Annex G

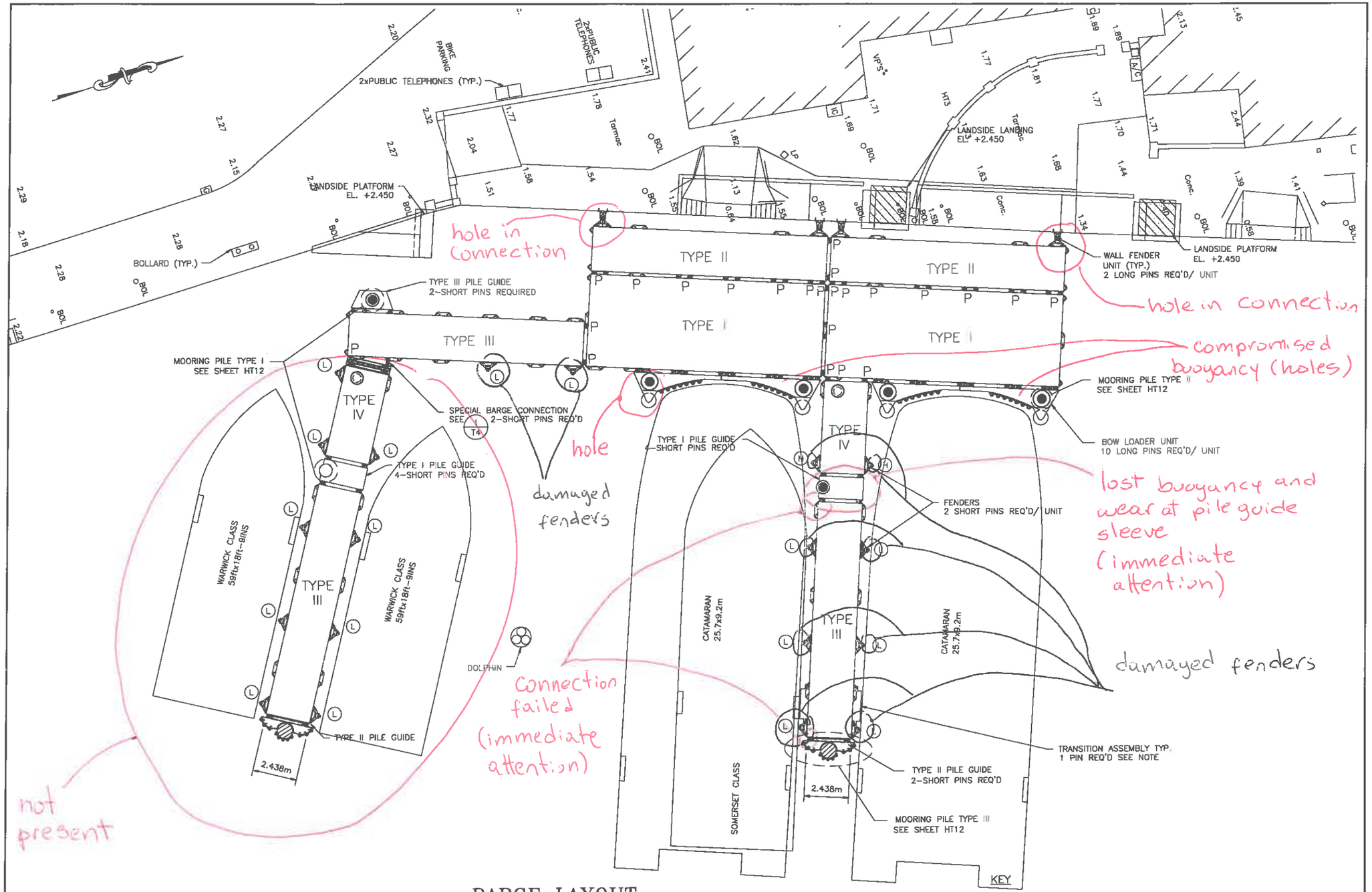
Floating Docks Repairs

2025

Reference Documents

Drawings and Photos

Location of Repairs



BARGE LAYOUT

KEY

(L) LOW FENDER – SEE SHEET T4.

(H) HIGH FENDER – SEE SHEET T4.

P–BARGE TO BARGE PIN REQUIRED

NOTE: 1. SEE SHEETS T3 FOR BARGE UNITS.
2. SEE SHEETS T4 FOR PILE GUIDE UNITS.
3. TRANSITION ASSEMBLY TO USE COMMON PIN W/ BARGE FENDER

CONSTRUCTION

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

P.O. Box HM525 Hamilton HMCX Bermuda
Phone: (441)295-5151

ENGINEERING and OPERATIONS DIVISION
Fax: (441)295-0170

Structures Section

BCE Bourne Consulting Engin
104 Red Control Drive Franklin, MA 02038
TEL. (508) 528-9125 FAX. (508) 528-907

GENERAL NOTES:
1. COORDINATES BASED ON BNG 2000.
2. ALL ELEVATIONS ARE IN METERS BASED ON ORDNANCE DATUM.
3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
A	BARGES II & IV	RRB	04/01/02
△	.	.	.

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

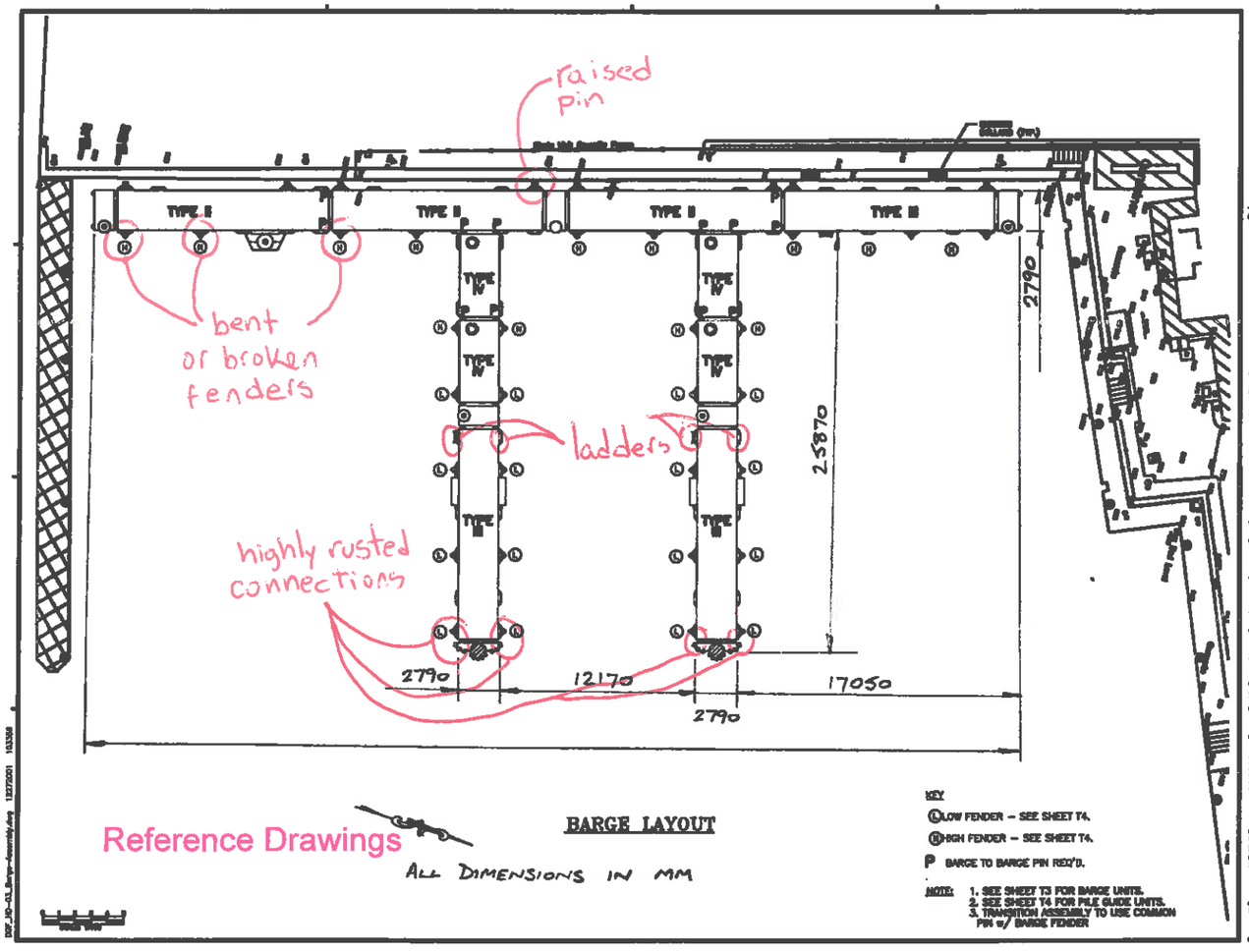
PROJECT NAME:
HAMILTON TERMINAL REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD
PEMBROKE PARISH

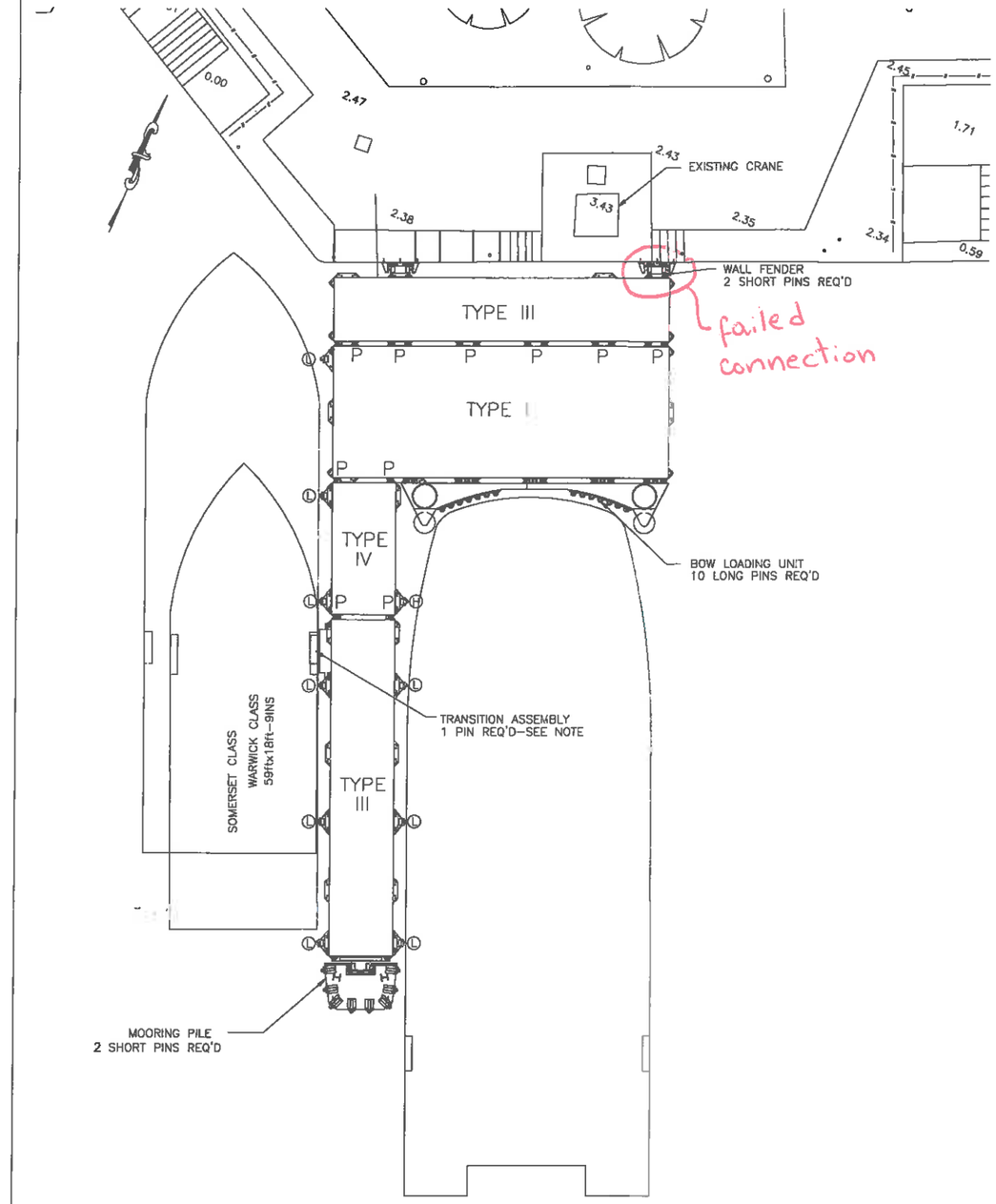
DRAWING FILE NO: HT-3_Barge-assembly.dwg ACAD R-14

SHEET TITLE:
BARGE ASSEMBLY PLAN

SHEET NUMBER: 13/26/02/HT3 REVISION: A



K:\Structures\Fastferry\Phase 1\General\bermuda dock construction\HD-03_Barge-AssemblyRB.dwg, Layout1, 10/21/2002 03:41:18 PM

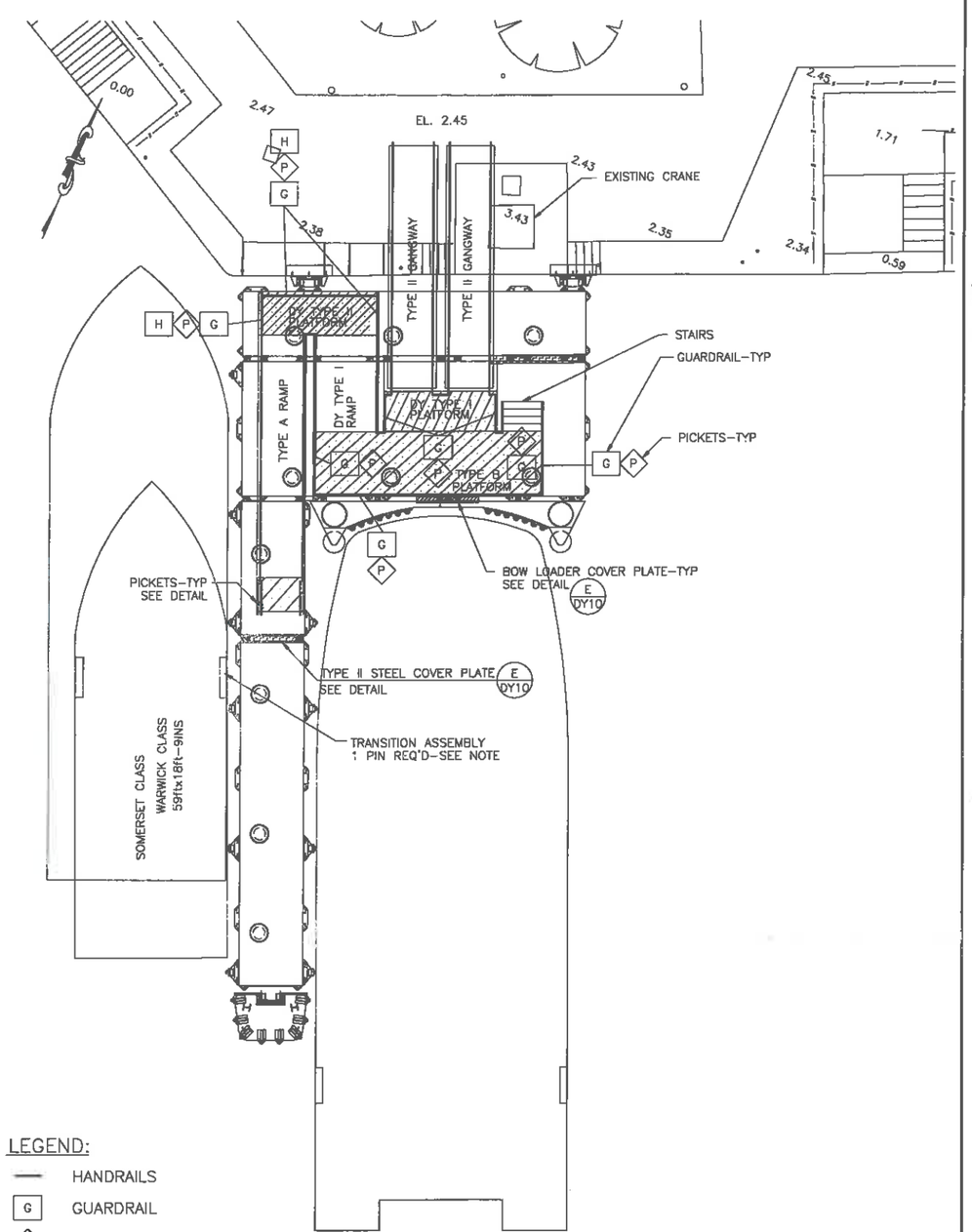


BARGE LAYOUT

KEY

- (L) LOW FENDER SEE SHEET DY9
- (H) HIGH FENDER SEE SHEET DY9
- P BARGE TO BARGE PIN REQ'D

NOTE: SEE SHEET T1 FOR BARGE UNITS.
SEE SHEET T2 FOR PILE GUIDE UNITS.



ALUMINUM LAYOUT

LEGEND:

- HANDRAILS
- G GUARDRAIL
- P PICKETS
- H HANDRAIL
- ALUMINUM COVER PLATE SEE SHEET DY10
- STEEL COVER PLATE SEE SHEET DY10
- EXP EXPANSION SPACER SEE DETAIL (J / DY4)

SEE SHEET T5 FOR PLATFORMS
SEE SHEET T6 FOR GANGWAYS AND RAMPS

CONSTRUCTION

SCALE: 1 : 100

THE MINISTRY OF WORKS AND ENGINEERING

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Franklin, Ma 02038
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GENERAL NOTES:

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3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
A	BARGES/ LAYOUTS	RRB	04/01/02
△	.	.	.

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: ACAD R–14
DY–3_Barge_Alum_Assembly.dwg

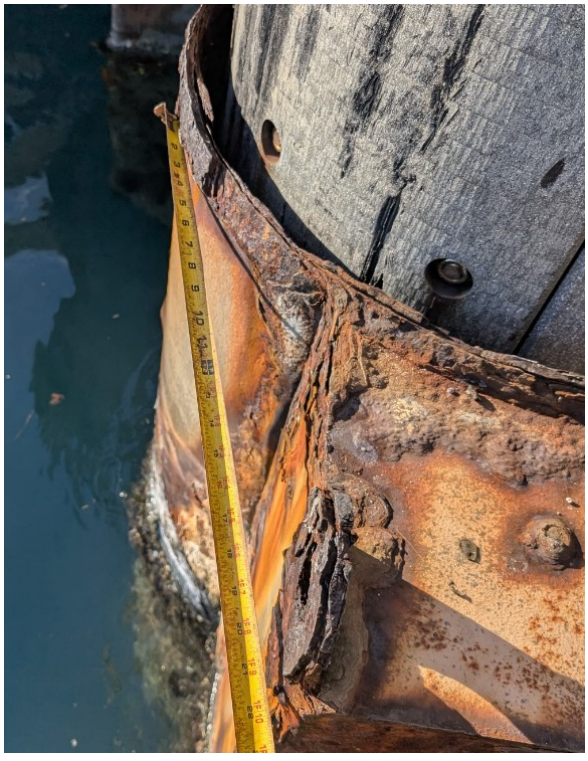
SHEET TITLE:
BARGE & ALUMINUM ASSEMBLY PLAN

