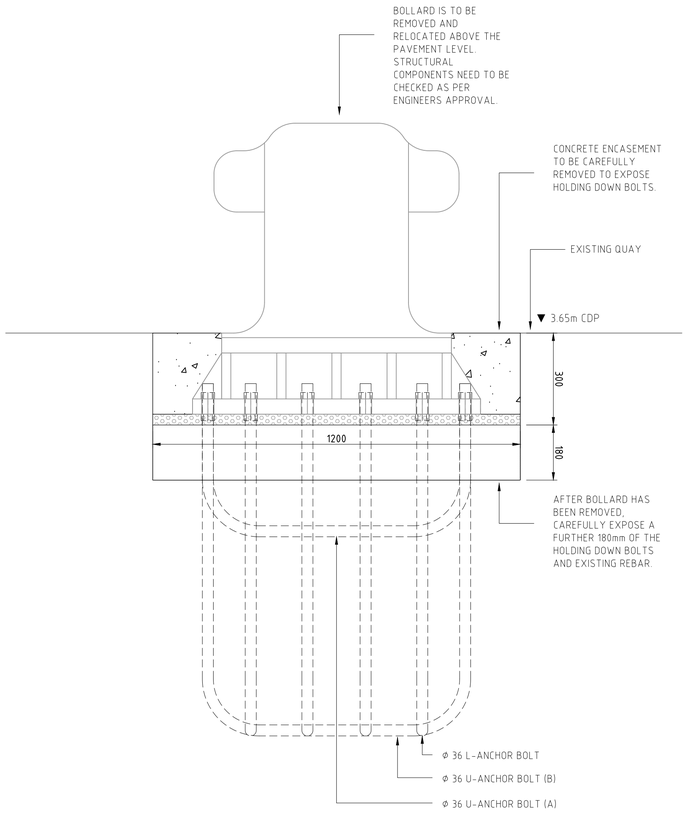
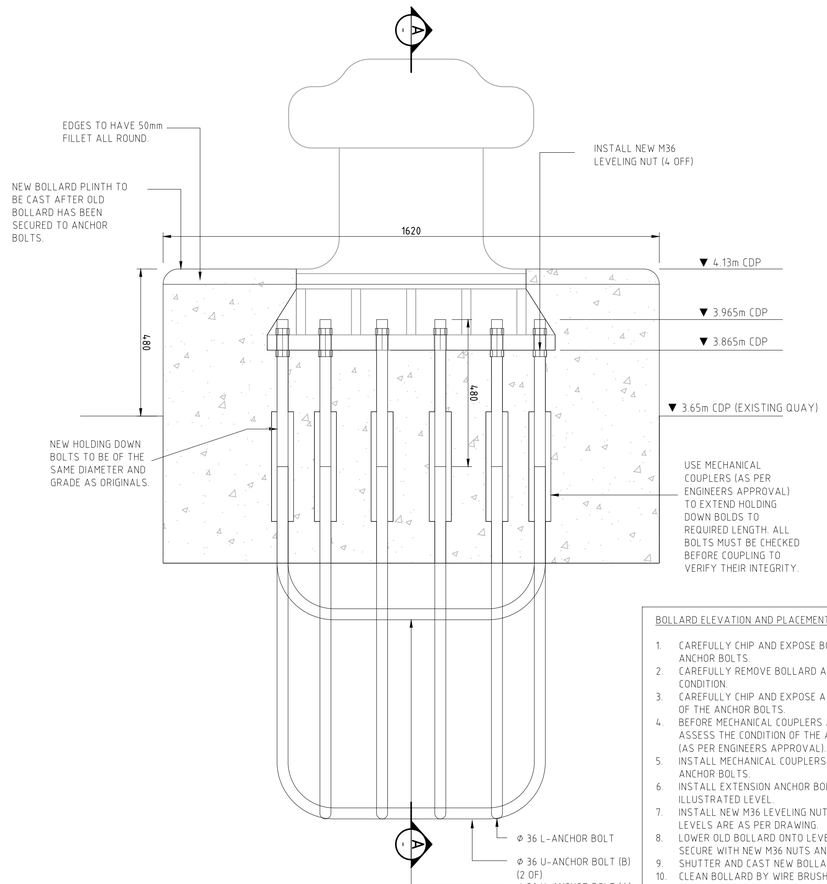
DO NOT SCALE - IF IN DOUBT, ASK



