## PIER 07 BASE BENDING SCHEDULE

| STRUCTURAL MEMBER | BAR MARK | TYPE & SIZE | No OF MEMBERS | No OF BARS | TOTAL No. | BAR LENGTH | SHAPE CODE | DIMENSIONS (mm) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | A | B | C | D | E/R |
| PIER 07 FOUNDATION | 1 | Y32 | 1 | 66 | 66 | 7975 | 55 | 600 | 1100 | 4900 | 1100 | 600 |
| PIER 07 FOUNDATION | 2 | Y32 | 1 | 66 | 66 | 5950 | 38 | 600 | 4900 | 600 | | |
| PIER 07 FOUNDATION | 5 | Y20 | 1 | 25 | 25 | 8400 | 37 | 650 | 7800 | | | |
| PIER 07 FOUNDATION | 5 | Y20 | 1 | 25 | 25 | 8400 | 37 | 650 | 7800 | | | |
| PIER 07 FOUNDATION | 5 | Y20 | 1 | 25 | 25 | 8400 | 37 | 650 | 7800 | | | |
| PIER 07 FOUNDATION | 5 | Y20 | 1 | 25 | 25 | 8400 | 37 | 650 | 7800 | | | |
| PIER 07 FOUNDATION | 6 | Y20 | 1 | 5 | 5 | 6325 | 38 | 800 | 4825 | 800 | | |
| PIER 07 FOUNDATION | 6 | Y20 | 1 | 5 | 5 | 6325 | 38 | 800 | 4825 | 800 | | |
| PIER 07 FOUNDATION | 7 | Y20 | 1 | 4 | 4 | 12900 | 20 | 12900 | | | | |
| PIER 07 FOUNDATION | 7 | Y20 | 1 | 4 | 4 | 12900 | 20 | 12900 | | | | |
| PIER 07 FOUNDATION | 10 | Y16 | 1 | 12 | 12 | 3050 | 60 | 1075 | 300 | | | |
| PIER 07 FOUNDATION | 10 | Y16 | 1 | 12 | 12 | 3050 | 60 | 1075 | 300 | | | |
| PIER 07 FOUNDATION | 10 | Y16 | 1 | 12 | 12 | 3050 | 60 | 1075 | 300 | | | |
| PIER 07 FOUNDATION | 10 | Y16 | 1 | 12 | 12 | 3050 | 60 | 1075 | 300 | | | |
| PIER 07 FOUNDATION | 10 | Y16 | 1 | 12 | 12 | 3050 | 60 | 1075 | 300 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 50 | 50 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 50 | 50 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |
| PIER 07 FOUNDATION | 14 | Y32 | 1 | 1 | 1 | 3125 | 37 | 2750 | 450 | | | |

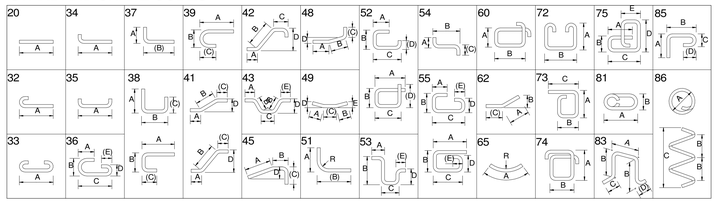
## PIER 07 WALL BENDING SCHEDULE

| STRUCTURAL MEMBER | BAR MARK | TYPE & SIZE | No OF MEMBERS | No OF BARS | TOTAL No. | BAR LENGTH | SHAPE CODE | DIMENSIONS (mm) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | A | B | C | D | E/R |
| PIER 07 WALL | 1 | Y20 | 1 | 44 | 44 | 2300 | 39 | 950 | 800 | 950 | | |
| PIER 07 WALL | 1 | Y20 | 1 | 44 | 44 | 2300 | 39 | 950 | 800 | 950 | | |
| PIER 07 WALL | 2 | Y20 | 1 | 44 | 44 | 10200 | 20 | 10200 | | | | |
| PIER 07 WALL | 2 | Y20 | 1 | 44 | 44 | 10200 | 20 | 10200 | | | | |
| PIER 07 WALL | 3 | Y32 | 1 | 50 | 50 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 3 | Y32 | 1 | 50 | 50 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 3 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 3 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 3 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 3 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 4 | Y32 | 1 | 1 | 1 | 9950 | 37 | 325 | 9700 | | | |
| PIER 07 WALL | 4 | Y32 | 1 | 1 | 1 | 9950 | 37 | 325 | 9700 | | | |
| PIER 07 WALL | 4 | Y32 | 1 | 1 | 1 | 9950 | 37 | 325 | 9700 | | | |
| PIER 07 WALL | 4 | Y32 | 1 | 1 | 1 | 9950 | 37 | 325 | 9700 | | | |
| PIER 07 WALL | 5 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 5 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 5 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 5 | Y32 | 1 | 1 | 1 | 9925 | 37 | 300 | 9700 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |
| PIER 07 WALL | 6 | Y12 | 1 | 10 | 10 | 2400 | 60 | 275 | 800 | | | |

