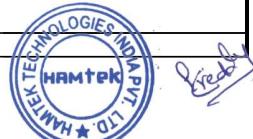


**INDICATIVE FIELD QUALITY PLAN**

SUPPLIERS NAME AND ADDRESS		ITEM : Civil Work		QP NO. :			PROJECT:				
		SUB-SYSTEM : GEOTECH INVESTIGATION, FOUNDATIONS, EXCAVATION & FILL, SITE LEVELLING, CONCRETE, BUILDING ETC.		REV. NO. :			PACKAGE:	EPC PACKAGE			
				DATE :			CONTRACT NO. :				
				PAGE :			MAIN CONTRACTOR :				
Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record		Remarks
1	2	3		4	5	6	7	8	9	D*	10
<b>1</b>	<b>GENERAL REQUIREMENTS</b>										
A	Setting up of Field QA&QC laboratory, Availability of requisite laboratory set up and equipment in good working condition & duly calibrated well before commencement of concerned activity.		As agreed / required	B	Physical	Once prior to start of work and thereof monthly	Tech Specs and Const. Drawings	SR	✓		
B	Submission of QA & QC manpower deployment schedule and availability of manpower		As agreed / required	B	Physical	Manpower shall be deployed progressively as per the work front and discipline wise progress	Tech Specs and Const. Drawings	SR	✓		
C	Sampling for testing of construction materials (Coarse aggregate, fine aggregate etc.), materials for concrete mix design etc.		As agreed / required	A	Physical	Once per each source	Tech Specs and Const. Drawings	SR/TR	✓		
D	Submission of Monthly Test/QA reports/data		As agreed / required	A	Physical	Monthly	Tech Specs and Const. Drawings	SR/TR	✓		
E	Stacking and storage of construction materials and components at site		As per IS:4082	B	Physical	Random in each week	Tech Specs and Const. Drawings, Manufacturer's	SR			
F	Survey										
	Construction of Bench Mark / Grid Pillars	To mark reference co-ordinate & elevation	As required / agreed	B	Physical	Each Bench Mark/ Grid Pillars	As per technical specifications / approved drawings	SR	✓	Joint protocol for co-ordinate and elevation	
<b>2</b>	<b>EXCAVATION, FILLING/BACKFILLING AND COMPACTION WORKS</b>										
<b>2.1</b>	<b>Excavations-</b>										
i		Nature, type of soil/rock before and during excavations	As agreed / required	B	Visual	Random	Tech Specs and Const. Drawings	SR			
ii		Initial ground level before start of excavations, shape, Dimensions of excavations & Side slope of final excavation and Final excavation levels.	As agreed / required	B	Measurement	100%	Tech Specs and Const. Drawings	SR	✓		
<b>2.2</b>	<b>Excavation in Hard Rock- If required</b>										
i		Receipt, Storage, accountability of Explosive	As agreed / required	B	Physical	Random in each week	Indian Explosive Act 1940/all statutory norms, Tech Specs and Const. Drawings	SR	✓		
ii		Execution of Blasting Operation	As agreed / required	B	Physical	Random in each shift	IS:4081, Tech Specs and Const. Drawings/ scheme	SR			
iii		Submission of Blasting report to EIC	As agreed / required	B	Physical	Each blast	Tech Specs and Const. Drawings		✓		
iv		Excavation in Hard Rock (Blasting Prohibited)	As agreed / required	B	Physical	100%	As per approved drawing/ scheme, Tech Specs and Const.	SR	✓		
<b>2.3</b>	<b>Filling/ Backfilling</b>										



