RAJKOTMUNICIPALCORPORATION

e-TenderNo.RMC/ENGG/CZ/23-24/

BidDocumentsFor

CONSTRUCTIONOFBOX CRICKET AT RACECOURSE (RE-TENDER)

Milestonedatesfore-tenderingareasunder	
1.Downloading of e-documents	16-07-24 To 29-07-24 upto 18:00Hrs.
2.Pre-bid meeting in the O/o CE	23-07-24 at 16:00 Hrs
3.Last date for on line submission of e-Tender	29-07-24 upto 18:00Hrs.
4.Submission of EMD, Tender fee and other documents for verification by Regd.Post.A.D. / Speed Post	Before 31-07-24 upto 18.00Hrs.
5.Opening of Technical Bid	01-08-24 at 11:00 Hours onwards
6.Verification of submitted documents (EMD, e - Tender fee, etc.)	01-08-24 at 11:00 Hours onwards
7.Agency to remain present with original documents for verification	02-08-24 between 16:00 to 17:00Hrs
8.Opening of Price Bid (ForTechnically qualifiedbiddersonly)	03-08-24 at 11:00 Hours onwards
9.Bid Validity	180 Days

2024-25

ADDL.CITYENGINEERRAJKOT MUNICIPALCORPORATION
DR.AMBEDKARBHAWANCENTRAL ZONE,DHEBARBHAIROAD,
RAJKOT-360001(GUJARAT)

RAJKOTMUNICIPALCORPORATION

BIDDOCUMENTFOR

CONSTRUCTIONOF BOX CRICKET AT RACECOURSE (RE-TENDER)

PART-I

Section-1 InvitationtoBid,InstructionstoBiddersand Formats.

Section-2 GeneralConditionsof Contract

PART-II

Section-3 TechnicalSpecifications

PART-III

BillofQuantities(WithPrice)

ABBREVIATIONS

Statementshowingthedetailsofabbreviations

FullForm	Abbreviation
ADDL.CITYENGINEER	ACE
OperationandMaintenance	O&M
NetPresentValue	NPV
EngineeringProcurementandConstruction	EPC
PaschimGujaratVijCo.Ltd.	PGVCL
CriticalPathMethod	CPM
ReinforcedCementConcrete	RCC
HighGroundLevelReservoir	HGLR
Kilometer	KM
MildSteel	MS
BureauofIndianStandard	BIS
AmericanWaterWorksAssociation	AWWA
AmericanPetroleumIndustries	API
MillionLiterperDay	MLD
HighYieldStrengthDeformedbar	HYSD
CorrosionResidenceSteel	CRS
OrdinaryPortlandCement	OPC
AmericanStandardforTestingofMaterial	ASTM
FluxCompensatedMagneticAmplifier	FCMA
CostInsuranceandFreight	CIF
FreeOnBoard	FOB
EX–Works	EXW

PART -
ISECTION-1

INVITATIONFORBIDS

RAJKOTMUNICIPALCORPORATION
***e*-TENDERNOTICE**

Thee-Tender sareinvited with two bid system bye-Tendering from the experienced contractors registered in GWSSB / StateGovernment /CentralGovernment / Semi Government in appropriate eclass for belo wmentioned work:

Sr No	Nameofwork	a) EstimatedcostinRs. b) EMD c) E-TENDERfee d) Time limit forcompletionofwork
1	CONSTRUCTIONOF BOX CRICKET AT RACECOURSE (RE-TENDER) **e-TENDERNo.RMC/ENGG/CZ/24-25/**	a)Rs.30,03,990/- (without GST) b)Rs.30,040/- c)Rs.1,875/- d)90 days

Milestonedatesfore-tenderingareasunder	
1.Downloading of e-documents	16-07-24 To 29-07-24 upto 18:00Hrs.
2.Pre-bid meeting in the O/o CE	23-07-24 at 16:00 Hrs
3.Last date for on line submission of e-Tender	29-07-24 upto 18:00Hrs.
4.Submission of EMD, Tender fee and other documents for verification by Regd.Post.A.D. / Speed Post	Before 31-07-24 upto 18.00Hrs.
5.Opening of Technical Bid	01-08-24 at 11:00 Hours onwards
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7.Agency to remain present with original documents for verification	02-08-24 between 16:00 to 17:00Hrs
8.Opening of Price Bid (ForTechnically qualifiedbiddersonly)	03-08-24 at 11:00 Hours onwards
9.Bid Validity	180 Days

1. All bidders must submit Bid security (EMD) as above either directly deposited in ICICI Bank Account No. 015305010638 (Rajkot Municipal Corporation) IFSC Code ICIC0000153 or submit at the below mentioned address in form of Demand Draft in favour of "Rajkot Municipal Corporation",Rajkot, from any Nationalized Bank or Scheduled Bank (except Co-operativeBank) in India. Thereceiptof professional tax paid for current year,addressproof,tenderappendixdetailsandIDproofshallhave to besubmittedalong with physical submission of required documents shall havetobedoneatthebelowmentionedaddress:

*Officeofthe*ADDL.CITYENGINEERRa
jkotMunicipalCorporation,
DR.AMBEDKARBHAWAN,
CENTRAL ZONE
Office,DHEBARBHAIROA
D,
Rajkot-*360001(Gujarat)*

2. The e-tender fee will be accepted in form of Demand Draft only in favor of"Rajkot Municipal Corporation" Rajkot, from any Nationalizedor ScheduledBank (except Co-operative Bank) in India and must be delivered to aboveaddress.

3. **Theprequalificationrequirementisasunder**:

i) FinancialCriteria:

1. Anaverage annual turnover of seven years should not be less than 50% of tender amount.
2. Working capital should not be less than 25% of the estimated amount.
3. Bidder must have minimum "E1" Class registration
4. Minimum amount of solvency should be Rs.2.00 lakhs

ii) ExperienceCriteria:

Thebiddershouldpossesfollowingminimumexperience:

1. Bidder should have completed at least one work of civil & Gardening work of amounting to **60% OR** two works amounting to **50%**oftenderamount in last seven years either in government or Semi-governmentasamain contractor.
2. Bidder should have enough machinery and experienced personnel tosupervisethework.

Note:Enhancementfactorat10%peryearwillbeapplicabletoarriveataverage annual turnover and finalize the magnitude of work done in lastsevenyears.

Sr	Year	Enhancefactor
1	CurrentYear(2023-24)	1.00
2	CurrentYear–1(2022-23)	1.10
3	CurrentYear–2(2021-22)	1.21
4	CurrentYear–3(2020-21)	1.33
5	CurrentYear–4(2019-20)	1.46
6	CurrentYear–5(2018-19)	1.61
7	CurrentYear–6(2017-18)	1.77
8	CurrentYear–7(2016-17)	1.95

4. The contractor shall have to quote their ratesexcluding GST and includingothertaxesandtheInvoicewithbreak-upofGSTistobesubmittedaccordingly, failing which, such amount will be deducted from the bill of theagencyanddepositedaccordingly.

   The contractor shall have to purchasethe material requiredfor this tenderwork, only from the supplier having registered GST Number. RMC will not beresponsible to pay any amount towards GST if the material is purchasedfromtheunregisteredsupplier/nothavingGSTNumber.

5. **The bidder(s) submitting the tender shallalsohave to submit thecopyofESIC&EPFRegistrationdocumentalongwiththeotherdocuments, duly self attested, failing which, the tender ofsuchbidder(s) will be considered as non-responsive and theironlinepricebidwillnotbeopened.**

6. TheTenderofthosebidder(s)thosewhofailstosubmittherequireddocumentsfor verification within the stipulated date and time, will be treatedasnonresponsiveandtheirPriceBidwillnotbeopened.Thephysicalsubmission of required documents received after the prescribed date and timewillbeoutrightlyrejected.

7. The bidder should not have been Black Listed, suspended, terminated, backedout,debarred&delistedbyanyMunicipalBody/UrbanLocalBody/Development Authority in any State Government Body or undertaking / anydepartmentorundertakingofGovernmentofIndia,sinceinceptionofthefirm/Company. Such a case will be rejected out rightly. A Declaration in this regardon Rs.300/- Stamp Paper duly Notarized shall have to be submitted as perAnnexure along with the tender documents. Submission of the bid documentwithoutsuchNotarizeddeclarationwillberejectedoutrightly.

8. The bidder should provide accurate information on any litigation history orarbitration resulting from contracts completed or under execution by him overthelasttenyears.ThisshouldalsoincludesuchcasesinprocessWhichareinprocess / progress.A consistent history of awards against the bidder may result infailure of the bid. In case the bidder has notprovidedsuch information andhas come tothenotice of the authority, the tender will be rejected at whatso ever stage and in such caseall the losses that will arise out of this issuewill be recoveredfrom the bidder and he will not have any defense for thesame.

9. After opening of Technical Bid, the procedure for the pre-qualification shall beadopted and the PriceBidof only successful qualified bidder shall beopenedforfinalevaluationofthecontract.ThedecisionofMunicipalCommissionerregarding the pre- qualification shall be final and binding to allthebidders.

10. ConditionalTenderswill beoutrightlyrejected.

11. IfnoagencyremainspresentandarenopointsforPrebidmeeting,"NIL"minutestobeconsideredandthesamewillnotbeuploaded.

12. Commissioner, Rajkot Municipal Corporation, Rajkot, reserves the right toaccept/rejectanyoralle-tender(s)without assigning any reasons thereof.

ADDL. CITY ENGINEER
Rajkot Municipal Corporation

ELIGIBILITY CRITERIA

1. ExperienceCriteria:

Thebiddershouldpossesfollowingminimumexperience:

1. Biddershouldhavecompletedatleastoneworkofsimilarnatureamounting to **60% OR** two works amounting to **50%** of tender amountinlastsevenyearseitherinorSemi-governmentasamaincontractor.
2. Bidder should have enough machinery and experienced personnel tosupervisethework.

2. FinancialCriteria

(1) Anaverageannualturnoverofsevenfinancialyearsshouldnotbelessthan50%ofestimatedtenderamount.

(2) Workingcapitalshouldnotbelessthan25%oftheestimatedtenderamount.

(3) SolvencymustnotbelessthanRs.2.00lakhs

(4) Available bid capacity- ABC must be more than the estimated tenderamount. The bidding capacity shall be worked out using the followingformula:

Bidding capacity=[2***A****N**]–**B** =_____(tobefilledbyApplicant)

where,

A=Maximum value of works executed in any one year during thelastsevenyears(updatedto……*pricelevel)takingintoaccountthecompletedaswellasworksinprogress.

N=Number of years prescribed for completion of the works forwhichtendersareinvited.

B = Value (…* price level) of existing commitments and on-goingworksto be completed during that next **N** year (period ofcompletionoftheworksforwhichthetendersareinvited)

3. EnhancementFactor

Followingenhancefactorforrespectiveyearwillbeconsideredtoarriveatcurrentfinancialyear:

Sr	Year	Enhancefactor
1	CurrentYear(2023-24)	1.00
2	CurrentYear–1(2022-23)	1.10
3	CurrentYear–2(2021-22)	1.21
4	CurrentYear–3(2020-21)	1.33
5	CurrentYear–4(2019-20)	1.46
6	CurrentYear–5(2018-19)	1.61
7	CurrentYear–6(2017-18)	1.77
8	CurrentYear–7(2016-17)	1.95

4. LitigationHistory

The bidder should provide accurate information on any litigation history orarbitration resulting from contracts completed or under execution by him overthelastsevenyears.Thisshouldalsoincludesuchcases,whichareinprocess/progress. A consistent history of awards against the bidder or anypartner of a joint venture may result in failure of the bid. In case the bidderhasnotprovidedsuchinformationandhascometothenoticeoftheAuthority,the tender will be rejected at whatsoever stage and in such case all the lossesthatwillariseoutofthisissuewillberecoveredfromtheBidder/contractorandhewill nothaveanydefenseforthesame.

5. Eventhoughthebiddersmeettheabovecriteria,theyaresubjecttoberejected,iftheyhave:

Misleadingorfalserepresentationmadeintheform,statementsandattachments Submitted And / Or having poor performance record such asabandoning the work, improper completion of contract, inordinate delays incompletion,litigationhistory,financialfailures, etc.

6. Brandnames

Specific reference in the specifications any materials by manufacturer's name(as per the prevailing list of GWSSB), or catalogue shall be constructed asestablishingastandardorqualityandperformanceandnotaslimitingcompetition, andtheBidderinsuchcases,willnotathisoptionfreelyuseonlyotherproduct

ADDL.CITYENGINEER
RajkotMunicipalCorporation

NameandsignatureofBidder

INSTRUCTIONS
TO
BIDDERS

INSTRUCTIONS TO BIDDER

IT1. GENERAL

The contract documents may be secured in accordance with the Notice Inviting E-TENDER for the work called. The work shall include supply of materials necessary forconstructionofthework.

IT2. INVITATIONTOE-TENDER

The Rajkot Municipal Corporation hereinafter referred as the Corporation will receivee-Tenders for the work of as per the specifications and schedule of prices in the e-Tender document. The e-Tenders shall be opened online as specified in the e-Tendernotice in the presence of interested Bidders or their representatives. The Corporationreservesthe right toreject thelowestor any otheror all e-Tenders or part of itwhichintheopinionoftheCorporationdoesnotappeartobeinitsbestinterest,andthe Bidder shall have no cause of action or claim against the Corporation or itsofficers,employees,successorsorassigneesforrejectionofhise-Tender.

IT3. LANGUAGEOFe-TENDER

E-TENDERs shall be submitted in English, and all information in the e-Tender shallalso be in English, Information in any other language shall be accompanied by itstranslation in English. Failure to comply with this may make the e-Tender liable torejection.

IT4.QUALIFICATIONSOFBIDDERS

A. TheBiddersshallabidebythelawsoftheUnionofIndiaandofGujaratStateandlegaljurisdictionofthe placewheretheworksarelocated.

B. TheBiddershallfurnishawrittenstatementoffinancialandtechnicalparameterswithdetailsanddocumentsalongwithhise-Tender whichcontainsnamelyasbelow:

i. TheBidder'sexperienceinthefieldsrelevanttothiscontract.
ii. TheBidder'sfinancialcapacity/resourcesandstandingoveratleast7(Seven)years.
iii. TheBidder'spresentcommitments(Jobsonhand).
iv. TheBidder'scapabilityandqualificationsofhimselfandhisregularstaffetc.
v. PlantsandMachineryavailablewiththeBidderfortheworke-Tendered.

C. The Bidder shall furnish original documents on the date mentioned in tender notice.The bid for those bidder will be treated as non-responsive who failing to produceoriginaldocuments onspecifieddate.

IT5.e-TENDERDOCUMENTS

The e-Tender documents and drawings shall comprehensively be referred to as e-TENDERdocument.Theseveralsectionsforminthedocumentaretheessentialparts of the contract and a requirement occurring in one shall be as binding asthough occurring in all, they are to be taken as mutually, explanatory and describeandprovideforcompleteworks.

IT6.EXAMINATIONBYBIDDERS

A. At this own expense and prior to submitting his e-Tender, each Bidder shall (a)examine the Contract Documents, (b) visit the site and determine local conditionswhich may affect the work including the prevailing wages and other pertinent costfactors, (c) familiarize, himself with all central, state and local laws, ordinance, rulesregulations and codes affecting the material supply including the cost of permits andlicenses required for the work and (d) correlate his observations, investigations, anddeterminations with the requirements of the e-TENDER Documents, site & subsoilinvestigation.

B. Thee-Tender isinvitedon..**%. rate**andcontractorshallhavetoquotehis priceon % bases**above or below in the schedule -B./ Price Schedule**. The works shallhave to be completed in all respect as stated in the e-Tender document to thesatisfactionofthe Corporation.

C. ThefollowingcomprisesinContractDocumentsatapriceof**Rs.3,000-00**.**e-**

TENDERDocument:

Part-I

1. NoticeinvitingBidders.
2. InstructionstotheBidder.
3. Formats
4. Generalconditionsofcontract

Part-II

Technicalspecifications

Part-III

a. BidForm (WithPrice)
b. PreambletoPriceschedule
c. PriceSchedule(Schedule-B)

D. Copy of the E-TENDER Document should be completed, checked in a responsiblemanner, digitally signed, and submitted. Security Bond shall be submitted in personbythestipulatedate,whichshallformthee-Tender.

The e-Tender is required to complete with all the pages in which entries are requiredto be made by the Bidder are contained in the e-Tender documents and the Biddershall not take out or add to or amend the text of any of the documents except in sofarasmaybenecessarytocomplywithanyaddendaissuedpursuanttoClauseIT.17hereof.

IT7.EARNESTMONEYDEPOSIT:

A. Each Bidder must submit a receipt of deposit as Tender guarantee towards **Earnestmoney** amounting to **Rs.30,040/-** in the form of crossed Demand Draft in favor of"Rajkot Municipal Corporation", from any Scheduled bank (except Co-operative Bank) in Indiaacceptable to owner payable at Rajkot. The Tender Bond, shall be valid for a periodof not less than 180 days from the date the e-Tenders are opened and shall complywith the requirements for Bond as stipulated in the General conditions of contract.TheTenderguaranteebondwillbeheldbytheownerasaguaranteethattheBidder,if awarded the contract, will enter into the contract agreement in good faith andfurnish the required bonds. Any e-Tender not accompanied by a Tender guarantee intheformofearnestmoneydepositedforthesumstipulatedinthee-TenderDocumentwillbesummarilyrejected.

B. TheEarnestMoneyDepositwillberefundedtotheunsuccessfulBiddersafteranawardhasbeen finalized.

C. The Earnest Money Deposit (Tender Guarantee) will be forfeited in the event, thesuccessful Bidder fails to accept the contract and fails to submit the "PerformanceGuarantee Bonds to the Owner as stipulated in this e-Tender documents within tendays.(10)daysafterreceiptof noticeof award ofcontract.

D. TheEarnestMoneyDepositofthesuccessfulBiddershallbereturnedaftertheperformancegua ranteebond,asrequired,isfurnishedbythecontractor.

E. Nointerestshallbepaidbytheowneronanye-Tenderguarantee.

~~**IT8. INCOMETAXCLEARANCECERTIFICATE: (DELETED):**~~

~~Latest Income Tax clearance Certificates must accompany with the e-Tender withoutwhich the e-Tender is liable to be summarily rejected. The Income Tax ClearanceCertificate obtained from the Income Tax Officer shallclearly indicate the IncomeTax Pan No/Circle/Ward, District and the reference number of the assessment alongwiththeassessment year.~~

IT9.PREPARATIONOFe-TENDERDOCUMENTS

Biddersarerequiredtonotethefollowingwhilepreparingthee-TENDERDocuments:

A. e-TENDER shall be submitted on the e-TENDER form bound here in English. Allstatementsshallbeproperlyfilledin.Numbersshallbestatedbothinwordsandinfigure swheresoindicated.

B. All entries or prices and arithmetic shall be checked before submission of the e-TENDER. If there is discrepancy between the rates quoted in figures and in words,theratesexpressed inwords shallbeconsideredasbinding.

C. Eache-Tendershallbeaccompaniedbytheprescribede-Tendersecuritybondandotherrequireddocumentsanddrawings.Allwitnessesandsuret iesshallbepersons of status and probity and their full names, occupations and addressesshallbestatedbelowtheirsignature.

D. Variation to the contract Documents requested by the Bidder may be affixed andduly signed and stamped. Such variations may be approved or refused by theCorporationisnotobligedtogivereasonforhisdecisions.

IT10.SUBMISSIONOFe-TENDERDOCUMENTS

Biddersarerequestedtosubmitthee-TENDERDocumentsonfollowinglines.

A. Volumecontainingfollowingdocuments:
   I. EarnestMoneyDeposit.
   II. CertificatesasregisteredcontractorinappropriateclasswithGovernmentofGujara torappropriateauthority.
   III. Bidder'sfinancialcapabilitystatementincludinglastthreeyearsIncometaxreturns, balancesheet,dulysignedbyregisteredcharteredaccount.
   IV. Bidder'sexperienceinthefieldrelevanttothiscontract.
   V. AlistoftheequipmenttheBidderpossessesandthatwhichheproposedtoacquireand useforthe purposerelatedtothework.

The time limit for receipt of e-Tender shall strictly apply in all cases. The Biddersshould therefore ensure that their e-Tender is received by the competent authority**TheRajkotMunicipalCorporation**atbeforeexpiry ofthetimelimit.Nodelayonaccountofanycauseforreceiptofe-Tendershallbeentertained.

The e-Tender must contain the name address of residence and place of business ofthepersonorpersonssubmittingthee-Tenderandmustbedigitallysigned.

e-TENDERbypartnershipfirmmustbefurnishedwiththefullnamesandaddressesof all partners and be signed by one of the members of the partnership or by alegally authorized representative holding power of attorney followed by signatureanddesignation oftheperson ofpersonsigning.

e-TENDER by Corporations/Companies must be signed with the legal name of theCorporation/Companies by the president/or by the secretary or other person orpersonslegallyauthorizedtobindtheCorporation/Company inthematter.

