

# **SUB-SECTION D**

## **GENERAL ANNEXURE D**

### **FQP & MQP for Civil Works**

|    | A      | B                                                                                                                                                                                                                                | C                     | D              | E                       | F                                                            | G                                                              | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|-------------------------|--------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Sr.No. | Activity & Operation                                                                                                                                                                                                             | Instruments           | Class of Check | Type of Check           | Quantum of Check                                             | Reference Documents & Acceptance Standard                      | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2  |        |                                                                                                                                                                                                                                  |                       |                |                         |                                                              |                                                                | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3  | 1      | General Requirements                                                                                                                                                                                                             |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4  | a      | Availability of requisite test set-up and equipment in good working condition with valid calibration at site well before commencement of concerned activity                                                                      | As required/ agreed   | Critical       | Physical                | Once prior to start of work & Monthly there after            | Tech. Specs, Construction Drawings                             | SR                                                                                                                           | √                                                                                                   |                                  | x              | x             | <b>Min. list of equipment</b> - CTM, Set of Seives for CA & FA, Elcometer (digital), Micrometer, Multimeter, Meggar, Torque Wrench, Moulds for casting of concrete/ mortar test samples, Curing tank of adequate size, SS measuring tape - 50m, Theodolite, leveling staff and associated equipment etc. for day to day work with proper storage racks. The equipment shall be in adequate no. matching the site progress requirements.<br><br>Functioning of laboratory equipment in proper working condition to be verified on monthly basis |
| 5  | b      | Submission of QA & QC manpower deployment schedule based on agreed L-2 network                                                                                                                                                   | As required/ agreed   | Critical       | Verification            | Before start of work                                         | Tech. Specs, Construction Drawings                             | SR                                                                                                                           | √                                                                                                   |                                  | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6  | c      | Availability of QA & QC manpower deployment based on agreed deployment schedule, Periodic review for augmentation as per actual progress                                                                                         | As required/ agreed   | Critical       | Physical                | Once prior to start of work & Monthly there after            | Tech. Specs, Construction Drawings                             | SR                                                                                                                           | √                                                                                                   |                                  | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 7  | d      | Submission of schedule/ programme of tests and inspection of civil works (survey, excavation, concreting, backfilling, brickwork, finishing works, roads, drains etc.) to be done monthly and quarterly based on agreed schedule | As required/ agreed   | Critical       | Physical                | Once prior to start of work & Monthly/ Quarterly there after | Tech. Specs, Construction Drawings                             | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8  | e      | Submission of actual work programme min. 3 days (72 hours) in advance to facilitate planning for quality checks as per approved QP                                                                                               | As required/ agreed   | Critical       | Physical                | 48 hours before start of actual work                         | Master programme/ schedule                                     | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 9  | f      | Stacking and storage of construction materials and components at site                                                                                                                                                            | IS: 4062              | Critical       | Physical                | Random                                                       | Tech. Specs, Construction Drawings & IS: 4062                  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 11 | 2      | Surveying (Execution phase)                                                                                                                                                                                                      |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 12 | a      | Availability of Calibrated Instruments, qualified & experieced staff at site                                                                                                                                                     | As required/ agreed   | Critical       | Physical                | 100%                                                         | Tech. Specs, Construction Drawings, Agreed deployment schedule | Calibration Report                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 13 | b      | Ensure correct Boundary Layout and Latitude-Longitude Coordinates, True North                                                                                                                                                    | construction Drawings | Critical       | Measurement             | 100%                                                         | Tech. Specs, Construction Drawings                             | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 14 | c      | GL (ground level), FGL (finished ground level) and Plinth Level, Check PBM(permanent bench mark) with Total Station/ Theodolite and after conformation carryout Peg marking                                                      | As required/ agreed   | Critical       | Measurement             | 100%                                                         | Construction Drawings                                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 16 | 3      | Materials                                                                                                                                                                                                                        |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 17 | A      | Cement                                                                                                                                                                                                                           |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 18 | i      | Fineness                                                                                                                                                                                                                         | As per IS: 4031       | Critical       | Review of MTC/ Physical | One test at Lab to corelate with MTC                         | IS:456,IS:269,IS:8112, IS:12269,IS:1489, Tech. Specs           | Manufacturers Test Certificate (MTC's) and Laboratory Test results                                                           | √                                                                                                   | x                                | x              | x             | Each consignment/ lot of cement shall be duly correlated with MTC<br>If cement stored is more than 60 days in godown the same shall be re-tested for conformation with MTC                                                                                                                                                                                                                                                                                                                                                                     |
| 19 | ii     | Compressive Strength                                                                                                                                                                                                             |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 20 | iii    | Initial & final setting time                                                                                                                                                                                                     |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 21 | iv     | Chemical composition of Cement                                                                                                                                                                                                   |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 22 | B      | Coarse Aggregates (CA)                                                                                                                                                                                                           |                       |                |                         |                                                              |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|    | A      | B                                                                                                                                         | C                                          | D                     | E                                                                    | F                                                                                          | G                                                                          | H                                                                                                                            | I                                                                                                   | J                                | K                                                                                                                                                                               | L                                             | M                                                                                                                                               |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Sr.No. | Activity & Operation                                                                                                                      | Instruments                                | Class of Check        | Type of Check                                                        | Quantum of Check                                                                           | Reference Documents & Acceptance Standard                                  | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                                                                                                                                                                                 |                                               | Remarks                                                                                                                                         |
| 2  |        |                                                                                                                                           |                                            |                       |                                                                      |                                                                                            |                                                                            | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor                                                                                                                                                                  | SECI or Owner                                 |                                                                                                                                                 |
| 23 | i      | Determination of Particle size (Sieve Analysis), Flakiness index, Elongation index                                                        | As per IS: 2386                            | Major                 | Visual                                                               | Once per 100 cum or part thereof (During monsoon moisture content to be checked every day) | IS:383,IS:2386, Tech. Specs                                                | Lab Test results                                                                                                             | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | Water content of concrete to be corrected as per results of moisture content                                                                    |
| 24 | ii     | Moisture content                                                                                                                          |                                            | Critical              |                                                                      | One test at Lab for each source/ on every change of source                                 |                                                                            |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | These tests shall be carried out while establishing design mix. In case of change of source the design mix shall be re-validated for new source |
| 25 | iii    | Crushing Value, Impact value, Abrasion value                                                                                              |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 26 | iv     | Specific Gravity, water absorption                                                                                                        |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 27 | v      | Bulk Density                                                                                                                              |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 28 | vi     | Soundness                                                                                                                                 |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 29 | vii    | Presence of deleterious materials                                                                                                         |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 30 | C      | Fine Aggregate (FA)                                                                                                                       |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 31 | i      | Gradation/Determination of Particle size (Sieve Analysis)                                                                                 | Balance, Oven etc.<br>As per IS: 2386, 383 | Major                 | Visual                                                               | Gradation - Once per 1000 cum or part there of Moisture content - Every day                | IS:383,IS:2386,IS:456 , Tech. Specs                                        | Lab Test results                                                                                                             | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | Water content of concrete to be corrected as per results of moisture content                                                                    |
| 32 |        | Moisture Content                                                                                                                          |                                            | Major                 | Visual                                                               | One test at Lab for each source/ on every change of source                                 |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 33 | ii     | Specific Gravity and density (for design mix concretes only)                                                                              | As per IS: 2386, 383                       |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 34 | iii    | Water absorption (for design mix concretes only)                                                                                          |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 35 | iv     | Presence of deleterious materials                                                                                                         |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 36 | D      | Concrete Admixture                                                                                                                        |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 37 | i      | Type of admixture                                                                                                                         |                                            |                       | Review of MTC                                                        | IS: 9103, Approved design mix                                                              | √                                                                          | x                                                                                                                            | x                                                                                                   | x                                | Admixture shall be of brand and type as per approved design mix.<br>Each lot/ batch of admixurture shall accompany the Manufacturer's Brochure and shall be correlated with MTC |                                               |                                                                                                                                                 |
| 38 | ii     | Physical & Chemical properties                                                                                                            |                                            | Review of MTC         | IS: 9103, Manufacturer's Brochure                                    |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 39 | iii    | Suitability                                                                                                                               |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 40 | E      | Bricks                                                                                                                                    |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 41 | i      | Dimensional Tolerance, shape                                                                                                              |                                            | Measurement/ Physical | As per relevant IS code/ one sample for 30,000 nos. or part there of | IS: 1077, IS: 13757, IS: 12894, Tech. Specs, Construction Drawings                         | Lab Test results                                                           | √                                                                                                                            | x                                                                                                   | x                                | x                                                                                                                                                                               | Efflorescence shall be checked at each source |                                                                                                                                                 |
| 42 | ii     | Compressive Strength                                                                                                                      |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 43 | iii    | Water Absorption                                                                                                                          |                                            |                       |                                                                      |                                                                                            | Visual                                                                     |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 44 | iv     | Efflorescence                                                                                                                             |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 45 | E      | Water                                                                                                                                     |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 46 | i      | Cleanliness - Test for ascertaining limit of solids                                                                                       |                                            | Major                 |                                                                      | One per 3 months for each source                                                           | IS:456,IS:3025 (part 18), Tech. Specs, Construction Drawings specification | Lab Test reports                                                                                                             | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | Water to be used for concrete shall be of potable quality and shall meet requirements specified in IS: 456                                      |
| 47 | ii     | Chemical Tests to ascertain the suitability for construction purposes - pH Value, Sulphate & Chloride content                             |                                            |                       |                                                                      |                                                                                            | IS:456,IS:3025 (part 22, 23), Tech. Specs, Construction Drawings           | Lab Test reports                                                                                                             | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
| 48 | F      | Reinforcement Steel                                                                                                                       |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 49 | i      | Identification & Size                                                                                                                     |                                            | Major                 | Visual                                                               | Each batch of delivery                                                                     | IS:432,IS:1786,IS:1852, Tech Specs                                         | SR                                                                                                                           | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | Reinforcement steel shall be stored properly at site to avoid rusting                                                                           |
| 50 | ii     | Freedom from cracks, surface flaws, lamination                                                                                            |                                            |                       |                                                                      | Random in each shift                                                                       |                                                                            |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
| 51 | iii    | Tensile Test                                                                                                                              |                                            | Critical              | Review of MTC                                                        | Each batch of delivery                                                                     | IS:432,IS:1566,IS:1786, Tech Specs                                         | Manufacturers Test Certificate (MTC's)                                                                                       | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
| 52 | iv     | Yield stress/proof stress                                                                                                                 |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
| 53 | v      | Percentage Elongation                                                                                                                     |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
| 54 | vi     | Bend/Rebend Test                                                                                                                          |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
| 55 | vii    | Reverse Bend Test for HDS wire                                                                                                            |                                            |                       |                                                                      |                                                                                            | IS:432, Tec. Specs                                                         |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             |                                                                                                                                                 |
|    | 3      | Structural Steel Work {Example: Chequered plate cover, Panel supports, Rungs, Cat ladder, Inserts, Fencing gate (MS) etc.}                |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 57 |        |                                                                                                                                           |                                            |                       |                                                                      |                                                                                            |                                                                            |                                                                                                                              |                                                                                                     |                                  |                                                                                                                                                                                 |                                               |                                                                                                                                                 |
| 58 | i      | Strutural Steel (Raw material)-Chemical Properties, Ultimate Tensile Strength(UTS), Yield Strength (YS), Percentage Elongation, Bend test |                                            | Critical              | Review of MTC                                                        | For each batch of each section                                                             | IS: 2062, IS: 8500, Tech. Specs, Construction Drawings                     | Manufacturers Test Certificate (MTC's)                                                                                       | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | MTC to be correlated                                                                                                                            |
| 59 | ii     | Dimensional Check - Secition dimensions, thickness                                                                                        |                                            | Critical              | Measurement                                                          | 10% of total quanity at Random                                                             |                                                                            |                                                                                                                              | √                                                                                                   | x                                | x                                                                                                                                                                               | x                                             | For Fencing gate - dimensional check 100%                                                                                                       |

