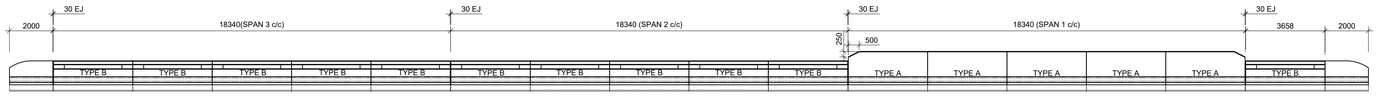
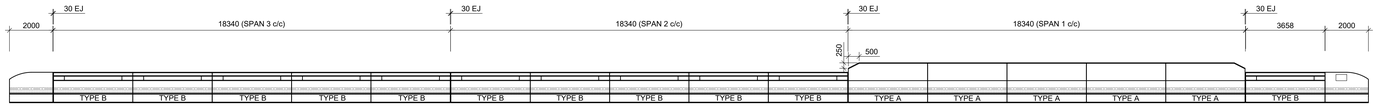
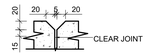
PLAN
SCALE 1:100



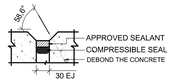

EASTERN INSIDE ELEVATION
SCALE 1:100



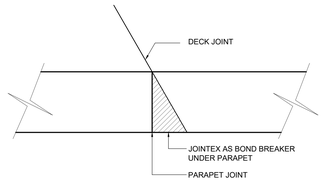

WESTERN OUTSIDE ELEVATION
SCALE 1:100



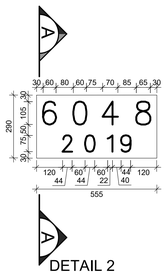

DETAIL 4
(TYPICAL BALUSRADE
JOINT 5mm GAP)
SCALE 1:5



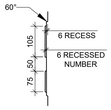

DETAIL 5
(TYPICAL BALUSRADE
EJ 30mm GAP)
SCALE 1:5



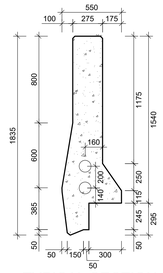

BALUSTRADEJOINT DETAIL
AT SKEW DECK JOINT
SCALE 1:20



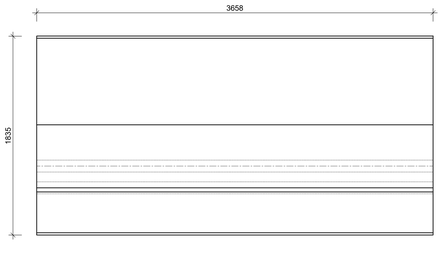

DETAIL 2
SCALE 1:10



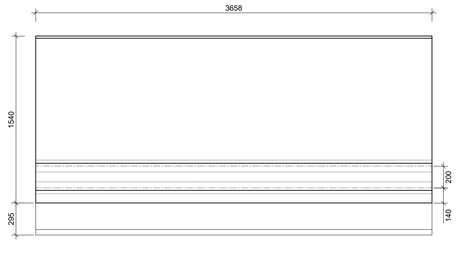

SECTION A-A
SCALE 1:10



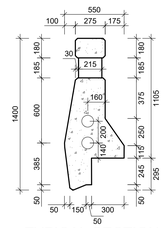

TYPICAL SECTION
(TYPE A BALUSTRADE)
SCALE 1:20



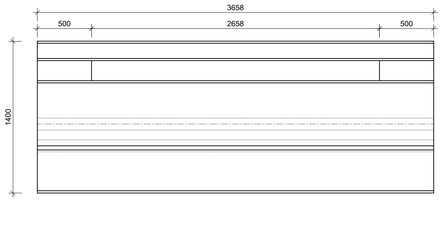

TYPICAL OUTSIDE ELEVATION
(TYPE A BALUSTRADE)
SCALE 1:20



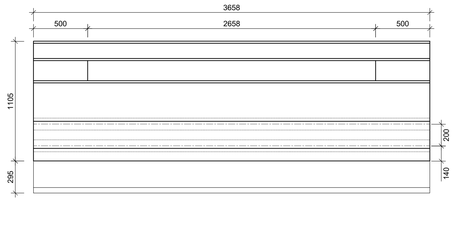

TYPICAL INSIDE ELEVATION
(TYPE A BALUSTRADE)
SCALE 1:20



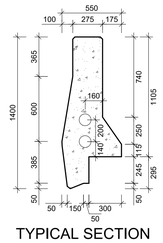

TYPICAL SECTION
(TYPE B BALUSTRADE)
SCALE 1:20



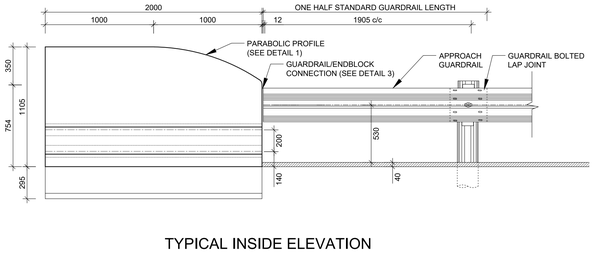

TYPICAL OUTSIDE ELEVATION
(TYPE B BALUSTRADE)
SCALE 1:20



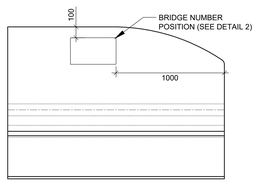

TYPICAL INSIDE ELEVATION
(TYPE B BALUSTRADE)
SCALE 1:20



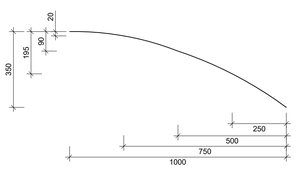

TYPICAL SECTION
(ENDBLOCK)
