GENERAL SPECIFICATIONS:

GENERAL STRUCTURAL

1. SANS 1200 SPECIFICATIONS WILL APPLY.

2. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings, schedules and details. The Contractor shall check all drawings and schedules to ensure that he has sufficient information prior to commencing with the works involved.

3. The Contractor must verify all dimensions on site before commencement of any work. Any discrepancies are to be referred to the architect and Engineer immediately.

4. Structural levels are in metres and related to the bench mark.

100.000 On plans TOC 6000.000

100.000 On elevations

5. All dimensions are in millimetres or meters, as indicated.

6. For setting out details refer to the relevant Architect's and Engineer's drawings where applicable.

7. The Contractor is responsible for the design, detailing, erection, certification, maintaining and removal of all propping, strutting or other temporary works required by the construction and for the safe execution of all works during building construction. The Contractor shall provide all temporary supports and bracing necessary to maintain structural stability under any conditions that can be expected during construction. The Contractor shall, when requested, submit calculations and details of his proposed temporary works, for review, before the work begins.No concrete may be cast until the full compliance of the above.

8. The Contractor shall provide and maintain any necessary protection of the works.

9. Where retaining walls are connected to other elements of structure, backfill must not be placed behind the wall unless the wall is suitably propped by permanent structure.

10. Any item specified on the structural drawings is indicative of the required standard and qualities. Alternatives may be used provided that full technical details demonstrating equivalent properties of the item are submitted by the Contractor and approval is obtained from the Engineer, prior to execution.

11. No remedial work shall be undertaken without prior approval of the Engineer.

12. Where structural elements are designed by a specialist, the Contractor shall submit the choice of specialist to the Engineer for approval.

13. All proposed materials shall be proven to meet the specification prior to use. No inspection or approval of works shall be given where the materials incorporated therein have not previously been shown to meet the Specification. Refer to specific testing/approval requirements in other sections.

14. The contractor must confirm that the existing services and their location agree with the drawings, prior to construction. Any discrepancies must be indicated to the Engineer.

15. The contractor is responsible to ensure that all work is done accordingly to the latest OHS Act. and Construction Regulations.

16. Contractor to ensure that all shopfronts/curtain walls and all other fixings have sufficient clearance against the supporting structure/s to allow for movement/deflections of the supporting structure without damaging the glass/framework.

DESIGN INFORMATION

1. The following design standards have been used:

SANS 82: Bending dimensions of bars for concrete reinforcement.

SANS 1024: Welded steel fabric for reinforcement of concrete.

SANS 10100: "The Structural use of Concrete."

SANS 10162: "The Structural Use of Steelwork in Building"

SANS 10164: "The Structural use of Masonry"

SANS 10400: "National Building Regulations"

STRUCTURAL STEEL

1. All structural steel members (Except purlins & Girts which will be galvanised) must be painted as follows:

a) Preparation: Abrasive blast cleaning to SA 2.5 complying with the relevant clauses of SANS

b) Clean, dry and apply one full coat approved Zinc Phosphate Primer to a dry film thickness of 35 microns within two hours after abrasive cleaning in accordance with SANS 0681. Applied in the Factory.

c) Wire brush all areas in which the primer has been damaged, touch up, apply one full coat multi-purpose undercoat to a dry film thickness of 35 microns and one full coat Alkyd Base Enamel to a dry film thickness of 35 microns (color to client specification)

d) Making good damaged areas in accordance with SANS 0120

e) Final Alkyd base Enamel paint coat as per client specification.

2. Unless noted otherwise, the steelwork indicated on the drawings has been designed in accordance with SANS 0162. Work to be carried out to SANS 1200 H unless noted otherwise.

3. All steel, except for cold formed sections, to be Grade EN 10025-2-S355JR to EN 10025 / SANS 1431 unless noted otherwise. The Contractor shall submit mill certificates to the Engineer for approval prior to fabrication.

4. All fabrication drawings to be submitted to the Engineer a minimum of three weeks before fabrication. Fabrication drawings must be thoroughly checked by the main contractor prior to submitting. Any comments made by the Engineer are to be incorporated prior to commencing fabrication.Engineer will provide approval of fabrication drawings in principal only, as the responsibility for accurate fabrication drawings remains with the contractor.

5. Unless otherwise noted, structural bolts to be grade 8.8 to SANS 10162. Minimum diameter to be 16mm unless noted otherwise. All bolts to be Galvanized and supplied with equivalent nuts and 2 washers, unless stated otherwise.