|    | A      | B                                                                                                                                                | C           | D              | E                                  | F                              | G                                                                                     | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                    |
|----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|----------------------|
|    | Sr.No. | Activity & Operation                                                                                                                             | Instruments | Class of Check | Type of Check                      | Quantum of Check               | Reference Documents & Acceptance Standard                                             | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks              |
| 1  |        |                                                                                                                                                  |             |                |                                    |                                |                                                                                       | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                      |
| 2  |        |                                                                                                                                                  |             |                |                                    |                                |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                      |
| 60 | iii    | Visual checks for damages, rusting, pitting, scaling etc.                                                                                        |             | Major          | Visual                             | 100%                           | IS: 822, Tech. Specs, Construction Drawings, MTC, relevant BIS standards for painting | Manufacturers Test Certificate (MTC's)/ SR                                                                                   | √                                                                                                   | x                                | x              | x             |                      |
| 61 | iv     | Visual checks for welding defects, painting (surface preparation, primer coat, and Finishing coat - make and shade of paint, DFT) as applicable. |             | Major          | Visual/ Measurement/ Review of MTC | 10% of total quanity at Random |                                                                                       |                                                                                                                              | √                                                                                                   | x                                | x              | x             | MTC to be correlated |
| 62 | v      | Acceptance ofStructural steel works                                                                                                              |             | Major          | Physical/ Acceptance               | Random                         | Tech. Specs, Construction Drawings                                                    | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                      |
| 64 | 4      | Foundation System                                                                                                                                |             |                |                                    |                                |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                      |

|     | A      | B                                                                                                                                    | C                   | D              | E                    | F                                      | G                                                                                     | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M       |
|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------|----------------------|----------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------|
| 1   | Sr.No. | Activity & Operation                                                                                                                 | Instruments         | Class of Check | Type of Check        | Quantum of Check                       | Reference Documents & Acceptance Standard                                             | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be issentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks |
| 2   |        |                                                                                                                                      |                     |                |                      |                                        |                                                                                       | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |         |
| 80  | B      | Cable Trench/ Building & Equipment Foundations                                                                                       |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 81  | a      | Before Excavation                                                                                                                    |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 82  | i      | Ensuring correctness of layout                                                                                                       |                     | Critical       | Physical             | 100%                                   | Tech. Specs, Construction Drawings                                                    | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 83  | ii     | Checking of trench marking & alignment                                                                                               |                     | Major          | Visual               |                                        | Tech Specs, Construction Drawings                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 84  | b      | Excavation                                                                                                                           |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 85  | i      | Dimensional conformity including diagonal check                                                                                      |                     | Critical       | Visual / Measurement | 100%                                   | IS:3764, Tech Specs, Construction Drawings                                            | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 86  | ii     | Excavated earth kept away from edges                                                                                                 |                     | Minor          | Visual               | Random                                 |                                                                                       | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 87  | c      | Acceptance of Trench/ Foundation casting - Shape, reinforcement, shuttering, concreting, etc.                                        |                     | Minor          | Physical             | 100%                                   | Tech. Specs, Construction Drawings                                                    | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 89  | 5      | Foundation Bolts / Inserts/ Concrete embedments                                                                                      |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 90  | i      | Visual check of mechanical damage and galvanising painting if applicable on inserts                                                  |                     |                | Visual / Measurement | 100%                                   | As per Tech Specs, Construction Drawings                                              | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 91  | ii     | Bolt and assecories, inserts - Dimensions (total & threaded length & dia of bolt, size & thk of embedment and lugs etc.), Nos        |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 92  | iii    | Verticality, alignment, levels, pitch distance, embeded and projected length of bolt                                                 |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 93  | iii    | Use of template for Alignment and Level checking                                                                                     |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 94  | iv     | Acceptance of foundation bolt assembly / inserts in postion                                                                          |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 96  | 6      | Formwork                                                                                                                             |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 97  | i      | Materials & Accessories                                                                                                              | As agreed/ required | Major          | Visual               | Once before start of work              | IS :456 , Other relevant BIS Standard, Tech. Specs, Construction Drawings             | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 98  | ii     | Soundness of staging, shuttering and scaffolding including application of mould oil/ release agent                                   | As agreed/ required | Major          | Visual               | Once before start of work              | Manufacturer's specs, IS :3096, IS:4014, IS: 4990, Tech. Specs, Construction Drawings | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 99  | iii    | Dimensional Check, alignment & levels as per drawing and tolerences                                                                  |                     | Major          | Visual/ Measurement  | 100%                                   | Tech. Specs, Construction Drawings                                                    | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 100 | iv     | Proper sealing of joints, Acceptance of formwork before concreting                                                                   |                     | Major          | Physical/ Visual     | Before start of concreting             | As per provisions, tolerences, Tech. Specs, Construction drawings                     |                                                                                                                              | √                                                                                                   | x                                | x              | x             |         |
| 102 | 7      | Placement of Reienforcement Steel                                                                                                    |                     |                |                      |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 103 | i      | Check whether Bar bending schedule (BBS) with necessary lap, spacers & chairs is available before start of cutting & bending of bars | As agreed/ required | Major          | Visual/ physical     | Random in each shift at each work site | Tech. Specs, Construction Drawings, IS: 2502                                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 104 | ii     | Check whether cutting and bending of bars is as per BBS and placement conforms construction drawings                                 |                     |                | Visual/ measurement  |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 105 | iii    | Check whether all joints and crossing of bars are tied properly with right gauge and annealed wire                                   |                     |                | Visual               |                                        |                                                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |         |

|     | A      | B                                                                                                                                             | C                                                                                       | D              | E                   | F                                                                                             | G                                                         | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                                                                                                                                                    |
|-----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------|---------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Sr.No. | Activity & Operation                                                                                                                          | Instruments                                                                             | Class of Check | Type of Check       | Quantum of Check                                                                              | Reference Documents & Acceptance Standard                 | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                                                                                                                                                              |
| 1   |        |                                                                                                                                               |                                                                                         |                |                     |                                                                                               |                                                           | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                      |
| 2   |        |                                                                                                                                               |                                                                                         |                |                     |                                                                                               |                                                           |                                                                                                                              |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                                                                                                                                                      |
| 106 | iv     | Check for proper cover,spacing of bars, spacers & chairs after the reinforcement cage has been put inside the foundation                      |                                                                                         |                | Visual              |                                                                                               |                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                      |
| 107 | v      | Check whether lapping of bars are tied properly with right gauge and annealed wire                                                            |                                                                                         |                | Visual              |                                                                                               |                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                      |
| 109 | 8      | Concrete                                                                                                                                      |                                                                                         |                |                     |                                                                                               |                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                      |
| 110 | i      | Availability of approved Design Mix (for all specified grades)                                                                                |                                                                                         | Critical       | Physical            | For each specified grade of concrete                                                          | IS :456, Tech Specs, Construction Drawings                | Approved mix design                                                                                                          | √                                                                                                   |                                  | x              | x             | The concrete shall be as per approved design mix and the materials (cement, coarse and fine aggregate shall be from the same source considered during mix trials. The mix design shall be verified and approved in case of change of source of any of the matearials |
| 111 | ii     | Minimum cement content (as applicable in foundation/ below ground works)                                                                      |                                                                                         | Critical       | Physical            | For piling and foundation works                                                               | IS: 456, Tech. specs, Construction drawings               | SR                                                                                                                           | √                                                                                                   |                                  | x              | x             | The minimum cement content shall correspond to exposure conditions and/ or, suplhate contents in ground water/ soil                                                                                                                                                  |
| 112 | iii    | Trial mixes to ascertain the workability and cube strength                                                                                    | As per recommended mix design from specialist agency                                    | Critical       | Physical/ Testing   | One for each mix proportion                                                                   | Tech. Specs, IS: 456                                      | Lab Test Reports                                                                                                             | √                                                                                                   | x                                | x              | x             | Necessary correction for moisture content and water absoption according to mix design recommendations may be carried out during trial mix                                                                                                                            |
| 113 | iv     | Mixing of concrete- check for quanities of cement, CA, FA and water used, Concrete shall be homogenous                                        | Mixing shall be done in a approved mixer/ batching plant (conforming to IS: 4926/ 4925) | Major          | Physical            | Mixer/ Batchter to be calibrated at the time of starting and subsequently once in tree months | IS: 4925, IS: 4926                                        | Calibration Report/ Certificate                                                                                              | √                                                                                                   | x                                | x              | x             | Review of calibration chart/ Certificate as per IS: 4926 Qty. of materials including cement consumptionshall be available through on line printer                                                                                                                    |
| 114 | v      | Handling & trasportation                                                                                                                      | As required                                                                             | Major          | Physical            | 100%                                                                                          | As per approved/ agreed construction methodology          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             | Concrete shall be placed within 30 minutes of its removal from mixer                                                                                                                                                                                                 |
| 115 | vi     | Placement of concrete                                                                                                                         | As required                                                                             | Major          | Visual/ Physical    | 100%                                                                                          |                                                           |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                      |
| 116 | vii    | Compacting                                                                                                                                    | As required                                                                             | Major          | Physical            | At Random                                                                                     |                                                           |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                      |
| 117 | viii   | Curing                                                                                                                                        | As required                                                                             | major          | Physical            | At Random                                                                                     |                                                           |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                                                                                                                                                                                                                                                      |
| 119 | 9      | Concrete Testing & Acceptance                                                                                                                 |                                                                                         |                |                     |                                                                                               |                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                      |
| 120 | i      | Workability - Slump Test                                                                                                                      |                                                                                         | Critical       | Physical            | At the time of concrete pouring at site every 2 hrs                                           | IS:456, IS:516,IS:1199, Tech Specs, Construction Drawings | Test Results / SR                                                                                                            | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                      |
| 121 | ii     | Crushing strength - (Works test cubes)                                                                                                        |                                                                                         | Critical       | Physical            | Testing                                                                                       | IS:456, IS:516,IS:1199, Tech Specs, Construction Drawings | Test Results/ SR                                                                                                             | √                                                                                                   | x                                | x              | x             | Building work and Equipment/ Misc foundations etc. - 6 cubes (3 for 7 day test & 3 for 28 day strength) per sample for each 25 cum or part there off                                                                                                                 |
| 122 | iii    | Acceptance of concrete work - Dimensional check (dimensions, levels etc), placement of bolts, inserts, pockets, pitch distance for bolts etc. | As required & dimensional tolerences                                                    | Major          | Visual/ Measurement | 100%                                                                                          |                                                           | Joint Protocol between Civil Conractor, EPC Vendor and SECI/ Owner where applicable/<br><br>SR                               | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                      |
| 124 | 10     | Acceptance of Hardened Concrete                                                                                                               |                                                                                         |                |                     |                                                                                               |                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                                                                                                      |
| 125 | i      | Dimensional check (dimensions, levels etc), workmanship, finishing after removal of shuttering                                                | As required & dimensional tolerences                                                    | Major          | Visual/ Measurement | At Random                                                                                     |                                                           |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                                                                                                      |

