405 | 2196045 | UTILITY ACCESS WALKWAY PLAN AND DETAILS |
| U-6 | 35 OF 36 | FP2-98-406 | 2196046 | INTENTIONALLY LEFT BLANK |
| U-7 | 36 OF 36 | FP2-98-407 | 2196047 | INTENTIONALLY LEFT BLANK |
| MD-1 | 37 OF 46 | FP2-99-408 | 2196265 | BOLLARD & CLEAT REPAIR PLAN |
| MD-2 | 38 OF 46 | FP2-99-409 | 2196266 | BOLLARD & CLEAT REPAIR DETAILS |
| MD-3 | 39 OF 46 | FP2-99-410 | 2196267 | ADDITIONAL LADDER & WALKWAY PLAN |
| MD-4 | 40 OF 46 | FP2-99-411 | 2196268 | LADDER DETAILS BERTH 11 |
| MD-5 | 41 OF 46 | FP2-99-412 | 2196269 | LADDER DETAILS BERTH 13 |
| MD-6 | 42 OF 46 | FP2-99-413 | 2196270 | BROW PLATFORM ASSEMBLY |
| MD-7 | 43 OF 46 | FP2-99-414 | 2196271 | BROW PLATFORM DETAILS |
| MD-8 | 44 OF 46 | FP2-99-415 | 2196272 | BROW PLATFORM INSTALLATION |
| MD-9 | 45 OF 46 | FP2-99-416 | 2196273 | BERTHING FACE REALIGNMENT BERTH 11 |
| MD-10 | 46 OF 46 | FP2-99-417 | 2196274 | ADDITIONAL SLOPE STABILIZATION BERTHS 11 & 13 |



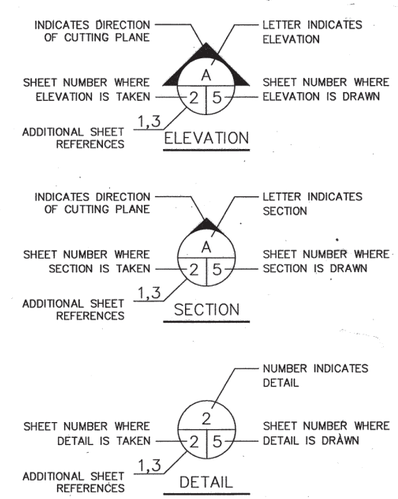

**SITE PLAN**

0 300 600
SCALE: FEET

## LEGEND

| | |
|---|---|
| MLLW | MEAN LOWER LOW WATER |
| MLW | MEAN LOW WATER |
| MHW | MEAN HIGH WATER |
| EAHW | ESTIMATED ANNUAL HIGH WATER |
| EL | ELEVATION IN FEET |
| EST. EL | ESTIMATED ELEVATION IN FEET |
| (TYP) | TYPICAL |
| MIN. | MINIMUM |
| MAX. | MAXIMUM |
| O.C. | ON CENTER |
| E.W. | EACH WAY |
| E.F. | EACH FACE |
| N.S. | NEAR SIDE |
| F.S. | FAR SIDE |
| #6 | REINFORCING BAR SIZE |
| I.D. | INSIDE DIAMETER |
| DIA. | DIAMETER |
| C.I.P. | CAST–IN–PLACE |
| LF | LINEAR FEET |
| SF | SQUARE FEET |
| CY | CUBIC YARD |
| NHDOTSS | NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION (1997) |
| Ⓜ | EXISTING MANHOLE |
| ⋈ | EXISTING WATER GATE |
| —E— | EXISTING ELECTRICAL UTILITY |
| —W— | EXISTING WATER LINE |
| □ | EXISTING CATCH BASIN |
| | EXISTING TREE |
| —O— | EXISTING CHAINLINK FENCE |
| X 12.13 | EXISTING SPOT ELEVATION (FEET) |
| + 12.22 | SPOT ELEVATION (FEET) |
| + | EXISTING 7/8" DIA. RIVET |
| TBM | TEMPORARY BENCHMARK |
| ℄ | CENTER LINE |
| PL | PLATE |
| REF. | REFERENCE |
| STD | STANDARD |
| TEMP. | TEMPORARY |
| BLDG. | BUILDING |
| SIM. | SIMILAR |

## ELEVATION, SECTION OR DETAIL SYMBOLS




| REVISION | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 10/15/99 | ORIGINAL CONTRACT MODIFIED, ADDED SHEETS 37 TO 46 | RMS |

REVISIONS

ARCH. | CIV. STR. | MECH. | PRNCH. | ELEC. | DATE

SATISFACTORY TO | DATE
SATISFACTORY TO | DATE
REGIONAL ENGINEERING BRANCH | DATE
APPROVED | DATE
NEFA FACILITIES DIVISION


