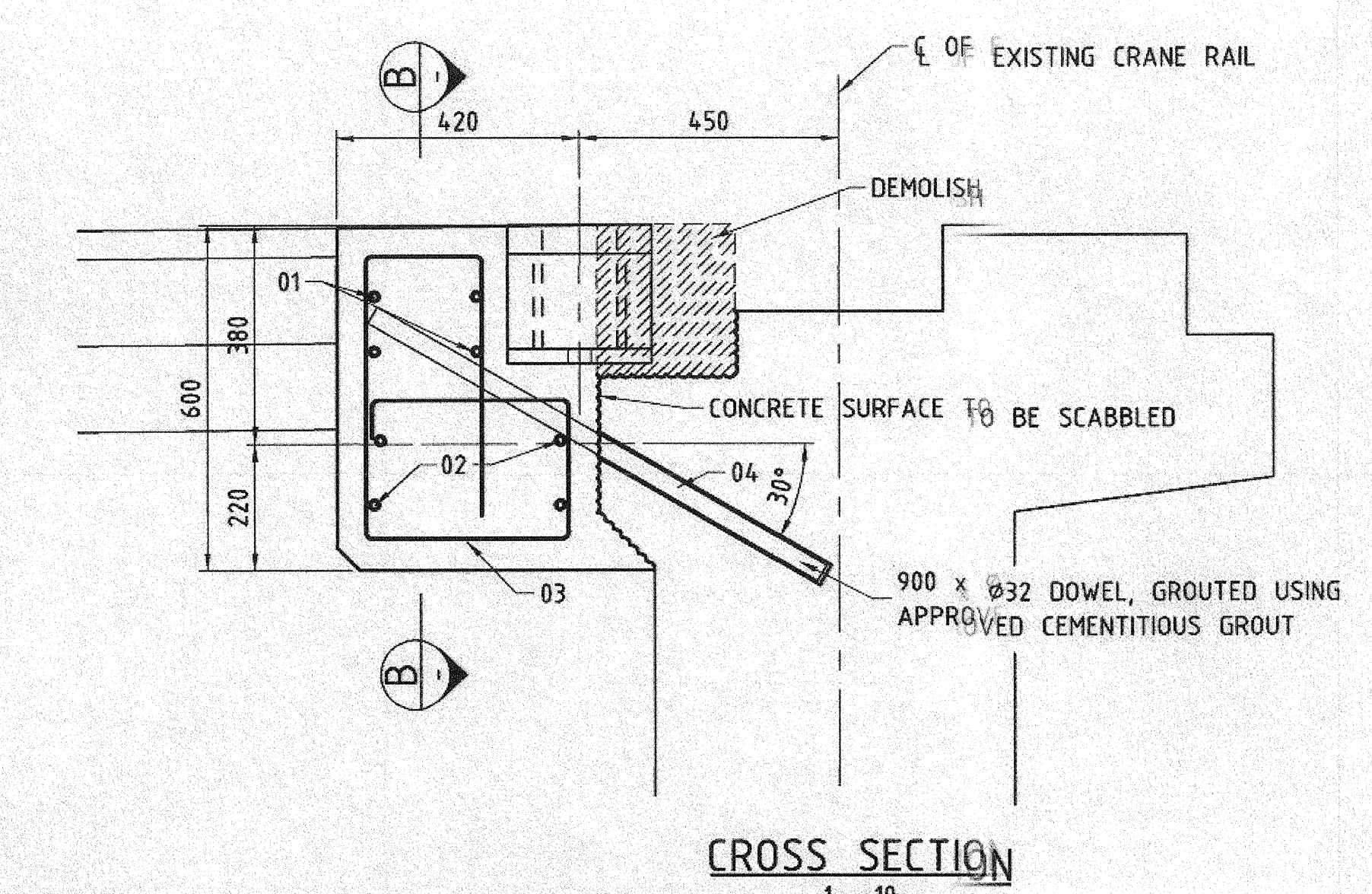
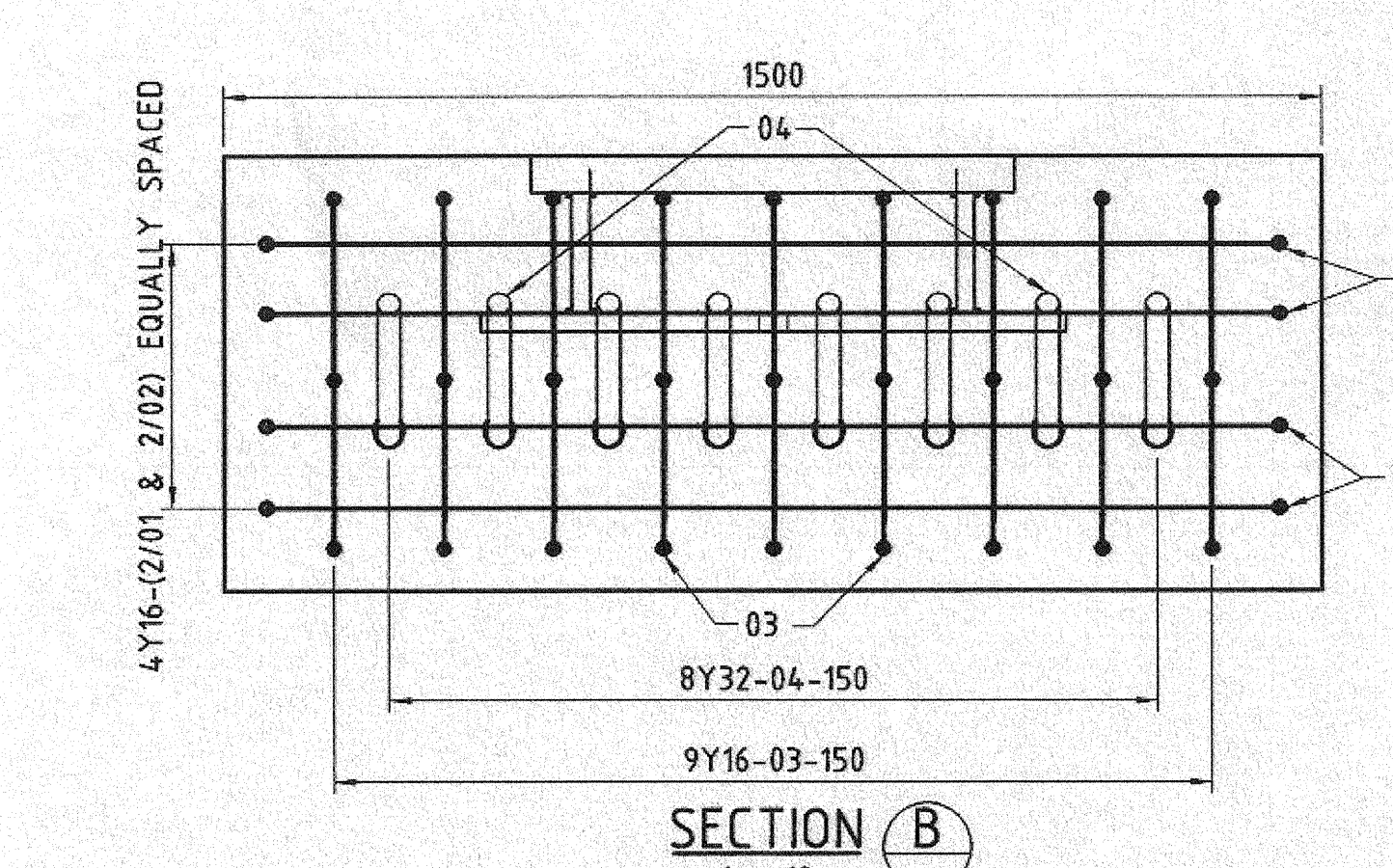