SHEET NUMBER: 61/45/01/DY3
REVISION: A

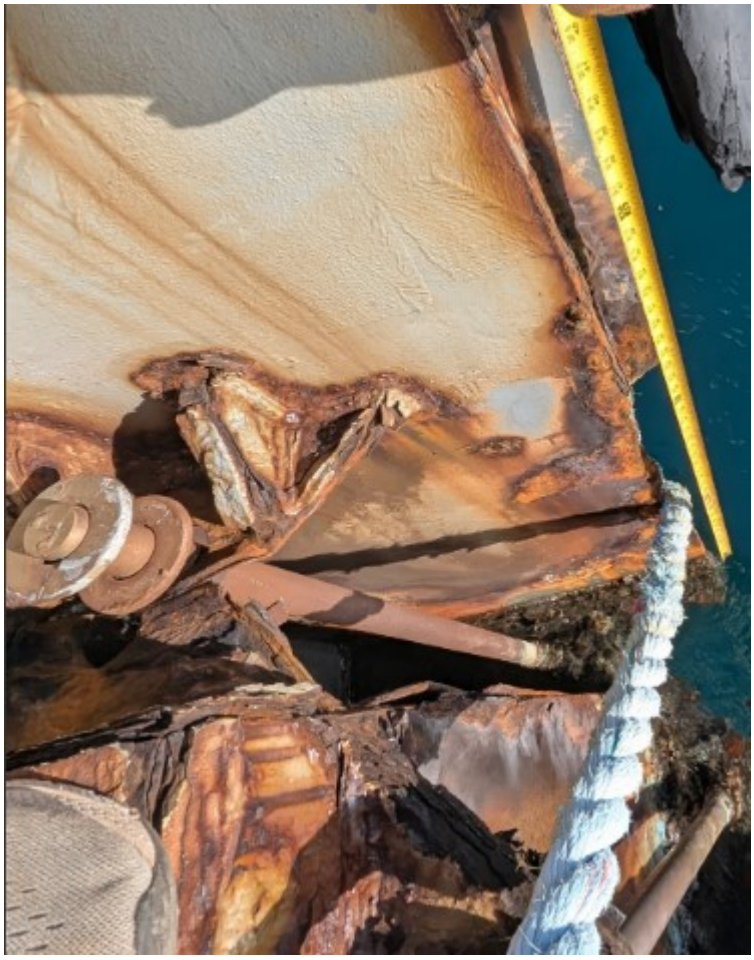
Hamilton Ferry Terminal Photos

Pile Guide – Loss of Buoyancy

Pile Guide Detail

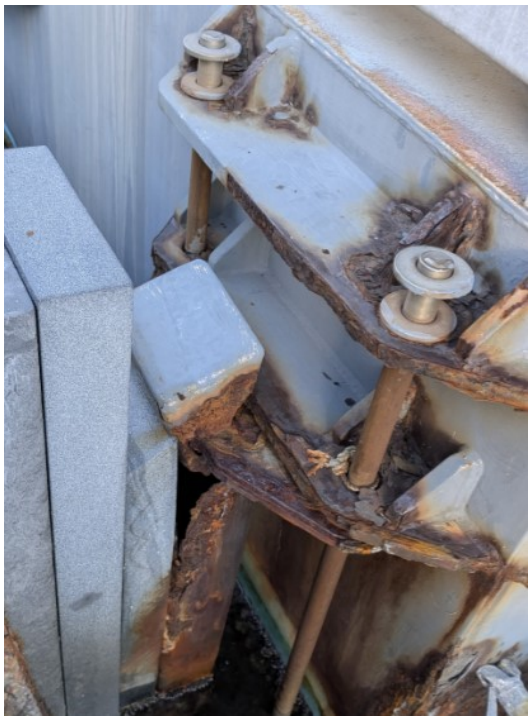


Connection Failure at Pile Guide

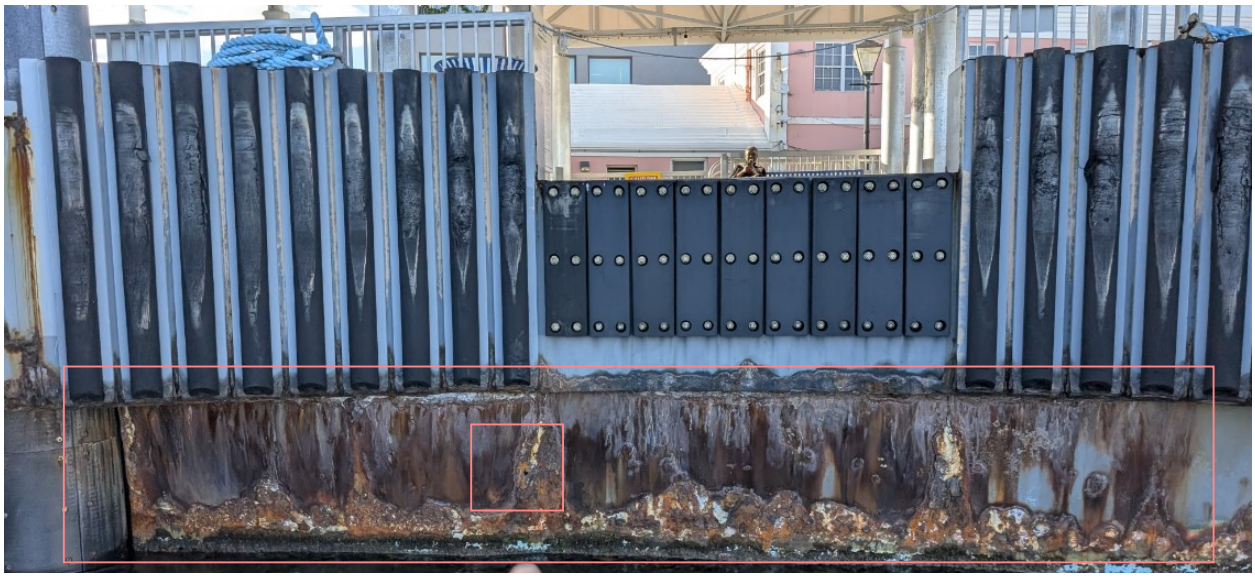


Wall Fender Failed Connection - North

Wall Fender Failed Connection - South



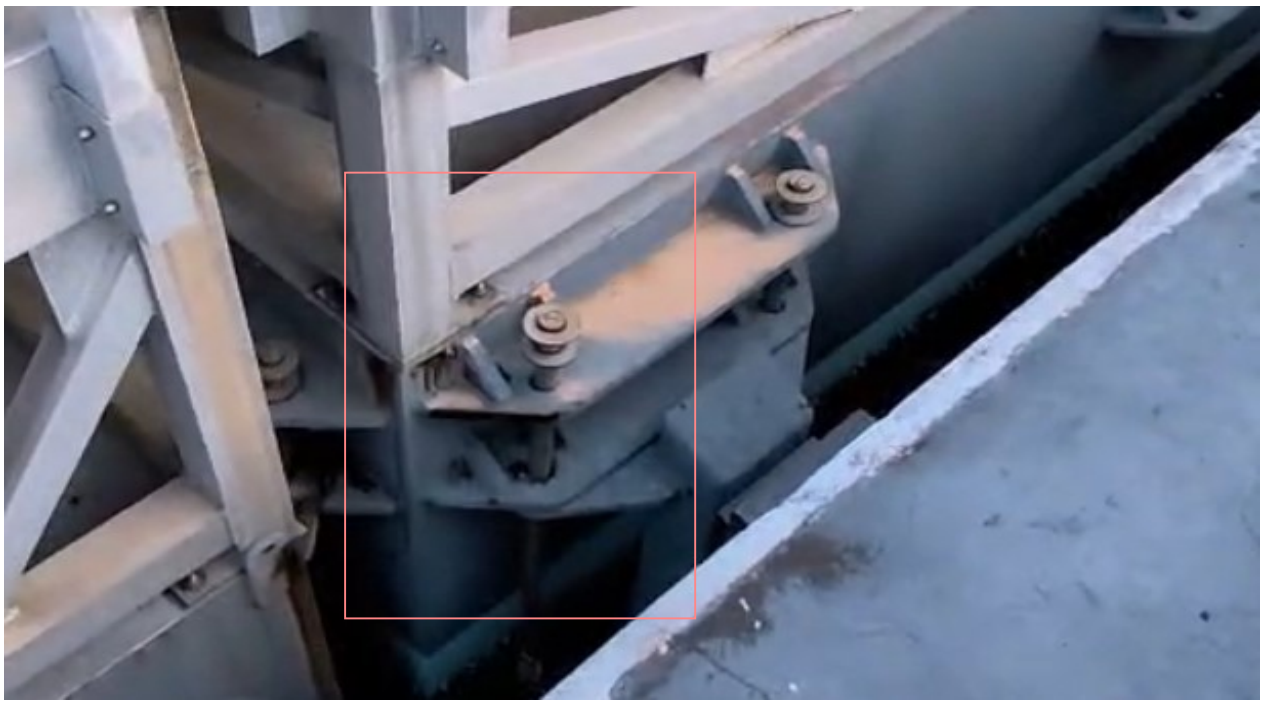
Bow Loader



Hole in Bow Loader Unit

Hole in Bow Loader Unit

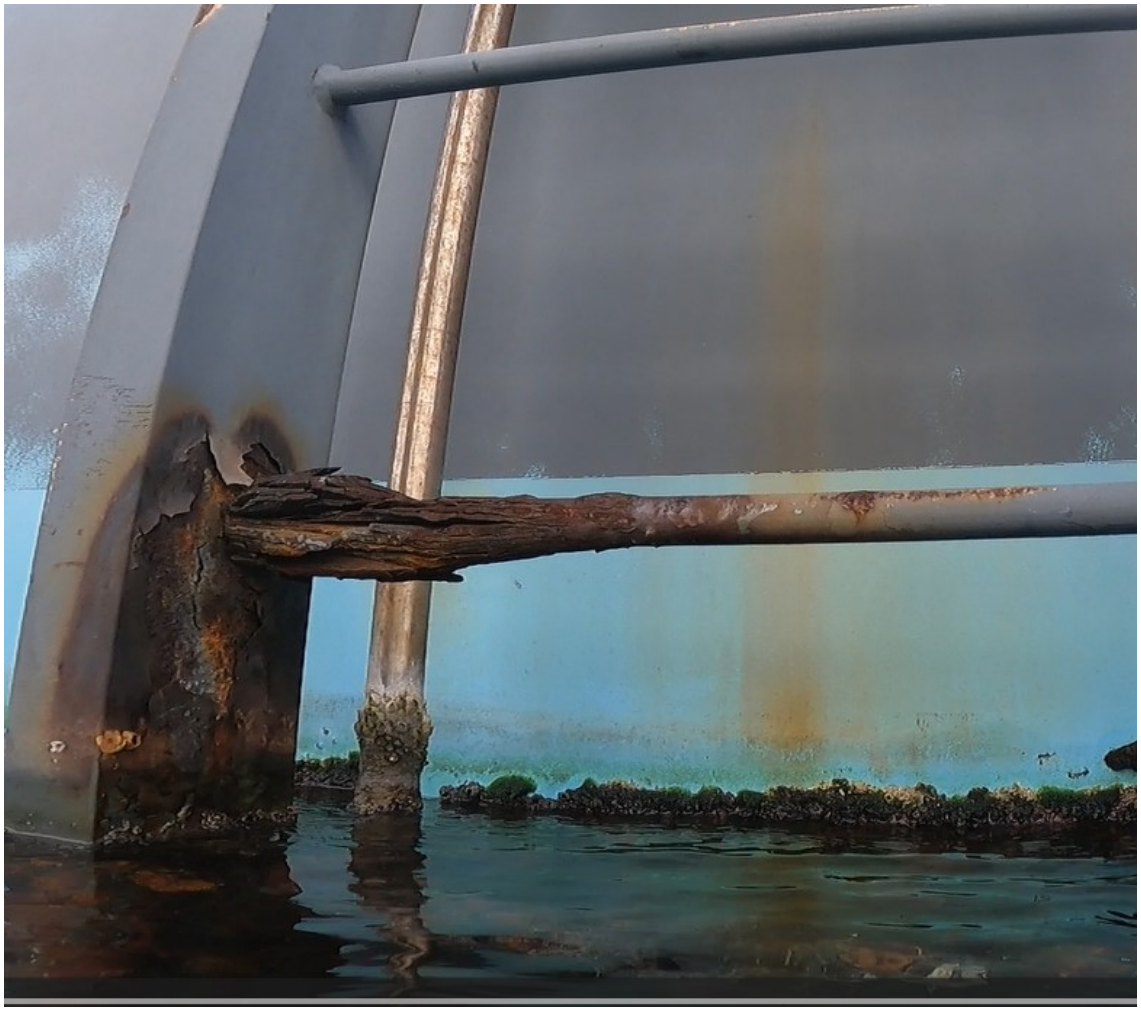
Raised Pin

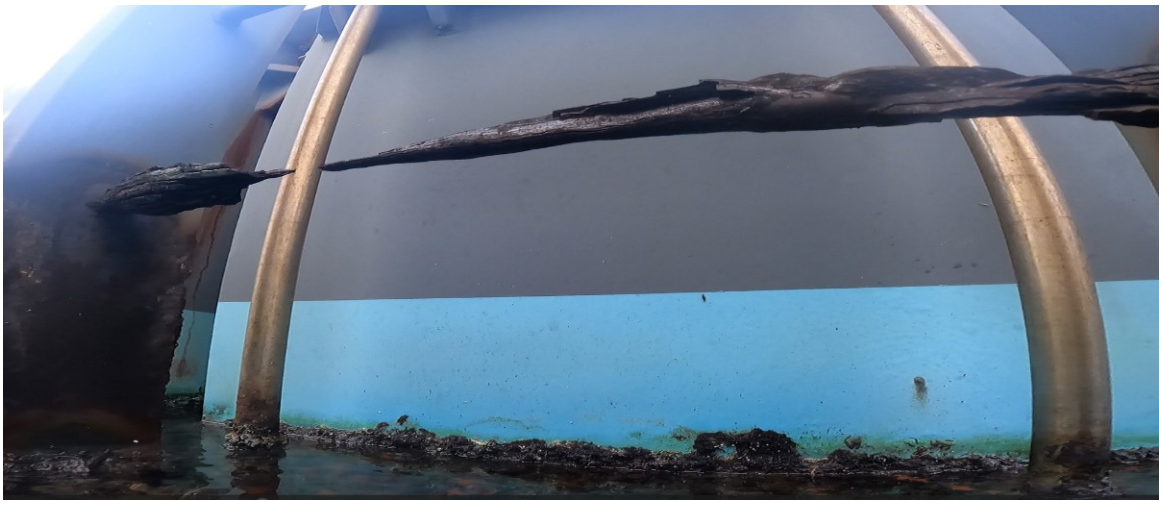


Hamilton Ferry Depot Photos

Pile Guide Connection

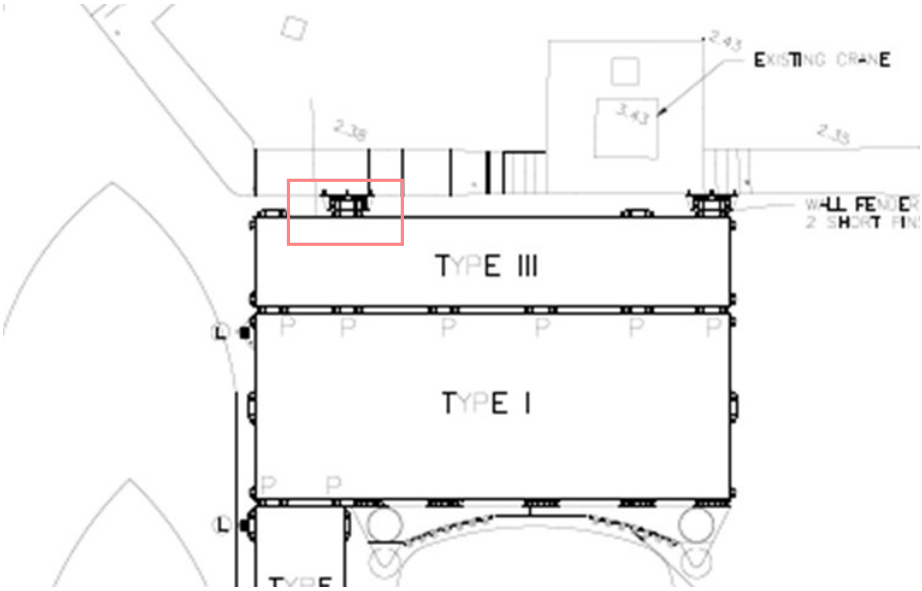
Ladders' Details:



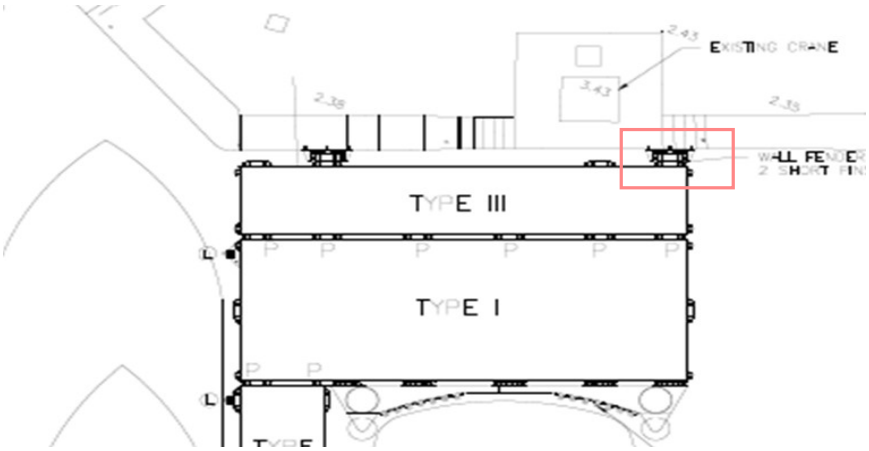


Dockyard Ferry Terminal Photos

Dockyard West Side Guiding Bracket



Dockyard East Side Guiding Bracket



Reference Drawing List

Note: The drawings provided correspond to the original works and are to be used as a guide only.

General

61/01/01/T1 Title Sheet
61/01/01/T2 General Notes
61/01/01/T3 Standard Barge Units
61/01/01/T4 Standard Barge Attachments
61/01/01/T5 Standard Aluminium Platforms
61/01/01/T6 Standard Aluminium Gangways & Ramps

Hamilton Terminal

13/26/02/HT2 Site Plan
13/26/02/HT3 Barge Assembly Plan
13/26/02/HT4 Aluminium Assembly Plan
13/26/02/HT5 Assembly Connection Details
13/26/02/HT6 Ballasting Plan
13/26/02/HT8 Wall Notch Construction
13/26/02/HT10 Gangway Pier Extension
13/26/02/HT11 Wall Fender
13/26/02/HT12 Mooring Piles
13/26/02/HT13 Misc. Details

Dockyard Terminal

61/45/01/DY1 Existing Conditions
61/45/01/DY3 Barge & Aluminum Assembly Plan
61/45/01/DY4 Assembly Connections
61/45/01/DY5 Ballasting Plan
61/45/01/DY6 Gangway Notch Plan & Details
61/45/01/DY7 Wall Fender
61/45/01/DY8 Not Included
61/45/01/DY9 Fender Details
61/45/01/DY10 Misc. Details

61/45/01/DY11 Mooring Layout
61/45/01/DY12 Mooring Details

Market Wharf

61/46/01/SG2 Site Layout
61/46/01/SG3 Barge & Aluminium Assembly Plan
61/46/01/SG4 Assembly Connections
61/46/01/SG5 Ballasting Plan

Hamilton Depot

61/35/01/HD3 Barge Assembly Plan
S00 General Arrangement Plan

MINISTRY OF WORKS AND ENGINEERING

REPLACEMENT FERRY PROJECT

PHASE 1

DOCK CONSTRUCTION

PROJECT NO. 61/01/01

MAY 2001

REFERENCE ONLY

DRAWING LIST

DRAWING #	TITLE	CURRENT REVISION
	GENERAL DRAWINGS	
T1	TITLE SHEET	B
T2	GENERAL NOTES	B
T3	STANDARD BARGE UNITS	B
T4	STANDARD BARGE ATTACHMENTS	B
T5	STANDARD ALUMINUM PLATFORMS	--
T6	STANDARD ALUMINUM GANGWAYS & RAMPS	--
	HAMILTON DEPOT	
HD1	EXISTING CONDITIONS	--
HD2	SITE LAYOUT	B
HD3	BARGE ASSEMBLY PLAN	B
HD4	ALUMINUM ASSEMBLY PLAN	B
HD5	ASSEMBLY CONNECTIONS	B
HD6	BALLASTING PLAN	B
HD7	PIER PILE & PILE CAP PLAN	A
HD8	PIER PILE CAP DETAILS	--
HD9	STRUCTURE ALTERNATIVES	--
HD10	MISCELLANEOUS CONCRETE DETAILS	B
HD11	WALL AND VESSEL FENDER	A
HD12	MOORING PILES	B
HD13	MISC. DETAILS	B

DRAWING LIST

DRAWING #	TITLE	CURRENT REVISION
	HAMILTON TERMINAL	
A1	PROPOSED LAYOUT PLAN AND ELEVATION	B
A2	LANDSIDE WORKS - ALTERATIONS TO EXISTING	A
A3	LANDSIDE WORKS - PLAN AND ELEVATION	A
A4	LANDSIDE WORKS - SECTIONS AND DETAILS	A
HT1	EXISTING CONDITIONS	--
HT2	SITE PLAN	B
HT3	BARGE ASSEMBLY PLAN	B
HT4	ALUMINUM ASSEMBLY PLAN	B
HT5	ASSEMBLY CONNECTION DETAILS	B
HT6	BALLASTING PLAN	B
HT7	CANOPY	--
HT8	WALL NOTCH CONSTRUCTION	--
HT9	WALL DETAILS	--
HT10	GANGWAY PIER EXTENSION	--
HT11	WALL FENDER	--
HT12	MOORING PILES	B
HT13	MISC. DETAILS	B
	DOCKYARD	
DY1	EXISTING CONDITIONS	--
DY2	**SHEET DELETED**	B
DY3	BARGE & ALUMINUM ASSEMBLY PLAN	B
DY4	ASSEMBLY CONNECTIONS	B
DY5	BALLASTING PLAN	B
DY6	GANGWAY NOTCH PLAN & DETAILS	--
DY7	WALL FENDER	--
DY8	**SHEET DELETED**	B
DY9	FENDER DETAILS	B
DY10	MISC. DETAILS	B
DY11	MOORING LAYOUT	B
DY12	MOORING DETAILS	B

DRAWING LIST

DRAWING #	TITLE	CURRENT REVISION
	ST. GEORGE'S	
SG1	EXISTING CONDITIONS	--
SG2	SITE LAYOUT	B
SG3	BARGE & ALUMINUM ASSEMBLY PLAN	B
SG4	ASSEMBLY CONNECTION	B
SG5	BALLASTING PLAN	B
SG6	PIER PLAN AND DETAILS	--
SG7	MOORING PILES	B
SG8	MISC. DETAILS	B
SG9	PLAN, SECTIONS AND DETAILS	--
	ROCKAWAY TERMINAL	
RW1	EXISTING CONDITIONS	--
RW2	SITE LAYOUT	--
RW3	ACCESS RAMP PLAN & ELEVATION	B
RW4	ACCESS RAMP REINFORCING DETAILS	A
RW5	OUTSHORE PLATFORM AND SUSPENDED SLAB	--
RW6	PIER PLAN & ELEVATIONS	--
RW7	PIER PILE/PILECAP PLAN & ELEVATIONS	--
RW8	PILE & PILE CAP DETAILS	--
RW9	SHEETING ELEVATION & DETAILS	--
RW10	PIER STRUCTURE ALTERNATIVES	--
RW11	PIER NOTCH PLAN & ELEVATIONS	--
RW12	PIER ATTACHMENT DETAILS	--
RW13	BERTHING DOLPHINS	--
RW14	DOLPHIN DETAILS	--
RW15	GANGWAY HOIST PLAN & DETAILS	--
RW16	DOLPHIN ASSEMBLY PLANS & DETAILS	B
RW17	MISC. DETAILS	--

THE MINISTRY OF WORKS AND ENGINEERING

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184 West Central Stree
Franklin, MA 0203
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GENERAL NOTES:

ISSUED FOR: REFERENCE ONLY 2016 09 07

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	NOTES	RRB	04/01/02
C	REFERENCE ONLY	MAM	2016 09 07
.	.	.	.

SCALE: NO SCALE

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: RRB DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: RRB DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:
REPLACEMENT FERRY PROJEC
PHASE I
DOCK CONSTRUCTION

DRAWING FILE NO: ACAD R-14
TITLE SHT REV.dwg

SHEET TITLE:
TITLE SHEET

SHEET NUMBER: 61/01/01/T1

REVISION: C

GENERAL NOTES:

ALL ELEVATIONS ARE IN ORDNANCE DATUM
MEAN HIGH WATER (MHW) = 0.80 m
MEAN LOW WATER (MLW) = -0.60 m

HURRICANE STORM SURGE ELEVATIONS

Terminal Location	Cat 1 Hurricane Max Surge (m)	Cat 3 Hurricane Max Surge (m)	Cat 5 Hurricane Max Surge (m)
Hamilton Depot	0.79	1.56	2.34
Hamilton Terminal	0.79	1.56	2.34
Rockaway	1.72	3.05	4.39
Dockyard	0.82	1.52	2.33
St. George's	0.56	1.05	1.63

DESIGN LOADS

Ramps and Platforms (uniform)	4800 N/M²
Ramps and Platforms Concentrated	1335 N (25 cm² Area)
Guardrails (uniform)	1460 N/M
Guardrails (concentrated)	1110 N
Handrails (uniform)	730 N/M
Handrails (concentrated)	1110 N
Wind Load	2000 N/M²
(110 MPH sustained with gusting factor)	

Vessel Berthing Speed

Normal	Side	4.6 KPH
	Bow	2.8 KPH
Extreme	Side	10 KPH
	Bow	5 KPH

Vessel Design Freeboard

Catamaran Bow	2300 mm
Catamaran Side	1600 mm
Warwick Class	1070 mm
Somerset Class	1070 mm

Barge Design Freeboard

Type I, II	1380 mm
Type III, IV	1080 mm

CODES

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
AMERICAN WELDING SOCIETY (AWS)
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
ALUMINUM ASSOCIATION SPECIFICATIONS FOR ALUMINUM STRUCTURES
AMERICAN CONCRETE INSTITUTE (ACI)
CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
AMERICAN BUREAU OF SHIPPING - RULES FOR BUILDING AND CLASSING STEEL BARGES (ABS)
STEEL STRUCTURES PAINTING COUNCIL (SSPC)
BERMUDA BUILDING CODE
BOCA NATIONAL BUILDING CODE

FOUNDATION

PILE CAPACITY

MOORING PILE TYPE I	15 TONS
MOORING PILE TYPE II	25 TONS
MOORING PILE TYPE III	25 TONS
ALL BEARING PILES	50 TONS
HAMILTON TERMINAL DOLPHIN	60 TONS TOTAL CAPACITY FOR GROUP

BEARING CAPCITY
ROCKAWAY RETAINING WALLS TSF

STRUCTURAL STEEL

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITIONS

ALL STEEL PLATE AND ANGLES SHALL BE WEATHERING STEEL AND SHALL CONFORM TO ASTM A588 GRADE A. THE MINIMUM ATMOSPHERIC CORROSION INDEX SHALL BE 8.

ALL OTHER STRUCTURAL STEEL SHAPES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO ASTM A36.

ALL STAINLESS STEEL BARS AND SHAPES SHALL CONFORM TO ASTM A276, TYPE 316 ALLOY.

ALL NUTS, BOLTS AND WASHERS SHALL BE STAINLESS STEEL ASTM F593, TYPE 316 ALLOY.

MACHINE AND EYE BOLTS SHALL BE STAINLESS STEEL AND CONFORM TO ASTM A276, TYPE 316 ALLOY UNLESS OTHERWISE NOTED.

ANCHOR BOLTS SHALL BE STAINLESS STEEL TYPE 316 ALLOY AND CONFORM TO ASTM A276 AND A479.

WELDING RODS SHALL CONFORM TO AWS E70XX GRADE.

ALL STAINLESS STEEL WELDING SHALL CONFORM TO ASTM A530.

ALL WELDING OF WEATHERING STEEL SHALL BE ANSI / AASHTO / AWS D1.5-88. CONTRACTOR SHALL USE LOW-HYDROGEN ELECTRODES AND FOLLOW ALL MINIMUM PREHEAT SUGGESTIONS IN ANSI / AWS D1.1-92.

GALVANIZING SHALL BE BY THE HOT DIP METHOD ACCORDING TO ASTM SPECIFICATIONS A-123 AND A-153 UNLESS OTHERWISE NOTED. HOT DIP GALVANIZING SHALL BE IN A DRY KETTLE METHOD, WITH A ZINC-NICKEL ALLOY, IN ACCORDANCE WITH ASTM A 123, ASTM A 153 AND ASTM A385, AS APPLICABLE. GALVANIZING SHALL BE DONE WITH A NICKEL ENRICHMENT OF THE GALVANIZING TANK SUCH AS "NIGALV" OR APPROVED EQUAL

ALUMINUM

THE DECKING FOR BOTH THE GANGWAY, RAMPS AND PLATFORMS SHALL BE NON-SKID WITH EITHER A RAISED RIB PROFILE WITH THE RIBS NO HIGHER THAN 1/4" AND PERPENDICULAR TO THE FLOW OF TRAFFIC, OR COVERED WITH A UNIFORM CARBORUMDUM SURFACE. SURFACES CAPABLE OF HAVING A SLOPE OF THAT IS STEEPER 1:12 SHALL HAVE A STATIC COEFFICIENT OF FRICTION OF 0.8 OR GREATER WHEN WET. SURFACES WHERE THE SLOPE WILL ALWAYS BE 1:12 OR LESS SHALL HAVE A STATIC COEFFICIENT OF FRICTION OF 0.5 OR GREATER WHEN WET.

ALL NUTS, BOLTS AND WASHERS SHALL BE STAINLESS STEEL ASTM F593 TYPE 316 ALLOY. NUTS SHALL BE SELF LOCKING.

EXPANSION JOINT MATERIAL BETWEEN ALUMINUM PLATFORMS SHALL BE CROSS LINKED POLYETHYLENE METASEALAS MANUFACTURED BY CAPITAL SERVICES OF NY, INC, TO THE DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS.

GANGWAY CONNECTION PINS AND SLEEVES SHALL BE STAINLESS STEEL AND MEET ASTM A269 TYPE 316 ALLOY.

COATINGS

ALL COATINGS SHALL BE FROM THE SAME MANUFACTURER UNLESS OTHERWISE AGREED BY THE OWNER. ALL COATINGS SHALL BE TWO PART EPOXY, MIXED IMMEDIATELY PRIOR TO INSTALLATION.

ALL STEEL SHALL BE CLEANED AND PREPARED AS RECOMMENDED BY THE MANUFACTURER FOR EACH TYPE OF COATING PRIOR TO FABRICATION.

SANDBLASTING SHALL MEET THE REQUIREMENTS OF SSPC-SP10 "NEAR-WHITE BLAST CLEANING"

COATINGS SHALL MEET THE REQUIREMENTS OF SSPC-PS 13.01

COATING ON ALL STEEL PLATE AND SHAPES, ALL FIELD WELDED OR DAMAGED AREAS SHALL BE REPAIRED AS PER MANUFACTURERS RECOMMENDATIONS.

THE EXTERIOR OF THE BARGE, SIDES AND BOTTOM SHALL BE COATED WITH AMERCOAT 235 TWO PART EPOXY WITH 68% SOLIDS OR APPROVED EQUAL. THERE SHALL BE A MINIMUM OF TWO COATS WITH A FINAL DRY FILM THICKNESS OF 16 MILS (MINIMUM, NOT AVERAGE). THERE SHALL BE A STRIP COAT OVER SHARP EDGES, CUTOUTS AND WELDS. THERE SHALL BE CONTRASTING COLORS FOR EACH COAT WITH THE FINAL COLORS DARK GREY ABOVE THE WATERLINE AND LIGHT BLUE BELOW THE WATERLINE. ALL SURFACES MUST BE INSPECTED PRIOR TO COATING.

THE DECK OF THE BARGE SHALL BE COATED WITH AMERCOAT 238 TWO PART EPOXY WITH 77% SOLIDS OR APPROVED EQUAL. THERE SHALL BE A MINIMUM OF TWO COATS WITH A FINAL DRY FILM THICKNESS OF 16 MILS (MINIMUM, NOT AVERAGE). THE FINAL COAT SHALL CONTAIN AMERON FINE GRIT 886 ALUMINUM OR APPROVED EQUAL. THERE SHALL BE A STRIP COAT OVER SHARP EDGES, CUTOUTS AND WELDS. THERE SHALL BE CONTRASTING COLORS FOR EACH COAT WITH THE FINAL COLORS LIGHT GREY. ALL SURFACES MUST BE INSPECTED PRIOR TO COATING.

THE CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS OF THE MANUFACTURER.

ALL BARGE DECKS OR OTHER STEEL WALKING SURFACES SHALL HAVE A LIGHT GRAY COLOR COATING AND SHALL HAVE A NON-SKID FINISH.

STEEL BARGES

TACTILE WARNING STRIP SHALL BE DETECTABLE WARNING SURFACE AS MANUFACTURED BY AMS TACTILE SYSTEMS, LLC, STOUGHTON, MA OR APPROVED EQUAL.

ANODES SHALL BE ALOLINE GALVANIC ALUMINUM ANODES 29FM, MANUFACTURED BY FARWEST CORROSION, GARRDENA CA OR EQUAL. CONSUMPTION RATE OF 7.6 PONDS PER AMP YEAR, NO MERCURY ALLOWED. ALL ANODE CONNECTIONS SHALL BE BOLTED.

TYPE I BARGE UNITS SHALL HAVE 16 ANODES (MIN).
TYPE II BARGE UNITS SHALL HAVE 12 ANODES (MIN).
TYPE III BARGE UNITS SHALL HAVE 12 ANODES (MIN).
TYPE IV BARGE UNITS SHALL HAVE 6 ANODES (MIN).

TYPE I PILE GUIDE SHALL HAVE 2 ANODES (MIN).
TYPE II PILE GUIDE SHALL HAVE 2 ANODES (MIN).
TYPE III PILE GUIDE SHALL HAVE 1 ANODES (MIN).

BOW LOADER UNITS SHALL HAVE 4 ANODES (MIN).

ALL BALLAST SHALL BE PLACED ON CCA TREATED TIMBER CROSS FRAMED TO PREVENT MOVEMENT OF THE TIMBER. TIMBER SHALL BE INSTALLED AND SECURED SUCH THAT MOVEMENT OF THE TIMBER IS NOT ALLOWED. NO DIRECT ATTACHMENT OF THE TIMBER TO THE BARGE SHALL BE ALLOWED. ALL TIMBER SHALL BE FASTENED USING STAINLESS STEEL THROUGH BOLTS WITH NO BOLT PROJECTIONS ON THE EXPOSED BALLAST DECK FACE.

BALLAST SHALL BE CONCRETE OR LEAD BLOCK.

FENDER PANELS

THE RUBBER ELEMENTS USED SHALL BE CONE TYPE UNIT AS MANUFACTURED BY SUMITOMO. FENDER UNIT SHALL BE SUMITOMO PVT-600H, WITH CT2 TYPE RUBBER OR APPROVED EQUAL. FENDERS SHALL BE MOLDED RUBBER UNITS WITH METAL MOUNTING PLATES IMBEDDED IN AND BONDED TO THE ENDS TO CREATE AN INTEGRAL UNIT AT BOTH CONNECTION FACES. FENDER UNITS SHALL BE RESISTANT TO OZONE, SUNLIGHT, TEMPERATURE EXTREMES, MARINE GROWTH, WEAR AND ABRASION. EMBEDDED STEEL PLATES SHALL CONFORM TO ASTM A36 OR BETTER.