|     | A      | B                                                                                                                                                                                                                       | C           | D              | E                     | F                                                                                                                                                                                        | G                                                                                                 | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                     |
|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------|
|     | Sr.No. | Activity & Operation                                                                                                                                                                                                    | Instruments | Class of Check | Type of Check         | Quantum of Check                                                                                                                                                                         | Reference Documents & Acceptance Standard                                                         | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                               |
|     |        |                                                                                                                                                                                                                         |             |                |                       |                                                                                                                                                                                          |                                                                                                   | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                       |
| 126 | ii     | Water tightness test for liquid retaining structures/ tanks                                                                                                                                                             | As required | Critical       | Physical/ Testing     | 100%                                                                                                                                                                                     | IS: 3370 (Pt.4), Tech Specs, Construction Drawings                                                | SR/ Test Records                                                                                                             | √                                                                                                   | x                                | x              | x             | Water tightness test shall be performed for Under ground (UG) water tank, Septic tank                                                 |
| 128 | 11     | Excavation & filling in foundations, trenches, plinth & grading works                                                                                                                                                   |             |                |                       |                                                                                                                                                                                          |                                                                                                   |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                       |
| 129 |        | Excavation                                                                                                                                                                                                              |             |                |                       |                                                                                                                                                                                          |                                                                                                   |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                       |
| 130 |        | Nature, Type of soil/ rock before and during excavation                                                                                                                                                                 |             | Major          | Visual                | Random in each shift                                                                                                                                                                     | Tech. Specs., Construction Drawings                                                               | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                       |
| 131 |        | Initial GL before start of excavation                                                                                                                                                                                   |             | Major          | Measurement           | 100%                                                                                                                                                                                     |                                                                                                   | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                       |
| 132 |        | Final shape/ size & dimensions of excavation                                                                                                                                                                            |             | Major          | Measurement           | 100%                                                                                                                                                                                     |                                                                                                   | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                       |
| 133 |        | Final excavation levels                                                                                                                                                                                                 |             | Major          | Measurement           | 100%                                                                                                                                                                                     |                                                                                                   | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                       |
| 134 |        | Side slope of final excavation                                                                                                                                                                                          |             | Major          | Measurement           | Random in each shift                                                                                                                                                                     |                                                                                                   | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                       |
| 135 | 12     | Fill / Backfill                                                                                                                                                                                                         |             |                |                       |                                                                                                                                                                                          |                                                                                                   |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                       |
| 136 | i      | Suitability of borrowed earth for filling (if applicable) - Grain size analysis, Atterberg limits, Free swell index, Organic matter                                                                                     |             | Major          | Physical              | One in every 2000 cum or part there of for each type and source of fill material subject to min. 2 samples                                                                               | IS: 2720 (Pt. IV), IS: 2720 (Pt. XI), Tech Specs, Construction Drawings                           | Lab Test Results/ SR                                                                                                         | √                                                                                                   | x                                | x              | x             | The parameter should not be worse than the parameter of the existing soil in plant area                                               |
| 137 | ii     | Optimum moisture content (OMC), Max. dry density (MDD) before fill                                                                                                                                                      |             | Critical       | Visual                | At Random                                                                                                                                                                                | IS: 2720 (Pt. I), IS: 2720 (Pt.VII), Tech Specs, Construction Drawings                            | Lab Test Results/ SR                                                                                                         | √                                                                                                   | x                                | x              | x             |                                                                                                                                       |
| 138 | iii    | Layer thickness, Compaction procedure                                                                                                                                                                                   |             | Major          | Visual                | At Random                                                                                                                                                                                | Approved Methodology, Tech. Specs, Construction Drawings                                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | The layer thickness, Type & Capacity of roller, No. of passes shall be as per approved methodology, Construction Drawing, Tech. Specs |
| 139 | iv     | Degree of compaction -<br>1. Dry density by proctor needle penetration<br>2. Earth filling - In-situ Dry density (core cutter or sand replacement method) or<br>Sand Filling - In-situ Relative density (Density Index) |             | Critical       | Physical              | (i) For foundation fill/ backfill - One for every 10 foundations at Random for each compacted layer<br>(ii) For area grading/ filling - one every 1000 sqm area for each compacted layer | IS: 2720 (Pt. XXIX), IS: 2720 (Pt. XXVIII), IS: 2720 (Pt. XIV), Tech Specs, Construction Drawings | Test Results/ SR                                                                                                             | √                                                                                                   | x                                | x              | x             |                                                                                                                                       |
| 141 | 13     | Brick masonry work                                                                                                                                                                                                      |             |                |                       |                                                                                                                                                                                          |                                                                                                   |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                       |
| 142 | i      | Soaking of Bricks before use                                                                                                                                                                                            |             | Major          | Physical              | 100%                                                                                                                                                                                     | IS: 2250                                                                                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                       |
| 143 | ii     | Grading of sand, Mortar mix / proportion, Compressive strength, Consistency                                                                                                                                             |             | Major          | Physical/ Test        | At Random                                                                                                                                                                                | IS: 2250, IS: 2116, Tech Specs, Construction Drawings / As per Design Specification               | Lab Test Results/ SR                                                                                                         |                                                                                                     | x                                | x              | x             | The sand grading shall conform to IS: 2116                                                                                            |
| 144 | iii    | Workmanship, Verticality (Plumb) / Alignment                                                                                                                                                                            |             | Major          | Physical/ Measurement | 100%                                                                                                                                                                                     | IS: 2212, IS: 1905, Tech Specs, Construction Drawings                                             | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                       |
| 145 | iv     | Check for Bond/closers, joints                                                                                                                                                                                          |             | Major          | Visual                | At Random                                                                                                                                                                                | IS: 2250                                                                                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                       |
| 146 | v      | Curing                                                                                                                                                                                                                  |             | Major          | Visual                | 100%                                                                                                                                                                                     | IS: 2250 / As perTech. Specification                                                              | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                       |
| 148 | 12     | Cement Plaster                                                                                                                                                                                                          |             |                |                       |                                                                                                                                                                                          |                                                                                                   |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                       |

|     | A      | B                                                                                                                                                                                                                                       | C                          | D              | E                   | F                                                                                                                                                 | G                                                     | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                |
|-----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|----------------------------------------------------------------------------------------------------------------------------------|
|     | Sr.No. | Activity & Operation                                                                                                                                                                                                                    | Instruments                | Class of Check | Type of Check       | Quantum of Check                                                                                                                                  | Reference Documents & Acceptance Standard             | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                          |
| 1   |        |                                                                                                                                                                                                                                         |                            |                |                     |                                                                                                                                                   |                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                  |
| 2   |        |                                                                                                                                                                                                                                         |                            |                |                     |                                                                                                                                                   |                                                       | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                  |
| 149 | i      | Quality & Grading of sand, Check for mix proportion, wetting the surface etc                                                                                                                                                            |                            | Major          | Physical            | At Random                                                                                                                                         | IS: 2116, IS: 2386 (Pt. I & II), IS: 1542, Tech Specs | Lab Test Results/ SR                                                                                                         |                                                                                                     | x                                | x              | x             | Sand to be used shall be free from deleteriousmaterials, Grading shall conform to Table-I of IS: 2116                            |
| 150 | ii     | Plaster & grooves - Thickness, Evenness & Finishing, Trueness os palstering system                                                                                                                                                      |                            | Major          | Visual/ Measurement | At Random in each shift                                                                                                                           | Tech Specifications, Construction Drawings            | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | Trueness - Deviation not more than 4mm when checked with straight edge of 2m length                                              |
| 151 | iii    | Hacking, Raking of joints, Cleaning the surface, Removing all loose particles, Wetting the surface etc                                                                                                                                  |                            | Major          | Visual              | At Random in each shift                                                                                                                           | IS 1661, Tech Specs                                   | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                  |
| 152 | iv     | Curing                                                                                                                                                                                                                                  |                            | Minor          | Physical            | 100%                                                                                                                                              | IS 1661, Tech Specs                                   | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                  |
| 154 | 14     | <b>Painting System - Plastered Masonry &amp; Concrete surface</b>                                                                                                                                                                       |                            |                |                     |                                                                                                                                                   |                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                  |
| 155 | i      | Materials & accessories - Approval for Paint, Color shade and Brand- Dry distemper, Oil Bound Distemper, Acrylic Emulsion, Chemical resistant, Oil resistant Paint, Weather proof acrylic exterior paint, water proof cement paint etc. | As approved by SECI/ Owner | Critical       | Review of MTC       | Each batch of delivery                                                                                                                            | Tech Specs, Construction Drawings                     | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             | MTC shall be correlated with the material received                                                                               |
| 156 | ii     | Surface preparation                                                                                                                                                                                                                     | As required                | Minor          | Physical            | Random in each shift                                                                                                                              | IS: 2935 (Pt.1), Tech Specs, Construction Drawings    | SR                                                                                                                           | x                                                                                                   | x                                | x              | x             |                                                                                                                                  |
| 157 | iii    | Number of coats                                                                                                                                                                                                                         | As required                | Major          | Physical            | Random in each shift                                                                                                                              | Tech Specs, Construction Drawings                     | SR                                                                                                                           | x                                                                                                   | x                                | x              | x             |                                                                                                                                  |
| 158 | iv     | Application and Acceptance of painted surface                                                                                                                                                                                           | As required                | Major          | Physical            | Each surface at Random                                                                                                                            |                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                  |
| 160 | 15     | <b>Floor finishes &amp; Allied works</b>                                                                                                                                                                                                |                            |                |                     |                                                                                                                                                   |                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                  |
| 161 | i      | Preperation of Sub-grade                                                                                                                                                                                                                |                            |                | Physical            | At Random for each building                                                                                                                       | Tech. Specs, Construction Drawings                    | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                  |
| 162 | ii     | Plinth filling in layers (stone aggregates/ rubble with interstices filled with sand), ramming & compaction                                                                                                                             |                            |                | Physical            | At Random for each building                                                                                                                       | IS: 2720, Tech. Specs, Construction Drawings          |                                                                                                                              | √                                                                                                   | x                                | x              | x             | Quality Checks as aplicable to Fill/ Back fill                                                                                   |
| 163 | iii    | Check providing shuttering, reinforcement (if applicable)                                                                                                                                                                               |                            |                | Physical            | At Random for each building                                                                                                                       | Tech. Specs, Construcion Drawings                     |                                                                                                                              |                                                                                                     | x                                | x              | x             | Quality Checks as aplicable to Shuttering/ Reinforcement placement                                                               |
| 164 | iv     | Checking the Panel size (as applicable)                                                                                                                                                                                                 |                            |                | Physical            | At Random for each building                                                                                                                       | IS: 5491, Tech. Specs, Construcion Drawings           |                                                                                                                              |                                                                                                     | x                                | x              | x             | The concrete shall be cast in alternate panels in chess board fashion, panel size as specified in Construction Drawing or 25 sqm |
| 165 | v      | Availability of Design mix (if applicable)                                                                                                                                                                                              |                            |                | Visual              | At Random for each building                                                                                                                       | Tech. Specs, Construcion Drawings                     | Mix Design Report/ SR                                                                                                        |                                                                                                     | x                                | x              | x             |                                                                                                                                  |
| 166 | vi     | Clearance for concreting (as applicable)                                                                                                                                                                                                |                            |                | Physical            | 100%                                                                                                                                              | Tech. Specs, Construction Drawings                    | Joint Protocol between Civil Contractor, Eqpt. Supplier/ EPC Vendor & SECI/ Owner SR                                         |                                                                                                     | x                                | x              | x             |                                                                                                                                  |
| 167 | viii   | Performing concreting ensuring Grade/Mix Proportions, Compaction, Thickness and Finish                                                                                                                                                  |                            |                | Physical            | At Random per shift                                                                                                                               | IS; 456, Tech. Specs, Construction Drawings           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | Quality Checks as aplicabel to Concrete Work                                                                                     |
| 168 | viii   | Curing                                                                                                                                                                                                                                  |                            |                | Visual              | 100%                                                                                                                                              | IS: 456, Tech. Specs                                  | SR                                                                                                                           |                                                                                                     | x                                | x              | x             | Minimum up to 10 days from date of casting                                                                                       |
| 169 | ix     | Testing of Concrete Cubes for Flooring                                                                                                                                                                                                  |                            |                | Physical            | One sample for every 20 Cum of concreting or part thereof for each days concreting (one sample consists of min 3 test cubes for 28 days strength) | IS:456, IS:516,IS:1199 and Design specification       | Lab Test Reports                                                                                                             |                                                                                                     |                                  |                |               |                                                                                                                                  |
| 170 | x      | Tiled flooring/ dado                                                                                                                                                                                                                    |                            |                |                     |                                                                                                                                                   |                                                       |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                  |