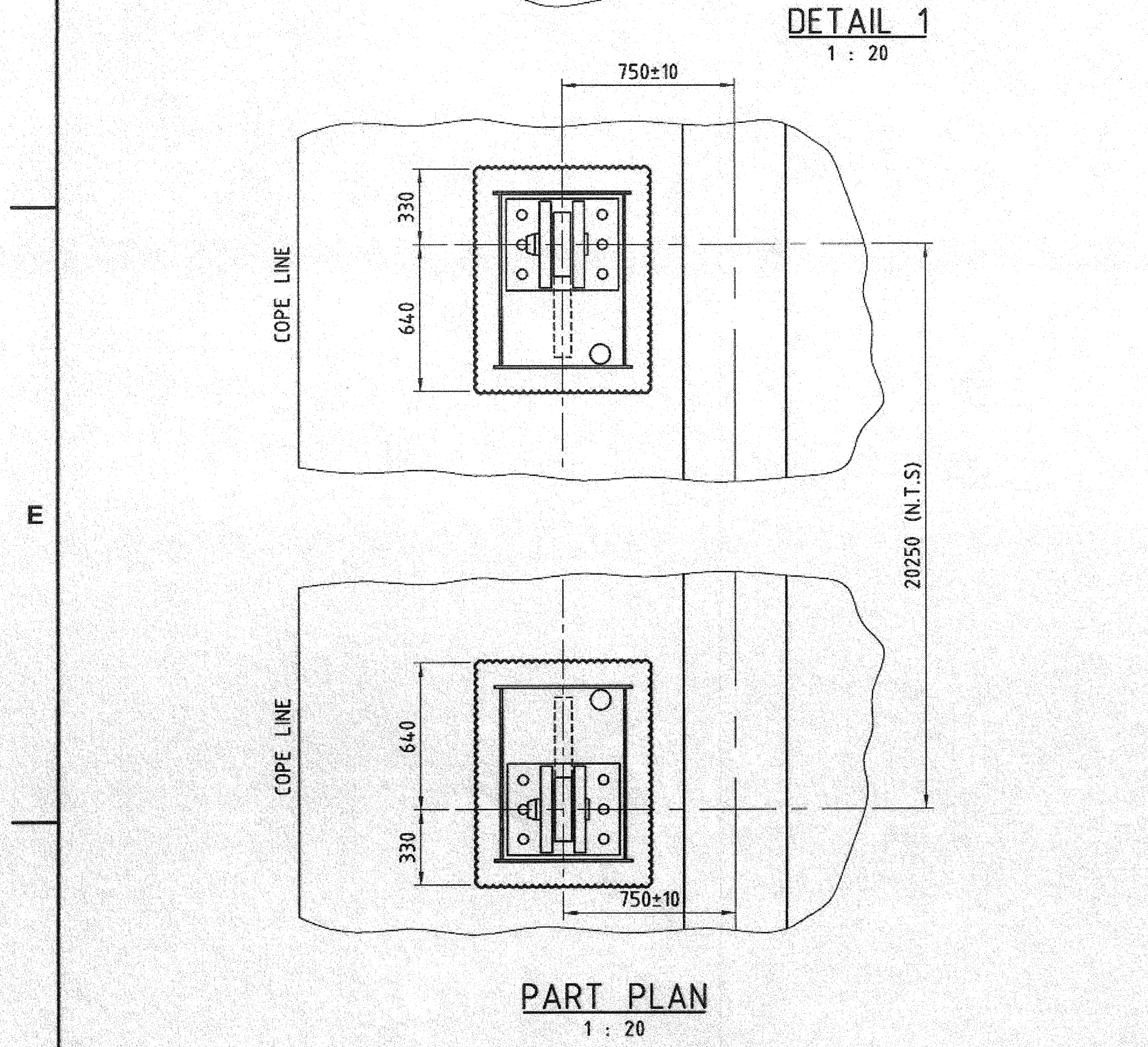