THE RUBBER PERFORMANCE CHARACTERISTICS SHALL BE:
RATED DEFLECTION 57.5% - REACTION LOAD 25.7 ton / ENERGY ABSORPTION 6.4 ton-M
MAXIMUM DEFLECTION 60% - REACTION LOAD 28.2 ton / ENERGY ABSORPTION 6.8 ton-M

FENDER PANEL CHAINS SHALL BE GALVANIZED, SPECTRUM 4 HIGH STRENGTH CHAIN AS MANUFACTURED BY CROSBY GROUP OR APPROVED EQUAL HAVING A SAFE WORKING LOAD CAPACITY OF 18,500 POUNDS.

CONNECTING LINKS SHALL BE OF THE SIZE SHOWN ON THE PLAN AND SHALL BE LOK-A-LOY-6 CONNECTING LINKS AS MANUFACTURED BY CROSBY GROUP OR APPROVED EQUAL HAVING A SAFE WORK LOAD CAPACITY OF 23,000 POUNDS.

RUBBER FENDER FACING: MATERIAL SHALL BE A SOLID RUBBER, NATURAL OR SYNTHETIC AND CONFORM TO ASTM D2000 CALLOUT 3BA720A14B13C12EA14F17G11 (G11≥ 250 LB/SQ IN) AS MANUFACTURED BY MARITIME INTERNATIONAL, INC. OR APPROVED EQUAL.

FENDER PANEL PERIMETER: PERIMETER OF PANEL SHALL BE COVERED WITH UHMW-PE.

CONCRETE WORKS

ALL REINFORCEMENT SHALL BE NEW DEFORMED BILLET STEEL BARS, GRADE 60, AND GALVANIZED IN ACCORDANCE WITH ASTM A-123.
REINFORCEMENT ACCESSORIES SHALL BE DIELECTRIC COATED STEEL OR APPROVED PLASTIC.
FORM COATINGS SHALL BE NON-GRAIN RAINING AND NON-STAINING TYPE THAT DO NOT LEAVE RESIDUE.
THERE ARE TWO TYPES OF AGGREGATE FOR THE PROJECT. IMPORTED AGGREGATE SHALL MEET ASTM C33 FOR FINE COARSE AGGREGATES. LOCAL BERMUDA AGGREGATE SHALL BE APPROVED BY THE OWNER PRIOR TO USE.
NO WATER SHALL BE ADDED AT THE SITE DURING PLACEMENT OPERATIONS. ALL CONCRETE SHALL MEET SLUMP REQUIREMENTS FOR THE TYPE AND LOCATION.
AIR ENTRAINMENT SHALL BE MAINTAINED AT 3% - 5% FOR ALL CONCRETE WORKS.
TYPE A GROUT IS CEMENTATIOUS GROUT THAT IS NON-METALLIC AND CONTAINS NO CHLORIDE, TYPE B SHALL BE A HIGH STRENGTH, NON-SHRINK GROUT WITH SALTWATER RESISTANCE SUCH AS FIVE STAR GROUT 120.
CONSTRUCTION JOINTS SHALL BE A MAXIMUM OF 40 APART.
EXPANSION JOINTS SHALL INCLUDE A JOINT FILLER, BOND BREAKER AND JOINT SEALANT.
CONCRETE SHALL BE CURED FOR 7 DAYS AND KEEP IN A MOIST CONDITION FOR THIS ENTIRE TIME.

PILE JACKETS

ALL CONCRETE FOR PILE JACKETING SHALL BE 4000 PSI CONCRETE WITH 3/8" (3/4" ALLOWED IF LARGER PIPE USED FOR PLUMBING) IMPORTED AGGREGATE.
PILE JACKETS SHALL BE ¼" THICK MINIMUM FIBERGLASS JACKET THAT NEST ON EACH TO PROVIDE THE SUFFICIENT LENGTH OF JACKET.
THE BOTTOM OF THE FORM REQUIRES A 200MM EPOXY GROUT PLUG THAT HAS FULLY CURED PRIOR TO PLACEMENT OF CONCRETE.
THE JACKETS SHALL HAVE REINFORCING BANDS AS RECOMMENDED BY THE MANUFACTURER OF THE JACKET.

HOIST SYSTEM

THE MECHANICAL WINCH SHALL BE JEAMAR CMA HEAVY DUTY SEAWORTHY ALUMINUM MODEL CMA 1760,
THE ELECTRICAL WINCH SHALL BE THE JEAMAR NLS2000 HEAVY DUTY LIFTING WINCH, SINGLE PHASE.
THE WIRE ROPE SHALL BE THE STEEL WIRE ROPE, 6X37 IWRC, EIPS AS SUPPLIED BY JEAMAR WITH THE WINCHES.
ALL SHEAVES AND BLOCKS SHALL BE JEAMAR UNITS THAT ARE SEALED AND SELF LUBRICATING.
REMOTE WINCH CONTROLLER AND ELECTRICAL BOX SHALL BE WEATHER TIGHT, LOCKING AS SUPPLIED BY JEAMAR WITH THE UNITS.
ALL CABLE DIRECTED TO BE SUBAQUEOUS SHALL BE MINING CABLE - 600/2000 VOLT TYPE G OR GC THREE CONDUCTOR ROUND CABLE.

MISCELLANEOUS ITEMS

ALL FRICTION SURFACES SHALL HAVE A DYNAMIC COEFFICIENT OF FRICTION OF 0.10 - 0.14 (DRY).
MATERIAL SHALL HAVE A DENSITY OF 0.93 g/cm^3, MINIMUM TENSILE STRENGTH OF 4000 psi, ABRASION INDEX OF 10 (SAND SLURRY), A SAND ON WHEEL INDEX OF 100cc (ASTM G65) AND A DUROMETER VALUE OF 67 (ASTM D-2240).

ALL HATCHES SHALL BE REMOVABLE WITH A MINIMUM OPENING OF 0.680M CLEAR. HATCHES SHALL BE WATERTIGHT WITH A NEOPRENE GASKET THAT CONFORMS TO MIL SPEC MIL R-6855 CLASS 2 NEOPRENE GRADE 60. HATCH SHALL BE SECURED WITH STAINLESS STEEL SOCKET SCREWS, FLUSH TO THE HATCH.

ALL DISSIMILAR METALS SHALL BE SEPARATED WITH PLASTIC SHEETS OR BUSHINGS NO LESS THAN 1.59MM (1/16") THICK. PLASTIC PADS SHALL BE PLACED UNDER ALL ALUMINUM BASE PLATES AND BUSHINGS INSTALLED BETWEEN ALL STAINLESS STEEL STUDS. THE SEPARATION MATERIAL SHALL BE NYLATRON-GS PLASTIC CONFORMING TO MILITARY SPECIFICATION MIL-P-15035.

RAILING SHALL BE 1 1/2" I.P.S. SCHEDULE 40 INTER-RAIL TYPE WITH HEAVY DUTY BASE PLATES.

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Structures Section

BCE Bourne Consulting Engine

GENERAL NOTES:

ISSUED FOR: REFERENCE ONLY 2016 09 07

AMENDMENTS:

NO:	REVISION	APP	DATE:
A	Revised as noted	RJT	14/08/01
B	Revised as noted	RRB	04/01/02
C	Revised as noted	MAM	2016 09 0
1	.	.	.

SCALE: NONE

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: DRG DATE: 16/03/01
CHECKED BY: RRB DATE: 16/03/01

DRAWING
PREPARED BY: BAP DATE: 16/03/01
CHECKED BY: DRG DATE: 16/03/01

APPROVED BY: RRB

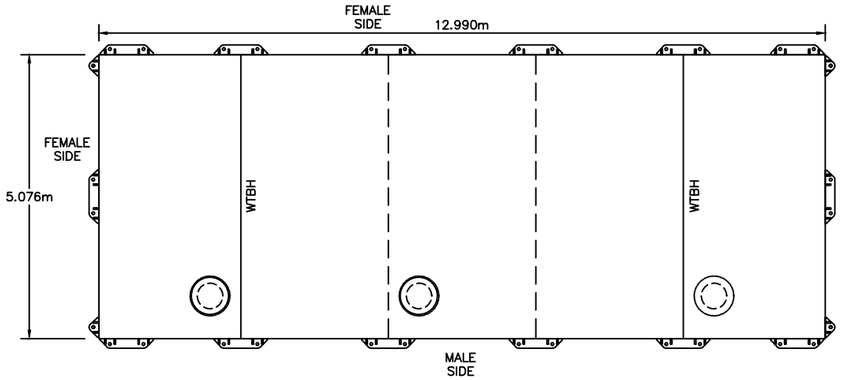
PROJECT NUMBER: 61/01/01

PROJECT NAME:
REPLACEMENT FERRY PROJEC PHASE I DOCK CONSTRUCTION

DRAWING FILE NO: T-2 gen notes.dwg ACAD R-14

SHEET TITLE:
GENERAL NOTES

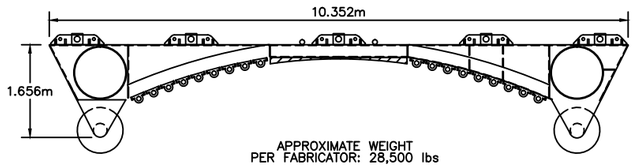
SHEET NUMBER: 61/01/01/T2 REVISION C



APPROXIMATE WEIGHT
PER FABRICATOR: 58,388 lbs

A T3 TYPE I BARGE

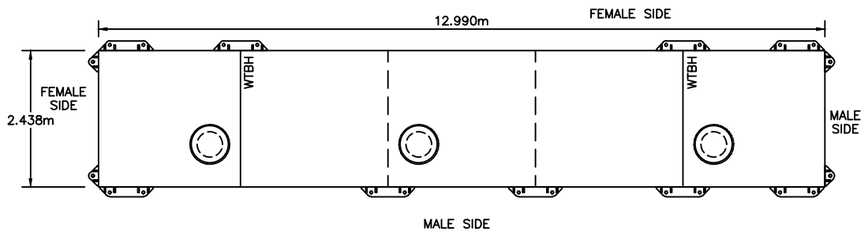
SCALE: 1 : 50



APPROXIMATE WEIGHT
PER FABRICATOR: 28,500 lbs

B T3 BOW LOADER UNIT

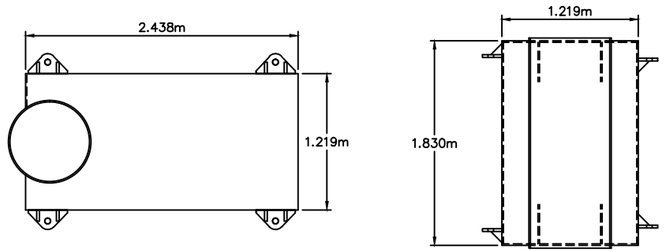
SCALE: 1 : 50



APPROXIMATE WEIGHT
PER FABRICATOR: 36,476 lbs

C T3 TYPE II BARGE

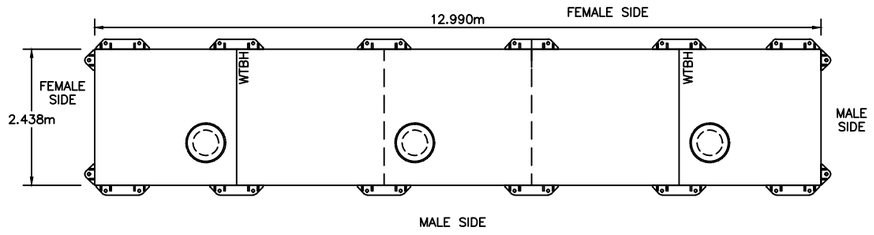
SCALE: 1 : 50



APPROXIMATE WEIGHT
PER FABRICATOR: 4,950 lbs

D T3 TYPE I PILE GUIDE

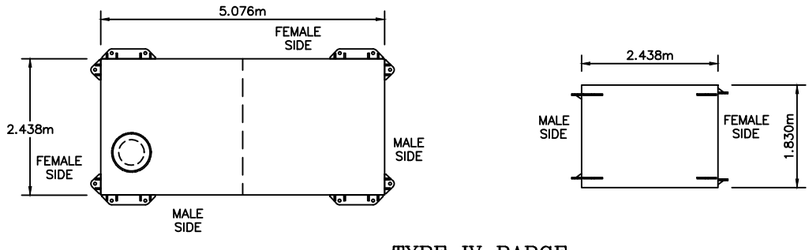
SCALE: 1 : 25



APPROXIMATE WEIGHT
PER FABRICATOR: 32,802 lbs

E T3 TYPE III BARGE

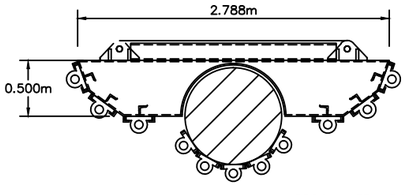
SCALE: 1 : 50

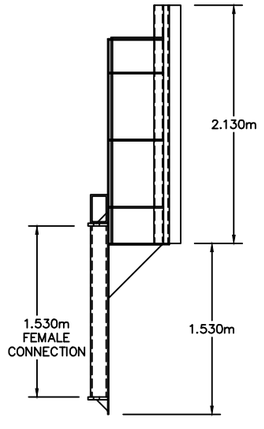


APPROXIMATE WEIGHT
PER FABRICATOR: 13,948 lbs

F T3 TYPE IV BARGE

SCALE: 1 : 50





APPROXIMATE WEIGHT: 5,890 lbs
PER FABRICATOR: 5,434 lbs

G T3 TYPE II PILE GUIDE

SCALE: 1 : 25

REFERENCE ONLY

Reference Drawings

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GENERAL NOTES:

WTBH – WATER TIGHT BULKHEAD

ISSUED FOR: REFERENCE ONLY 2016 09 07

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	REVISIONS AS NOTED	RRB	04/01/02
C	REFERENCE ONLY	MAM	2016 09 07
△	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

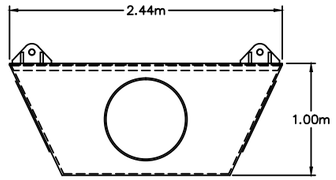
PROJECT NAME:

REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

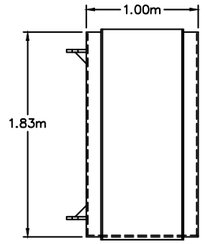
DRAWING FILE NO: T-3 STD Barge Units.dwg
ACAD R-14

SHEET TITLE:
STANDARD BARGE UNITS

SHEET NUMBER: 61/01/01/T3
REVISION: C

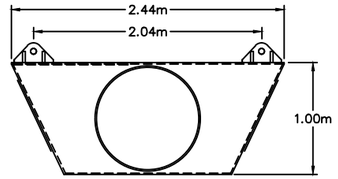


2 PINS REQ'D–LENGTH VARIES



A T4 TYPE III PILE GUIDE

SCALE: 1 : 25



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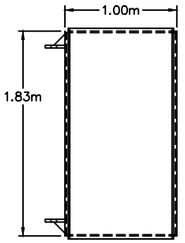
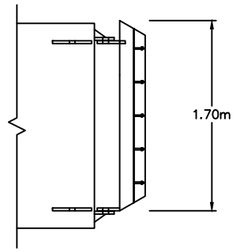


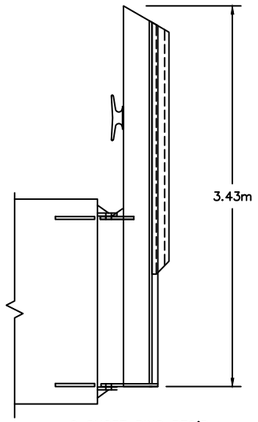
B T4 TYPE IV PILE GUIDE

SCALE: 1 : 25



C T4 WALL FENDER

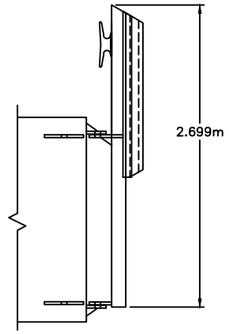
SCALE: 1 : 25



2 SHORT PINS REQ'D

D T4 HIGH FENDER TYPE HM

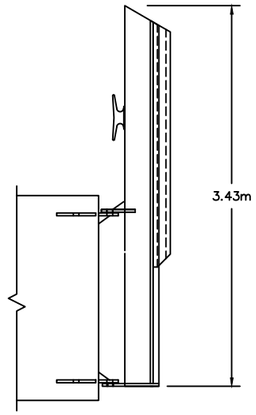
SCALE: 1 : 25



2 SHORT PINS REQ'D

E T4 LOW FENDER TYPE LM

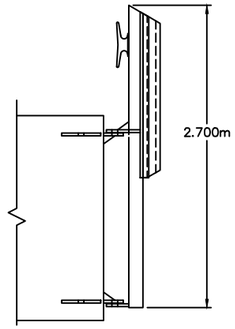
SCALE: 1 : 25



2 SHORT PINS REQ'D

F T4 HIGH FENDER TYPE HF

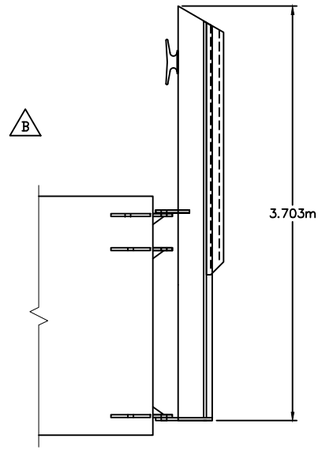
SCALE: 1 : 25



2 SHORT PINS REQ'D

G T4 LOW FENDER TYPE LF

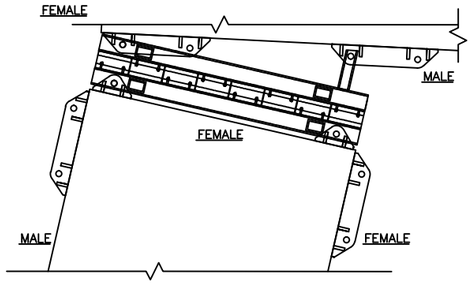
SCALE: 1 : 25

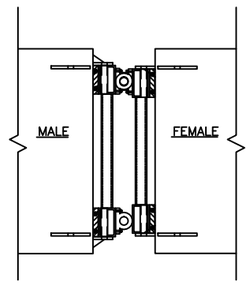


2 LONG PINS REQ'D

H T4 HIGH FENDER TYPE HMS

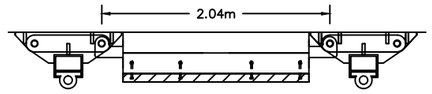
SCALE: 1 : 25





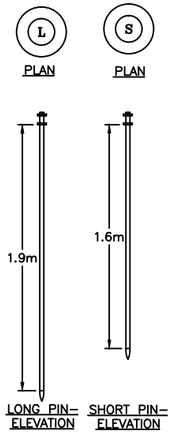
I T4 BARGE CONNECTION – DETAIL

SCALE: 1 : 25



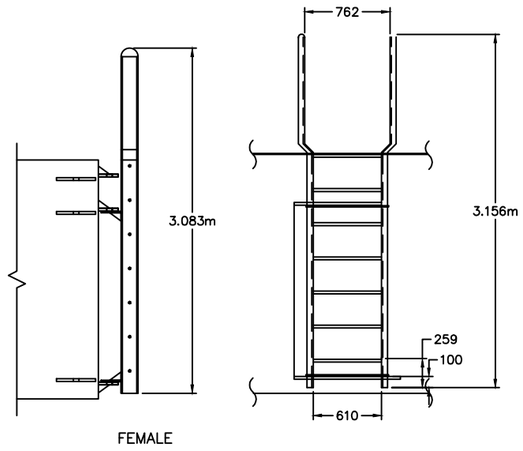
J T4 TRANSITION ASSEMBLY

SCALE: 1 : 25



K T4 PIN DETAIL

SCALE: 1 : 20



L T4 LADDER

SCALE: 1 : 25

REFERENCE ONLY

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GENERAL NOTES:

ISSUED FOR: REFERENCE ONLY 2016 09 07

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	HIGH HMS FENDER	RRB	04/01/02
A	REFERENCE ONLY	MAM	2016 09 07
△	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

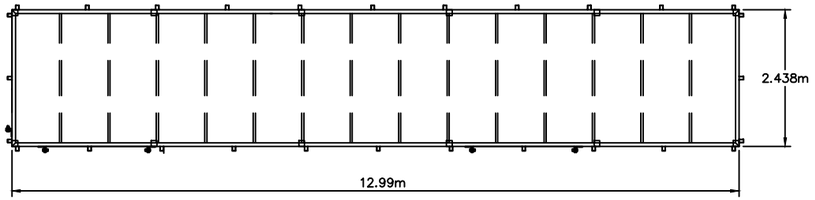
PROJECT NAME:

REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DRAWING FILE NO: T-4 STD Barge Attachments.dwg
ACAD R-14

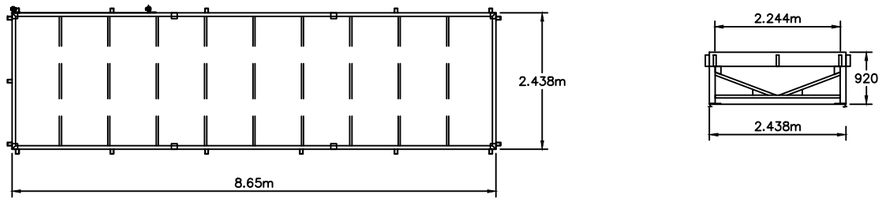
SHEET TITLE:
STANDARD BARGE ATTACHMENTS

SHEET NUMBER: 13/01/01/T4
REVISION: C



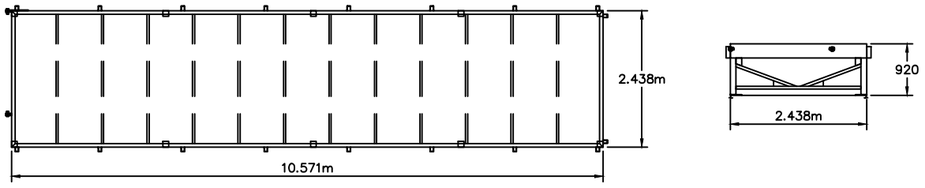
A T5 TYPE A PLATFORM

SCALE: 1 : 50



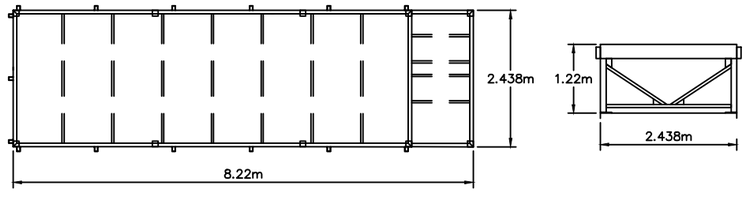
C T5 TYPE B PLATFORM

SCALE: 1 : 50



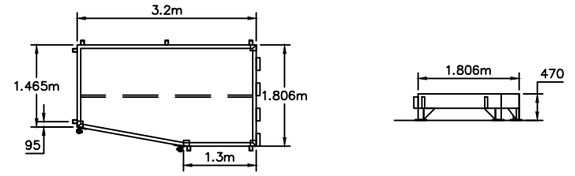
E T5 HD-TYPE 1 PLATFORM

SCALE: 1 : 50



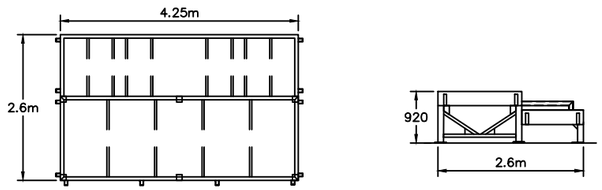
G T5 HD-TYPE 2 PLATFORM

SCALE: 1 : 50



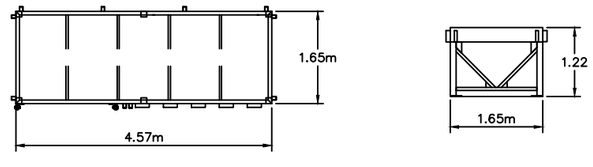
B T5 HT-TYPE 2 PLATFORM

SCALE: 1 : 50



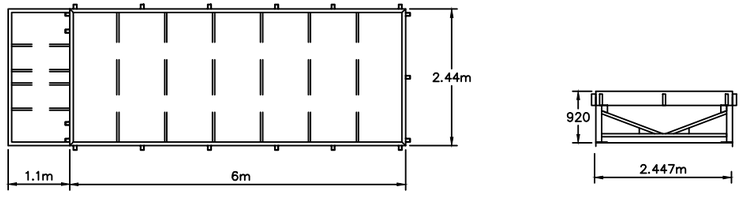
D T5 DY-TYPE 1 PLATFORM

SCALE: 1 : 50



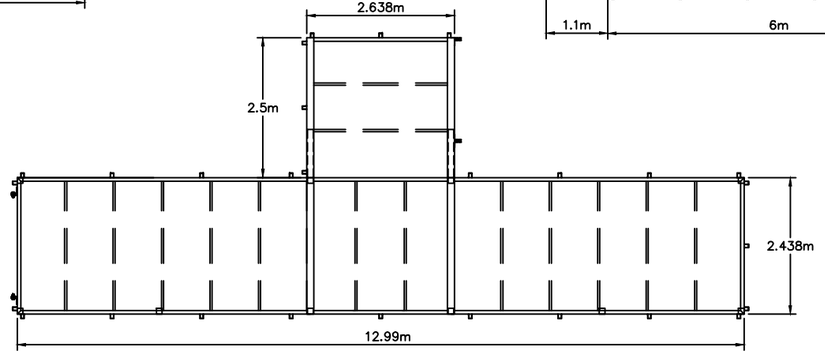
F T5 DY-TYPE 2 PLATFORM

SCALE: 1 : 50



H T5 StG-TYPE 1 PLATFORM

SCALE: 1 : 50



I T5 HT-TYPE 1 PLATFORM

SCALE: 1 : 50

REFERENCE ONLY

Reference Drawings

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GENERAL NOTES:

ISSUED FOR: REFERENCE ONLY 2016 09 07

AMENDMENTS:

NO:	REVISION	APP	DATE:
1	.	.	.

SCALE: 1 : 50

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

APPROVED BY:
RRB

PROJECT NUMBER:
61/01/01

PROJECT NAME:

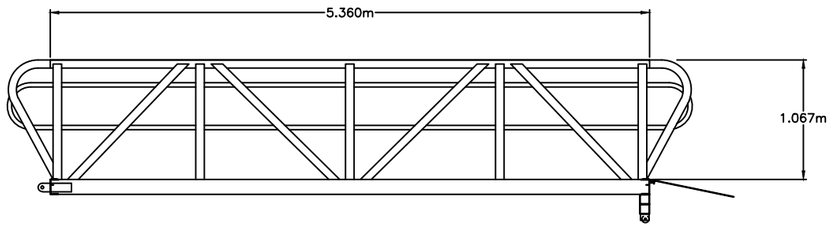
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DRAWING FILE NO: ACAD R-14
T-5 STD Aluminum Platforms.dwg

SHEET TITLE:
STANDARD ALUMINUM PLATFORMS

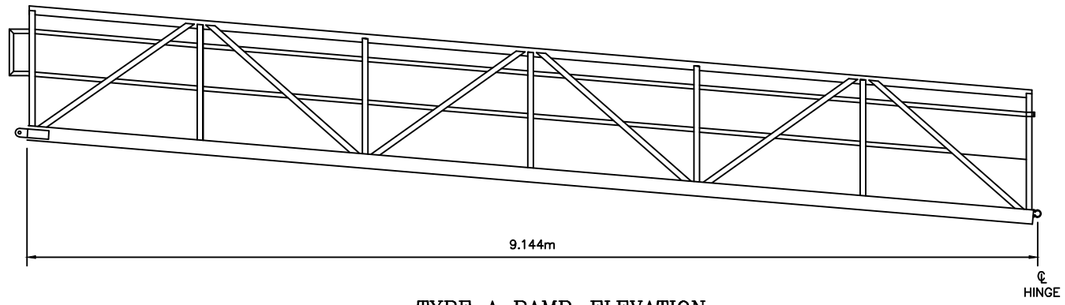
SHEET NUMBER: 61/01/01/T5

REVISION: 1 .



