

GENERAL NOTES

1. DETAILS CONTAINED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
CAN/CSA-S8-00 – CANADIAN HIGHWAY BRIDGE DESIGN CODE.
CSA S16.1
2. THE METRIC SYSTEM OF UNITS IS USED UNLESS SPECIFIED OTHERWISE. THE REFERENCE DRAWINGS ARE IN THE IMPERIAL AND METRIC SYSTEM OF UNITS.
3. THE DIMENSIONS AND ELEVATIONS OF THE EXISTING COMPONENTS HAVE BEEN TAKEN FROM THE REFERENCE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE ALL FIELD ELEVATIONS AND DIMENSIONS NECESSARY FOR HIS WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION OR ORDERING AND FABRICATING ANY MATERIAL.
4. THE CONTRACTOR IS TO CONFIRM LOCATION OF ALL UTILITIES AND DRAINAGE PIPES THAT MAY BE AFFECTED BY THE WORK TO BE PERFORMED IN THIS CONTRACT PRIOR TO THE COMMENCEMENT OF THE WORK.
5. REMOVE EXISTING ELEMENTS TO GAIN ACCESS TO WORK AS NECESSARY. REINSTATE TO MATCH EXISTING, UNLESS NOTED OTHERWISE.
6. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT TECHNICAL SPECIFICATIONS.

DESIGN CRITERIA

PROJECT DATUM & TIDAL ELEVATIONS

1. ALL ELEVATIONS ARE REFERENCED TO HYDROGRAPHIC (TIDE & CHART) DATUM.
2. THE METRIC SYSTEM OF UNITS IS USED.
3. TIDAL ELEVATIONS AT THE SITE ARE BASED ON VALUES PUBLISHED BY THE CANADIAN HYDROGRAPHIC SERVICE (CH.S.) FOR PATRICIA BAY, B.C.:
E.H.W.L.....3.87m
L.L.W.L.....0.00m
E.L.W.L.....-0.40m

STRUCTURAL DESIGN

1. OPERATING VESSELS FOR THE FACILITY.

TABLE 1 – DESIGN VESSELS				
VESSEL	LOAD DISPLACEMENT (TONNES)	LENGTH OVERALL (m)	BEAM (m)	MAXIMUM DRAFT (m)
SIR WILFRED LAURIER (A)	4660	83.0	16.20	6.0
BARTLETT (B)	1723	57.8	13.00	4.1
JOHN P. TULLY	2100	69.0	14.50	4.5
JOHN JACOBSON	800	50.0	11.00	4.0
TANU	900	50.1	9.75	4.6
VECTOR	560	39.7	9.50	3.1
GORDON REID	1100	50.0	11.00	5.4
ATLIN POST	70	20.0	5.20	1.5

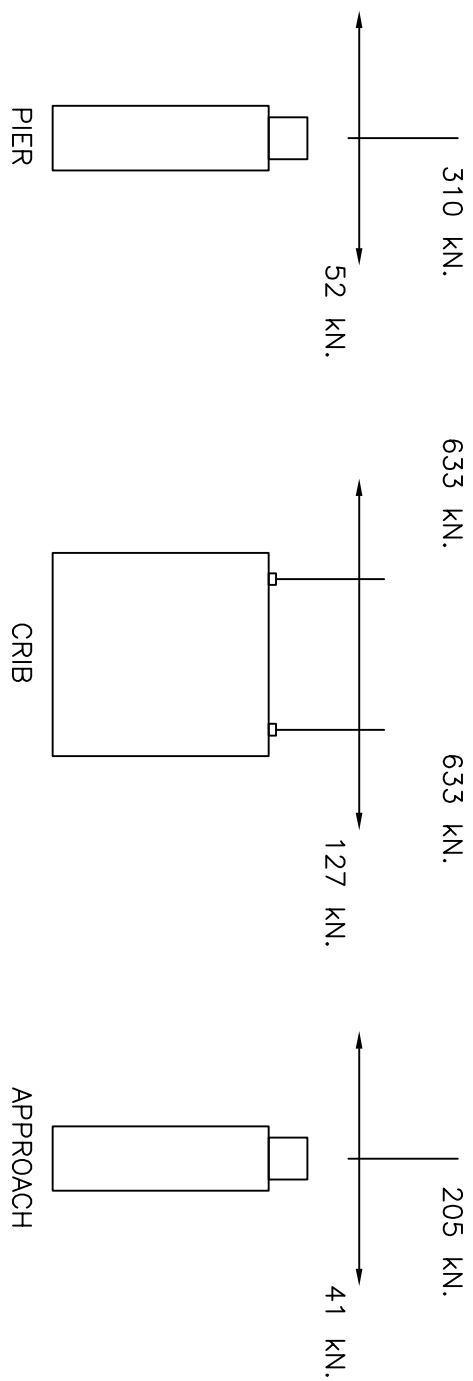
2. DESIGN VESSEL: PIER 1, PIER 2 & CROSS PIER – 2500 TONNE LOAD DISPLACEMENT VESSEL.
APPROACH PIER – BENTS 3 TO 10 – 1000 TONNE LOAD DISPLACEMENT VESSEL.

3. FENDER SYSTEM:
DESIGN BERTHING VELOCITY – 0.3 m/s PERPENDICULAR TO BERTH FACE
BERTHING TYPE 1/4 POINT
MAXIMUM BERTHING ANGLE 10 DEGREES
BERTHING COEFFICIENT 0.66
DESIGN BERTHING ENERGY 7.0 TONNE m
DESIGN BERTHING ENERGY BENTS 3-10 3.2 TONNE m

4. BERTHING VELOCITIES FOR INCREASED DISPLACEMENT TONNAGE

TABLE 2 – REDUCED VELOCITIES			
VESSEL	LOCATION	BERTHING VELOCITY PERP. TO BERTH FACE	
STANDARD	APPROACH PIER	0.2 m/s	
2500 TONNE LOAD DISPLACEMENT	BENT 3 TO 10		
STANDARD	PIER 1, PIER 2 & CROSS PIER	0.2 m/s	
5000 TONNE LOAD DISPLACEMENT	APPROACH PIER		
5000 TONNE LOAD DISPLACEMENT	BENT 3 TO 10	0.15 m/s	

5. ALLOWABLE BERTHING FORCES (BASED ON WHARF LATERAL CAPACITY):



GROUT

1. FOR FACE PLATES USE PREMIUM CEMENTITIOUS FLOW ABLE NON SHRINK GROUT. FREE OF METALLIC AGGREGATES, CONFORMING TO ASTM C1107. MINIMUM COMPRESSIVE CUBE STRENGTH OF 21MPa @ 3 DAYS AND 45MPa @ 28 DAYS.
2. FOR PILE TIP TENDON USE, PREMIUM FLUID CONSISTENCY CEMENTITIOUS EXPANDING NON SHRINK GROUT FREE OF AGGREGATES CONFORMING, TO ASTM C1107. MINIMUM CUBE STRENGTH OF 35 MPa @ 3 DAYS AND 60 MPa @ 28 DAYS, BOTH WITH FLUID CONSISTENCY
3. FOR PILE GROUTING USE PREMIUM FLOWABLE CONSISTENCY CEMENTITIOUS EXPANDING NON SHRINK GROUT FREE OF METALLIC AGGREGATES CONFORMING, TO ASTM C1107. MINIMUM CUBE STRENGTH OF 25 MPa @ 3 DAYS AND 50 MPa @ 28 DAYS, BOTH WITH FLOWABLE CONSISTENCY

STRUCTURAL AND MISCELLANEOUS STEEL

1. STRUCTURAL STEEL CAN/CSA G40.20/G40.21, WITH THE FOLLOWING GRADES, W SHAPE BEAMS AND HSS SECTIONS: 350W PLATES AND ANGLES: 300W PILE AND CAMEL PIPES: 445 MPa. MINIMUM YIELD
2. PILE TIP TENDONS TO BE DOUBLE CORROSION PROTECTED THREADED BAR AS MANUFACTURED BY DYWIDAG SYSTEMS INTERNATIONAL OR APPROVED EQUAL, IN ACCORDANCE WITH CSA G30.18-M92 GRADE 413/520 MPa.
3. HOT DIP GALVANIZE STEEL WHERE INDICATED TO CAN/CSA G164, MINIMUM ZINC COATING OF 600 g/m.
4. STRUCTURAL STEEL ERECTION BOLTS SHALL CONFORM TO ASTM A325 TYPE 1 ZINC COATED UNLESS NOTED OTHERWISE.
5. PAINT ALL METAL NOT REQUIRED TO BE GALVANIZED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
6. MINIMUM THICKNESS OF CONNECTION PLATES IS 6mm.

WELDING

1. WELDING IN ACCORDANCE WITH CSA-W59 AND CSA-W47.1.
2. MINIMUM WELD SIZE TO BE 6mm UNLESS NOTED OTHERWISE.
3. ALL WELDS TO BE CONTINUOUS UNLESS NOTED OTHERWISE.
4. ELECTRODES SHALL BE IN ACCORDANCE WITH CSA STANDARD W48.1-M.
5. ELECTRODES TO BE E40XX CLASSIFICATION.
6. SEAL WELD ALL WELDED JOINTS.

EXPANDED ANCHORS

1. ALL ANCHOR RODS TO BE ~~STAINLESS STEEL GRADE 316~~ GALVANIZED A307
2. DRILL Holes IN CONCRETE AS DETAILS. ADJUST TO AVOID CONTACT WITH EXISTING REINFORCING. PLUG ALL DRILL HOLES USED WITH CEMENTITIOUS GROUT
3. FIELD MEASURED AND RIGIDLY FABRICATED STEEL ELEMENTS & PLATES TO SUBMIT FOR APPROVAL
4. EPOXY GROUT TO BE USED WITH "HULTI HIT HY150" OR APPROVED EQUIVALENT (SEE SPECIFICATION FOR UNDERWATER)
5. TACK WELD ALL EXPOSED NUTS HOLDING UHMW TO CONCRETE

FENDERS

1. FENDER RUBBERS:

DESIGN OF THE FENDER RUBBER HAS BEEN BASED ON PROPRIETARY CATALOGUE INFORMATION. REQUIRED DESIGN PROPERTIES FOR THE FENDERS IS AS FOLLOWS:

FENDER TYPE	CALL UP	THICKNESS	ENERGY ABSORPTION	MAX. SUPPORT FINISH
ARCH	AR600H	500	70	450
ARCH	AR600HP	500	70	450
ARCH	AR600H	800	70	450
UNIT ELEMENT	UE550	550	70	285
CONE	C400	400	36	180
TIRE	305ø	500	-	-

(ARCH AND UNIT ELEMENT DATA BASED ON 1 m WIDTH)

FACE FINISH:

TYPE A: STRUCTURAL MOUNTING 1 FACE: IMPACT RUBBER AT OTHER FACE

TYPE B: STRUCTURAL MOUNTING 1 FACE: WELDED STEEL FACE WITH UHMW PANEL MOUNTING

TYPE C: STRUCTURAL MOUNTING EACH FACE

2. PROVIDE FOR ENGINEER'S APPROVAL, DETAILS AND PERFORMANCE DATA OF FENDER RUBBERS TO BE SUPPLIED TO MEET THE ABOVE REQUIREMENTS.
3. FENDER MOUNTING PLATE SIZES AND ANCHORAGE LOCATIONS ARE TO BE ADJUSTED BY THE CONTRACTOR FOR FENDER RUBBERS APPROVED BY PWOSC.

SUMMARY OF SCOPE OF WORK

1. REMOVE AND DISPOSE TIMBER PILES ALONG THE NORTH AND SOUTH FACES OF THE END CRIBS OF PIER 1 AND PIER 2.
2. REMOVE AND DISPOSE 200mm RUBBER ARCH FENDERS WHERE REQUIRED TO ACCOMMODATE NEW FENDERING SYSTEM.
3. SUPPLY AND INSTALL DIAGONAL HSS BRACING AND FRAMING, TOGETHER WITH ANCHORS, AND STEEL FRAMING EXTENSIONS TO CONCRETE BENT COLUMNS AT THE FOLLOWING LOCATIONS:
ALONG GRID A – AT GRIDS 3 TO 10;
ALONG GRID G AT GRIDS 14, 17 & 20;
ALONG GRID 11 AT EACH COLUMN.
4. SUPPLY & INSTALL 762ø PIPE PILES, WITH PILE TOPS AS DETAILED, AND EACH PILE WITH ~~WELDED STEEL FACE~~ GROUTED 57ø DOUBLE CORROSION PROTECTED TENDON, AT EACH COLUMN OF EACH BENT AND ADJACENT TO THE SIDE FACES OF EACH CRIB ALONG GRID G, EXCEPT AT LOCATIONS CALLED UP IN NOTE 3 ABOVE.
5. SUPPLY AND INSTALL RUBBER ARCH FENDERS, TOGETHER WITH MOUNTING PANELS AND ANCHORS, TO THE WALL FACE AT EACH CORNER OF EACH CRIB ALONG GRID B, EXCEPT GRID 12; EACH CORNER OF EACH CRIB ALONG GRID G.
6. SUPPLY AND INSTALL UNIT ELEMENT (UE) RUBBER FENDERS, TOGETHER WITH MOUNTING PANELS, PILE ATTACHMENT FRAMING AND ANCHORS, AT EACH PIPE PILE LOCATION.
7. SUPPLY AND INSTALL WALL ANCHORED BEAM SUPPORT FOR UE RUBBER FENDERS ADJACENT TO THE SIDE FACES OF EACH CRIB ALONG GRID G.
8. SUPPLY AND INSTALL UHMW(PE) PANELS AT LOCATIONS SHOWN.
9. SUPPLY AND INSTALL LOAD DISPERSION PANELS TO PILES AT LOCATIONS OF UE RUBBER FENDERS, EXCEPT THE CROSS PIER PILES ALONG GRID 13.
10. SUPPLY AND INSTALL CONTINUOUS 710ø PIPE CAMELS WITH FOAM FILL, SPLICE JOINTS, RECESSES, TIMBER RUB STRIP, LOCATING HSS & CHAINS, OUTRIGGERS AND UHMW(PE) PANELS. CAMELS TO BE PROVIDED ALONG GRIDS A, B, F, G & 11.
11. SUPPLY AND INSTALL ARCH RUBBER FENDERS AT PIPE CAMEL RECESSES AT THE FOLLOWING LOCATIONS:
EACH CORNER OF EACH CRIB ALONG GRID A, & F, EXCEPT AT INTERSECTION OF GRIDS F & 12;
EACH BENT FACE ALONG GRID 11