IT11 TENDERVALIDITYPERIOD

The validity period of the e-Tender submitted for this work shall be of 180 days fromthe date of opening of the e-Tender and that the Bidder shall not be allowed towithdraw or modify the e-Tender offer on his own during the validity period. TheBidder will not be allowed to withdrawn the e-Tender or make any modifications oradditions in the terms and conditions on his own e-Tender. If this is done then theownershall,withoutprejudicetoanyotherrightorremedy,beatlibertytorejectthee-Tenderandforfeittheearnestmoney deposit infull.

IT12GENERALPERFORMANCEDATA

Biddershallpresentalltheinformationwhichsoughtforinthee-Tenderdocumentinform of various schedules if given. e-TENDERs may not be considered if left blank ortheschedulesarenot properlyfilledin.

IT13SIGNINGOFe-TENDERDOCUMENTS

If the Tender is made by an individual it shall be signed with his full name above hiscurrentaddress.IftheTenderis madebyaproprietaryfirm,itshallbesignedbytheproprietorabovehisnameandthenameofhisfirmwithhiscurrentaddress.

If the e-Tender is made by a firm in partnership, it shall be signed by all the partnersof the firm above their full names and current address, or by a partner holding thepowerofattorneyforthefirm,inwhichcaseacertifiedcopyofthepowerofattorneyshall accompany the e-TENDER. A certified copy of the partnership deed, currentaddressesofallthepartnersofthefirmshallalsoaccompanythee-Tender.

If the e-Tender is made by a limited company or a limited corporation, it shall besigned by a duly authorized person holding the power of attorney, shall accompanythe e-Tender. Such limited company or corporation may be required to furnishsatisfactoryevidenceof itsexistencebeforethecontractisawarded.

If the e-TENDER is made by a group of firms, the sponsoring firm shall submitcomplete information pertaining to each firms in the group and state along with thebid as to which of the firms shall have the responsibility for e-Tendering and forcompletion of the contract documents and furnish evidence admissible in law inrespectoftheauthoritytosuchfirmsonbehalfofthegroup offirmsfore-Tenderingand for completion of contract documents. The full information and satisfactoryevidence pertaining to the participation of each member of the group of firms in thee-Tender shallbefurnishedalongwiththee-Tender.

Allwitnessesandsuretiesshallbepersonsofstatusandprobityandtheirfullnames,occupations and addresses shall be stared below their signatures. All the signaturesinthe e-Tenderdocumentshallbe dated.

IT14WITHDRAWALOFTENDERS

If,during the tendervalidityperiod, theBidder withdrawshisTender, Tendersecurity (Earnest Money) shall be forfeited and Bidder will be debarred for next threeyearstoquotein R.M.C.

IT15INTERPRETATIONSOFe-TENDERDOCUMENTS

Bidders shall carefully examine the e-TENDER Document and fully inform themselvesastoalltheconditionsandmatterswhichmayinanywayaffectthework orthe costthereof. If a Bidder finds discrepancies, or omission from the specifications or otherdocuments or should be in doubt as to their meaning, he should at once addressquery to the ADDL. CITY ENGINEER, R.M.C. The result of interpretation of the e-TENDERwillbeissuedasaddendum.

IT16ERRORSANDDISCREPANCIESINe-TENDERS

In case of conflict between the figures and words in the rates the rate expressed inwordsshallprevailand applyinsuchcases.

IT17MODIFICATIONOFDOCUMENTS

Modification of specifications and extension of the closing date of the e-Tender, ifrequiredwill bemade byan addendum.Each addendum will be made availableonline to all Bidders. These shall form a part of e-Tender. The Bidder shall not add toor amend the text of any of the documents except in so far as may be necessary tocomplywithanyaddendum.

ADDENDA

Addenda form part of the Contract Documents, and full consideration shall be givento all Addenda in the preparation of e-Tender. Bidders shall verify the number ofAddenda issued, if any and acknowledge the receipt of all Addenda in the e-TENDERFailuretosoacknowledgemaycausethe e-Tendertoberejected.

A. TheOwnermayissueAddendatoadviseBiddersofchangedrequirements.Suchaddenda maymodifypreviously issued Addenda.

B. Noaddendummaybeissuedafterthetimestatedinthenoticeinvitinge-Tenders.

IT18TAXANDDUTIESONMATERIALS

All charge on account of excise duties, Central / State, sales tax, work contract taxand other duties etc. on materials obtained for the works from any source shall bebornebythecontractors.No(P)or`C' or`D'formshallbesupplied.

IT19EVALUATIONOFE-TENDERS

While comparing e-Tenders, the Rajkot Municipal Corporation shall consider factorslikepriceofferisworkablewiththemarketprice,efficiencyandreliabilityofconstructio n method proposed, compliance with the specifications, relative quality,workdoneinpastwithRajkotMunicipalCorporationorotherGovernmentOrganizati ons, litigation issues etc. Evaluation criteria specifically mentioned in thespecificationwillalsobetakenintoconsiderationintheevaluationofe-Tenders.

IT20TIMEREQUIREDFORCOMPLETION

The completion period mentioned in this schedule is to be reckoned from the date ofnotice to proceed. Total completion period is **4 Months** from the date of issue ofnotice to proceed and contractor should adhere to this completion time. ~~Monsoonperiod from 1st July to 30th September will be considered as non-working period andhence excludedintimelimit~~.

IT21POLICYFORTENDERUNDERCONSIDERATION

TENDER shall be termed to be under consideration from the opening ofthe e - Tenderuntilsuchtime anyofficialannouncementoraward ismade.

While e-Tenders are under consideration, Bidders and their representative or otherinterestedpartiesareadvisedtorefrainfromcontactingbyanymeansanycorporations personnel or representatives on matters related to the e-Tenders understudy. The Corporation's representatives if necessary will obtain clarification on e-Tenders by requesting such information from any or all the Bidders, either in writingor through personal contact, as may be necessary. The Bidder will not be permittedto change the substance of his e-Tender after e-Tenders have been opened. Thisincludes any post Tender price revision. Non-compliance with his provision shallmaketheTender liablefor rejection.

IT22PRICESANDPAYMENTS

The Bidder must understand clearly that the prices quoted are for the total works orthe part of the total works quoted for and include all costs due to materials, labour,equipment, supervision, other services, royalties, taxes etc. and to include all extrato cover the cost. No claim for additional payment beyond the prices quoted will beentertained and the Bidder will not be entitled subsequently to make any claimonanyground.

IT23PAYMENTTERMS

The termsofpaymentare definedintheGeneralConditionsofContractandTechnical specifications. The Corporation shall not under any circumstances relaxthesetermsofpaymentandwillnotconsideranyalternativepaymentterms.Biddersshould therefore in their own interest note this provision to avoid rejection of their e-Tenders.

IT24AWARD

Award of the contract or the rejection or e-TENDERs will be made during the Tendervalidity period. A separate Schedule-B (Price Schedule) is given. The contractors arerequested to quote their price offer **in % below or above on the given price intheschedule-Bof PriceScheduleonly.**

A. After all contract contingencies are satisfied and the Notice of Award is issued,the successful Biddershall execute the Contract Agreement within the timestated and shall furnish the Bond as requiredherein. The contract Agreementshallbeexecuted,informstipulatedby theOwner.

B. If the Bidder receiving the Notice of Award fails or refuses to execute theContract Agreement within the stated time limit or fails or refuses to furnish theBond as required herein. The Owner may annul his award and declare the e-Tendersecurity forfeitedandwilltakeactionasdeemed fit.

C. A corporation, partnership firm or other consortium acting as the Bidder andreceiving the award shall furnish evidence of its existence and evidence that theofficer signing the contract agreement and Bonds for the corporation, partnershipfirmorotherconsortiumactingastheBidderisdulyauthorizedtodoso.

IT25SIGNINGOFCONTRACT

The successful Bidder shall be required to execute the contract agreement within 10days of receipt of intimation to execute the contract, failing which the Corporationwill be entitled annul to the award and forfeit the Earnest Money Deposit. The personto sign the contract document shall be person as detailed in Article IT.13 (signing ofe-Tender documents).

IT26DISQUALIFICATION

Ae-Tendershallbedisqualifiedandwillnotbetakenforconsiderationif,

(a) TheTenderfeeandTenderEarnestMoneyDepositisnotdepositedinfullandinthemanneras specifiedasperArticleIT.7i.e.EarnestMoneyDeposit.
(b) Thee-Tenderisinalanguageotherthan Englishordoesnotcontainits EnglishTranslationincaseofotherlanguageadoptedfore-Tenderpreparation.
(c) Thee-Tenderdocumentsarenotsignedbyanauthorizedperson(asperArticleIT.13i.e.signing of e-Tender documents).
(d) Thegeneralperformancedataforqualificationisnotsubmittedfully(asperArticleIT12i.e.GeneralperformanceData).
(e) Bidderdoesnotagreetopaymenttermsdefinedasper ArticleIT.23i.e.payment terms.

A. Ae-Tendermayfurtherbedisqualifiedif,

(a) PricevariationisproposedbytheBidderonanyprincipleotherthanthoseprovidedinthee-TENDERDocuments.
(b) Completionscheduleofferedisnotconsistentwiththecompletionscheduledefine dandspecifiedine-Tenderdocument.
(c) Thevalidityofe-Tenderbondis lessthanthatmentionedinArticle IT.11i.e.e-Tendervalidityperiod.
(d) Anyofthepageorpagesofe-Tenderis/areremovedorreplaced.
(e) Anyconditionaltender.

IT27 PERFORMANCEGUARANTEE(SECURITYDEPOSIT)

AsacontractsecuritytheBidder towhomthe awardismade shall furnishaperformance guarantee(Security deposit)forthe amountof **5%** of the contractprice to guarantee the faithful performance, completion and maintenance of theworksofthecontractinaccordancewithallconditionsandtermsspecifiedhereinand to the satisfaction of the Engineer-in-charge and ensuring the discharge of allobligationsarisingfromtheexecutionofcontractintheformsmentionedbelow:

A fixed deposit receipt of any Schedule Bank or Nationalized Bank (except Co-operative Bank) duly endorsed in favour of the **Rajkot Municipal Corporation,Rajkot.**

The performance guaranteeshall be deliveredto theCorporationwithin ten (10)daysofthenoticeofawardandatleastthree(3)daysbeforethe contractagreementissignedunlessotherwisespecifiedbytheEngineer-in-charge.Alternatively, the contractor may at his option deposit an amount of **2.5%** of thevalue of the contract price within ten days and the balance **2.5%** to be recovered ininstallmentsthroughdeduction@therateof10%fromtherunningaccountbills.Itis further clarified that Performance Guarantee (SD) for extra work will also be recovered@10%fromthebillofextrawork i.e.worksbeyondtender amount.

Ondueperformanceandcompletionofthecontractinallrespects,**THEPERFORMANCEGUARANTEE(SECURITYDEPOSIT)WILLBERELEASED TO THE CONTRACTOR WITHOUT ANY INTEREST AFTERDEFECTLIABILITYPERIODISOVER.**

IT28 STAMPDUTY

The successful Tenderer shall have to enter into an agreement on a non-judicialstamp paper of amount as per StampDutyActinthe form of the agreementapproved by the Corporation. The cost of stamp paper and adhesive stamp shall bebornebythecontractor.

IT29 BRANDNAMES

Specific reference in the specifications to any material by manufacturer's name, orcatalogue shall be constructed as establishing a standard or quality and performanceandnotaslimitingcompetitionandtheBidderinsuchcases,mayathisoptionfreelyuse only other product, provided that it ensures an equal of higher quality than thestandardmentioned andmeets Corporationapproval.

IT30 NONTRANSFERABLE

e-TENDERdocumentsarenottransferable.

IT31 COSTOFe-Tendering

TheownerwillnotdefrayexpenseincurredbyBiddersine-Tendering.

IT32EFFECTOFe-Tender

The e-Tender for the work shall remain for a period of 180 days from the date ofopening of the e-Tenders for this work and that the Bidder shall not be allowed towithdraw or modify the offer in his own during the period. If any Bidder withdraws ormakesanymodificationoradditions inthetermsandconditionsofhisowne-Tender,then the Corporation shall, without prejudice to any other right or remedy, be atlibertyto rejectthee-Tenderandforfeittheearnestmoney infull.

IT33CHANGEINQUANTITY

The Corporation reserves the right to waive any information in any e-Tender and toreject one or all e-Tenders without assigning any reasons for such rejection and alsoto vary the quantitiesof items or group as specified in the scheduled of prices asmaybenecessary.

IT34NEWEQUIPMENTANDMATERIAL

All materials, equipment and spare parts thereof shall be new, unused and originallycoming from manufacturer's plant to the Corporation. The rebuilt or overhauledequipment/materialswillnotbeallowed tobeusedonworks.

IT35RIGHTSRESERVED

The owner reserves the right to reject any or all e-Tenders, to waive any informalityor irregularity in any e-Tender without assigning any reason. The owner furtherreserves the right to withhold issuance of the notice to proceed, even after executionof the contract agreement. No payment will be made to the successful Bidder onaccount of such withholding. The owner is not obliged to give reasons for any suchaction.

IT36ADDITIONALRIGHTSRESERVED

The Commissioner, Rajkot Municipal Corporation, reserves right to reduce the scopeof work & split the e-Tender on two or more parts without assigning any reason evenaftertheawardsofcontract.

IT37MOBILIZATIONADVANCE

Nomobilizationadvanceoradvanceonmachinerywillbegiven.

IT38CONDITIONALe-Tenders

The scope of work is clearly mentioned in the e-Tender documents. The contractorshall have to carry out the work in accordance with the details specifications. Noconditionwillbeaccepted.Theconditionale-Tenderwillliabletoberejected.

IT39CESS&REGISTRATION:

For the welfare of labour working under construction Industry, the agency shall havetotaketheregistrationwithcompetentauthorityasperCircularNo.CWA/2004/841/M-3dated30-01-2006ofGovernmentofGujarat.RajkotMunicipal Corporation will deduct prevailing CESS of the value of work and willdepositthesameinGovernment.

IT40ESIREGISTRATION:

The contractors who are liable to be registered under ESI Act must possess ESIregistration number at the time of filling of tender. The agency should follow all therules andregulationsofESIAct asperprevailingnorms.

IT41PROFESSIONALTAX

The bidder shall have to pay the Professional Tax for current financial year imposedby Government of Gujarat, and also the bidder shall have to produce EnrollmentCertificateforthesame.

IT42PFCODE:

The contractors who are liable to be registered under EPF Act, 1950 must possessEFP code at the time of filling of tender. The agency should follow all the rules andregulationsoftheActasprevailingcurrently.

IT43LABOURLICENSE:

The contractorswho areliable tobe registeredunder Contract Labour Act, 1970must possess online Labour License at the time of filling of tender. The agencyshouldfollowalltherulesandregulationsoftheActasprevailingcurrently.

IT44FILLINGOFe-TENDER

The bidder shall have to fill all the details required in on-line bidding form of e-Tender. Incomplete OR inappropriate OR wrong information filled may cause the e-Tendertoberejected.

Addl/Asst.Engineer	**Dy.Ex.Engineer**	**ADDL.CITYENGINEER**
R.M.C.	**R.M.C.**	**R.M.C.**

SignatureofContractorwithSeal

FORMATS

Financial&OtherStatements

Information/DetailstobesubmittedbytheBiddersinthePerformamentionedunder Statementno 1 to 9.All the documentssubmittedherewithassupportingdocumentsshallbedulyattestedandcertified truecopy.

STATEMENTNO-1

DECLARATION

I/We _____hereby declaredthatIam/Wepartner(s)arenotblacklistedorTerminatedorDebarredorsuspended,backedout,delistedorconnectedwithfirmblacklistedorterminatedordebarredorsuspendedorbackedoutordelistedinanyStates,CPWD/MES/RailwaysoranyGovernment,Semi-GovernmentorPrivate bodysincetheinceptionofthe firm /company.Also,noPolicecomplaint islodgedagainstthefirm/companyorStaffdeployedbyme/us.

AtpresentIam/weareregisteredasapprovedcontractor(s),firmsin_____ _____State,CPWD/MES/Railways.

I, owner / We, the partners of this firm, herebygivean undertaking thatwe arejointly and severally responsible to meet allthe liabilities ever and abovethe business of this firm and make good the above financial loss sustained by theRajkot Municipal Corporation as a result of our abandoning the works entrusted tous.

I furtherundertake that if above declaration proves to be wrong/ incorrectormisleading,ourtender/contract standstobecancelled/terminated.

Date: _____
Place: SignatureofAuthorizedPerson

WithNotarised

STATEMENTNO-2

APPLICABILITYOFPROVIDENTFUNDANDMISCELLANEOUSPROVISIONSACT1952

Successful bidder i.e. the agency whose tender is accepted by the RMC shall have tocomply the necessary formalities under the employees provident fund and MiscellaneousProvisions Act, 1952 as Contributory Provident Fund Scheme is applicable to labourersengaged in construction activity and shall have to submit proofs regarding deduction ofprovident fund and other dues and depositing the same with government departmentunder the act and the scheme regularly on monthly basis failing which no running / final billpaymentwillbemadebytheRMCtothecontractorinanycircumstances.

AcertificatetotheaboveeffecthastobegivenbythecontractorasunderDeclaration Of DepositingProvidentFundcontribution

Thistocertifythatwehavedeductedtheemployees'P.F.anddepositedthesamealongwithemployer'scontributiontowardsprovidentfundonlabourcharges /wagespaidbyustothelabourersengagedfortheworkof_____ _____with ProvidentFundAuthorityunderourProvidentFundCodeNo.__

Weproduceherewiththecopiesofthechallansfortheprovidentfunddeductionandcontributiondepositedasmentionedabove.

Date: **SealandSignatureofthe Bidder**

STATEMENTNO.–3

CURRICULAMVITAE

Sr.No.	Detailsofperson	
1.	Name	
2.	Age	
3.	Qualifications	
4.	ExperienceinProjectRelatedfield	
5.	Otherexperiences	
6.	EmploymentRecord.	

Sr.No.	Period From - To	Organization under whichwork	Status /positionin the

Note:

(1) Separatesheetforeachpersontobefurnishedasabove.
(2) Thecontractor'sProjectTeamshouldconsistofpersonsinthefol lowingdisciplines.

a) SeniorEngineerwithexperienceofBuildingwork
b) SeniormaterialEngineer.
c) SeniorQuantitySurveyor.
d) Projectmanagementexpert.
e) Siteincharge

STATEMENT–4

INFORMATIONREGARDINGFINANCIALCAPACITYOF THECONTRACTORS

Sr.	Details	Amount(Rs.inlakhs)	Remarks
1.	Solvency		ABanker'sCertificateofcurrent financial yearmaypleasebeattached.
2.	AnnualTurnoverforthelastsevenyears.		Certifiedtruecopyto beattached
3.	Priceofbiggestsimilarnaturejobcarriedout		Certifiedtruecopytobeattached

STATEMENTNO.–4/A

BIDDER'SFINANCIALCAPACITY

Sr.No.	FinancialYear	AnnualTurnover inEngineeringProjectRs.	NetworthRs.	Net CashRs.	Working Capital Rs.
1	2022-2023				
2	2021-2022				
3	2020-2021				
4	2019-2020				
5	2018-2019				
6	2017-2018				
7	2016-2017				

Note:-

1) *Figures to be taken from audited balance sheets. Duly certifiedattestedtruecopy*
2) *Copiesofthebalancesheettobeattached..*
3) *The bidder shall have to provide that for a period of at least 6Months the bidder has ability to sustain negative cash balanceandhowheproposestomeetwiththesame.*
4) *CashPlan/CashflowStatement.*

STATEMENTNO.–4/B

AVAILABLEBIDCAPACITY

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Valueofworks executed inRs.Crores.							

Theavailablebidcapacitywillbeworkedoutasfollows.

Availablebidcapacity=(AxNx2)–B,where

A =Maximumofupdatedtotalamountofworkexecutedinanyone yearofthelastfivefinancialyears.

B=Theamountoftheexistingcommitmentsandongoingworkstobedischargeduringtime intervalofNyearsfromthebid due date.

N= Numberofyearsprescribedforcompletionoftheproposedworks

STATEMENTNO.–5

LISTOFSINGLEPROJECTWORKOFNOTLESSTHAN60%OFTHEESTIMATEDCOSTCOMPLETEDDURINGTHELASTSEVENYEARS.

Sr. No.	*YearofConstructionwork*	*Nameof Project*	Nameof owner& contactpersonoftheproject,address, phone	Totalcostofthework	Totalvalueofworkdone	Dateofstartingwork	DateofActualcompletionofwork
1	*2*	3	4	5	6	7	8
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

***Note**:Certificatefromtheownersinsupportofaboveworksmaybeenclosed with thisstatement.*

STATEMENTNO.5/A

Detailedinformationofsimilartypeofworkcostingnotlessthan50%oftender amountcompletedwithgoodqualityandworkmanshipinthepastsevenyears.