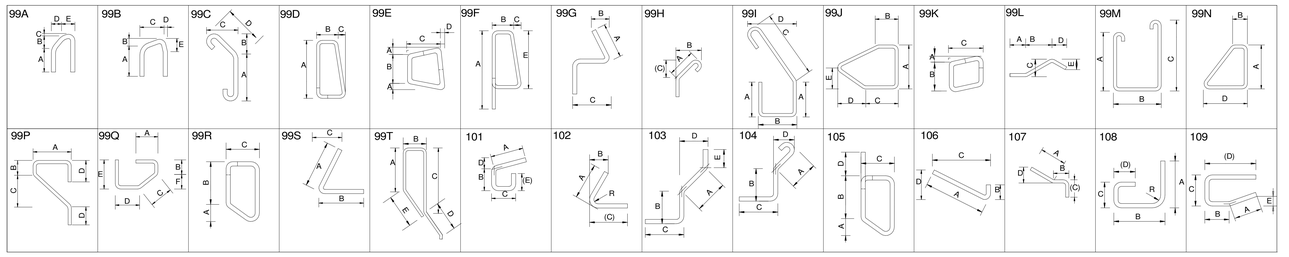
## PIER 07 CAP BEAM BENDING SCHEDULE

| STRUCTURAL MEMBER | BAR MARK | TYPE & SIZE | No OF MEMBERS | No OF BARS | TOTAL No. | BAR LENGTH | SHAPE CODE | DIMENSIONS (mm) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | A | B | C | D | E/R |
| PIER 07 CAPPING BEAM | 1 | Y12 | 1 | 57 | 57 | 3550 | 60 | 1150 | 500 | | | |
| PIER 07 CAPPING BEAM | 2 | Y12 | 1 | 69 | 69 | 4050 | 60 | 1400 | 500 | | | |
| PIER 07 CAPPING BEAM | 3 | Y16 | 1 | 57 | 57 | 5400 | 60 | 1150 | 1400 | | | |
| PIER 07 CAPPING BEAM | 4 | Y16 | 1 | 1 | 1 | 4900 | 60 | 900 | 1400 | | | |
| PIER 07 CAPPING BEAM | 4 | Y16 | 1 | 1 | 1 | 5025 | 60 | 950 | 1400 | | | |
| PIER 07 CAPPING BEAM | 4 | Y16 | 1 | 1 | 1 | 5125 | 60 | 1000 | 1400 | | | |
| PIER 07 CAPPING BEAM | 4 | Y16 | 1 | 1 | 1 | 5250 | 60 | 1075 | 1400 | | | |
| PIER 07 CAPPING BEAM | 5 | Y16 | 1 | 1 | 1 | 6625 | 60 | 1800 | 1350 | | | |
| PIER 07 CAPPING BEAM | 5 | Y16 | 1 | 1 | 1 | 6725 | 60 | 1850 | 1350 | | | |
| PIER 07 CAPPING BEAM | 6 | Y12 | 1 | 1 | 1 | 3050 | 60 | 900 | 500 | | | |
| PIER 07 CAPPING BEAM | 6 | Y12 | 1 | 1 | 1 | 3150 | 60 | 950 | 500 | | | |
| PIER 07 CAPPING BEAM | 6 | Y12 | 1 | 1 | 1 | 3275 | 60 | 1000 | 500 | | | |
| PIER 07 CAPPING BEAM | 6 | Y12 | 1 | 1 | 1 | 3375 | 60 | 1050 | 500 | | | |
| PIER 07 CAPPING BEAM | 7 | Y12 | 1 | 1 | 1 | 4850 | 60 | 1800 | 500 | | | |
| PIER 07 CAPPING BEAM | 7 | Y12 | 1 | 1 | 1 | 4975 | 60 | 1850 | 500 | | | |
| PIER 07 CAPPING BEAM | 8 | Y12 | 1 | 1 | 1 | 3050 | 60 | 900 | 500 | | | |
| PIER 07 CAPPING BEAM | 8 | Y12 | 1 | 1 | 1 | 3150 | 60 | 950 | 500 | | | |
| PIER 07 CAPPING BEAM | 8 | Y12 | 1 | 1 | 1 | 3275 | 60 | 1000 | 500 | | | |
| PIER 07 CAPPING BEAM | 8 | Y12 | 1 | 1 | 1 | 3375 | 60 | 1050 | 500 | | | |
| PIER 07 CAPPING BEAM | 9 | Y12 | 1 | 1 | 1 | 4850 | 60 | 1800 | 500 | | | |
| PIER 07 CAPPING BEAM | 9 | Y12 | 1 | 1 | 1 | 4950 | 60 | 1850 | 500 | | | |
| PIER 07 CAPPING BEAM | 10 | Y16 | 1 | 1 | 1 | 4900 | 60 | 900 | 1400 | | | |
| PIER 07 CAPPING BEAM | 10 | Y16 | 1 | 1 | 1 | 5025 | 60 | 950 | 1400 | | | |