Appledore Engineering Inc.
600 State Street, Suite D
Portsmouth, New Hampshire 03801
(603) 433-8818
e-mail@appledoreinc.com
DESIGNED BY: Robin N.E. Clark, RRS SUPV. RMS
DRAWN BY: (SIGNED) Vice President 10/15/99
TITLE DATE


THE STATE OF NEW HAMPSHIRE ROBERT SNOVER No. 6300 PROFESSIONAL ENGINEER (SEAL)

DEPARTMENT OF THE NAVY
NAVAL SHIPYARD
NAVAL FACILITIES ENGINEERING COMMAND
PORTSMOUTH, N.H.
STRUCTURALLY REPAIR BERTH 11

# COVER SHEET

CODE I.D. NO. 80091
DRAWING SIZE: D
CONST. CONT. NO. N62472-98-C-6547
SPEC. 04-98-6547
NAVFAC DRAWING NO. 2196000
SHT G
SHEET 1 OF 46.
PW NO. FP2-98-372

UNCLASSIFIED

## GENERAL NOTES:

1. THESE DRAWINGS FORM A PART OF THE SPECIFICATIONS. REFER TO THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ELEVATIONS AND SOUNDINGS ARE IN FEET BASED ON MEAN LOWER LOW WATER (MLLW) PROJECT DATUM FOR THE 1960–78 TIDAL EPOCH.
3. ALL DIMENSIONS, ELEVATIONS & CONDITIONS SHALL BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.
4. CONTRACTOR SHALL MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS.
5. THE EXACT SIZE & LOCATION OF ALL EXISTING UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES PRESENT AND ALL CONSTRUCTION SHALL BE COORDINATED WITH THE CONTRACTING OFFICER.
6. HORIZONTAL CONTROL WAS BASED ON TRANSVERSE MERCATOR MAINE WEST ZONE GRID. PNSY CONTROL POINT NO. D1–8 WAS HELD.
7. VERTICAL CONTROL WAS BASED ON CONTROL POINT 13A, DISK "DMA B13N" = 14.61' WAS HELD.
8. SHORELINE FEATURES WERE SURVEYED BY CIVIL CONSULTANTS UNDER SUBCONTRACT TO APPLEDORE ENGINEERING, INC. IN JULY/AUGUST/SEPTEMBER 1998 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
9. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND ERECTION UNLESS OTHERWISE DIRECTED BY CONTRACTING OFFICER. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
10. METHODS OF DEMOLITION, CONSTRUCTION AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.
11. THE BERTH 11 WHARF WILL BE NORMALLY CLOSED TO PORTAL CRANE TRAVEL AND OPERATION DURING CONSTRUCTION. SCHEDULE OF WORK BETWEEN BENTS 24 THROUGH H SHALL BE APPROVED BY THE GOVERNMENT.
12. DIMENSIONS AND DETAILS OF THE EXISTING CONSTRUCTION ARE FROM CONSTRUCTION DRAWINGS FURNISHED BY THE GOVERNMENT. ALL DIMENSIONS AND DETAILS OF THE EXISTING CONSTRUCTION SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR.
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT NOT BE LIMITED TO TURBIDITY AND DUST.
14. ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR, SAFETY, HEALTH ACT, U.S. ARMY CORPS OF ENGINEERS, AND STATE/LOCAL WETLANDS CONTROL.
15. THE GOVERNMENT MAY CHARGE TO THE CONTRACTOR ANY ADDITIONAL COST OF INSPECTION OR TEST WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY.
16. EXISTING COMMON, RAILROAD AND 15' GAUGE RAIL GIRDERS ARE ASSUMED TO BE BETHLEHEM STEEL CORP. B36a DESIGNATIONS (TAPERED FLANGES).
17. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL PROVIDE CALCULATIONS, SKETCHES, PROCEDURES AND OTHER DOCUMENTS AS NECESSARY, STAMPED BY A PROFESSIONAL ENGINEER, DEMONSTRATING LAY–DOWN, EQUIPMENT AND CONSTRUCTION TECHNIQUES WILL NOT EXCEED THE CAPACITY OF THE WHARF OR AFFECTED STRUCTURES LISTED ON SHEET G3.

## CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO NHDOTSS SECTION 520 CLASS AA CONCRETE WITH MAXIMUM WATER/CEMENT RATIO OF 0.38, USING HIGH RANGE WATER REDUCING ADMIXTURE AND CONTAINING FROM 5 TO 8 PERCENT ENTRAINED AIR (6.5% ±1.5%). CONCRETE FOR DECK OVERLAY, EXPANSION JOINT RECONSTRUCTION AND RAIL POCKET FILL SHALL ALSO CONFORM TO NHDOT SECTION 520 CLASS AA (0.38W/C) AND SHALL HAVE A CLASS AA AGGREGATE FOR OVERLAY AND CONTAIN FIBER REINFORCEMENT.
2. ALL CONCRETE SHALL BE MADE WITH TYPE II PORTLAND CEMENT.
3. * REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
4. * CLEARANCES FOR REINFORCEMENT SHALL BE OF 3" OF CLEAR COVER AT ALL EXPOSED SURFACES UNLESS OTHERWISE NOTED.
5. CONSTRUCTION JOINTS SHALL BE MADE ONLY AS SHOWN.
6. * ALL REINFORCING SHALL BE FULLY SUPPORTED ON APPROVED CHAIRS AND BARS. REINFORCING SHALL NOT BE SUPPORTED ON TIMBER BLOCKS, BRICKS, CONCRETE BLOCKS, ETC.
7. ALL CONCRETE SHALL BE PLACED IN DEWATERED CONDITIONS (EXCEPT FOR ROCK SOCKET AND GROUT BAG CONCRETE).
8. ALL FORMWORK SHALL BE LEFT IN PLACE AND CONCRETE SURFACES SHALL BE COVERED AND KEPT MOIST FOR A PERIOD OF NOT LESS THAN SEVEN (7) FULL DAYS AFTER CONCRETE PLACEMENTS.
9. CONTRACTOR SHALL SUBMIT DETAILED REINFORCING DRAWINGS INCLUDING BAR AND BENDING SCHEDULES TO CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO DELIVERY OF ANY REINFORCING STEEL.

## DEMOLITION NOTES:

1. DEMOLITION SHALL BE CONDUCTED TO PREVENT DEBRIS FROM FALLING INTO THE RIVER. UNDER–WATER INSPECTIONS MAY BE CONDUCTED BY THE GOVERNMENT TO ENSURE THE CONTRACTOR REMOVES ALL DEMOLITION AND CONSTRUCTION DEBRIS FROM THE RIVER.
2. THE CONTRACTOR SHALL PROVIDE CONTROL MEASURES AS REQUIRED BY ENVIRONMENTAL REGULATIONS AND AS REQUIRED TO PREVENT DEBRIS FROM ENTERING THE RIVER.
3. THE CONTRACTOR SHALL OBTAIN, ON A DAILY BASIS, A BURNING PERMIT FROM THE PNSY FIRE DEPARTMENT FOR ALL WELDING OR TORCH CUTTING WORK.
4. REMOVE MARINE GROWTH AND OTHER BOND INHIBITING SUBSTANCES FROM ALL SURFACES IN CONTACT WITH REPAIR WORK. PRESSURE WASHING EQUIPMENT SHALL BE OPERATED AT 5,000 PSI (MIN).
5. CONTRACTOR SHALL USE A PILOT HOLE OR EQUIVALENT METHOD TO ACCURATELY LOCATE DECK HOLES TOPSIDE RELATIVE TO PILE CAP OFFSET SPECIFIED.

## STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE STRUCTURAL CONSTRUCTION MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2. VERTICAL AND BATTER PILES SHALL BE ASTM A572, GRADE 50 STEEL. SHEET PILES SHALL BE ASTM A328 STEEL. STRUCTURAL TUBING SHALL BE ASTM A500, GRADE B. ALL OTHER STRUCTURAL STEEL SHALL BE ASTM A36 STEEL.
3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STRUCTURAL WELDING CODE, D1.1, OF THE AMERICAN WELDING SOCIETY (AWS).
4. ALL CONNECTIONS (EXCEPT UTILITY WALKWAY CONNECTIONS) USING ASTM A325 HIGH STRENGTH BOLTS SHALL BE FRICTION TYPE CONNECTIONS.
5. THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS TO CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO THE FABRICATION OR DELIVERY OF ANY STEEL (EXCEPT FOR PILES AND CONNECTING PLATES).

## UTILITY WALKWAY NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURE DIMENSIONS BEFORE FABRICATION.
2. CONTRACTOR SHALL CONFIRM LOCATION OF EACH CATWALK SECTION WITH CONTRACTING OFFICER PRIOR TO FABRICATION.
3. ALL FIBERGLASS REINFORCED PLASTIC (FRP) SHALL BE MANUFACTURED BY THE PULTRUDED PROCESS USING A VINYLESTER RESIN WITH AN ULTRAVIOLET INHIBITOR.
4. ALL FRP SHAPES SHALL HAVE A MINIMUM THICKNESS OF 3/8" UNLESS OTHERWISE APPROVED.
5. BOLTED CONNECTIONS SHALL USE ASTM A276 TYPE 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS. BOLTS SHALL BE 5/8" DIAMETER UNLESS OTHERWISE APPROVED. NUTS SHALL BE SELF LOCKING. FLAT WASHERS SHALL BE USED UNDER BOTH THE BOLT HEAD AND NUT.
6. THE FRP WALKWAY IS TO BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE LOCATIONS AND LOADING REQUIREMENTS SHOWN ON SHEET G3. THE WALKWAYS SHALL BE DESIGNED IN ACCORDANCE WITH ALL OSHA REQUIREMENTS AND BE MANUFACTURED OUT OF THE MATERIALS SPECIFIED HEREIN.
7. ALL HARDWARE SHALL CONFORM TO ASTM A276 TYPE 316 STAINLESS STEEL.