NameofContractor:_____

Sr. No.	Name ofwork	Name ofclient	Estimated cost of work(Rs. Lakhs)	Tenderedamount Rs.(Lakhs)	Dateofawardofcontract	Targetdateofcompletion	Actualdateofcompletion	Reasonfor delay	Amount of work doneduringlastsevenyearspreceding this tender(Rs.Lakhs).							Amountof work doneafter March2021 (Rs. Lakhs	Remarks
									2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23		

***Note**:Certificatefromtheownersinsupportofaboveworksmaybeenclosedwiththisstatement.*

STATEMENTNO–5/B

DETAILSOFIMPORTANTCONSTRUCTIONPROJECTS

Sr. No.	Name ofProject	Estimated cost	Prescribedtime ofperformance		ActualCompletion		ActualCompletionCostRs.	Name,addressand
			Start Date	Completion Date	Start Date	Completion Date		
1	2	3	4	5	6	7	8	9

***Note**:Certificatefromtheownersinsupportofaboveworksmaybeenclosedwiththisstatement.*

STATEMENTNO.–5/C

DETAILSOFONGOINGPROJECT

Sr. No	Nameofproject	Value ofremaining work Rs. inlakhs.	Start date	Likelydate ofcompletion	Name, address,telephone, fax no. ofprojectauthorityand contactperson.

STATEMENTNO.-6

DETAILSOFPLANT&MACHINERYTOBEDEPLOYEDONTHISWORK

Nameofthecontractor/company_____

Sr. No	Name ofplants/machinery	Nos.available(with make&year)	Nos.proposed tobedeployedfor thisproject	Present location	Presentvalue ofplant/machineries
1	2	3	4	5	6

Note:

Plant/machinerieswhicharepproposedtobeprocuredshallhavetobeprocuredattheearliestafterawardoftheworkandbeforethestartofthework.

STATEMENTNO.7

METHODSTATEMENTANDWORKPLAN

The Biddershall have to provide a brief write up to be enclosed withthe"TechnicalBids"coveringhisapproachandmethodologytohandletheproject constructionactivitiesincludinghisdetailsworkplan.Thebrief shallinclude thefollowingaspects.

Sr. No.	Components	
1.	Methodology	
2.	Constructionequipmentavailabilityandplanofdeployment.	
3.	PERT/Constructionchart/Barchart.	

ApplicationForm(1)
GeneralInformation

Allindividualfirmsandeachpartnerofaconsortiumapplyingforqualificationarerequestedtocompletetheinformationinthisform.Nationality information to be provided for all owners or applicants who arepartnerships orindividually-ownedfirms.

WheretheApplicant proposestousenamedsubcontractorsforcriticalcomponents of the works, or forwork contentsin excess of 10 percent ofthe value ofthe whole works thefollowing information should also besuppliedforthespecialistsubcontractor(s).

1.	NameofFirm	
2.	Headofficeaddress	
3.	Telephone	Contact
4.	Fax	Telex
5.	Placeofincorporation/registration	Year of incorporation/registration

	Nationalityofowners	
	Name	**Nationality**
1.		
2.		
3.		
4.		
5.		

NameofBiddersofficers/Personstobecontacted			
Name.	**Address**	**PhoneNos.**	**Fax.**

ApplicationForm(1A)

StructureandOrganization

Theapplicantis anindividual aproprietaryfirm afirminpartnership aLimitedCompanyorCorporation agroupoffirms/consortium(ifYes,give completion information in respect ofeachpartner)	
AttachtheOrganizationChartshowingthe structure of the organization includingthenamesoftheDirectorsandpositionOFficers	
Numberofyearsofexperience:	
as a Prime Contractor (contractorshoulderingmajorresponsibility inowncountry othercountries(specifycountry)	
inaconsortiumino wncountry othercountries(Specifycountry)	
as a sub-contractor (specify maincontractor) inowncountry othercountries(Specifycountry)	
4.Name and addressof any associatesthe applicant has in India (in case theapplicant happens to be from foreigncountry)whoareknowledgeableintheproceduresofcustoms,immigration,taxesandotherinformationnecessarytodothework.	
Forhowmanyyearshasyourorganizationbeeninbusinessofsimilar work under its present name?Whatwereyourfieldswhenyourorganizationwasestablished?Whether any new fields were added inyourorganization?Andifso,when?	

5.Wereyoueverrequiredtosuspendconstruction for a period of more thansixmonthscontinuouslyafteryou started?Ifso,givethenameofprojectandgivereasonsthereof.	
6.Haveyoueverlefttheworkawardedto you incomplete? If so, give name ofprojectandreasonsfornotcompleting work.	
In which fields of civil engineering constructiondoyouclaimspecializationandinterest?	
Give details of your experience inmechanizedcementconcretelining and in modern concrete technology formanufactureandqualitycontrol.	
Give details of your experience in usingheavyearthmovingequipmentandqualitycontrolincompactionofsoils.	
GivedetailsofyourexperienceinUndergroundDrainageworkinrockyarea.	
Givedetailsofcivilworkfordrainagepumpingstation	
Givedetailsforconstructionofseweragetreatmentplant	
Givedetailsforpumpingmachineryindrainagepumpingstation	

GENERALCONDITIONSO FCONTRACT

::TABLEOFCONTESTS::

GC-51	Specialrisks
GC-52	ChangeinConstitution
GC-53	Sub-contractualrelations
GC-54	PatentsandRoyalties
GC-55	Lien
GC-56	Executionofwork
GC-57	Workinmonsoon
GC-58	WorkonSundaysandHolidays
GC-59	GeneralConditionsforconstructionwork
GC-60	DrawingstobesuppliedbytheOwner
GC-61	DrawingstobesuppliedbytheContractor
GC-62	Settingoutwork
GC-63	ResponsibilitiesofContractorforcorrectnessofwork
GC-64	MaterialstobesuppliedbytheOwner
GC-65	ConditionsofissueofmaterialsbytheOwner
GC-66	MaterialsprocuredwithassistanceoftheOwner
GC-67	Materialsobtainedfromdismantling
GC-68	Articleofvalueoftreasurefoundduringconstruction
GC-69	Discrepanciesbetweeninstructions
GC-70	Alternationsinspecificationsanddesignsandextrawork.
GC-71	Actionwhennospecificationsareissued
GC-72	Abnormalrates
GC-73	AssistancetoEngineer-In-Charge
GC-74	Testsforqualityofwork
GC-75	Actionandcompensationincaseofbadworkmanship
GC-76	Suspensionwork
GC-77	Ownermaydopartofthework
GC-78	Possessionpriortocompletion
GC-79	CompletionCertificate
GC-80	ScheduleofRates
GC-81	Procedureformeasurementofworkinprogress
GC-82	Runningaccountpaymentstoberegardedasadvances
GC-83	Noticeforclaimforadditionalpayment
GC-84	PaymentofContractor'sBill
GC-85	FinalBill
GC-86	Receiptforpayment
GC-87	CompletionCertificate
GC-88	Taxes,Duties,etc.
GC-89	Insurance
GC-90	DamagetoProperty
GC-91	ContractortoIndemnifyOwner
GC-92	ImplementationofApprenticeAct1954
GC-93	HealthandSanitaryarrangementsforworkers
GC-94	SafetyCode
GC-95	Accidents

GC-01 DEFINITIONSANDINTERPRETATIONS:

Inthecontract(ashereinafterdefined)thefollowingwordsandexpressionsshall,unlessrepugnanttothesubjectorcontextthereof,havethefollowingmeans assignedtothem.

The "Owner / Corporation" shall mean Rajkot Municipal Corporation andshall include its Municipal Commissioner or other Officers authorized bytheCorporationandalsoincludeowner'ssuccessorsandassignees.

The "Contractor" shall mean the person or the persons, firm or Companywhosee-TenderhasbeenacceptedbytheOwnerandincludestheContractorslegalrepresentative,hissuccessorsandpermittedassigned.

DELETED

The "Engineer-In-Charge" shall mean the person designated as such bythe owner from time to time and shall include those who are expresslyauthorized by the Corporation to act for and on its behalf for all functionspertainingtotheoperationofthiscontract.

Engineer-In-Charge's Representative shall mean any resident Engineer orAssistant to the Engineer-In-Charge appointed from time to time by theowner to perform duties set forth in the E-TENDER Document whoseauthority shall be notified in writing to the Contractor by the Engineer-In-Charge.

"E-TENDER"–theofferorproposaloftheBiddersubmittedintheprescribed form setting for the prices for the work to be performed, andthedetailsthereof.

"Contract Price" shall mean total money payable to the Contractor underthecontract.

"Addenda"shallmeanthewrittenorgraphicnoticesissuedpriortosubmissionofe-Tenderwhichmodifyorinterpretthecontractdocuments.

"ContractTime"–thetimespecifiedforthecompletionofwork.

"Contract" shall mean agreement between the parties for the execution ofworksincludingthereinallcontractdocuments.

"ContractDocument" shall mean collectively thee-Tender documents,designs, drawings, specifications, agreed variations, if any and such otherdocumentsconstituting thee-Tenderandacceptancethereof.

"The Sub-Contractor" shall mean any person, firm or company (other thanthe Contractor) to whom any part of the work has been entrusted by theContractor with the written consent of the Engineer-In-Charge and thelegal representative successors and permitted assignee of such person,firmorcompany.

The"Specifications"shallmeanalldirections,thevariousTechnicalSpecifications, provisions and requirements attached to the contract whichpertainstothemethodandmannerofperformingthework,tothequantities and qualities of the work and the materials to be furnishedunder the contract for the work and any order(s) or instruction(s) thereunder. It shall also mean the latest Indian Standard Institute Specificationrelativetotheparticularworkorpartthereof,sofarastheyarenot

contrary to the E-TENDER specifications and in absence of any otherCountry applied in Indian as a matter of standard engineering practice andapprovedinwritingbytheEngineer-In-Chargewithorwithoutmodification.

The "Drawings" shall include maps, plans, tracings, or prints thereof withany modification approved in writing by the Engineer-In-Charge and assuch other drawings as may, from time to time, be furnished or approvedinwritingbytheEngineer-In-Chargeinconnectionwiththework.

The "Work" shall mean the works to be executed in accordance with thecontract or the part thereof as the case may be and shall include extra,additional, altered or substituted works as required for the purpose of thecontract.Itshallmeanthetotalityoftheworkbyexpression orimplicationenvisagedinthecontractandshallincludeallmaterials,equipmentandlabourrequiredfororrelativeorincidentaltoorinconnection with the commencement, performance and completion of anyworkand /orincorporation inthework.

The "Permanent Work" shall mean works which will be incorporated in andformpartoftheworktobehandedovertotheownerbytheContractoroncompletionof thecontract.

The "Temporary Work" shall mean all temporary works of every kindrequired in or about the execution, completion and maintenance of thework.

"Site" shall meanthe land and other places, on, under, in or throughwhich the permanent works are to be carried out and any other lands orplacesprovidedbytheCorporationforthepurposeofthe contracttogether with any other places designated in the contract as forming partof thesite.

The "Construction Equipment" shall mean all appliances / equipment ofwhatever nature required in or for execution, completion or maintenanceof works or temporary works (as herein before defined) but does notinclude materials or other things intended to form or forming part of thepermanentwork.

"Notice in writing orwritten Notice" shall mean a notice written,typed or in printed form delivered personally **OR** sent by Registered Postto the last known private or business address or Registered Office of theContractor **OR** through e-mail **OR** mobile message shallbe deemed tohave been received in the ordinary course of post it would have beendelivered.

The "Alteration / variation order" shall mean an order given in writing bythe Engineer-In-Charge to effect additions or deletions from or alterationsinthework.

"Final Test Certificate" shall mean the final test certificate issued by theownerwithintheprovisions ofthecontract.

The "Completion Certificate" shall mean the certificate to be issued by theEngineer-In-Charge when the work has been completed and tested to hissatisfaction.

The"FinalCertificate"shallmeanthefinalcertificateissuedbytheEngineer-In-Charge after the period of defects liability is over and theworkisfinallyaccepted by theowner.

"DefectsLiabilityPeriod"shallmeanthespecifiedperiodbetweentheissueof Completion Certificate and the issue of final certificate during which theContractor is responsible for rectifying all defects that may appear in theworks.

"Approved"shallmeanapprovedinwritingincludingsubsequentconfirmation in writing of previous verbal approval and "Approval" meansapprovedinwritingincluding asaforesaid.

"Letter of Acceptance" shall mean an intimation by a letter to Bidder thathise-Tenderhasbeenacceptedinaccordancewiththeprovisionscontainedtherein.

"Order" and "Instructions" shall respectively mean any written order orinstructiongivenbytheEngineer-In-Chargewithinthescopeofhispowersintermsofthecontract.

"Running Account Bill" shall mean a bill for the payment of "On Account"money to the Contractor during the progress of work on the basis of workdone and the supply of non-perishable materials to be incorporated in thework.

"Security Deposit" shall mean the deposit to be held by the owner assecurityfortheddueperformanceofthecontractualobligations.

The "Appointing Authority" for the purpose of Arbitration shall be theMunicipalCommissioner,RajkotMunicipalCorporation.

1.32. "Retention Money" shall mean the money retained from R.A.Bills for theduecompletionofthe"LETWORS".

1.33 Unlessotherwisespecificallystated,themasculinegendershallincludethefemi nine and neuter genders and vice-versa and the singular shall includethepluralandvice-versa.

GC-02 **<u>LOCATIONOFSITEANDACCESSIBILITY</u>:**

Theintendingbiddersshouldinspectthesite&makethyselffamiliarwithsiteconditionsandavailablecommunicationfacilities.

Non-availability of access roads shall in no case be the cause tocondone delay in the execution of the work and no claim or extracompensationwillbepaid.

GC-03 **<u>SCOPEOFWORK</u>:**

The scope of work is defined broadly in the special conditions of contractand specifications. The Contractor shall provide all necessary materials,equipment and labour etc. for the execution and maintenance of the work.All material that go with the work shall be approved by the Engineer-In-Chargepriortoprocurementand use.

<u>PowerSupply</u>:

The Contractor shall make his own arrangement for power supply duringinstallation.

<u>LandforContractor'sFieldOffice,GodownEtc.</u>:

Owner will not be in a position to provide land required for Contractor'sfield office, godown, etc. The Contractor shall have to make his ownarrangementforthesame.

GC-04 **RULINGLANGUAGE:**

The language according to which the contract shall be construed andinterpreted shall be English. All entries in the contract document and allcorrespondencebetweenthecontractorandtheCorporationortheEngineer-In-Charge shall be in English/Gujarati. All dimensions for thematerialsshallbegiveninmetricunits only.

GC-05 **INTERPRETATIONOFCONTRACTDOCUMENT:**

1. The provision of the General Conditions of Contract and Special Conditionsof Contract shall prevail over those of any other documents of the contractunlessspecificallyprovidedotherwise,shouldhavetherebeanydiscrepancy, inconsistency, error or omission in the several documentsforming the contract, the matter may be referred to the Engineer-In-Chargeforhisinstructionsanddecision.The Engineer-In-Charge'sdecisioninsuchcaseshallbefinalandbindingtotheContractor.

2. Worksshownuponthedrawingsbutnotdescribedinthespecificationsordescribed in the specifications without showing on the drawings shall betakenasdescribed inthespecificationsandshownonthedrawings.

3. The headings and the marginal notes to the clause of these GeneralConditions of Contract or to the specifications or to any other part of e-Tender documents are solely for the purpose of giving a concise indicationandnotasummaryofcontentsthereof.Theyshallneverbedeemedtobe part thereof or be used in the interpretation or construction of thecontract.

4. Unlessotherwisestatesspecifically,inthiscontractdocuments thesingular shall include the plural and vice-versa wherever the context sorequires. Works imparting persons shall include relevant Corporations /Bodyofindividual/ firmofpartnership.

5. Notwithstanding the sub-division of the documents into separate sectionandvolumeseverypartofeachshallbesupplementarytoandcomplementary of every other part and shall be read with and into thecontext sofaras itmaybepracticabletodoso.

6. Whereanyportionof theGeneralConditionsof Contractis repugnanttoorat variance with any provisions of the Special Conditions of Contract, then,unlessadifferentintentionappears,theprovisionsofthe specialconditions of contract shall be deemed to over ride the provisions ofGeneralConditionsofContracttotheextentofeachrepugnancyofvariance.

7. The materials, design, and workmanship shall satisfy the relevant IS, andcodesreferredto.Ifadditionalrequirementsareshowninthespecifications, the same shall be satisfied over and above IS and othercodes.

8. IfthespecificationsmentionthattheContractorshallperformcertainworkor provide certain facilities, it shall mean that the Contractor shall do so athisown cost.

9. **ContractortoCollectHisOwnInformation-**

Thedetailsgiveninthee-Tenderarearrangedmakingnecessaryinvestigations for framing an estimate. However, when the work is beingexecuted,changesinsoilconditionsare likelytobemetwithinviewoftheformation of soil, strata in Rajkot District.It is, therefore, desirable thatthe Contractor makes his own investigations or additional investigations asmay be required for correctly assessing the cost of different items of workandsubmithise-Tenderaccordingly.Anychangeindescription orquantity of an item shall not vitiate the contract or release the Contractorfromexecutingtheworkcomprisedinthecontractaccordingtothedra

wingsandspecificationsatthee-Tenderedrates.

He is deemed to have know the scope, nature and magnitude of the workand the requirements of materials and labour involved and as to whateverwork he has to complete in accordance with the contract. The Contractoris expected to visit the site and surroundings to satisfy himself as to thenature of all existing structures, if any, and also as to the nature and theconditions of railways, roads, bridges and culverts, means of transport andcommunicationswhetherbyland,airorwaterandastopossibleinterruptions thereto and the access and gross from the site, to haveexamined and satisfied himself as to the sites for obtaining sand, stones,bricks and other materials, the site for disposal of surplus materials, theavailable accommodation and make such enquiries as may be necessaryfor executing and completing the work, to have local enquiries as to thesub-soil, subsoil water and variation thereof, storms, prevailing winds,climatic conditions and all other similar matters, effecting work. He isexpected to be familiar with his liability for payment of Government taxes,customs and excise duty and other charges etc. in contract with theexecutionofthis contract.

GC-06 **CONTRACTORTOUNDERSTANDHIMSELFFULLY:**

The Contractor by e-Tendering shall be deemed to have satisfied himself,as to all considerations and circumstances affecting the e-Tender price, asto the possibility of executing the works as shown and described in thecontract and to have fixed his prices according to his own view on thesematters and to have understood that no additional allowances except asotherwiseexpresslyprovided,willafterwardsbemadebeyondthecontractpric e. The Contractor shall be responsible for any misunderstanding orincorrectinformation,however, obtained.

GC-07 **ERRORSINSUBMISSIONS:**

The Contractor shall be responsible for any errors or omissions in theparticulars supplied by him, whether such particulars have been approvedbytheEngineer-In-Chargeornot.

GC-08 **SUFFICIENCYOFe-TENDER:**

TheContractorshallbedeemedtohavesatisfiedhimselfbeforee-Tendering as to the correctness of the e-Tender rates which rates shall,except as otherwise provides for, cover all the Contractor's liabilities andobligations set forth or implied in the contract for the proper execution oftheworkforcompliancewithrequirementsofArticleGC-19thereof.

GC-09 **DISCREPANCIES:**

Thedrawingsandspecificationsaretobeconsideredasmutuallyexplanatory of each other, detailed drawings being followed in preferenceto small-scale drawings and figured dimensions in preference to scale andspecialconditionsinpreferencetoGeneralConditions.Thespecialdirections or dimensions given in the specifications shallsupercede allelse.Shouldanydiscrepancieshowever,appearorshouldanymisunderstandi ngariseastothemeaningandintentofthesaidspecifications or drawings, or as to the dimensions or the quality of thematerials or the due and proper execution of the works, or as to themeasurement or quality and valuation of the work executed under thiscontract or as extra there upon, the same shall be explained by theEngineer-In-Chargeandhisexplanationshallbesubjecttothefinaldecision of the Municipal Corporation in case reference be made to it, bebinding upon the Contractor and the Contractor shall execute the workaccording to such explanation and without addition or to deduction fromthecontractpriceandshallalsodo allsuchworks andthings necessary fortheprocompletionoftheworksasimpliedbythedrawingsandspecification s, even though such works and things are not specially shownand described in the said specifications. In cases where no

particularspecifications are given for any article to be used under the contract,
therelevantspecificationsoftheIndianStandardInstitutionshallapply.