TIE DOWN ANCHOR INSTALLATION

- SAW-CUT 100mm AND BREAK OUT EXISTING CONCRETE TO THE DIMENSIONS AS SHOWN. CORE $\phi 75$ DRAINAGE HOLE THROUGH EXISTING CONCRETE AS SHOWN.
- H.D. BOLTS AND SHUTTER BOX TO BE CAST INTO POSITION ACCURATELY USING THE SHUTTER BOX AS A H.D. BOLT TEMPLATE.
- UPPER RETAINING NUTS TO BE REMOVED FOR FIXING OF THE ANCHOR ASSEMBLY.

STORM PIN ANCHOR INSTALLATION

- SAW-CUT 100mm AND BREAK OUT EXISTING CONCRETE TO THE DIMENSIONS AS SHOWN. CORE $\phi 75$ DRAINAGE HOLE THROUGH EXISTING CONCRETE AS SHOWN.
- HOLD STORM PIN ANCHORS IN POSITION AND GROUT INTO POSITION USING AN APPROVED CEMENTITIOUS GROUT SUCH AS SIKA 212 OR EQUAL APPROVED.

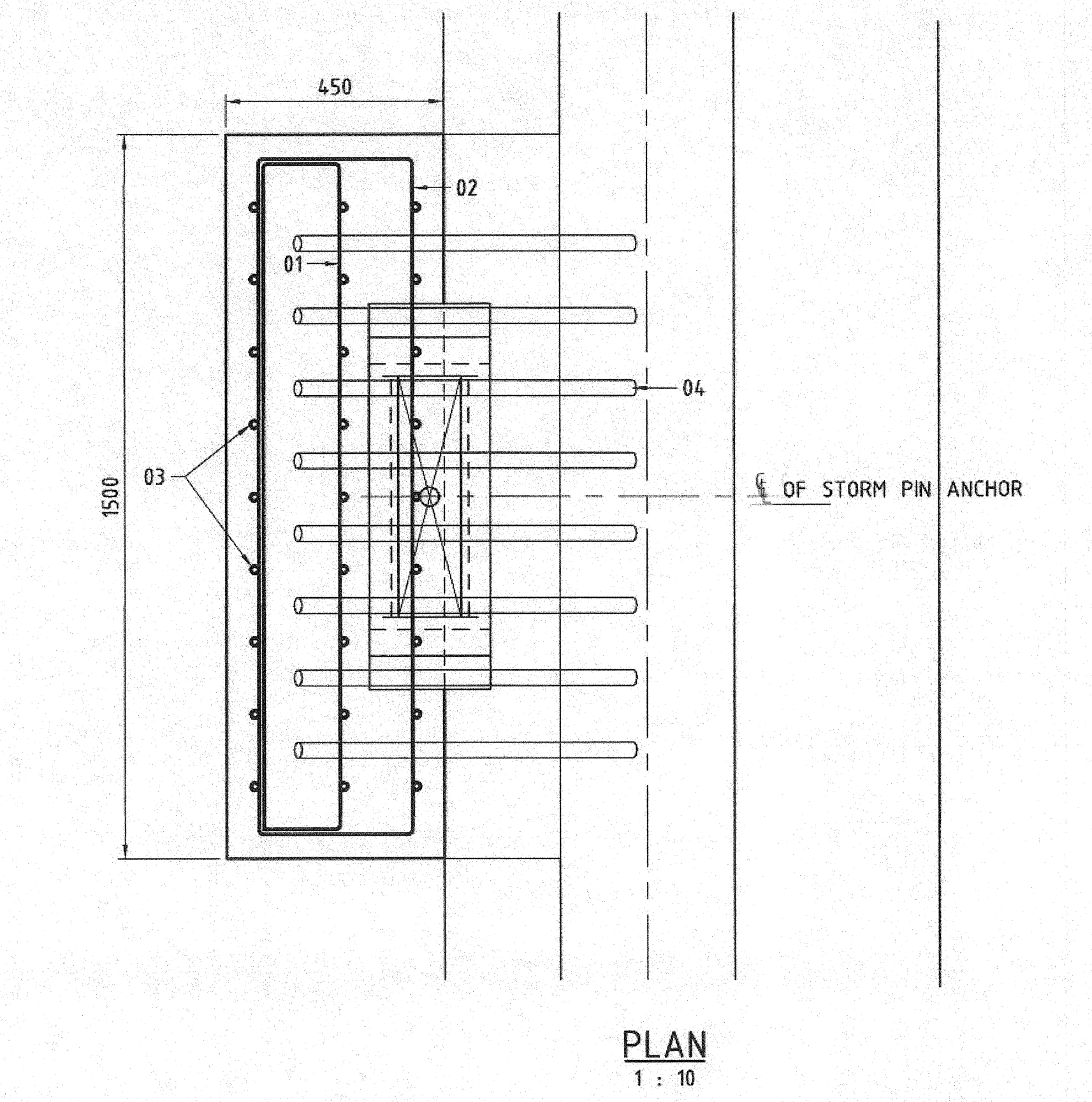
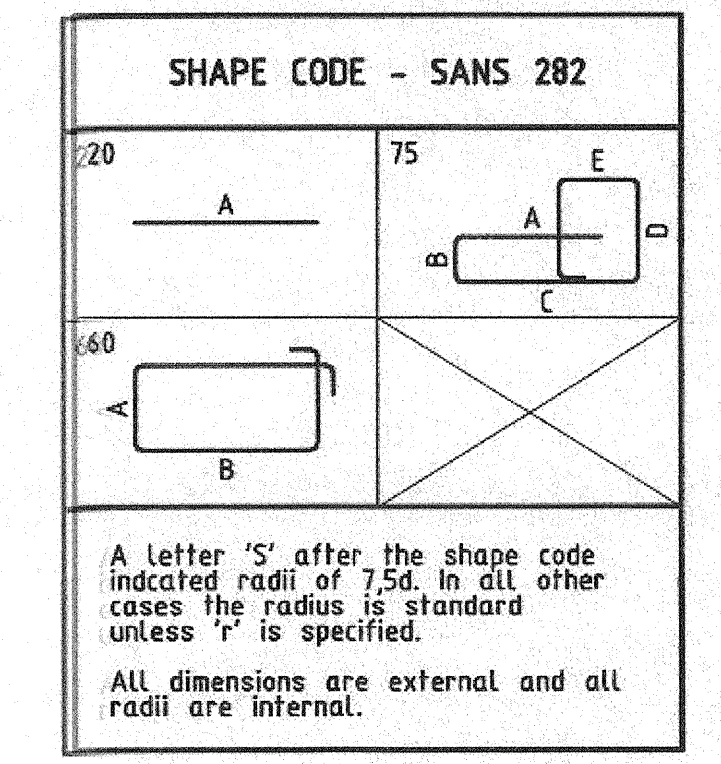