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1	2	3	4	5	6	7	8	9	D*	10
i	Suitability of fill material	Grain size analysis, Organic Matter, Liquid Limit, plastic limit, Shrinkage limit & Free Swell Index and chemical analysis(like Organic Matter, Calcium carbonate, pH value, Total soluble sulphate etc.) as required in TS	As per IS: 2720	B	Physical	Once per each type of source or change of source subject to a min. of 2 samples	IS:2720 (Pt.IV), IS:2720 Pt.XXII, IS:2720 (Pt.XI)/relevant part, Tech Specs and Const. Drawings	SR/TR	✓	
2.4	Standard proctor Test	Optimum moisture content (OMC) and max. dry density (MDD) of filling/backfilling materials	As per IS: 2720	A	Physical	One in every 10000 cum for each type and source of fill materials	IS 2720 (Pt.VII), Tech Specs and Const. Drawings	SR/TR	✓	
2.5	Compaction of Filling / Backfilling Works									
i	Moisture content	Moisture content of fill before compaction	As per IS: 2720	B	Physical	Random	IS 2720 (Pt.II), Tech Specs and Const. Drawings	SR/TR	✓	
ii		Dry density by core cutter method --- OR --- Dry density in place by sand replacement method --- OR --- any other method as per IS	As per IS: 2720	A	Physical	i) For foundation back fill: one in every 10 foundations for each compacted layer.  ii) For area filling: every 1000 SQM area for each compacted layer.	IS 2720 (Pt. XXIX)/ IS 2720 (Pt. XXVIII)/ IS 2720 Relevant Part/ Tech Specs and Const. Drawings	SR / TR	✓	
iii		Relative density (Density Index)	As per IS: 2720	A	Physical	---do--- (I) & (ii) above	IS 2720 (Pt. XIV), Tech Specs and Const. Drawings	SR/TR	✓	
3	RAW MATERIALS FOR CONCRETE									
3.1	CEMENT									
i	Material	Physical and chemical properties as per relevant IS codes	As required/agreed	A	Review of MTC/ test reports	for each manufacturing Week number	IS : 269/ IS:1489/ IS:455, Tech Specs and Const. Drawings	MTC	✓	
ii		Testing of cement for Setting time (Initial & Final ) and compressive strength	As per IS:4031	A	Physical	one for each manufacturing number	IS : 269/ IS:1489/ IS:455, Tech Specs and Const. Drawings	SR/Test Report	✓	
3.1 b	Fly ash (if applicable)									
		Physical and chemical properties as per IS 3812 Part I (Table 1 and 2)	As per IS 3812 Part I	A	Physical	once in a week or change of source whichever is earlier	IS:3812 Part I and Tech. Spec./Design mix.	SR/Test Report	✓	Batching plant shall have facility for mixing of fly ash.
3.2	Coarse Aggregate									
i		Moisture content	IS:2386	B	Physical	To be done every day before start of work	IS : 456/IS : 383/IS: 2386 Part-III/Tech Spec	SR/LB	✓	
ii		Sieve analysis, flakiness index, elongation index	IS:2386	B	Physical	One per 100 cum. or part thereof	IS: 2386 Part-I, IS:383 / Tech Spec	SR/LB/TR	✓	



Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks
1	2	3	4	5	6	7	8	9	D*	10
	iii	Specific gravity, Soundness, Water absorption, Deleterious materials (coal & lignite, clay lumps, material finer than 75 micron sieve, soft fragment, shale, Total of % of all deleterious materials),	IS:2386	A	Physical	Once for each source & for every change of source	IS: 2386 Part-III, IS: 2386 Part-II, IS: 2386 Part-V, IS:456, IS:383/Tech Spec	SR/LB/TR	✓	During Design mix, these tests may be carried out.
	iv	Alkali aggregate reactivity and Petrographic examination	IS 2386	A	Physical	-do-	IS: 2386 (Part-VII/VIII), IS:383 /Tech Spec/ASTM C-1260 / ASTM 1293	SR/LB/TR	✓	
	v	Crushing value, Abrasion value and Impact value	IS:2386	A	Physical	-do-	IS:383, IS-2386 Part IV/Tech Spec	SR/LB/TR	✓	
3.3	<b>Fine Aggregate</b>									
i	Moisture content	IS:2386	B	Physical	To be done every day before start of work	IS : 456/IS : 383/IS: 2386 Part-III/Tech Spec	SR/LB	✓		
ii	Sieve analysis, Silt content	As agreed / required	B	Physical	One per 100 cum. or part thereof	Tech Spec/ IS 2386 / IS 456/ IS 383	SR/LB/TR	✓		
	iii	Specific gravity, Soundness, Water absorption, Deleterious materials (coal & lignite, clay lumps, material finer than 75 micron sieve, soft fragment, shale, Total of % of all deleterious materials (excluded mica as well as included mica content)), organic impurities	IS:2386	A	Physical	Once for each source & for every change of source	IS: 2386 Part-III, IS: 2386 Part-II, IS: 2386 Part-V, IS:456, IS:383/Tech Spec	SR/LB/TR	✓	During Design mix, these tests may be carried out.
	iv	Alkali aggregate reactivity and Petrographic examination	IS 2386	A	Physical	-do-	IS: 2386 (Part-VII/VIII), IS:383 /Tech Spec/ASTM C-1260 / ASTM 1293	SR/LB/TR	✓	
3.4	<b>Water</b>	Complete Testing as per IS:456-2000	As per IS:456	B	Testing	Once for each source and thereafter yearly in case of borewell. If water is used from open source like river, stream, canal etc., then water testing is to be done quarterly.	IS:456-2000/ Tech. spec.	TR	✓	
3.5	<b>Admixtures for Concrete</b>	Material/Type of admixture and its suitability	As per IS:9103	A	Review of MTC/ test reports	For each lot received at site	As per Designed mix and IS:9103/ Tech. Spec.	Test Report / MTC	✓	
4	<b>CONCRETING (MIXING, CONVEYING, PLACEMENT, COMPACTION, CURING &amp; TESTING)</b>									
4.1	Batching Plant (if installed)									