GC-10 **PERFORMANCEGUARANTEE(SECURITYDEPOSIT):**

1. A sum of 5% of the contract price shall be deposited by the Bidder(hereinafter called the contractor when e-Tender is accepted) as securitydepositwiththeownerforthefaithfulperformance,completionandmaintenance of the works in accordance with the contract documents andto the satisfaction of the Engineer-In-Charge and assuring the payment ofall obligations arising from the execution of the contract. This shall bedeposited inoneoftheformsmentionedbelow :

   a. By a Demand Draft on the Rajkot Branch of any Scheduled Bank exceptco-operativebank.

   b. A Fixed Deposit Receipt of a Schedule Bank duly endorsed in favour of the"**RAJKOTMUNICIPALCORPORATION**", Rajkot.

   c. The Contractor may pay 2.5% of the value of works as initial securitydeposit and the balance 2.5% shall be recovered in installments throughdeductions at the rate of 10 (ten) percent of the value of each RunningAccount Bill till the total security execution exceeds the accepted value ofe-Tender because of allotment of further work, further recoveries towardssecurity deposit shall be effected at 10% of the R A Bills to make up thefivepercentsecuritydepositoftherevisedvalue of contract.Alternatively, the Contractor may at his option deposit the full amount of 5percentofsecuritydepositwithin tendaysofreceiptbyhimofthenotificationacceptingthee-Tenderintheformasaforesaid.**PERFORMANCEGUARANTEE(SECURITYDEPOSIT)WILLBERELEASED TO THE CONTRACTOR WITHOUT ANY INTEREST AFTERDEFECTLIABILITYPERIOD ISOVER.**

2. If the Contractor, sub-contractor or their employees shall break, deface ordestroy any property belonging to the owner or other agency during theexecution of the contract, the same shall be made good by the contractorat his own expense and in default thereof, the Engineer-In-Charge
maycausethesametobemadegoodbyotheragenciesandrecoverexpense

   from the Contractor (for which the certificate of the Engineer-In-Chargeshall be final). These expenses can be recovered from the security depositif recovery from other sources is not possible. The amount as reduced insecurity deposit will be made good by deduction from the next R A Bill oftheContractor.

GC-11 **INSPECTIONOFWORK:**

1. The Engineer-In-Charge shall have full power and authority to inspect theworkatanytimewhereverinprogresseitheronthe siteorattheContractor's or any other manufacturer's workshop or factories whereversituatedandtheContractorshall affordtoEngineer-In-Chargeeveryfacility and assistance to carry out such inspection,Contractoror hisauthorized representative shall, at all time during the usual working hoursand all times when so notified, remain present to receive orders andinstructions.

   Ordersgivento Contractor'srepresentative shall be consideredto havethe same force asifthey had been given to the Contractor himself.Contractor shall give not less than ten (10) days notice in writing to theEngineer-In-Charge before covering up or otherwise placing beyond reachof inspection and measurement any work in order that the same may beinspected and measured. In the event of breach of the above, the sameshallbeuncoveredatContractor'sexpensesforcarryingoutsuchinspection ormeasurement.

2. The material shall be dispatched from Contractor's store on site of workbefore obtaining approval in writing of the Engineer-In-Charge. Contractorshall provide at all times during the progress of work and maintenanceperiod of proper means of access with ladders, gangways, etc. and makenecessary arrangement as directed for inspection or measurement of workbyEngineer-In-Charge.

GC-12 **DEFECTLIABILITY:**

1. Contractor shall guarantee the work for aperiodof 12 Months.Anydamage or defect that may arise or that may remain undiscovered at thetime of issue of Completion Certificate connected in any way with theequipment or materials supplied by him or in the workmanship shall berectified or replaced by Contractor at his own expense as desired byEngineer-In-Charge or in default Engineer-In-Charge may cause the sameto be made good by other agency and deduct expenses of which thecertificate of Engineer-In-Charge shall be final from any sums that maythen or any time thereafter become due to Contractor or from his securitydepositortheproceedsofsalethereoforofasufficientportionthereof.

2. From the commencement to completion of work Contractor shall take fullresponsibility for the care of the work including all temporary works and incase any damages, occur from any cause whatsoever he shall at his owncost, repair and make good the same so that on completion, work shall beingoodorderandinconformity,ineveryrespect,withtherequirementsofcontractandaspertheinstructionsoftheEngineer-In-Charge.

3. Ifatanytimebeforetheworkistakenover,theEngineer-In-Charge-

a) DecidethatanyworkdoneormaterialsusedbytheContractoraredefectiveornotinaccordancewiththecontractorthatworkoranyportion thereofis defective or do not fulfill the requirements of contract(allsuchmaterialsbeinghereinaftercalleddefectsinthisclause)heshall,

as soon as reasonably practicably, give notice to Contractor in writing ofthe said defect specifying particulars of the same then Contractor shall athisownexpenseandwithallspeedmakegoodthedefectssospecified.

b) In case Contractor fails to do so, owner may take, at the cost of theContractor, such stops as may in all circumstances be responsible to makegoodsuchdefects.Theexpendituresoincurredbyownerwill berecovered from the amount due to Contractor. The decision of Engineer-In-Charge with regard to the amount to be recovered from Contractor willbefinalandbinding ontheContractor.

GC-13 **POWER OF ENGINEER-IN-CHARGE TO GIVE FURTHERINSTRUCTIONS:**

The Engineer-In-Charge shall have the power and authority from time totime and at all times to give further instructions and directions as mayappear to him necessary or proper for the guidance of the Contractor andthe works and efficient execution of the works according to the terms ofthe specifications, and the Contractor shall receive, execute, obey and bebound by the same, according to the true intent and meaning thereof, asfully and effectively as though the same had accompanied or had beenmentioned or referred to in the specifications. No work which radicallychangestheoriginalnatureofthecontractshallbeorderedbytheEngineer-In-Chargeandintheeventofanydeviationbeingordered,whichintheopinionoftheContractorchangestheoriginalnatureof thecontract, he shall nevertheless carry it out and any disagreement as to thenatureoftheworkandtheratetobepaidtothereofshallberesolved.

The time of completion of works shall, in the event of any deviations

beingordered resulting in additional cost or reduction in cost over the contractsum, be extended or reduced reasonably by the Engineer-In-Charge. TheEngineer-In-Charge'sdecisioninthecaseshallbefinalandbinding.

GC-14 **PROGRAMME:**

The time allowed for execution of works shall be the essence of thecontract. The contract period shall commence from the date of notice ofintimation to proceed. The Bidder at the time of submitting his e-Tendershall indicate in the construction schedule his programme of execution ofwork commencement with the total time specified. The Contractor shallprovidetheEngineer-In-Chargeadetailedprogrammeoftimescheduleforexecution of the worksinaccordance withthe specificationsandthecompletion date. The entire programme to be finalized by the Contractor,has to conform to the execution period mentioned along with the Bill ofQuantitiesinthee-Tenderdocuments.TheEngineer-In-Chargeuponscrutinyofsuchsubmittedprogrammebycontractor,shallexamine suitability of it to the requirement of contract and suggest modifications, iffound necessary.

GC-15 **SUB-LETTINGOFWORK:**

No part of the contract nor any share of interest thereon shall in anymanner or degree be transferred, assigned or sublet by the Contractordirectly or indirectly to any person, firm or Corporation whosoever exceptas provided for in the succeeding sub-clause, without the consentinwritingofthe owner.

GC-16 **SUB-CONTRACTSFORTEMPORARYWORKSETC.:**

The owner may give written consent to sub-contractors for execution ofany part of the works at the site, being entered upon the contractorprovided each individual contract is submitted to the Engineer-In-Chargebefore being entered into and is approved by him.List of sub-contractorstobesupplied.

Not-withstandinganysublettingwithsuchapprovalasaforesaidandnotwithstanding the Engineer-In-Charge shall have received of any sub-contractors, the Contractor shall be and shall remain solely responsible forthe quality and proper and expeditious execution of the works and theperformance of all the conditions of contract in all respects as if suchsubletting or subcontracting had not taken place and as if such works hadbeendonedirectlybytheContractor.

GC-17 **TIMEFORCOMPLETION:**

1. The work covered under this contract shall be commenced from the datethe Contractor is served with a notice to proceed with the work and shallbe completed before the date as mentioned in the time schedule of work.The time is the essence of the contract and unless the same is extendedas mentioned in Clause GC-18 "Extension of Time", the Contractor shallpayliquidateddamages forthedelay.
2. Thegeneraltimescheduleforconstructionisgiveninthee-Tenderdocument. Contractorshall prepare adetailedweeklyormonthlyconstruction programme in consultation with the Engineer-In-Charge soonafter the agreement and the work shall be strictly executed accordingly.Thetimeforconstructionincludes,thetimerequiredfortesting,rectifications,ifany,retestingandcompletionoftheworkinallrespectstothe entire satisfactionof theEngineer-In-Charge except theitems whicharenotcoming inthewaytocommission theproject.
3. ~~Monsoonperiodfrom1st July to30th Septembershallbeconsideredas non-workingperiodhenceexcludedintimelimit~~.

GC-18 **EXTENSIONOFTIME:**

Time shall be considered as the essence of the contract. If, however, thefailure of the Contractor to complete the work as per the stipulated datesreferredtoabovearisesfromdelaysonthepartofCorporationinsupplying the materials or equipment, it has undertaken to supply underthe contract or from delays on the quantity of work to be done under thecontract, or force majeure an appropriate extension of time will be givenby the Corporation. The Contractor shall request for such extension withinone month of the cause of such delay and in any case before expiry of thecontractperiod.

GC-19 **CONTRACTAGREEMENT:**

The successful Bidder shall enter into and execute the contract agreementwithin 10 (ten) days of the notice of award, in the form shown in e-Tenderdocuments with such modifications as may be necessary in the opinion ofthe Corporation. It shall be incumbent on the Contractor to pay the stampdutyandthelegalchargesforthepreparationofthecontractagreement.

GC-20 **LIQUIDATEDDAMAGES:**

If the Contractor fails to complete the work or designated part thereofwithin the stipulated completion date for the work or for the part, he shallpayliquidateddamagesat0.1(zeropointone)percentofcontractvalue

for per day of delay subject to maximum of 10% of the contract value orasdecidedbyMunicipal Commissioner.

The Contractor shall complete one-sixth quantum of work within onefourth period, four-tenth quantum of work within one-half period andeight-tenth quantum of work within three-fourth period, failing which, theContractorshallbeliabletopayliquidateddamagesanamountasspecifiedabo ve,orasdecided byMunicipalCommissioner.

The amount of liquidated damages shall, however, be subjected to amaximumof10 percentofthecontractvalue.

GC-21 **FORFEITUREOFSECUEITYDEPOSIT:**

Whenever any claim against the Contractor for the payment of a sum ofmoneyoutof or under the contract arises, the Corporation shall beentitledto recoversuchsum byappropriatingin partor whole, thesecuritydepositoftheContractor.Incasethesecuritydepositisinsufficient, the balance recoverable shall be deducted from any sum thendue or which at any time thereafter may become due to the Contractor.The Contractor shall pay to the owner on demand any balance remainingdue.

GC-22 **ACTIONOFFORFEITUREOFSECURITYDEPOSIT:**

In any case in which under any Clause or Clauses of the contract, theContractor shall committed a breach of any of the terms contained in thiscontract, the owner shall have power to adopt any of the following coursesashemaydeembestsuitedtohis interest.

a) Torescindthecontract(ofwhichrecessionnoticeinwritingtothecontractor under the hand of the owner shall be conclusive evidence) inwhich case the security deposit of the Contractor shall stand forfeited andbeabsolutelyat thedisposaloftheowner.

b) To employ labour and to supply materials to carry out the balance workdebiting Contractor with the cost of labour employed and the cost ofmaterials supplied for which a certificate ofthe Engineer-In-Charge shallbe final and conclusive against the Contractor and 10% of costs on aboveto cover all departmental charges and crediting him with the value of workdone at the same rates as if it has been carried out by the Contractorunderthetermsofhiscontract.ThecertificateofEngineer-In-Chargeasto the value of the work done shall be final and conclusive against theContractor.

c) To measure up the work of the contractor and to take such part thereof asshall be unexecuted out of his hand and give it to another Contractor tocomplete, the same.in this case the excess expenditure incurred thanwhat would have been paid to the original Contractor, if the whole workhadbeenexecutedbyhim,shallbeborneandpaidbytheoriginalContractor andshall be deductedfromanymoney due to himby theowner under the contract or otherwise and for the excess expenditure, thecertificateoftheEngineer-In-Chargeshallbefinalandconclusive.

In the event any of the above courses being adopted by the owner, theContractorshallhavenoclaimsforcompensationforanylosssustainedbyhim by reason of his having purchased or procured any materials orentered into any agreements or made any advance on account of or with aviewtotheexecutionoftheworkortheperformanceofthecontract.

In purchase the Contractor shall not be entitled to recover or be paid anysumforanyworkactuallyperformedunderthiscontractunlesstheEngineer-In-Charge will certify in writing the performance of such workandthevaluepayableinrespectthereofandheshallonlybeentitledtobepaid thevaluesocertified.

In the event of the owner putting in force the powers as stated in a, b, c,abovevestedinhimundertheproceedingclause,hemay,ifhesodesires,take possession of all or any tools and plant, materials and stores in oruponthe worksorthesitethereofbelongingtotheContractor, orprocured by

him and intended to be used for the execution of the work orany part thereof paying or allowing for the same in account at the contractrates to be certified by the Engineer-In-Charge. The Engineer-In-Chargemay give notice in writing to the Contractor or his representative requiringhim to remove such tools, plant, materials or stores from the premiseswithin the time specified in the notice and in the event of the Contractorfailingtocomplywithanysuchnotice,theEngineer-In-Chargemayremove them at the Contractor's expenses or sell them by auction orprivate sale on account of the Contractor and his risks in all respectswithout any further notice as to the date, time or place of the sale and thecertificate of Engineer-In-Charge as to the expense of any such removaland the amount of the proceeds and the expenses of any such sale shallbefinalandconclusiveagainsttheContractor.

GC-23 **COMPENSATIONFORALTERATIONINORRESTRICTIONINWORK:**

If at any time from the commencement of the work, the owner shall forany reasons whatsoever not require the whole work or part thereof asspecified in the e-Tender to be carried out, the Engineer-In-Charge shallgive notice in writing of the fact to the Contractor, who shall have no claimto any payment or compensation whatsoever on account of any profit oradvantage which he might have derived from the execution of the work infull but which he did not derive in consequence of full amount of the worknothavingbeencarriedout.Healsoshallnothaveanyclaimforcompensation by reasons of any alterations having been made in originalspecifications, drawings, designs and instructions which shall involve anycurtailment of theworkas originallycontemplated.

When the Contractor is a partnership firm, the prior approval in writing ofthe owner shall be obtained before any change is made in the Constitutionof the firm. Where the Contractor is an individual or a Hindu UndividedFamily or business concern, such approval as aforesaid shall, likewise beobtained before Contractor enters into an agreement with other partieswhere under, the reconstituted firm would have the right to carry out theworkherebyundertakenbytheContractor.Ineithercase,if priorapproval as aforesaid is not obtained, the contract shall be deemed tohave been allotted contravention of subletting clause hereof and the sameaction may be taken and the same consequence shall ensure as providedinthesublettingclause.

GC-24 **INTHEEVENTOFDEATHOFTHECONTRACTOR:**

Without prejudice to any of the rights or remedies under the contract, ifthe Contractor dies, the owner shall have the option of terminating thecontractwithoutcompensationtotheContractor.

GC-25 **MEMBERSOFTHEOWNERNOTINDIVIDUALLYLIABLE:**

No official or employee of the owner shall in any way be personally boundor liable for the acts or obligation of the owner under the contract, oranswerable for any default or omission in the observance or performanceofanyacts,matters orthings,whichareherein,contained.

GC-26 **OWNERNOTBOUNDBYPERSONALREPRESENTATIONS:**

The Contractor shall not be entitled to any increase on the schedule ofratesoranyotherrightsorclaimswhatsoeverbyreason ofrepresentation,promiseorguaranteesgivenorallegedtohavebeengiventohimbyanyperson.

GC-27 **CONTRACTOR'SOFFICEATSITE:**

The Contractor shall provide and maintain an office at the site for theaccommodation of his agent and staff and such office shall remain open

atallreasonablehourstoreceiveinformation,noticesorothercommunications.

GC-28 **CONTRACTOR'SSUBORDINATESTAFFANDTHEIRCONDUCT:**

1. The Contractor on award of the work shall name and depute a qualifiedEngineer having experience of carrying out work of similar nature, whomequipments, materials, if any, shall be issued and instructions for workgiven. the Contractor shall also provide to the satisfaction of Engineer-In-Charge sufficient and qualified staff, competent sub-agents, foreman andloading hands including those specially qualified by previous experience tosupervise the type of works comprised in the contract in such manner aswill ensure work of the best quality and expeditious working. If, in theopinion of the Engineer-In-Charge additional properly qualified supervisionstaff is considered necessary, it shall be employed by the Contractor,without additional charge on account thereof. The Contractor shall ensureto the satisfaction of the Engineer-In-Charge that sub-contractors, if any,shall provide competent and efficient supervision over the work entrustedtothem.

2. If and whenever any of the Contractor's or sub-contractor's agents, sub-agents, assistants, foreman or other employees shall, in the opinion of theEngineer-In-Charge, be guilty of any misconduct or be incompetent orinsufficiently qualified or negligent in the performance of their duties orthat in the opinion ofthe owner or Engineer-In-Charge, it is undesirableforadministrativeoranyotherreasonforpersonorpersonstobeemployed in the works, the Contractor if so directed by the Engineer-In-Charge, shall at once remove such person or persons from employmentthereon.Anypersonorpersonssoremovedshallnotagainbere-employed in connection with the works without the written permission ofthe Engineer-In-Charge. Any person, so removed from the works shall beimmediately replaced at the expense of the Contractor by a qualified andcompetent substitute. Should the Contractor be required to repatriate anyperson removed from the works he shall do so after approval of Engineer-In-Chargeandshallbearallcostsinconnectiontherewith.

3. The Contractor shall be responsible for the proper behavior of all the staff,foreman, workmen and others and shall exercise proper control over themandinparticularandwithoutprejudicetothesaidgenerality,theContractor shall be bound to prohibit and prevent any employee fromtrespassing or acting in any way detrimental or prejudicial to the interestofthecommunityoroftheproperties oroccupiersoflandandproperties

   in the neighborhood and in the event of such employees so trespassing,the Contractor shall be responsible therefore and relieve the owner of allconsequent claims, actions for damages or injury or any other groundwhatsoever.The decision of the Engineer-In-Charge uponany matterarisingunderthisclaimshallbefinal.

4. If and when required by the owner, the Contractor's personnel enteringupon the owner's premises shall be properly identified by badges of a typeacceptable to the owner which must be worn at all times on owner'spremises.

GC-29 **TERMINATIONOFSUB-CONTRACTBYOWNER:**

If any sub-contractor engaged upon the works at the site execute anyworkwhichintheopinionofEngineer-In-Chargeisnotaccordancewiththecontractdocuments,theownermaybywrittennoticeto theContractor request him to terminate such sub-contract and the Contractorupon the receipt of such notice shall terminate such sub-contracts and thelatter shall forthwith leave the works, failing which, the owner shall havetheright toremovesuchsub-contractorsfrom thesite.

No action taken by the owner under the above clause shall relieve theContractor of his liabilities under the contract or give rise to any right tocompensation, extensionoftimeor otherwise.

GC-30 **POWEROFENTRY:**

If the Contractor shall not commence the work in the manner previouslydescribed in the contract documents or if he shall at any time, in theopinion ofEngineer-In-Charge–

i) Failtocarryoutworksinconformitywiththecontractdocuments,or
ii) Failtocarryouttheworksinaccordancewiththetimeschedule,or
iii) Substantially suspend work or the works for a period of seven dayswithoutauthorityfromEngineer-In-Charge, or
iv) Failtocarryoutandexecutethework tothesatisfactionoftheEngineer-In-Charge,or
v) Fail to supply sufficient or suitable construction plant, temporary works,labour, materials orthings,or
vi) Commit breach of any other provisions of the contract on his part to beperformedorobserved orpersistsinanyoftheabovementioned breachesof the contract for seven days after notice in writing shall have been givento the Contractor by the Engineer-In-Charge requiring such breach to beremedied,or
vii) Abandonthework,or
viii) Duringthe continuance of the contractbecomesbankrupt, make anyarrangement or compromise with his creditors, or permit any execution tobe levied or go into liquidation whether compulsory or voluntary not beingmerelyavoluntaryliquidationforthepurposeofamalgamationorreconstructiontheninanysuchcase.

Theownershallhavethepowertoenteruponthe worksandtakepossession thereof and of the materials, temporary works, constructionalplant and stores therein and to revoke the Contractor's license to use thesameandtocompletetheworksbyhisagents,otherContractororworkmen, to relate the same upon any terms to such other person firm orCorporation as the owner in his absolute discretion may think proper toemploy, and for the purpose aforesaid to use or authorize the use of anymaterials,temporaryworks,constructionalplant,andstoresasaforesaid

withmakingpaymentsorallowancetotheContractorforthesaidmaterials other than such as may be certified in writing by the Engineer-In-Charge to be reasonable and without making any payment or allowanceto the Contractor for the use of said temporary works, constructional plantand stock or being liable for loss or damage thereto. If the owner shall bereason of his taking possession of the works or of the work being gotcompleted by other Contractor incurred excess expenditure be deductedfrom any money which may be due for the work done by the Contractorunder the contract and not paid for. Any deficiency shall forthwith bemade good and paid to the owner by the Contractor and the owner shallhavepowertosellinsuchmannerandforsuchpriceashemaythinkfitallorany oftheconstructionalplant,materialsetc.,consistconstructed byor belonging to and to recoup and retain the said deficiency or any partthereofoutoftheproceedsofthesale.