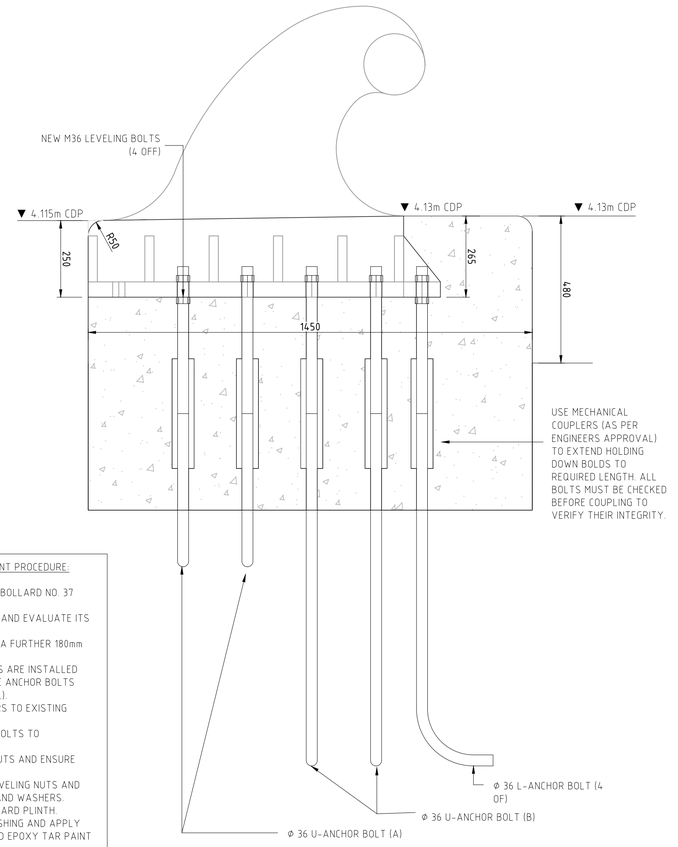
BOLLARD 37 :LANDWARD ELEVATION
1:10



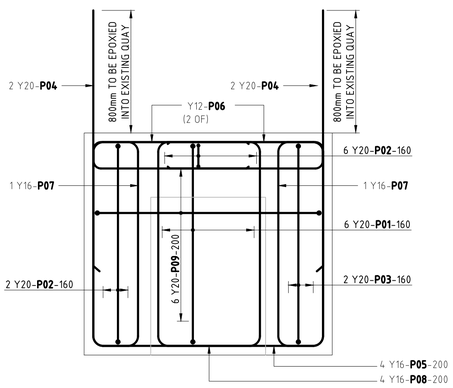
SEAWARD ELEVATION
1:10

BOLLARD ELEVATION AND PLACEMENT PROCEDURE:

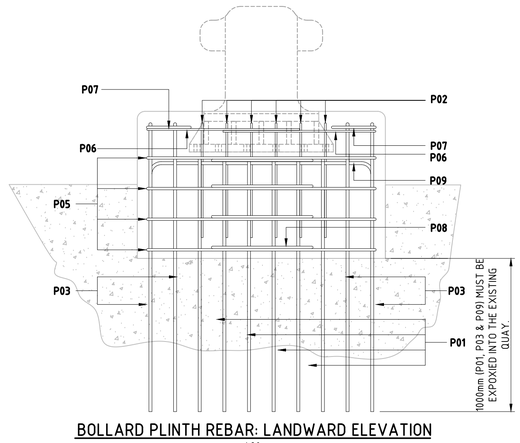
1. CAREFULLY CHIP AND EXPOSE BOLLARD NO. 37 ANCHOR BOLTS.
2. CAREFULLY REMOVE BOLLARD AND EVALUATE ITS CONDITION.
3. CAREFULLY CHIP AND EXPOSE A FURTHER 180mm OF THE ANCHOR BOLTS.
4. BEFORE MECHANICAL COUPLERS ARE INSTALLED ASSESS THE CONDITION OF THE ANCHOR BOLTS (AS PER ENGINEERS APPROVAL).
5. INSTALL MECHANICAL COUPLERS TO EXISTING ANCHOR BOLTS.
6. INSTALL EXTENSION ANCHOR BOLTS TO ILLUSTRATED LEVEL.
7. INSTALL NEW M36 LEVELING NUTS AND ENSURE LEVELS ARE AS PER DRAWING.
8. LOWER OLD BOLLARD ONTO LEVELING NUTS AND SECURE WITH NEW M36 NUTS AND WASHERS.
9. SHUTTER AND CAST NEW BOLLARD PLINTH.
10. CLEAN BOLLARD BY WIRE BRUSHING AND APPLY TWO NEW COATS OF APPROVED EPOXY TAR PAINT AS PER SABS 801.