|     | A      | B                                                                                                                           | C                                                                        | D              | E                                           | F                                        | G                                                                           | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                        |
|-----|--------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------|---------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|--------------------------------------------------------------------------------------------------------------------------|
|     | Sr.No. | Activity & Operation                                                                                                        | Instruments                                                              | Class of Check | Type of Check                               | Quantum of Check                         | Reference Documents & Acceptance Standard                                   | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                  |
| 1   |        |                                                                                                                             |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 2   |        |                                                                                                                             |                                                                          |                |                                             |                                          |                                                                             | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                          |
| 171 | a      | Material - Glazed ceramic Tiles, Vitrified Ceramic Tiles, Mosaic Tiles, Acid alkali Tiles, Heavy duty cement concrete tiles | As agreed/ required                                                      | Critical       | Review of MTC & Test Reports                | Each lot of material received            | IS:13755, IS:1237, IS:8042, Tech Specs, Construction Drawings               | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             | MTC shall be correlated for all the parameters specified in Tech. Specs, BIS Standard                                    |
| 172 | b      | Finishing & Acceptance                                                                                                      |                                                                          | Major          | Physical                                    | 100%                                     | IS: 1443, Tech Specs, Construction Drawings                                 |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 173 | xi     | IPS with or without IRONITE (as applicable)                                                                                 |                                                                          | Major          | Physical                                    | At Random per shift                      | IS: 5491, Tech. Specs, Construction Drawings                                | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 174 | xi     | Fixing of Panel Dividers for finishing course (3 mm Thk Glass/ 2mm Thk Aluminium strip) (if applicable)                     |                                                                          | Major          | Physical                                    | At Random per shift                      | Tech Specs, Construction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 175 | xii    | Anti abrasion/ anti wearing epoxy coating (if applicable)                                                                   |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 176 | a      | Material                                                                                                                    | As agreed/ required                                                      | Critical       | Approved Make and Type                      | Each lot of material received            | Tech Specs, Construction Drawings, Manufacturer's Brochure/ Recommendations | manufacturer's Brochure/ SR                                                                                                  | √                                                                                                   | x                                | x              | x             | Material specifications to be correlated with Manufacturer's Brochure                                                    |
| 177 | b      | Finishing & Acceptance                                                                                                      |                                                                          | Major          | Physical                                    | 100%                                     | Tech Specs, Construction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 178 | xiv    | Kota stone flooring and skirting (as applicable)                                                                            |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 179 | a      | Material                                                                                                                    | Quality, Texture, Thickness, Colour fro approved source                  | Major          | Physical                                    | Each batch of delivery                   | Tech Specs, Construction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 180 | b      | Finishing & Acceptance                                                                                                      |                                                                          | Major          | Physical                                    | 100%                                     | Tech Specs, Cosntruction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 181 | xv     | Acid/ Alkali resistant tile flooring/ dado                                                                                  |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 182 | a      | Material -Tiles, Mortar, Sealing, Fillers etc.                                                                              | Thickness, Quality,                                                      | Critical       | Approved source, Review of MTC/ Test Report | Each batch of delivery                   | Tech Specs, Construction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | The acid alkali resistant tile flooring nd dado shall be provided in battery room as per approved Arch finishing details |
| 183 | b      | Finishing & Acceptance                                                                                                      | Workmanship                                                              | Major          | Physical                                    | 100%                                     | Tech Specs, Construction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 184 | xvi    | Interlocking Blocks                                                                                                         |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 185 | a      | Materials                                                                                                                   | Size/ Shape, colour shade, Grade of Concrete                             | Critical       | Approved source, Review of MTC/ Test Report | Each batch of delivery                   | BS: 6717, Tech Specs, Construction Drawings                                 | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 186 | b      | Final finishing & Acceptance                                                                                                | As agreed/ required                                                      | Major          | Physical                                    | 100%                                     | BS: 7533 (Pt.3), Tech Specs, Construction Drawings                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 188 | 16     | <b>Damp Proof Course</b>                                                                                                    |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 189 | i      | Material - Hot bitumen & water proofing materials etc.                                                                      | As agreed/ required                                                      | Critical       | Review of MTC                               | Each batch of delivery                   | IS: 702, Tech. Specs, Cosntruction Drawings                                 | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 190 | ii     | Acceptance of Damp Proof Course - Thickness, Grade of PCC, Application of Bitumen layer etc.                                | As agreed/ required                                                      | Major          |                                             | 100%                                     | Tech Specs, Construction Drawings                                           | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 192 | 17     | <b>Grouting of pockets/ underside of base plate</b>                                                                         |                                                                          |                |                                             |                                          |                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                          |
| 193 | i      | Material                                                                                                                    | As required/ Agreed                                                      | Critical       | Review of MTC/ Physical                     | Each batch of delivery                   | Tech. specs, Construction Drawings, Manufacturerr's catalogue               | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | In case of ready mixed grout MTC to be correlated with Manufacturerr's catalogue                                         |
| 194 | ii     | Type of Mix                                                                                                                 | Anti shrink cement grout/ Ready mixed - Fluid mix, stiff mix as required | Major          | Physical                                    | At Random prr shift of grout application | Tech. specs, Construction Drawings                                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | In case of cement grout anti shrink compound shall be added as per provisions of relevant IS/ Cosntruction Drawing       |
| 195 | iii    | Mixing, placement, application                                                                                              | As required                                                              | Major          | Visual                                      | At Random prr shift of grout application | Tech. Specs, Construction Drawings                                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                          |
| 196 | iv     | Crushing Strength - Test cubes                                                                                              | As required                                                              | Major          | Physical/ Testing                           | 3 cubes for entire grouting work         | IS: 4031 (Pt.6), Tech Specs, Construction Drawings                          | SR/ Lab Test Report                                                                                                          | √                                                                                                   | x                                | x              | x             |                                                                                                                          |

|     | A      | B                                                                                                                                                                              | C                               | D              | E                               | F                                    | G                                                              | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                               |
|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------|---------------------------------|--------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Sr.No. | Activity & Operation                                                                                                                                                           | Instruments                     | Class of Check | Type of Check                   | Quantum of Check                     | Reference Documents & Acceptance Standard                      | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                                         |
| 2   |        |                                                                                                                                                                                |                                 |                |                                 |                                      |                                                                | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                                 |
| 197 | v      | Acceptance of Grouting                                                                                                                                                         | Thickness, Finished level etc.  | Major          | Physical                        | 100% of 20 % of grout work at Random | Tech. Specs, Construction Drawings                             | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                 |
| 199 | 18     | <b>Precast Concrete</b>                                                                                                                                                        |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 200 | a      | <b>Bought Out Units (Precast boundary wall units - Slab Panels, Column etc., Trench Covers , Manhole Covers, Paver Blocks etc.)</b>                                            |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 201 | i      | Crushing strength                                                                                                                                                              | As required                     | Critical       | Review of MTC/ Test Reports     | 100% for Each batch of delivery      | IS: 456, IS:516, IS: 1199, Tech Specs, Construction Drawings   | MTC                                                                                                                          | √                                                                                                   | x                                | x              | x             | Sampling as per IS: 456, Vendor record review                                                                                                   |
| 202 | ii     | Workmanship, dimentions, R/F                                                                                                                                                   | As require/ agreed              | Major          | Review of MTC/ Physical         | Each batch of delivery at Random     | Tech Specs, Construction Drawings                              | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             | Vendor record review, Physical check at Random                                                                                                  |
| 203 | b      | <b>Cast at site (if applicable)</b>                                                                                                                                            |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 204 | i      | Crushing strength - Test Cubes                                                                                                                                                 | As required                     | Critical       | Testing                         |                                      | IS: 456, IS:516, IS: 1199, Tech Specs, Construction Drawings   | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | 1 sample of 6 cubes (3 for 7 days strength, 3 for 28 days strength) for each 5 cum of concrete with minimum 1 sample per shift of concrete work |
| 205 | ii     | Workmanship, dimentions, R/F                                                                                                                                                   | As required/ agreed             | Major          | Physical                        | At Random                            | Tech Specs, Construction Drawings                              | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                 |
| 206 | c      | <b>Acceptance of pre-cast concrete units</b>                                                                                                                                   |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 207 | i      | Bought Out Units - Check for any breakage, damage during handing & trasport, erection at site (levels) etc.                                                                    | As required/ Agreed             | Major          | Visual                          | At Random                            | Tech Specs, Construction Drawings                              | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                 |
| 208 | ii     | Cast at site (if applicable) - Check for curing, damage during handling, erection at site (level) etc.                                                                         | As required/ Agreed             | Major          | Visual                          | 100% of 10% at Random                | Tech Specs, Construction Drawings                              | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                 |
| 210 | 19     | <b>Joints In concrete</b>                                                                                                                                                      |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 211 | i      | Joint Material - Bitumen inpregnataed fiber board, PVC water stop, Sealing compound - Bitumastic/ polysulphide, Hydrophilic strip, Expanded polysterene (thermocol) board etc. | As per manufacturer's standards | Critical       | Review of MTC                   | Each batch of delivery               | Tech. Specs, Construction Drawings, IS: 1838, IS:1834, IS:2200 | MTC                                                                                                                          | √                                                                                                   | x                                | x              | x             |                                                                                                                                                 |
| 212 | ii     | Acceptance of installation                                                                                                                                                     | As agreed/ required             | Major          | Physical                        | Each installation at Random          | Tech. Specs and Construction Drawings                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                 |
| 214 | 20     | <b>Underdeck Insulation Works</b>                                                                                                                                              |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 215 | i      | Insulation material - Mineral/ Glass wool, galvanized wire neting, Aluminium foil, fasteners etc.                                                                              | As agreed/ required             | Critical       | Review of MTC/ Test Reports     | Each lot received at site            | Tech. Specs and Construction Drawings                          | MTC/ Test Reports/ SR                                                                                                        | √                                                                                                   | x                                | x              | x             | All tests as per Tech. Specifications                                                                                                           |
| 216 | ii     | Acceptance of installation                                                                                                                                                     | As agreed/ required             | Major          | Physical                        | Each installation                    | Tech. Specs and Construction Drawings                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                 |
| 218 | 21     | <b>False Ceiling</b>                                                                                                                                                           |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |
| 219 | i      | Materials - Gypsum board/ Tiles, Particle board tiles, Al tiles/ Strips, GI hangers, AL/ GI Tee support, AL/ GI Edge angle, Fasteners etc.                                     | As agreed/ required             | Critical       | Visual/ Physical, Review of MTC | Each lot received at site            | IS:2095, IS:8183, Tech. Specs and Construction Drawings        | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             | Compare MTC with Tech. Specifications and requirements                                                                                          |
| 220 | ii     | Acceptance of Installation                                                                                                                                                     | As agreed/ required             | Major          | Visual/ Physical                | Random                               | Tech. Specs and Construction Drawings                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                 |
| 222 | 22     | <b>Doors, Windows, Ventilators, Glass/ Glazing and Grill</b>                                                                                                                   |                                 |                |                                 |                                      |                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                 |