GC-31

CONTRACTOR'SRESPONSIBILITYWITHTHEOTHERCONTRACTORANDAGENCIES:

Withoutrepugnance toany other conditions, it shall be the responsibilityof the Contractor executing the work, to work in close co-operation andco-ordination with other Contractors or their authorized representativesand the Contractor will put a joint scheme with the concurrence of othercontractors or their authorized representatives showing the arrangementsfor carrying his portion of the work to the Engineer-In-Charge and get theapproval. The Engineer-In-Charge before approving the joint scheme willcall the parties concerned and modify the scheme if required. No claimwill be entertained on account of the above. The

Contractor shall conformin all respects with the provisions of any statutory regulations, ordinancesor bylaws of any local or duly constituted authoritiesor public bodieswhich may be applicable from time to time to works or any temporaryworks. The Contractor s shall keep the owner indemnified against allpenalties and liabilities of every kind arising out of non-adherence to suchstatutes,ordinance, laws,rules,regulationsetc.

GC-32 **OTHERAGENCIESATSITE:**

The Contractor shall have to execute the work in such place and conditionwhere other agencies will also be engaged for other works, such as sitegrading, filling and leveling, electrical and mechanical engineering worksetc. No claim shall be entertained for works being executed in the abovecircumstances.

GC-33 **NOTICES:**

Any noticeunderthiscontractmaybeservedontheContractororhisdulyauthorized representative at the job site or may be served by RegisteredPost direct to the official address of the Contractor.ProOF issue of anysuchnoticecouldbeconclusiveoftheContractorhavingbeendulyinformedof allcontentstherein.

GC-34 **RIGHTSOFVARIOUSINTERESTS:**

The owner reserves the right to distribute the work between more thanoneContractor.Contractorshallco-operateandaffordreasonableopportunity to other Contractor s for access to the works, for the carriageand storage of materials and execution of their works. Whenever the workbeing done by department of the owner or by other Contractor employedbytheowneriscontingentuponworkcoveredbythiscontract,therespectiverightsofthevariousinterestsshallbedeterminedbytheEngineer-In-Charge to secure the completion of various portions of theworkingeneralharmony.

GC-35 **PRICEADJUSTMENTS:**

No adjustment in price shall be allowed and no price escalation will beallowed.

GC-36 **TERMSOFPAYMENT:**

Thepaymentofbillsshallbemadeprogressivelyaccordingtotherulesand practices followedby theCorporation. The progressive paymentunlessotherwiseprovidedinthe contractagreementorsubsequentlyagreed to by the parties shall be made generally monthly on submission ofa bill by the Contractor in prescribed form of an amount according to thevalue of the work performed less the price of materials supplied by owneraggregate of previous progressive payments and as required by ClauseGC-37 (Retention of Money) herein. All such progressive payments shallberegardedaspaymentsbywayofadvanceagainstfinalpayment.Paymentfortheworkdonebythe Contractorwillbebasedonthemeasurementatvariousstagesofthework,inaccordancewiththeconditionatclauseGC-81(measurementofworkinprogress).

GC-37 **RETENTIONMONEY:**

Pursuance to clause GC-36 (Terms of Payment) any on at money due tothe Contractor for work done, Corporation will hold as Retention moneyfive (5) percentof the value of work.The retention moneywill notnormally be due for payment until the completion of the entire work andtill such period the work has been finally accepted by the Corporation anda completion certificate issued by the Corporation in pursuant to Clause-GC79(CompletionCertificate).

GC-38 **PAYMENTSDUEFROMTHECONTRACTOR:**

All costs, damages or expenses, for which under the contract, Contractoris liable to the Corporation, may be deducted by the Corporation from anymoney due or becoming due to the Contractor under the contract or fromany other contract with the Corporation or may be recovered by action atlaw or otherwisefromtheContractor.

GC-39 CONTINGENTFEE:

i) The Contractor warrants that he has not employed a person to solicit orsecure the contract upon any agreement for a commission, percentage,and brokerage contingent fee.Breach of thiswarranty shall give theCorporation the right to cancel the contract or to take any drastic measureastheCorporationmaydeemfit.Thewarrantydoesnotapplytocommissions payable by the Contractor to establish commercial or sellingagentforthepurposeofsecuringbusiness.

ii) No officer, employer or agent of the Corporation shall be admitted to anyshareorpartofthiscontractortoanybenefitthatmayrisetherefrom.

GC-40 BREACHOFCONTRACTBYCONTRACTOR:

If the Contractor fails to perform the work under the contract with duediligenceorshallrefuseor neglecttocomplywithinstructionsgiventohimin writing by the Engineer-In-Charge in accordance with the contract, orshall contravene the provisions of the contract, the Corporation may givenotice in writing to the Contractor to make good such failure, neglect, orcontravention.Should the Contractor fail to comply with such writtennoticewithin10(Ten)daysofreceipt,itshallbelawfulfortheCorporation, without prejudice to any other rights the Corporation mayhaveunderthecontract,toterminatethecontractforallorpartofthe

works, and make any other arrangements it shall deem necessary tocompletetheworkoutstandingunderthecontractatthetimeoftermination.Inthisevent,theperformanceBondshallimmediatelybecome due and payable to the Corporation.The value of the work doneon the date of termination and not paid for shall be kept as deposit foradjustment of excess expenditure incurred in getting the remaining workcompleted and the Corporation shall have free use of any works which theContractormayhaveatthesiteatthetimeofterminationofthecontract.

If Contractor fails to carry out the work in timely manner as mentioned inclause 20 (Liquidated damages), Rajkot Municipal Corporation may givenotice in writing to the Contractor to expedite the work, so that the workcan be completed as per time schedule. If Contractor fails to expedite thework within 10 days of receipt of notice, Rajkot Municipal Corporation mayterminate the contract and debar the Contractor for three years and theremaining work will be executed through other agency at the risk and costof theContractor.

GC-41 DEFAULTOFCONTRACTOR:

i) The Corporation may upon written notice of default to the Contractorterminatethecontractcircumstancesdetailedasunder:

a) IfintheopinionoftheCorporation,theContractorfailstomakecompletionofworkswithinthetimespecifiedinthecompletionscheduleorwithintheperiodforwhichextensionhasbeengrantedbytheCorporationtotheContractor.

b) IfintheopinionoftheCorporation,theContractorfailstocomplywithanyof theotherprovisionsofthiscontract.

ii) In the event, the Corporation terminatesthe contract in whole or in partas provided in Article GC-50 (Termination of the Contract) the Corporationreserves the right to purchase upon such terms and in such manner as itmaybedeemappropriate,plantsimilartoonewhichisnotsuppliedbytheContractor and the Contractor will be liable to the Corporation for anyadditional

costs for such similar plant and / or for liquidated damages fordelayuntilsuchtimeasmayberequiredforthefinalcompletionofworks.

iii) If this contract is terminated as provided in this paragraph GC-40 AND/ORGC-30 (Power of Entry) (1) the Corporation in addition to any other rightsprovided in this clause, may require the Contractor to transfer title anddelivertothe Corporation.

a) Anycompletedworks
b) Such partially completed information and contract rights as the Contractorhas specifically produced or acquired for the performance of the contractsoterminated.

iv) In the event, the Corporation does not terminate the contract as providedin the paragraph GC-50 (Termination of Contract) the Contractor shallcontinue performance of the contract, in which case, he shall be liable tothe Corporation forliquidateddamagesfor delayuntil the worksarecompletedandaccepted.

GC-42 **BANKRUPTCY:**

If the Contractor shall become bankrupt or insolvent or has a receivingordermadeagainsthim,orcompoundwithhiscreditors,orbeingthe

Corporation commence to be wound up not being a member voluntarywinding up for the purpose of amalgamation or reconstruction, or carry onitsbusinessunderareceiverforthebenefitofhiscreditorsoranyofthem,theCorporationshallbeat libertytoeither(a)terminatethecontract forthwith by giving notice in writing to the Contractor or to thereceiver or liquidator or to any person or Organization in whomthecontract may become vested and to act in the manner provided in ArticleGC-41 (Default of Contractor) as thought the last mentioned notice hadbeen the notice referred to in such article or (b) to give such receiver,liquidator or other persons in whom the contract may become vested theoption of carrying out the contract subject to his providing a satisfactoryguarantee for the due and faithful, performance of the contract up to anamount to be agreed. In the event that the Corporation terminates thecontractinaccordancewiththisarticle,theperformancebondshallimmediatelybecomedueandpayableondemandtoCorporation.

GC-43 **OWNERSHIP:**

Workshandover pursuant to the contract shall become the property oftheCorporationfromwhicheveristheearlierofthefollowingtimes,namely;

a) Whentheworksarecompletedpursuanttothecontract.
b) WhenthecontractorhasbeenpaidanysumtowhichhemaybecomeentitledinrespectthereofpursuanttoClauseGC-36(TermsofPayment).

GC-44 **DECLARATIONAGAINSTWAIVER:**

The condemnation by the Corporation of any breach or breaches by theContractor or an authorized sub-contractor of any of the stipulations andconditions contained in the contract, shall in no way prejudice or affect orbe construed as a waiver of the Corporation's rights, powers and remediesunderthecontract in respectofanybreachorbreaches.

GC-45 **LAWSGOVERNINGTHECONTRACT:**

This contract shall be construed according to and subject to the laws ofIndia and the State of Gujarat and under the jurisdiction of the Courts ofGujaratatRajkot.

GC-46 **OVERPAYMENTANDUNDERPAYMENT:**

Whenever any claim for the payment of a sum to the Corporation arisesout of or under this contract against the Contractor, the same may bededucted by the Corporation from any sum then due or which at any

timethereafter may become due to the Contractor under this contract andfailing that under any other contract with the Corporation (which may beavailable with the Corporation), or from his retention money or he shallpay the claim on demand. The Corporation reserves the right to carry outpost payment audit and technical examinations of the final bill including allsupporting vouchers, abstracts etc. The Corporation further reserves theright to enforce recovery of any payment when detected, not withstandingthe fact that the amount of the final bill may be included by one of theparties as an item of dispute before an Arbitrator, appointed under ArticleGC-49 (Arbitration) of this contract and notwithstanding the fact that theamount of the final bill figures in the arbitration award. If as a result ofsuch audit and technical examinations any over payment is discovered inrespect of any work done by the Contractor or alleged to have been doneby him under the contract, it shall be recovered by the Corporation fromthe Contractor as prescribed above. If any under payment is discoveredbytheCorporation, theamountduetotheContractorunderthiscontract,

may be adjusted against any amount then due or which may at any timethereafterbecomeduebeforepaymentismadetotheContractor.

GC-47 **SETTLEMENTOFDISPUTES:**

Exceptasotherwisespecificallyprovidedinthecontract,alldisputesconcerning questions of fact arising under the contract shall be decided bythe Engineer-In-Charge subject to a written appeal by the Contractor tothe Engineer-In-Charge and those decisions shall be final and binding onthe parties hereto. Any disputes or differences including those consideredas such by only one of the parties arising out of or in connection with thiscontract shall be to the extent possible settled amicably between theparties. If amicable settlement cannot be reached then all disputed issuesshall be settled as provided in Article GC-48 (Disputes or differences to bereferredto)and ArticleNo.GC-49 (Arbitration).

GC-48 **DISPUTESOFDIFFERENCESTOBEREFERREDTO:**

Ifatanytime,anyquestion,disputesordifferencesofanykindwhatsoever shall arise between the Engineer-In-Charge and the contractorupon or in relation to or in connection with this contract either party mayforthwith give to the other, notice in writing of the existence of suchquestion, dispute or difference as to any decision, opinion, instruction,direction,certificateorevaluationoftheEngineer-In-Charge.
Thequestion,disputeordifferencesshallbesettledbytheMunicipalCommissioner,RajkotMunicipalCorporation,whoshallstatehisdecisionin writing and give notice of same to the Engineer-In-Charge and to theContractor. Such decision shall be final and binding upon both parties.The contract and work on contract if not already breached or abandonedshall proceed normally unless and until the same shall be revised (oruphold)byanyarbitrationproceedingsashereinafterprovided.Suchdecisions shall be final and binding on the Engineer-In-Charge and theContractor unless the Contractor shall require the matter to be referred toan Arbitrationpanelashereinafterprovided.

GC-49 **ARBITRATION:**

In case of any dispute arising during the course of execution, the mattershould be referred to Municipal Commissioner who will be sole Arbitratorwhosedecisionswillbefinaland bindingtotheContractor.

The word "Arbitration" or "Arbitration Clause" wherever mentioned in thistender document, is to be treated to be referred to GC-49. In this context, anOrder bearing No.RMC/Legal/1858 dated 18-02-2017 of Legal Department ofRajkot Municipal Corporation is uploaded separately along with this tender,which Order, will hereafter referred and taken into consideration for Arbitrationrelated purpose.

GC-50 **TERMINATIONOFTHECONTRACT:**

i) IftheContractorfindsitimpracticabletocontinueoperationowingtoforcemajeur

ereasonsorforanyreasonsbeyondhiscontroland/ortheCorporationfinditimpossibletocontinueoperation,thenpromptnotificationinwritingshallbegivenbythepartyaffectedtotheother.

ii) If the delay or difficulties so caused cannot be expected to cease orbecome unavoidable or if operations cannot be resumed within two (2)months then either party shall have the right to terminate the contractupon ten (10) days written notice to the other. In the event of suchtermination of the contract, payment to the Contractor will be made asfollows:

a) The Contractor shall be paid for all works approved by the Engineer-In-Chargeandforany otherlegitimateexpensesduetohim.

b) If the Corporation terminates the contract owing to Force Majeure or dueto any cause beyond its control, the Contractor shall additionally be paidfor any work done during the said two (2) months period including anyfinancialcommitmentmadefortheproperperformanceofthecontractandwh icharenotreasonablydefrayedbypaymentsunder(a)above.

c) The Corporation shall also release all bonds and guarantees at its disposalexceptincaseswherethetotalamountofpaymentmadeto theContractorexceedsthefinalamountduetohiminwhichcasetheContractorsh allrefund theexcess amountwithinthirty(30)days afterthetermination and the Corporation thereafter shall release all bonds andguarantees. Should the Contractor fail to refund the amounts received inexcess within the said period such amounts shall be deducted from thebondsorguaranteesprovided.

iii) On termination of the contract for any cause the Contractor shall see theorderly suspension and termination of operations, with due considerationto the interests of the Corporation with respect to completion safeguardingof storing materials procured for the performance of the contract and thesalvageandresalethereof.

GC-51 **<u>SPECIALRISKS</u>:**

If during the contract, there shall be an outbreak of war (whether war isdeclared or not), major epidemic, earthquake or similar occurrence in anypart of the world beyond the control of either party to the contract whichfinanciallyorotherwisematteriallyaffectstheexecutionofthecontract,the Contractor shall unless and until, the contract is terminated under theprovisions of this article use his best endeavors to complete the executionof the contract, provided always that the Corporation shall be entitled atany item after the onset of such special risks, to terminate the contract bygiving written notice to the contractor and upon such notice being giventhis contract shall terminate but without prejudice to the rights of eitherpartyinrespectofanyantecedentbreachthereof.

The Contractor shall notbe liable for payment of compensation for delayor for failure to perform the contract for reasons of Force Majeure such asactsofpublicenemy,actsofGovernment,fires,floods,cyclones,epidemics, quarantine restrictions, lockouts, strikes, freight embargoesand provided that the Contractor shall within 10 (ten) days from thebeginning of such delay notify the Engineer-In-Charge in writing, of thecause of delay, the Corporation shall verify the facts and grant suchextensionasthefactsjustify.

GC-52 **<u>CHANGEINCONSTITUTION</u>:**

Where the Contractor is a partnership firm, the prior approval in writing ofthe owner shall be obtained before any change is made in the constitutionof the firm. Where the Contractor is an individual or undivided familybusiness concern such approval as aforesaid shall likewise be obtainedbefore the Contractor enters into any partnership agreement where underthe partnership firm would have the right to carry out the works herebyundertakenbytheContractor.Ifpriorapprovalasaforesaidisnotobtained ,thecontractshallbedeemedtohavebeenassignedincontraventionofcontract.

GC-53 **SUB-CONTRACTUALRELATIONS:**

All works performed for the contract by a sub-contractor shall be pursuanttoanappropriateagreementbetweentheContractorandthesub-contractor,whichshallcontainprovisionto–

a) Protect and preserve the rights of the Corporation and the Engineer-In-Chargewithrespecttotheworkstobeperformedunderthesub-contractingpartywillnotprejudicesuchrights.

b) Require that such work be performed in accordance with the requirementsof contractdocuments.

c) Requireundersuchcontracttowhichthecontractorisaparty,thesubmission to the Contractor of application for payment and claims foradditional costs, extension of time, damages for delay or otherwise withrespect to the sub-contracted portions of the work in sufficient time, thatthe Contractor may apply for payment comply in accordance with thecontractdocumentsforlikeclaimsbytheContractoruponthe Corporation.

d) Waive all rights the contracting parties may have against one another fordamages caused by fire or other perils covered by the property insuranceexcept such rights as they may have to the proceeds of such insuranceheldbytheCorporationastrusteeand,

e) Obligate each sub-contractor specifically to consent to the provisions ofthisArticle.

GC-54 **PATENTSANDROYALTIES:**

1. Contractor, if licensed under any patent covering equipment, machinery,materials or composition of matter to be used or supplied or methods andprocess to be practiced or employed in the performance of this contractagrees to pay all royalties and license fees, which may be due with respectthereto. If any equipment, machinery, materials, composition matters, tobe used or supplied or methods practiced or employed in the performanceof this contract, is covered by a patent under which Contractor is notlicensed, then the Contractor before supplying / using the equipment,machinery, materials, compositions, methods of process shall obtain suchlicense and pay such royalties and license fees as may be necessary forperformance of this contract. In the event Contractor fails to pay suchroyalty or to obtain any such license, any suit for infringement of suchpatents which is brought against the Contractor or the owner as a result ofsuch failure will be defended by the Contractor at his own expenses andthe Contractor will pay any damages and costs awarded in such suit. TheContractor shall promptly notify the owner if the Contractor has acquiredknowledge of any plant under which a suit for infringement could bereasonably brought because of the use by the owner of any equipmentmachinery,materials,processmethodstobesuppliedinhereunder.Contractor agrees to and does hereby grant to owner together with theright to extend the same to any of the subsidiaries of the owner anirrevocable royalty fee license to use in any Country, any invention madeby the Contractor or his employees in or as a result of the performance ofworkundercontract.

2. With respect to any sub-contract entered into by Contractor pursuant tothe provisions of the relevant clause hereof, the Contractor shall obtainfrom the sub-contractor an understanding to provide the owner with thesame patent protection that contracts is required to provide under theprovisions oftheclause.

3. The Contractor shall indemnify and save harmless the owner from any losson account of claims against owner for the contributory infringement ofpatent rights arising out of and based upon the claim that the use by theCorporationoftheprocessincludedinthedesignpreparedbytheContractor and used in the operation of the plant infringes on any patentrights.

GC-55 **LIEN:**

If, at any time, there should be evidence of any lien or claim for whichownermighthavebecomeliableandwhichischargeableto theContractor, the owner shall have the right to retain out of any paymentthen due or thereafter to become due an amount sufficient to completelyindemnify the owner against such lien or claim or if such lien or claim bevalid the owner may pay and discharge the same and deduct the amountas paid from any money which may be due or become due and payable totheContractor.Ifanylienorclaimsremainingunsettledafter allpayments are made, the Contractor shall refund or pay to the owner allmoney that the latter may be compelled to pay in discharging such lien orclaim includingallcostsandreasonable expenses.

GC-56 **EXECUTIONOFWORK:**

The whole work shall be carried out in strict conformity with the provisionsofthecontractdocument,detaileddrawings,specificationsandtheins tructions of the Engineer-In-Charge from time to time. The Contractorshall ensure that the whole work is executed in the most substantial, andproper manner with best workmanship using materials of best quality instrict accordance with the specifications to the entire satisfaction of theEngineer-In-Charge.

GC-57 **WORKINMONSOON:**

When the work continues in monsoon if required, the Contractor shallmaintainminimumlabourforcerequiredfortheworkandplan andexecute the construction and erection work according to the prescribedschedule. No extra rate will be considered for such work in monsoon.During monsoon and entire construction period, the Contractor shall keepthe site free from water at his own cost. ~~However, monsoon period from1stJulyto30thSeptemberwillbeexcludedintime limit~~.

GC-58 **WORKONSUNDAYSANDHOLIDAYS:**

Noworkexceptcuringshall be carried outonSunday andholidays.However, if the exigencies of the work need continuation of work onSundays and Holidays, written permission of the Engineer-In-Charge shallbeobtainedinadvance.

GC-59 **GENERALCONDITIONSFORCONSTRUCTIONWORK:**

Working hours shall be eight every day. The over time work in two shiftscould be carried out with the written permission of the Engineer-In-Chargebut no compensation shall be paid for the same. The rate quoted shallinclude this. The Contractor shall plan his work in such a way that hislabourers do not remain idle. The owner will not be responsible for idlelabouroftheContractor.TheContractorshallsubmittotheownerprogress report every week. The details and proforma of the report will beaspermutualagreement.