| PIER 07 CAPPING BEAM | 10 | Y16 | 1 | 1 | 1 | 5125 | 60 | 1000 | 1400 | | | |
| PIER 07 CAPPING BEAM | 10 | Y16 | 1 | 1 | 1 | 5250 | 60 | 1075 | 1400 | | | |
| PIER 07 CAPPING BEAM | 11 | Y16 | 1 | 1 | 1 | 6600 | 60 | 1800 | 1350 | | | |
| PIER 07 CAPPING BEAM | 11 | Y16 | 1 | 1 | 1 | 6700 | 60 | 1850 | 1350 | | | |
| PIER 07 CAPPING BEAM | 12 | Y25 | 1 | 8 | 8 | 10925 | 20 | 10925 | | | | |
| PIER 07 CAPPING BEAM | 13 | Y20 | 1 | 4 | 4 | 7250 | 20 | 7250 | | | | |
| PIER 07 CAPPING BEAM | 13 | Y20 | 1 | 4 | 4 | 7250 | 20 | 7250 | | | | |
| PIER 07 CAPPING BEAM | 13 | Y20 | 1 | 4 | 4 | 7250 | 20 | 7250 | | | | |
| PIER 07 CAPPING BEAM | 14 | Y25 | 1 | 8 | 8 | 7800 | 37 | 7425 | 450 | | | |
| PIER 07 CAPPING BEAM | 14 | Y25 | 1 | 8 | 8 | 7800 | 37 | 7425 | 450 | | | |
| PIER 07 CAPPING BEAM | 15 | Y10 | 1 | 10 | 10 | 3450 | 60 | 225 | 1400 | | | |
| PIER 07 CAPPING BEAM | 15 | Y10 | 1 | 9 | 9 | 3450 | 60 | 225 | 1400 | | | |
| PIER 07 CAPPING BEAM | 16 | Y20 | 1 | 4 | 4 | 7325 | 20 | 7325 | | | | |
| PIER 07 CAPPING BEAM | 17 | Y20 | 1 | 1 | 1 | 6950 | 20 | 6950 | | | | |
| PIER 07 CAPPING BEAM | 17 | Y20 | 1 | 1 | 1 | 6375 | 20 | 6375 | | | | |
| PIER 07 CAPPING BEAM | 18 | Y20 | 1 | 1 | 1 | 6950 | 20 | 6950 | | | | |
| PIER 07 CAPPING BEAM | 18 | Y20 | 1 | 1 | 1 | 6375 | 20 | 6375 | | | | |
| PIER 07 CAPPING BEAM | 19 | Y20 | 1 | 1 | 1 | 6950 | 20 | 6950 | | | | |
| PIER 07 CAPPING BEAM | 19 | Y20 | 1 | 1 | 1 | 6375 | 20 | 6375 | | | | |
| PIER 07 CAPPING BEAM | 20 | Y20 | 1 | 1 | 1 | 6950 | 20 | 6950 | | | | |
| PIER 07 CAPPING BEAM | 20 | Y20 | 1 | 1 | 1 | 6375 | 20 | 6375 | | | | |
| PIER 07 CAPPING BEAM | 21 | Y12 | 1 | 8 | 8 | 3150 | 38 | 1500 | 225 | 1500 | | |
| PIER 07 CAPPING BEAM | 21 | Y12 | 1 | 8 | 8 | 3150 | 38 | 1500 | 225 | 1500 | | |
| PIER 07 CAPPING BEAM | 22 | Y20 | 1 | 8 | 8 | 3850 | 48 | 1200 | 1475 | 1175 | 425 | 1425 |
| PIER 07 CAPPING BEAM | 22 | Y20 | 1 | 8 | 8 | 3850 | 48 | 1200 | 1475 | 1175 | 425 | 1425 |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |
| PIER 07 CAPPING BEAM | 23 | Y10 | 1 | 4 | 4 | 1400 | 38 | 600 | 250 | 600 | | |