### REQUIRED BOLT TORQUE (FT–LBS) *

| BOLT SIZE | A 307 FENDER BOLT W/OGEE | A 307 STRUCTURAL BOLT | A 325 STRUCTURAL BOLT |
|---|---|---|---|
| 3/4" | | 150 | 355 |
| 7/8" | | 200 | 525 |
| 1" | 85 | 300 | 790 * |
| 1 1/8" | | 475 | 1060 |
| 1 1/4" | 125 | 650 | 1500 |

* UNLESS OTHERWISE NOTED

A

*FOR CLEAVE/RAILROAD STUDS AND BOLTS ONLY: REDUCE TORQUE TO ELIMINATE STUD/BOLT FAILURE. 10,500 FT-LBS. TORQUE MAY BE REDUCED TO A MIN. OF 4100 FT-LBS IF REQ.

| REVISION | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 10/21/99 | REVISED PER ASBUILT | KTB |

REVISIONS

CIV. STR. / PNGR. / ELEC. — DATE

SATISFACTORY TO — DATE

SATISFACTORY TO — DATE

REAL ENGINEERING REVIEW — DATE 12/1/99

APPROVED — DATE 1/4/99

NAVAL FACILITIES ENGINEERING COMMAND — DATE

TITLE — DATE

Appledore Engineering Inc.
P.O. Box 1346
Portsmouth, New Hampshire 03801
(603) 433-8818
DESIGN: DCM DRWN: NJE CHK: RRB SUPV: RNS
Robert N. Shaw Vice President 10/30/98

THE STATE OF NEW HAMPSHIRE — ROBERT N. SHAW — No. 5360 — LICENSED PROFESSIONAL ENGINEER

NAVAL FACILITIES ENGINEERING COMMAND
DEPARTMENT OF THE NAVY
NAVAL SHIPYARD PORTSMOUTH, N.H.
STRUCTURALLY REPAIR BERTH 11
GENERAL NOTES

CODE I.D. NO. 80091
DRAWING SIZE: D
CONST. CONT. NO. N62472–98–C–6547
SPEC. 04–98–6547
NAVFAC DRAWING NO. 2196001
SHT 32 — SHEET 2 OF 36
PW NO. FP2–98–373

UNCLASSIFIED



AE(243A)\FP2-373.DWG

## REPAIR DESIGN CRITERIA:

1. WHARF DECK ORIGINALLY DESIGNED FOR 500 PSF UNIFORM LIVE LOAD OR H-10 TRUCK LOADING. DECK REPAIRS ARE IN-KIND. SUBSEQUENT ANALYSIS REVISED THE DECK RATING TO AASHTO HS-20 TRUCK LOADING.
2. WHARF PILES, PILE CAPS AND CRANE RAIL GIRDERS WERE DESIGNED FOR BROWN HOIST (PC24 & PC27) AND STAR IRON (PC20 & PC22) PORTAL CRANE OPERATION IN UP TO APPROXIMATELY 45 MPH WIND (5 PSF WIND PRESSURE). THESE PORTAL CRANES WERE ALSO ASSUMED TO BE PARKED ON THE WHARF IN A NON-OPERATING WEATHERVANED CONDITION IN WIND SPEEDS UP TO 70 MPH. THE WHARF WILL NOT BE UTILIZED FOR PORTAL CRANE PICKS OVER RATED HOOK LOAD (I.E. NO CERTIFICATION OR DEFUELING PICKS) OR FOR PORTAL CRANE PARKING WHEN WIND SPEEDS EXCEED 70 MPH.
3. NO CONSIDERATION FOR SEISMIC EVENTS HAVE BEEN MADE IN ANALYSIS OR REPAIR DESIGN OF THIS WHARF, PER DIRECTION OF THE NAVY.
4. A 250 PSF UNIFORM LIVE LOAD SURCHARGE WAS ASSUMED ON THE ADJACENT BITUMINOUS PAVEMENT AREA INSHORE OF THE WHARF. IT WAS ASSUMED THAT SPECIAL LOADS, SUCH AS PORTABLE BUILDINGS, EXISTING IN SOME OF THIS AREA DO NOT EXCEED THE ASSUMED 250 PSF UNIFORM LIVE LOAD SURCHARGE. NO ANALYSIS WAS MADE FOR MOBILE CRANE OR HEAVY FORK-LIFT SOIL SURCHARGE LOADS
5. THE DESIGN VESSEL FOR BERTH 11 BENTS N TO 12 WILL BE THE BARGE YRBML-043 WITH DIMENSIONS AS FOLLOWS:

| | |
|---|---|
| LENGTH OVERALL | 146 FEET |
| LENGTH WATERLINE | 146 FEET |
| BREADTH | 46 FEET |
| LOAD DRAFT | 4.5 FEET |
| DISPLACEMENT (ESTIMATED) | 740 LONG TONS |
| WIND AREAS: | |
| BROADSIDE (EST.) | 5500 SF |
| FRONTAL (EST.) | 2050 SF |