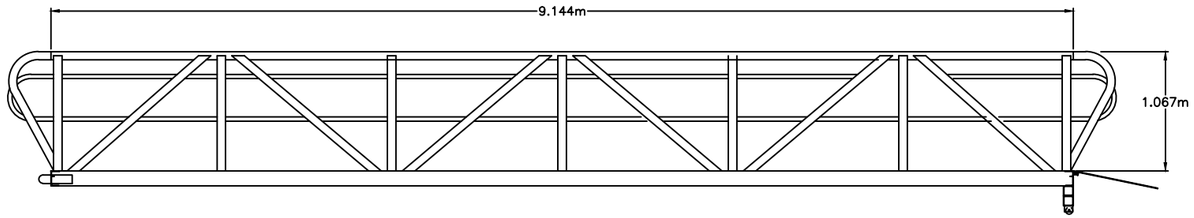
A T6 TYPE I GANGWAY – ELEVATION

SCALE: 1 : 25



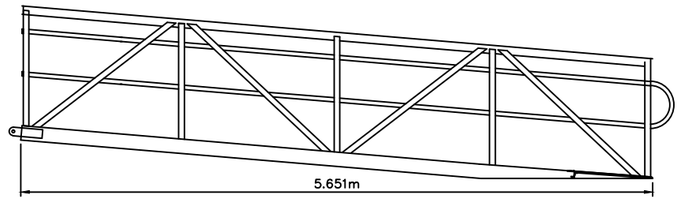
B T6 TYPE A RAMP–ELEVATION

SCALE: 1 : 25



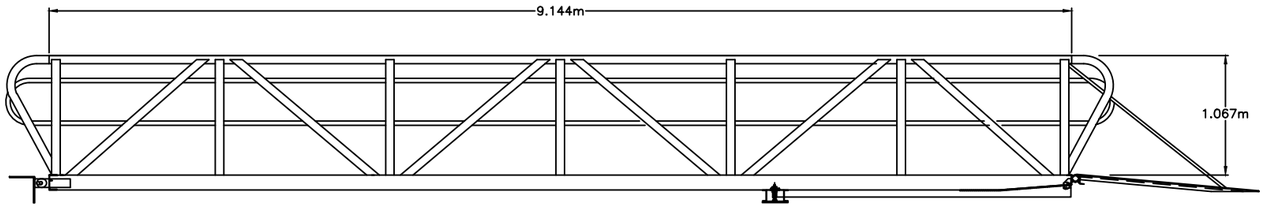
C T6 TYPE II GANGWAY – ELEVATION

SCALE: 1 : 25



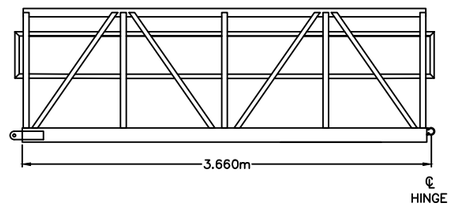
D T6 HT–TYPE 1 RAMP–ELEVATION

SCALE: 1 : 25



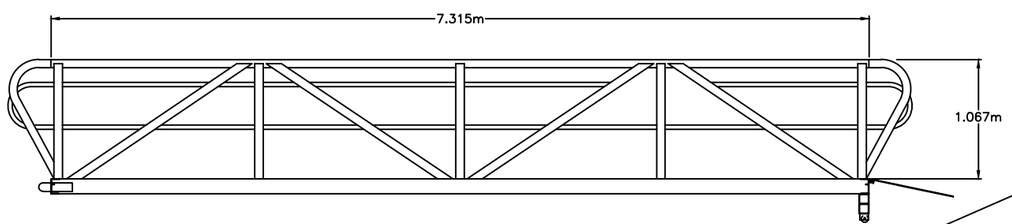
E T6 TYPE III GANGWAY – ELEVATION

SCALE: 1 : 25



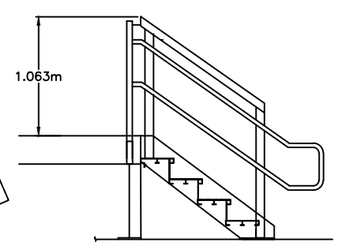
F T6 DY–TYPE 1 RAMP–ELEVATION

SCALE: 1 : 25



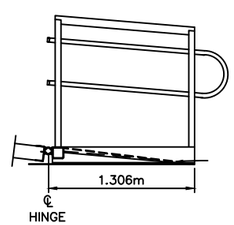
G T6 TYPE IV GANGWAY – ELEVATION

SCALE: 1 : 25



H T6 STAIRS

SCALE: 1 : 25



I T6 TRANSITION RAMP–ELEVATION

SCALE: 1 :25

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

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Franklin, MA 02038
TEL. (508) 528-0133 FAX (508) 520-007

GENERAL NOTES:

ISSUED FOR: REFERENCE ONLY 2016 09 07

AMENDMENTS:

NO:	REVISION	APP	DATE:
△.		.	.

SCALE: 1 : 25

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: DATE:
BAP 23/05/01
CHECKED BY: DATE:
RRB 23/05/01

DRAWING
PREPARED BY: DATE:
JSK 23/05/01
CHECKED BY: DATE:
RRB 23/05/01

APPROVED BY:
RRB

PROJECT NUMBER:
61/01/01

PROJECT NAME:

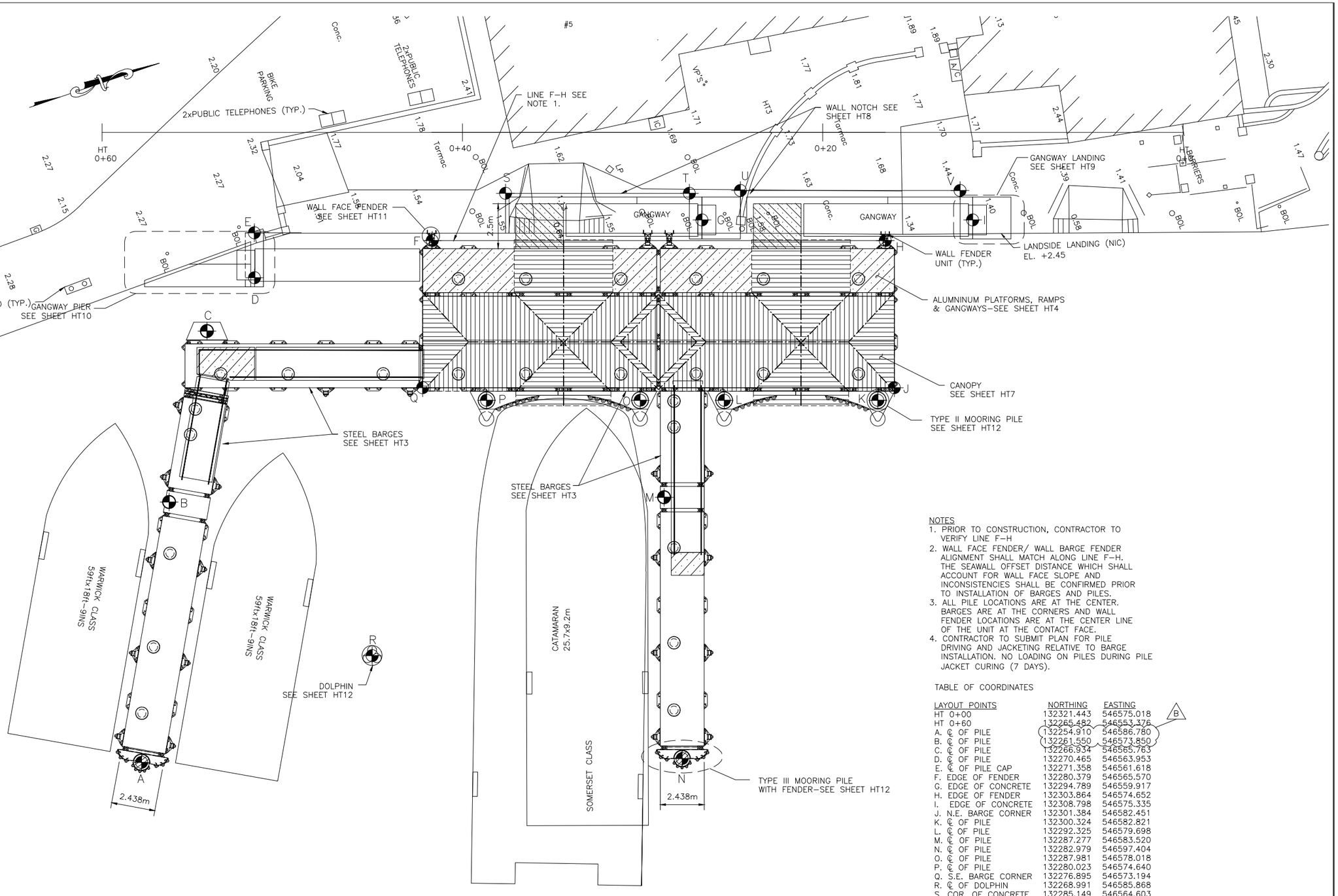
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DRAWING FILE NO: ACAD R-14

SHEET TITLE:
STANDARD ALUMINUM GANGWAYS & RAMPS

SHEET NUMBER: **61/01/01/T6**

REVISION △.



GENERAL LAYOUT PLAN

NOTES
1. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY LINE F–H
2. WALL FACE FENDER/ WALL BARGE FENDER ALIGNMENT SHALL MATCH ALONG LINE F–H. THE SEAWALL OFFSET DISTANCE WHICH SHALL ACCOUNT FOR WALL FACE SLOPE AND INCONSISTENCIES SHALL BE CONFIRMED PRIOR TO INSTALLATION OF BARGES AND PILES.
3. ALL PILE LOCATIONS ARE AT THE CENTER. BARGES ARE AT THE CORNERS AND WALL FENDER LOCATIONS ARE AT THE CENTER LINE OF THE UNIT AT THE CONTACT FACE.
4. CONTRACTOR TO SUBMIT PLAN FOR PILE DRIVING AND JACKETING RELATIVE TO BARGE INSTALLATION. NO LOADING ON PILES DURING PILE JACKET CURING (7 DAYS).

TABLE OF COORDINATES

LAYOUT POINTS	NORTHING	EASTING
HT 0+00	132321.443	546575.018
HT 0+60	132265.492	546553.376
A. ℄ OF PILE	132254.910	546586.780
B. ℄ OF PILE	132261.550	546573.850
C. ℄ OF PILE	132266.934	546565.763
D. ℄ OF PILE	132270.465	546563.953
E. ℄ OF PILE CAP	132271.358	546561.618
F. EDGE OF FENDER	132280.379	546565.570
G. EDGE OF CONCRETE	132294.789	546559.917
H. EDGE OF FENDER	132303.864	546574.652
I. EDGE OF CONCRETE	132308.798	546575.335
J. N.E. BARGE CORNER	132301.384	546582.451
K. ℄ OF PILE	132300.324	546582.821
L. ℄ OF PILE	132292.325	546579.698
M. ℄ OF PILE	132287.277	546583.520
N. ℄ OF PILE	132282.979	546597.404
O. ℄ OF PILE	132287.981	546578.018
P. ℄ OF PILE	132280.023	546574.640
Q. S.E. BARGE CORNER	132276.895	546573.194
R. ℄ OF DOLPHIN	132268.991	546585.868
S. COR. OF CONCRETE	132285.149	546564.603
T. COR. OF CONCRETE	132294.670	546568.285
U. COR. OF CONCRETE	132297.365	546569.167
V. COR. OF CONCRETE	132308.732	546573.563

A –LAYOUT POINT

CONSTRUCTION

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

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Structures Section

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GENERAL NOTES:
1. COORDINATES BASED ON BNG 2000.
2. ALL ELEVATIONS ARE IN METERS BASED ON ORDNANCE DATUM.
3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	BARGES II & IV	RRB	04/01/02
A	.	.	.

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

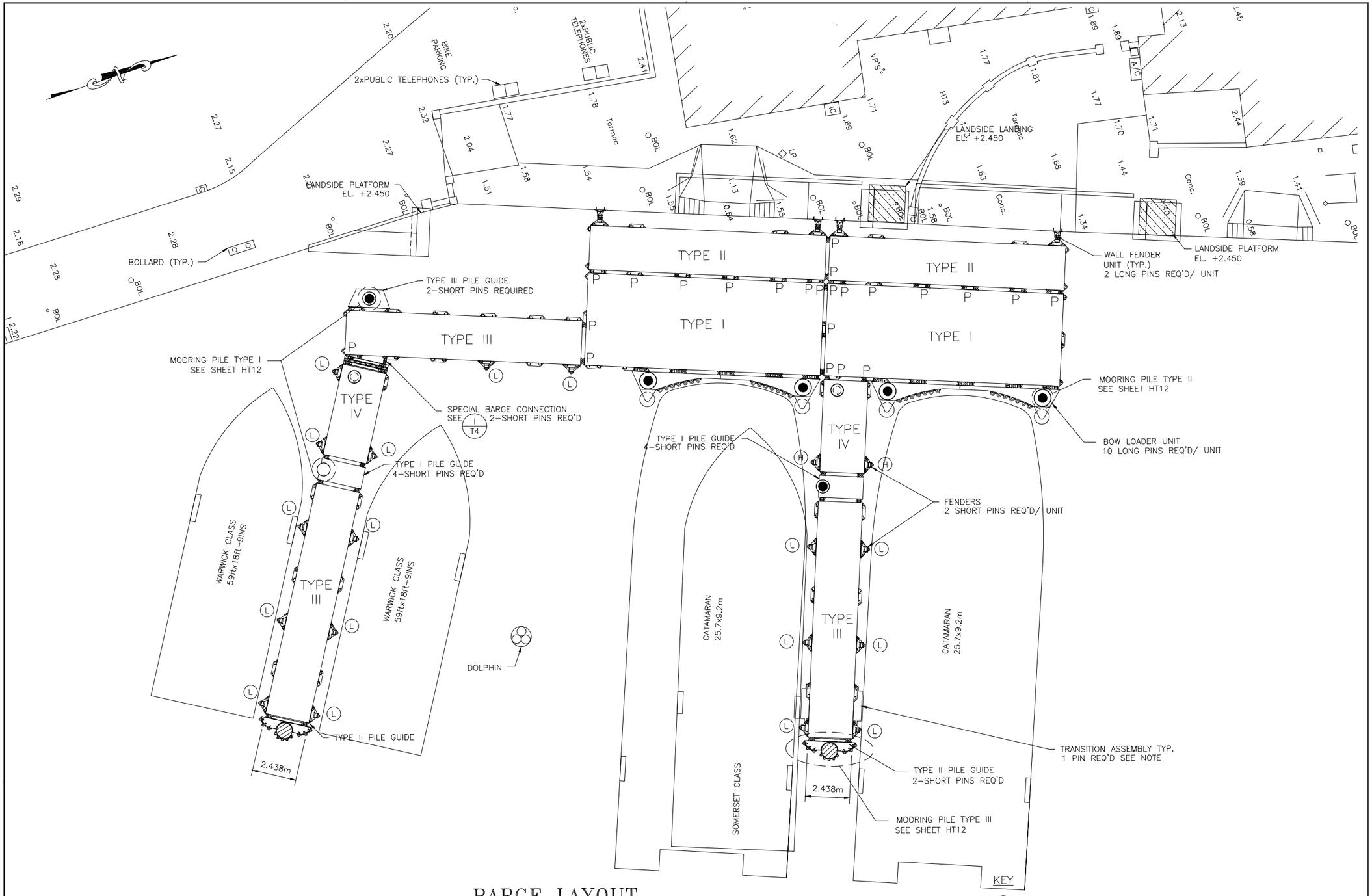
HAMILTON TERMINAL
REPLACEMENT FERRY PROJECT
PHASE 1
DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD
PEMBROKE PARISH

DRAWING FILE NO: HT–4_Site–Layout.dwg ACAD R–14

SHEET TITLE:
SITE
PLAN

SHEET NUMBER: 3/26/02/HT2 REVISION: B



BARGE LAYOUT

NOTE:
1. SEE SHEETS T3 FOR BARGE UNITS.
2. SEE SHEETS T4 FOR PILE GUIDE UNITS.
3. TRANSITION ASSEMBLY TO USE COMMON PIN W/ BARGE FENDER.

CONSTRUCTION

THE MINISTRY OF WORKS AND ENGINEERING

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GENERAL NOTES:
1. COORDINATES BASED ON BNG 2000.
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3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	BARGES II & IV	RRB	04/01/02
△	.	.	.

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

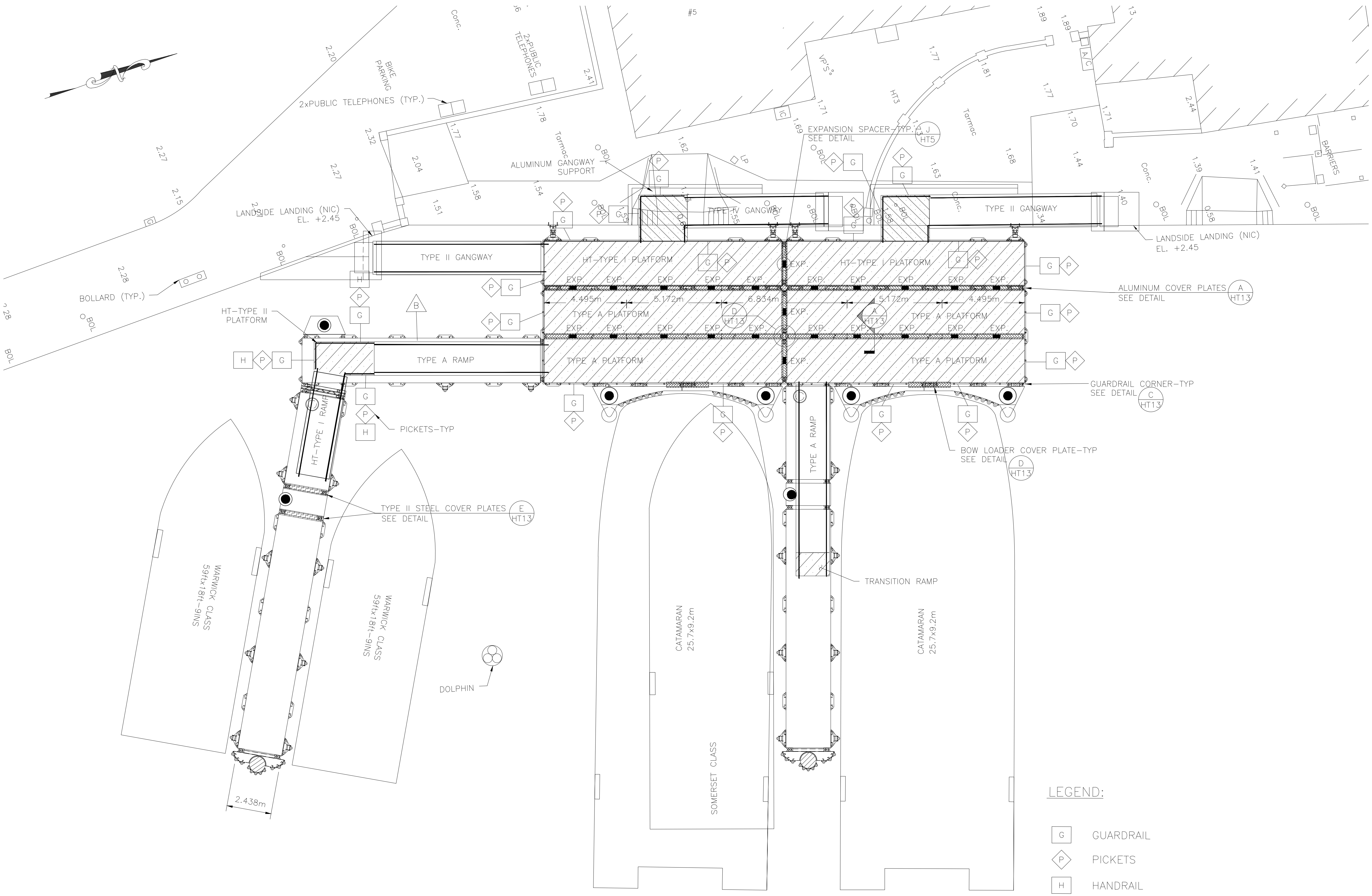
HAMILTON TERMINAL REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD
PEMBROKE PARISH

DRAWING FILE NO: ACAD R-14
HT-3_Barge-assembly.dwg

SHEET TITLE:
BARGE ASSEMBLY PLAN

SHEET NUMBER: 13/26/02/HT3
REVISION: B



ALUMINUM LAYOUT

CONSTRUCTION

Reference Drawings

LEGEND:

G	GUARDRAIL
P	PICKETS
H	HANDRAIL
(hatch)	ALUMINUM COVER PLATE-SEE SHEET HT13
(hatch)	STEEL COVER PLATE-SEE SHEET HT13
EXP	EXPANSION SPACER SEE DETAIL J/HT5

NOTES

SEE SHEET T5 FOR STANDARD PLATFORMS.

SEE SHEET T6 FOF STANDARD GANGWAYS AND RAMPS.

THE MINISTRY OF WORKS AND ENGINEERING

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GENERAL NOTES:

1. COORDINATES BASED ON BNG 2000.
2. ALL ELEVATIONS ARE IN METERS BASED ON ORDNANCE DATUM.
3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	BARGES II & IV	RRB	04/01/02
.	.	.	.

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

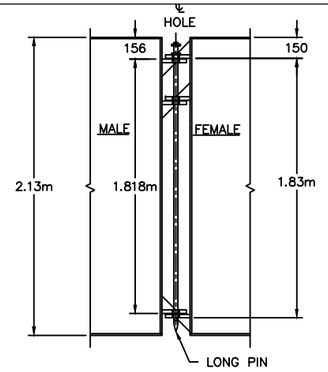
PROJECT NUMBER: 61/01/01

PROJECT NAME:
HAMILTON TERMINAL REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION
#1 POINT PLEASANT ROAD
PEMBROKE PARISH

DRAWING FILE NO: ACAD R-14
HT-4_Alum-Assembvly.dwg

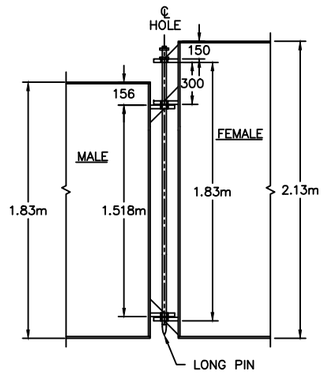
SHEET TITLE:
ALUMINUM ASSEMBLY PLAN

SHEET NUMBER: 13/26/02/HT4
REVISION: B



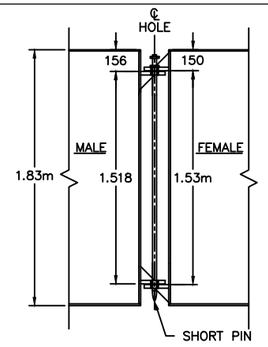
A HT5 HIGH BARGE CONNECTION

SCALE: 1 : 20



B HT5 HIGH/LOW BARGE CONNECTION

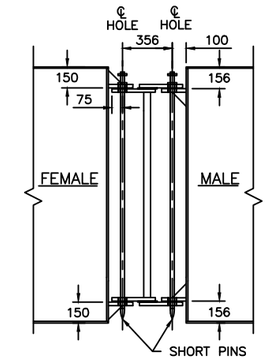
SCALE: 1 : 20



C HT5 LOW BARGE CONNECTION

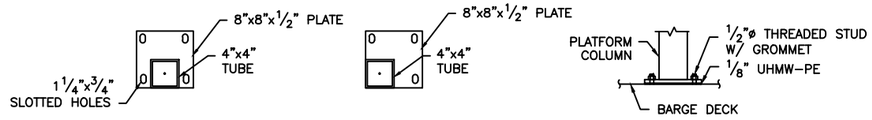
PILE GUIDE CONN. SIMILAR

SCALE: 1 : 20



D HT5 BARGE CONNECTION – DETAIL

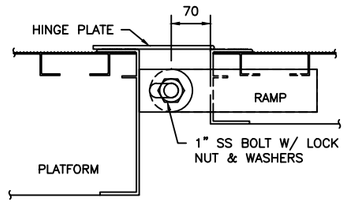
SCALE: 1 : 20



NOTE:
CONNECTION SHALL BE 4–1/2ø SS THD' STUDS W/GROMMET, NUT & WASHER WITH 1/8"x9"x9" UHMW–PE BELOW BASE PLATE

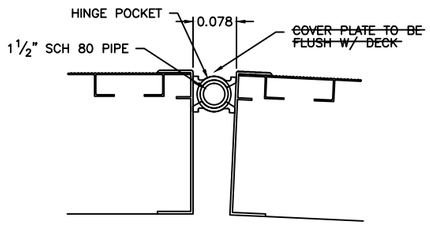
E HT5 PLATFORM BASE CONNECTION

SCALE: 1 : 10



F HT5 RAMP TO PLATFORM CONNECTION

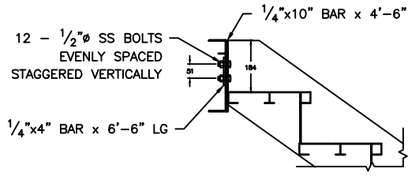
SCALE: 1 : 5

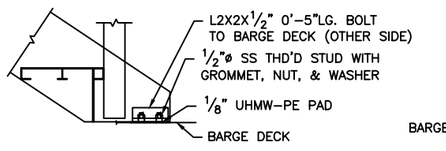


NOTE
SECURE SCH 80 PIPE TO PREVENT LONGITUDINAL MOVEMENT

G HT5 STANDARD HINGE POCKET CONNECTION

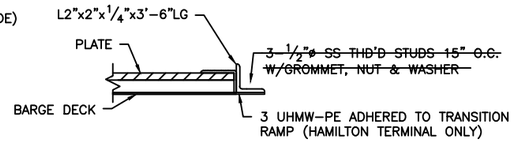
SCALE: 1 : 5





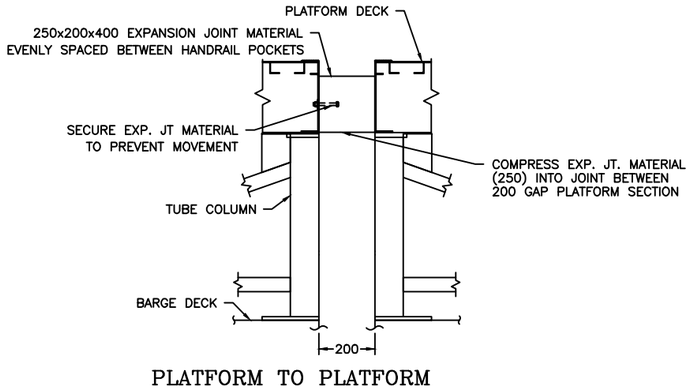
H HT5 STAIR CONNECTIONS

SCALE: 1 : 10



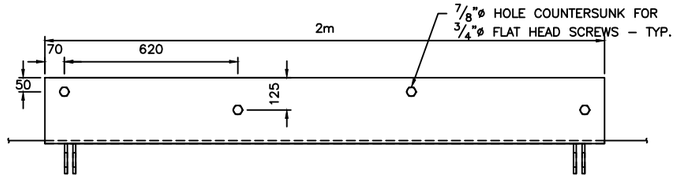
I HT5 TRANSITION CONNECTION

SCALE: 1 : 5

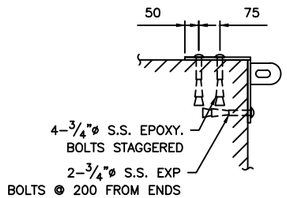


J HT5 PLATFORM TO PLATFORM CONNECTION

SCALE: 1 : 10



PLAN



SECTION

K HT5 GANGWAY LANDSIDE CONNECTION – STANDARD DETAIL

SCALE: 1 : 10

CONSTRUCTION

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	REVISED AS NOTED	RRB	04/01/02
A	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