12. SUPPLY AND INSTAL CONE FENDER RUBBERS AT PIPE CAMEL RECESSES ALONG GRIDS AT GRIDS 3 TO 10.
13. SUPPLY AND INSTALL CAMEL LOCATING CHAINS AND WEIGHTS.
14. SUPPLY AND INSTALL CONTINUOUS 305ø STEEL PIPE WITH 14" USED TIRE WRAP CAMEL AT EACH CRIB FACE ALONG GRID G.
15. SUPPLY AND INSTALL 102ø HSS AND FRAMES FOR CAMEL ALIGNMENT
16. RELOCATE EXISTING LADDER TO ACCOMMODATE FENDER LOCATING HSS AND OUTRIGGERS, WHERE REQUIRED

DRAWING LIST

- DRAWING NO. 1 – GENERAL NOTES
- DRAWING NO. 2 – GENERAL ARRANGEMENT AND EXISTING SECTIONS
- DRAWING NO. 3 – DETAILS AT APPROACH PIER BENTS
- DRAWING NO. 4 – DETAILS AT PIER 1 BENTS
- DRAWING NO. 5 – DETAILS AT PIER 2 BENTS
- DRAWING NO. 6 – DETAILS AT CROSS PIER BENTS
- DRAWING NO. 8 – DETAILS AT PIER 2 BENTS
- DRAWING NO. 9 – DETAILS AT PIER 2 CRIBS
- DRAWING NO. 10 – DETAILS AT CRIB 6
- DRAWING NO. 11 – OUTRIGGER & CAMEL LOCATING CHAIN DETAILS
- DRAWING NO. 12 – CAMEL LOCATING HSS AND FRAMING DETAILS
- DRAWING NO. 13 – DETAIL AT PIER 1 AND 6 ON GRID 13

REFERENCE DATA

- REFERENCE DRAWINGS
1. PATRICIA BAY, BC: MARINE FACILITY, PWOSC PROJECT NO. 89323, DRAWINGS ST TO ST17
2. PATRICIA BAY, BC: MARINE FACILITY, PWOSC PROJECT NO. 89049, DRAWINGS ST18 TO ST19
- DRAWINGS 142232-8-SK1 TO SK14

A	AS BUILT		DEC. 2, 2004		
number	revision		revision		date

	A detail number		A project
	B source drawing no.		
	C de dessin no.		
	C detail on drawing no.		
	C detail sur dessin no.		

PATRICIA BAY, B.C.
INSTITUTE OF OCEAN SCIENCES
MAIN WHARF
FENDERING UPGRADE

GENERAL NOTES

drawing	dessin
designed	conçu
MAHMOUD KATHRODA, P. ENG.	
date	date
03.03.03	
drawn	dessiné
ARLEN DONNELLY	
date	date
03.03.10	
approved	approuvé
date	date
03.03.10	
Tender	Soumission
PWOSC Project Manager	Administrateur de projets TPSCC
project number	nombre du projet
853033	
drawing number	numéro du dessin
001	
rev.	rev.
	A

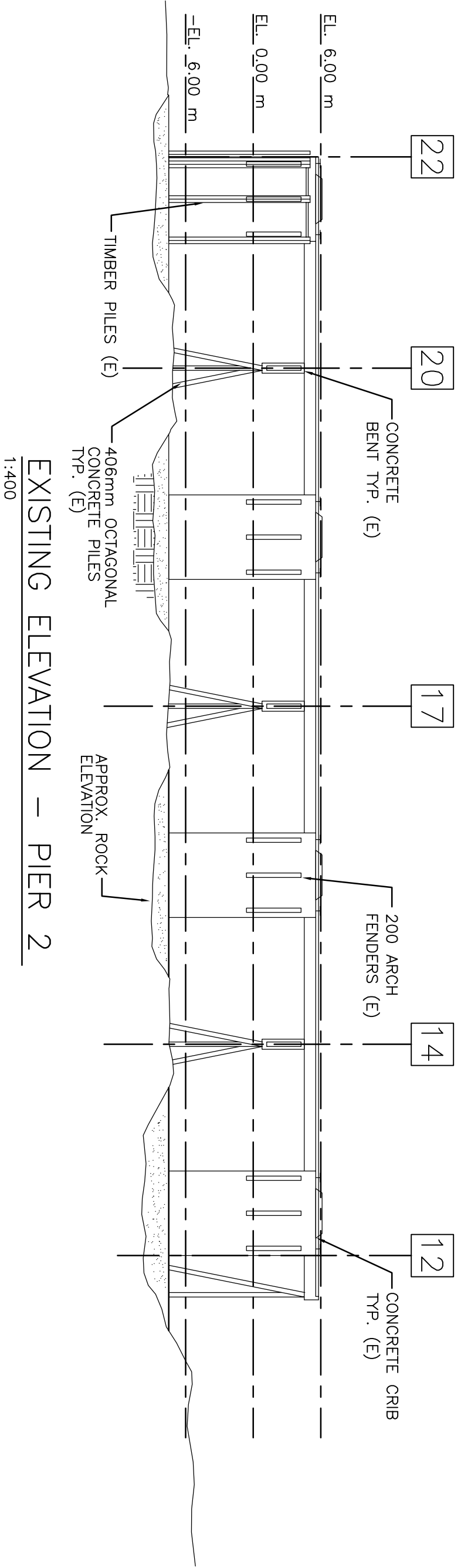
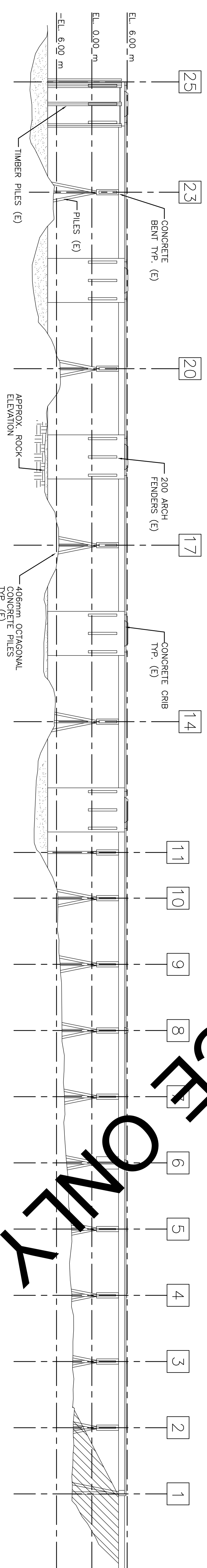
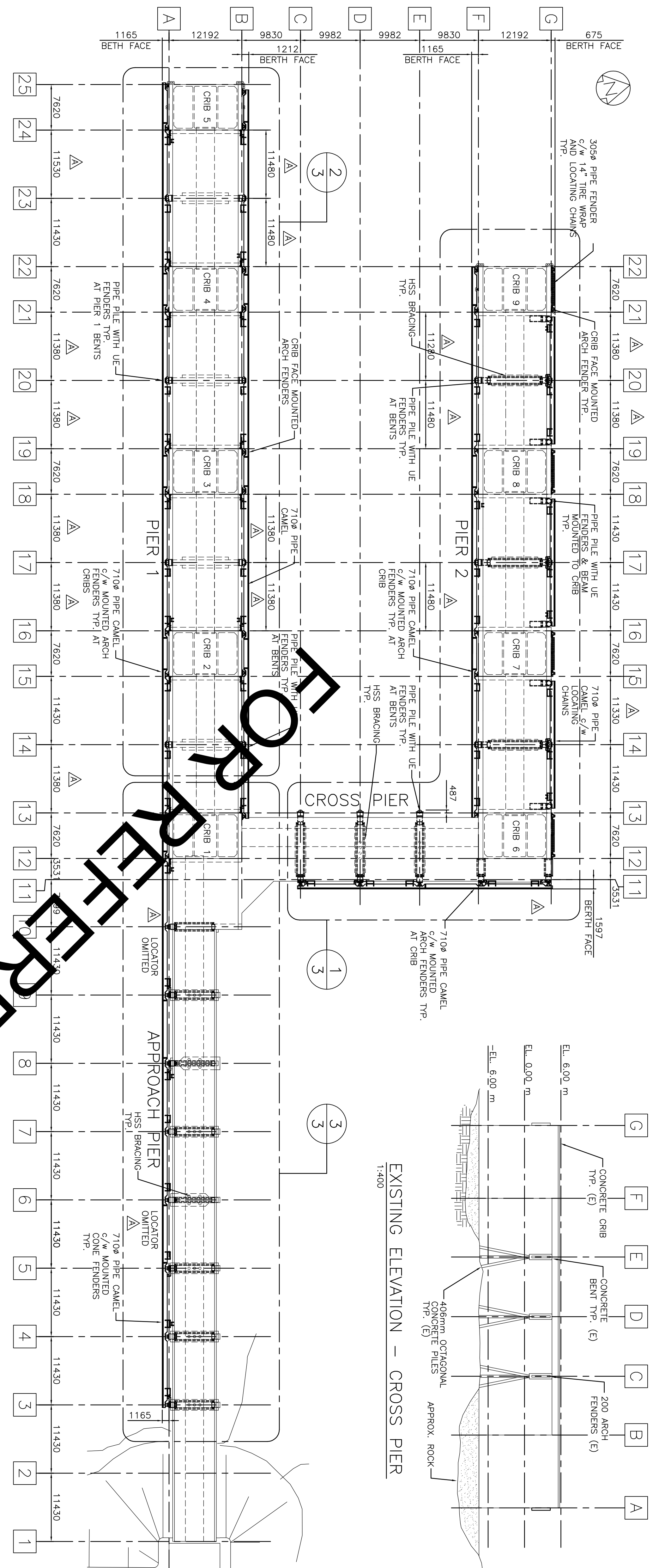
KM Engineering Group Inc.
Consulting Engineers KM 04-2003
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CAD FILE NO. – SHEET 1
KM ENGINEERING PROJECT NO. – KM 04-03

number	revision	revision	date
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	number du detail	
A	source drawing no.	A
C	de dessin no.	B C
	C detail on drawing no.	
	detail sur dessin no.	

growing	desired
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INSTITUTE OF OCEAN SCIENCES	
MAIN WHARF	
FENDERING UPGRADE	
GENERAL ARRANGEMENT AND EXISTING SECTIONS	

designed	MAHMOED KATHRODA, P. ENG.	concur
date	03.03.03	date
drawn	ARLEN DONNELLY	dessiné
date	03.03.10	date
approved		approved
date		date
Tender		Submission
Project Manager	Administrateur de projets IPSCG	
number	853033	number du projet
number		number du dessin
number		rev.



A	AS BUILT			DEC 6, 2004	
number	revision		revision	date	

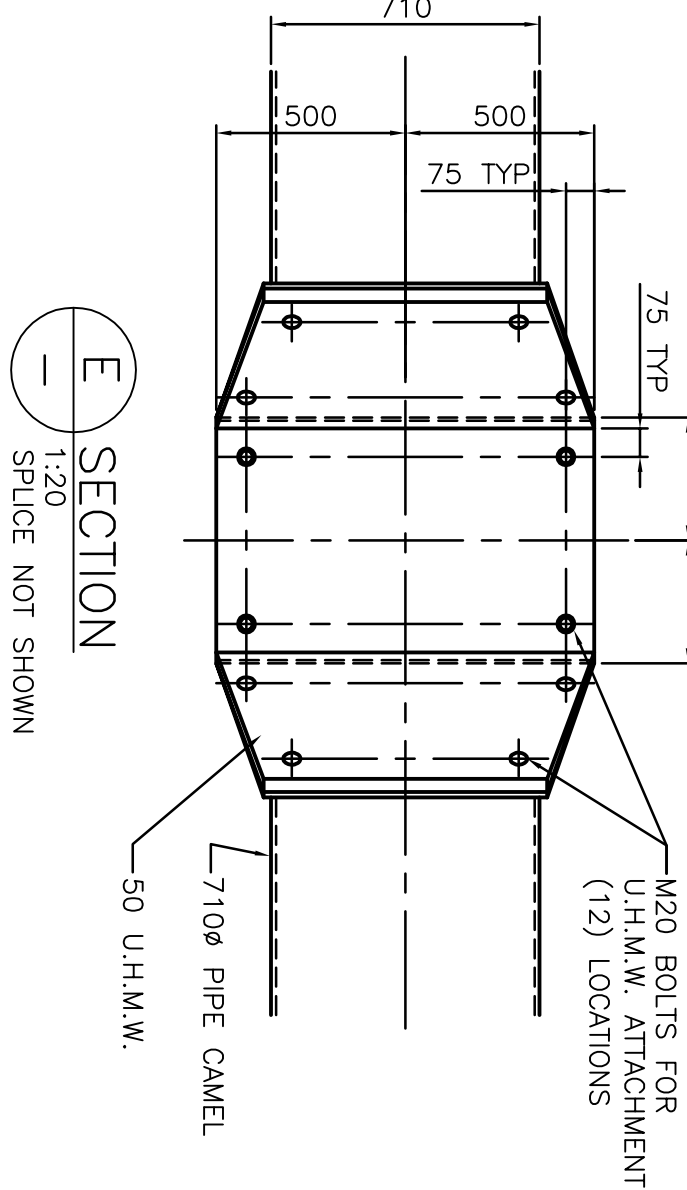
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A detail number
B source drawing no.
C detail on drawing no.
C detail sur dessin no.