6. FENDER SYSTEM REPAIRS FROM BENTS 12 TO D" ARE IN-KIND (LATERAL LOAD CAPACITY OF 1000 LBS. PER LINEAR FOOT.)
7. VESSEL PROPULSION TESTS AND/OR PROPULSION TEST LOADS WILL BE FULLY REACTED BY ASSIST TUGS AND AS SUCH THESE LOADS WERE NOT INCLUDED IN REPAIR DESIGN CRITERIA PER DIRECTION OF THE NAVY.
8. BOLLARDS ON MASTER PILES WERE DESIGNED FOR 50 TON CAPACITY WITH AN UPLIFT ANGLE OF 0 DEGREES. CLEAT FOUNDATIONS AT BERTH 12 WERE DESIGNED FOR 10 TON CAPACITY.
9. LOAD COMBINATIONS WERE IN ACCORDANCE WITH NAVFAC MILHDBK 1025/1 OCTOBER 1987.
10. PROJECT LIMITS ARE FROM BENT D" ON BERTH 11 TO BENT LYK ON BERTH 11, EXCEPT FOR INCIDENTAL WORK AS NOTED.
11. THIS SHEET PROVIDED FOR INFORMATION PURPOSES ONLY.

## UTILITY WALKWAY DESIGN LOADS:

A. DECKING:

UNIFORM LIVE LOAD.....100 PSF

CONCENTRATED LIVE LOAD.....300 LB

B. RAILING:

UNIFORM LOADING, APPLIED HORIZONTALLY AND VERTICALLY AT TOP OF RAIL. SIMULTANEOUSLY.....50 PLF

CONCENTRATED LOAD.....200 LB

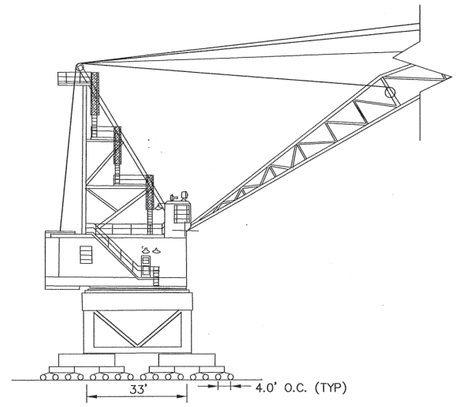
C. DEFLECTION:

MAXIMUM DEFLECTIONS UNDER SPECIFIED LOADS OF SPAN/240.

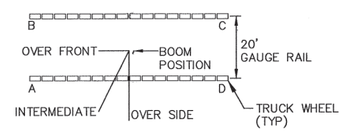
## DESIGN PILE CAPACITY:

1. DESIGN PILE CAPACITY

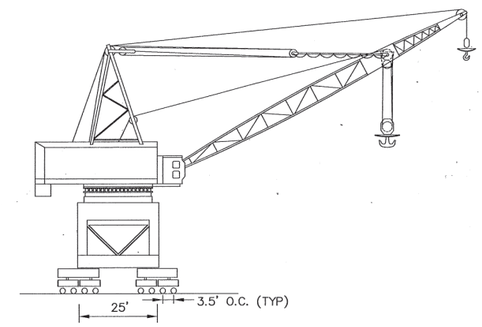
| | |
|---|---|
| W14x283 VERTICAL PILES: | 325 kips |
| HP14x117 VERTICAL PILES: | 240 kips |
| HP14x117 BATTER PILES: | 240 kips |



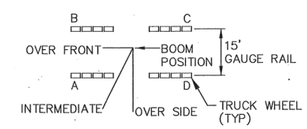

STAR IRON PORTAL CRANE
SIDE ELEVATION




STAR IRON PORTAL CRANE
PLAN VIEW




BROWN HOIST PORTAL CRANE
SIDE ELEVATION




BROWN HOIST PORTAL CRANE
PLAN VIEW

20' GAUGE STAR IRON PORTAL CRANE
MAXIMUM WHEEL LOAD CONDITIONS (PC20 & PC22)
WITH 5 PSF OPERATING WIND LOADS

| MAXIMUM WHEEL LOAD CONDITION GENERATED FROM RATED HOOK LOAD+/-WIND (KIP) | | | |
|---|---|---|---|
| | BOOM POSITION | | |
| CORNER | 0°(OVER FRONT) RADIUS=80 FT HOOK LOAD=100 KIP | 59° (INTERMEDIATE) RADIUS=85 FT HOOK LOAD=92 KIP | 90°(OVER SIDE) RADIUS=80 FT HOOK LOAD=100 KIP |
| A | 57.8 | 66.4 | 62.9 |
| B | 57.8 | 41.1 | 36.7 |
| C | 41.8 | 35.1 | 36.7 |
| D | 41.8 | 55.6 | 62.9 |

