

Annexure 1 - Details of all the activities to be carried out under each life cycle phase.

1. Concept Phase:

- Consider the RSR 00-2-7: 2016 Edition 1.0, Part 2-7 Requirements for systemic engineering and operational safety standards – Railway stations.

2. Design Phase:

The following minimum documentation shall be submitted for evaluation and approval of the design phase before installation commences:

1. Project organogram with roles & responsibilities per station.

2. Overall project plan per station.

3. Design phase report inclusive of:

- a. The design standards,
- b. Construction regulation/specifications to be implemented for the project,
- c. Structural integrity of the twenty platforms:
 - i. i.e., evidence illustrating the ability of the station platforms to withstand the proposed mobile ramp loading without failing due to horizontal/vertical displacement, fatigue and vibration. As well as confirming that the platform structures are fit for the purpose until its designed lifespan is served and it will not negatively impact the function of the platforms.
- d. Safe failure mode of the proposed interim solution,
- e. Length of each station platforms and the proposed design of the structure to be installed per platform, and
- f. Vibration mitigation(s) to acceptable measure.

4. A signed overall project risk assessment per station inclusive of:

- a. Potential hazards introduced by changing platform's current design,

- b. The platform structural integrity and its ability to provide passenger safety during emergency evacuation,
 - c. Safe passenger management (smooth safe passenger flow, controlling overcrowding passenger volume, passengers with disabilities or special needs, behaviour of people in confined areas embarking and disembarking into the train; etc.),
 - d. Physical environmental factors, and
 - e. Dynamic of station platform designs:
 - This will be due to other stations not having mobile ramps (risk of passengers not familiarising themselves with changes of other platforms).
5. Intended/design height from the top of rail to the platform edge and the distance between the center of the track and the platform as well as horizontal and vertical gap between the train floor or footboards to the modified platform edge per station.
6. Signed detailed design drawings per station (Example: Civil and Structural).
- a. Drawings shall be signed by a professional engineer registered with ECSA.

4. **Construction:**

The following documentation shall be submitted for an assessment and approval before commencement of the construction phase (should the project plan differ per station, submission from construction to operation phase may be done per station completion of such life cycle phase):

1. Signed detailed construction program and procedure (construction methodology) per station.
2. Construction organogram with roles and responsibilities.
3. A letter signed-off by PRASA's executive confirming the contractor's health and safety file is in accordance with the Occupational Health and Safety Act 85.

4. Quality assurance plan to monitor compliance of the approved design, drawings and specifications during construction.
5. Risk assessment (baseline risk assessment) for per station:
 - a. Should this phase occur during other train services on the railway line alongside of the stations, relevant hazards to be considered.

6. Testing and Commission Phase

The following minimum documentation shall be submitted for an assessment and approval of the testing and commissioning (where applicable, the RSR shall be invited before operation phase commences):

1. A test and commissioning procedure and scope in accordance with the relevant national legislation and standards signed off by relevant role players:
 - a. Scope for testing and commissioning to include simulations of accessibility, capacity and flow of passengers under normal, abnormal and emergency conditions.
 - i. Hazards identified to be added to the operational risk assessment per station with mitigation controls.
2. Completion of work certificate per station signed off by a competent person/s within the affected engineering disciplines (e.g. Perway/Civil, Facilities etc.) certifying that the installed mobile ramps complies with the relevant technical specifications and legislative requirements.
3. Commissioning phase risk assessment.
4. Operational readiness plan inclusive of:
 - a. The communication of changes, modifications and arrangements to all interested and effected parties during the testing and commissioning and operational phases how different stations are to the end users.

5. Height from the top of rail to the platform edge and the distance between the center of the track and the platform as well as horizontal and vertical gap between the train floor or footboards to the modified platform edge per station after construction.