ANCHOR BLOCK

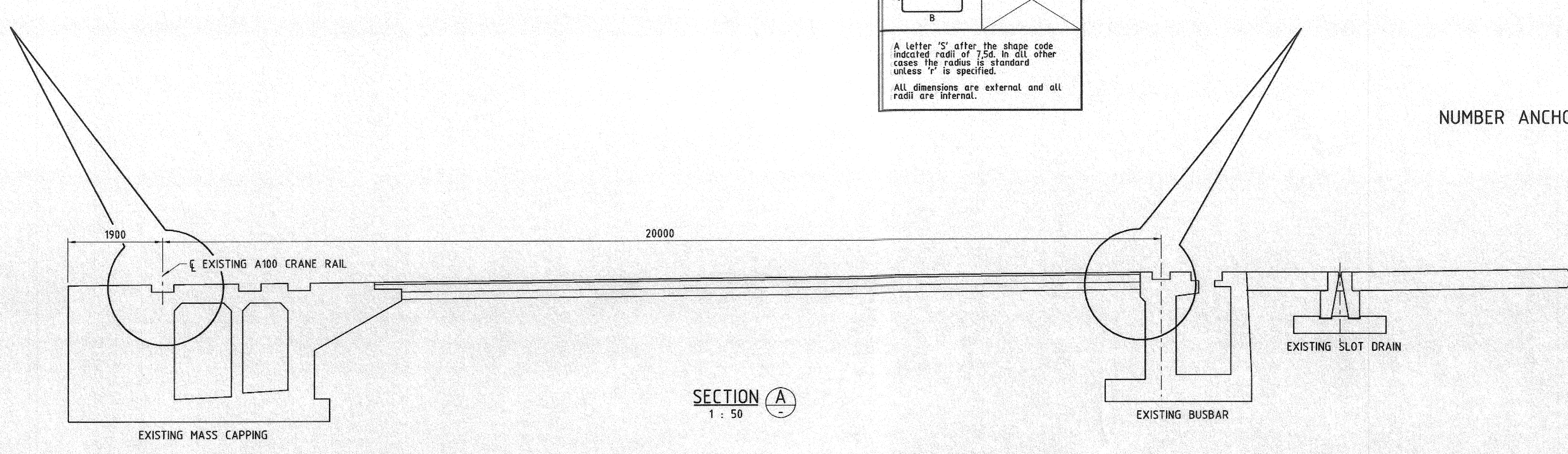
- EXISTING CONCRETE SURFACE AGAINST WHICH NEW CONCRETE IS TO BE CAST SHALL BE SCABBLED TO EXPOSE THE AGGREGATE. BEFORE CASTING CONCRETE THE SURFACE SHALL BE WETTED AND A NEAT CEMENT SLURRY OF PEA-SOUP CONSISTENCY SHALL BE APPLIED TO THE SURFACE IMMEDIATELY BEFORE CONCRETING.
- CONCRETE STRENGTH AT 28 DAYS 40 MPa
- CONCRETE COVER = 50 mm

BENDING SCHEDULE (2 ANCHOR BLOCKS)

Member	Reinforcement				Bending Dimensions for Shape Codes (SANS 282)							
	Bar Mark	Type	No. Off Member	No. In Each	Total No. Of	Cut Length	Shape Code	A	B	C	D	E/r
ANCHOR BLOCK	01	Y16	2	2	4	3250	60	160	1400			
	02	Y16	2	2	4	3550	60	310	1400			
	03	Y16	2	7	14	2000	75	450	200	490	350	240
Total Masses												
					R BARS =							
					Y BARS =	104 kg						



NUMBER ANCHOR BLOCKS REQUIRED = 2



2014-01-14
CAPITAL PROJECTS
DOCUMENT CONTROL - DURBAN
MASTER

SIGNATURE: [Signature]
DATE: 14/01/14
CAPITAL PROJECTS
DOCUMENT CONTROL - DURBAN
AS BUILT

REFERENCE DRAWINGS : RCE-346A Sh.
1. ANCHORAGE LOCATION AND DETAIL
2. STORM PIN AND TIE DOWN ANCHOR : DETAILS
3. STITCHING PILES

AS BUILT

NOTES

- DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION.

DRAWING NO.	REFERENCE
1	REFERENCE DRAWINGS

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
2	AS-BUILT	LAV			2013-04-23
0	ISSUED FOR CONSTRUCTION	LAV			2012-11-13

REVISIONS

This Document includes all design and information therein is Confidential Intellectual Property of Transnet. Copyright and all other rights are reserved by Transnet. This Document may only be used for its intended purpose.