15' GAUGE BROWN HOIST PORTAL CRANE
MAXIMUM WHEEL LOAD CONDITIONS (PC24)
WITH 5 PSF OPERATING WIND LOADS

| MAXIMUM WHEEL LOAD CONDITION GENERATED FROM RATED HOOK LOAD+/-WIND (KIP) | | | |
|---|---|---|---|
| | BOOM POSITION | | |
| CORNER | 0°(OVER FRONT) RADIUS=75 FT HOOK LOAD=50 KIP | 50° (INTERMEDIATE) RADIUS=75 FT HOOK LOAD=50 KIP | 90°(OVER SIDE) RADIUS=75 FT HOOK LOAD=50 KIP |
| A | 56.9 | 76.7 | 66.7 |
| B | 56.9 | 26.2 | 17.6 |
| C | 27.4 | 19.8 | 17.6 |
| D | 27.4 | 45.7 | 66.7 |

20' GAUGE STAR IRON PORTAL CRANE
MAXIMUM WHEEL LOAD CONDITIONS (PC20 & PC22)
WITH 5 PSF OPERATING WIND LOADS

| MAXIMUM WHEEL LOAD CONDITION GENERATED FROM NO HOOK LOAD+/-WIND (KIP) | | | |
|---|---|---|---|
| | BOOM POSITION | | |
| CORNER | 0°(OVER FRONT) RADIUS=55 FT HOOK LOAD=0 KIP | 59° (INTERMEDIATE) RADIUS=55 FT HOOK LOAD=0 KIP | 90°(OVER SIDE) RADIUS=55 FT HOOK LOAD=0 KIP |
| A | 34.3 | 26.1 | 26.2 |
| B | 34.3 | 54.3 | 67.2 |
| C | 59.1 | 74.0 | 67.2 |
| D | 59.1 | 32.2 | 26.2 |

15' GAUGE BROWN HOIST PORTAL CRANE
MAXIMUM WHEEL LOAD CONDITIONS (PC27)
WITH 5 PSF OPERATING WIND LOADS

| MAXIMUM WHEEL LOAD CONDITION GENERATED FROM NO HOOK LOAD+/-WIND (KIP) | | | |
|---|---|---|---|
| | BOOM POSITION | | |
| CORNER | 0°(OVER FRONT) RADIUS=40 FT HOOK LOAD=0 KIP | 55° (INTERMEDIATE) RADIUS=40 FT HOOK LOAD=0 KIP | 90°(OVER SIDE) RADIUS=40 FT HOOK LOAD=0 KIP |
| A | 28.6 | 21.9 | 21.4 |
| B | 28.6 | 43.3 | 57.6 |
| C | 50.4 | 64.3 | 57.6 |
| D | 50.4 | 28.6 | 21.4 |

| | | | | |
|---|---|---|---|---|
| CIV. STR. | | | | |
| ARCH. | | | | |
| MECH. | | | | |
| ELEC. | | | | |
| REVISION | DATE | DESCRIPTION | BY | |

REVISIONS


Appledore Engineering Inc.
600 State Street, Suite D
Portsmouth, New Hampshire 03801
(603) 433-4818
DESIGN: KJOB DRWN: NJE CHK: RRB SUPV: RJGS
SUBMITTED BY: Robert M. Jones Vice President 10/30/98
TITLE DATE


SATISFACTORY TO: DATE 11/13/98
SATISFACTORY TO: DATE
REAR OWNER REPRESENTATIVE: DATE 12/1/98
APPROVED BY: DATE 12/4/98
NAVAL FACILITIES ENGINEERING COMMAND PORTSMOUTH, N.H.