## STANDARD SHAPE CODES




## SPECIAL SHAPE CODES




**NOTES**

1. BEFORE ORDERING AND BEFORE CUTTING AND BENDING OF REINFORCEMENT COMMENCES, THE CONTRACTOR MUST CHECK ALL SCHEDULES TO ENSURE CORRECTNESS, WHERE CHANGES ARE NECESSARY, THEY SHALL BE REFERRED TO THE ENGINEER.
2. ALL BENDING SHALL BE DONE IN ACCORDANCE WITH SABS 82 (WITH THE LATEST AMENDMENTS).
3. THREE TYPE OF REINFORCEMENT CAN BE SPECIFIED ON REINFORCEMENT DRAWINGS AND BENDING SCHEDULE viz.
   a. R HOT-ROLLED MILD STEEL BARS OF PLAIN ROUND CROSS-SECTION HAVING A CHARACTERISTIC STRENGTH OF 250 MPa.
      Y HOT-ROLLED HIGH YIELD STRESS STEEL HAVING A CHARACTERISTIC STRENGTH OF 450 MPa.
   b. WELDED STEEL FABRIC IN ACCORDANCE WITH SABS 1024:1991.

   FOR EXAMPLE:

   R20 DENOTES A 20mm DIAMETER PLAIN ROUND HOT-ROLLED MILD STEEL

   Y25 DENOTES A 25mm DIAMETER HOT-ROLLED HIGH YIELD STRESS STEEL

   REF: 665 DENOTES FABRIC REFERENCE 655 MESH

| Rev | Date | Description | Checked | Signed |
|---|---|---|---|---|
| A | 28-09-2023 | ISSUED FOR APPROVAL | BM | |

AMMENDMENTS

**AS BUILT**

Supervising Engineer _____ Date _____

Supervising Authority _____

| | |
|---|---|
| Continued from : | |
| Continued on : | |
| Cross Section No : | |
| Longitudinal Section No : | |
| Survey Plan No : | |

| | |
|---|---|
| Designed by : | T. Mhkize |
| Checked by : | B. Manyela |
| Drawn by : | S. Maphumulo |
| Checked by : | T. Mhkize |
| Date of approval : | |

transport
Department:
Transport
Province of KwaZulu-Natal

Designed by :

IBHONGO CONSULTING (PTY) LTD
71 Fifth Avenue
Morningside
Durban 4001
Tel: (031) 324 2200
Fax: (031) 324 2222
email:info@ibhongo.co.za

Director _____ Date _____

Structural Design: Chief Engineer

Head: Transport

**PROVINCIAL ROAD P52/3 - NONGOMA TO PONGOLA**
S 27 39 47.18 E 31 43 12.14

# PROPOSED MKHUZE RIVER BRIDGE

## PIER 07 BENDING SCHEDULES

| | |
|---|---|
| Staked km distance | 27.400 |
| Scale : | As indicated |
| Sheet : | 23 |
| of : | 51 |
| Ibhongo Dwg No: | 2203-SBS-307 |
| DOT Dwg No: | 3801-23 |

3801-23