CONSULTANT:

RCE CONSULTANTS
Railway & Civil Engineering

1st Floor, 1000
Durban

CONTRACTOR / CONSULTANT:

FILE	NAME	SIGN	DATE
DRAWN	LAV		12/01/14
CHECKED			
DESIGNED			
CHECKED			

OPERATING DIVISIONS:

FILE	NAME	SIGN	DATE
PRE-ENCL / PR/TECH/PR/ ARCH			
NAME	H de VET		
SIGNATURE	[Signature]		12/11/13
REG. NUMBER	720670		
SCALE:	1:750		

TRANSNET CAPITAL PROJECTS

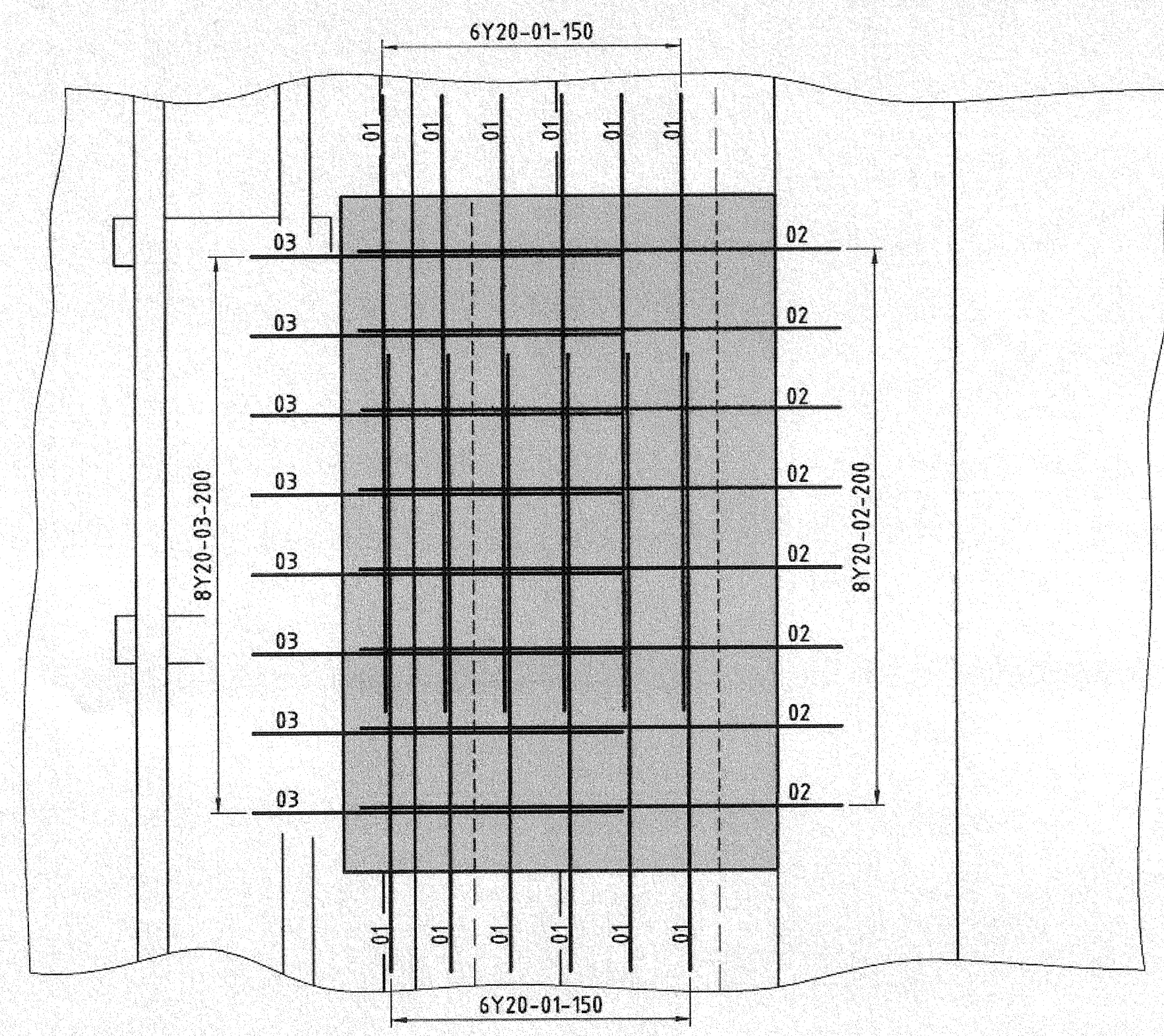
TRANSNET LTD (INCORPORATED IN SOUTH AFRICA)
207 SANDHURST GARDENS
DURBAN TEL: 031 261 1000
P.O. BOX 1073, DURBAN FAX: 031 261 1099