6. All bolted connections to use a minimum two bolts, unless noted otherwise.

7. All plates to be minimum thickness of 10mm, unless noted otherwise.

8. All welds to be 6mm fillet welds, all round, unless noted otherwise, to SANS 044 and 455. All butt welds must be indicated on the fabrication drawings. The visual appearance of welds on exposed steelwork is to be agreed with the Engineer prior to fabrication. Samples are to be provided where requested or as indicated on the drawings. All welding to be undertaken at an approved fabrication workshop. Welding on site is not permitted without the consent of the Engineer. The Contractor shall submit, to the Engineer, the details of any operatives involved in welding to indicate that they are suitably qualified.

9. All welds are to be visually examined for correct size, shape, slag inclusions, cracks, undercut and porosity. Selected welds are to be tested using the dye penetration method. Critical butt welds are to be tested using ultrasonic equipment.

10. Holding down bolts to be set with suitable means of adjustment. Method to be approved by the Engineer. Holding down bolts to be galvanized if the site is within 50km from the coast.

11. No post-fixing shall be allowed unless specified by the Engineer or with the express approval of the Engineer.

12. Steel items embedded in brickwork are to be protected with 2 layers of Malthoid. Any additional paint requirements will be to the architects requirements.
All steel support brackets to concrete to be galvanised.

13. All necessary temporary bracing and safety requirements for the steelwork are the responsibility of the Contractor during construction of the works.

14. Tolerances are to be in accordance with SANS 1200 H, degree of accuracy II

15. Prior to fabrication the fabricator and the main contractor are to survey the existing structure to check and confirm the line, level and element dimensions. The contractor is to inform the Engineer of any discrepancies and propose his remedial works. Prior to delivery to site, the Engineer must be notified for inspection of all steel elements in the steel workshop.

16. Grating to be hot dipped galvanised to SANS 763, serrated and banded.

17. All structural steelwork related to building projects to conform to SANS 2001-CS1: 2005 Edition 1.

18. Contractor to submit to the engineer an appropriate method statement of stacking construction material on roof structure for approval, prior to construction.

roof structure for approval, prior to construction.

BUILDERS WORK

1. The Contractor shall coordinate and submit for approval to the Engineer/Client shop drawings showing all builders work requirements involving structural elements, prior to commencement of the works involved. These shop drawings shall be of sufficient detail as to layout, building-in requirements, connection to structural elements, etc. to progress the works in a coordinated, workmanlike manner. Refer to other specifications for other builders work shop drawing requirements.

2. The Contractor shall make allowance in his programme for all approvals before any builders work is incorporated into the works.

3. Except as detailed on the Structural Drawings, no structural element shall be sleeved or otherwise penetrated for any reason unless prior approval is obtained from the Engineer.

4. If conduit is to run in slabs, the conduit shall be placed at mid depth of slab, and maximum conduit dimension shall not exceed 33 percent of the slab depth. There shall be a minimum of 75mm clear space between conduits. Aluminium conduit is prohibited. Copies of proposed conduit layouts are to be submitted to the Structural Engineer for review prior to commencing the element of the works.

5. To ensure that expansion joints remain open, the contracter must place 10mm polystyrene inbetween the brickwork, in sections of not more than 300mm, during the building process.

MASONRY

1. These notes apply to all masonry walls, both load bearing and non-loading bearing. Only load bearing walls are shown on structural drawings, refer to the architect's drawings for other walls.

2. All masonry must be constructed in accordance with SANS 10164 Part 1.

3. The required brick strength parameters for load bearing masonry are:

Strength	Water absorption
10MPa minimum, unless otherwise noted	12% maximum

4. Unless otherwise noted mortar shall be:

class iii Above ground slab level

class ii Below ground slab level

Cubes are to be taken for the mortar and the test results submitted to the Engineer for approval.