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1	2	3	4	5	6	7	8	9	D*	10
i		Calibration of Batching Plant		A	Physical	To be calibrated at the time of starting and subsequently once in three months in house, and shall conform to IS:4925	Review of calibration chart/ Certificate/IS 4925	Calibration Certificate	√	
<b>4.2 CONCRETE</b>										
i		4 Trial mixes to ascertain the workability and cube strength	After receiving the recommended mix design	A	Physical	4 trial mix. for each mix proportion	Tech. Spec.,IS 456/IS 10262	SR/LB	√	
ii		Concrete Cube strength Test	IS:516	A	Physical	One set of 6 cubes per 50 Cum or part thereof for each grade of concrete per shift whichever is earlier.	IS:516, IS:456, Tech. Spec.	SR/LB/TR	√	
iii		Workability - slump test	IS:1199	B	Physical	At the time of concrete pouring at site every two hrs.	IS:456/Tech. Spec.	SR/LB/TR	√	
iv		Temperature Control of Concrete as per Tech. spec./IS standard	Thermometer	B	Physical	100%	Temperature as per technical specification/Relevant standard	SR	√	
v		Water Cement Ratio		B	Physical	For each batch of concrete	As per approved Design Mix	SR/Batch slip	√	
vi		Placement of concrete, Compacting, Curing	As required	B	Physical	At Random	IS:456, Period of curing as per IS 456	SR		
<b>4.3 TESTS / CHECKS ON RCC STRUCTURE IN HARDENDED CONDITION</b>										
i		Visual inspection of concrete surface just after removal of shuttering	As agreed / required	B	Visual	100%	As per IS:456/ tech. Specification.	SR		
ii		Dimensional check on finished structures	As agreed / required	B	Measurement	100%	As per IS:456/ tech. Specification and Const.	SR/LB	√	
iii		Position and alignment of embedded parts and inserts	As agreed / required	B	Visual	100%	As per provisions and tolerances of equipment supplier, Tech Specs and Const.			
iv		Embedment of inserts in concrete shall be checked for gap if any using hammer for all dynamic foundations	As agreed / required	B	Physical	100%	As per Technical Specification	SR	√	No hollow sound
v		Submission of grouting / repair methodology to EIC for approval if concrete surface / position and alignment of embedded parts / inserts are found defective	--	B	Review and approval	once for each type of defect	As per provisions and tolerances, Tech Specs and Const. Drawings		√	



Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks
1	2	3	4	5	6	7	8	9	D*	10
vi		UPV Tests on top deck of TG foundation, Columns & Other Foundations as per Technical Spec.	IS:13311	A	Physical	As per Tech. Spec.	IS:13311/As per Technical Specification	Test Report	✓	
vii		Core Test	IS:516	A	Physical	As required by Employer EIC.	As per IS:456, IS 516	SR/LB/TR	✓	
viii		Rebound Hammer test	IS:13311	A	physical	As required by Employer EIC.	As per relevant Standard/ tech. Specification.	SR/LB/TR	✓	
ix		Water Tightness Test of liquid retaining structure/ tanks	As required	A	Test	100%	IS:3370/ Tech. Specification	SR/LB	✓	
5	<b>REINFORCEMENT STEEL AND ITS PLACEMENT</b>									
i	Material	Physical and chemical properties as per relevant IS codes and Tech spec.	As agreed/required	A	Review of MTC	Each batch/lot of delivery	As per IS 1786, IS 432, IS 1566, tech spec and cont. drawing	MTC	✓	
ii		Freedom from cracks surface flaws, Lamination & excessive rust.	As agreed / required	B	Visual	Random in each shift	IS: 1852, IS:432, IS:1786, Tech Specs and Const. Drawings	SR		
iii		Bar bending schedule with necessary lap, Spacers & Chairs	As agreed / required	B	Physical & Measurement	Random in each shift	Approved Drawings, Tech Specs and Const. Drawings, IS:2502	SR	✓	
iv		Acceptance - disposition of cage w.r.t. reference axes, cover, spacing of bars, spacers and chairs after the reinforcement cage is put inside the formwork	Measuring tape & as required	B	Visual & Measurement	Random in each shift*	IS 456, Tech Specs and Const. Drawings	SR	✓	
6	<b>FOUNDATION SYSTEM</b>									
i		Foundation casting - Layout, Shape, dimensions, Reinforcement, concreting, curing etc.	As required / agreed	B	Physical	Each foundation	As per technical specifications and construction drawings	SR	✓	
7	<b>STAGING AND FORMS</b>									
i		Materials and accessories	As agreed / required	B	Visual	Once before start of work	As per relevant IS, Tech Specs and Const. Drawings	SR		
ii		Soundness of staging, shuttering and scaffolding including application of mould oil / release agent	As agreed / required	B	Visual	Once before start of work	As per manufacturer's spec.and as per 3696,4014, 4990, Tech Specs and Const. Drawings	SR		
iii		Acceptance of formwork before start of concreting : disposition w.r.t. reference axes, size, etc.	Measuring tape & as required	B	Physical / visual	Before start of each concreting	As per provisions and tolerances in IS 456, Tech Specs and Const. Drawings	SR	✓	
8	<b>EMBEDDED PARTS (INCLUDING LAYING OF RAILS &amp; ANCHOR FASTENERS) --If</b>									



Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks	
1	2	3		4	5	6	7	8	9	D*	10
i		Material	As agreed / required	B	Review of MTC/ test reports	Each batch/lot delivery	As per Tech Specs and Const. Drawings	SR/MT C	✓		
i		Position / alignment / levels of embedded parts / bolt hole / pipe sleeves / rails / PVC pipes / etc. as per TS and construction Drg.	As agreed / required	B	Physical/ measurement	100%	As per Tech Specs and Const. Drawings	SR/ Protocol	✓		
ii		Welding / tying of embedment reinforcement	As agreed / required	B	Physical/ measurement	Random in each shift	As per Tech Specs and Const. Drawings	SR			
9	JOINTS IN CONCRETE, DAMP PROOF COURSE										
i	JOINTS IN CONCRETE	Joint material - bitumen impregnated fibre board, PVC water stops, Sealing compound, Expanded polystyrene board, Hydrophilic strip, Acrylic polymer etc. (as given in technical spec)	As manufacturer per Standards	A	Review of MTC/ test reports	Each batch/lot delivery	Tech Specs and Const. Drawings, IS 1838, IS 1834, IS12200	SR/MT C	✓		
ii	DAMP PROOF COURSE	Material - Hot bitumen and water proofing materials etc. (as given in technical spec).	As agreed / required	A	Review of MTC/ test reports	Each batch/lot delivery	Tech Specs and Const. Drawings, IS 702	SR/MT C	✓		
iii		Acceptance of installation of Joints material & Acceptance of damp proof course.	As agreed / required	B	Acceptance	Each randomly installation	Tech Specs and Const. Drawings		✓		
10	GROUTING										
i		Material	As agreed / required	A	Review of MTC/ test reports	Each batch/lot delivery	Tech Specs and Const. Drawings	SR//M TC	✓		
ii		Compressive strength of grouting material before its use.	As agreed / required	A	Physical	Each batch/lot delivery	Tech Specs and Const. Drawings	SR/LB/TR	✓		
iii		Compressive strength of cubes after grouting.	As agreed / required	A	Physical	Random	Tech Specs and Const. Drawings	SR/LB/TR	✓		
iv		Acceptance of the grouts : Mixing, placement, application and grout pressure (as applicable)	As agreed / required	B	Physical	Each grout section	Tech Specs and Const. Drawings	SR	✓		
11	MASONARY WORKS										
11.1	Test on Bricks										
i		Compressive strength, water absorption, efflorescence.	As agreed / required	A	Measurement / Physical Test	As per relevant IS Code/ One Sample for 30,000 nos. or part thereof	IS: 1077, IS:13757, IS: 12894 / Tech Specs and const. Drawings	SR/LB/TR	✓		
ii		Dimensions , shape, warpage.	As agreed / required	B	Measurement / Physical Test	As per relevant IS Code/ One Sample for 30,000 nos. or part thereof	IS: 1077, IS:13757, IS: 12894 / Tech Specs and const. Drawings	SR/LB	✓		
12.2	Modular aerated panel										