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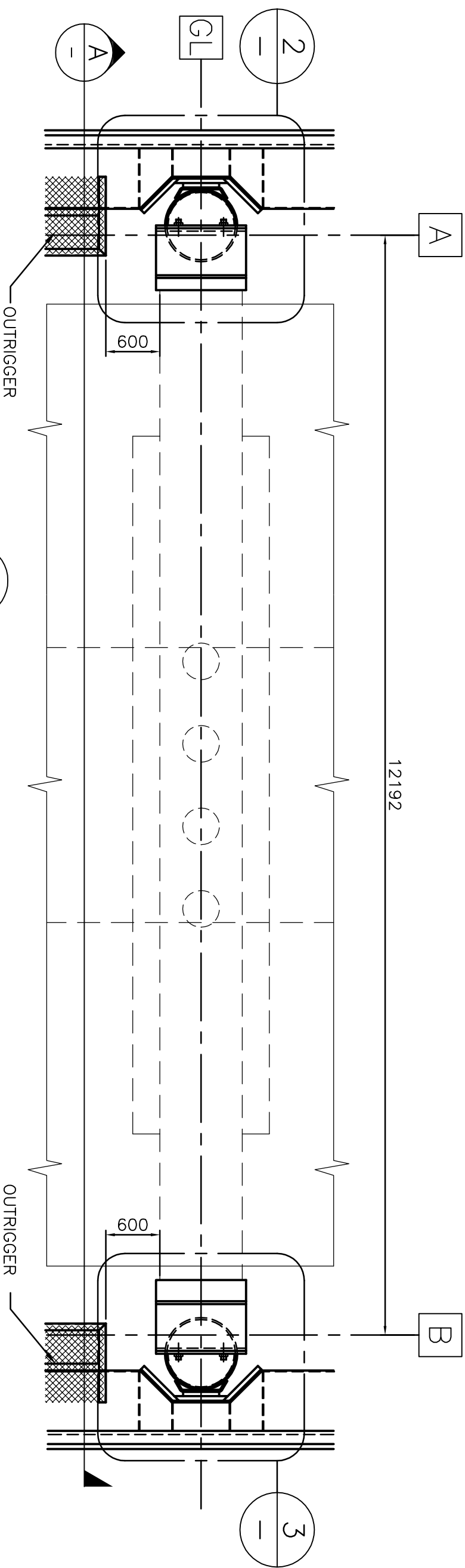
GENERAL ARRANGEMENT
DETAILS

designed	MAHMOUD KATHRODA, P. ENG.	conçu	
date	03.03.03	date	
drawn	ARLEN DONNELLY	dessiné	
date	03.03.10	date	
approved		approuvé	
date		date	
Tender		Soumission	
PWSO Project Manager	Administrateur de projets TPSCC		
project number	853033	numéro du projet	
drawing number	003	numéro du dessin	
		rev.	A



SECTION E
1:20
SPRUE NOT SHOWN

1 DETAIL @ PIER 1 BENTS
1:50



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SECTION

1:20

SPRUE NOT SHOWN

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CAD FILE No. - SHEET 5

KM ENGINEERING PROJECT No. - KM 04-03

project

number

revision

AS BUILT

DEC. 3, 2004

ddde

project

project

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INSTITUTE OF OCEAN SCIENCES

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DETAILS AT PIER 1 BENTS

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CAD FILE No. - SHEET 6

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number	revision	revision	date	

	number du détail	
		
B	source drawing no.	
C	détail on drawing no.	
	détail sur dessin no.	

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FENDERING UPGRADE

DETAILS AT PIER 1 CRIBS

drawing		design
DETAILS AT PIER 1 CRIBS		
designer	MAHOMED KATHIRADA, P. ENG.	concept
date	03.03.03	date
drawn	AARLEN DONNELLY	drawing
date	03.03.10	date
approved		approval
tender		submission

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CAD FILE NO. - SHEET 7


KM ENGINEERING PROJECT NO. - KM 04-03


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number	revision	revision	date	

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number du détail

B source drawing no.
de dessin no.

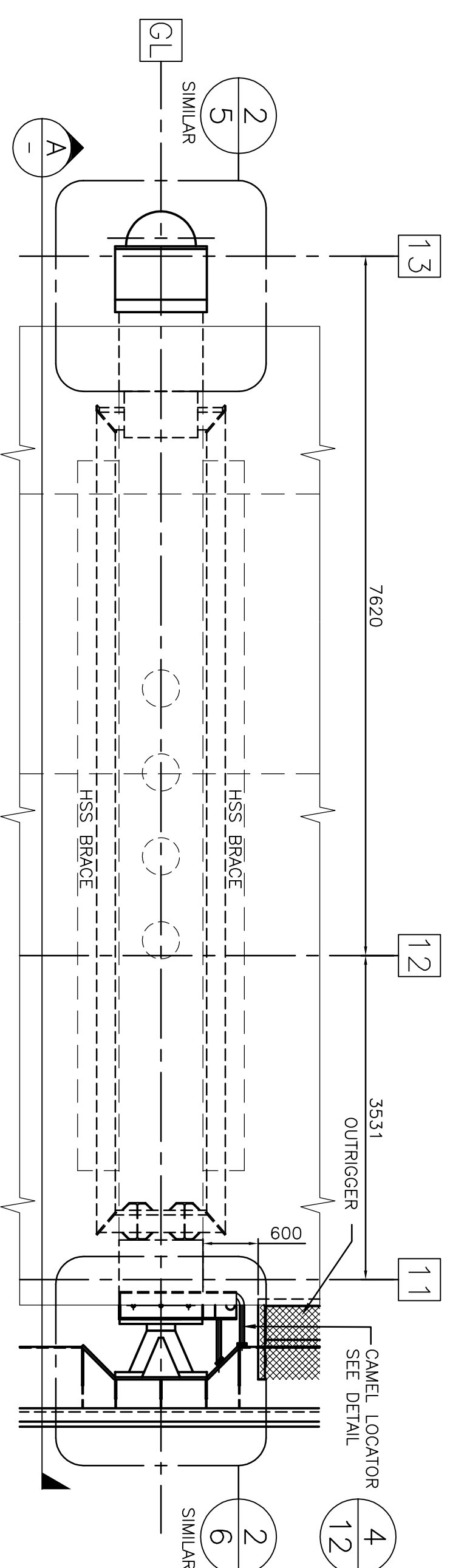
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détail sur dessin no.



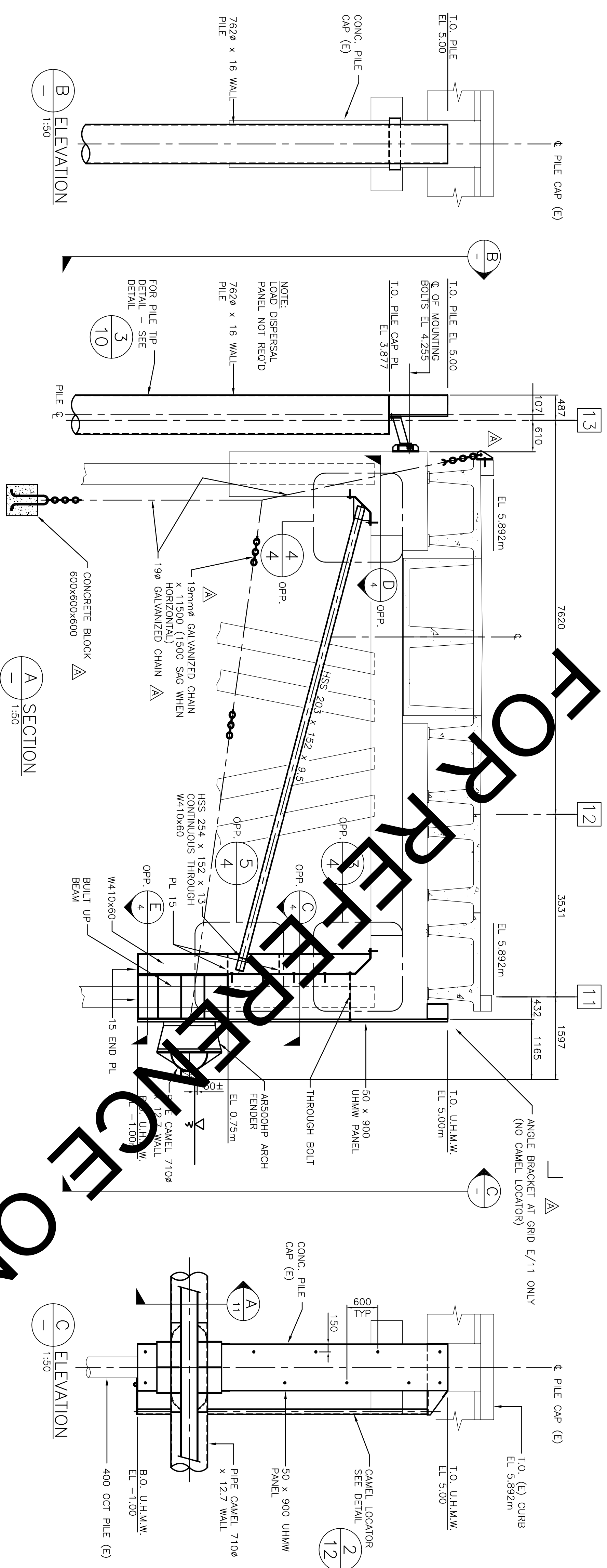


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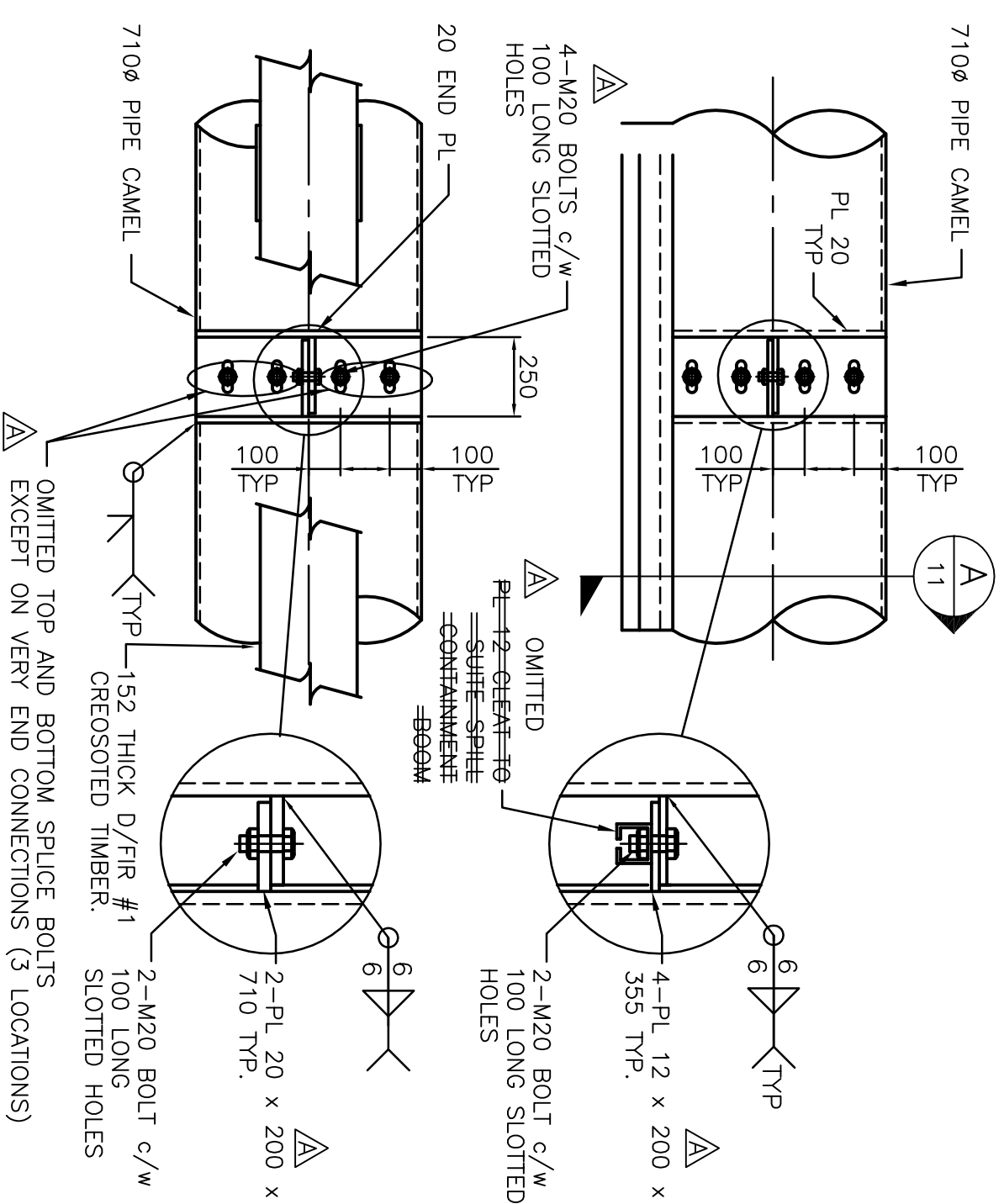
drawing			dessin
DETAILS AT CROSS PIER BENTS			
designed	MAHOMED KATHRADA, P. ENG.	conçu	
date	03.03.03	date	
drawn	ARIEN DONNELLY	dessiné	
date	03.03.10	date	
approved		approuvé	
date		date	
Tender		Submission	
PWSSC Project Manager	Administrateur de projets TPSCC		
Project number	853033	numero du projet	
drawing number	007	rev.	A



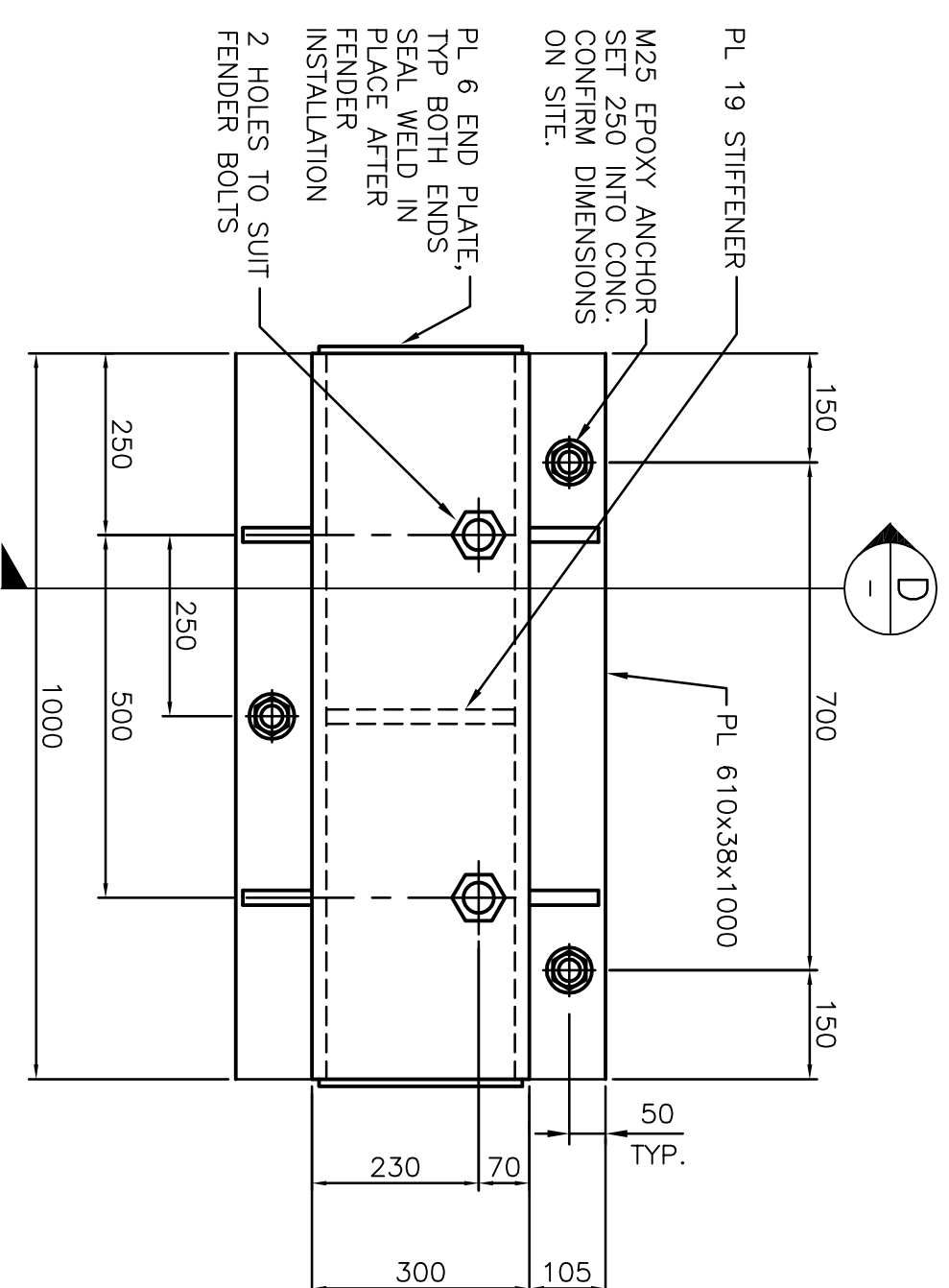
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3 1:50