GC-60 **DRAWINGSTOBESUPPLIEDBYTHEOWNER:(N.A.)**

The drawings attached with the e-Tender documents shall be for generalguidanceoftheContractortoenablehimtovisualizethetypeofwork

contemplatedandscopeofworkinvolved.Detailworkingdrawingsaccording to which the work is to be done shall be prepared by theContractor forexecutingthework.

GC-61 **DRAWINGSTOBESUPPLIEDBYTHECONTRACTOR:**

Where drawings, data are to be furnished by the Contractor they shall beas enumerated in special conditions of contract and shall be furnishedwithin the specified time. Where approval of drawings has been specifiedit shall be Contractor's responsibility to have these drawings got approvedbeforeanyworkistakenup with regardto thesame.Anychangesbecoming necessary in those drawings during the execution of the workshall have to be carried out by the Contractor at no extra cost. All finaldrawings shall bear the certification stamp as indicated below duly signedbyboththeContractorandEngineer-In-Charge.

Certified true for…… Project Agreement No……..

Signed…….

Contractor **Engineer-In-Charge**

Drawingswillbeapprovedwithinthree(3weeksofthereceiptofthesamebytheEngineer-In-Charge.

GC-62 **SETTINGOUTWORK:**

The Contractor shall set out the work on the site handed over by theEngineer-In-Charge and shall be responsible for the correctness of thesame. The work shall be carried out to the entire satisfaction of Engineer-In-Charge. The approval thereof or partaking by Engineer-In-Charge orsetting out work shall not relieve Contractor of any of his responsibilities.The Contractor shall provide at his own cost all necessary level posts,pegs,bamboos,flags,rangingrods,stringsandothermaterialsandlabourers required for proper setting out of the work. The Contractor shallprovidefixandberesponsibleforthemaintenanceofall stakes,templates,levelmarkets,profilesandsimilarotherthingsandshalltakeall necessary precautions to prevent their removal or disturbance and shallbe responsible for the consequences for such removal or disturbance. TheContractor shall also be responsible for the maintenance of all existingsurvey marks, boundary marks, and distance marks and centerline markseither existing or face lines and cross lines shall be marked by smallmasonry pillars. Each pillar shall have distance mark at the center forsetting up the theodolite. The work shall not be started unless the settingout is choked and approved by Engineer-In-Charge in writing but suchapproval shall not relieve the Contractor of his responsibilities about thecorrectness of setting out. The Contractor shall provide allmaterials,labour and other facilities necessary for checking at his own cost. Pillarsbearing geodetic marks on site shall be protected by the Contractor.

Oncompletionofthework,theContractorshallsubmitthegeodeticdocumentsaccordingtowhichtheworkhas beencarriedout.

GC-63

RESPONSIBILITIESOFCONTRACTORFORCORRECTNESSOFTHEWORK:

TheContractorshallbeentirelyandexclusivelyresponsibleforthecorrectness of every part of the work and shall rectify completely anyerrorsthereinathisowncostwhensoinstructedbyEngineer-In-Charge.Ifanyerrorhascreptintheworkduetonon-observanceofthisclause,

the Contractor will be responsible for the error and bear the costofcorrectivework.

1. **MaterialstobesuppliedbytheContractor:**
Contractor shall procure and provide all the material required for theexecution and maintenance of work including M S rods; all tools, tackles,construction plant and equipment except, the materials to be supplied bytheownerdetailedinthecontractdocuments.Owner,shallmakerecommendations forprocurementofmaterialstotherespectiveauthorities if desired by the Contractor but assumes no responsibility ofany nature. Owner shall insist for procurement of materials with ISImarks suppliedby reputedfirmsoftheDGS&Dlist.

2. If however, the Engineer-In-Charge feels that the work is likely to bedelayed due to Contractor's inability to procure materials, the Engineer-In-Charge shall have the right to procure materials, from the market and theContractor will accept these materials at the rates decided by Engineer-In-Charge.

GC-64 **MATERIALSTOBESUPPLIEDBYTHEOWNER:**

1. If the contract provided certain materials or stores to be supplied by theowner, such materials and stores transported by the Contractor at his costfrom owner's stores or Railway Station. The cost from Contractor for thevalue of materials supplied by the owner will be recovered from theR.A.Bill on the basisof actual consumptionof materials in theworkcovered and for which R A Bill has been prepared. After completion of thework, the Contractor has to account for the full quantity of materialssuppliedtohim.

2. The value of store materials supplied by owner to the Contractor shall becharged at rates shown in the contract document and in case any othermaterial not listed in the schedule of materials is supplied by the owner,thesameshallbechargedatcostpriceincludingcartingandotherexpenses incurred in procuring the same. All materials so supplied shallremain the property of the owner and shall not be removed from the siteon any account. Any material remaining unused at the time of completionof work or termination of contracts shall be returned to owner's store orany other place as directed by the Engineer-In-Charge in perfectly goodcondition at Contractor's cost. When materials are supplied free of cost foruse in work and surplus and unaccounted balance thereof are not returnedtotheowner,recoveryinrespectofsuchbalancewillbeeffectedatdouble the applicable issue rate of the material or the market rates whichever ishigher.

GC-65 **CONDITIONSOFISSUEOFMATERIALSBYTHEOWNER:(N.A.)**
The materials specified to be issued by the owner to the Contractor shallbeissued bytheownerathisstoreandallexpensesforitcartingsite shallbe borne by the Contractor will be issued during working hours and as perrulesofownerfromtimetotime.

Contractor shall bear all expenses for storage and safe custody at site ofmaterialsissuedtohimbeforeuseinwork.

Material shall be issued by the owner in standard / non-standard sizes asobtainedfrommanufacturer.

Contractorshallconstructsuitablegodownsatsiteforstoring thematerials to protect the same from damage due to rain, dampness, fire,theftetc.

The Contractor should take the delivery of the materials issued by theowner after satisfying himself that they are in good condition. Once thematerials are issued, it will be the responsibility of the Contractor to keepthem in good condition and in safe custody. If the materials get damagedor if they are stolen, it shall be the responsibility of the Contractor toreplace them at his cost according to the instructions of the Engineer-In-Charge.

For delay in supply or for non-supply of materials to be supplied by theowner, on account of natural calamities, act of enemies, other difficultiesbeyond the control of the owner, the owner carries no responsibilities. Inno case the Contractor shall be entitled to claim any compensation for losssufferedbyhim onthis account.

None of the materials issued to the contractor, shall be used by theContractorformanufacturingitemswhichcanbeobtainedfromthemanufacturer's. The materials issued by the owner shall be used for theworkonlyandnootherpurpose.

Contractor shall be required to execute indemnity bond in the prescribedformforthesafecustodyandaccountofmaterialsissuedbytheowner.

Contractorshallfurnishsufficientlyinadvanceastatementofhisrequirements of quantities of materials to be supplied by the owner andthe time when the same will be required for the work, so as to enableEngineer-In-Chargeto make arrangements to procure and supply thematerials.

A daily account of materials issued by the owner shall be maintained bythe contractor showing receipt, consumption and balance on hand in theform laid down by Engineer-In-Charge with all connected paper and shallbealwaysavailableforinspection inthesiteoffice.

Contractor shall see that only the required quantities of materials are gotissued and no more. The Contractor shall be responsible to return thesurplusmaterialsatowner'sstoreathisowncost.

GC-66 **MATERIALSPROCUREDWITHASSISTANCEOFTHEOWNER:**

Notwithstandinganything contained to the contrary in any of the clausesof this contract, where any materials for the execution of the contract areprocured with the assistance of the owner either by issue from owner'sstockorpurchasemadeunderordersorpermitsorlicensesissuedmaterials as trustees for owner, and use such materials not disposed themoff without the permission of owner and unserviceable materials that maybe left with him after completion of the contract or at its termination foranyreasonwhatsoeveronhisbeingpaidorcreditedsuchpriceasEngineer-In-Charge shall determine having due regard to the conditions ofthe materials.ThepriceallowedtoContractorshallnotexceed theamount charged to him excluding the storage of breach of the aforesaidcondition, the Contractor shall in terms of license or permits and/or forcriminal breach of trust be liable to compensate owner at double the rateor any higher rates. In the event of these materials at that time havinghigherrateornotbeingavailableinthemarketthenanyotherratetobe

determined by the Engineer-In-Charge at his decision shall be final andconclusive.

GC-67 **MATERIALSOBTAINEDFROMDISMANTLING:**

If the Contractor, in the course of execution of work, is called upon todismantle any part of work for reasons other than on account of bad orimperfectwork,thematerialsobtainedfromdismantlingwillbepropertyof the owner and will be disposed off as per instructions of Engineer-In-Chargeinthebest interestoftheowner.

GC-68 **ARTICLE OF VALUE OF TREASURE FOUND DURING CONS-TRUCTION:**

All gold, silver and other minerals of any description and all preciousstones, coins, treasures, relics, antiques and other similar things whichshall be found in, under or upon site shall be the property of the ownerand the Contractor shall properly preserve the same to the satisfaction oftheEngineer-In-Chargeandshallhandoverthesametotheowner.

GC-69 **DISCREPANCIESBETWEENINSTRUCTIONS:**

If there is any discrepancy between various stipulations of the contractdocumentsorinstructionstotheContractororhisauthorizedrepresentative or if any doubt arises as to the meaning of such stipulationor instructions, the Contractor shall immediately refer in writing to theEngineer-In-Chargeandshallhandoverthe sametotheowner.

GC-70 **ALTERATIONSINSPECIFICATIONS&DESIGNS&EXTRAWORK:**

TheArchitect/Engineer-In-Chargeshallhavepowertomakeanyalterations in, omission from, addition to substitution for, the schedule ofrates, the original specifications, drawings, designs and instructions thatmay appear to him to be necessary or advisable during the progress ofwork and the Contractor shall be bound to carry out such altered / extra /new items of work in accordance with any instructions which may be giventohiminwritingsignedbyEngineer-In-Chargeandsuchalterationomissions, additions or substitutions, shall not invalidate contract and anyaltered,additionalorsubstitutedworkshallbecarriedoutbytheContractor on the same conditions of contract. The time of completionmay be extended by Architect as may be consideredjust and reasonableby him. The rates for such additional, altered or substitute work shall beworkedoutasunder:

a) If the rates for additional, altered or substitutes work are specified in thecontract for work, the Contractor is bound to carry out such work at thesameratesas specifiedinthecontract.

b) If the rates for additional, altered or substituted work are not specificallyprovided in the contract for the work, the rates will be derived from theratesofsimilaritemsofworkinthecontractwork.TheopinionofEngineer-In-Charge as to whether the rates can be reasonably so derivedtheitems ofcontractwillbefinalandbindingtotheContractors.

c) If the rates of altered, additional or substitute work cannot bedetermined as specified in (a) or (b) above, the rate shall be paidasperS.O.R.ofRMCandifnotavailableinRMCSORthanitwillbepaidaccordingtoSOR ofR&B/GWSSB.

d) If the rates of altered, additional or substitute work cannot be determinedasspecifiedin(a)or(b)or(c)above,theContractorshallwithinseven

days of the receipt of order to carry out the work inform the Architect /Engineer-In-Charge of the rate which he intends to charge for such worksupported by rate analysis and the Architect / Engineer-In-Charge willdetermine the rate on the basis of prevailing market rates of materials,labour costat schedule oflabour plus15%thereonas Contractor'ssupervision overheads and profit. The opinion of Architect / Engineer-In-Charge as to the market rates of materials and the quantity of labourinvolvedperunitofmeasurementwillbefinalandbindingonContractor.

But under no circumstances, the Contractor suspends work or the plea ofnonsettlementof itemsfallingunderthisclause.

GC-71 **ACTIONWHENNOSPECIFICAITONSAREISSUED:**
In case of any class of work for which no specifications is supplied by theowner in the e-Tender documents, such work shall be carried out inaccordance with relevant latest ISS and if ISS do not cover the same, theworkshall be carriedoutasperGeneralTechnicalSpecification forbuildingwork;andifnotcoveredinthenitistobewithstandardEngineeringPractices ubjecttotheapprovalofEngineer-In-Charge.

GC-72 **ABNORMALRATES:**
Contractor is expected to quote rate for each item after careful analysis ofcost involved for the performance of the completed item considering allspecifications andconditions ofcontract.

GC-73 **ASSISTANCETOENGINEER-IN-CHARGE:**
Contractor shall make available to Engineer-In-Charge free of cost allnecessaryinstrumentsandassistanceincheckingofanyworkmadebytheContractorsettingoutfortakingmeasurement ofworketc.

GC-74 **TESTSFORQUALITYOFWORK:**

1. Allworkmanshipshallbeofthebestkinddescribedinthecontractdocuments and in accordance with the instructions of Engineer-In-Chargeand shall be subjected from time to time to such tests at Contractor's costas the Engineer-In-Charge may direct at the place of manufacture offabrication or on the site or at any such place. Contractor shall provideassistance, instruments, labour and materials as are normally required forexamining, measuring and testing of any work of workmanship as may beselectedandrequiredbyEngineer-In-Charge.

2. All tests necessary in connection with the execution of work as decided byEngineer-In-Charge shall be carriedoutatan approved laboratory atContractor'scost.

3. ContractorshallfurnishtheEngineer-In-Chargeforapprovalwhenrequested or if required by the specification, adequate samples of allmaterials and finished goods to be used in work sufficiently in advance topermit tests and examination thereof. All materials furnished and finishedgoodsappliedinworkshallbeexactlyaspertheapprovedsamples.

GC-75 **ACTIONANDCOMPENSATIONINCASEOFBADWORKMANSHIP:**
If it shall appear to the Engineer-In-Charge that any workhas beenexecutedwith materials of inferior description, or quality or are unsoundor with unsound, imperfect or unskilled workmanship or otherwise not inaccordancewiththecontract,theContractorshall,ondemandinwriting

from Engineer-In-Charge or his authorized representative specifying thework, materials or articles complained of, notwithstanding that the samemay have been inadvertently passed, certified and paid for, forthwithrectify or remove and reconstruct the work, so specified. In the event offailure to do so within a period to be specified by the Engineer-In-Chargein his aforesaid demand, Contractor shall be liable to pay compensation atthe rate of half a percent of the estimated cost of work for every worklimited to a maximum of ten (10%) percent of the value of work while hisfailuretodosocontinuesandinthecaseofanysuchfailure,theEngineer-In-Charge may on expiry of the notice period rectify and removeand re-execute the work or remove and replace with others at the risk andcost of the Contractor. The decision of the Engineer-In-Charge as to anyquestionarisingunderthisclauseshallbefinalandconclusive.

GC-76 **SUSPENSIONWORK:**

Contractorshall,iforderedinwritingbyEngineer-In-Chargeorhisrepresentative temporarily suspended the work or any part thereof forsuch time (notexceedingone month) as ordered and shall not afterreceiving such written notice proceed with the work until he shall havereceived a written order to proceed therewith. The Contractor shall not beentitledtoclaimcompensationforanylossordamagesustainedbyhimbyreason of temporary suspension of work as aforesaid. An extension oftimeforcompletionofworkwillbegrantedtotheContractorcorresponding to the delay caused by such suspension of workif heapplies for the same provided the suspension was not consequent uponanydefaultorfailureon thepartofthe Contractor.

GC-77 **OWNERMAYDOPARTOFTHEWORK:**

WhentheContractorfailstocomplywithanyinstructionsgiveninaccordance with the provisions of this contract, the owner has the right tocarry out such parts of work as the owner may designate whether bypurchasing materials and engaging labour or by the agency of anotherContractor. In such case the owner shall deduct from the amount whichotherwise might become due to Contractor, the cost of such work andmaterials with then (10) percent added to cover all departmental chargesand should the total amount thereof exceed the amount due to contract,Contractorshallpaythedifferencetoowner.

GC-78 **POSSESSIONPRIORTOCOMPLETION:**

The Engineer-In-Charge shall havetherightto take possession of or touseanycompletedorpartlycompletedworkorpartofwork.Suchpossession or use shall not be deemed to be an acceptance of any workcompleted in accordance with the contact. If such prior possession or useby Engineer-In-Charge delays the process of work, equitable adjustmentinthetimeofcompletionwillbemadeandthecontractshallbedeemed tobemodified accordingly.

GC-79 **COMPLETIONCERTIFICATE:**

As soon as the work has been completed in accordance with contact(except in minor respects that do not effect their use for the purpose forwhich theyare intended andexceptfor maintenance thereof) asperGeneralConditionsofContracttheEngineer-In-Chargeshallissueacertificate (hereinafter called completion certificate) in which shall certifythe date on which work has been completed and has passed the said testsandownershallbedeemedtohavetakenoverworkonthedateso

certified. If work has been divided in various groups in contract, ownershall be entitled to take over any group or groups before the other orothers and there upon the Engineer-In-Charge will issue a completioncertificate,whichwill,however,beforsuchgrouporgroupssotakenover.

In order that Contractor could get a completion certificate, he shall makegood will all speed any defect arising from the defective materials suppliedby Contractor of workmanship or any act or omission of Contractor thatmay have been discovered or developed after the work or groups of workshas been taken over. The period allowed for carrying out such work willbe normally, one month. If any defect be not remedied within the timespecified,ownermay proceedtodoworkatContractor's(Agency,orFirm)risk and expenses and deduct from the final bill such amount as may bedecidedbyowner.Ifbyreasonofanydefaultonthepartofthe Contractor,acompletioncertificatehasnotbeenissuedinrespectofeveryportion of work within one month after the date fixed by contract forcompletion of work, owner shall be at liberty to use work or any portionthereofin respectofwhichacompletioncertificatehasbeenissued,provided that work or the portion thereof so used as aforesaid shall beafforded reasonable opportunity for completion of that work or the portionthereof so used as aforesaid shall be afforded reasonable opportunity forcompletionofthatworkfortheissueofcompletioncertificate.

GC-80 **SCHEDULEOFRATES:**

1. The rates quoted by the Contractor shall remain firm till the completion ofthe work and shall not be subject to escalation. Schedule of rates shall bedeemed to include and cover all costs, expenses and liabilities of everydescription and risks or every kind to be taken in executing, completingand handing over the work to owner by Contractor. The contractor shallbe deemed to have known the nature, scope, magnitude and the extent ofwork and materials required though contract documents may not fully andprecisely furnish them. He shall make such provision in the Schedule ofRates as he may consider necessary to cover the cost of such items ofwork and materials as may be reasonable and necessary to complete thework. The opinion of Engineer-In-Charge as to the item of work which arenecessary and reasonable for completion of the work shall be final andbinding on Contractor although the same may be not shown on drawingsordescribedspecificallyincontractdocuments.

2. The Schedule of Rates shall be deemed to include and cover the cost of allconstructionalplant,temporarywork,materials,labourandallothermattersin connectionwitheachiteminScheduleofRatesandtheexecution ofworkoranyportionthereoffinishedcompletein everyrespect and maintained as shown or described in the contract document orasmaybeorderedinwritingduringthecontinuanceofthecontract.

3. The Schedule of Rates shall be deemed to include and cover the cost of allroyalties and fees for the articles and processes, protected byletterspatent or otherwise incorporated in or used in connection with work, alsoallroyalties,rentsandotherpaymentsinconnectionwithobtainingmaterial of whatsoever kind for work and shall include an indemnity toownerwhichContractorherebygivesagainstallaction,proceedings,claims, damages, costs and expenses arising from the incorporation in oruse on the works of any such articles, processes or materials. OtherMunicipalorlocalBoardchargesifleviedonmaterial,equipmentormachineries to be brought to site for use on work shall be borne by theContractor.

4. Noexemptionorreductionofcustomduties,exciseduties,salestaxorany other taxes or charges of the Central or State Government or of anyLocal Body whatsoever will be granted or obtained and all such expensesshall be deemed to have been included in and covered by Schedule ofRates.Contractorshallalsoobtainandpayforallpermitsorotherprivileges necessary tocompletethework.

5. The Schedule of Rates shall be deemed to include and cover risk onaccount of delay and interference with Contractor's conduct of work whichmay occur from any cause including orders of owner in the exercise of hispowersandonaccountofextensionoftimegrantedduetovariousreasons.

6. Forworkunderunitratebasis,noalterationwill beallowedintheSchedule of Rates by reasons of work or any part of them being modified,altered,extended,diminishedor omitted.

GC-81 **PROCEDUREFORMEASUREMENTOFWORKINPROGRESS:**

1. All measurements shall be in metric system.All the work in progress willbe jointlymeasuredbytherepresentative ofEngineer-In-ChargeandContractor's authorized agent. Such measurements will be got recorded intheMeasurementBookbytheEngineer-In-Chargeorhisauthorizedrepresentative and signed by the Contractor or his authorized agent intoken of acceptance. If the Contractor or his authorized agent fails to bepresentwheneverrequiredbytheEngineer-In-Chargefortakingmeasuresfor every reasons whatsoever, the measurement will be taken by theEngineer-In-Charge or his authorized representative not withstanding theabsence of Contractor and these measurements will be deemed to becorrectandbinding onthe Contractor.