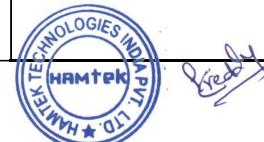


Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks
1	2	3		4	5	6	7	8	9	D*
i	Material	As required	As agreed / required	A	Review of test report	Each batch/lot of delivery	Tech Specs and Const. Drawings	SR/LR	✓	
<b>12.3 Autoclaved Aerated Concrete (AAC) block</b>										
i	Material	As agreed / required	B	Review of MTC	Each batch/lot of delivery	Tech Specs /IS 2185 Part III and Const. Drawings	SR/MT C	✓		
ii	Compressive Strength and Density	As agreed / required	A	Physical	As per relevant IS Code/ One Sample for 10,000 nos. or part thereof	Tech Specs /IS 2185 Part III	TR	✓		
iii	Dimensions, shape	As agreed / required	B	Physical	As per relevant IS Code/ One Sample for 10,000 nos. or part thereof	Tech Specs /IS 2185 Part III	TR/SR	✓		
<b>12.4 Test on Mortar</b>										
i	Sand	Grading	As agreed / required	B	Test	once per 100 Cum or part thereof	IS:2116	SR/LB	✓	
ii		Compressive strength	As agreed / required	B	Test	At random	IS 2250-1981, Tech Specs and Const. Drawings	SR/TR	✓	
<b>12.5 Masonry construction</b>		Workmanship, verticality and alignment	As agreed / required	B	Visual/ Physical	100%	IS 2212, IS 1905 , Tech Specs and Const. Drawings	SR/LB		
<b>13 PLASTERING- MATERIAL AND WORKMANSHIP</b>										
i	Sand	Deleterious Material	As agreed / required	B	Physical	Once per source	IS : 2386 (Part-I & II) & IS :2116, Tech Specs and Const.	SR/TR	✓	
ii		Grading	As agreed / required	B	Physical	50 Cum./or part thereof	Tech Specs and Const. Drawings	SR/TR	✓	
iii		Silt content	As agreed / required	B	Physical	One per 100 cum., or part thereof	CPWD/ Tech Spec/ IS 2386/ IS 456/ IS 383	SR/LB/ TR	✓	
iv	Stone grit plaster/ granular textured coat finish (if applicable)	Material	As agreed / required	B	Review of MTC	For each lot received at site	Tech Specs and Const. Drawings	SR/MT C	✓	
v	Galvanised wire mesh (if applicable)	Galvanized hexagonal wire netting for lath plastering	As agreed / required	B	Review of MTC/ test reports	Each batch/lot of delivery at site	Tech Specs and Const. Drawings	SR/MT C	✓	
vi		Thickness, Trueness and finishing of plaster, grooves etc.	As agreed / required	B	Visual/ Measurement	Random in each shift	Tech Specs and Const. Drawings	SR/LB	✓	
<b>13 PAINTING SYSTEM - CONCRETE WORKS (including Chimney) AND PLASTERED MASONARY SURFACES</b>										
i	Materials and accessories- Oil Bound, Acrylic Emulsion, Chemical Resistant, Oil Resistant Paint etc. as applicable (as given in technical spec).	Shade, type from brand and manufacturer as approved by EIC.	As agreed / required	A	Review of MTC/ test reports	Each batch/lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
ii	Surface preparation	As required	As agreed / required	B	Physical / visual	Random in each shift	Tech Specs and Const. Drawings	SR		
iii	Acceptance of painted surfaces	Shade, finish, WFT	As agreed / required	B	Physical/visual	Each surface at random	Tech Specs and Const. Drawings	SR	✓	
<b>14 PAINTING SYSTEM - STEEL WORKS (OTHER THAN STRUCTURAL STEEL WORKS)</b>										
i		Painting Materials and accessories	-	A	Review of MTC/ test reports	Each batch of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
ii		Surface preparation	As agreed / required	B	Physical / visual	Each Erection Mark	Tech Specs and Const. Drawings, Relevant code/	SR	✓	
iii		Primer Thickness	Elcometer	B	Measurement	Each Erection Mark	Tech Specs and Const. Drawings	SR	✓	