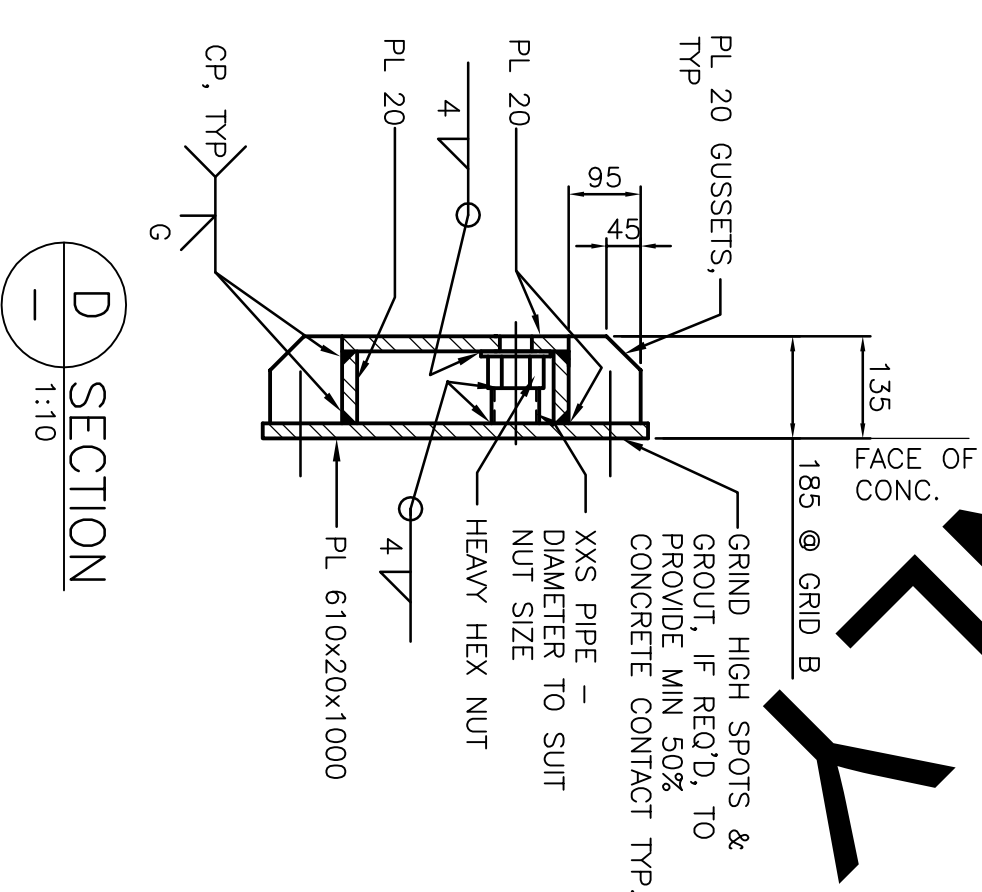
2 TYP SPLICE DETAIL



3 UE FENDER MOUNT DETAIL
1:10



D SECTION
1:10



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CAD FILE NO. - SHEET 8

KM ENGINEERING PROJECT NO. - KM 04-03

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A detail number
 B source drawing no.
 C detail sur drawing no.

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drawing

DETAILS AT PIER 2 BENTS

dessin

drawing

designing

DETAILS AT PIER 2 BENTS

designed	MAHMOUD KATHIRDA, P. ENG.	checked	
date	03.03.03	date	
drawn	AARLEN DONNELLY	designed	
date	03.03.10	date	
approved		approved	
header		Submission	date

PMGSC Project Manager	Administrateur de projets TPSCGC
project number	853033
drawing number	numéro du dessin
	rev.

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FILE No. - SHEET 9

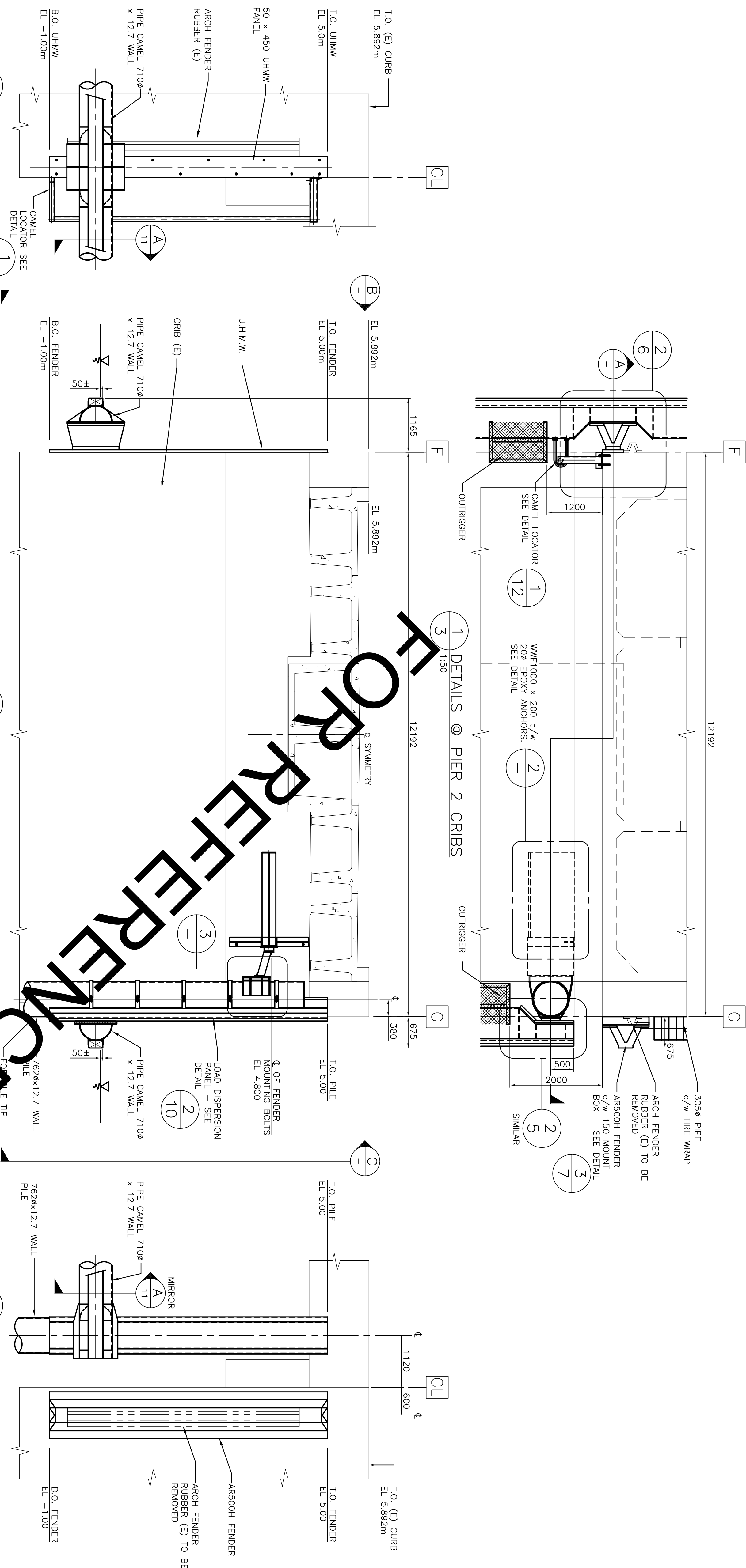
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number	revision	revision	date
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A ocean number
 B source drawing no.
 C detail on drawing no.
 C detail sur dessin no.

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drawing		dessin
DETAILS AT PIER 2 CRIBS		
designed	MAHOMED KATHROGA, P. ENG.	conçu
date	03.03.03	date
drawn	ARLEN DONNELLY	dessiné
approved	03.03.10	date
		approved
date		date
Tender		Submission
PMOSC Project Manager	Administrateur de projets TRSCC	
project number	853033	numéro du projet
drawing number	009	numéro du dessin
		rev. A



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CAD FILE NO. – SHEET 10
KM ENGINEERING PROJECT NO. – KM 04-03

number	revision	revision	date
A	AS BUILT		DEC. 5, 2004

A detail number of drawing no. C

B source drawing no. de dessin no. C

C detail on drawing no. detail sur dessin no. C

PATRICIA BAY, B.C.
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MAIN WHARF
FENDERING UPGRADE

design

designated	MAHMOUD KATRAHA, P. ENG.	cancel
date	03.03.03	date
drawn	ARLEN DONNELLY	dessinee
date	03.03.10	date
approved		approved
date		date
render		Submission
EMSSG Project Manager	Administrateur de projets IPSCG	
project number		numero du projet