|     | A      | B                                                                                                                                                                                               | C                   | D              | E                                             | F                               | G                                                                                           | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                                                                     |
|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------|-----------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Sr.No. | Activity & Operation                                                                                                                                                                            | Instruments         | Class of Check | Type of Check                                 | Quantum of Check                | Reference Documents & Acceptance Standard                                                   | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                                                                               |
| 1   |        |                                                                                                                                                                                                 |                     |                |                                               |                                 |                                                                                             | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                                                                       |
| 223 | i      | Door Frame (Hollow steel metal, Aluminium, Wooden etc. including fittings such as hold fasts etc.)                                                                                              | As agreed/ required | Critical       | Visual, Physical, Review of MTC/ Test Reports | Each lot received at site       | Tech. Specs and Construction Drawings                                                       | MTC/ Lab Test Reports/ SR                                                                                                    | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                       |
| 224 | a      | <b>Steel Doors</b>                                                                                                                                                                              |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 225 | i      | Materials (MS sheet & Stiffeners, fasteners, hinges, jambs, lock strike plate, hydraulic door closer, fittings and fixtures etc)                                                                | As agreed/ required | Critical       | Visual/ Physical/ Review of MTC, Test Report  | Each lot received at site       | IS:2062, Tech. Specs and Construction Drawings                                              | MTC/ Lab Test Report/ SR                                                                                                     | √                                                                                                   | x                                | x              | x             | Review of MTC/ Test Report                                                                                                                                                            |
| 226 | ii     | Finishing & Acceptance - Surface preperation for painting, primer & finishing coat, DFT                                                                                                         | As agreed/ required | Major          | Visual/ Physical                              | Random                          | Tech. Specs and Construction Drawings                                                       | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                       |
| 227 | b      | <b>Flush Doors</b>                                                                                                                                                                              |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 228 | i      | Shutters, Teak beading                                                                                                                                                                          | As agreed/ required | Critical       | Review of MTC/ Test Report                    | Each lot received at site       | IS:2202, Tech. Specs and Cosntruction Drawings                                              | MTC/ Lab Test Report/ SR                                                                                                     | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                       |
| 229 | ii     | Acceptance                                                                                                                                                                                      | As agreed/ required | Major          | Visual/ Physical                              | Random                          | Tech. Specs and Construction Drawings                                                       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                                       |
| 230 | c      | <b>Aluminium doors and Partition works</b>                                                                                                                                                      |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 231 | i      | Materials- Aluminium sections (average thickness, alkali resistant, anodisation, power coating and colour shade etc.), fittings and fixtures. floor spring, hydraulic door closer, hinges, etc. | As agreed/ required | Critical       | Visual/ Physical/ Review of Test Report       | Each lot received at site       | IS:1948, IS:1949, IS:733, IS:1285, IS:1868, IS:11857, Tech. Specs and Construction Drawings | SR/ Lab Test Reports                                                                                                         | √                                                                                                   | x                                | x              | x             | Review of Test Report<br>For anodization check as per Tech. Specs and Construction Drawings<br>Power coating, colour shade as applicable as per Tech. Specs and Construction Drawings |
| 232 | ii     | Finishing & Acceptance - fabrication & erection, fitting etc..                                                                                                                                  | As agreed/ required | Major          | Visual/ Physical                              | Random                          | Tech. Specs and Construction Drawings                                                       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                                       |
| 233 | d      | <b>Grill</b>                                                                                                                                                                                    |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 234 | i      | Materials - Aluminium, MS, Anodization in case of aluminium                                                                                                                                     | As agreed/ required | Critical       | Visual/Physical/ Review of Test Report        | Each lot received at site       | Tech. Specs and Construction Drawings                                                       | SR/ Lab Test Reports                                                                                                         | √                                                                                                   | x                                | x              | x             | Review of Test Reports                                                                                                                                                                |
| 235 | ii     | Finishing & Acceptance - erection, fitting, painting in case of MS grill etc.                                                                                                                   | As agreed/ required | Major          | Visual/ Physical                              | Random                          | Tech. Specs and Construction Drawings                                                       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                                       |
| 236 | e      | <b>Rolling Shutters</b>                                                                                                                                                                         |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 237 | i      | Surface finish, Thickness of plate, mechanically operated                                                                                                                                       | As agreed/ required | Critical       | Visual/ Physical/ review of MTC               | Random for each lot of delivery | IS:8248, Tech. Specs & Construction Drawings                                                | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                       |
| 238 | ii     | Finishing and Acceptance -Painting , DFT                                                                                                                                                        | As agreed/ required | Major          | Visual/ Physical                              | Random                          | Tech. Specs and Construction Drawings                                                       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                                       |
| 239 | f      | <b>Glass and Glazing</b>                                                                                                                                                                        |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 240 | i      | Material - Clear float glass, wired glass, tinted glass, ground glass, figured glass, thickness                                                                                                 | As agreed/ required | Major          | Review of MTC/ test reports                   | For each lot received at site   | IS: 14900, IS:1081, IS: 3548, IS:5437 Tech Specs and Construction Drawings                  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                       |
| 241 | ii     | Installation, finishing and acceptance                                                                                                                                                          | As agreed/ required | Major          | Visual/ Physical                              | Random                          | Tech Specs and Construction Drawings                                                        | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                                       |
| 243 | 23     | <b>Precast Concrete Boundary Wall</b>                                                                                                                                                           |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 244 |        | Acceptance of boundary wall- Finising, Alignment Dimensions etc.                                                                                                                                | As agreed/ required | Major          | Physical                                      |                                 | Tech Specs and Construction Drawings                                                        | SR                                                                                                                           |                                                                                                     | x                                | x              | x             | For inspection of precast concrte units -refer S.No. 18                                                                                                                               |
| 246 | 24     | <b>Roof Water Proofing</b>                                                                                                                                                                      |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 247 | i      | Methodology for the application of water proofing system                                                                                                                                        | As required         | Critical       | Review                                        | for each type of treatment      | Tech Specs and Const. Drawings                                                              |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |
| 248 | a      | Materials                                                                                                                                                                                       |                     |                |                                               |                                 |                                                                                             |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                                       |

|     | A      | B                                                                                                                                                                                                                    | C                    | D              | E                           | F                                                       | G                                                                                                                        | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                                                                                          |
|-----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|-----------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Sr.No. | Activity & Operation                                                                                                                                                                                                 | Instruments          | Class of Check | Type of Check               | Quantum of Check                                        | Reference Documents & Acceptance Standard                                                                                | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                                                                                    |
| 2   |        |                                                                                                                                                                                                                      |                      |                |                             |                                                         |                                                                                                                          | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                                                                                            |
| 249 | i      | Polyurethane based coating, polyester scrim cloth, extruded HD dimpled polyurethane                                                                                                                                  | As agreed / required | Critical       | Review of MTC/ test reports | For each lot received at site                           | ASTM C-836, ASTM C898 and Tech Specs /Const. Drawings                                                                    | MTC/ SR                                                                                                                      | √                                                                                                   |                                  |                |               |                                                                                                                                                                            |
| 250 | b      | Roof                                                                                                                                                                                                                 |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 251 | i      | Graded under bed - Slope/ Level                                                                                                                                                                                      | As agreed / required | Major          | Physical                    | 100%                                                    | Tech Specs and Construction Drawings                                                                                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 252 | ii     | Elastomeric coatings -Primer coat, Finishing coat                                                                                                                                                                    | As agreed / required | Major          | Review of MTC/ test reports | Each lot of delivery                                    | Tech Specs and Construction Drawings                                                                                     | MTC/ Test Reports/ SR                                                                                                        | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                            |
| 253 | iii    | Wearing Course - PCC-Grade, chicken wire mesh, elastomeric sealant                                                                                                                                                   | As agreed / required | Major          | Visual/ Review of MTC       | Each lot of delivery of material/ Review of Test Report | Tech Specs and Construction Drawings                                                                                     | MTC/ Test Reports SR                                                                                                         | √                                                                                                   | x                                | x              | x             | 2 samples of 3 no. of test cube each shall be taken for PPC work for testing of crushing strength of concrete mix, Review of MTC for Chicken wire mesh, waterproof sealant |
| 254 | c      | Acceptance of Water proofing treatment                                                                                                                                                                               | As agreed/ required  | Major          | Visual/ Physical            | 100%                                                    | Tech Specs and Construction Drawings                                                                                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 256 | 25     | <b>Water Supply and Sanitary Installations</b>                                                                                                                                                                       |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 257 | a      | <b>Water Supply Fittings and Fixtures</b>                                                                                                                                                                            |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 258 | i      | Materials - GI/ MS/ C-PVC/ uPVC/PPR/HDPE pipes and fittings                                                                                                                                                          | As agreed / required | Critical       | Review of MTC/ test reports | Each lot of delivery as per Specifications              | IS:1239, IS:4736, IS:4985, IS:6745, IS: 4984, IS:2633, IS:2629, IS:15778, IS:15801, Tech Specs and Construction Drawings | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                            |
| 259 | ii     | Disinfection - Before use                                                                                                                                                                                            | As agreed / required | Major          | Physical                    | Each installation                                       | IS:2065, Tech specs and construction Drawings                                                                            | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 260 | iii    | Hydraulic test - Before use/ Leakage                                                                                                                                                                                 | As agreed / required | Critical       | Physical                    | Each installation                                       | Tech Specs and Construction Drawings                                                                                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 261 | iv     | Acceptance & Working                                                                                                                                                                                                 | As agreed / required | Major          | Physical                    | Random                                                  | Tech Specs and Construction Drawings                                                                                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 262 | b      | <b>Sand Cast Iron/ Cast iron Pipes</b>                                                                                                                                                                               |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 263 | i      | Material - SCI / CI pipes and fittings / joints                                                                                                                                                                      | As agreed / required | Critical       | Review of MTC/ test reports | Each lot of delivery (as applicable)                    | IS: 1729, IS:1536, IS:1538, Tech Specs and Construction Drawings                                                         | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                            |
| 264 | ii     | Acceptance and leakage                                                                                                                                                                                               | As agreed / required | Major          | Physical                    | Random                                                  | Tech Specs and Construction Drawings                                                                                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 265 | c      | <b>HDPE Pipes for Sewerage</b>                                                                                                                                                                                       |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 266 | i      | Material- HDPE pipes and fittings/ joints                                                                                                                                                                            | As agreed/ required  | Critical       | Review of MTC/ test reports | Each lot of delivery (as applicable)                    | IS:14333, Tech. Specs                                                                                                    | MTC/SR                                                                                                                       | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                            |
| 267 | ii     | Acceptance & leakage                                                                                                                                                                                                 | As agreed / required | Major          | Physical                    | Random                                                  | Tech Specs and Const. Drawings                                                                                           | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 268 | d      | <b>HDPE Pipes for Rain water Downcommer</b>                                                                                                                                                                          |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 269 | i      | HDPE pipes and fittings/ joints                                                                                                                                                                                      | As agreed/ required  | Critical       | Review of MTC/ test reports |                                                         | IS:4984, Tech. Specs                                                                                                     | MTC/SR                                                                                                                       | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                            |
| 270 | ii     | Acceptance & leakage                                                                                                                                                                                                 | As agreed / required | Major          | Physical                    | Random                                                  | Tech Specs and Const. Drawings                                                                                           | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                                                                                            |
| 271 | e      | <b>Sanitary fitting and fixtures</b>                                                                                                                                                                                 |                      |                |                             |                                                         |                                                                                                                          |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                                                                                            |
| 272 | i      | Sanitary items and fixtures i.e. water closets, urinals, wash basins, sinks, mirrors, shelves, towel rail, soap containers, geyser, water cooler, etc, water supply / sanitation pipes, manhole cover and frames etc | As agreed / required | Major          | Review of MTC/ Test reports | Each lot of delivery as per Specifications              | Tech Specs and Const. Drawings                                                                                           | MTC/Test Reports/ SR                                                                                                         | √                                                                                                   | x                                | x              | x             |                                                                                                                                                                            |