SCALE 1:20



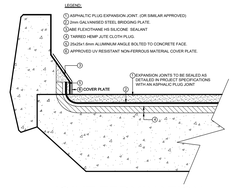

TYPICAL INSIDE ELEVATION
(ENDBLOCK)
SCALE 1:20



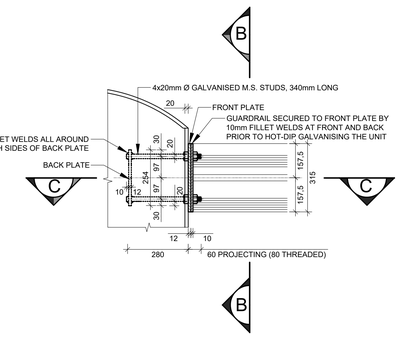

TYPICAL OUTSIDE ELEVATION
(ENDBLOCK)
SCALE 1:20



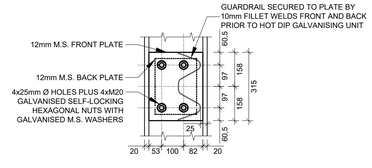

DETAIL 1
SCALE 1:10



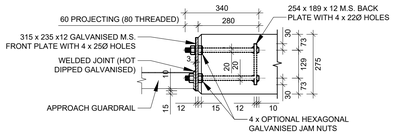

JOINT TERMINATION
DETAIL AT BALUSTRADE
SCALE 1:20



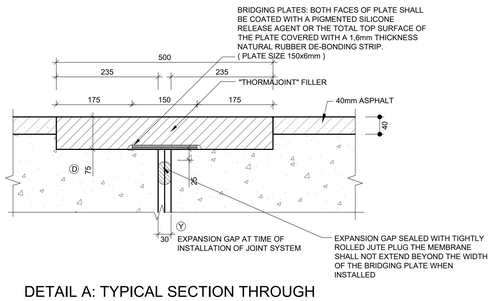

DETAIL 3
SCALE 1:10



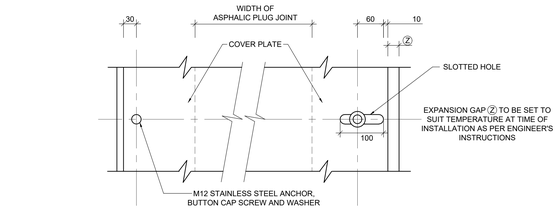

SECTION B-B
SCALE 1:10



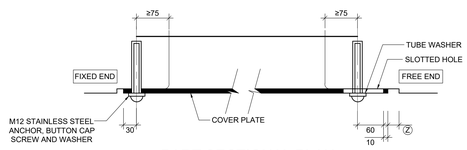

SECTION C-C
SCALE 1:10




DETAIL A: TYPICAL SECTION THROUGH
THORMA TYPE EXPANSION JOINT
SCALE 1:5




PART ELEVATION
SCALE 1:5




PART SECTIONAL PLAN
SCALE 1:5

TYPICAL DETAIL OF INSTALLED COVER PLATES

## NOTES

COVER PLATES

1. GENERAL

1.1 THESE COVER PLATES ARE APPLICABLE TO ALL JOINTS TYPES, EXCEPT BURIED TYPES.
1.2. THE DIMENSIONS OF THE PARAPETS, KERBS AND SKEW ANGLE OF THE EXPANSION JOINT SHALL BE CONFIRMED ON SITE AND THE SIZES OF THE COVER PLATES SHALL BE ADJUSTED WHERE NECESSARY TO MATCH THE "AS CONSTRUCTED" PROFILES AND JOINT MOVEMENTS.

2. MATERIALS AND MANUFACTURING

THE MATERIAL AND WORK SHAL COMPLY WITH THE RELEVANT CLAUSES THE STANDARD SPECIFICATIONS, THE PROJECT SPECIFICATIONS AND THE FOLLOWING:-

2.1 THE COVER PLATES SHALL BE CONSTRUCTED OUT OF APPROVED UV RESISTANT NON-FERROUS MATERIAL.