PORT OF DURBAN

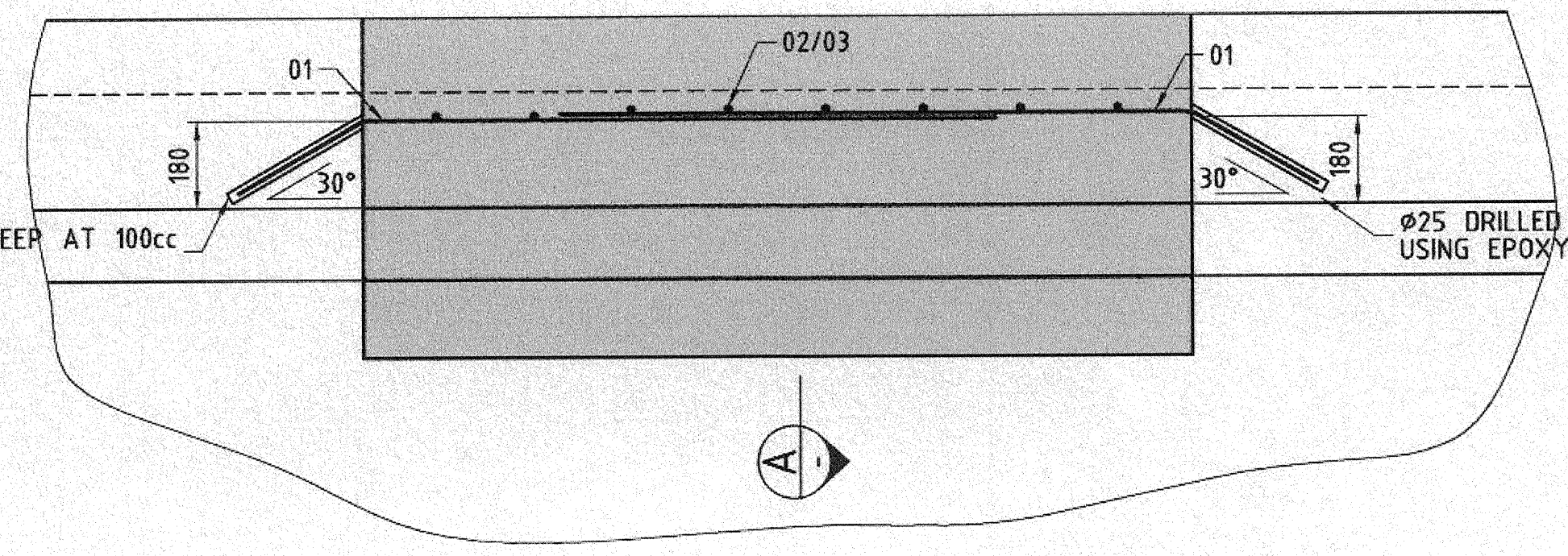
PIER 2 : EAST ARM : BERTHS 200 TO 202

ANCHOR DETAILS : LIEBHERR CRANE ANCHORAGE LOCATION AND DETAIL

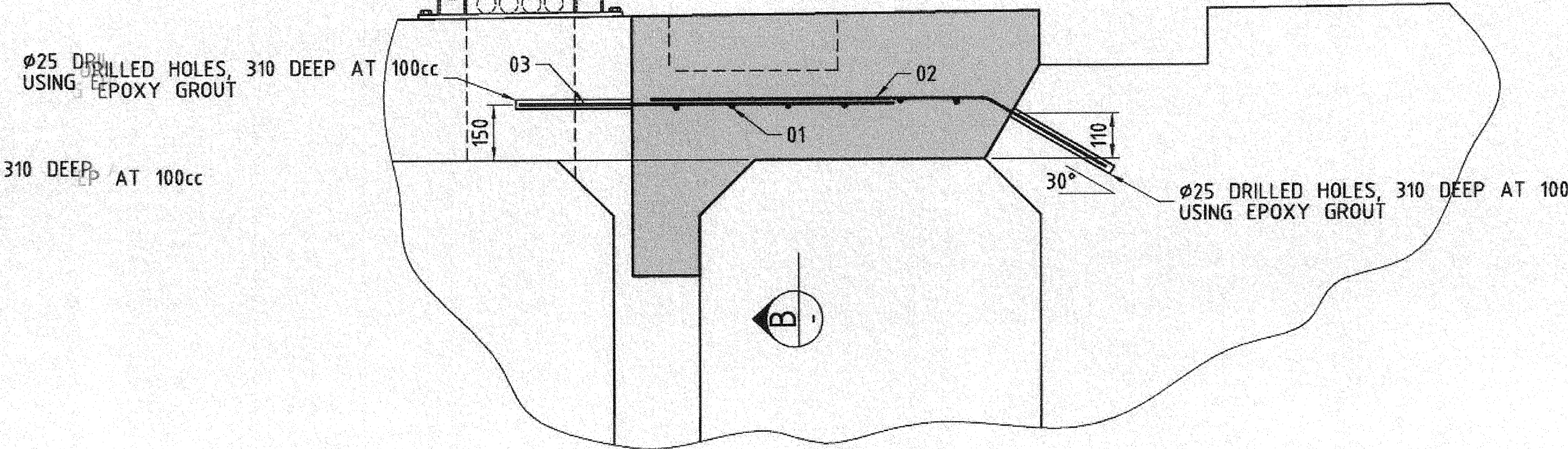
PROJECT NUMBER	ISS	DES	CON	AS-B	REV	ID
AO222230917	1	1	1	1	1	1