HAMILTON TERMINAL REPLACEMENT FERRY PROJEC PHASE 1 DOCK CONSTRUCTION

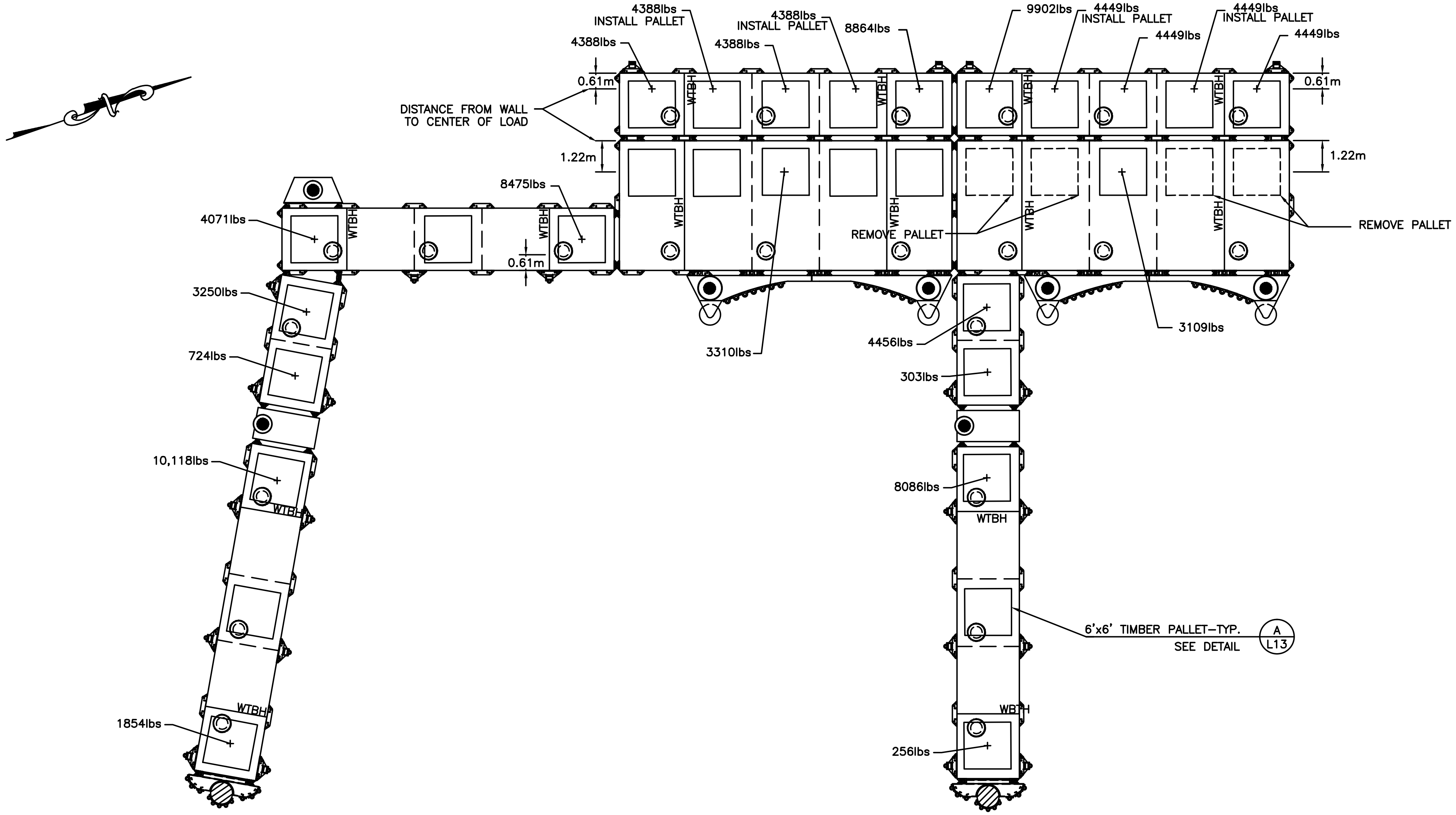
#1 POINT PLEASANT ROAD PEMBROKE PARISH

DRAWING FILE NO: ACAD R-14
HT-5 Assembly-Connections.dwg

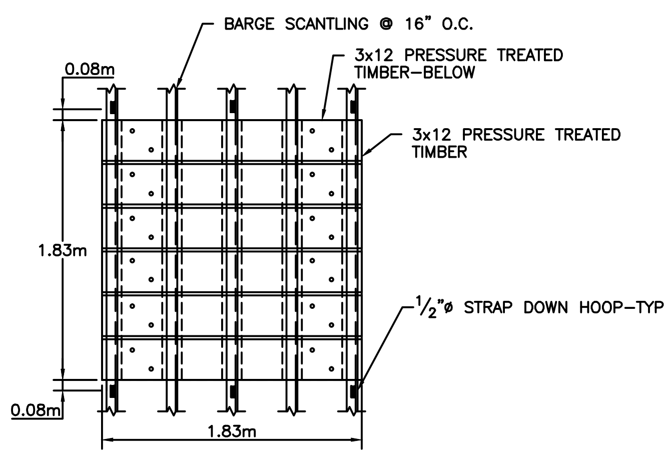
SHEET TITLE:
ASSEMBLY CONNECTION DETAILS

SHEET NUMBER: 13/26/02/HT5

REVISION B



HAMILTON TERMINAL



A / HD6

BALLAST PALLET–PLAN

SCALE: 1 : 25

0 1 2 3 4 5
SCALE: 1 : 100

CONSTRUCTION

NOTES:

1. BALLAST LOADS ARE SHOWN AT CENTER OF BAY UNLESS NOTED OTHERWISE.
2. BALLAST TO BE REMOVABLE CONCRETE BLOCK OR LEAD.
3. BALLAST SHALL BE INSTALLED ON TIMBER PALLETS AT LOCATIONS SHOWN. PALLETS SUPPLIED WITH BARGES.

THE MINISTRY OF WORKS AND ENGINEERING

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TEL. (508) 528–6133 FAX. (508) 520–667.

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	HOOP ORIENTATION	RRB	04/01/02
C	BALLAST LAYOUT	RRB	11/01/02
.	.	.	.

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE: 23/05/01

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

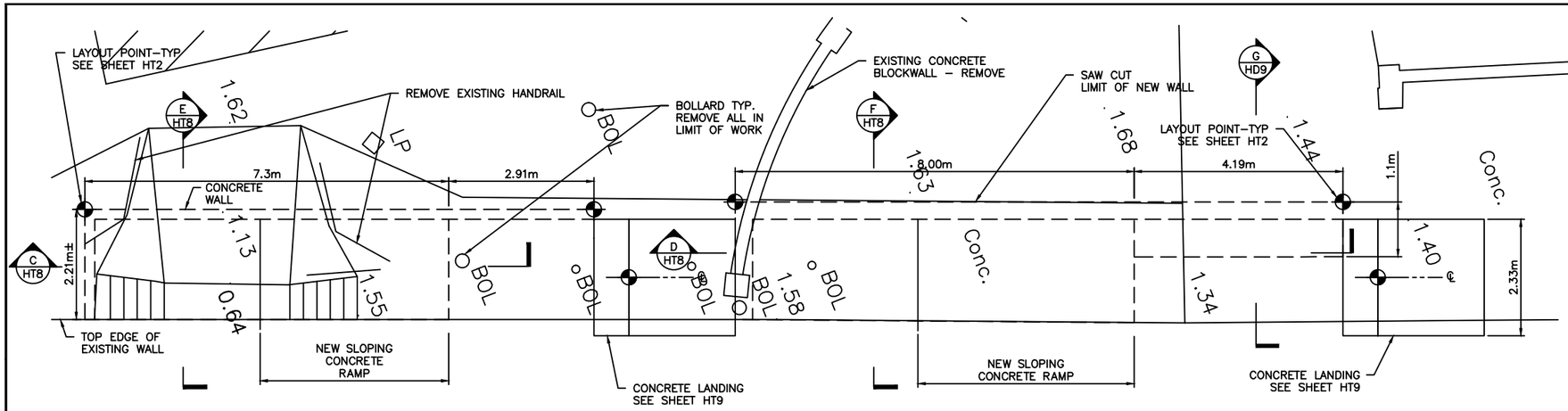
PROJECT NAME:
HAMILTON TERMINAL REPLACEMENT FERRY PROJEC PHASE 1 DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD PEMBROKE PARISH

DRAWING FILE NO: ACAD R–14
HT–6_Ballasting_Plan

SHEET TITLE:
BALLASTING PLAN

SHEET NUMBER: 13/26/02/HT6
REVISION C

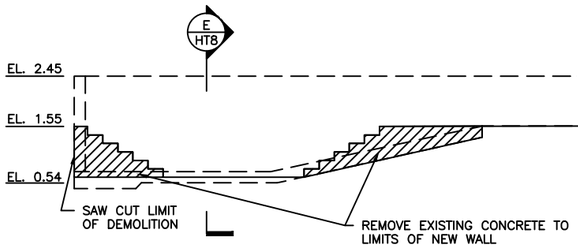


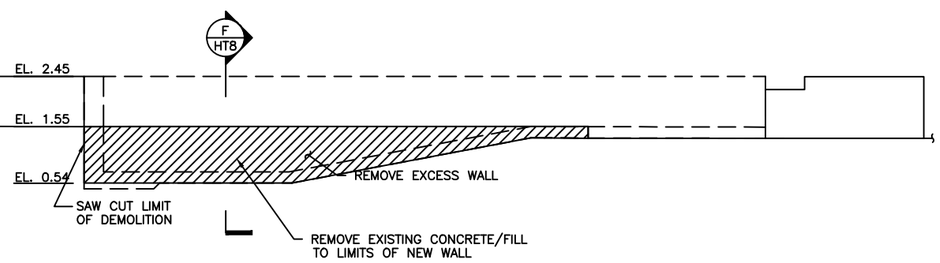
A HT8 SOUTH NOTCH – PLAN

SCALE: 1 : 50

B HT8 NORTH NOTCH – PLAN

SCALE: 1 : 50



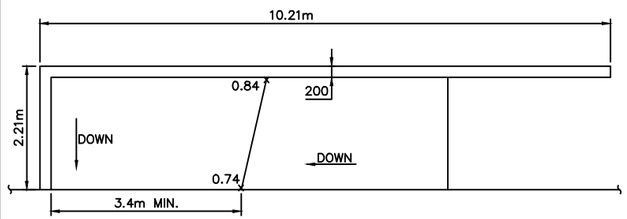


C HT8 SOUTH NOTCH – ELEVATION

SCALE: 1 : 50

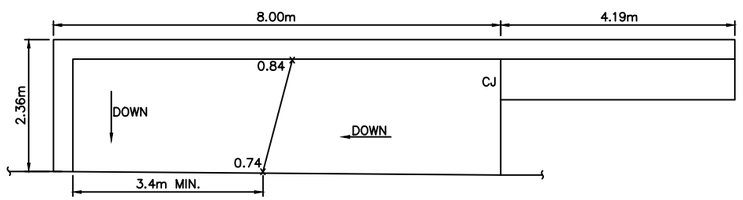
D HT8 NORTH NOTCH – ELEVATION

SCALE: 1 : 50



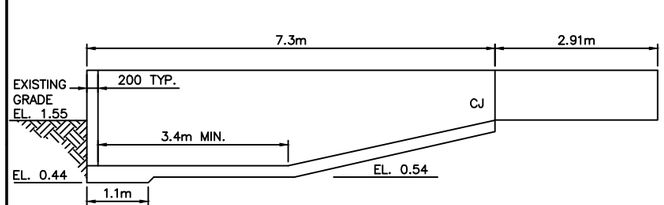
G HT8 SOUTH NOTCH – PLAN

SCALE: 1 : 50



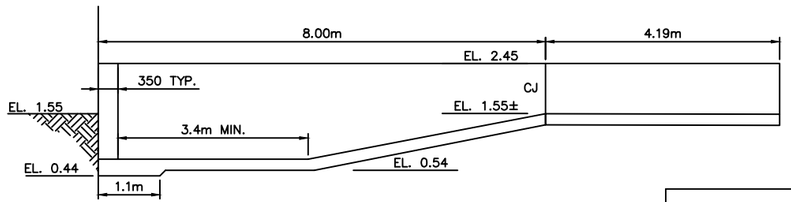
H HT8 NORTH NOTCH – PLAN

SCALE: 1 : 50



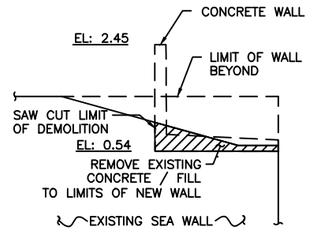
J HT8 SOUTH NOTCH – ELEVATION

SCALE: 1 : 50



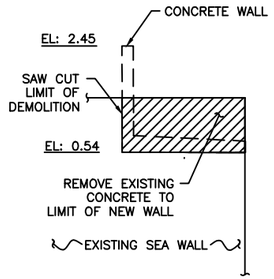
K HT8 NORTH NOTCH – ELEVATION

SCALE: 1 : 50



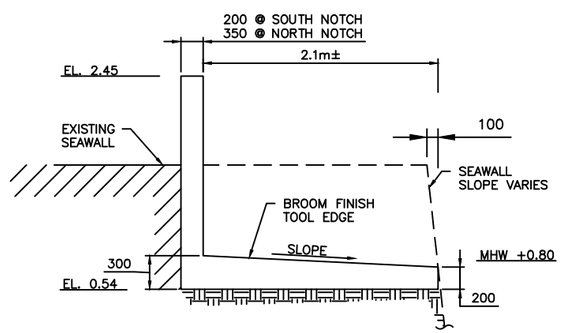
E HT8 SOUTH NOTCH SECTION

SCALE: 1 : 50



F HT8 NORTH NOTCH SECTION

SCALE: 1 : 50



I HT8 WALL – CROSS SECTION

SCALE: 1 : 25

CONSTRUCTION

NOTE:

* ALL REINFORCING STEEL TO BE HOT DIPPED GALVANIZED.
* REINFORCING SHALL HAVE A MINIMUM COVER OF 75mm.
* 25 CHAMFER ON ALL EDGES UNO.

THE MINISTRY OF WORKS AND ENGINEERING

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184 West Central Stree
Franklin, MA 02038
TEL. (508) 528-8133 FAX. (508) 520-607

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
1	.	.	.

SCALE: 1 : 50

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

HAMILTON TERMINAL REPLACEMENT FERRY PROJEC PHASE 1 DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD PEMBROKE PARISH

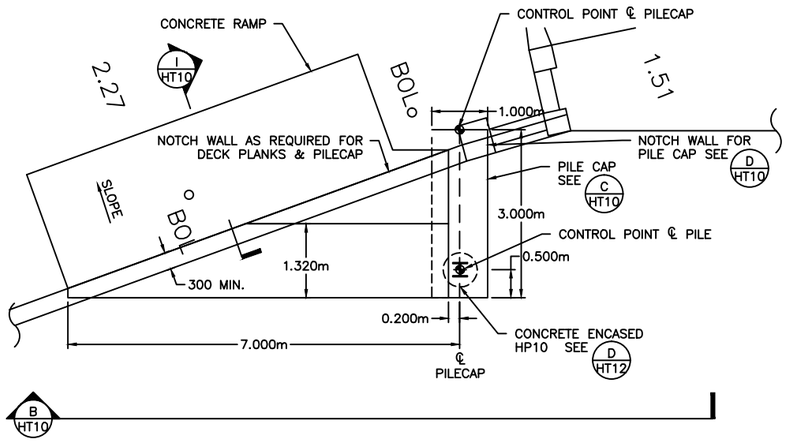
DRAWING FILE NO: HT-8 Wall Notch.dwg ACAD R-14

SHEET TITLE:

WALL NOTCH CONSTRUCTION

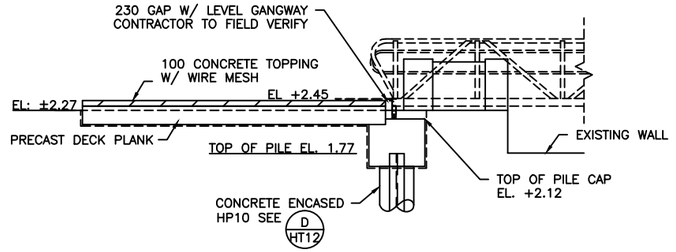
SHEET NUMBER: 13/26/02/HT8

REVISION: 1



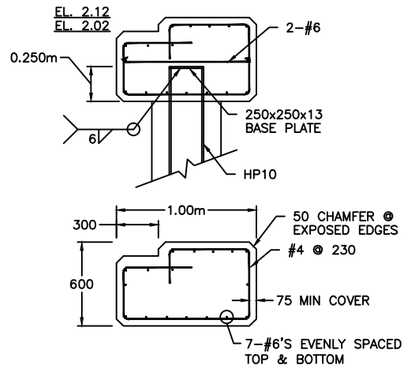
A HT10 GANGWAY PIER EXTENTION—PLAN

SCALE: 1 : 50



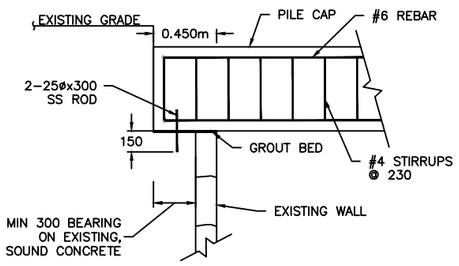
B HT10 GANGWAY PIER EXTENTION—ELEVATION

SCALE: 1 : 50



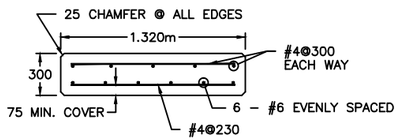
C HT10 PILE CAP—REINFORCING

SCALE: 1 : 20



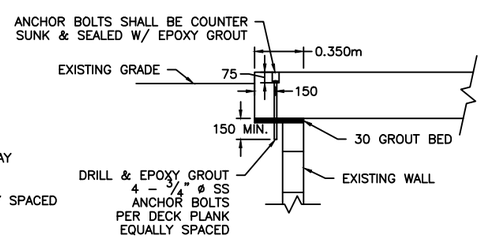
D HT10 PILE CAP NOTCH

SCALE: 1 : 20



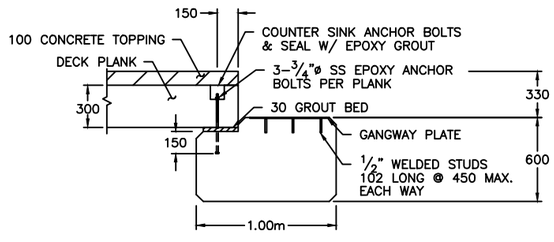
E HT10 PIER SLAB—REINFORCING

SCALE: 1 : 20



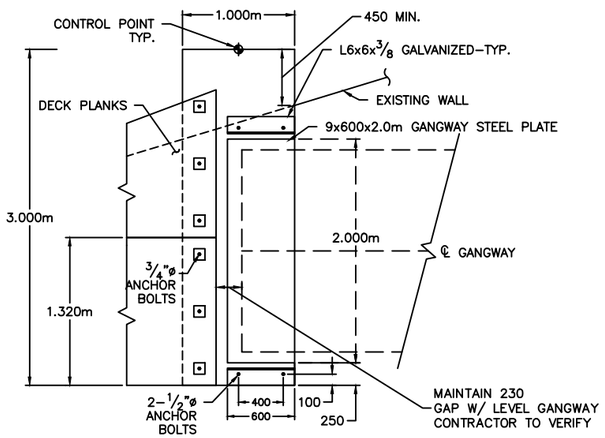
F HT10 SLAB / WALL CONNECTION

SCALE: 1 : 20



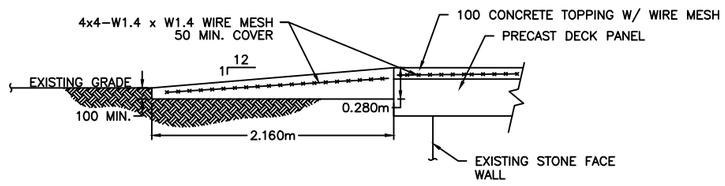
G HT10 PILE CAP—DETAIL

SCALE: 1 : 20



H HT10 PILE CAP PLAN

SCALE: 1 : 25



I HT10 TRANSITION RAMP

SCALE: 1 : 25

CONSTRUCTION

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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
△	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: RFG DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/C

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

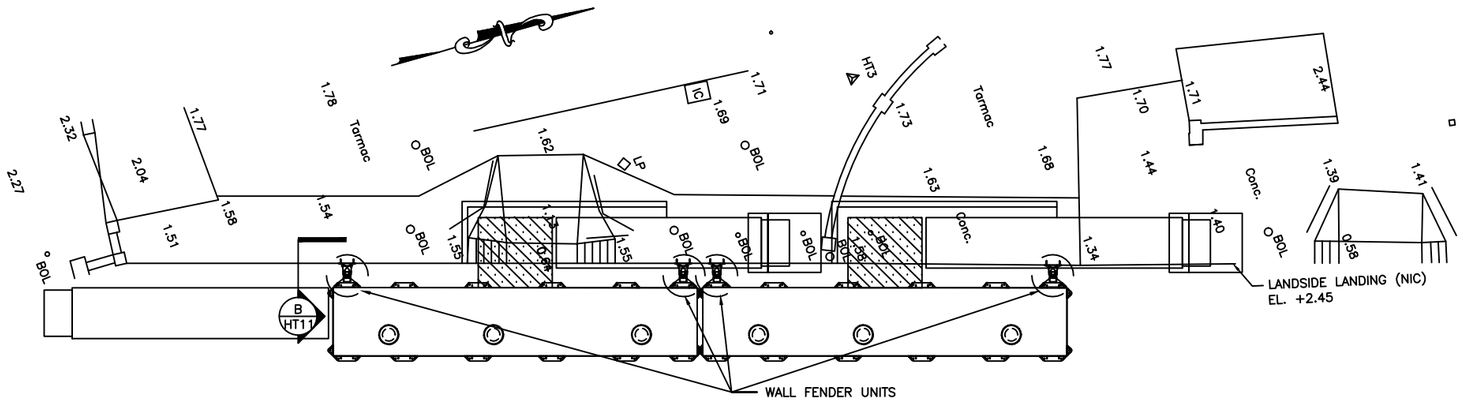
HAMILTON TERMINAL REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD PEMBROKE PARISH

DRAWING FILE NO: HT-10_Gandway_Pier_Ext.dwg ACAD R-14

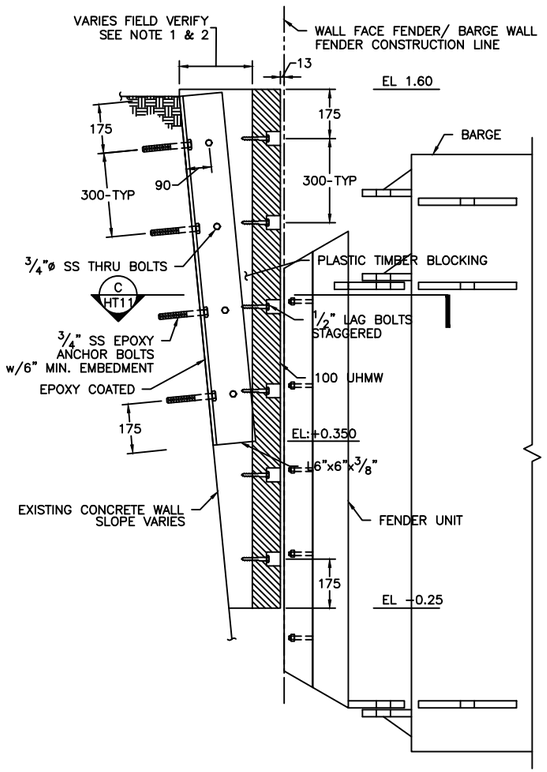
SHEET TITLE:
GANGWAY PIER EXTENTION

SHEET NUMBER: 13/26/02/HT10 REVISION △



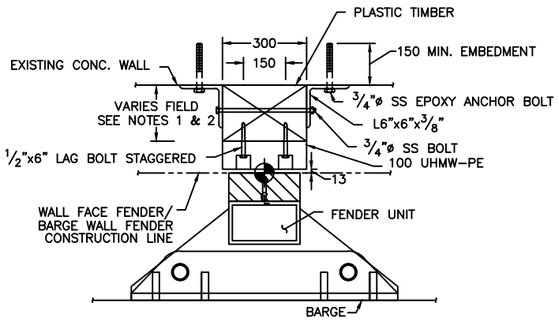
A HT11 TERMINAL PARTIAL PLAN

SCALE: 1 : 50



B HT11 WALL FENDER DETAIL

SCALE: 1 : 10



C HT11 WALL FENDER PLAN

SCALE: 1 : 10

NOTES
1. PLASTIC TIMBER SHALL HAVE MINIMUM THICKNESS OF 100mm @ EL:+0.35.
2. CONTRACTOR TO FIELD VERIFY SEAWALL SLOPE AND FINAL WALL FACE FENDER/ BARGE WALL FENDER CONSTRUCTION LINE.