2.2 THE MECHANICAL ANCHORS FOR FASTENING THE COVER PLATES SHALL BE 50mm LONG M12 STAINLESS STEEL "DROP-IN ANCHORS" COMPLETE WITH STAINLESS STEEL BUTTON CAP SET SCREWS AND STAINLESS STEEL WASHERS. ANCHORS - GRADE 304, SCREWS AND WASHERS - GRADE 316
2.3 THE COVER PLATES SHALL MATCH THE "AS CONSTRUCTED" PROFILE OF THE PARAPETS AND KERBS. ON SITE ADJUSTMENT TO THE COVER PLATES, IN ORDER TO COMPLY WITH THE ABOVE, IS SUBJECT TO THE PROVISION THAT LOCAL DEFORMATIONS ARE NOT INTRODUCED AND DAMAGED PAINTED SURFACES ARE REPAIRED TO THE ORIGINAL SPECIFICATION.

3. INSTALLATION OF THE COVER PLATES

3.1 INSTALL THE DROP-IN ANCHORS USING THE COVER PLATES AS TEMPLATES TO MARK OFF THE DRILL HOLE POSITIONS. THE ANCHORS SHALL BE LOCATED IN THE POSITIONS SHOWN IN THE DETAILS ON THIS DRAWING IN ORDER TO PERMIT FREE MOVEMENT OF THE DECK. THE ANCHORS SHALL BE SECURED IN THE DRILLED HOLES BY THE APPLICATION OF A SMALL QUANTITY OF A SUITABLE EPOXY RESIN ENSURING THAT THE THREADS OF THE ANCHORS ARE NOT CONTAMINATED.
3.2 INSTALL THE COVER PLATES ENSURING THAT THE COVER PLATES MATCH-FIT THE PROFILE OF THE PARAPETS AND KERBS (SEE 2.3). THE SET SCREWS SHALL BE TIGHTENED AGAINST TUBE WASHERS TO ALLOW FREE MOVEMENT RELATIVE TO THE DECK. THE COVER PLATES SHALL BE SECURED BY APPLYING "LOCTITE 243" OR EQUAL APPROVED ADHESIVE TO THE THREAD OF THE SET SCREWS AND IN ADDITION BY FILLING THE RECESSES IN THE HEADS OF THE SET SCREWS WITH A SUITABLE EPOXY PUTTY.