|     | A      | B                                                                                                 | C                    | D              | E                                     | F                                                                | G                                                                                                                   | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                                                                                             |
|-----|--------|---------------------------------------------------------------------------------------------------|----------------------|----------------|---------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------------------------------------------------------------------------------------------------------------|
|     | Sr.No. | Activity & Operation                                                                              | Instruments          | Class of Check | Type of Check                         | Quantum of Check                                                 | Reference Documents & Acceptance Standard                                                                           | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                                                                                       |
|     |        |                                                                                                   |                      |                |                                       |                                                                  |                                                                                                                     | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                                                                                               |
| 273 | ii     | Acceptance of installations of all sanitary items and fixtures                                    | As agreed / required | Major          | Acceptance                            | 100%                                                             | Tech Specs and Const. Drawings                                                                                      | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                               |
| 274 | f      | <b>RCC Pipes</b>                                                                                  |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 275 | i      | Material - RCC pipes                                                                              | As agreed / required | Major          | Review of MTC/ test reports           | Each lot of delivery as per Specifications                       | IS: 458, Tech Specs and Const. Drawings                                                                             | MTC/Test Reports/ SR                                                                                                         | √                                                                                                   | x                                | x              | x             |                                                                                                               |
| 276 | ii     | Acceptance and leakage                                                                            | As agreed / required | Major          | Physical                              | Random                                                           | Tech Specs and Const. Drawings                                                                                      | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                               |
| 277 | g      | <b>Water Storage Tank</b>                                                                         |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 278 | i      | Over head / loft type                                                                             | As agreed / required | Critical       | Physical, review of MTC/ test reports | Each lot of delivery as per Specifications                       | IS:12701, Tech Specs and Const. Drawings                                                                            | MTC/Test Reports/ SR                                                                                                         | √                                                                                                   | x                                | x              | x             |                                                                                                               |
| 279 | ii     | Aceptance and leakage                                                                             | As agreed / required | Major          | Acceptance                            | Random                                                           | IS:12701, Tech Specs and Const. Drawings                                                                            | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                               |
| 280 |        |                                                                                                   |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 281 | 26     | <b>Special Items (Switch Yard)</b>                                                                |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 282 | a      | <b>Earthing Mat (Grounding System)</b>                                                            |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 283 | i      | Earthing mat                                                                                      | As agreed / required | Critical       | Physical, review of MTC/ test reports | Each lot of delivery as per Specifications                       | As per relevant IS and Tech. Specs / Manufacturer's, IS 3043                                                        | SR/MTC                                                                                                                       | √                                                                                                   | x                                | x              | x             |                                                                                                               |
| 284 | ii     | Weld sizes & length                                                                               | Visual/Tape          | Major          | Visual/ Measurement                   | 100%                                                             | Tech Specs and Const. Drawings                                                                                      | SR                                                                                                                           |                                                                                                     | x                                | x              | x             | Low hydrogen electrode as per approval shall be used.                                                         |
| 285 | iii    | D P test                                                                                          | DP test Kit          | Critical       | Physical                              | 10% at random                                                    | Tech Specs and Const. Drawings                                                                                      | TR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                                                                                               |
| 286 | iv     | Earth test                                                                                        | Earthing test kit    | Critical       | Physical                              | 100%                                                             | IS:3043, Tech Specs and Const. Drawings, Relevant IS 3043                                                           | SR/ Test Report                                                                                                              | √                                                                                                   | x                                | x              | x             |                                                                                                               |
| 287 | b      | <b>Anti Weed Treatment</b>                                                                        |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 288 | i      | Anti-weed treatment materials                                                                     | As agreed / required | Critical       | Physical, review of MTC               | Each batch of delivery                                           | Tech Specs and Const. Drawings                                                                                      | SR/ MTC                                                                                                                      | √                                                                                                   | x                                | x              | x             |                                                                                                               |
| 289 | ii     | Execution of treatment                                                                            | As agreed / required | Major          | Physical                              | Random check for each treatment                                  | Tech Specs and Const. Drawings                                                                                      | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                                                                                               |
| 291 | 27     | <b>Road Work</b>                                                                                  |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 292 | a      | <b>Construction of Sub-Grade and earthen/hard soulders</b>                                        |                      |                |                                       |                                                                  |                                                                                                                     |                                                                                                                              |                                                                                                     |                                  |                |               |                                                                                                               |
| 293 | i      | Standard proctor Test                                                                             | As per IS: 2720      | Critical       | Physical                              | One in every 2000 cum for each type and source of fill materials | As per Tech Specs and Const. Drawings,Section 900 of MORTH specification, IS 2720 (Pt.VII)                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | In cutting or existing levelled ground - quantum of check shall be one per 1000 SQM                           |
| 294 | ii     | Moisture content of fill before compaction                                                        | As per IS: 2720      | Major          | Physical                              | One in every 2000 cum for each type and source of fill materials | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification, IS 2720 (Pt.II)                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             | In cutting or existing levelled ground - quantum of check shall be one per 1000 SQM                           |
| 295 | iii    | Dry density by core cutter method ---- OR----<br>Dry density in place by sand displacement method | As per IS: 2720      | Critical       | Physical                              | One in every 500 SQM area for each compacted layer.              | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification, IS 2720 (Pt. XXIX)/ IS 2720 (Pt. XXVIII) | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | Both for embankment and cut formation quantum of check - One in every 1000 SQM area for each compacted layer. |
| 296 | iv     | Lines, grade and cross section                                                                    | As required / agreed | Major          | Physical                              | One in every 500 SQM area                                        | As per Tech Specs and Const. Drawings                                                                               | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | Template, straight edge                                                                                       |

|     | A      | B                                                                               | C                                     | D              | E             | F                                                                                         | G                                                                                | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                       |
|-----|--------|---------------------------------------------------------------------------------|---------------------------------------|----------------|---------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|-------------------------|
| 1   | Sr.No. | Activity & Operation                                                            | Instruments                           | Class of Check | Type of Check | Quantum of Check                                                                          | Reference Documents & Acceptance Standard                                        | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                 |
| 2   |        |                                                                                 |                                       |                |               |                                                                                           |                                                                                  | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                         |
| 297 | b      | <b>Water Bound Macadam (Non-Bituminous) for base course and sub-base course</b> |                                       |                |               |                                                                                           |                                                                                  |                                                                                                                              |                                                                                                     |                                  |                |               |                         |
| 298 | i      | Aggregate Impact value                                                          | Aggragate Impact value Test Apparatus | Critical       | Physical      | One test per 200 cum of Test aggregate                                                    | As perTech Specs and Const. Drawings, Section 900 of MORTH specification         | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                         |
| 299 | ii     | Grading                                                                         | Set of IS Sieves                      | Major          | Physical      | One test per 100 cum of aggregate                                                         | As perTech Specs and Const. Drawings, Section 900 of MORTH specification         | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                         |
| 300 | iii    | Flakiness index and elongation index                                            | Flakiness test gauge                  | Major          | Physical      | One test per 200cum of agregate                                                           | As perTech Specs and Const. Drawings, Section 900 of MORTH specification         | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                         |
| 301 | iv     | Atterberg Limits of binding material                                            | Atterberg limits determination        | Critical       | Physical      | One test per 25 cum of binding material                                                   | As perTech Specs and Const. Drawings, Section 900 of MORTH specification         | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                         |
| 302 | v      | Atterberg Limits of portion of agreggate passing 425 micron sieve               | Atterberg limits determination        | Critical       | Physical      | One test per 100cum of aggregate                                                          | As perTech Specs and Const. Drawings, Section 900 of MORTH specification         | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                         |
| 303 | vi     | Camber, surface, slope                                                          | As required / agreed                  | Major          | Physical      | One in every 500 SQM area                                                                 | As per Tech Specs and Const. Drawings                                            | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             | Template, straight edge |
| 304 | c      | <b>Bituminous Macadam for base and binder course</b>                            |                                       |                |               |                                                                                           |                                                                                  |                                                                                                                              |                                                                                                     |                                  |                |               |                         |
| 305 | i      | Quality of binder                                                               | Penetrometre with St. needle          | Critical       | Physical      | No. of samples per Lot & tests as per IS:73, IS:217, IS:8887 as applicable                | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification, IS 73 | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                         |
| 306 | ii     | Aggregate Impact Value / Los angeles abrasion value                             | Aggregate Impact ValueTest apparatus  | Major          | Physical      | Once per source                                                                           | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification        | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                         |
| 307 | iii    | Flakiness Index and elongation index of aggregates                              | Flakiness test gauge                  | Major          | Physical      | One test per 50 cum of aggregate                                                          | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification        | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                         |
| 308 | iv     | Stripping value of aggregate (Immersion tray test)                              | As required / agreed                  | Major          | Physical      | Initially one set of 3 representative specimen per source, and on every change of source. | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification        | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                         |
| 309 | v      | Water sensitivity of mix                                                        | As required / agreed                  | Critical       | Physical      | Initially one set of 3 representative specimen per source, and on every change of source. | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification        | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                         |
| 310 | vi     | Grading of aggregates                                                           | Set of Sieves                         | Major          | Physical      | Two test per day per plant both on individual constituents and mixed aggregate from dryer | As per Tech Specs and Const. Drawings, Section 900 of MOSRTH specification       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                         |
| 311 | vii    | Water absorption of aggregate                                                   | As required / agreed                  | Major          |               | Initially one set of 3 representative specimen per source, and on every change of source. | As per Tech Specs and Const. Drawings, Section 900 of MOSRTH specification       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                         |