2. Contractor will submit a bill in approved proforma in quadruplicate to theEngineer-In-Chargeoftheworkgivingabstractanddetailedmeasurements of various items executed during a month as mutuallyagreed.The Engineer-In-Charge shall verify the bill and the claim, as faras admissible, adjusted if possible, within 10 days of presentation of thebills.

GC-82 **RUNNINGACCOUNTPAYMENTSTOBEREGARDEDASADVANCES:**

1. All running account payments shall be regarded as payments by way ofadvance against the final payment only and not as payment for workactually done and completed and shall not preclude the requiring of bad,unsound and imperfect or unskilled work to be removed and taken awayand reconstructed or rejected or to be considered as an admission of thedueperformanceofcontractoranyparttthereof.

2. Five (5) percent of the gross R A Bill amount shall be retained from eachbillasretentionamountandthesamewillbepaidwiththefinalbill.

GC-83 **NOTICEFORCLAIMFORADDITIONALPAYMENT:**

IftheContractorconsidersthatheisentitledtoextrapaymentorcompensationor anyclaimwhatsoeverinrespectofwork,heshallforthwith give notice in writing to the Engineer-In-Charge about his extrapaymentand/orcompensation.SuchnoticeshallbegiventotheEngineer-In-Charge within ten (10) days from the happening of any eventuponwhichContractorbasissuch claimsandsuchnoticeshallcontainfull

particularsofthenatureofsuchclaimwithfull detailsand amountclaimed. Failure on the part of the Contractor to put forward any claimwith the necessary particulars as above, within the time above specifiedshall be an absolute waiver thereof. No omission by owner to reject anysuch claim and no delay in dealing therewith shall waiver by owner or anyrightsin respectthereof.

GC-84 **PAYMENTOFCONTRACTOR'SBILL:**

1. The price to be paid by the owner to Contractor for the work to be doneandfortheperformanceofalltheobligationsundertakenby theContractorundercontractshallbebasedonthecontractpriceandpayment tobe madeaccordinglyfor the workactuallyexecutedandapprovedbytheEngineer-In-Charge.

2. No payment shall be made for work costing less than Rs.2,00,000/- till thework is completed and a certificate of completion for Construction is given.But in case of work estimated to cost more than Rs.2,00,000/-, Contractoronsubmittingthebillthereofwillbeentitledtoreceiveamonthlypaym entproportionate to the part thereof, approved and passed by Engineer-In-Charge, whose certificate of such approval and passing of the sum sopayable shall be final and conclusive against contractor. This paymentshall be made after necessary deductions as stipulated elsewhere in thecontract documents for materials, security deposit etc. The payment shallbereleasedtotheContractorwithintwo(2)monthofsubmissionofthebilldul ypre-occupiedonproperrevenuestamp.PaymentduetoContractor shall be made by the owner by ECS/RTGS mode in Indiancurrency. Successful bidder must furnish his Bank details for RTGS/ECSwithAccountBranchof RMC.

GC-85 **FINALBILL:**

The final bill shall be submitted by Contractor within one (1) month of thedate of physical completion of work, otherwise the Engineer-In-Charge'scertificate of the measurement and of total amount payable for work shallbefinalandbindingon allparties.

GC-86 **RECEIPTFORPAYMENT:**

Receipt for payment made on account of work when executed by a firmmust be signed by a person holding Power of Attorney in this respect onbehalf of Contractor except when described in the e-Tender as a limitedcompany in which case the receipt must be signed in the name of theCompanybyoneofitsprincipalofficersorbysomepersonhavingauthoritytogi veeffectualreceiptfortheCompany.

GC-87 **COMPLETIONCERTIFICATE:**

1. When the Contractor fulfils his obligation as per terms of contract, he shallbe eligible to apply for Completion Certificate. Contractor may apply forseparate Completion Certificate in respect of each such portion of work bysubmittingthecompletiondocumentsalongwithsuchapplicationforCompleti onCertificate.

   The Engineer-In-Charge shall normally issue to Contractor the CompletionCertificatewithinone(1)monthafterreceivinganapplicationthereof fromContractor after verifying, from the completion documents and satisfyinghimself that work has been completed in accordance with and as set out intheconstructionanderectiondrawingsandthecontractdocuments.Contracto r after obtaining the Completion Certificate is eligible to presentthefinalbillforworkexecutedbyhimunderthetermsofcontract.

2. Within one month of completion of work in all respects Contractor shall befurnished with a certificate by the Engineer-In-Charge of such completionbut no certificate shall be given nor shall work be deemed to have beenexecuted until all (i) scaffolding, surplus materials and rubbish is cleanedoffsitecompletely,(ii)untilworkshallhavebeenmeasuredbytheEngineer-In-Charge whose measurement shall be binding and conclusiveand, (iii) until all the temporary works, labour and staff colonies etc.constructed are removed and the work site cleaned to the satisfaction oftheEngineer-In-Charge.IfContractorshallfailtocomplywiththerequirements as aforesaid or before date fixed for the completion of work,the Engineer-In-Charge may at the expense of Contractor remove suchscaffolding, surplus materials and rubbish and dispose off the same as hethinksfit.

3. Thefollowingdocumentswillformthecompletiondocuments:-

a) Technicaldocumentsaccordingtowhichtheworkhasbeencarriedout.

b) Three sets of construction drawings showing therein the modifications andcorrections made during the course of execution signed by the Engineer-In-Charge.

c) CompletionCertificatefor"Embedded"or"Covered"upwork.

d) Certificateoffinallevels assetoutforvariousworks.

e) Certificateoftestperformedforvariouswork.

f) Material appropriationstatement for the materials issued by owner forworkandlistofsurplusmaterialsreturnedto owner'sstoredulysupportedbynecessarydocuments.(N.A.)

4. Upon expiry of the period of defect liability and subject to Engineer-In-Charge being satisfied that work has been duly maintained by ContractorduringthedefectliabilityperiodoffixedoriginallyorasextendedsubsequentlyandthatContractorhasinallrespectsmadeupanysubsidence and performed all his obligations under contract, the Engineer-In-Charge (without prejudice to the rights of owner in any way) give finalcertificate to that effect. The Contractor shall not be considered to havefulfilled the whole of his obligation until final certificate shall have beengivenbytheEngineer-In-Charge.

5. FinalCertificateonlyevidenceofcompletion:
Exceptthe final certificate,no othercertificate of payment againstacertificate or on general account shall be taken to be an admission byowner of the due performance of contract or any part thereOF occupancyorvalidityoranyclaimby theContractor.

GC-88 <u>TAXES,DUTIES,ETC.</u>:

1. Contractor agrees to and does hereby accept full and exclusive liability forthe payment of any and all taxes including Sales Tax, Duties, etc., now orhereinafter imposed, increased or modified from time to time in respect ofwork and materials and all contributions and taxes for unemployment,compensation,insuranceandoldagepensionorannuitiesnowo rhereinafterimposedbytheCentralorStateGovernmentauthoritieswith

respecttoorcoveredbythewages,salariesorothercompensationpaidtothepersons employed byContractor.
If the Contractor is not liable to Sales Tax assessment, a certificate to thateffect from the Competent Authority shall be produced without which finalpayment to the Contractor shall not be made No.P, 'C' and 'D' Form shallbe supplied by the owner, and the Contractor shall be required to pay fulltaxas applicable.

2. Contractor shall be responsible for compliance with all obligations andrestrictionsimposedbythelabourlaworanyotherlawaffectingemployer-employeerelationship.

3. Contractor further agrees to comply and to secure the compliance of allsubcontractorswithapplicableCentral,State,Municipalandlocallawsandregulationsandrequirement.Contractoralsoagreestodefend,indemnify the hold harmless the owner from any liability or penalty whichmay be imposed by Central, State or local authority by reasons of anyviolation by Contractor or sub Contractor of such laws, regulations orrequirements and also from all claims, suits or proceedings that may bebrought against owner arising under, growing out of or by reasons or workprovided for by thisContract by third parties or by Central orStateGovernmentauthorityoranyadministrativeSub-Divisionthereof.

TheSalesTaxonworkcontractwillbebornebyContractor.

GC-89 **<u>INSURANCE</u>:**
Contractor shall at his own expenses carry and maintain the reputableInsuranceCompaniestothesatisfactionof ownerasfollows:

1. Contractor agrees to and uses hereby accept full and exclusive liability forcompliance with all obligations imposed by the Employer's State InsuranceAct, 1948 and Contractor further agrees to defend, indemnify and holdowner hardness from any liability or penalty which may be imposed by theCentral or State Government or local authority by reasons of any assortedviolationbyContractororSub-ContractorortheEmployeesStateInsurance Act, 1948 and also from all claims, suits or proceedings thatmay be brought against owner arising under, growing out of or by reasonsof the work provided for by this contract whether brought by employees ofContractor by third parties or by Central or State Government authority oranyadministrative Sub-divisionthereof.

ContractoragreestofillinwiththeEmployeesStateInsuranceCorporation, the declaration form and all forms which may be required inrespect of Contractor's or sub-Contractor's employees whose aggregateremuneration is Rs.400/- p.m. or less and who are employed in workprovidedfororthosecoveredbyESIfromtimetotimeundertheagreement.
The Contractor shall deduct and secure the agreement of thesub-Contractortodeducttheemployeescontributionasperthefirstschedule of the Employees State Insurance Act from wages. Contractorshall remit and secure the agreement of sub-contractor to remit to theState Bank of Indian Employees State Insurance Accounts, the employee'scontribution as required by the Act. Contractor agrees to maintain allcards and records as required under the Act in respect of employees andpaymentsandContractorshallsecuretheagreementsofthesubcontractors to maintain in such records, any expenses incurred for thecontributions,makingcontributionsormaintainingrecordsshallbeto

Contractors or sub-contractors own account. owner shall retain such sumas may be necessary from the contract value until Contractor shall furnishsatisfactory proof that all contribution as required by the Employees StateInsuranceAct,1948havebeen paid.

2. **Workman'scompensationandemployeesliabilityinsurance:**Insurance shall be effected for all Contractors employees engaged in theperformance of this contract. If any part of work is sublet, Contractorshall require the sub-Contractor to provide workman's compensation andemployer'sliabilityinsurance,whichmayberequiredbyowner.

3. Other Insurance required under law of regulations or by owner Contractorshall also carry and maintain any and all other insurance which may berequired under any law or regulation from time to time. He shall alsocarryandmaintainanyotherinsurance,whichmayberequiredbyowner.

GC-90 **DAMAGETOPROPERTY:**

1. Contractor shall be responsible for making good to the satisfaction ofowneranylossofandanydamagetoallstructuresandpropertiesbelonging to owner or being executed or procured or being procured byowner or ofother agencieswithin the premisesof all workofowner, ifsuch loss or damage is due to fault and / or the negligence of willful act oromission of Contractor, his employees, agent, representatives or sub-Contractors.

2. Contractor shall indemnify and keep owner harmless of all claims fordamage to properties other than property arising under by reasons of thisagreement, such claims result from the fault and / or negligence or willfulact or omission of Contractor, his employees, agents representative orsub-contractor.

GC-91 **CONTRACTORTOINDEMNIFYOWNER:**

1. The Contractor shall indemnify and keep indemnified the owner and everymember, officer and employee of owner from and against all actions,claims, demands and liabilities whatsoever under the in respect of thebreach of any of the above clauses and / or against any claim, action ordemandbyanyworkman/employeeoftheContractoror anysub-contractorunderanylaws, rulesor regulationshaving force oflaws,including but not limited to claims against the owner under the workmancompensation Act, 1923, the Employee's Provident Funds Act, 1952 and /orthecontractlabour(AbolitionandRegulations)Act,1970.

2. PAYMENTSOFCLAIMSANDDAMAGES : If owner has to pay any money inrespect of such claims or demands aforesaid, the amount so paid and thecost incurred by the owner shall be charged to and paid by ContractorwithoutanydisputenotwithstandingthesamemayhavebeenpaidwithoutheconsentorauthorityoftheContractor.

3. Ineverycaseinwhichbyvirtueofanyprovisionapplicableintheworkman's Compensation Act, 1923 or any other Act, owner be obliged topay compensation to workmen employed by Contractor the amount ofcompensation so paid, and without prejudice to the rights of owner underSection-(12) Sub-section-(2) of the said Act, owner shall be at liberty torecover such amount from any surplus due to on to become due to theContractor or from the security deposit. Owner will not be bound tocontestanyclaimmadeunderSection-(12)Sub-section-(2)ofthesaidact

exceptonwrittenrequestofContractorandgivingfullsecurityforallcostsconsequent uponthecontestingofsuchclaim.

The Contractor shall protect adjoining sites against structural, decorativeand other damages that could be cased to adjoining premises by theexecution of these works and make good at his cost, any such damage, socaused.

GC-92 **IMPLEMENTATIONOFAPPRENTICEACT1954:**
Contractor shall comply with the provisions of the apprentice Act 1954 andthe orders issued there under from time to time. If he fails to do so, it willbeabreachofcontract.

GC-93 **HEALTHANDSANITARYARRANGEMENTSFORWORKERS:**
Contractor shall comply with all the rules and regulations of the localSanitary Authorities or as framed by owner from time to time for theprotectionofhealthandprovidesanitaryarrangementsofalllabourdirectlyorindirectly employedontheworkofthiscontract.

GC-94 **SAFETYCODE:**
General:
Contractor shall adhere to safe construction practice and guard againsthazardous and unsafe working conditions and shall comply with owner'srulesas setforthherein.

FirstAidandIndustrialInjuries:
Contractor shall maintain First-Aid facilities for its employees and those ofhissub-contractors.

Contractorshallmakeoutsidearrangementsforambulanceserviceandforthetreatment ofindustrialinjuries.Nameofthoseproviding theseservicesshallbefurnishedtoEngineer-In-Chargepriortostartofconstruction, and their telephone numbers shall be prominently posted inContractor'sfieldoffice.

Allinjuries shallbereportedpromptlytoEngineer-In-ChargeandacopyofContractor's report covering each personal injury requiring the attention ofaphysicianshallbefurnishedto owner.

GeneralRules:
Carryingandstriking,matches,lightersinsidetheprojectareaandsmoking within the job site is strictly prohibited. Violators of smoking rulesshall be discharged immediately. Within the operation area, no hot workshall be permitted, without valid gas, safety, fire permits. The Contractorshallalsobeheldliableandresponsibleforalllapsesofhissub-Contractors /employeesinthisregard.

Contractor'sBarricades:
Contractor shall erect and maintain barricades without any extra cost,required in connection with his operation to guard or protect during theentirephaseof the operationofthis contractfor-

i) Excavation
ii) Hoistingareas
iii) AreasadjudgedhazardousbyContractor'sOROwner'sinspectors.
iv) Owner'sexistingpropertyliabletobedamagedbyContractor'soperations,intheopinionofEngineer-In-Charge/SiteEngineer.

Contractor's employees and those of his sub-contractors shall becomeacquaintedwithowner'sbarricadingpracticesandshallrespecttheprovisions thereof.

Barricades and hazardous areas adjacent to but not located in normalroutesof travelshallbe markedbyred lanternatnight.

Scaffolding:
Suitable scaffolding shall be provided for workman for all worksthatcannot safely be done from ladders. When a ladder is used, an extramazdoor shall be engaged for holding the ladder and if the ladder is usedfor carrying materials as well suitable footholds and handholds shall beprovided on the ladder and the same shall be given an inclination notsteeperthat1 in4 (1horizontaland4vertical).

Scaffolding or staging, more than 3.6 M. (12') above the ground or floor,swing or suspended from an overhead support or erected with stationarysupport shall have a guard rail properly attached, bolted, braced andotherwise fixed at least 1.0 M (3') high above the floor or platform orscaffolding or staging and extending along the entire length of the outsideends thereof with only such openings as may be necessary for the deliveryof materials.Such scaffolding or staging shall be so fastened as topreventitfromswayingfromthebuildingorstructure.

Working platforms, gangways, and stairways shouldbe so constructedthat they should not sag unduly or inadequately and if the height of theplatform or the gangway of the stairway is more than 3.6 (12') aboveground level or floor level, they should be closely boarded, should haveadequatewidthandshouldbesuitablyfastenedasdescribedin4.2above.

Every opening in the floor of a building or in a working platform beprovided with suitable means to prevent the fail of persons or materials byproviding suitable fencing or railing whose minimum height shall be 1.0 M(3'.0").

Safe means of access shall be provided to all working platforms and otherworking places. Every ladder shall be securely fixed. No portable singleladdershallbeover 9.0 M.(30')in length while the width between theside rails in rung ladder shall in no case be less than 30 cms (12 inches)for ladder up to and including 3.0 M. (10'), in longer ladders this widthwould be increased at least 6 mm (1/4") for each addition 30 c.m. (1.0) oflength. Uniform step spacing shall not exceed 30 cms. (12"). Adequateprecaution shall be taken to prevent danger from electrical equipment. Nomaterials on any of the side of work shall be so stacked or placed as tocause danger or inconvenience to any person or public. The Contractorshall also provide all necessary all necessary fencing and lights to protectthe workers and staff from accidents, and shall be bound to bear theexpenses of defence of every suit action or other proceedings at law thatmay be brought by any persons for injury sustained owning to neglect ofthe above precautions and to pay damages and costs which may beawarded in any such suit or action or proceedings to any such person, orwhich, may be with the consent of the Contractor be paid to compromiseanyclaim byany suchperson.

Excavation:
All trenches 1.2 M (4') or more in depth, shall at all time be supplied withatleastoneladder.

Ladder shall be extended bottom of the trench to at least 3" above thesurface of the ground. The side of the trench which are 1.5 M (5') or morein depth shall be stopped back to give suitable slope, or securely held bytimberbracing,soastoavoidthedangerofsidestocollapse.Theexcavated materials shall not be placed within 1.5 M (5') of the trench ofhalf of the trench depth whichever is more. Cutting shall be done from topto bottom. Under no circumstances, undermining or under cutting bedone.

Demolition:
Before any demolition work is commenced and also during the progress ofthe work all roads and open area adjacent to the work site shall either beclosedorsuitablyprotected.

No electric cable or apparatus which is liable to be a source of danger shallremainelectricitycharged.

All practical steps shall be taken to prevent danger to persons employedfrom risk of fire or explosion of flooding. No floor or other part of thebuilding shall be so over loaded with debris or materials as to render itunsafe.

SafetyEquipment:
All necessary personal safety equipment as considered necessary by theEngineer-In-Chargeshouldbemadeavailablefortheuseofpersonsemployed on the site and maintained in a condition suitable for immediateuse, and the Contractor should take adequate steps to ensure proper useof equipmentbythoseconcerned.

Workers employed on mixing asphaltic materials, cement and line mortarsshallbeprovidedwithprotectivefootwearand protectivegloves.

RiskyPlace:
When the work is done near any place where there is a risk of drowning,all necessary safety equipment shall be provided and kept ready for useand all necessary steps taken for prompt rescue of any person in dangerand adequate provision should be made for prompt first-aid treatment ofallinjurieslikelytobesustainedduring thecourseofthework.

HoistingEquipment:
Use of hoisting machines and tackles including their attachments, andstorageandsupportsshallconformtothefollowingstandardsorconditions.
Theseshallbeofgoodmechanicalconstruction,soundmaterialandadequate strength and free from patent defect and shall be kept in goodconditionandingood workingorder.
Everyropeusedinhoistingorloweringmaterialsorasameansofsuspension shall be of durable quality and adequate strength and freefrompatentdefects.
Everycranedriverorhoistingappliance operatorshallbe properlyqualified and no person under the age of 21 years should be in-charge ofanyhoistingmachine includinganyscaffolding.

In case of every hoisting machine and of every chain ring hook, shackle,swivel andpulleyblock usedin hoistingorloweringor asmeansofsuspension,thesafeworkingloadshallbeascertainedby adequatemeans. Every hoisting machine and all gear referred to above shall beplainly marked with the safe working load and the conditions under whichit is applicable shall be clearly indicated. No part of any machine or anygear referred to above in this paragraph shall be loaded beyond the safeworking loadexceptforthepurposeoftesting.

In case of departmental machine, the safe work load shall be notified bythe Engineer-In-Charge, as regards Contractor s machine, the Contractorshall, notify, the safety working load of the machine to the Engineer-In-Charge. Whenever the Contractor brings any machinery to site of work heshouldgetitverifiedbytheEngineer-In-Chargeconcerned.

10.0 ElectricalEquipment:

Motors, gears, transmission, electric wiring and other dangerous parts ofhoisting appliances shall be provided with efficient safeguards, hoistingappliances should be provided with such means when will reduce to theminimum the risk of accidental descent of the load, adequate precautionsshallbetaken toreducetotheminimum theriskofanypartorasuspendedloadbecomingaccidentallydisplaced.Whenwo rkersareemployed on electrical installations which are already energized, insulatingmats, wearing apparel such as gloves, and booths as may be necessaryshall be provided. The workers shall not wear any rings, watches andcarrykeysorothermaterialswhicharegoodconductorsofelectricity.