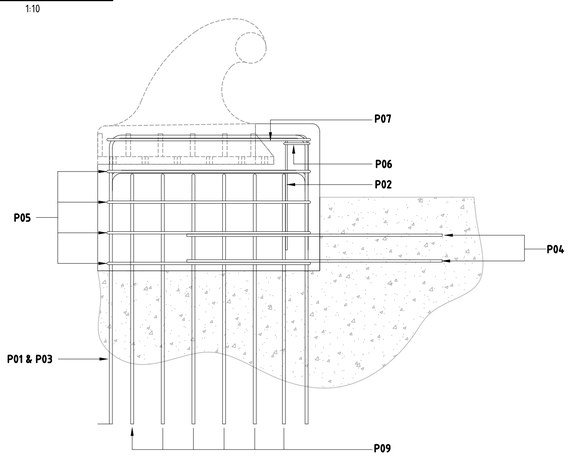
SECTION A
1:10



BOLLARD PLINTH REBAR: PLAN
1:20



BOLLARD PLINTH REBAR: LANDWARD ELEVATION
1:20



BOLLARD PLINTH REBAR: SIDE ELEVATION
1:20

NOTES:

1. COVER
   1.1. 60 mm COVER TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
2. CONCRETE STRENGTH
   2.1. 28 DAY CUBE STRENGTH = 40MPa
3. REINFORCEMENT
   3.1. REINFORCEMENT TO COMPLY WITH SANS 920 (2005).
   3.2. HIGH YIELD STEEL:- 450 MPa
   3.3. MILD STEEL :- 250 MPa
4. BENDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH SANS 282 (2004).

DRAWING NO.	REFERENCE
1785-CO-160-C-SCH-0003-01	BOLLARD 37 PLINTH BENDING SCHEDULE
1785-CO-160-C-DWG-0005-02	TYPICAL PAVEMENT DETAILS SHT 2 OF 2

REFERENCE DRAWINGS

Engineers
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PROJECT NO	DIS CODE	AREA	DISP	TYPE	DRG NO	SHEET	STATUS	REV
1785	CO	160	C	DWG	0003	02	T	0A

NO.	DESCRIPTION	BY	CHK'D	APP'D	DATE
0A	ISSUED FOR TENDER	DM	MC	JZ	2019.07.26

REVISIONS / ISSUE AUTHORIZATION

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EPCM CONSULTANT: TNPA

TITLE	NAME	SIGNATURE	DATE
LEAD DES. ENG.			
ENG. COORD.			
ENG. MANAGER			
AREA MANAGER			
PROJECT MGR.			
DIVISION			

DIV.	TITLE	NAME	SIGNATURE	DATE

ORIGINATOR: ZAA

TITLE	NAME	SIGNATURE	DATE
DRAWN	DM		19 07 26
CHECKED	MC/WvW		19 07 26
ENG. COORD.			
DISCIP. ENG.			
ENG. MANAGER			
AREA MANAGER			

PR.ENG. / PR.TECH.

NAME	J. ZIETSMAN	DATE
SIGNATURE		19 07 26
REG. NUMBER	760293	
SCALE :	OR AS NOTED	A1

Transnet National Ports Authority
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PORT OF DURBAN

DCT BERTHS 203 to 205 RECONSTRUCTION DEEPENING AND LENGTHENING

ASPHALT AND CONCRETE PAVING PHASE 3

BOLLARD 37 EXTENSION

PROJECT NUMBER	DV	FBS	DIS.	TYPE	DRG. NO.	SHT.	REV.	ID
2122830-1	160	C	GA	1002	02	0A	DM	