STATE OF NEW HAMPSHIRE ROBERT M. JONES No. 5360 LICENSED PROFESSIONAL ENGINEER (SEAL)

DEPARTMENT OF THE NAVY
NAVAL SHIPYARD
STRUCTURALLY REPAIR BERTH 11

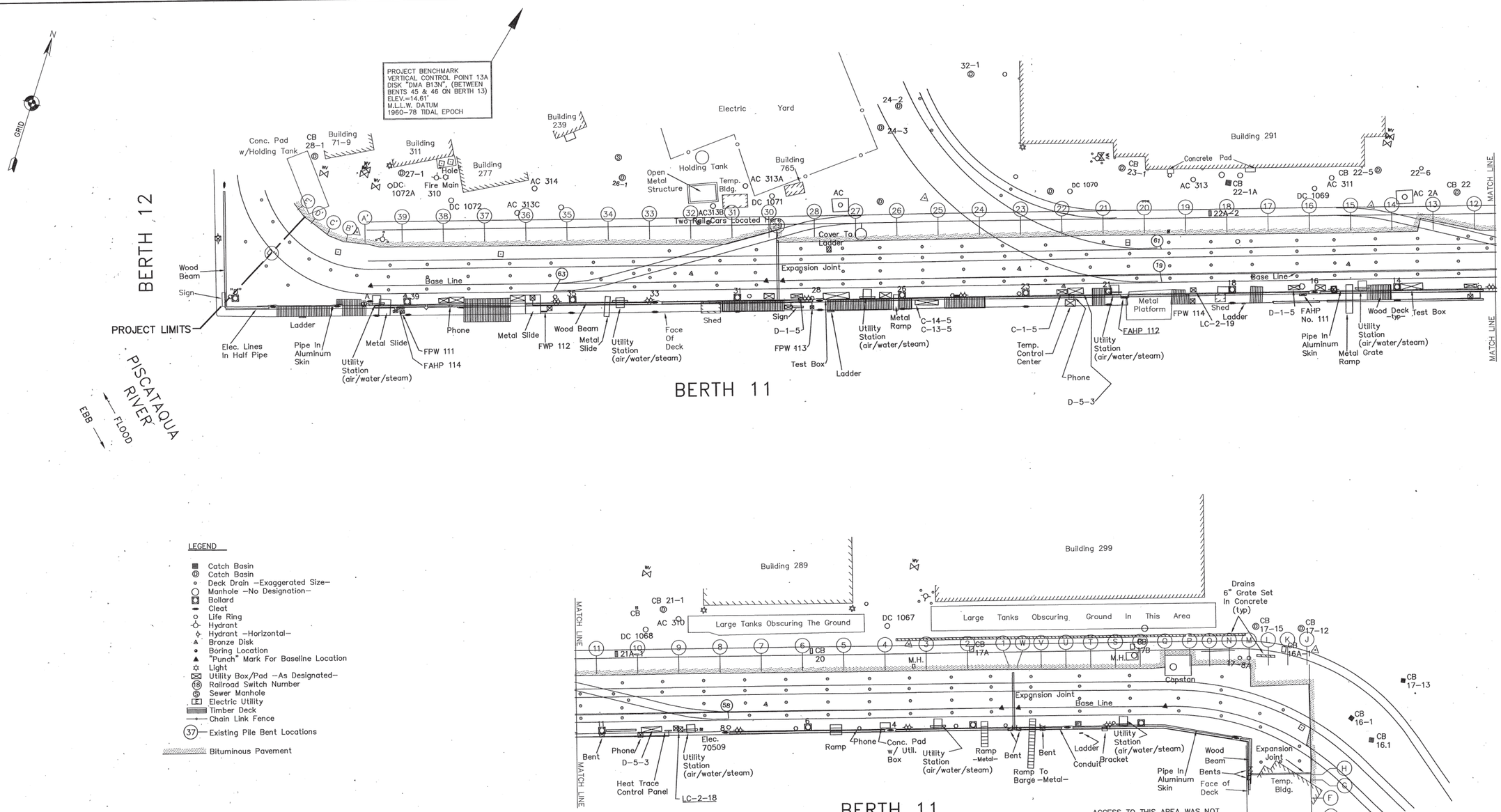
# DESIGN CRITERIA

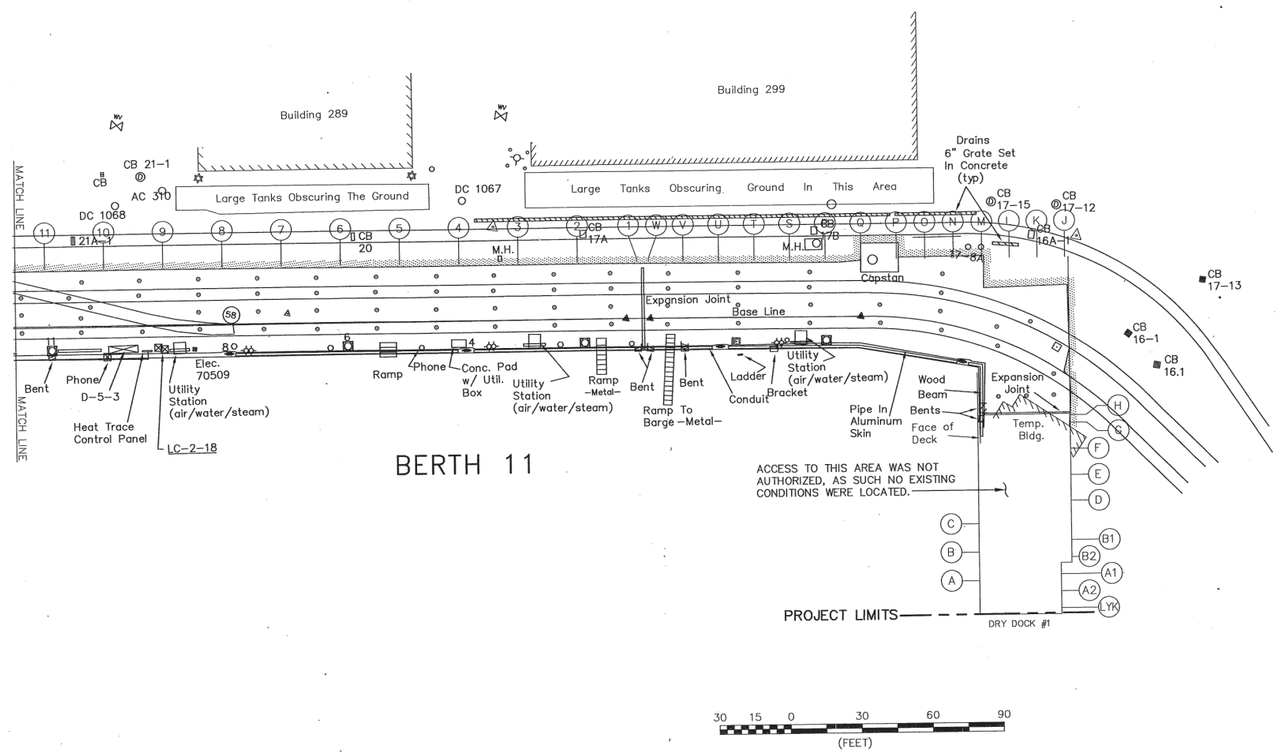
CODE I.D. NO. 80091
DRAWING SIZE: D
CONST. CONT. NO. N62472-98-C-6547
SPEC. 04-98-6547
NAVFAC DRAWING NO. 2196002
SHT G3
SHEET 3 OF 36
FW NO. FP2-98-374

AE(1243A)/FP2-374.DWG



UNCLASSIFIED




LEGEND

- Catch Basin
- Catch Basin
- Deck Drain –Exaggerated Size–
- Manhole –No Designation–
- Bollard
- Cleat
- Life Ring
- Hydrant
- Hydrant –Horizontal–
- Bronze Disk
- Boring Location
- "Punch" Mark For Baseline Location
- Light
- Utility Box/Pad –As Designated–
- Railroad Switch Number
- Sewer Manhole
- Electric Utility
- Timber Deck
- Chain Link Fence
- (37) Existing Pile Bent Locations
- Bituminous Pavement

NOTES:

1. TOPOGRAPHIC FIELD SURVEY COMPLETED BY CIVIL CONSULTANTS IN JULY, AUGUST AND SEPTEMBER 1998. FEATURES SHOWN HEREIN CAN ONLY BE CONSIDERED AS INDICATIVE OF THE CONDITIONS EXISTING AT THAT TIME.
