Annexure-IX

Checklist for StructuralSafety

Item	AsPerBuildingPlan				Remarkby authorized representative
	Yes	No	Non applicable	Applicable	
1)StructuralSafety					
1. ProvideDesignBasisReportasperthedocument					„
2. ProvidedescriptionofSub-structureandSuper-structureaspertheformatgiveninthe Ref(5&6) enclosed.					
3. Provide brief Description of Structural System withsketches,imagesofdrawing.etc.withspecific focusonLateralloadresistingsystem„.					
4. Providebriefnoteonmodeling,softwareusedetc. Clear mentionwhetherinfill/partitionwallis idealizedaspartoflateralloadsystem?					
5. Providethe heightofbuildingin meters.					
6. Provideplandimensionsofthebuilding(mtx mt)					
EQLoadingDetails					
7. ProvidefollowingEQloadingdetails.					
a)Zone Factor					
b)Importancefactor					
c)ResponseReductionfactor					
d)SoilType					
e)%LLconsideredinseismic					
f)Time Period inthehorizontalX-direction (sec)					
g)Time Period inthehorizontalZ-direction (sec)					
h)Total Seismicweight(Sw) ofbuilding(kN)					
i)Static Base-shearinX-direction(as%of Sw)					
j)Static Base-shearinZ-direction(as%of Sw)					
k)Table ofdistributionforstatic baseshear					
l)Max. deflectionatrooflevel. (mm)					
m)Max. inter storey drift./ Height					
VerticalElementsDetails					
8. ProvidefollowingdataregardingVertical Elements.					
a)Sizeofmaximumloaded column					
b)Gravityloadonmax. loaded column					
c)Axial stress inmax. loaded column (Gravityloads)					
d)Grade ofmax. loaded column					
e)Axial settlementinmax. loaded column					
f)Axial settlementinmin. loaded column					
g)%Base-shearresistedbyallcolumnsalong X(static)					
h)%Base-shearresistedbyallcolumnsalong Z(static)					
DynamicAnalysis					
9. Providefollowingdata fromDynamicAnalysis					
a)Total gravityloadonfloatingcolumn (providetable ifthere aremultiplefloating					

.

columns)					
b)Sizeandspanofgirders supportingfloating columns					
c)Numberoffloors supportedbyfloating columns					
d)Deflectionofgirder under column(from model)					
e)Deflectionofgirder under column(from s/s action)					
f)Specificdetails about floatingcolumnson cantilevergirders(Refer Table below)					
10.Provide,ifapplicable,followingdata for eachcantilever.					
a)Cantileverspan					
b)Structuralsystem					
c)Natureofusage					
d)Maximumelastic deflectionunder gravity loads					
11.Providestabilitycalculationsfor upliftand overturning(modelextractincaseofmodel)					
12.Typicaldesigncalculationsforfootings					
13.Typicaldesigncalculationsfor RCCcolumns CompositeColumns					
14.Typicaldesigncalculationsfor RCC walls					
15.Typicaldesigncalculationsfor RC beams(Or SteelBeams)					
16.Typicaldesigncalculationsfor RCCGirders(Or SteelGirders/Truss)					
17.TypicaldesigncalculationsforSteelBracings					
18.Providea noteonspecialprovisionssuggested forthebuilding(likedampersetc.)					
19.Softcopyofmodelincludinginputandoutput.					

Providefollowingdatafrom DynamicAnalysis				
Modes	Frequency	Time Period in Sec	X-Participation	Z-Participation
Mode 1				
Mode 2				
Mode 3				
Mode 4				
Mode 5				
Mode 6				
Mode 7				
Mode 8				
Mode 9				
Mode 10				
Mode 11				
Mode 12				
Mode 13				
Mode 14				
Mode 15				
	Summation			

ProvideTableforlateraldeflections(mm)atTerraceLevelinthefollowingformat.						
Load Case	Dxmax	H/Dx	Drift-x	Dzmax	H/Dz	Drift-z

.

ProvideCornerdisplacements(mm)forTorsionalIrregularity(alongx-direction)inthefollowing format.

Load Case	Corner-1	Corner-2	Corner-2	Corner-4	Avg-x	%Max./Avg.
Eq-x						
Wl-x						

ProvideCornerdisplacements(mm)forTorsionalIrregularity(alongz-direction)inthefollowing format.

Load Case	Corner-1	Corner-2	Corner-2	Corner-4	Avg-x	% Max./Avg.
Eq-z						
Wl-z						

Provideacceleration(mg) valuesinthefollowingformat.

Eq-x	Eq-z	WL-x	WL-z

Ref5

DESCRIPTIONOFSUB-STRUCTURE

No.ofbasement	
Minimumclearancebetweenoutermostbasement retainingwallandcompoundwall	
Has a Shoring system been installed ? Submit sectionaldetail oftheshoringsystem	
Give details of methodologyused to resist uplift pressuredue togroundwater for tower portionas wellastheportionoutsidethetower.	
Descriptionofthefoundationforthetower block	
NatureofFoundation	
SBC assumedT/sq.mt.	
Sub-gradeElasticModulus	
IntendedUseofbasements	
If rock anchors are used, are they grouted after installationandstressing?	
Is structuralsteel used in the constructionof the sub-structure?	
If yes, what are the measures taken for its fire proofingandcorrosionresistance?	
WhetherExpansion/	
Separationjoints provided?	
Whether expansion joint/ separation joint continuesthroughbasement?	
If yes, detail at Basementlevel &retainingwall junction	

Ref6

DESCRIPTIONOFSUPERSTRUCTURE

No.ofFloors &height ofbuildinginm	
Shape of Building, Plan,Elevation, Whether Symmetric in Elevation	
Maximumplandimensionineither directioninm.	

.

Ratio ofplandimension	
TypicalFloor tofloor height inmMaximumfloor tofloor height inentire height ofbuildinginm.	
Aspect ratio (Height of Building till Terrace / Minimum Dimensionof Building)	
Type offloor slab	
Averagethicknessoffloor slabinmm	
WhethercolumnareRCC, CompositeorInstructuralsteel	

.