CONSTRUCTION

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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
1	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

HAMILTON TERMINAL REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

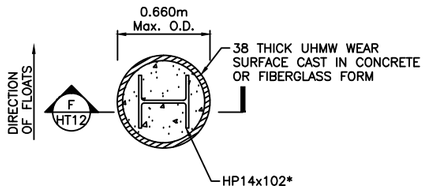
#1 POINT PLEASANT ROAD PEMBROKE PARISH

DRAWING FILE NO: HT-11_Wall-Fender.dwg ACAD R-14

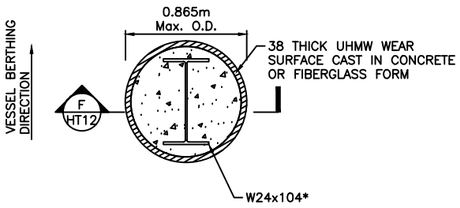
SHEET TITLE:

WALL FENDER

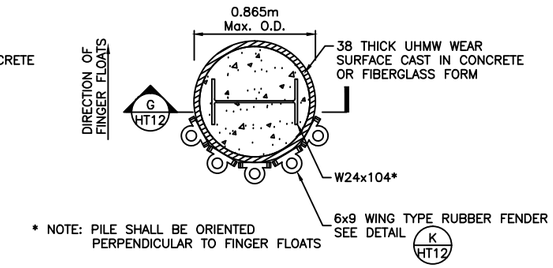
SHEET NUMBER: 13/26/02/HT11 REVISION 1



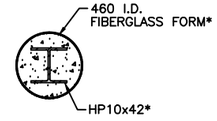
* NOTE: PILE SHALL BE ORIENTED PERPENDICULAR TO FLOATS



* NOTE: PILE SHALL BE ORIENTED IN VESSEL BERTHING DIRECTION



* NOTE: PILE SHALL BE ORIENTED PERPENDICULAR TO FINGER FLOATS

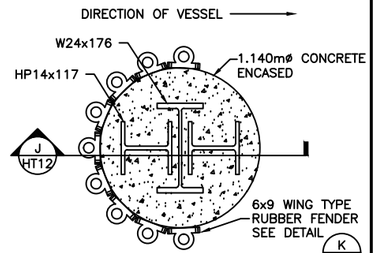


* ONE OR TWO PIECE REMOVABLE FORMS ALLOWED

STANDARD BEARING PILE

D HT12

SCALE: 1 : 20



SIDE DOLPHIN PLAN @ ELEV. 0.0M

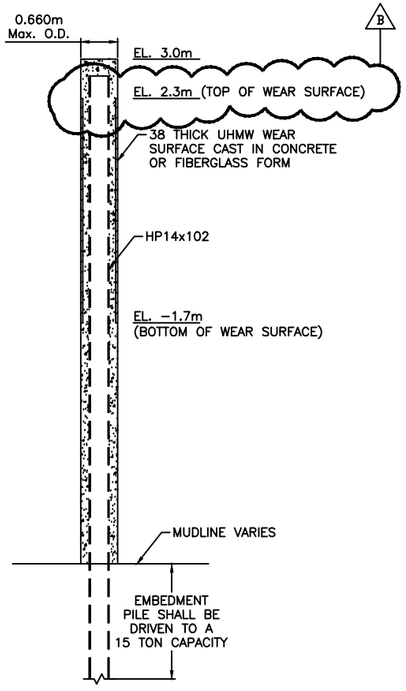
E HT12

SCALE: 1 : 20

TYPE I MOORING PILE

A HT12

SCALE: 1 : 20



TYPE I MOORING PILE – SECTION

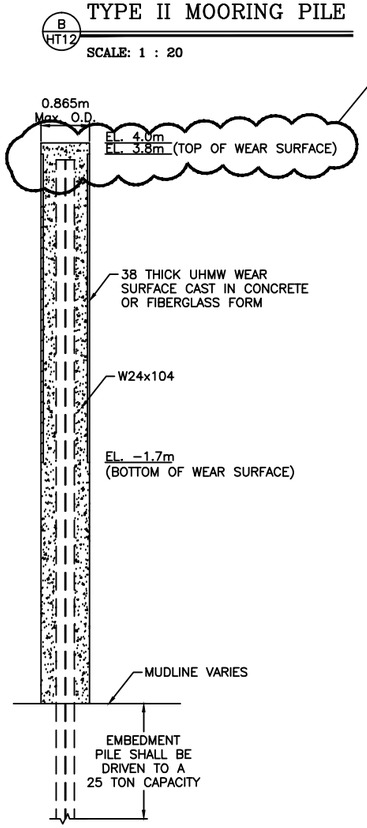
F HT12

SCALE: 1 : 50

TYPE II MOORING PILE

B HT12

SCALE: 1 : 20



TYPE II MOORING PILE – SECTION

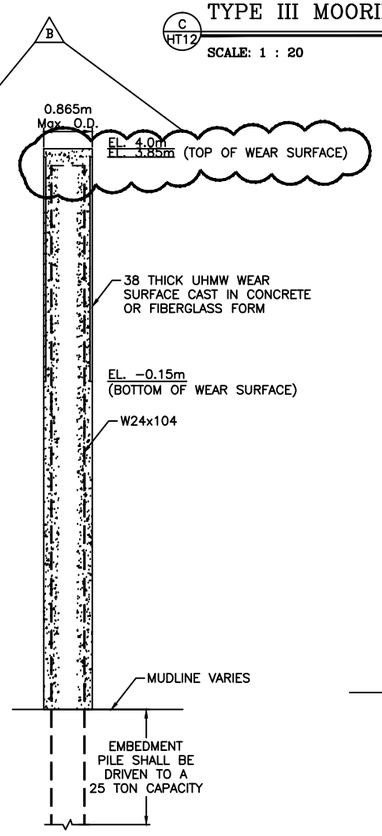
G HT12

SCALE: 1 : 50

TYPE III MOORING PILE

C HT12

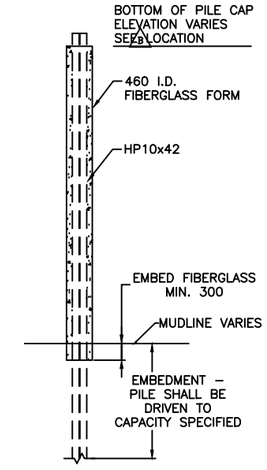
SCALE: 1 : 20



TYPE III MOORING PILE – SECTION

H HT12

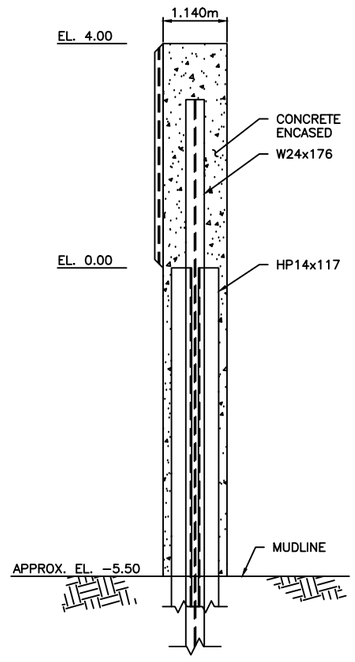
SCALE: 1 : 50



STANDARD BEARING PILE – SECTION

I HT12

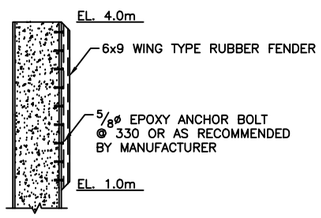
SCALE: 1 : 50



SIDE DOLPHIN – SECTION

J HT12

SCALE: 1 : 50



RUBBER UNIT – CONNECTION

K HT12

SCALE: 1 : 50

NOTE:
FIBERGLASS FORMS MAYBE 1 OR 2 PIECE REMOVABLE FORMS

CONSTRUCTION

PILE TYPE	ASSUMED TIP ELEV. FOR TENDER
MOORING PILE TYPE I	−37.5
MOORING PILE TYPE II	−37.5
MOORING PILE TYPE III	−37.5
STD. BEARING PILE	−37.5
DOLPHIN	−37.5

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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	WEAR SURFACE	RRB	04/01/02
A	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

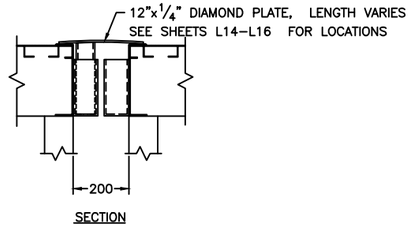
HAMILTON TERMINAL REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD PEMBROKE PARISH

DRAWING FILE NO: ACAD R-14
HT-12 Mooring Piles.dwg

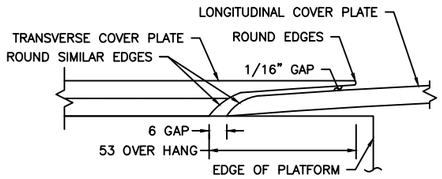
SHEET TITLE:
MOORING PILES

SHEET NUMBER: 13/26/02/HT12
REVISION: B



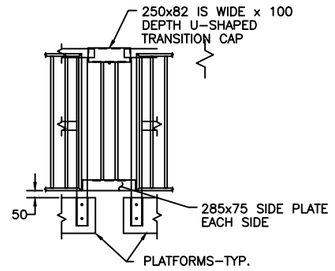
A HT13 PLATFORM TO PLATFORM TRANSITION PLATE

SCALE: 1 : 10



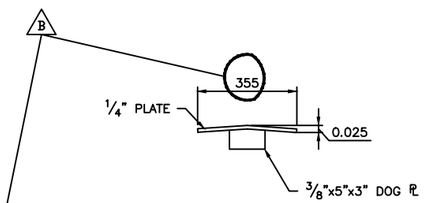
COVER PLATE CROSSING–SECTION

SCALE: 1 : 1



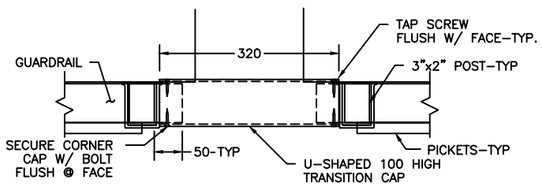
B HT13 HANDRAIL CONNECTION

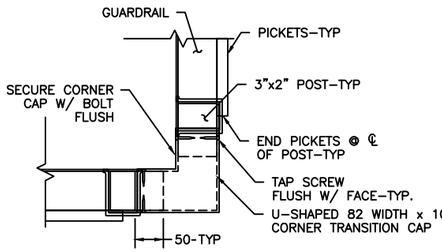
SCALE: 1 : 20



SECTION

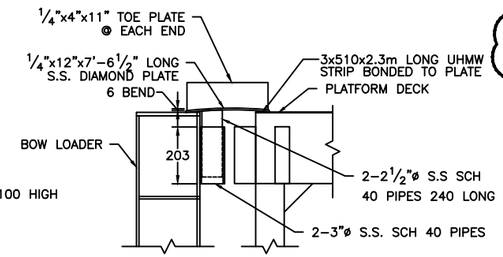
SCALE: 1 : 10





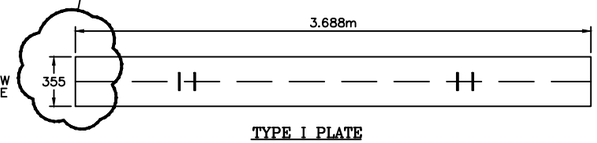
C HT13 GUARDRAIL TRANSITION

SCALE: 1 : 5

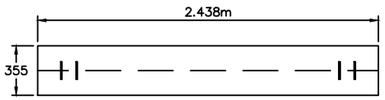


D HT13 BOW LOADER COVER PLATE

SCALE: 1 : 10



TYPE I PLATE



TYPE II PLATE

E HT13 STEEL BARGE COVER PLATES

SCALE: 1 : 20

CONSTRUCTION

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ENGINEERING and
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Structures Section

BCE Bourne Consulting Engin
184 West Central Stree
Franklin, MA 02038
TEL. (508) 528–8133 FAX. (508) 520–607

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	TYPE I PLATE	RRB	04/01/02
A	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

HAMILTON TERMINAL
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

#1 POINT PLEASANT ROAD
PEMBROKE PARISH

DRAWING FILE NO: ACAD R–14
HT–13 Misc. Details.dwg

SHEET TITLE:
MISC.
DETAILS

SHEET NUMBER: 13/26/02/HT13

REVISION B

TEST PILE DRIVING LOGS

DY-1

DEPTH	HAMMER BLOWS/FT
MUDLINE EL: -8.2m	
0 FT	(BARGE HEIGHT)
50	0 START
55	0
60	0
65	4
70	3
75	8
80	8
85	16
90	11
95	21
100	21
105	25
110	42 END

PILE: HP12x87
HAMMER: DELMAG D8-22
ENERGY: 18,000/9,500 FT-lbs/BLOW

NOTES

DY-1 TEST PILE LOCATION.
ALL PILES EXTRACTED.
PERFORMED DECEMBER 2000.

DESIGN WATER ELEVATIONS

HURR.	CAT. 5	2.33
	CAT. 3	1.52
	EHW	1.20
	MHW	0.80
	MLW	-0.60
	ELW	-0.80

0 2 4 6 8 10
SCALE: 1: 200

CONSTRUCTION

THE MINISTRY OF WORKS AND ENGINEERING

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104 West Central Street
Franklin, MA 02038
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GENERAL NOTES:

1. COORDINATES BASED ON BNG 2000.
2. ALL ELEVATIONS ARE IN METERS BASED ON ORDNANCE DATUM.
3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
1	.	.	.

SCALE: 1 : 200

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

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PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

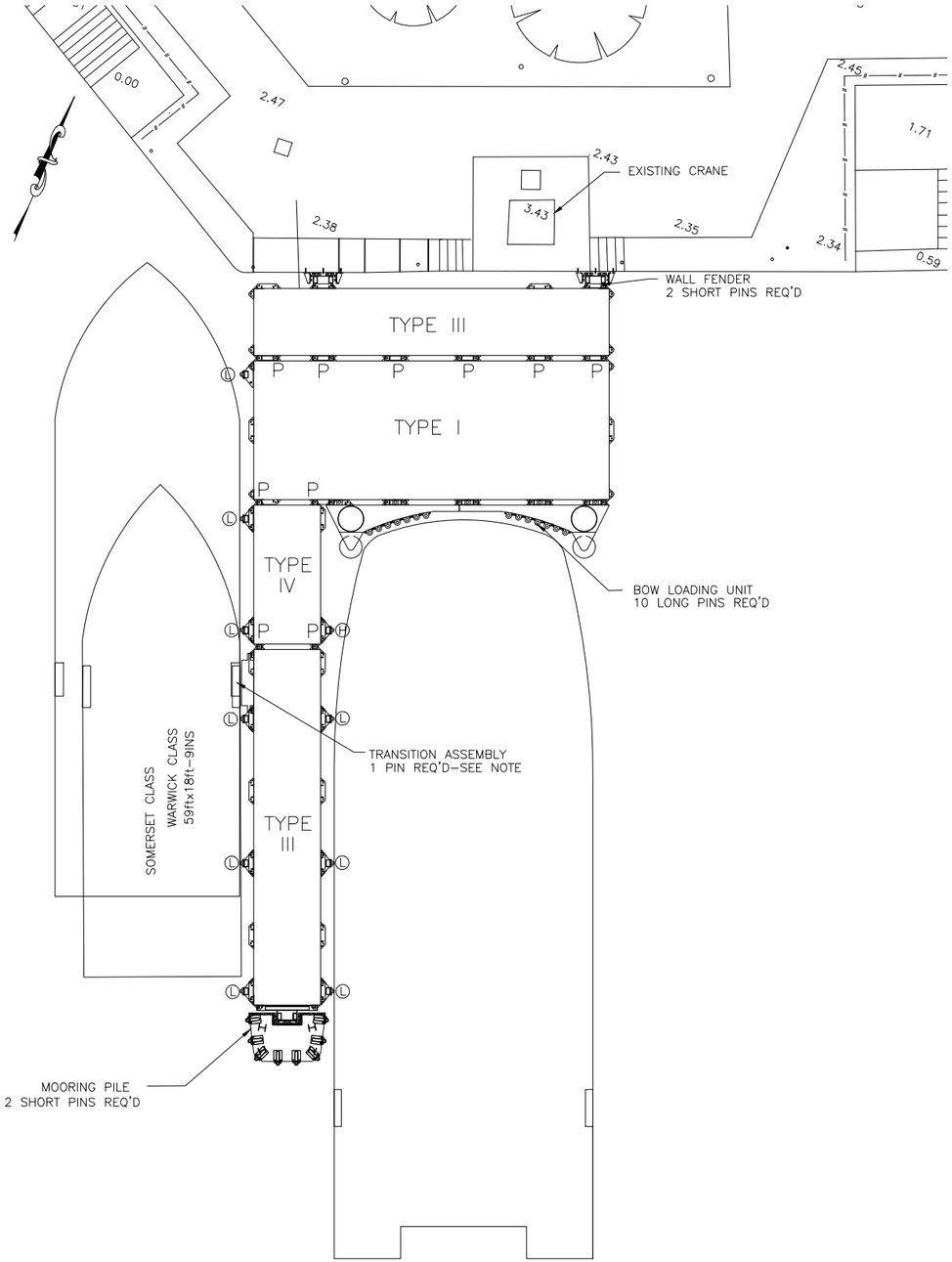
DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: DY-01_Exist Cond.dwg ACAD R-14

SHEET TITLE:
EXISTING CONDITIONS

SHEET NUMBER: 61/45/01/DY1

REVISION: 1

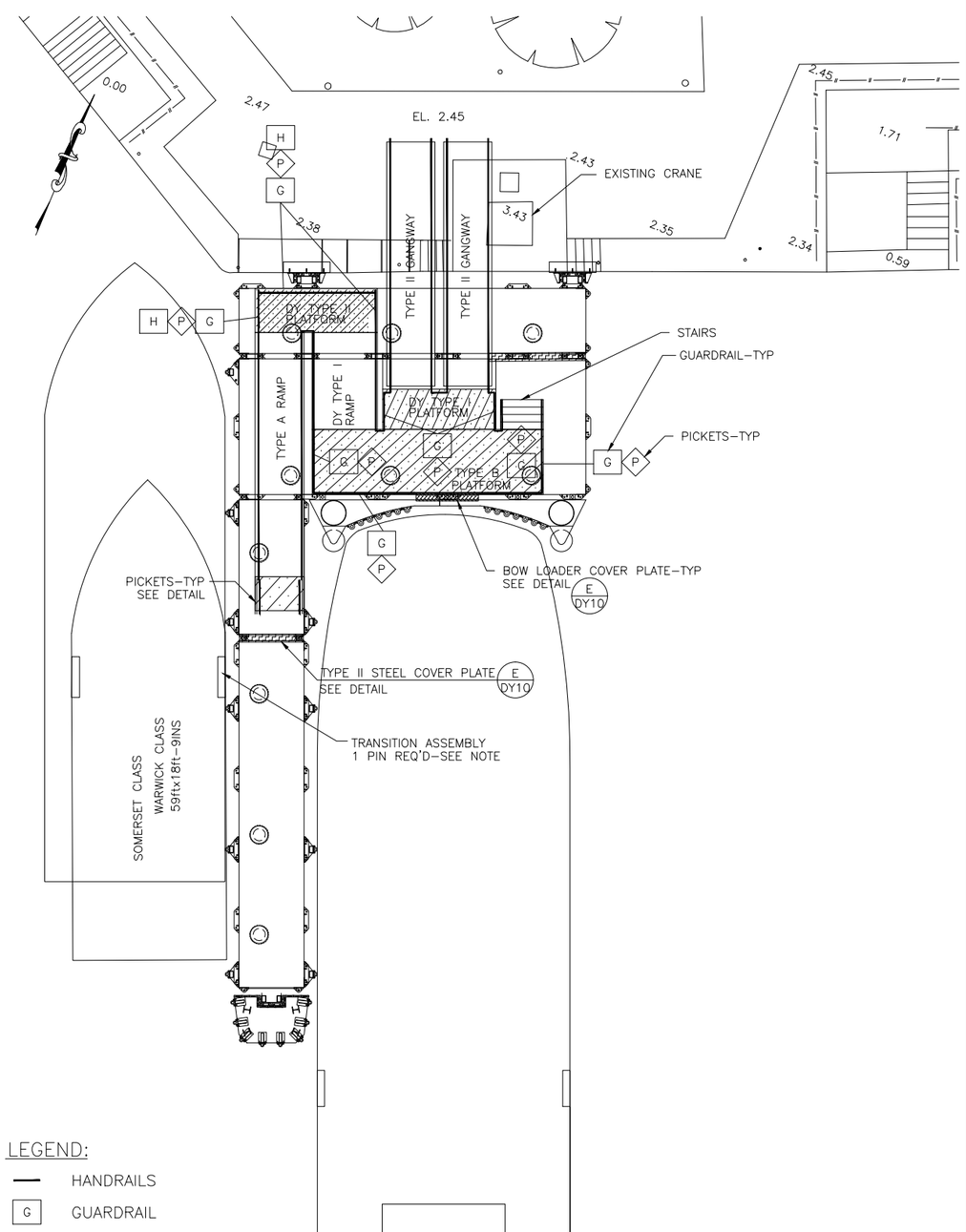


BARGE LAYOUT

KEY

- (L) LOW FENDER SEE SHEET DY9
- (H) HIGH FENDER SEE SHEET DY9
- P BARGE TO BARGE PIN REQ'D

NOTE: SEE SHEET T1 FOR BARGE UNITS.
SEE SHEET T2 FOR PILE GUIDE UNITS.



LEGEND:

- HANDRAILS
- G GUARDRAIL
- P PICKETS
- H HANDRAIL
- ALUMINUM COVER PLATE SEE SHEET DY10
- STEEL COVER PLATE SEE SHEET DY10
- EXP EXPANSION SPACER SEE DETAIL (J / DY4)

SEE SHEET T5 FOR PLATFORMS
SEE SHEET T6 FOR GANGWAYS AND RAMPS

ALUMINUM LAYOUT

CONSTRUCTION

SCALE: 1 : 100

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

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4. SURVEY CONTROL SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER.

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	BARGES/ LAYOUTS	RRB	04/01/02
A	.	.	.

SCALE: 1 : 100

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PREPARED BY: BAP DATE: 23/05/01
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DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

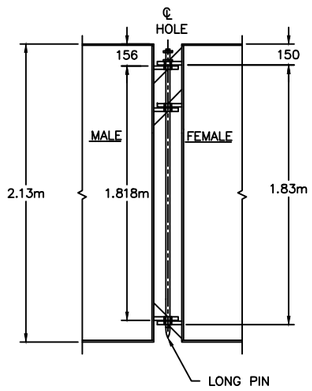
DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: ACAD R-14
DY-3_Barge_Alum_Assembly.dwg

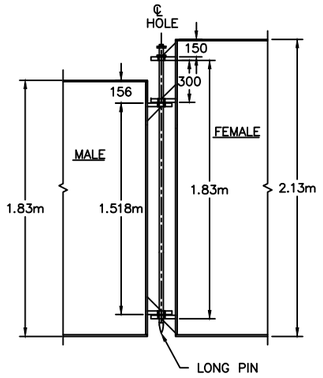
SHEET TITLE:
BARGE & ALUMINUM ASSEMBLY PLAN

SHEET NUMBER: 61/45/01/DY3
REVISION: B



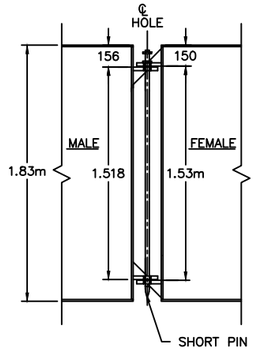
A DY4 HIGH BARGE CONNECTION

SCALE: 1 : 20



B DY4 HIGH/LOW BARGE CONNECTION

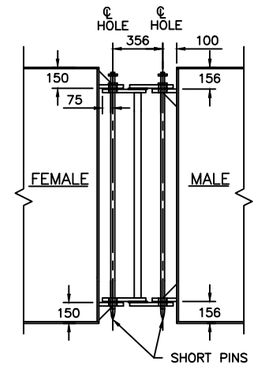
SCALE: 1 : 20



C DY4 LOW BARGE CONNECTION

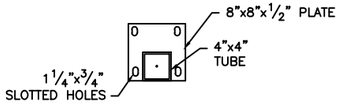
PILE GUIDE CONN. SIMILAR

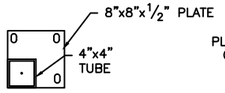
SCALE: 1 : 20

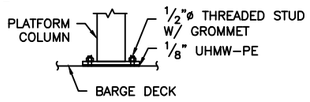


D DY4 BARGE CONNECTION – DETAIL

SCALE: 1 : 20



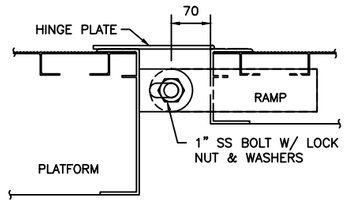




NOTE:
CONNECTION SHALL BE 4–1/2ø SS THD' STUDS W/GROMMET, NUT & WASHER WITH 1/8"x9"x9" UHMW–PE BELOW BASE PLATE

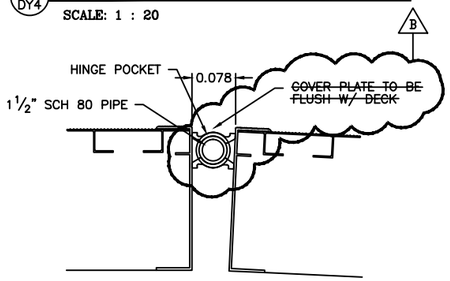
E DY4 PLATFORM BASE CONNECTION

SCALE: 1 : 10



F DY4 RAMP TO PLATFORM CONNECTION

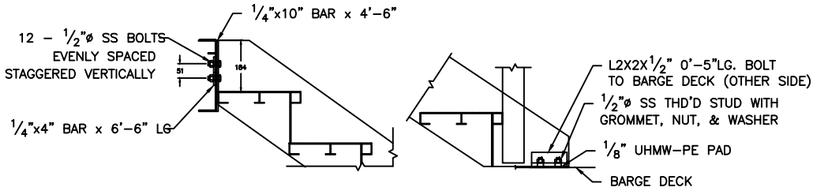
SCALE: 1 : 5



NOTE
SECURE SCH 80 PIPE TO PREVENT LONGITUDINAL MOVEMENT

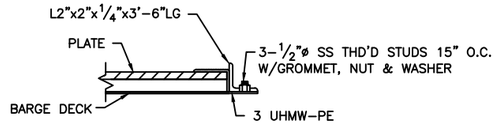
G DY4 STANDARD HINGE POCKET CONNECTION

SCALE: 1 : 5



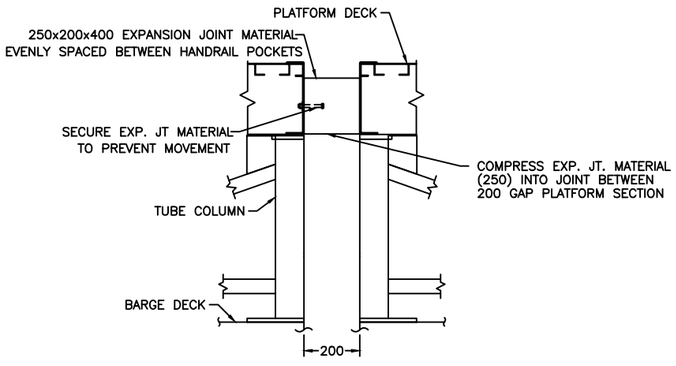
H DY4 STAIR CONNECTIONS

SCALE: 1 : 10



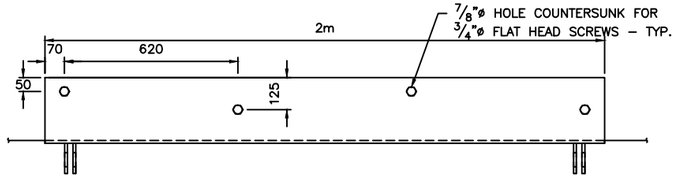
I DY4 TRANSITION CONNECTION

SCALE: 1 : 5

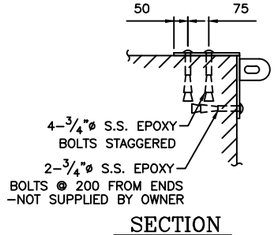


J DY4 PLATFORM TO PLATFORM CONNECTION

SCALE: 1 : 10



PLAN



SECTION

K DY4 GANGWAY LANDSIDE CONNECTION – STANDARD DETAIL

SCALE: 1 : 10

CONSTRUCTION

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

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184 West Central Stree Franklin, MA 02038
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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	COVER PLATE	RRB	04/01/02
A	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