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CAD FILE No. - SHEET 11

KM ENGINEERING PROJECT No. - KM 04-03

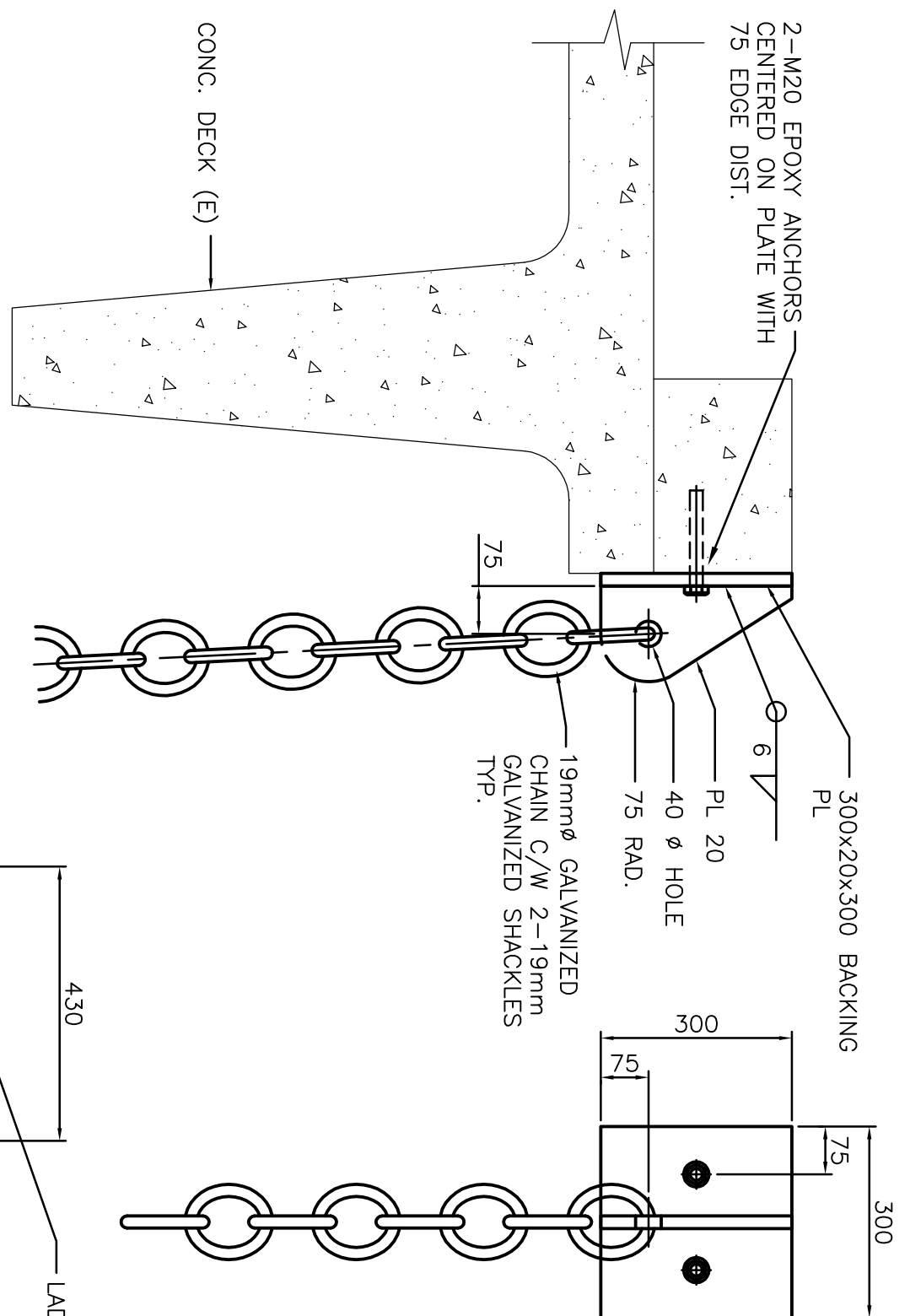
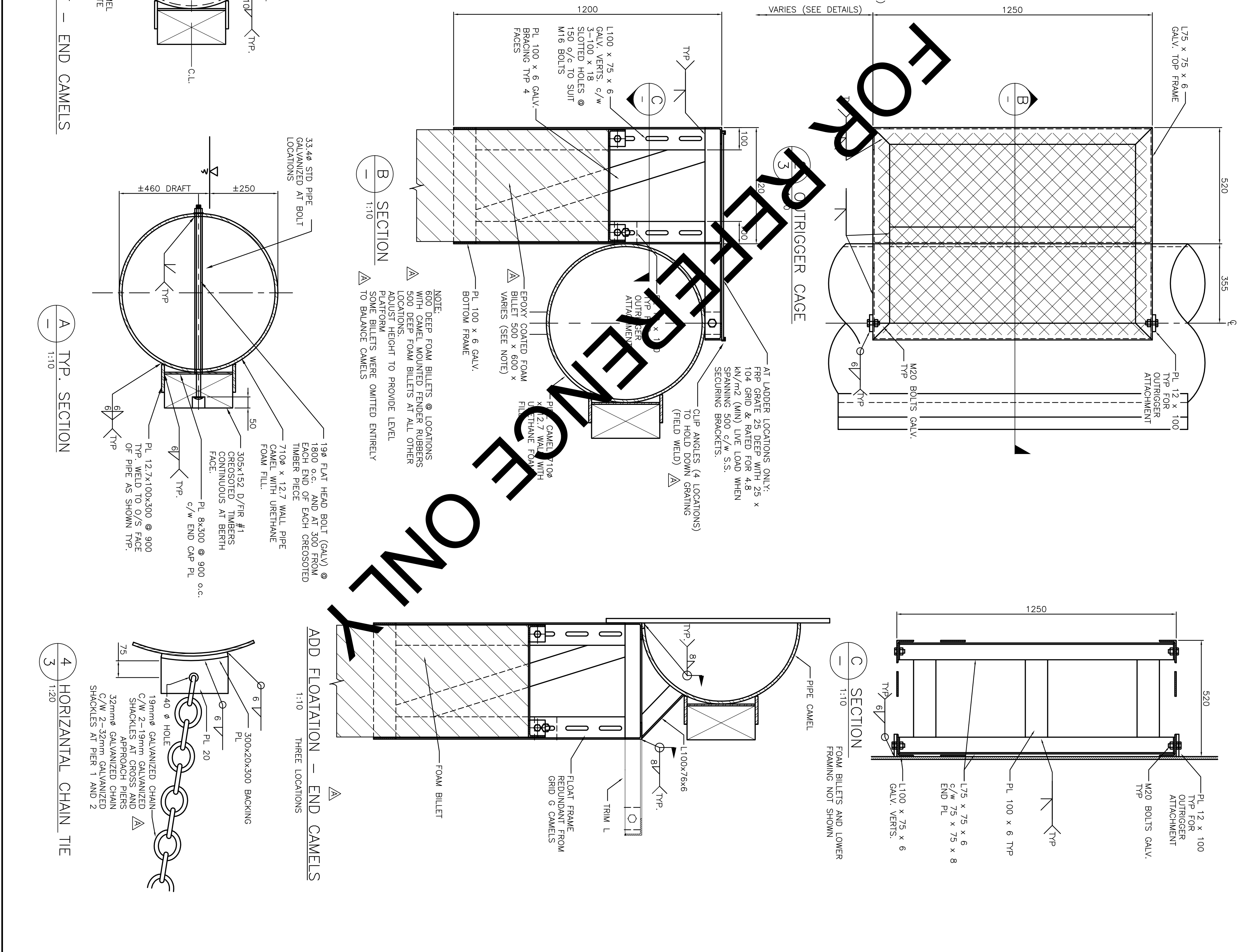
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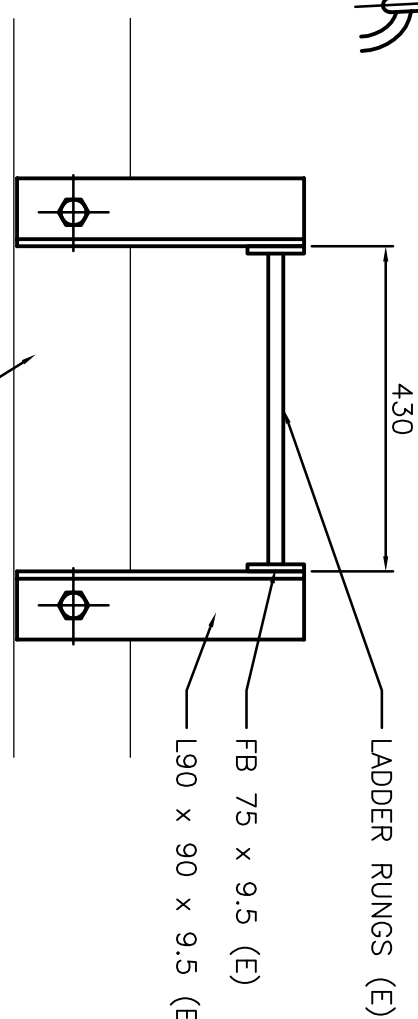
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MAIN WHARF
FENDERING UPGRADE

OUTRIGGER AND CAMEL
LOCATING CHAIN DETAILS

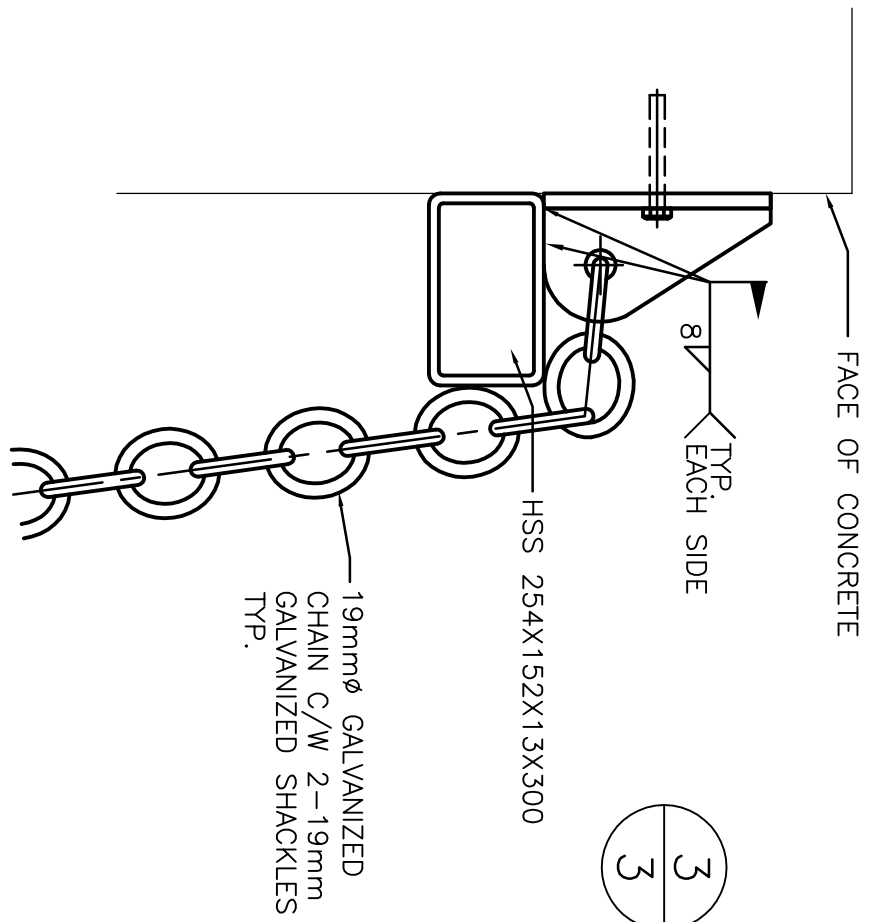
designed	MAHMOUD KATHRODA, P. ENG.	conçu	
date	03.03.03	date	
drawn	ARLEN DONNELLY	dessiné	
date	03.03.10	date	
approved		approuvé	
date	03.03.10	date	
Tender		Submission	
PWS20 Project Manager	Administrateur de projets TP56C		
project number	853033	numéro du projet	
drawing number	011	rev.	A



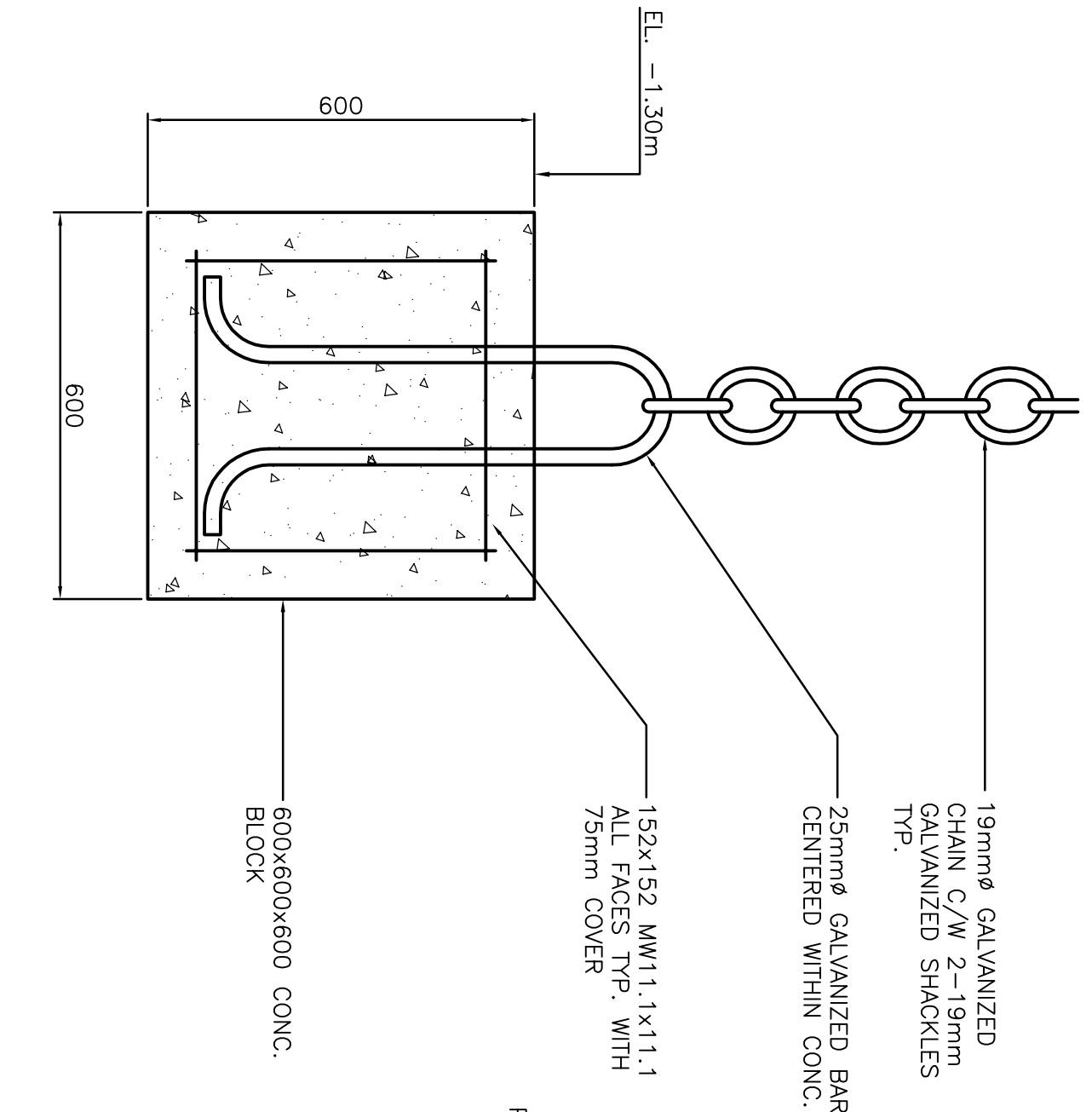
6 HANGER
3 1:10



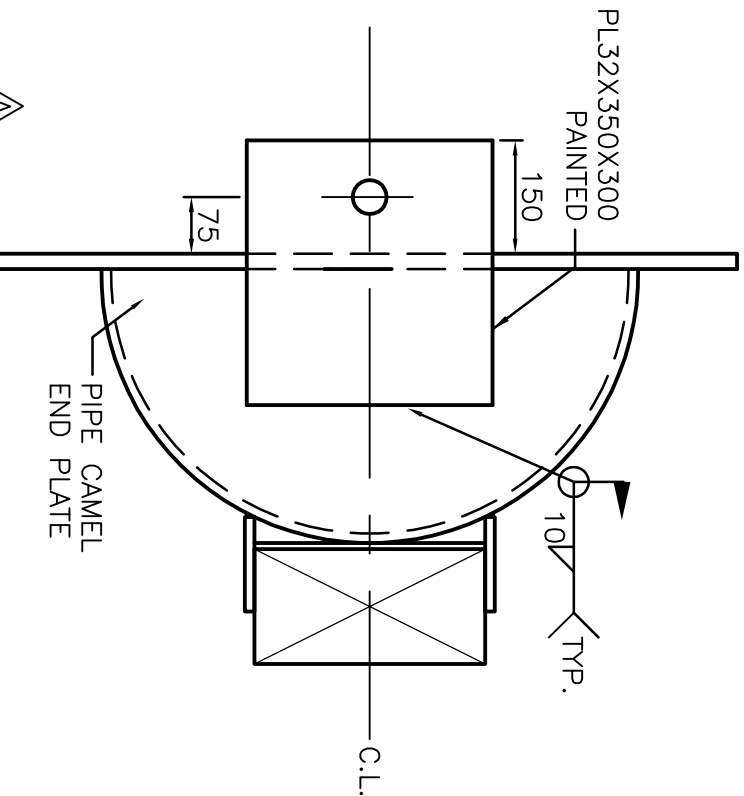
3 LADDER DETAIL (E)
3 1:20
RE-ATTACH AS PER EXISTING