PLAN
1 : 12,5

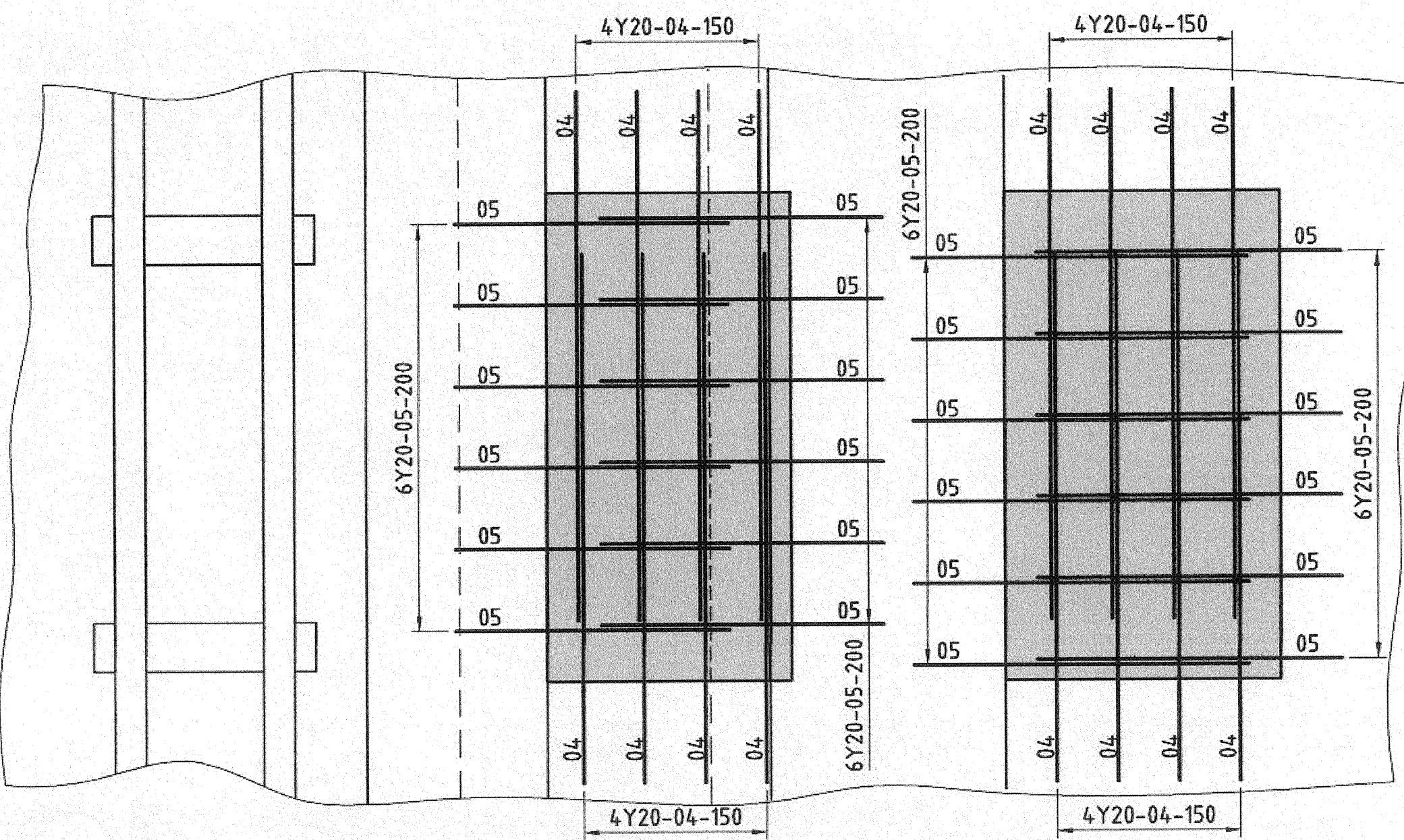


SECTION B
1 : 12,5

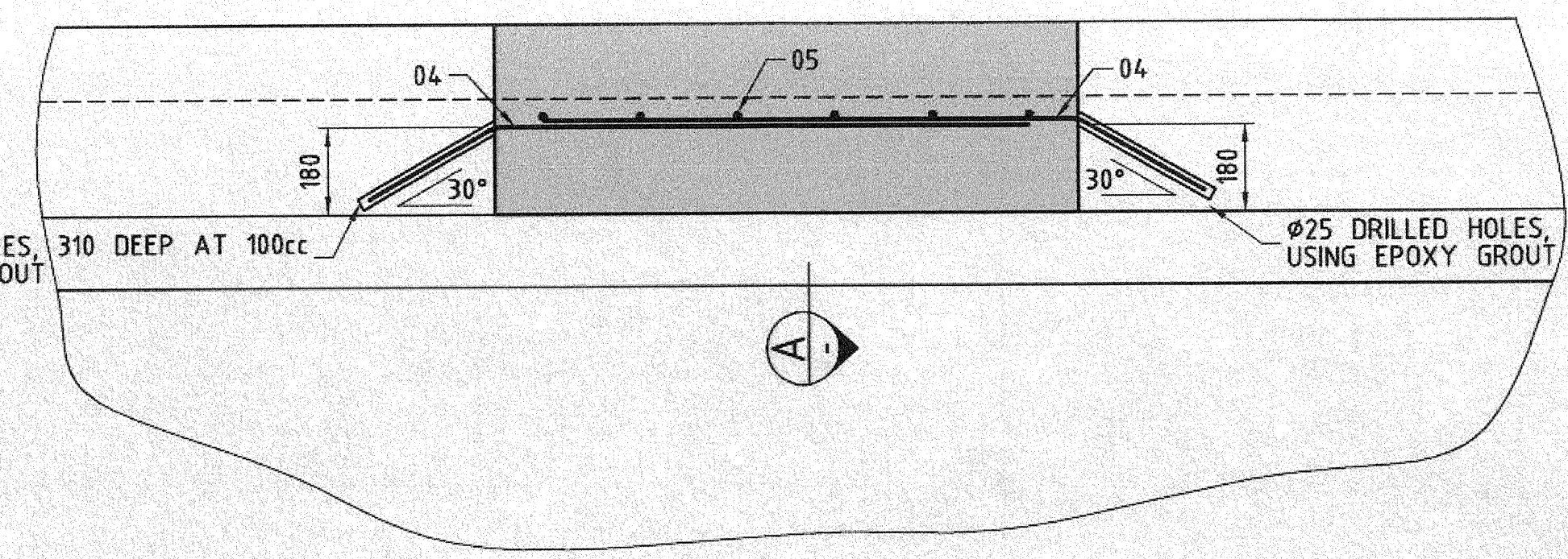


SECTION A
1 : 12,5

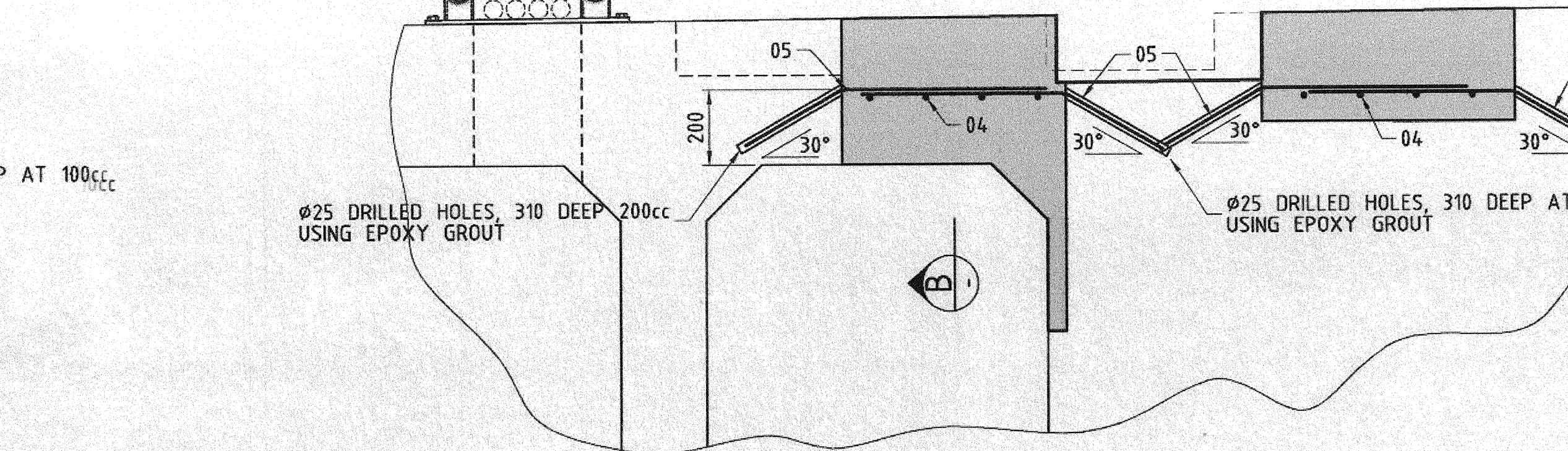
TIE DOWN ANCHORS



PLAN
1 : 12,5



SECTION B
1 : 12,5



SECTION A
1 : 12,5

STORM PIN ANCHORS

Member	Reinforcement					Bending Dimensions for Shape Codes (SANS 282)					SHAPE CODE - SANS 282			
	Bar Mark	Type & Dia	No. Off Member	No. In Each	Total No. Off	Cut Length	Shape Code	A	B	C	D	E/r	20	99a
TIE DOWN	01	Y20	2	12	24	1600	99a	300				170	A	99a
	02	Y20	2	8	16	1250	99a	370				200		
	03	Y20	2	8	16	1000	20	1000						
Total Masses													R BARS =	Y BARS = 183kg

A letter 'S' after the shape code indicates radii of 75d. In all other cases the radius is standard unless 'r' is specified.
All dimensions are external and all radii are internal.

20H-01-14
CAPITAL PROJECTS
DOCUMENT CONTROL
MASTER

SIGNATURE: [Signature]
DATE: 14/01/14
CAPITAL PROJECTS
DOCUMENT CONTROL
AS BUILT

Member	Reinforcement					Bending Dimensions for Shape Codes (SANS 282)					SHAPE CODE - SANS 282			
	Bar Mark	Type & Dia	No. Off Member	No. In Each	Total No. Off	Cut Length	Shape Code	A	B	C	D	E/r	20	99a
STORM PIN	04	Y20	2	8	16	1400	99a	300				170	A	99a
	05	Y20	2	12	24	850	99a	300				170		
Total Masses													R BARS =	Y BARS = 145kg

A letter 'S' after the shape code indicates radii of 75d. In all other cases the radius is standard unless 'r' is specified.