DOCKYARD REPLACEMENT FERRY PROJEC PHASE 1 DOCK CONSTRUCTION

DOCKYARD TERRACE SANDYS PARISH

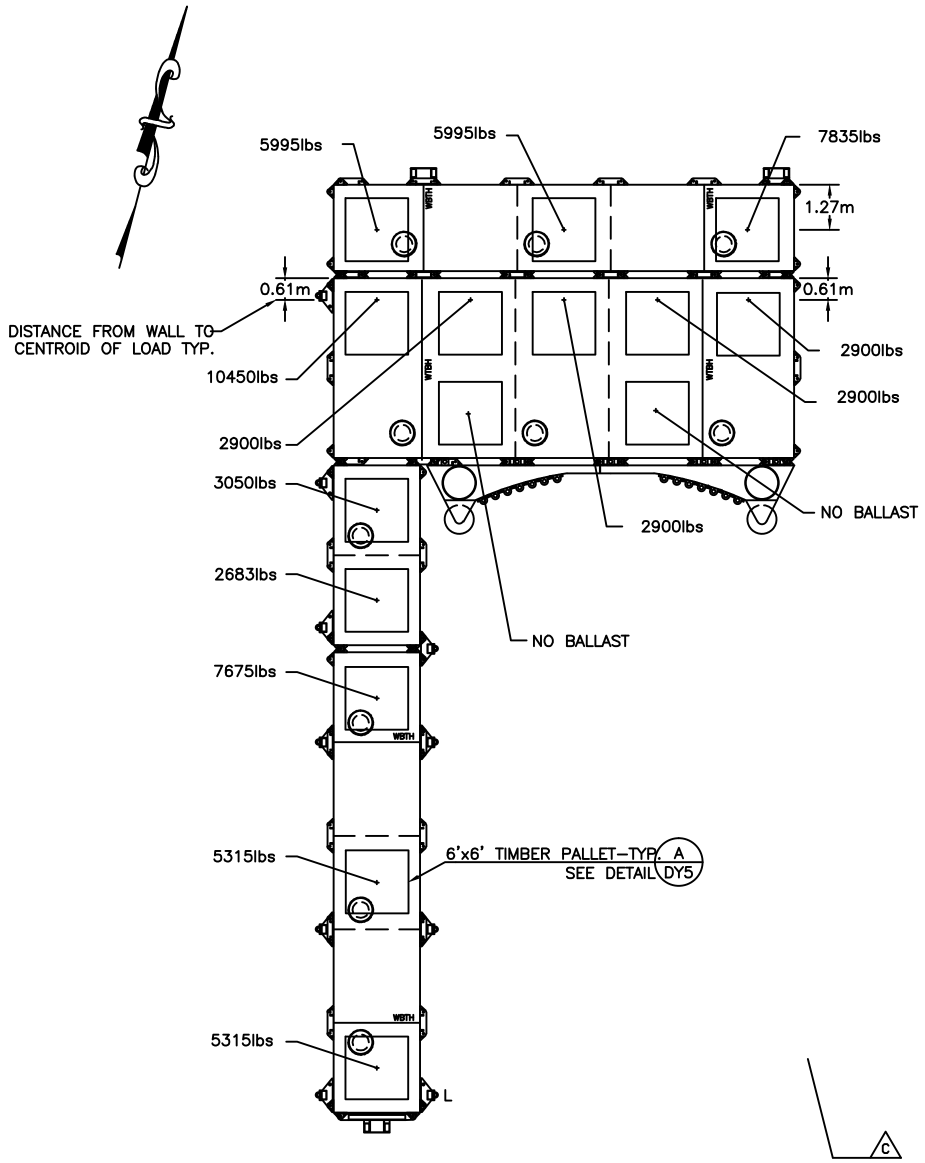
DRAWING FILE NO: ACAD R–14
DY–4 Assembly–Connections.dwg

SHEET TITLE:

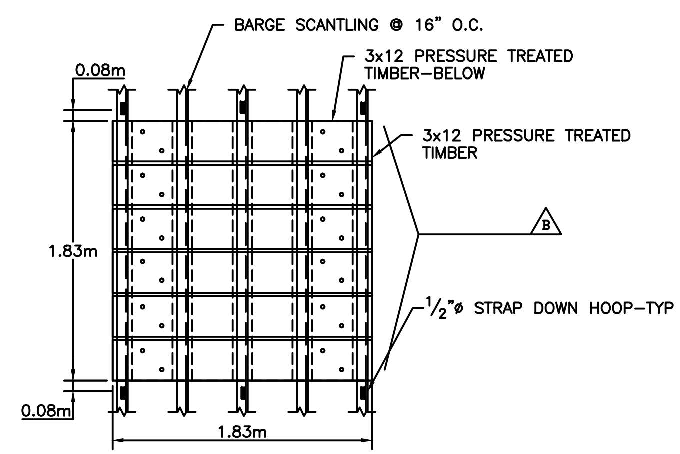
ASSEMBLY CONNECTIONS

SHEET NUMBER: 61/45/01/DY4

REVISION: B



DOCKYARD



A / DY5 BALLAST PALLET–PLAN

SCALE: 1 : 25

NOTES:

1. BALLAST LOADS ARE SHOWN AT CENTER OF BAY UNLESS NOTED OTHERWISE.
2. BALLAST TO BE REMOVABLE CONCRETE BLOCK OR LEAD.
3. BALLAST SHALL BE INSTALLED ON TIMBER PALLETS AT LOCATIONS SHOWN. PALLET SUPPLIED W/ BARGES

0 1 2 3 4 5
SCALE: 1 : 100

CONSTRUCTION

THE MINISTRY OF WORKS AND ENGINEERING

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Franklin, MA 0203
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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	HOOP ORIENTATION	RRB	04/01/02
C	BALLAST LAYOUT	RRB	11/02/02
.	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:
DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

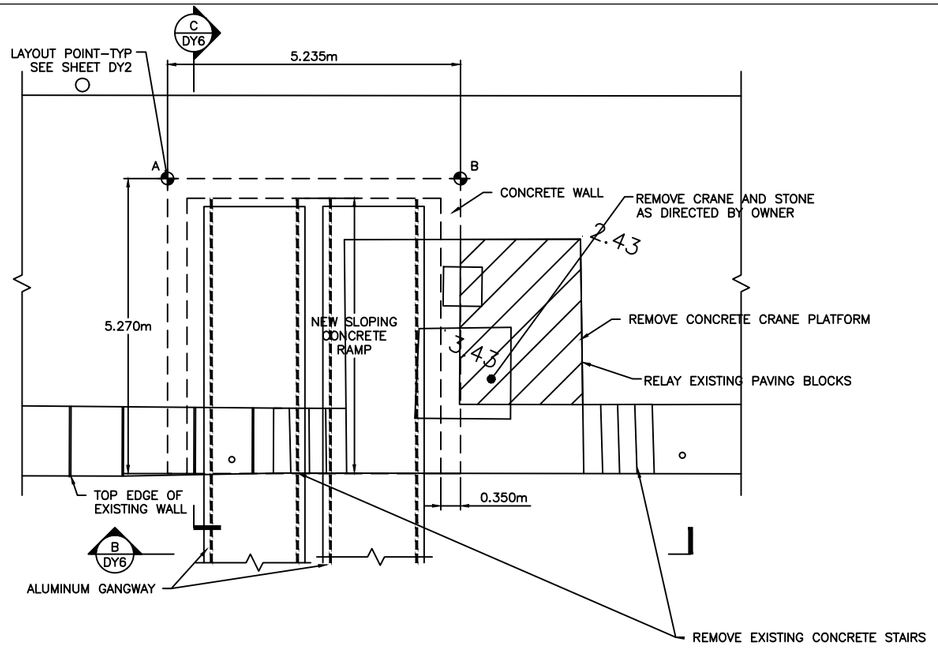
DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: ACAD R–14
DY–05_Ballasting Plan.dwg

SHEET TITLE:
BALLASTING PLAN

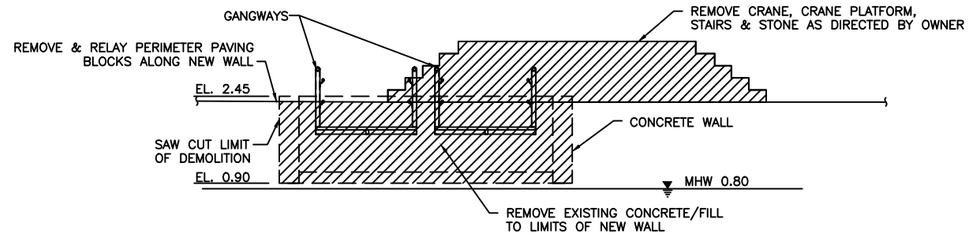
SHEET NUMBER: 61/45/01/DY5

REVISION: C



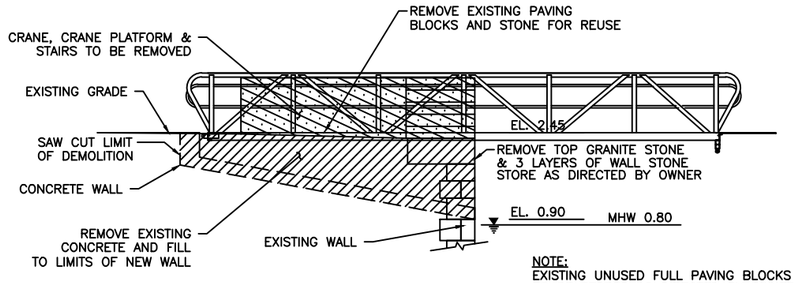
A DY6 CONCRETE NOTCH–PLAN

SCALE: 1 : 50



B DY6 CONCRETE NOTCH–ELEVATION

SCALE: 1 : 50

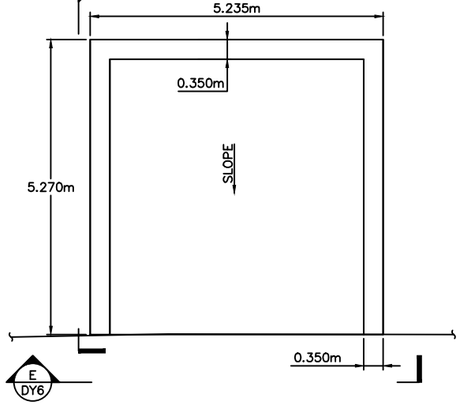


NOTE:
EXISTING UNUSED FULL PAVING BLOCKS TO BE STORED AS DIRECTED BY OWNER

C DY6 CONCRETE NOTCH–SECTION

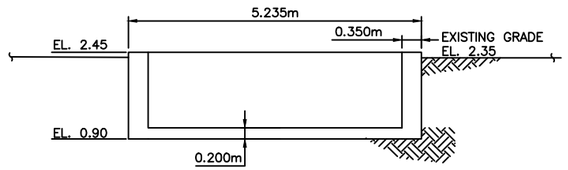
SCALE: 1 : 50

NOTE:
NO CHAMFER @ GANGWAY LOCATIONS



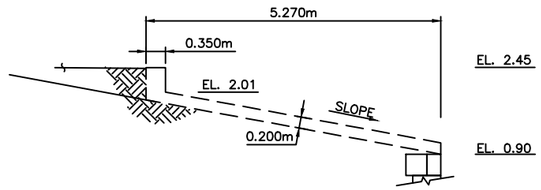
D DY6 CONCRETE WALL–PLAN

SCALE: 1 : 50



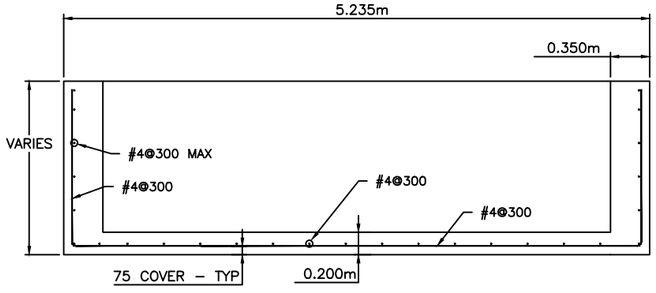
E DY6 CONCRETE WALL–ELEVATION

SCALE: 1 : 50



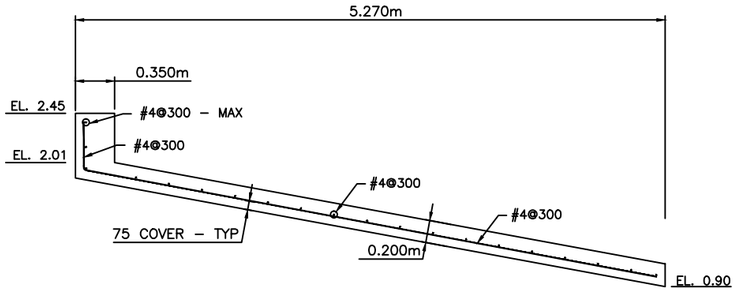
F DY6 CONCRETE WALL–SECTION

SCALE: 1 : 50



G DY6 CONCRETE WALL–REINFORCING

SCALE: 1 : 25



H DY6 TYPICAL SECTION – REINFORCING

SCALE: 1 : 25

CONSTRUCTION

NOTE:
* TOP OF WALL ELEVATION +2.45
* ALL REINFORCING MUST BE HOT DIPPED GALVANIZED.
* MINIMUM COVER FOR REINFORCEMENT SHALL BE 75mm.
* 25 CHAMFER ON ALL EXPOSED EDGES UNO

THE MINISTRY OF WORKS AND ENGINEERING

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Structures Section

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GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

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SCALE: AS NOTED

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PREPARED BY: BAP DATE: 23/05/01
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APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

DOCKYARD REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DOCKYARD TERRACE SANDYS

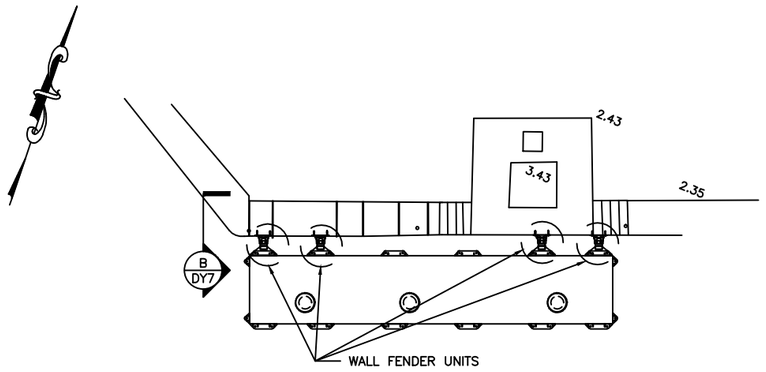
DRAWING FILE NO: DY–6 Gangway Notch.dwg ACAD R–14

SHEET TITLE:

GANGWAY NOTCH PLAN & DETAILS

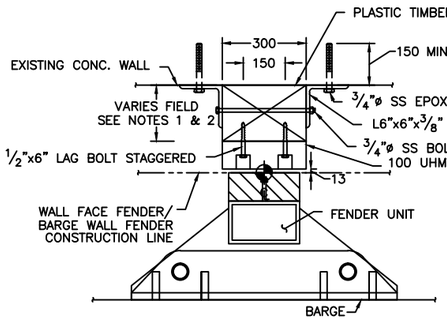
SHEET NUMBER: 61/45/01/DY6

REVISION: 1



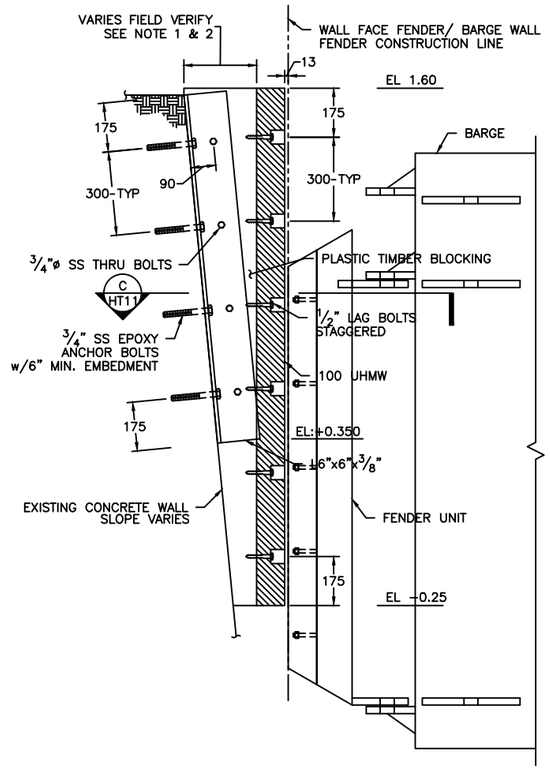
A DY7 PARTIAL PLAN

SCALE: 1 : 50



C DY7 WALL FENDER PLAN

SCALE: 1 : 10



B DY7 WALL FENDER DETAIL

SCALE: 1 : 10

NOTES
1. PLASTIC TIMBER SHALL HAVE MINIMUM THICKNESS OF 100mm @ EL:+0.35.
2. CONTRACTOR TO FIELD VERIFY SEA WALL SLOPE AND FINAL WALL FACE FENDER/ BARGE WALL FENDER CONSTRUCTION LINE.

CONSTRUCTION

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Structures Section

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TEL. (508) 528-8133 FAX. (508) 528-887

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
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SCALE: AS NOTED

SURVEY
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DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

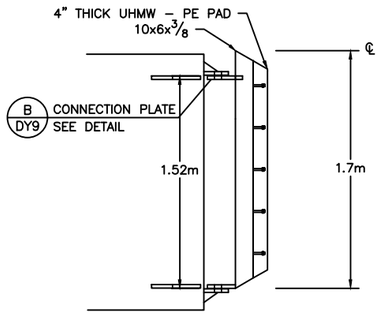
DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: ACAD R-14
DY-07_Wall-Fender.dwg

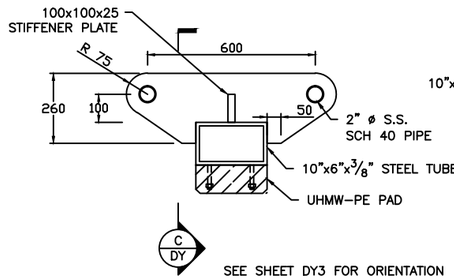
SHEET TITLE:
WALL
FENDER

SHEET NUMBER: 61/45/01/DY7
REVISION: 1



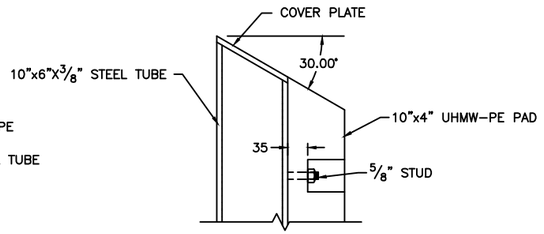
A DY9 WALL FENDER

SCALE: 1 : 20



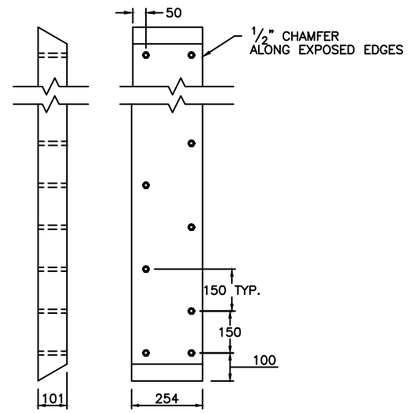
B DY9 WALL FENDER CONNECTION PLATE

SCALE: 1 : 10



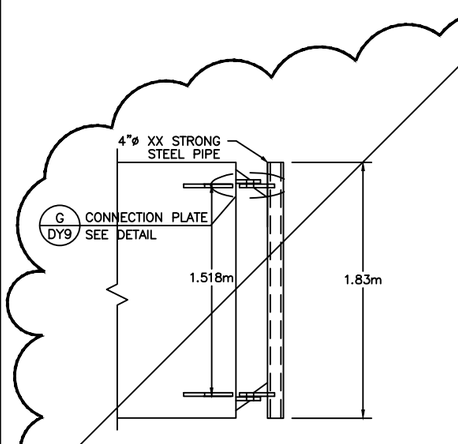
C DY9 SECTION

SCALE: 1 : 5



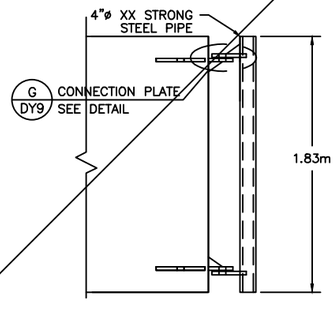
D DY9 UHMW–PE ELEVATIONS

SCALE: 1 : 10



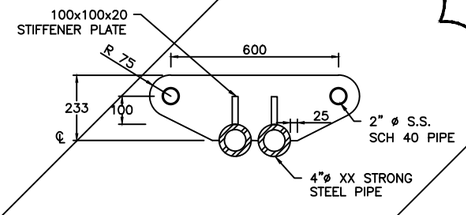
E DY9 MALE MOORING POST

SCALE: 1 : 20



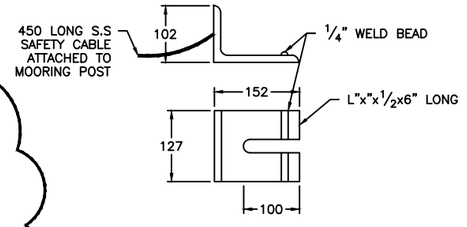
F DY9 FEMALE MOORING POST

SCALE: 1 : 20



G DY9 MOORING POST CONNECTION PLATE

SCALE: 1 : 10



H DY9 3/4"ø CHAIN DOG

SCALE: 1 : 5

CONSTRUCTION

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

P.O. Box HM525 Hamilton HMCX Bermuda
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ENGINEERING and
OPERATIONS DIVISION
Fax: (441)295-0170

Structures Section

BCE Bourne Consulting Engin
184 West Central Stree
Franklin, MA 02038
TEL. (508) 528-8133 FAX. (508) 528-887

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	DELETE MRG. DETAILS	RRB	04/01/02
A	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

DOCKYARD REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

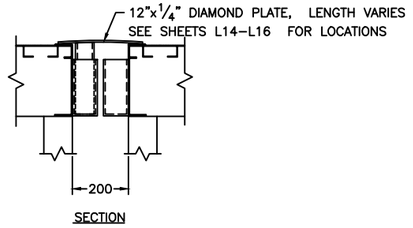
DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: ACAD R-14
DY-09Mooring Details

SHEET TITLE:
FENDER DETAILS

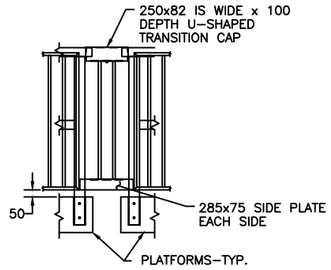
SHEET NUMBER: 61/45/01/DY9

REVISION B



A DY10 PLATFORM TO PLATFORM TRANSITION PLATE

SCALE: 1 : 10



B DY10 HANDRAIL CONNECTION

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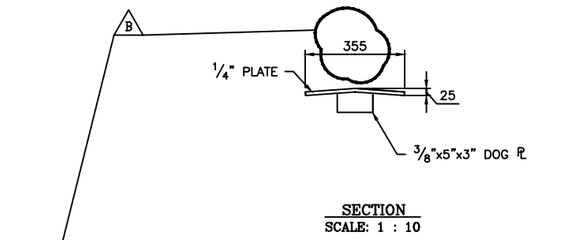
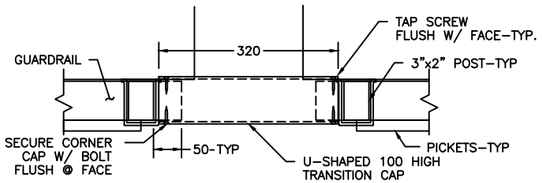
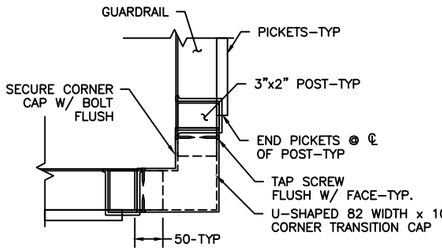


SECTION

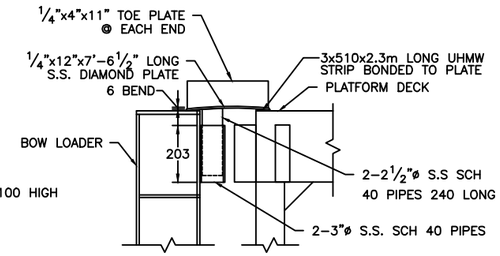
SCALE: 1 : 10





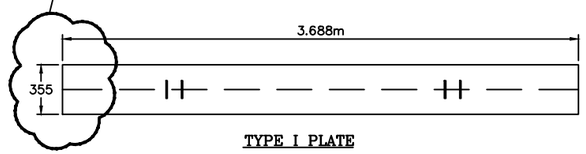
C DY10 GUARDRAIL TRANSITION

SCALE: 1 : 5

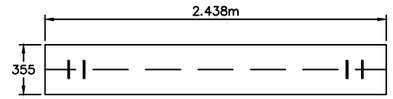


D DY10 BOW LOADER COVER PLATE

SCALE: 1 : 10



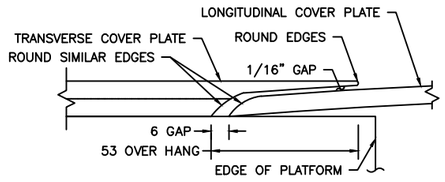
TYPE I PLATE



TYPE II PLATE

E DY10 STEEL BARGE COVER PLATES

SCALE: 1 : 20



F DY10 COVER PLATE CROSSING–SECTION

SCALE: 1 : 1

CONSTRUCTION

THE MINISTRY OF WORKS AND ENGINEERING

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184 West Central Stree
Franklin, MA 02038
TEL. (508) 528–8133 FAX. (508) 520–007

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 14/08/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	TYPE I PLATE	RRB	04/01/02
.	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: BAP DATE: 23/05/01

APPROVED BY:
RRB

PROJECT NUMBER:
61/01/01

PROJECT NAME:

DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

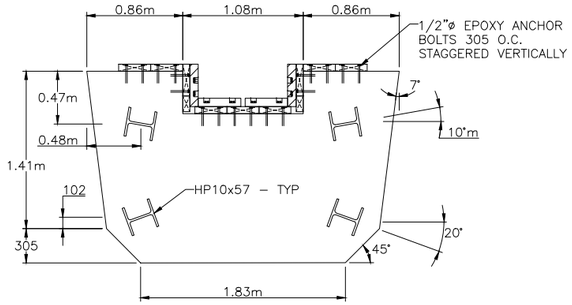
DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: ACAD R–14
DY–10 Misc. Details.dwg

SHEET TITLE:

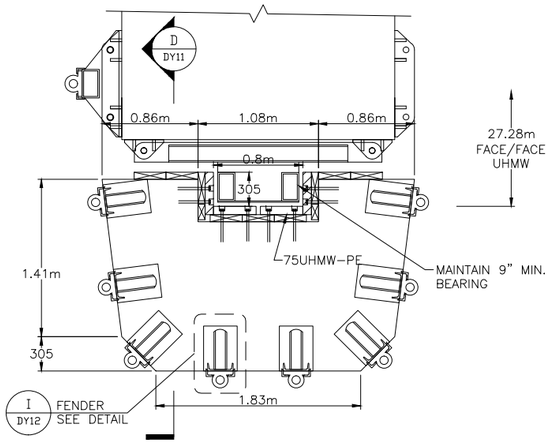
MISC.
DETAILS

SHEET NUMBER: 61/45/01/DY10
REVISION: B



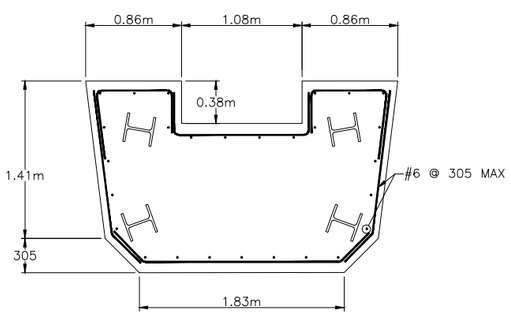
A DY11 MOORING PILE @ −0.2m−PLAN

SCALE: 1 : 25



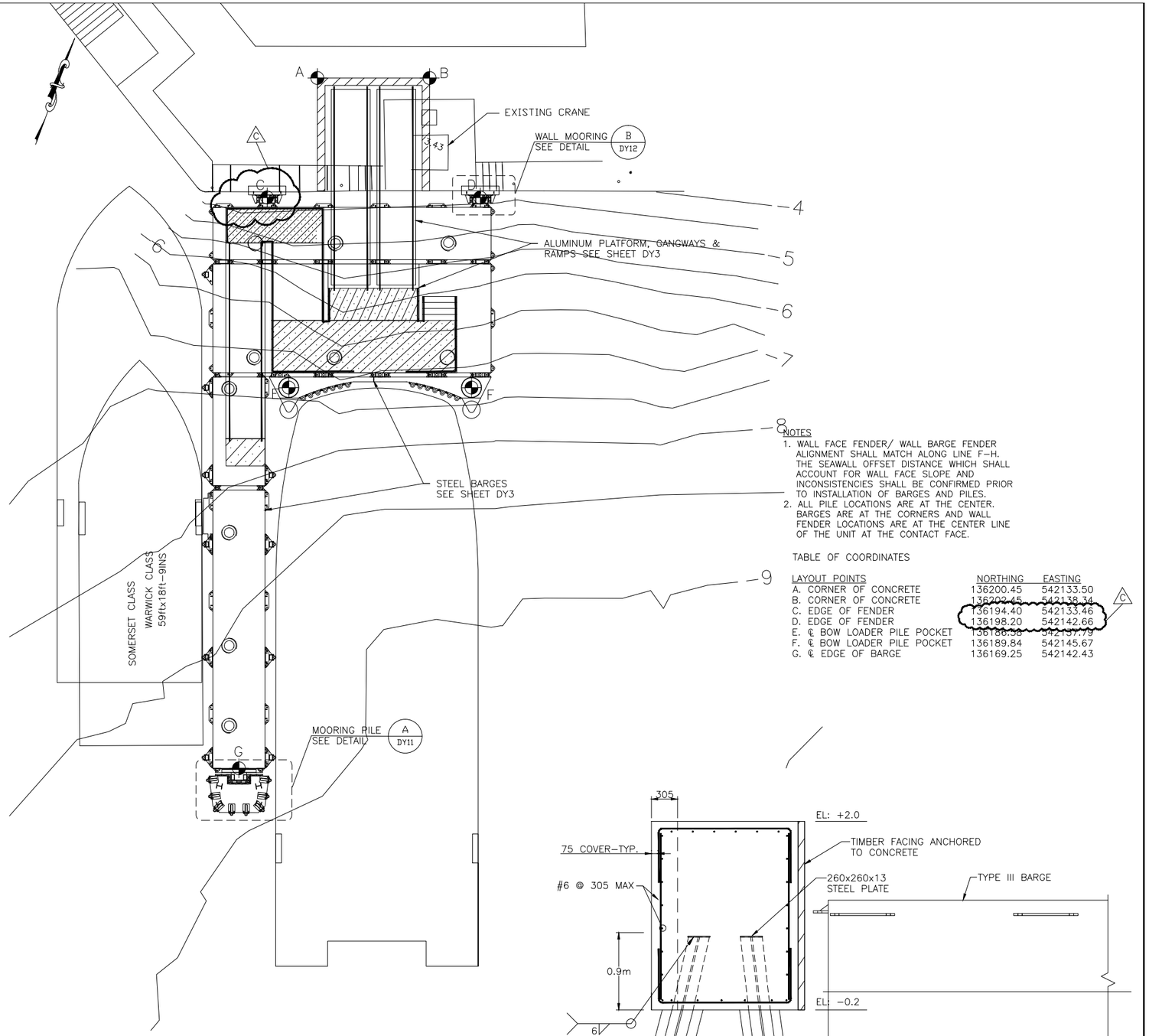
B DY11 MOORING PILE – PLAN

SCALE: 1 : 25



C DY11 REINFORCING – PLAN

SCALE: 1 : 25



NOTES

1. WALL FACE FENDER/ WALL BARGE FENDER ALIGNMENT SHALL MATCH ALONG LINE F−H. THE SEAWALL OFFSET DISTANCE WHICH SHALL ACCOUNT FOR WALL FACE SLOPE AND INCONSISTENCIES SHALL BE CONFIRMED PRIOR TO INSTALLATION OF BARGES AND PILES.
2. ALL PILE LOCATIONS ARE AT THE CENTER. BARGES ARE AT THE CORNERS AND WALL FENDER LOCATIONS ARE AT THE CENTER LINE OF THE UNIT AT THE CONTACT FACE.