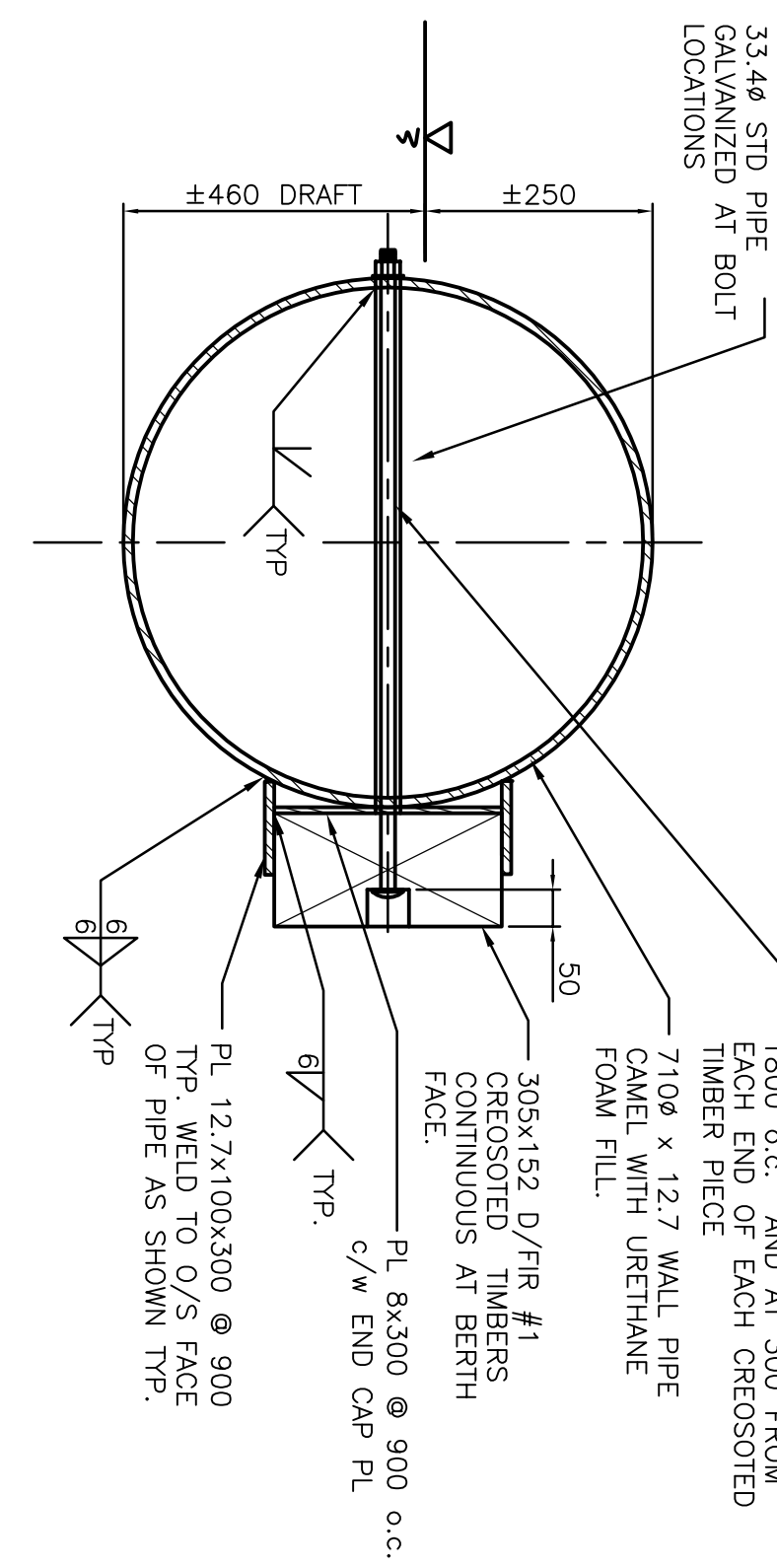
5 HANGER WITH CHAIN SUPPORT
3 1:10
8 LOCATIONS



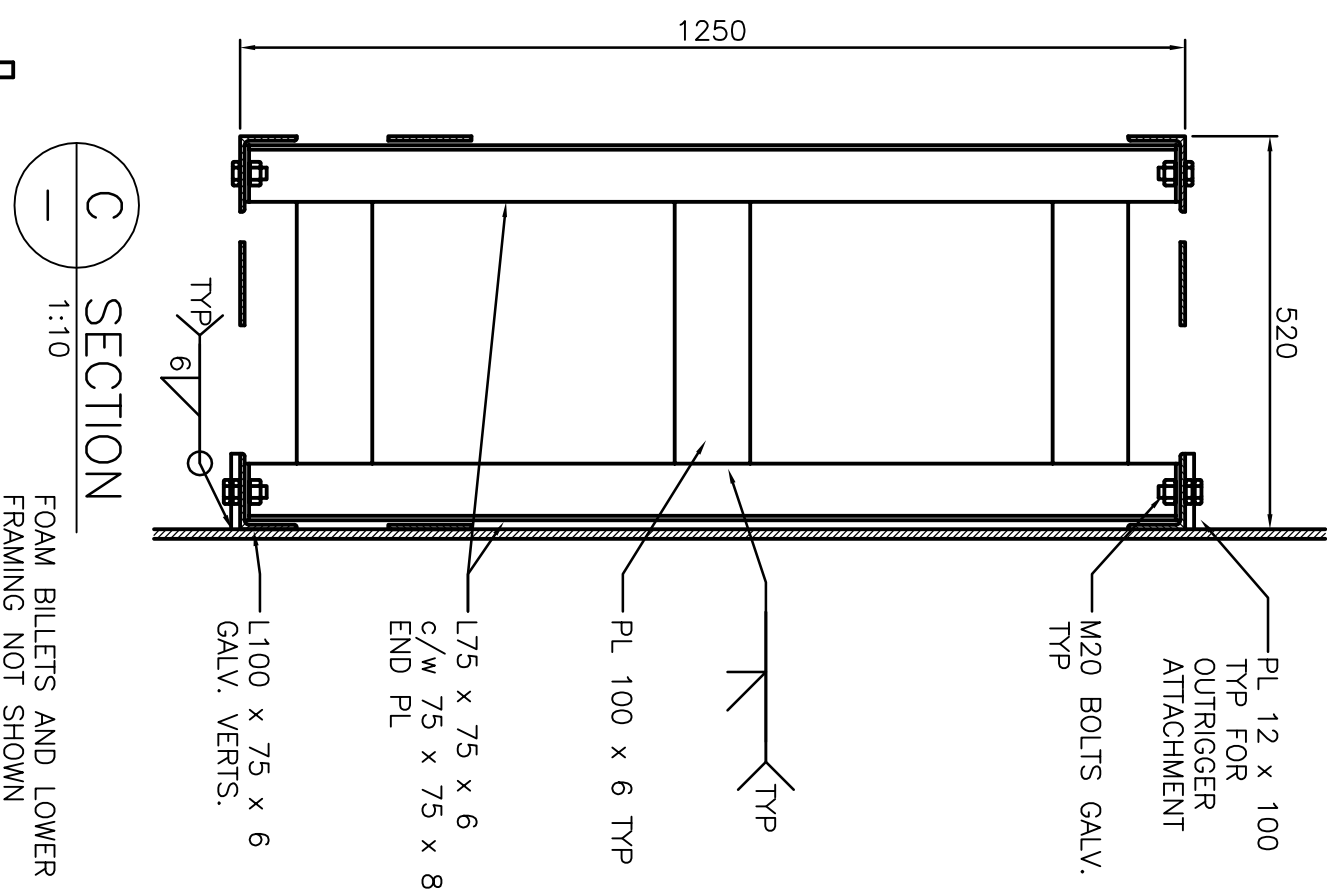
1 FENDER RETAINING CHAIN
3 1:10



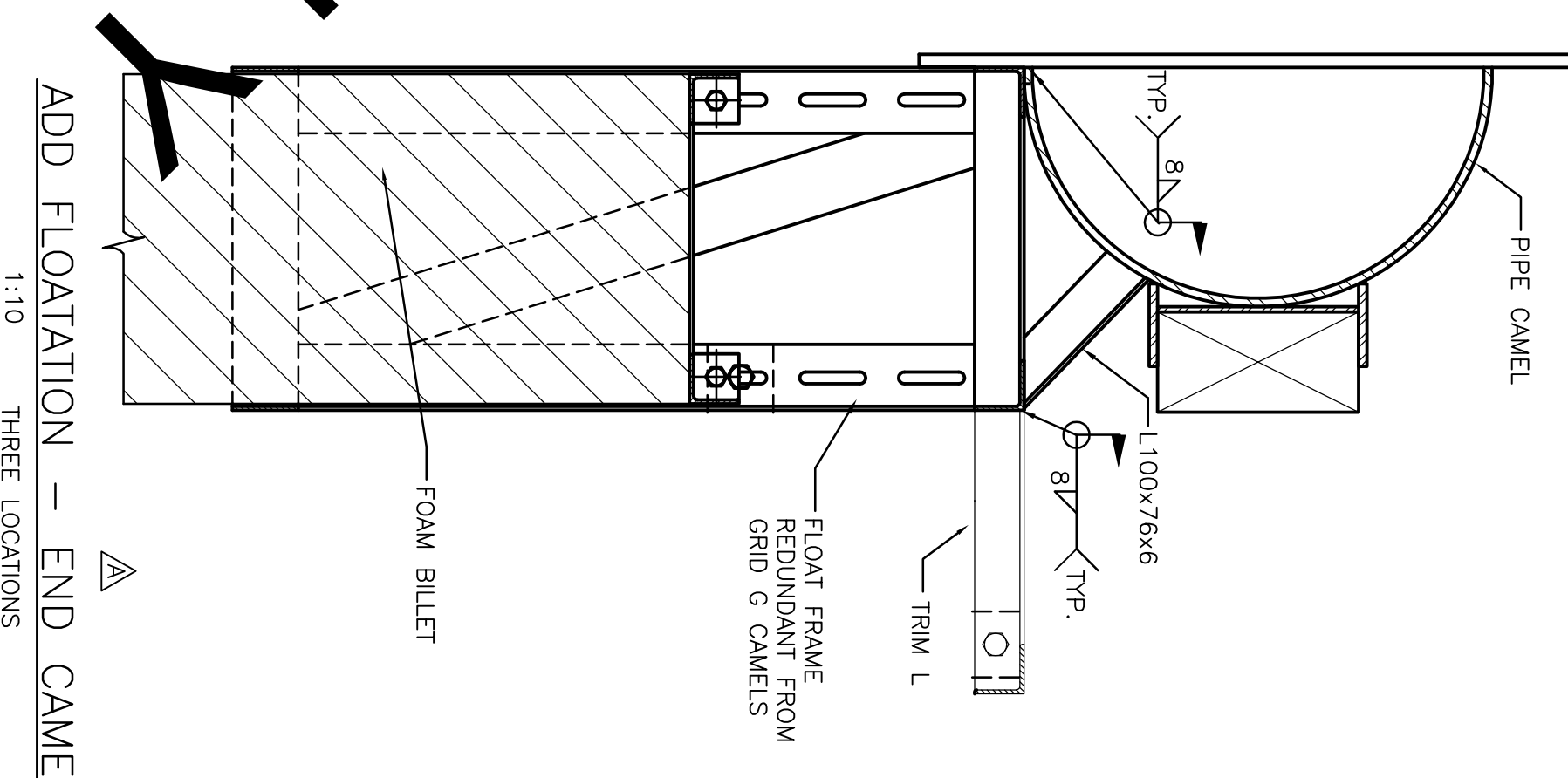
7 CHAIN ATTACHMENT - END CAMELS
11 1:10



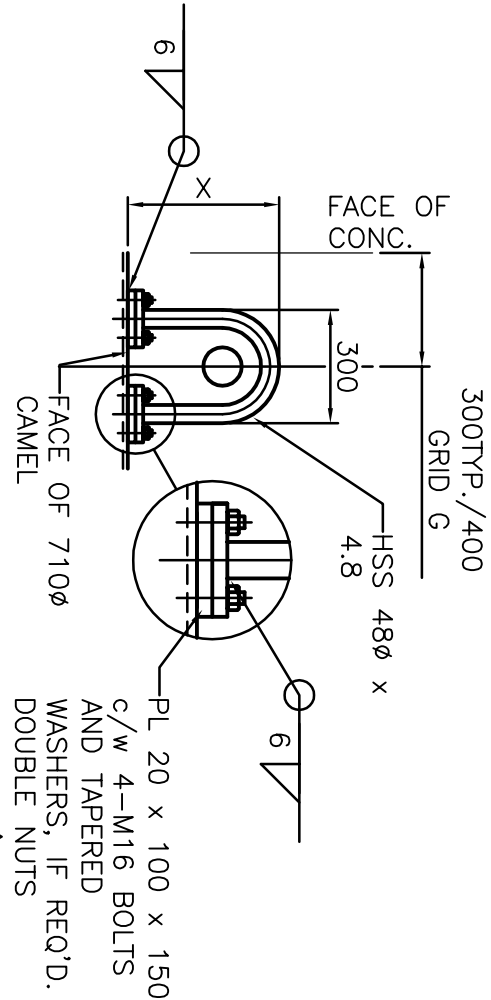
A TYP. SECTION
1:10



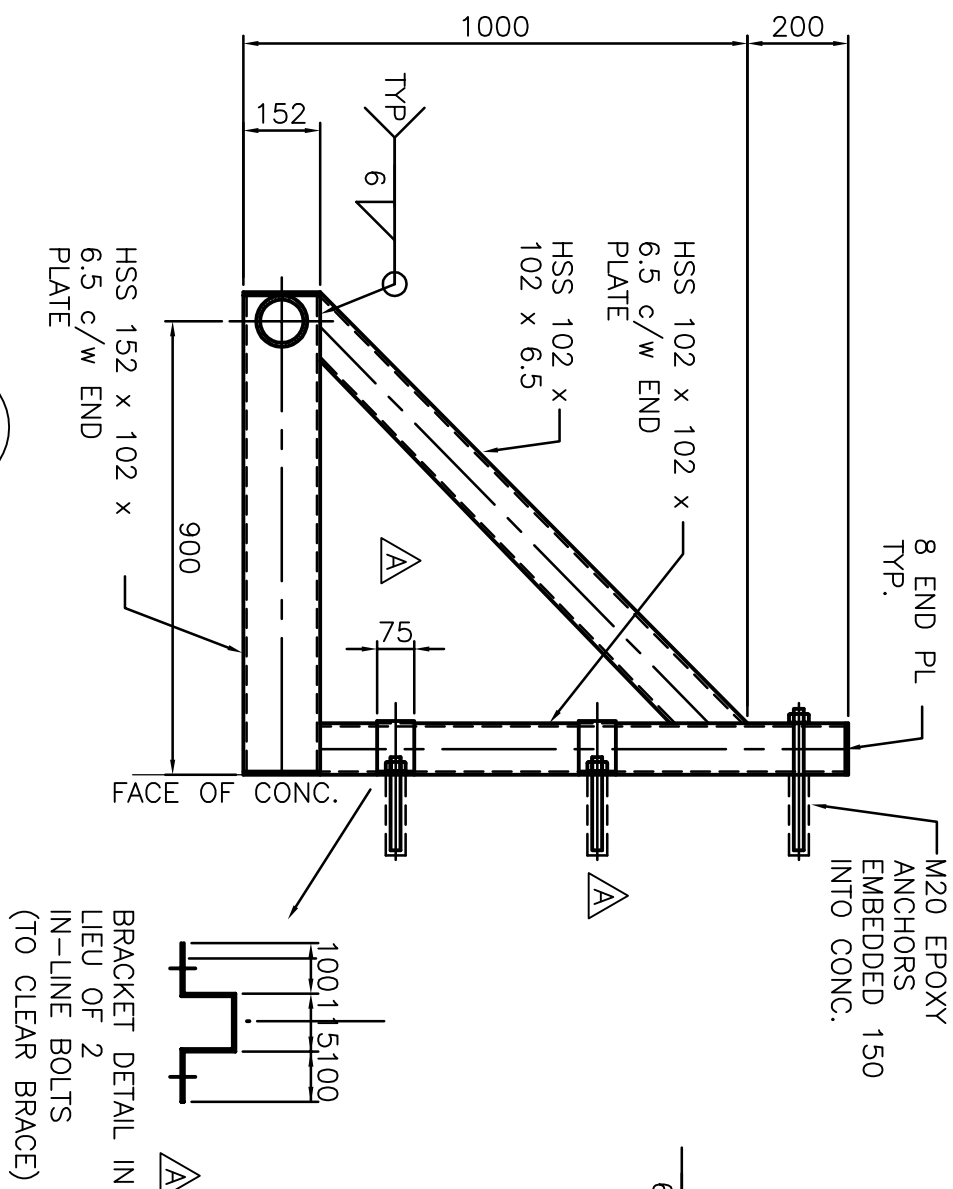
C SECTION
1:10
FOAM BILLETS AND LOWER FRAMING NOT SHOWN