2. TEMPORARY BUILDING LOCATIONS REPRESENT CONDITIONS AT THE TIME OF THE SURVEY. TEMPORARY BUILDINGS MAY BE IN DIFFERENT LOCATIONS AT THE TIME OF CONSTRUCTION.

| REVISIONS | | | |
|---|---|---|---|
| REVISION | DATE | DESCRIPTION | BY |

ARCH. / MECH. / ELEC. / CIV. STR. / PRINCIP.

SATISFACTORY TO DATE 11/3/99
SATISFACTORY TO DATE 12/1/99
HEAD, ENGINEERING DIVISION
APPROVED DATE 12/3/99
HEAD, FACILITIES DIVISION

**Appledore Engineering Inc.**
800 State Street, Suite D
Portsmouth, New Hampshire 03801
(603) 433-8818 aei@ma.ultranet.com

DESIGNED TAT DRWN. NJE CHK. RBS SUPV. RJS
SIGNATURE Robert J. Snover Vice President 10/30/98
DESIGNED TITLE DATE

THE STATE OF NEW HAMPSHIRE ROBERT J. SNOVER No. 6360 LICENSED PROFESSIONAL ENGINEER

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
**NAVAL SHIPYARD PORTSMOUTH, N.H.**

STRUCTURALLY REPAIR BERTH 11

# EXISTING CONDITIONS PLAN

CODE I.D. NO. 80091
DRAWING SIZE: D
CONST. CONT. NO. N62472–98–C–6547
SPEC. 04–98–6547
NAVFAC DRAWING NO. 2196003
SHT C1
SHEET 4 OF 36
PW NO. FP2–98–375



UNCLASSIFIED

AE(1243A)/FP2-375.DWG