TABLE OF COORDINATES

LAYOUT POINTS	NORTHING	EASTING
A. CORNER OF CONCRETE	136200.45	542133.50
B. CORNER OF CONCRETE	136202.45	542138.34
C. EDGE OF FENDER	136194.40	542133.46
D. EDGE OF FENDER	136198.20	542142.66
E. ℄ BOW LOADER PILE POCKET	136186.38	542137.79
F. ℄ BOW LOADER PILE POCKET	136189.84	542145.67
G. ℄ EDGE OF BARGE	136169.25	542142.43

D DY11 MOORING PILE – SECTION

SCALE: 1 : 25

THIS SHEET ADDED 14/12/01

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

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ENGINEERING and OPERATIONS DIVISION
Fax: (441)295−0170

Structures Section

BCE Bourne Consulting Engine

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 28/11/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
A	SHEET ADDED	RRB	04/01/02
B	COORDINATES REVISED	DGF	22/02/02
C	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 26/11/01
CHECKED BY: RRB DATE: 28/11/01

DRAWING
PREPARED BY: BAP DATE: 26/11/01
CHECKED BY: RRB DATE: 28/11/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:

DOCKYARD
REPLACEMENT FERRY PROJEC
PHASE 1
DOCK CONSTRUCTION

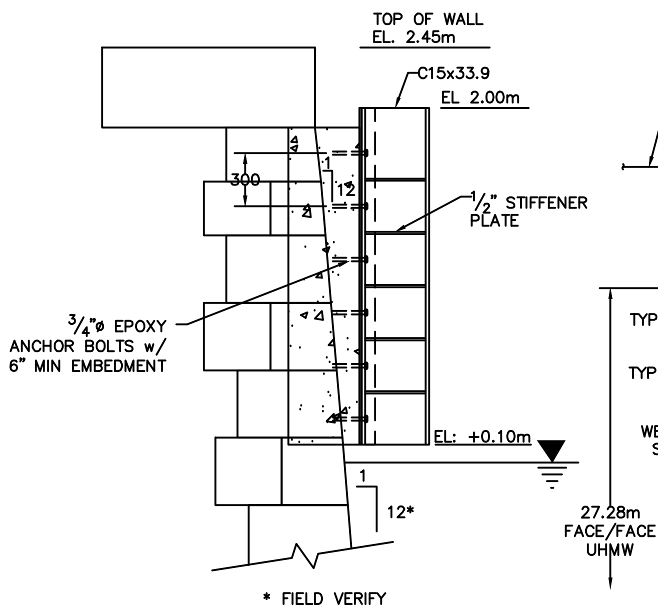
DOCKYARD TERRACE
SANDYS PARISH

DRAWING FILE NO: 21378/DY−11.dwg ACAD R−14

SHEET TITLE:

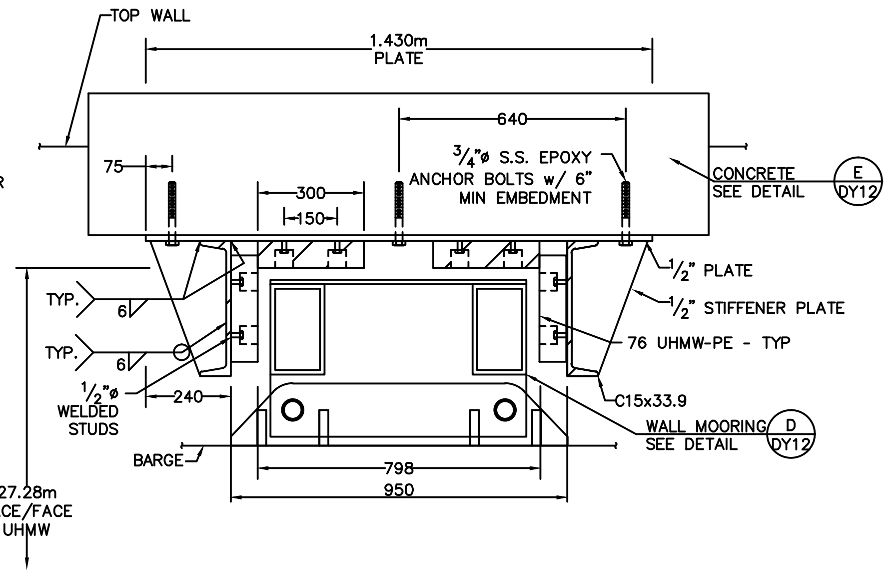
MOORING LAYOUT

SHEET NUMBER: 61/45/01/DY11 REVISION C



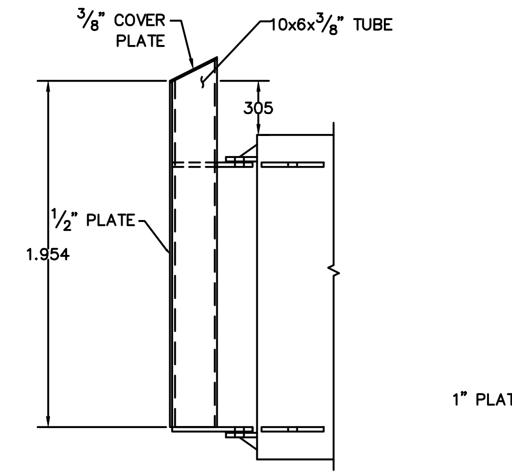
WALL MOORING GUIDE–SECTION
A / DY12

SCALE: 1 : 20



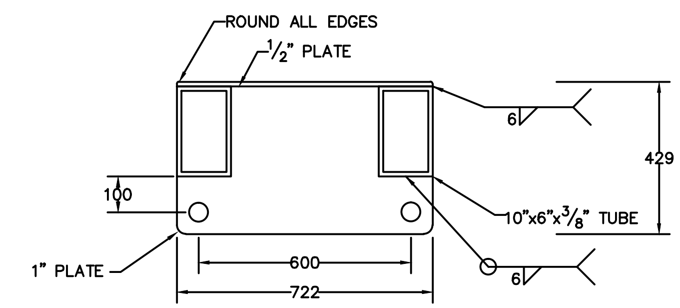
WALL MOORING GUIDE–PLAN
B / DY12

SCALE: 1 : 10



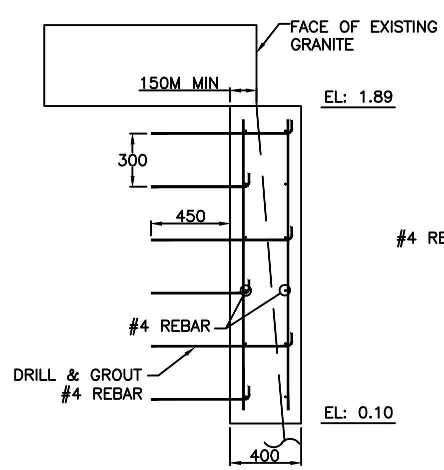
MOORING ATTACHMENT @ WALL
C / DY12

SCALE: 1 : 20



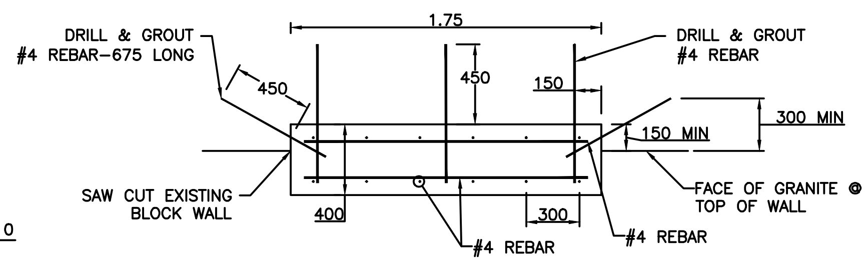
WALL MOORING – PLAN
D / DY12

SCALE: 1 : 10



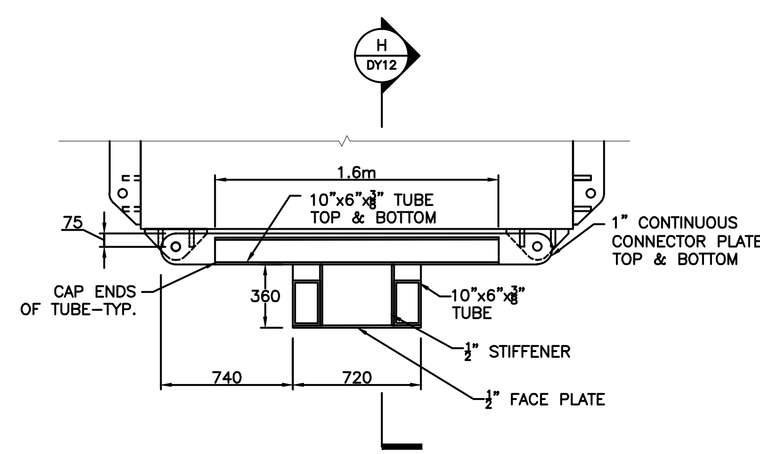
MOORING TO WALL ATTACHMENT–SECTION
E / DY12

SCALE: 1 : 20



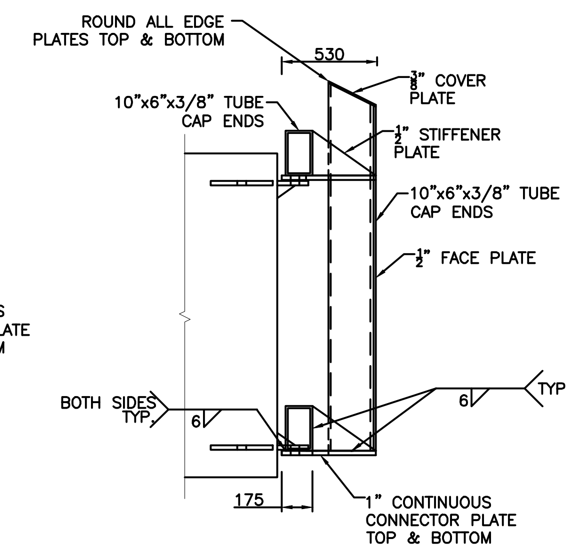
MOORING TO WALL ATTACHMENT–PLAN
F / DY12

SCALE: 1 : 20



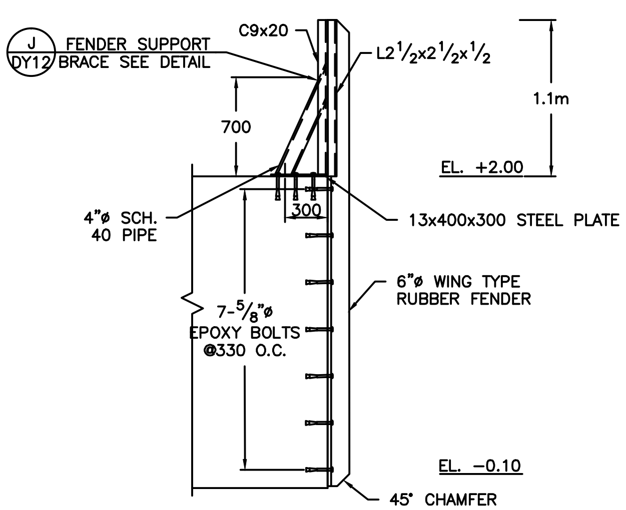
BARGE/MOORING DOLPHIN–PLAN
G / DY12

SCALE: 1 : 20



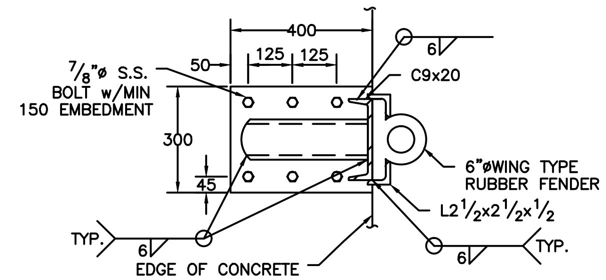
BARGE/MOORING DOLPHIN–SECTION
H / DY12

SCALE: 1 : 20



FENDER SECTION
I / DY12

SCALE: 1 : 25



FENDER SUPPORT BRACE
J / DY12

SCALE: 1 : 10

NOTES
1. CONTRACTOR TO FIELD VERIFY SEAWALL SLOPE
2. STEEL ASSOCIATED WITH MOORING GUIDES AND ATTACHMENTS SHALL BE EPOXY COATED AS SPECIFIED
3. STEEL FENDER SUPPORT BRACE SHALL BE GALVANIZED

THE MINISTRY OF WORKS AND ENGINEERING

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Structures Section

BCE Bourne Consulting Engin
164 West Central Stree
Franklin, MA 0203
TEL (508) 528-8133 FAX (508) 520-667

GENERAL NOTES:

ISSUED FOR: CONSTRUCTION 28/11/01

AMENDMENTS:

NO:	REVISION	APP	DATE:
B	SHEET ADDED	RRB	04/01/02
	.	.	.

SCALE: AS NOTED

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAP DATE: 26/11/01
CHECKED BY: RRB DATE: 28/11/01

DRAWING
PREPARED BY: JSK/BAP DATE: 26/11/01
CHECKED BY: BAP DATE: 28/11/01

APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:
DOCKYARD REPLACEMENT FERRY PROJEC

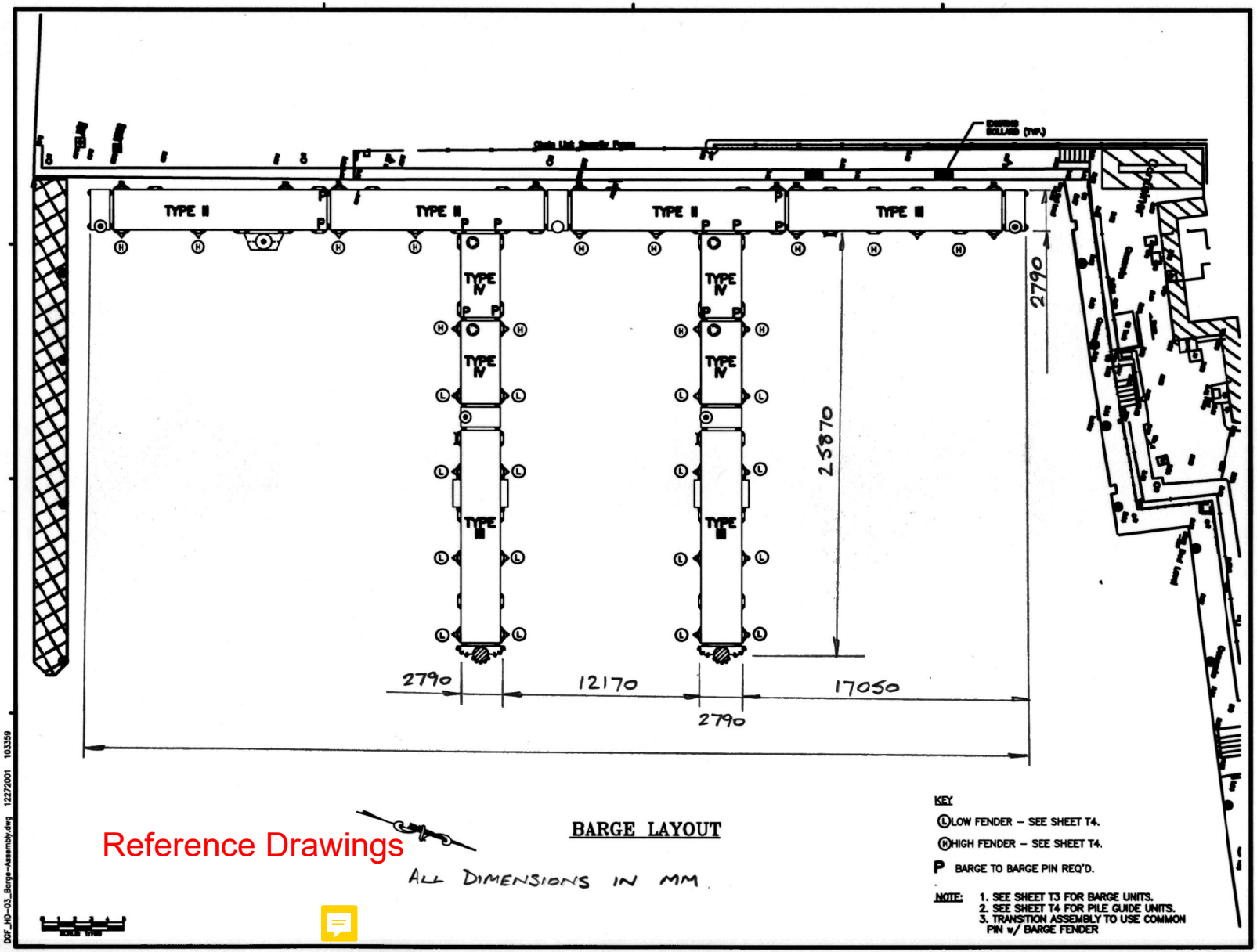
DOCK CONSTRUCTION

DOCKYARD TERRACE SANDYS PARISH

DRAWING FILE NO: 21378/DY–12.dwg ACAD R–14

SHEET TITLE:
MOORING DETAILS

SHEET NUMBER: 61/45/01 DY12
REVISION: B



Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING

P.O. Box HM 555 Hamilton HMCX Bermuda
Phone: (441)295-5151

ENGINEERING and OPERATIONS DIVISION
Fax: (441)295-5170

Structures Section

Bourne Consulting Engineering

GENERAL NOTES:
1. COORDINATES BASED ON BNG 2000.
2. ALL ELEVATIONS ARE IN METERS BASED ON ORDNANCE DATUM.
3. ALL DISTANCES ARE IN METERS.
4. SURVEY CONTROL PROVIDED TO THE CONTRACTOR, BY THE OWNER.

ISSUED FOR: TENDER 25/05/01

AMENDMENTS:

NO:	REVISION	APP	DATE
1	BARGES II & IV	JSK	14/11/01

SCALE: 1 : 100

SURVEY
PREPARED BY: DATE:

DESIGN
PREPARED BY: BAF DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01

DRAWING
PREPARED BY: JSK DATE: 23/05/01
CHECKED BY: RRB DATE: 23/05/01
APPROVED BY: RRB

PROJECT NUMBER: 61/01/01

PROJECT NAME:
HAMILTON-DEPOT
REPLACEMENT FERRY PROJECT
PHASE 1
DOCK CONSTRUCTION
#2 CROW LANE
PEMBROKE PARISH

DRAWING FILE NO: HD-3_Barge-Assembly.dwg ACAD R-14

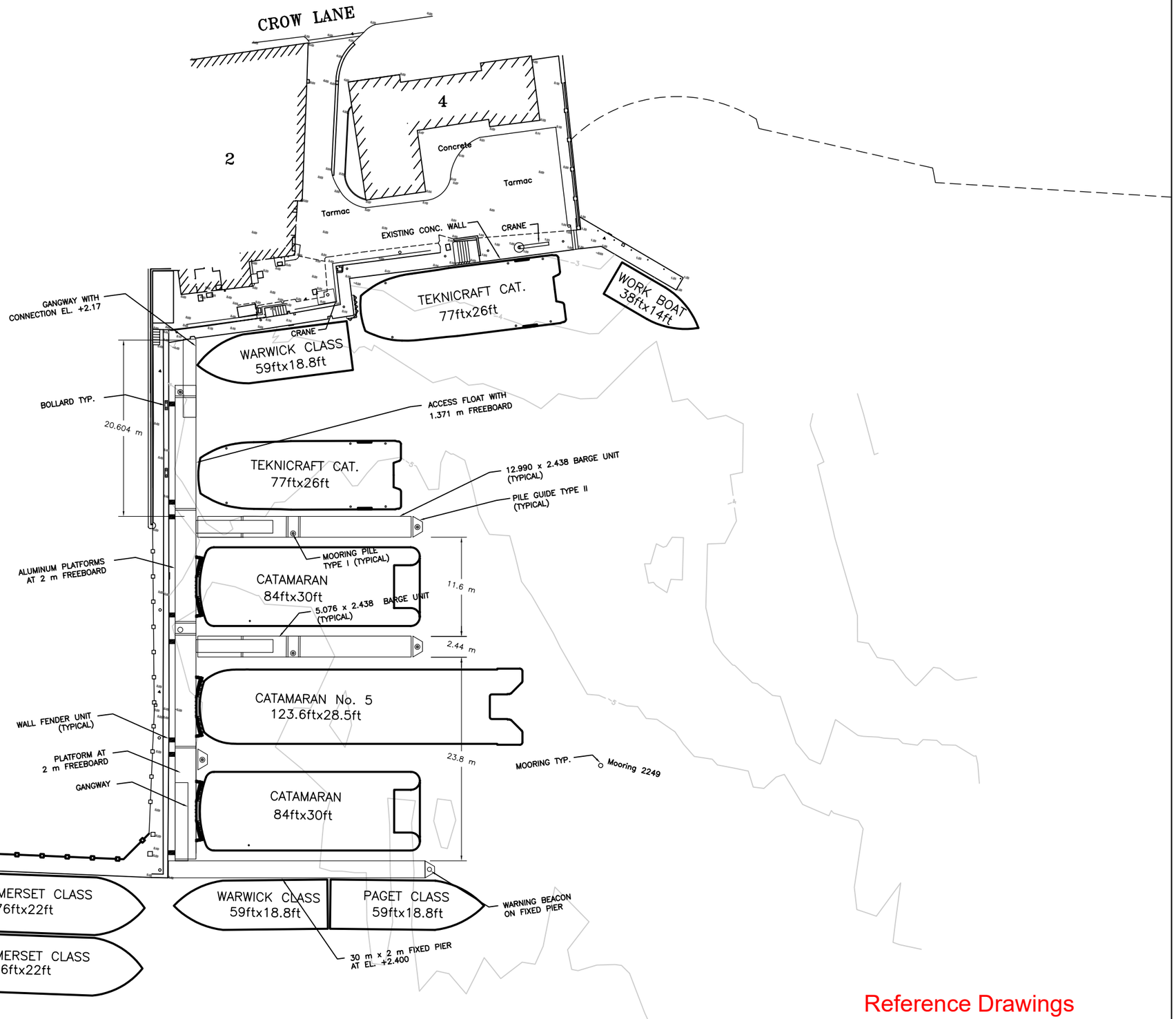
SHEET TITLE:
BARGE ASSEMBLY PLAN

SHEET NUMBER: 61/35/01/HD3 REVISION: 1

DGF_HD-03_Barge-Assembly.dwg 12272001 103359

K:\Structures\Fastferry\Phase 1\General\bermuda dock construction\HD-03_Barge-AssemblyRB.dwg, Layout1, 10/21/2002 03:41:18 PM

CITY OF HAMILTON
CONTAINER DOCK



NEW FENCE TO JOIN EXISTING FENCE AT GATE CONNECTION. NEW FENCE TO MATCH EXISTING

Reference Drawings

THE MINISTRY OF WORKS AND ENGINEERING AND HOUSING

P.O. Box HM525 Hamilton HMCX Bermuda
Phone: (441)295-5151

ENGINEERING and
OPERATIONS DIVISION
Fax: (441)294-9087

Structures Section

NOTE:
ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE.

ISSUED FOR: INFORMATION 25/07/06

AMENDMENTS:

NO	REVISION	BY	APP	DATE
1	.	.	.	.

SCALE: 1:500

SURVEY
PREPARED BY: KOS/ORS — DATE: 14/07/99

DESIGN
PREPARED BY: L. SYLVESTER — DATE: 21/07/06
CHECKED BY: — DATE:

DRAWING
PREPARED BY: T. HARMER — DATE: 24/07/06
CHECKED BY: L. SYLVESTER — DATE: 25/07/06
APPROVED BY: — DATE:

PROJECT NUMBER:
.

PROJECT NAME:
HAMILTON DEPOT REPLACEMENT FERRY PROJECT

4 CROW LANE HAMILTON

SHEET TITLE:
GENERAL ARRANGEMENT PLAN

SHEET NUMBER: **S00**
REVISION: 1

ACAD 2002