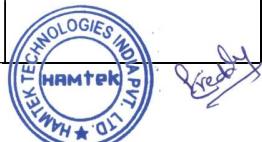


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1	2	3		4	5	6	7	8	9	D*
v		Acceptance of painted surfaces : DFT, Finish, Shade	Elcometer	B	Visual and measurement	Each Erection Mark	Tech Specs and Const. Drawings	SR	✓	
15	<b>SHEETING, INSULATION &amp; ALLIED WORK</b>									
i		Material : Profiled Colour coated Metal Deck & Cladding sheets	As agreed / required	A	Review of MTC / Test reports	Each lot received at site	Tech Specs and/ Const. Drawings/ profiled drawing	MTC/TR	✓	
iv		Installation, lap alignment & workmanship.	As agreed / required	B	Visual/ Physical	Random in each shift	Tech Specs and/ Const. Drawings	SR		
v		Finishing and acceptance	As agreed / required	B	Visual/ Physical	Each installation	Tech Specs and/ Const. Drawings	SR/LB	✓	
16	<b>DOORS , WINDOWS, VENTILATORS &amp; GRILLS</b>									
i	Steel doors	Materials & Check for shape tolerances thickness, welding & finishing of sections as per TS	As agreed / required	B	Visual/ Physical / test report	For each lot received at site	Tech Specs and Const. Drawings	SR / LB/TR	✓	
ii	Wood/Timber	Moisture content & anatomy	As agreed / required	A	Physical	For each lot received at site	Tech Specs and Const. Drawings/ IS 287	SR/LB	✓	
iii	Wood work in frames	Check for dimensions, surface finish	As agreed/ required	B	Physical	Random for each installation	Tech Specs and Const. Drawings	SR	✓	
iv	Flush Door shutter	End emersion test, knife test, adhesion test	As agreed/ required	A	Review of MTC/test reports	For each lot received at site	IS 2202, Tech Specs and Const. Drawings	SR/MT C	✓	
v	Particle Door		As agreed / required	A	Review of MTC/ test reports	For each lot received at site	IS:12823, Tech Specs and Const. Drawings	SR/MT C	✓	
vi	Anodised aluminium works (Door & Window)	Materials- Aluminium sections, Coating	As agreed / required	A	Visual/ Physical / test report	For each lot received at site	IS: 1948, IS: 1949, IS:733, IS1285, IS:1868, IS:11857/ Tech Specs and Const.	SR / LB	✓	
vii	Fire proof doors	Material & Receipt inspection	As agreed / required	A	Review of MTC/ purchase order (unpriced copy) / drawings of suppliers / certificate of CBRI/CPRI/G OV. LAB. & Visual/ Physical/ Review of MTC	For each source & For each lot received at site	Tech Specs and Const. Drawings	SR/MT C	✓	
viii	Rolling shutters	Surface finish and thickness of plate of approved make and DFT	As agreed / required	B	Physical / visual / review of MTC	Random for each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
ix	Steel windows / Grills/ Louvre	Material fabrication and fixtures	As agreed / required	B	Review of MTC/ test reports	Each lot of delivery	IS: 1038 / IS:1361, IS: 7452 and Tech Specs and Const. Drawings	SR/MT C	✓	 <i>Ready</i>

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x	Doors / Windows Sections	Material - Rolled Steel, Z Sections, T-iron frames sections, Plates etc.	As agreed / required	B	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
xi	Glass and glazing, Reflective toughened glass as per TS.	Material	As agreed / required	B	Review of MTC/ test reports	Each lot of delivery	IS: 14900, IS:1081, IS: 3548, IS:5437 Tech Specs and Const. Drawings	SR/MT C	✓	
xii	Curved dome on roof/ Poly Carbonate Sheet	Materials - As per tech spec.	As agreed / required	B	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
xiii	False Ceiling	Materials - As per tech spec.	As agreed / required	A	Review of MTC/ test reports	For each lot received at site	Tech Specs and Const. Drawings	SR/MT C	✓	
xiv		Installation finishing and acceptance	As agreed / required	B	Visual / physical	Random	Tech Specs and Const. Drawings	SR		
17	<b>WATER PROOFING (Roof / Basement Treatment)</b>									
i		Methodology for the application of water proofing system	As required	B	Review	for each type of treatment	Tech Specs and Const. Drawings	SR	✓	
ii	Graded under bed	Levels / slopes	As required	C	Physical	100%	Tech Specs and Const. Drawings			
iii	Elastomeric coatings	Material- Primer coat, finishing coat	As required	B	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
iv	Wearing course	Materials - As per tech spec.	As required	B	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
v		Acceptance of water proofing work	As agreed / required	B	Physical	100%	Tech Specs and Const. Drawings			
18	<b>Fencing and Gates</b>									
i	PVC coated chain link fencing (IS 2720), Welded wire mesh (IS 1566), Reinforced barbed tape galvanised (IS 2629) etc.	Materials	As agreed / required	A	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
ii	Structural steel, painting system, caster wheel, ball and bearing, fixtures and fasteners	Materials	As agreed / required	A	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
iii		Alignments, erection painting, DFT etc. and acceptance of the installation and working	As agreed / required	B	Physical / measurement s	Each installation	Tech Specs and Const. Drawings	SR	✓	
19	<b>FLOOR FINISHES AND ALLIED WORKS</b>									
i	Cement Concrete Flooring	Glass/ PVC strips in joints	As agreed / required	B	Physical	Random in each shift	Tech Specs and Const. Drawings	SR		
ii	Ceramic tiles, vitrified tiles, glass mosaic, acid alkali resistant tiles, heavy duty cement concrete tiles (Materials as per TS)	Materials	As agreed / required	B	Review of MTC / test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
iii	Interlocking Blocks	Materials	As agreed / required	A	Review of MTC / test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/MT C	✓	
iv	Kota Stone, Granite and Marble	Materials: Quality, texture, thickness, colour for each lot of delivery	As agreed / required	B	Physical	Each lot of delivery	Tech Specs/ BOQ and Const. Drawings	SR/TR	✓	
v	Metallic / non-metallic hardener	Material	As agreed / required	B	Review of MTC / test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/TR /MTC	✓	



Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks
1	2	3		4	5	6	7	8	9	D*
vii	Acid / alkali and oil resistant high built seamless epoxy based resin and treatment	Material	As agreed / required	A	Review of MTC / test reports	Each lot of delivery	Tech Specs and Const. Drawings	TR/MT C	✓	
		Surface preparation (as applicable)	As agreed / required	B	Physical	Random in each shift	Tech Specs and Const. Drawings, IS 2395			
viii	Rubber Flooring	Material	As agreed / required	A	Review of MTC / test reports	Each lot of delivery	Tech Specs and Const. Drawings / IS 809	TR/MT C	✓	
ix		Finishing and acceptance of all above BOI	As agreed / required	B	Physical	100%	Tech Specs and Const. Drawings	SR		
20	<b>WATER SUPPLY / SANITORY INSTALLATIONS</b>									
i	Material	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 (GI/ MS/ SCI/ CI / RCC), manhole cover and frames, Over head / loft type etc. as per TS	As agreed / required	B	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/TR /MTC	✓	
ii		leakage of pipes	As agreed / required	B	Physical	Each installation	Tech specs and const drawings	SR	✓	
iii		Acceptance of installations of all sanitary items and fixtures	As agreed / required	B	Acceptance	100%	Tech Specs and Const. Drawings	SR		
21	<b>RCC Pipes</b>									
i	Material (As per TS)	RCC pipes	As agreed / required	A	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/TR /MTC	✓	
ii		Acceptance and leakage	As agreed / required	B	Physical	Random	Tech Specs and Const. Drawings	SR		
22	<b>Water Storage Tanks</b>									
i	Material (As per TS)	Over head / loft type	As agreed / required	A	Review of MTC/ test reports	Each lot of delivery	Tech Specs and Const. Drawings	SR/TR /MTC	✓	
ii		Acceptance and leakage	As agreed / required	B	Acceptance	Random	Tech Specs and Const. Drawings	SR		
23	<b>Composite Aluminium Panels and structural glazing</b>									
i	Material (As per TS)	Type of aluminium panels / structural glazing / fasteners and fixtures / silicon sealant	As agreed / required	A	Review of MTC/ test reports	Each lot of delivery	Technical specifications / drawings	SR/TR /MTC	✓	
ii	Acceptance and workmanship	Installation / workmanship	As agreed / required	B	Physical	Random	Technical specifications / drawings	SR		
24.0	<b>ANTI WEED TREATMENT</b>									
i	Material (As per TS)	Anti-weed materials	treatment	As agreed / required	B	Review of MTC/ test reports	Each batch of delivery	Tech Specs and Const. Drawings	SR/TR /MTC	✓



Prepared by:

Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks
1	2	3	4	5	6	7	8	9	D*	10
ii		Execution of treatment	As agreed / required	B	Physical	Random check for each treatment	Tech Specs and Const. Drawings		SR	
<b>25.0</b>	<b>RCC Pavements</b>									
	Quality checks for Materials used for Pavement concrete		As per Table 900-6 of MORTH Spec.							
	Quality checks for concrete used for Pavement concrete		As per Table 900-6 of MORTH Spec.							
<b>26</b>	<b>PILING WORK (If Applicable)</b>									
	<b>Execution</b>									
i	Borehole diameter	As required	B	Physical	100%	As per appd. Drawings and technical specification		SR/LB	✓	
ii	Pile layout	Total station	B	Measurement	100%	As per appd. Drawings and technical specification		SR/LB	✓	
iii	Recording ground level and pile termination level	As required	B	Measurement	Random	As per appd. Drawings and technical specification		SR/LB	✓	
iv	Cleaning/Flushing of pile bore	As required	B	Measurement	Each pile	IS 2911/ Tech. Specs.		SR/LB	✓	
v	Size of bore and During boring of pile record commencement of SPT/ core recovery to ensure socketting length equivalent in terms of the Diameter of the pile below the socketting horizon.(if applicable)	As required	B	Measurement	100%	As per appd. Drawings and technical specification		SR/LB	✓	
vi	Pouring of concrete to project above cut off level.	As required	B	Measurement	100%	As per appd. Drawings and technical specification		SR/LB	✓	
	<b>Testing</b>									
i	Bentonite	IS:2720	A	Physical / Test report	Once per lot	As per IS:2720, IS 2911/ tech-Specs.		SR/TR	✓	
ii	Density check on sample of mud collected from pile bore bottom	IS 2911	B/A	Physical	Each pile/ Randomly 1 in 10 piles (i.e. 10%)	IS 2911/ Tech. Specs./approved PILING METHODOLOGY		SR/LB	✓	
ii	Slump test of concrete	IS:1199	B	Physical	Every 2 hrs at pouring point of concrete	IS:2911, As per appd. Drawings and technical specification		SR/LB/TR	✓	
iii	Concrete Cube strength Test	IS:456	A	Physical	One set of 6 cubes per 50 Cum or part thereof for each grade of concrete per shift whichever is earlier.	IS:2911, As per appd. Drawings and technical specification		SR/LB/TR	✓	
iv	Initial pile load test, Vertical (Compression), Lateral (horizontal) and pull-out (tension).	IS:2911 / as required	A	Testing	As per Technical Specification/IS standard	IS:2911, As per appd. Drawings and technical specification		SR/LB/TR	✓	



Sl. No	Activity and operation	Characteristics / instruments		Class of check	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	Format of Record	Remarks
1	2	3	4	5	6	7	8	9	D*	10
v		Routine pile tests (VERTICAL LOAD TEST (COMPRESSION) and LATERAL LOAD TEST (horizontal))	IS:2911 / as required	A	Testing	As per Technical Specification/IS standard	IS:2911, As per appd. Drawings and technical specification	SR/LB/TR	√	
vi		Pile Integrity Tests (PIT)	PEM / as required	A	Testing	100%	IS:2911, As per appd. Drawings and technical specification and suppliers manual	Test Report	√	
<b>27.0 GEOTECHNICAL INVESTIGATION WORK (if Applicable)</b>										
i		Deployment of Employer approved Geotechnical Investigation Agency - Equipment, Manpower etc.	As required / agreed	B	Physical	Once before commencement of work	As per technical specifications and relevant IS Codes	SR	√	
ii		Execution of Geotechnical Investigation - locations, type etc. as per scheme	As required / agreed	B	Physical	Each Location	As per technical specifications , approved drawing and relevant IS Codes	SR	√	
iii		Collection of disturbed and undisturbed samples , their packing and storage	As required / agreed	B	Physical	each sampling	As per technical specifications , approved drawing and relevant IS Codes	SR		
iv		Conducting field tests as per investigation scheme-such as, SPT/ERT/SCPT/PLT/PMT etc. if applicable	As required / agreed	B	Physical	each field test	As per technical specifications , approved drawing and relevant IS Codes	SR	√	
v		Submission of Employer approved Final Geotechnical investigation report along with recommendations.	As required / agreed	B	Physical	After completion of investigation work	As per technical specifications and relevant IS Codes	-	√	
Main-supplier		LEGENDS : * Records identified with tick (√) shall be essentially included by supplier in QA documentation. # Class A : Critical, Class B : Major, Class C : Minor.					For Employer Use	Employer DOC NO. :		
		Class 'A' checks shall be witnessed by Employer FQA and Execution Engineer, Class 'B' checks shall be witnessed by Employer Execution Engineer, Class 'C' checks shall be witnessed by Main contractor engineer. CLASS 'A' & 'B' CHECKS SHALL BE NTPC CHP STAGE. SR - Site Register, TR- Test Report, LB-Log Book, IR - Inspection Report, MTC - Manufacturer's Test Certificate. Surveillance of Class 'A' checks shall be perform By Employer Head (FQA), Class 'B' by Employer FQA Engineer and for class 'C' Another Executing Engineer authorised by Head (Executing Deptt)					REVIEWED BY	APPROVED BY	APPROVAL SEAL	