ASPHALIC PLUG JOINTS

THE MATERIALS, MANUFACTURE AND INSTALLATION OF THE ASPHALTIC PLUG EXPANSION JOINTS COMPLETE WITH COVER PLATES SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE RELEVANT CLAUSES OF THE STANDARD SPECIFICATIONS, THE PROJECT SPECIFICATIONS, THE MANUFACTURUR'S REQUIREMENTS AND THE FOLLOWING:

1. DIMENSION AND LIMITING FACTORS OF ASPHALTIC PLUG TYPE JOINTS

1.1 DIMENSION (D) IS THE MINIMUM DEPTH OF THE ASPHALTIC PLUG MEASURED TO THE TOP OF THE BRIDGING PLATE.
1.2 EXPANSION GAP (Y) IS THE GAP WIDTH AT TIME OF INSTALLATION OF THE EXPANSION JOINT SYSTEM. IN THE EVENT THAT THE "AS CONSTRUCTED" GAP WIDTH INCLUDING THE EFFECTS OF CREEP, SHRINKAGE AND THERMAL MOVEMENT EXCEEDS DIMENSION (Z) THE STEEL BRIDGE PLATE AND JOINT SIZES MUST BE REFERRED TO THE ENGINEER FOR RE-DESIGN.
1.3 THE GAP AT TIME OF INSTALLATION MUST TAKE INTO ACCOUNT ACTUAL CREEP, SHRINKAGE, AND TEMPERATURE MOVEMENTS.

2. AGRÉMENT SA APPROVAL

ALL ASPHALTIC PLUG TYPE JOINTS ARE TO BE AGRÉMENT SA APPROVED.

3. MEASUREMENT AND PAYMENT

MEASUREMENT AND PAYMENT FOR THE ASPHALTIC PLUG EXPANSION JOINT SYSTEM SHALL BE AS SPECIFIED IN THE STANDARD AND PROJECT SPECIFICATIONS.

**FOR TENDER**
(TENDER APPROVAL ONLY)

0 m 50 m 100 m
1 cm = 10 m for A0 size

| NO. | DATE | ADDITIONS AND AMENDMENTS | APPROVED CONS. | APPROVED PRE | |
|---|---|---|---|---|---|
| A | 13.02.2018 | FOR TENDER APPROVAL | | | DESIGNED BY: CW |
| | | | | | CHECKED BY: LDT |
| | | | | | DRAWN BY: CW |
| | | | | | CHECKED BY: BZ |

LYNERS
ELEMENT Consulting Engineers
A FIFTH DIMENSION TO ENGINEERING

CONSULTING ENGINEERS
DATE: _ _ _ _ _ _ _

WESTERN CAPE GOVERNMENT
DEPARTMENT OF TRANSPORT AND PUBLIC WORKS

**APPROVED**
THIS APPROVAL IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OF ANY KIND FROM WHATSOEVER OR HOWEVER ARISING

PROVINCIAL ROADS ENGINEER
DATE: _ _ _ _ _ _ _

# PROPOSED ROAD OVER RAIL BRIDGE No. 6048 ON DR 1103 OVER KLAPMUTS-PAARL RAIL NEAR SIMONSVLEI

## BALUSTRADE(S) & JOINTS CONCRETE LAYOUT & DETAILS

| P.R.E's FILE NO. | SCALE |
|---|---|
| 970123 | AS SHOWN |
| CONTRACT NO. TPW 16/6/4/1/4-C0850.01 | WCG STRUCTURE PLAN |
| CONSULTANTS DWG NO. 150049/S/009 | WCG INDEX NO. A93/22 |