|     | A      | B                                                                                                          | C                                    | D              | E             | F                                                                                         | G                                                                          | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M       |
|-----|--------|------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|---------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------|
|     | Sr.No. | Activity & Operation                                                                                       | Instruments                          | Class of Check | Type of Check | Quantum of Check                                                                          | Reference Documents & Acceptance Standard                                  | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks |
| 1   |        |                                                                                                            |                                      |                |               |                                                                                           |                                                                            |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 2   |        |                                                                                                            |                                      |                |               |                                                                                           |                                                                            | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |         |
| 312 | viii   | Soundness ( Magnesium and Sodium Sulphate)                                                                 | As required as per IS:2386           | Critical       | Physical      | Once per source by each method and on every change of source                              | As per Tech Specs and Const. Drawings, Section 900 of MOSRTH specification | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 313 | ix     | Percentage of fractured faces                                                                              | As required / agreed                 | Major          | Physical      | When gravel is used one test per 50cum of aggregates                                      | As per Tech Specs and Const. Drawings, Section 900 of MOSRTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 314 | x      | Binder content and aggregate grading                                                                       | Bitumen extractor                    | Critical       | Physical      | Periodic, subject to a min of two tests per day per plant                                 | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 315 | xi     | Control of Temperature of binder and aggregate for mixing and of the mix at the time of laying and rolling | Thermometer                          | Major          | Physical      | At regular close intervals                                                                | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 316 | xii    | Rate of spread of mixed materials                                                                          | As required / agreed                 | Major          | Physical      | Regular control through checks of layer thickness                                         | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 317 | xii    | Density of compacted Layer                                                                                 | As required / agreed                 | Critical       | Physical      | One test per 250 sqm of area                                                              | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 318 | c      | <b>Bituminous Surfacing - Open graded premix carpet and Seal coat</b>                                      |                                      |                |               |                                                                                           |                                                                            |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 319 | i      | Quality of binder                                                                                          | Penetrometre with St. needle         | Critical       | Physical      | No. of samples per Lot & tests as per IS:73, IS:217, IS:8887 as applicable                | IS 73,Tech Specs and Const. Drawings, Section 900 of MORTH specification   | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 320 | ii     | Aggregate Impact Value / Los angeles abrasion value                                                        | Aggregate Impact ValueTest apparatus | Major          | Physical      | One test per 50 cum of aggregate                                                          | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 321 | iii    | Flakiness Index and elongation indexof aggregates                                                          | Flakiness test gauge                 | Major          | Physical      | One test per 50 cum of aggregate                                                          | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 322 | iv     | Stripping value of aggregate (Immersion tray test)                                                         | As required / agreed                 | Major          | Physical      | Initially one set of 3 representative specimen per source, and on every change of source. | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 323 | v      | Water absorption test                                                                                      |                                      | Critical       | Physical      | Initially one set of 3 representative specimen per source, and on every change of source. | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 324 | vi     | Water sensitivity of mix                                                                                   | As required / agreed                 | Critical       | Physical      | Initially one set of 3 representative specimen per source, and on every change of source. | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 325 | vii    | Grading of aggregates                                                                                      | Set of Sieves                        | Major          | Physical      | One test per 25 cum of aggregates                                                         | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |

|     | A      | B                                                                                     | C                                   | D              | E             | F                                                                          | G                                                                         | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M       |
|-----|--------|---------------------------------------------------------------------------------------|-------------------------------------|----------------|---------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------|
| 1   | Sr.No. | Activity & Operation                                                                  | Instruments                         | Class of Check | Type of Check | Quantum of Check                                                           | Reference Documents & Acceptance Standard                                 | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks |
| 2   |        |                                                                                       |                                     |                |               |                                                                            |                                                                           | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |         |
| 326 | viii   | Soundness ( Magnesium and Sodium Sulphate)                                            | As required as per IS:2386          | Critical       | Physical      | Once per source by each method and on every change of source               | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 327 | ix     | Polished stone value                                                                  | As required as per BS:812(Part 114) | Major          | Physical      | As required                                                                | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 328 | x      | Temperature of binder at application                                                  | Thermometer                         | Major          | Physical      | At regular close intervals                                                 | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 329 | xi     | Binder content                                                                        | Bitumen extractor                   | Critical       | Physical      | One test per 500 cum& not less than two tests per day                      | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 330 | xii    | Rate of spread of materials                                                           | As required / agreed                | Major          | Physical      | One test per 500 cum and not less than 2 tests per day                     | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 331 | xiii   | Percentage of fractured faces                                                         | Bitumen extractor                   | Critical       | Physical      | When gravel is used one test per 50cum of aggregates                       | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 332 | d      | <b>Tack Coat/ Prime coat/ fog coat</b>                                                |                                     |                |               |                                                                            |                                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 333 | i      | Quality of binder                                                                     | Penetrometre with Standard needle   | Critical       | Physical      | No. of samples per Lot & tests as per IS:73, IS:217, IS:8887 as applicable | IS 73,Tech Specs and Const. Drawings, Section 900 of MORTH specification  | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 334 | ii     | Temperature of binder at application                                                  | Thermometer                         | Major          | Physical      | At regular close intervals                                                 | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 335 | iii    | Rate of spread of binder                                                              | As required / agreed                | Major          | Physical      | One test per 500 cum and not less than 2 tests per day                     | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 336 | e      | <b>Alignment, Level, Surface regularity and rectification</b>                         |                                     |                |               |                                                                            |                                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 337 | i      | Horizontal alignment, Surface levels and Surface regularity                           | As required / agreed                | Major          | Physical      | At Random                                                                  | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 338 | ii     | Rectification                                                                         | As required / agreed                | Major          | Physical      | Each rectification                                                         | As per Tech Specs and Const. Drawings, Section 900 of MORTH specification | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 340 | 28     | <b>Geotechnical Investigations</b>                                                    |                                     |                |               |                                                                            |                                                                           |                                                                                                                              |                                                                                                     |                                  |                |               |         |
| 341 | i      | Deployment of approved Geotechnical Investigation Agency - Equipments, Manpower etc   | As required / agreed                | Critical       | Physical      | Once before commencement of work                                           | As per technical specifications and relevant IS Codes                     | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |         |
| 342 | ii     | Execution of Geotechnical Investigation - locations, type etc as per scheme           | As required / agreed                | Major          | Physical      | Each Location                                                              | As per technical specifications and relevant IS Codes                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 343 | iii    | Collection of disturbed and undisturbed samples , their packing and storage           | As required / agreed                | Major          | Physical      | each sampling                                                              | As per technical specifications and relevant IS Codes                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |
| 344 | iv     | Conducting filed tests as per investigation scheme- such as, SPT/ERT/SCPT/PLT/PMT etc | As required / agreed                | Major          | Physical      | each field test                                                            | As per technical specifications and relevant IS Codes                     | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |         |

|     | A      | B                                                                                                                                    | C                    | D              | E                                    | F                                                                                   | G                                                                              | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                         |
|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|--------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|-------------------------------------------|
| 1   | Sr.No. | Activity & Operation                                                                                                                 | Instruments          | Class of Check | Type of Check                        | Quantum of Check                                                                    | Reference Documents & Acceptance Standard                                      | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                   |
| 2   |        |                                                                                                                                      |                      |                |                                      |                                                                                     |                                                                                | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                           |
| 345 | v      | Submission of Field Borelogs in approved format                                                                                      | As required / agreed | Major          | Review                               | Within 24 hours after completion of each BH                                         | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 346 | vi     | Submission of laboratory test schedule and selection of samples for laboratory testing                                               | As required / agreed | Critical       | Review and acceptance                | as per consultation with engineer during dispatch of samples to approved laboratory | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                           |
| 347 | vii    | Submission of Final Geotechnical investigation report along with recommendations                                                     | As required / agreed | Critical       | Physical                             | After completion of investigation work and review of draft reports                  | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 349 | 29     | <b>Topographical Survey Works</b>                                                                                                    |                      |                |                                      |                                                                                     |                                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |
| 350 | i      | Deployment of approved Topographical Surveying Agency - Equipments, Manpower etc                                                     | As required / agreed | Critical       | Physical                             | Once before commencement of work                                                    | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                           |
| 351 | ii     | Transfer of Permanent Bench mark to site from known location                                                                         | As required / agreed | Major          | Physical                             | Before commencement of work                                                         | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 352 | iii    | Establishment of boundary pillars and survey grid, Temporary bench Marks, Measurement & recording spot levels                        | As required / agreed | Major          | Physical                             |                                                                                     | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 353 | iv     | Recording features like trees, roads, transmission lines, lake, nala, river, temple, house, culverts etc. with coordinate locations  | As required / agreed | Major          | Physical                             |                                                                                     | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 354 | vi     | Submission of final Counter map showing all topographical features, record of spot levels                                            | As required / agreed | Critical       | Physical                             | After completion of investigation work and review of draft reports                  | As per technical specifications and relevant IS Codes                          | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                           |
| 356 | 30     | <b>Internal Switchyard - Site Leveling &amp; Grading</b>                                                                             |                      |                |                                      |                                                                                     |                                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |
| 357 | i      | Leveling Switchyard area                                                                                                             | As required / agreed | Major          | Visual / Physical                    | 100%                                                                                | As perTech. Specification and Approved Drawing                                 | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 358 | ii     | Grading of 20/40mm stone / Gravel Spreading in sitchyard area                                                                        | As required / agreed | Major          | Physical                             | 100%                                                                                | As per Tech. Specification & Approved Drawing                                  | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |
| 360 | 31     | <b>Plant Boundary Fencing (if applicable) &amp; Gate (Also refer S.No. 3 for Steel works as applicable)</b>                          |                      |                |                                      |                                                                                     |                                                                                |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |
| 361 | i      | Fence posts (Intermediate, Stay & Corner Posts etc.) - Section size, Length, Galvanization - Grade/ Thickness, Tensile strength etc. | As agreed/ Required  | Critical       | Physical/ Measurement/ Review of MTC | Each lot received at site Random                                                    | IS:226; IS:2721; IS:278; IS:480; IS:4826 , Tech. Specs & Construction Drawings | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             | For Structural steel checks refer S.No. 3 |
| 362 | ii     | Barbed wire - Dia. of line wire and barb wire, Grade of galvanization etc, Tensile strength etc.                                     | As agreed/ Required  | Critical       | Physical/ Measurement/ Review of MTC |                                                                                     |                                                                                |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |
| 363 | iii    | Tie wire - Diameter, Galvanization-Grade, tensile strength etc.                                                                      | As agreed/ Required  | Critical       | Physical/ Measurement/               |                                                                                     |                                                                                |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |
| 364 | iv     | Blade barbed/ Concertina Wire - Thickness/ Diameter, galvanization, Diameter of concertina coil, Tensile strength etc.               | As agreed/ Required  | Critical       | Physical/ Measurement/ Review of MTC |                                                                                     |                                                                                |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |

|     | A      | B                                                                                                                                            | C                   | D              | E                                    | F                                | G                                                                                      | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M                                         |  |
|-----|--------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------|--------------------------------------|----------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|-------------------------------------------|--|
| 1   | Sr.No. | Activity & Operation                                                                                                                         | Instruments         | Class of Check | Type of Check                        | Quantum of Check                 | Reference Documents & Acceptance Standard                                              | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks                                   |  |
| 2   |        |                                                                                                                                              |                     |                |                                      |                                  |                                                                                        | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |                                           |  |
| 365 | v      | Fence Fabric- Mesh size, Wire Diameter, Galvanization-Grade, Selvage, Knuckling, Tensile strength etc.                                       | As agreed/ Required | Critical       | Physical/ Measurement/ Review of MTC |                                  |                                                                                        |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |  |
| 366 | vi     | MS Gate - Caster weels, ball & bearings, Fixtures & fasteners etc.                                                                           | As agreed/ Required | Major          | Visual                               | 100%                             | Tech. Specs & Construction Drawings                                                    | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |  |
| 367 | vi     | Acceptance of Boundary Fence and gate                                                                                                        | As agreed/ Required | Major          | Physical                             | 100%                             | Tech. Specs & Construction Drawings                                                    | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |  |
| 369 | 32     | Tranformer Yard Fencing & Gate (Also refer S.No. 3 for Steel Works as applicable)                                                            |                     |                |                                      |                                  |                                                                                        |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |  |
| 370 | i      | Fence posts (Intermediate, Stay & Corner Posts), Concertina Wire Support Angles - Section size, Length, Galvanization, Tensile strength etc. | As agreed/ Required | Critical       | Physical/ Measurement/ Review of MTC | Each lot received at site Random | IS-226; IS 2721; IS-4948 , IS:480; IS:4826<br>Tech. Specification and Approved Drawing | MTC/ SR                                                                                                                      | √                                                                                                   | x                                | x              | x             | For structural steel checks refer S.No. 3 |  |
| 371 | ii     | Tie wire (as aplicable) - Diameter, Galvanization, Tensile strength etc.                                                                     | As agreed/ Required | Critical       | Physical/ Measurement/ Review of MTC |                                  |                                                                                        |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |  |
| 372 | iii    | Fence Fabric (chain link/ welded wire as aplicable)- Mesh size, Wire Diameter, Galvanization, Selvage, Knuckling, Tensile strength etc.      | As agreed/ Required | Critical       | Physical/ Measurement/ Review of MTC |                                  |                                                                                        |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |  |
| 373 | iv     | MS Gate - Fixtures and fasteners                                                                                                             | As agreed/ Required | Major          | Visual                               | 100%                             | Tech Specs andApproved Drawings                                                        | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |  |
| 374 | v      | Acceptance of Fence & Gate                                                                                                                   | As agreed/ Required | Major          | Physical                             | 100%                             | Tech Specs and Approved Drawings                                                       | SR                                                                                                                           |                                                                                                     | x                                | x              | x             |                                           |  |
| 376 | 33     | Installation of Pre Engineered Building (PEB) - Security Cabin                                                                               |                     |                |                                      |                                  |                                                                                        |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |  |
| 377 | a      | Receipt                                                                                                                                      |                     |                |                                      |                                  |                                                                                        |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |  |
| 378 | i      | Receipt of materials and Checking as per packing list                                                                                        | As agreed/ Required | Major          | Visual                               | 100%                             | As per Approved Drawings & Method Statement, Relevant BIS standards                    | SR                                                                                                                           | √                                                                                                   | x                                | x              | x             |                                           |  |
| 379 | iii    | Dimensional Check                                                                                                                            | As agreed/ Required | Major          | Measurement                          | 100%                             |                                                                                        |                                                                                                                              | √                                                                                                   | x                                | x              | x             |                                           |  |
| 380 | iv     | Visual checks for damages, rusting, pitting etc.                                                                                             | As agreed/ Required | Major          | Visual                               | 100%                             |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 381 | v      | Visual checks for defects, primer coating and painting/galvanising as applicable.                                                            | As agreed/ Required | Major          | Visual                               | 100%                             |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 382 | vi     | Nut/Bolt/Washers Checks                                                                                                                      | As agreed/ Required | Major          | Visual                               | 100%                             |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 383 | b      | Pre-Installation                                                                                                                             |                     |                |                                      |                                  |                                                                                        |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |  |
| 384 | i      | Check that the work area is ready and safe to start installation                                                                             | As agreed/ Required | Major          | Visual / Dimension                   |                                  |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 385 | ii     | Check readiness of Foundations                                                                                                               | As agreed/ Required | Major          |                                      | 100%                             |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 386 | c      | Installation (as aplicable)                                                                                                                  |                     |                |                                      |                                  |                                                                                        |                                                                                                                              |                                                                                                     |                                  |                |               |                                           |  |
| 387 | i      | Readyness of concrete platform, foundations for installation- Size, Location, Level etc.                                                     | As agreed/ Required | Major          | Visual                               |                                  |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 388 | ii     | Check PUF side walls/ roof are installed properly                                                                                            | As agreed/ Required | Major          | Physical                             |                                  |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |
| 389 | iii    | Check tightening of all Nut/Washers/Bolts                                                                                                    | As agreed/ Required | Major          | Physical                             |                                  |                                                                                        |                                                                                                                              |                                                                                                     | x                                | x              | x             |                                           |  |





|   | A      | B                    | C           | D              | E             | F                | G                                         | H                                                                                                                            | I                                                                                                   | J                                | K              | L             | M       |
|---|--------|----------------------|-------------|----------------|---------------|------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------|----------------|---------------|---------|
|   | Sr.No. | Activity & Operation | Instruments | Class of Check | Type of Check | Quantum of Check | Reference Documents & Acceptance Standard | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                   |                |               | Remarks |
| 1 |        |                      |             |                |               |                  |                                           | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor | EPC Contractor | SECI or Owner |         |
| 2 |        |                      |             |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                  |                |               |         |

|     |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |
|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------|--|----------|----------|--------|----------------------------------------------------------------------------------------------|----|---|---|---|---|--|
| 496 | 37  | Inverter Panel                                                                                                                      |  |          |          |        | Design Specification, Drawings, Manufacturer Manual Method Statement                         | SR |   |   |   |   |  |
| 497 |     | Pre Installation                                                                                                                    |  |          |          |        |                                                                                              |    |   |   |   |   |  |
| 498 | i   | Check for site physical layout as per drawing.                                                                                      |  | Major    | Visual   | 100%   |                                                                                              |    | √ | x | x | x |  |
| 499 | ii  | Ensure that no fouling with civil/structural                                                                                        |  | Major    | Physical | Random |                                                                                              |    |   | x | x | x |  |
| 500 | iii | Check for Foundation readiness and level of foundation.                                                                             |  | Major    | Physical | 100%   |                                                                                              |    |   | x | x | x |  |
| 502 | 38  | Burried Cables                                                                                                                      |  |          |          |        | Design Specification, Drawings, Manufacturer Catalogue Method Statement (SW-SEPC-MS-CAB-006) |    |   |   |   |   |  |
| 503 | i   | Cable Trench - Dimensions, alignment                                                                                                |  | Critical | Physical | 100%   | Design Specification, Drawings, Manufacturer Catalogue Method Statement                      | SR |   | x | x | x |  |
| 504 | ii  | Sand filling before cable laying, sand filling after cable laying, placing of precast concrete slabs/ bricks, backfilling with soil |  | Major    | Visual   | 100%   |                                                                                              |    |   | x | x | x |  |
| 586 |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |
| 587 |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |
| 588 |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |
| 589 |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |
| 590 |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |
| 591 |     |                                                                                                                                     |  |          |          |        |                                                                                              |    |   |   |   |   |  |

|     | A      | B                    | C                                                                                                                    | D              | E             | F                | G                                         | H                                                                                                                            | I                                                                                                   | J                                                        | K              | L             | M             |
|-----|--------|----------------------|----------------------------------------------------------------------------------------------------------------------|----------------|---------------|------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|---------------|---------------|
|     | Sr.No. | Activity & Operation | Instruments                                                                                                          | Class of Check | Type of Check | Quantum of Check | Reference Documents & Acceptance Standard | Format of Record                                                                                                             | D*<br>(Records identified with (√) shall be essentially included by EPC vender in QA documentation) | Cheking Agency                                           |                |               | Remarks       |
| 1   |        |                      |                                                                                                                      |                |               |                  |                                           | SR - Site Register<br>SECI-SPV-QA-F-XXX<br>SECI-SPV-QA-T-XXX<br>(XXX - Inspection record form No. or Test report format no.) |                                                                                                     | M'fr/ Supplier or Sub-Contractor                         | EPC Contractor | SECI or Owner |               |
| 2   |        |                      |                                                                                                                      |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 592 |        |                      | LEGEND: D * Records, indentified with "Tick" (√) shall be essentially included by supplier in QA documentation.      |                |               |                  |                                           |                                                                                                                              |                | DOC. NO.: SECI - XXX - XXX -XXX - FQP & MQP - 001 REV: 0 |                |               |               |
| 593 |        |                      | Legend to be used:                                                                                                   |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 594 |        |                      | Class # : A = Critical, B=Major, C=Minor                                                                             |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 595 |        |                      | Format of Record # : SR=Site Register, TR=Lab Test Report, IR=Inspection Report, MTC=Manufacturer's Test Certificate |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 596 |        |                      | All MTC's shall be correlated with batch of material supply, Tech specs and drawings                                 |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 597 |        |                      | Category 'A' - Sub-contractor/ sub-vendor, EPC Vendor, SECI/ Owner                                                   |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 598 |        |                      | Category 'B' - Sub-Contractor/ Sub-Vendor, EPC Vendor, SECI                                                          |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 599 |        |                      | Category 'C' - Sub-Contractor/ Sub-Vendor                                                                            |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 600 |        |                      |                                                                                                                      |                |               |                  |                                           |                                                                                                                              |                                                                                                     |                                                          |                |               |               |
| 601 |        |                      | This document shall be read in conjunction with Tech. Specifications and Drawings                                    |                |               |                  |                                           |                                                                                                                              |                                                                                                     | Reviewed By                                              | Approved By    |               | Approval Seal |