5. The maximum lift of brickwork or block-work allowed in a 24 hour period is 1.3m.

6. Mortar additives are not be used unless approved by the Client.

7. No horizontal chases shall be cut into the masonry.

8. No vertical chases shall be cut into the masonry without prior approval from the Architect/Engineer.

9. The method of cutting chases, where approved, shall be agreed with the Client/Engineer.

10. Reinforcement fabric in accordance with SANS 1024 is to be included in all brickwork as follows:

Foundation walls and below ground level. - every course
Above lintel - for 5 courses
Other locations - every 3rd course unless indicated otherwise

11. Flat ties, where specified, are to have a minimum section of 20 x 3mm unless otherwise noted.

12. Tolerances to be in accordance with the specification.

13. Brickwork is not to be constructed onto concrete supports until propping to formwork has been removed.

14. For setting out of masonry walls and locations of movement joints refer to Architect's drawings and details.

15. Refer to Architects detail for head restraints to non load bearing partition walls.

16. For collar leaf (double leaf) walls, all bed joints, perpends and vertical joints are to be fully filled with mortar. The two leaves are to be tied together with galvanised mild steel flat ties every 425 centres both vertically and horizontally. Ties are to be 20 x 3mm thick and have a minimum embankment of 50mm into each course of brickwork.

17. Cavity walls are to include vertical twist wall ties at a spacing of 425mm vertically and 750mm horizontally staggered. Ends of wall panels are to be tied to the structure at 425mm centres.

18. Masonry walls to be fixed to concrete elements by means of 1.2x30x800mm hoop iron straps. Straps to be shot fixed to or cast into concrete at a minimum spacing of 425mm unless indicated otherwise.

19. All openings in masonry walls to be covered by lintels according to NHBRC Part 2, Section 3. unless otherwise specified.

HOT-DIP GALVANIZING

1. All steel components, fabricated iron and steel articles as well as fasteners nuts, washers and bolts shall be hot dip galvanized in accordance with the requirements of SANS 121 (ISO 1461)

REPAIR TO DAMAGED COATING

1. Repairs to hot dip galvanized steel in conformance with SANS 121 (ISO 1461)

SITE REPAIRS

ZINK RICH PAINTS:
1. The recommended product is Zink Rich Epoxy. This productrovides superior corrosion protection.

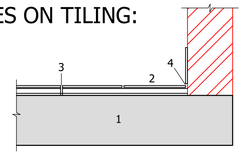
2. A product called Zincfix is to be used and is available in "Squish Pack" form. Zincfix is a solvent free product containing a minimum of 82% zinc in the dry film and 2% leafing aluminium for added corrosion resistance. The quantity contained in each 25ml sachet is capable of coating approximately 250cm². Larger packs are also available.

3. The surface to be repaired must be thoroughly cleaned by stainless wire brushing or with the aid of an abrasive such as emery cloth (roughness 80 grit). Once applied the thickness of the dry film should be checked to ensure that it is at least 30 micron greater than the minimum thickness specified for the surrounding galvanized coating.

4. Zincfix is available from the Hot Dip Galvanizers Association of South Africa and all of its members.

5. All bolts to be galvanized.

NOTES ON TILING:



The builder's attention is drawn to the tendency of ceramic tiles to expand and concrete to shrink over time. To minimize cracks in tiles due to this the following suggestions are made:

1 Concrete to be allowed to dry out for 6 weeks before tiling.

2 Use tiles with low moisture absorption B3 or better & low expansion rates. Soak in water for 30 min.before tiling.

3 Movement joints to be cut every 3m or as directed by architect and at junctions through the screed and be filled with polysulfide of same colour than tile grout.

4 Tile glue to be removed from joints (preferably 4mm wide, or as directed by architect) before filling with tile grout-also allow gap of 4mm at least to walls.

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WATERPROOFING

1. All waterproofing on exposed concrete slabs and beams on screeds to Architects specifications.

Rev. No:	Date:	Revision Details:	By:
1	30/02/23	Issued for Tender	S.G

Client:

prasa

Architect:

THE CREATIVE AXIS

Civil Engineers:

ILIFA AFRICA ENGINEERS (Pty) Ltd

PRETORIA	012- 941 1616
HARRISMITH	058- 622 1297
VANDERBIJLPARK	016- 981 0591
KRUGERSDORP	011- 955 5334
RICHARDSBAY	035- 753 1083
SECUNDA	017- 634 8895
NEWCASTLE	034- 312 6464

ilifa AFRICA ENGINEERS

ASSOCIATED OFFICES:
MTUBATUBA, NELSPRUIT

SACAS ISO 9001:2015 LEVEL 1 BBBEE contributor

314 Glenwood Road,
Lynnwood Park,
PO Box 11402,
Hatfield, 0028.

Project:

PRASA
Lower Concourse

Description:

General Notes

Paper size:	Drawn:	Checked:	Designed:
A1	S.Ganess	P. Kirsten	S.Ganess

Scale:	Project Number:	Drawing Number:	Revision:
-	P22-006-01	700	1