All dimensions are external and all radii are internal.

- NOTES
1. CONCRETE CUBE STRENGTH AT 28 DAYS 40MPa/19mm
 2. REINFORCING SHALL COMPLY WITH S.A.N.S 920: 2005 WITH THE FOLLOWING MINIMUM YIELD STRENGTH:
TYPE "Y" HIGH YIELD TYPE 2 DEFORMED BAR 450MPa
TYPE "R" MILD STEEL PLAIN ROUND BAR 250MPa

AS BUILT

NOTES
1. DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION.

CONSULTANT:
RCE CONSULTANTS
Railway & Civil Engineering
Tel: +27 (0) 11 456 6666 Fax: +27 (0) 11 456 6666
Building 1 P.O. Box 10279
Riverside Drive Durban 4013
South Africa

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
A	AS-BUILT	LAV	J.G.	HDW	2013-04-23
0	ISSUED FOR CONSTRUCTION	LAV	J.G.	HDW	2012-08-13

CONTRACTOR / CONSULTANT				TRANSNET CAPITAL PROJECTS			
TITLE	NAME	SIGN	DATE	TITLE	NAME	SIGN	DATE
				DRAWING	LAV		12/08/13
				CHECKED	J.G.		12/08/13
				DESIGNED	HDW		
				CHECKED	J.G.		

Transnet Capital Projects
TRANSNET
207 MAHATMA GANDHI ROAD
DURBAN TEL: 031 351 1896
P.O. BOX 1073, DURBAN FAX: 031 351 1895

PORT OF DURBAN
INFRASTRUCTURE FOR NEW SHIP TO SHORE
CRANES AT NORTH QUAY,
REPAIRS TO UN-USED ANCHOR HOLES IN TUNNEL
DETAILS

REVISIONS
This document is the property of RCE Consultants. It is to be used only for the project for which it was prepared. It is not to be used for any other purpose without the written consent of RCE Consultants.

PROJECT NUMBER	DD	PBS	DD	TYPE	DRAWING NO.	SHEET	REV.	10
AO2	2	2	3	0	9	7	1	1
	0	0	0	1	8	0	1	0
	0	1	0	1	0	1	1	2
	1	2	1	0	1	1	2	1