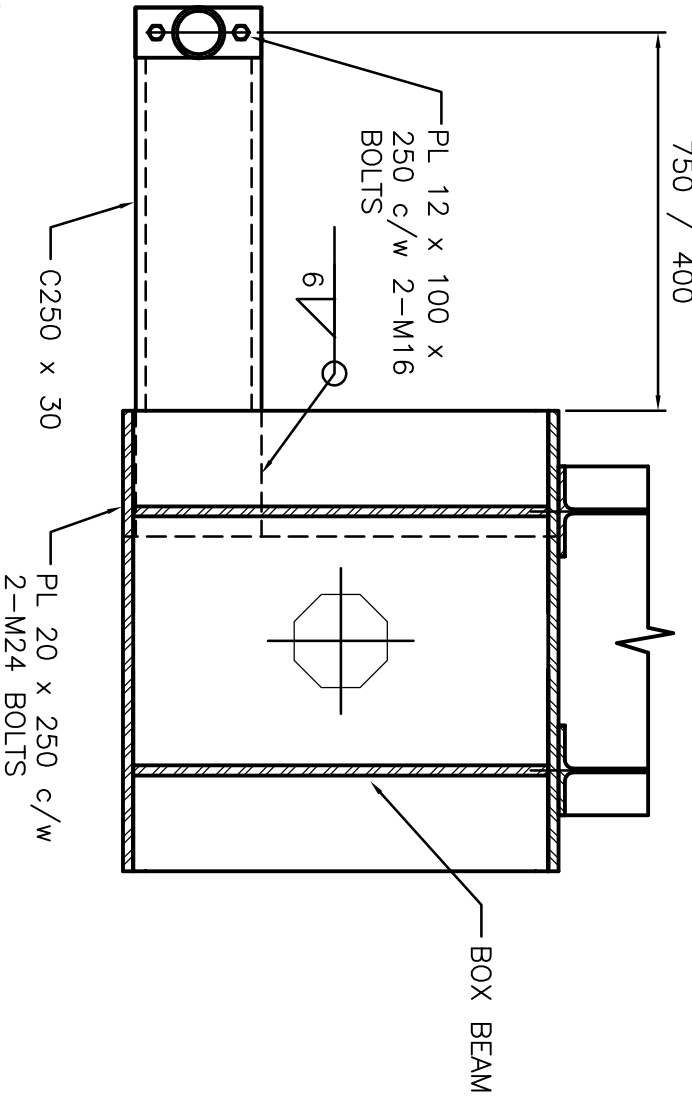
4 HORIZONTAL CHAIN TIE
3 1:20



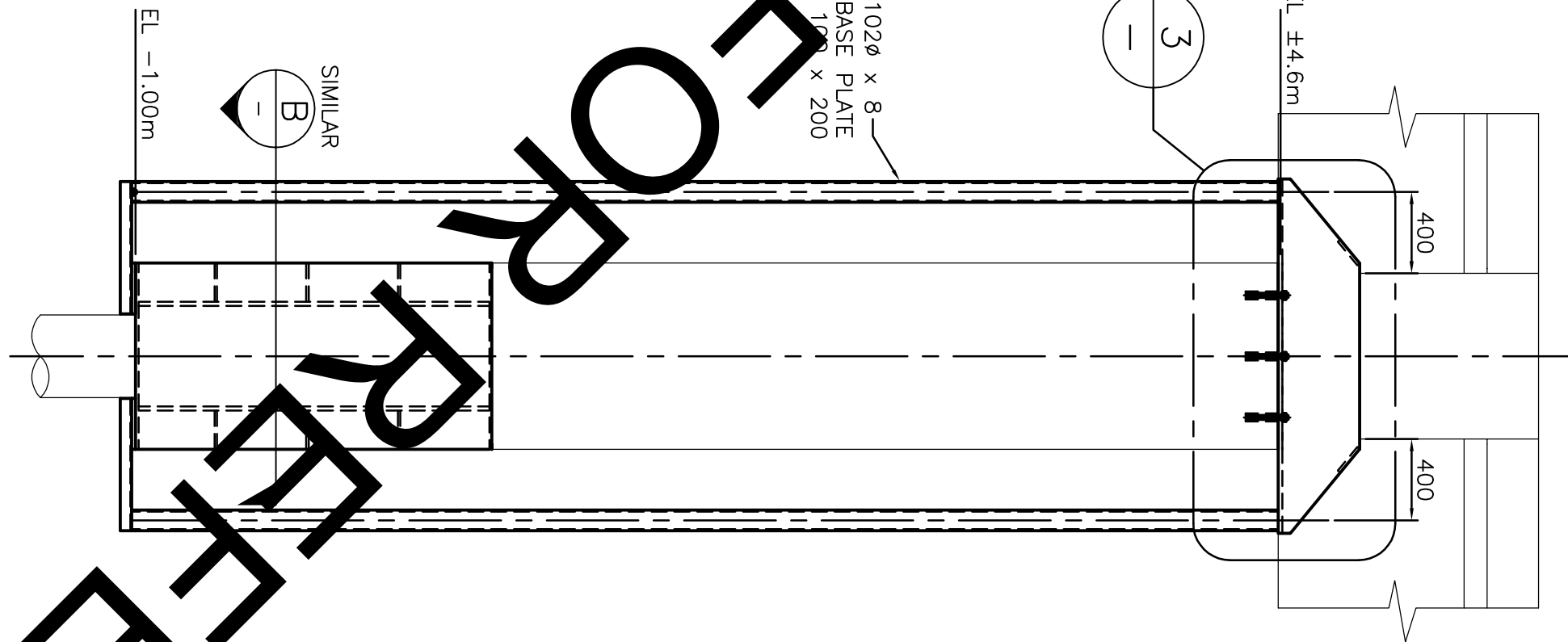
4 CAMEL LOCATOR
1:20



A SECTION
1:15

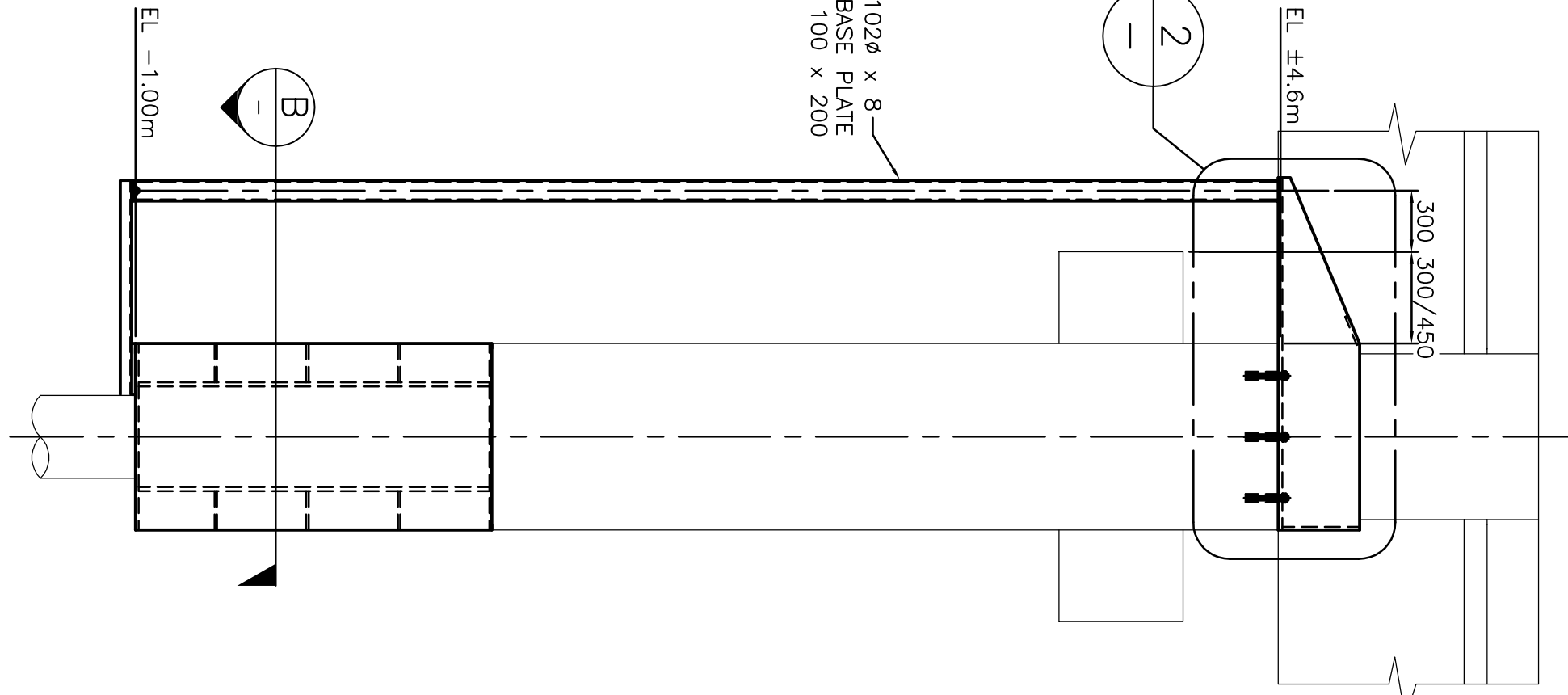


B SECTION
1:15



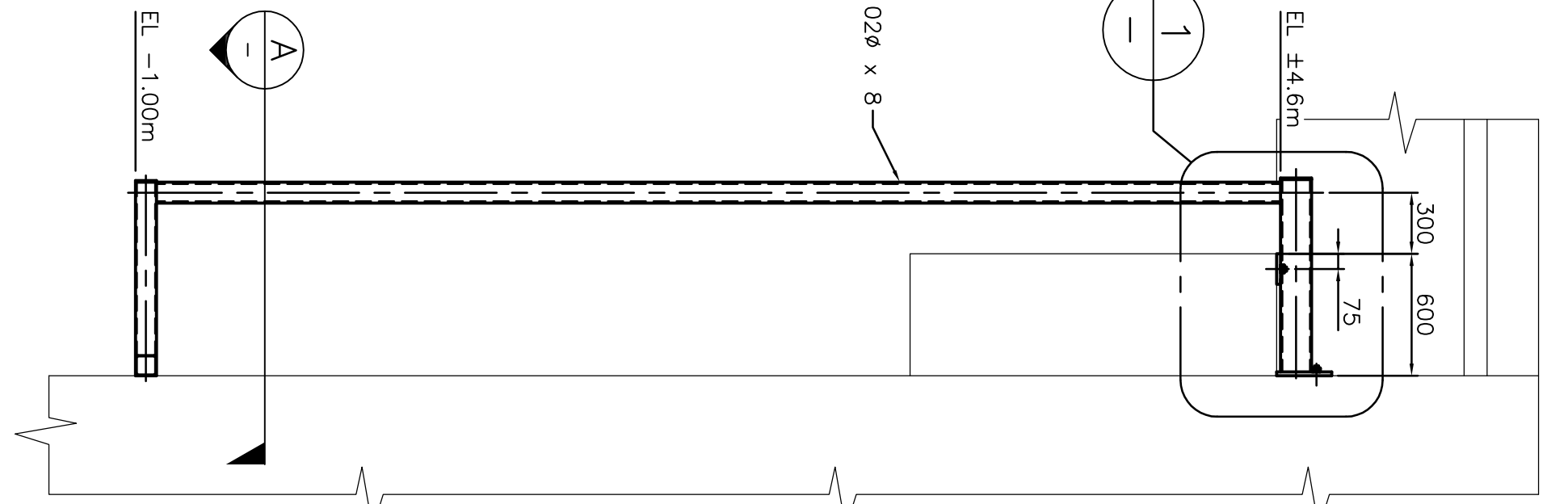
3 CAMEL LOCATOR FOR BENTS @ GFD
1:30

CAMELS AND FENDERS NOT SHOWN
OMITTED AT BENTS (1 SIDE ONLY)



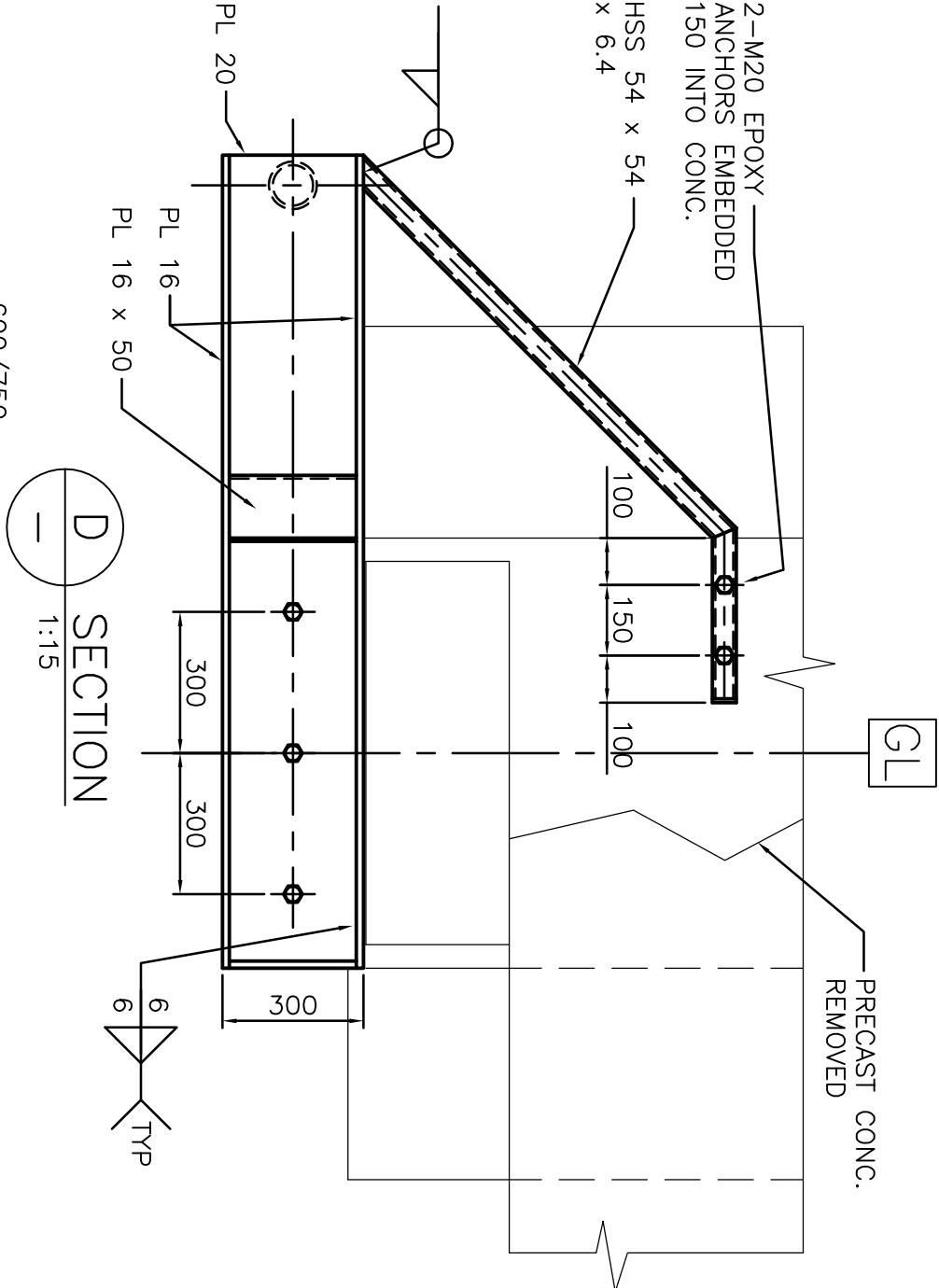
2 CAMEL LOCATOR FOR BENTS
1:30

APPROACH PIER SHOWN
CAMELS AND FENDERS NOT SHOWN
OMITTED AT BENTS 6 AND 10
ON APPROACH PIER

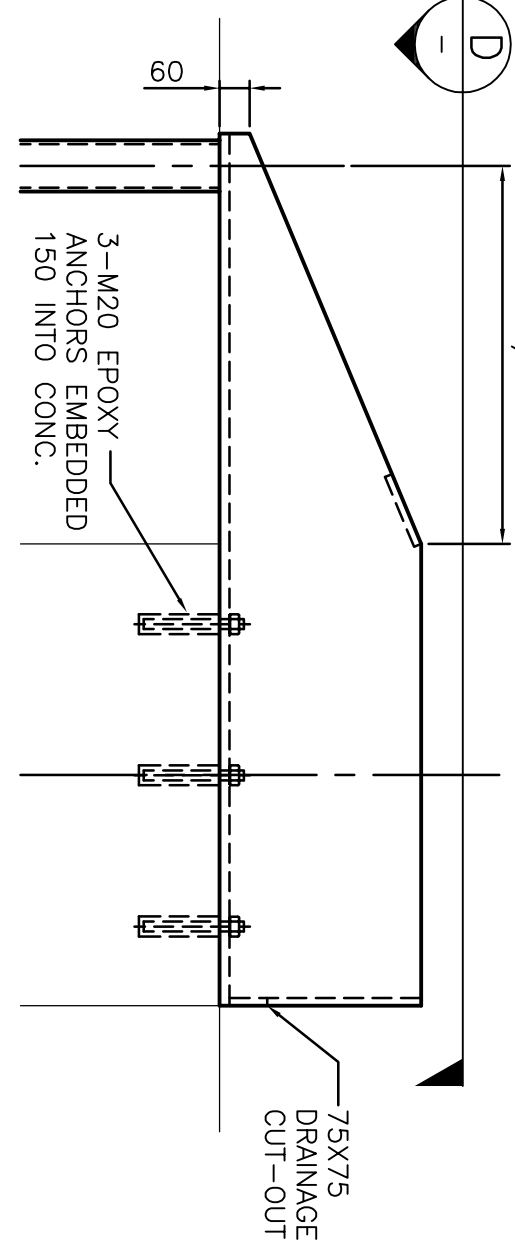


1 CAMEL LOCATOR FOR CRIBS
1:30

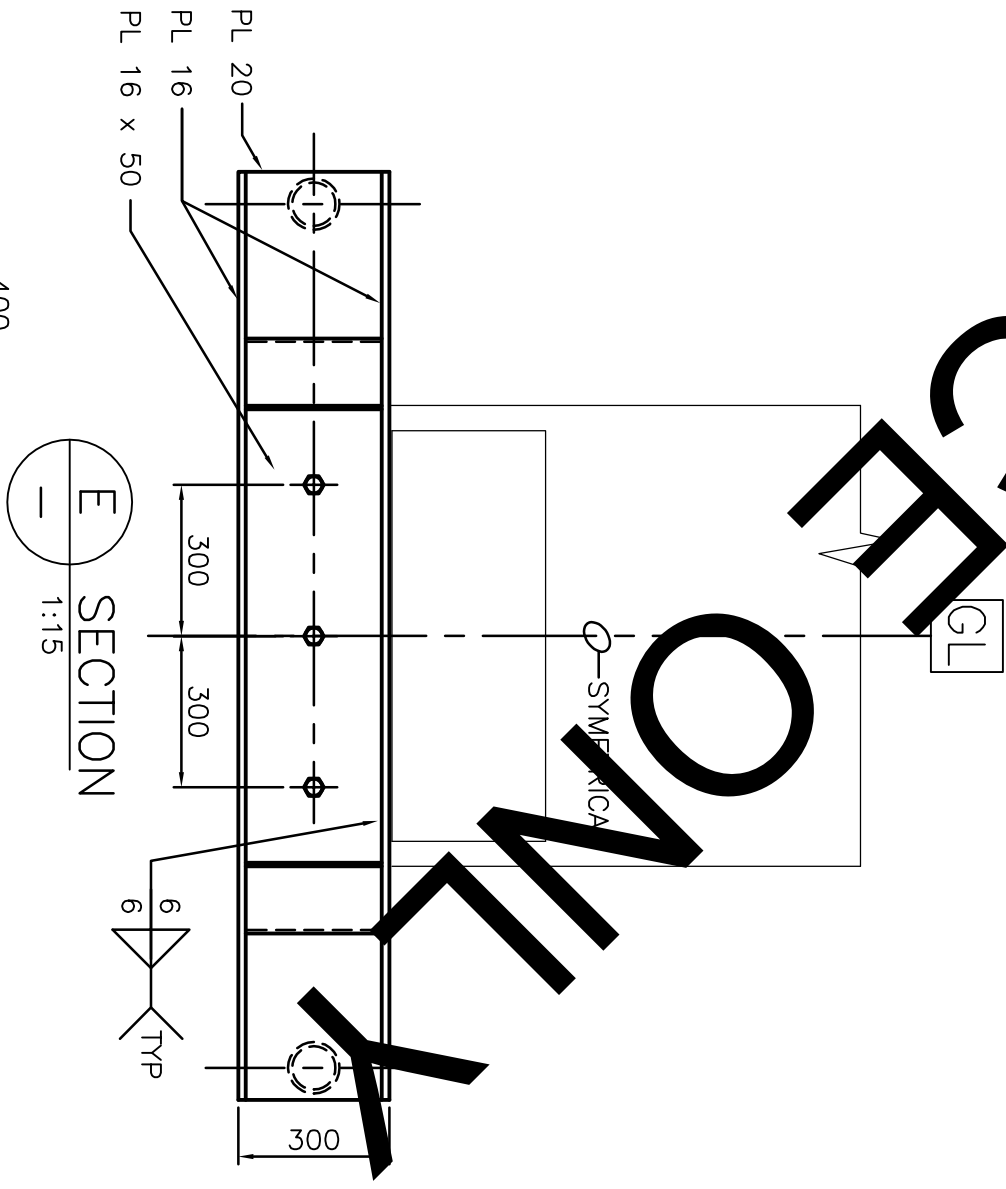
CAMELS AND FENDERS NOT SHOWN
OPPOSITE AS SHOWN IN SOME LOCATIONS



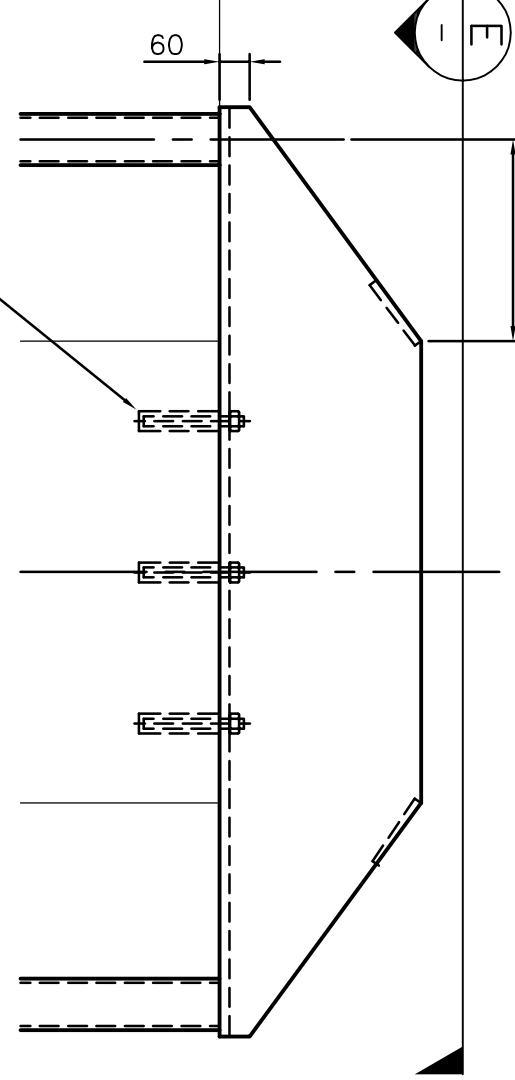
D SECTION
1:15



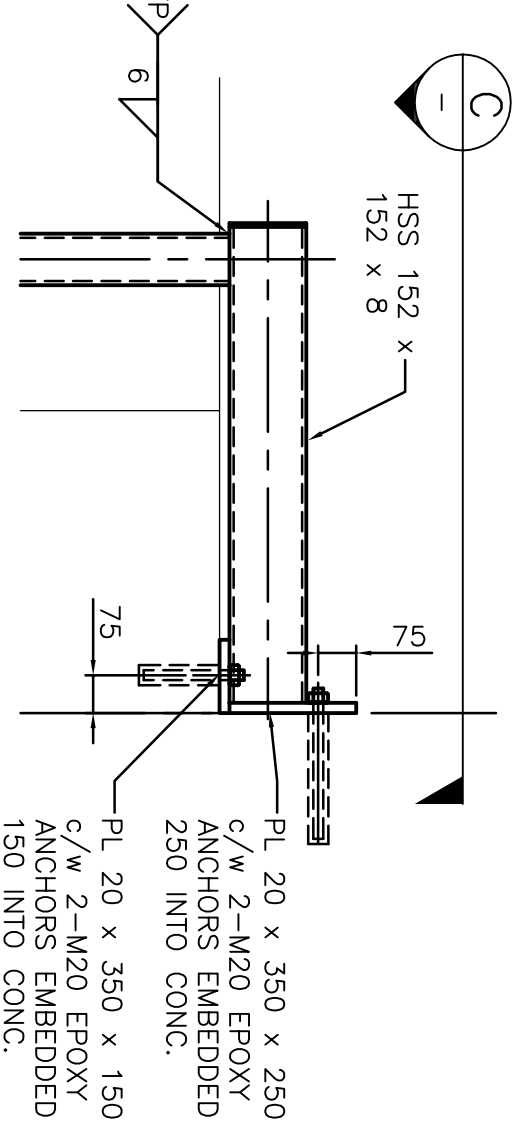
2 DETAIL
1:15



E SECTION
1:15



3 DETAIL
1:15



C SECTION
1:15

1 DETAIL
1:15

drawing
dessein

PATRICIA BAY, B.C.
INSTITUTE OF OCEAN SCIENCES
MAIN WHARF
FENDERING UPGRADE

project
projet

A detail number
B source drawing no.
C detail on drawing no.
A
C

A
B/C

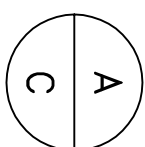
number	revision	revision	ddate
A	AS BUILT		DEC. 7, 2004

designed	MAHMOUD KATHRODA, P. ENG.	conçu
drawn	AREEN DONNELLY	dessiné
approved	03.03.10	approuvé
date	03.03.10	date
PM/SC Project Manager	Administrateur de projets TP/SC	
project number	853033	numéro du projet

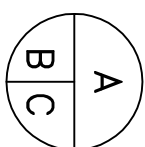
drawing number	numéro du dessin	rev.
012	A	

KM Engineering Group Inc.
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Suite 305 - 885 2nd Street, Victoria, B.C. V8W 1H7
TEL: (250) 920-7979 FAX: (250) 920-7911
CAD FILE No. - SHEET 6
KM ENGINEERING PROJECT No. - KM 04-03

number	revision	revision	date
A	AS BUILT (NO CHANGE)		DEC. 7, 2004



A detail number
B number du détail
C source drawing no.
C de dessin no.



A detail on drawing no.
B détail sur dessin no.

PATRICIA BAY, B.C.
INSTITUTE OF OCEAN SCIENCES
MAIN WHARF
FENDERING UPGRADE

drawing

DETAILS AT CRIBS 1 & 6
ON GRID 13

designé	MAMOUNE KATHIRABA, P. ENG.	consu
date	03.03.03	date
drom	ARIEN DONNELLY	dessine
date	03.03.10	date
approved		approve
date		date
Tender		Soumission
PMOSC Project Manager	Administrateur de projets TP55C	
project number	numero du projet	