11.0 MaintenanceofSafetyDevices:

All scaffolds, ladders and other safety devices as mentioned or describedherein shall be maintained in sound condition and no scaffold, ladder orequipment shall be altered or removed while it is inuse. Adequatewashingfacilitiesshould beprovidedatornearplaceofwork.

12.0 DisplayofSafetyInstructions:

The safety provisions should be brought to the notice of all concerned bydisplay on a Notice Board at a prominent place at the work spot. Thepersons responsible for compliance of the safety code shall be namedthereinbytheContractor.

13.0 EnforcementofSafetyRegulations:

To ensure effective enforcement of the rules and regulations relating tosafetyprecautions,the arrangementmadebytheContractorshallbeopentoinspectionbytheWelfareOff icer,Engineer-In-ChargeorSafetyEngineeroftheownerortheir representatives.

NoExemption:

Notwithstanding the above clause 1.0 to 13.0 there is nothing to exemptttheContractorfromtheoperationsofanyotherActorRulesinforceintheRepublic ofIndia.

In addition to the above, the Contractor shall abide by the safety codeprovisionsasperC.P.W.D.safetycodeframedfromtimetotime.

GC-95 <u>ACCIDENTS</u>:

It shall be Contractor's responsibility to protect against accidents on theworks. He shall indemnify the owner against any claim for damage or forinjury to person or property resulting from, and in the course of work andalso under the provisions of the workman's compensation Act. On theoccurrenceofanaccidentarisingoutoftheworkswhichresultsindeath

orwhichissoserious astobelikelytoresultindeath,theContractorshallwithintwenty-fourhoursofsuchaccident,reportinwritingtotheEngineer-In-Charge, the facts stating clearly and in sufficient details thecircumstancesofsuchaccidentandthesubsequentaction.Allotheraccidents on the works involving injuries to person or damage to propertyotherthanthatoftheContractorshallbepromptlyreportedtotheEngineer-In-Charge, stating clearly and in sufficient details the facts andcircumstances of the accidents and the action taken. In all cases, theContractor shall indemnity the owner against all loss or damage resultingdirectly or indirectly from the Contractor's failure to report in the manneraforesaid.This includes penalties or fines, if any, payable by the owner asaconsequenceoffailuretogivenoticeunderthe Workman'sCompensation Act, or failure to conform to the provisions of the said act inregardtosuchaccidents.

In the event of an accident in respect of which compensation may becomepayable under the Workman's Compensation Act VIII of 1923 including allmodification thereof, the Engineer-In-Charge may retain out of money dueand payable to the Contractor such sum of sums of money as may in theopinion ofEngineer-In-Chargebe sufficientto meetsuch liability.Onreceipt of award from the Labour Commissioner in regard to quantum ofcompensation,thedifferenceinamountwillbeadjusted.

Addl/Asst.Engineer R.M.C.	**Dy.Ex.Engineer R.M.C.**	**ADDL.CITYENGINEER R.M.C.**

SignatureofContractorwithSeal

PART-II

SECTION-3

TECHNICAL SPECIFICATIONS

PART-IISECTION – 3
TECHNICALSPECIFICATIONSCONT

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::TECHNICALSPECIFICATIONS::

A. GENERAL

1. SCOPEOFCONTRACT:

The workentitled compriseofexcavation oftrenches with shoringandstruttingwhereverrequiredbailingoutwaterwherevernecessary , laying of pipes, jointing including supply of material andmaterialrequiredforjointing,testingasperspecifications,Constructiono fappurtenancessuchasbrickMasonryManholes,house chambers etc. asperthetype design specified entirely ofthespecification ofvariousworks stipulatedin thee-Tender.Theworkincludessupplyofsewerpipesi.e.stonewarepipesofISIMar ked andR.C.C. precast manholeframes & covers which shallhave to be supplied at site or Municipal store by the contractor atspecified and shown in schedule "B". Other material like cement etcshallhavetosuppliedbythecontractorfromopenmarket.

2. e-TENDERPRICE:

Theratesquotedinthebillofquantitiesshallcovereverythingnecessaryforthe dueandcompleteexecutionoftheworkaccordingto the drawings and other condition and stipulations of the contractincluding specifications of the evident, intend and meaning of all oreither of them or according to customary usage and for periodicaland final inspection and test and proOF the work in every respectandformeasuring,numberingorweighingthesame,includingsetting out and laying or fixing in position and the provision of allmaterials,power,tools,rammers,labour,tackle,platformswithimperviou slappedjointsforscaffolding,rangingroads,straightedged,canteringandbo xing,wedges,moulds,templates,posts,straightrods,straightedged,canteri ngandboxing,wedges,moulds,templates,posts,straightrails,boningstaves strutting,barriers,fencinglightingpumpingapparatus,temporaryarrangem entforpassageoftrafficaccesstopremisesandcontinuance to drainagewatersupplyand lighting (if interruptedbycontractor'swork)temporarysheds,painting,varnishing,poli shingestablishmentforefficientsupervisionandstatingarrangements for the efficient protective of life and property and allrequisiteplantandmachineryofeverykind.

Thecontractorshallkeepeveryportionoftheworkclearofaccumulation from time to time and shall leave every portion of thework clean, clear, perfect and at the conclusion of whole, providingattheirowncostallsuchmaterialimplement,appliancesandlabour astheEngineerinchargemayrequiretoproveifittobeso.

3. COMPLETIONSCHEDULE:

The contract periodshallbe asprescribedintender document,from the dateofnoticeto proceed. The Contractor shall submithiscompletion scheduleandtheprogramof works togetherwith this e-Tender in conformity with completion schedulegiven inthedocuments.

4. GENERALTECHNICALGUIDELINE:

Alltheitemsoccurringintheworkandasfoundnecessaryduringactualexecutionshallbecarriedoutinthebestworkmanlikemannerasperspecifications andthewrittenorderoftheEngineerincharge

Extra Claim in respect of extra workshall be allowed only ifsuchworkisorderedtobecarriedoutinwritingbytheEngineerincharge

ThecontractorshallengageaqualifiedEngineerfortheExecution of work whowillremainpresent forall the timeonsiteandwillreceiveinstructionsandordersfromtheEngineerinchargeorhisauthorizedrepresentative.Theinstruction and orders given to the contractor representativeonsiteshallbeconsideredasitgiventothecontractorhimself.

The workorder book asprescribed shallbe maintained onthe site of the workbythe contactorandthe contractorshall signthe ordersgivenbythe inspecting offers andshallcarryoutthemproperly.

Quantities specified in the e-Tender may vary at the time ofactualexecutionandthecontractorshallhavenoclaimforcompensation onaccountofsuchvariation

Unexcavatedlengthsshallbeleftwhereverrequiredandsodirected by the Engineer in charge during the currency of thecontract and shall be tackled. If required, before completion ofwork.

Diversionofroad,ifnecessary,shallbeprovidedandmaintainedduringthecurrencyofthecontractbythecontractorathiscost.

FiguredDimensionsofdrawingshall supersedemeasurements by scale, special dimensionsor directions inthespecificationsshall supersedeallotherdimensions.

All levelsare givenon drawingsand thecontractorshallberesponsibletotakeregularlevelontheapproveddalignmentbeforeactuallystartingthework.Thelevelsshallbecommencetotheg.T.S.levelsandshallbegotapprovedfromtheEngineerincharge

Ifthearrangementoftemporarydrainageisrequiredtobemade during any workof thisContract,this shallbemadebytheContractor without claiminganyextracost.

5. CLASSIFICATION OFSTRATA:

Allmaterialsencounteredin excavation will beclassifiedinthe following groups irrespectiveof mode of excavatingthematerialsandthedecisionoftheEngineerinchargein thisregardshallbefinalandbinding tothe contractor.

Soils:

Soils of all sorts, silt, sand, gravel, soft murrum, stiff clay,kunkar and other soft excavation not covered in the itemsmentionedhereunder.

HardMurrum:

Hard Materials comprisingof all kinds ofdisintegratedrockorshaleorindurateconglomerateinterspersed withboulders,weatheredanddecomposedrockwhichcouldberem ovedwith pick,bar, shove, wedges and hammers,thoughnotwithoutsomedifficulties.

Soft–Rock:

Thisshall include all materials whichisrock but whichdoes not needblastingandcanbe removed with apickbar,wedges,pavementbreakers,pneumatictoolsetc.

HardRock:

Thisshallincluderockaccusinginmassorboulderswhichneedblasti ng,thiswillalsoincluderocktoberemoved by chiseling or any other method where blasting isnotpermissible.

6. Theratesareinclusiveofdewatering,ifrequired.

7. Regarding water supply for hydro testing, necessary water, power,labour,etc.requiredfornecessarytestshallbearrangedbythecontrac torat hisown cost.

8. Duringconstructionactivity,propercaremust betaken for laboursafetyandmustfollowthe provisionsoftheLabour laws.

9. TMT bars of Fe-500 should be confirming to IS:1786. The approvedmakesshallbeTATA,SAIL,Vizag,Gallent,Electrothermorotherequ ivalentmakeasapprovedbyengineer-in-charge.

10. CementshallbeordinaryPortlandcement53Gradeconformingto

IS:269,IS:8112orIS:12269forallthe worksaspertheinstructionsofenginee r-incharge.Theapprovedmakesshallbe Ambuja,Ultratect,LOTUS, Hathi oras per ISconfirming. Minimum Cementcontentfortheworkshouldbeasperattached circularNo.RMC/C/Vigi. (Tech)/231dt.11/03/2022.

11. Testing of the materials like Brick, Sand, Aggregate, Reinforcementsteel, etc. should have to be tested peridiocally as suggested by theEngineer-in-chargeatGovernmentapprovedmaterialtestingLaboratory and testing charges for the same has to be borne by thecontractor.

12. In case of any ambiguity found in inspections / drawings etc, thedecisionofengineer-in-chargeshallbefinalandbindingtothecontractor.

B. DETAILEDTECHNICALSPECIFICATIONS

B1 MATERIALSPECIFICATION

1. Material:

Water:

Water shall not be salty or brackish and shall be clean, reasonably clearandfreefromobjectionablequantitiesofsiltandtracesofoilandinjuriousal kalis, salts, organic matter and other deleterious material which willeither weaken the mortar of concrete or cause efflorescence or attack thesteel in RCC container for transport, storage and handling of water shallbe clean. Water shall conform to the standards specified in I.S. 456 - Latestedition.

If required by the engineer-in-charge, it shall be tested by comparisonwith distilled water. Comparison shall be made by means of standardcementtestsforsoundness,changeintimeofsettingandmortarstreng thas specified in I.S. 269 (Latest edition). Any indication of unsoundness,changeintimeofsettingby30minutesormoreordecreaseofmor ethan
10 per cint in strength of mortar prepared with water sample whencompared with the results obtained with mortar prepared with distilledwatershallbesufficientcauseforrejectionofwaterundertest.

Water for curing mortar, concrete or masonry should not be too acidic ortoo alkaline. It shall be free of elements which significantly affect thehydration reaction or otherwise interfere with the hardening of mortar orconcrete during curing or those which produce objectionable stains orotherunsightlydepositsonconcreteormortarsurface.

Hardandbitterwatershallnotbeusedforcuring.
Potablewaterwillgenerallyfoundsuitableforcuringmortarofconcrete.

Lime:

Lime shall be hydraulic lime as per I S 712 - Latest Edition. NecessarytestsshallbecarriedoutasperIS69329(PartsItoX)Latestedition.

Thefollowingfieldtestsforlimesaretobecarriedout:

i) Averyroughideacanbeformedaboutthetypeoflimebyitsvisualexamina tion i.e. fat lime bears pure white colour, lime in form ofporous lumps of dirty white colour indicates quick lime and solidlumpsare theunburntlimestone.

ii) Acid testsfor determiningthe carbonate content in lime,limeExcessiveamountofimpuritiesandroughdeterminationoflim e.

Storage shall comply with I S 712 - Latest Edition. The slaked lime, itstored, shallbe kept in a weatherproof and damp-proofshedwithimperviousfloorandsidestoprotect it against rain,moisture,andweather and extraneous materials mixing with it. All lime that has beendamaged in any way shall be and all rejected materials shall be removedfrom siteofwork.

Field testing shall be done according to I S 269 (latest edition) to showtheacceptabilityof materials.

Cement:

Cement shall be ordinary portland cement as per IS:269 or IS:8112 andIS:12669 (AllLatestedition).

WhiteCement:

ThewhitecementshallconformtoIS8042-ELatestedition.

ColoredCement:

Color cement shall be with white or grey portland cement as specified intheitem ofthework.

The pigments used for colored cement shall be of approved quality andshall not exceed 10% of cement used in the mix. The mixture of pigmentand cement shall be properly ground to have a uniform color and shade.Thepigmentsshallhavesuchpropertiesastoprovidefordurabilityunder exposuretosunlightandweather.

Thepigmentshallhavethepropertysuchthatitisneitheraffectedbythecementn ordetrimentaltoit.

Sand:

Sand shall be natural sand or silica, clean well graded, hard strong,durable and gritty particles free from injurious amounts of dust, clay,kankar nodules, soft or flaky particles Shale, alkali, salts organic matter,loam, mica or other deleterious substances andshall be got approvedfrom the engineer-in-charge. The sand shall not contain more than 8percent of silt as determined by field test. If necessary, the sand shall bewashedtomakeitclean.

CoarseSand:

The fineness modules of coarse sand shall not be less than 2.5 and shallnotexceed3.0.Thesieveanalysisofcoarseshallbeasunder:

I.S. SieveDesignation	Percentagebyweightpassingsieve	ISSievepercentage Designation	by weightpercent-agepass-ingsieve.
4.75mm	100	600Micron	30-100
2.36mm	90to100	300Micron	5-70
1.18mm	70-100	150Micron	0-50

FineSand:

The fineness modules shall not exceed 1.0 The sieve analysis of fine sandshallbeasunder:

I.S.Sieve Designation	Percentagebyweight passingsieve	ISSievepercentage Designation	byweight percent-agepass-ingsieve.

4.75mm	100	600Micron	40-85
2.36mm	100	300Micron	5-50
1.18mm	75-100	150Micron	0-10

StoneDust:

Thisshallbeobtainedfromcrushinghardblacktraporequivalent.Itshallnotcontainmorethan8%ofsiltasdeterminedbyfieldtestwithmeasuringcylinder.Themethodofdeterminingsiltcontentsbyfieldstestisgivenasunder:

A sample of stone dust to be tested shall be placed without drying in 200mm measuring cylinder. The quantity if the sample shall be such that itfillsthecylinderupto100mmmark, thecleanwatershallbe addedupto 150 mm mark. The mixture shall be stirred vigorouslyandcontentallowedtosettlefor3hours.

The height of silt visible as settled layer above the stone dust shall beexpressed as percentage of the height of the stone dust below. The stonecontaining more than 8% silt shall be washed so as to bring the contentwithintheallowablelimit.

Thefitnessnodulesofstonedustshallnotbelessthan1.80

StoneGrit:

Grit shall consist of crushed or broken stone and be hard, strong densedurable clean of proper gradation and free from skin or coating likely topreventproperadhesionofmortar.Gritshallgenerallybecubicalinshapeand as far as possible flaky elongated pieces shall be avoided. It shallgenerally comply with the provisions of IS 383 (Latest Edition). Unlessspecial stone of particular quarries is mentioned, grit shall be obtainedfrom the best black trap or equivalent hard stone as approved by theengineer-in-charge.Thegritshallhavenodeleteriousreactionwithcement.

Thegritshallconformtothefollowinggradationaspersieveanalysis:

I.S. SieveDesignation	Percentage passingthroughsieve	IS SieveDesignation	percentage passingthroughsieve
12.50mm	100%	4.75mm	0-20%
10.00mm	85-100%	2.36mm	0-25%

The crushing strength will be such as to allow the concrete in which itusedtobuildupthespecifiedstrengthofconcrete.

ThenecessarytestsforgritshallbecarriedoutaspertherequirementsofI S 2386 (Part I to VIII) Latest edition as per instruction of engineer-in-charge.Thenecessityoftestwillbedecidedbytheengineer-in-charge.

Cinder:

Cinder is well burnt furnace residue which has been fused or sintered intolumpsofvaryingsizes.

Cinder aggregates shall be well burnt furnaces residue obtained fromfurnace using coal fuel only. It shall be sound clean and free from clay,dirt,ashor otherdeleteriousmatter.

Theaveragegradingforcinderaggregateshallbeasmentionedbelow:

I.S. SieveDesignation	Percentagepassing	IS SieveDesignation	percentage passing
20mm	100%	4.75mm	70
10mm	86	2.36mm	52

LimeMortar:

Lime: LimeshallconformtospecificationM-
2.**Water:**WatershallconformtospecificationM-
1.**Sand:**SandshallconformtospecificationM-6.

ProportionofMix:
Mortarshallconsistofsuchproportionsofslakedlimeandsandasmaybespecifiedinitem.theslakedlimeandsandshallbemeasuredbyvolume.

PreparationofMortar:
Lime mortar shall be prepared by process as per IS 1625 Latest edition.Power drive mill shall be used for preparation of lime mortar. The slakedlime shall be placed in the mill in an even layer and ground for 180revolutions with a sufficient water. Water shall be addedas requiredduringgriding(carebeingtakennottoaddmorewater)thatwillbringthemixed material to a consistency of stiff paste. Thoroughly wetted sandshall then be added evenly and the mixture ground for another 180revolutions.

Storage:
Mortarshallalwaysbekeptdamp,protectedfromsunandraintillusedup,coveringitbytarpaulinoropensheds.

All mortar shall be used as soon as possible after grinding. It should beusedonthedayonwhichitprepared.Butinnocase,mortarmadeearlierthan36 hoursshall bepermittedforuse.

CementMortar:
WatershallconformtospecificationM-
1.Cement:CementshallconformtospecificationsM-
3.Sand:SandshallconformtoM-6.

ProportionofMix:
Cement and sand shall be mixed to specified proportion, sand beingmeasured by measuring boxes. The proportion of cement will bebyvolume on the basis of 50 kg/Bag of cement being equal to 0.342 Cu.M.Themortarmaybehandmixedasdirected.

ProportionofMortar:

In hand mixed mortar, cement and sand in the specifications shall bethoroughly mixed dry on a clean impervious platform by turning over atleast 3 times or more till a homogeneous mixture of uniform color isobtained.mixingplatformshallbesoarrangedthatnodeleteriousextraneous material shall get mixed with mortar or mortar shall flow out.Whilemixing,thewatershallbegraduallyaddedandthoroughlymixedtofor mastillplasticmassofuniformcolorsothateachparticleofsandshallbe completely covered with a film of wet cement. the water cement ratioshallbeadoptedasdirected.

The mortar so prepared shall be used within 30 minutes of adding water.Only such quantity of mortar shall be prepared as can used within 30minutes.

StoneCoarseAggregateforNominalMixConcrete.

Coarse aggregate shall be of machine crushed stone of black trap orequivalent and be hard, strong, dense, durable clean and free from skinandcoatinglikelytopreventproperadhesionofmortar.

Theaggregateshallgenerallybecubicalinshape.Unlessspecialstonesofparticu lar quarries are mentioned, aggregates shall be machine crushedfrom the best black trap or equivalent hard tone as approved. Aggregateshall have no deleterious reaction with cement. The size of the coarseaggregateforplaincementconcrete andordinaryreinforcedcementconcreteshallgenerallybeasperthetablegiven below, however,incaseof reinforced cement concrete the maximum limit may be restricted to 6mm, less than the minimum lateral clear distance between bars of 6 mmlessthanthecover whicheverissmaller.

IS Sievede signa-tion	Percentage passing for singlesized aggregates of nominalsize			IS Sievede sig-nation	Percentagepassingforsinglesizedaggregatesofnominalsize		
	40mm	20mm	16mm		40mm	20mm	16mm
80mm	--	--	--	12.5 mm	--	--	--
63mm	100	--	--	10mm	0.5	--	0.30
40mm	85-100	100	--	4.75mm	--	0.20	0.5
20mm	0-20	85-100	100	2.35mm	--	0.50	--
16mm			8-100	--	--	--	--

Note:

This percentage may be the engineer-in-charge when consideredne cessaryforobtainingbetterdensityandstrengthofconcrete.

The grading test shall be taken in the beginning and at the change ofsourceofmaterials.ThenecessarytestsindicatedinIS383Latesteditionand IS 456 Latest edition shall have to be carried out to ensure theacceptability. The aggregates shall be stored separately and handled insuch a manner as to prevent the intermixing of different aggregates. Ifthe aggregates are covered with dust, they shall be washed with water tomakethemclean.

BlackTraporEquivalentHardStoneCoarse:Aggrega teforDesignMixconcrete:

Coarse aggregate shall be of machine crushed stone of black trap orequivalent hard stone and be hard strong, dense, durable, clean and freefromskinandcoatinglikelytopreventproperadhesionofmortar.

The aggregates shall generally be cubical in shape. Unless special stonesofparticularquarriesarementioned,aggregatesshallbemachinecrushe dfromthebest,blacktraporequivalenthardstonesasapproved.Aggregateshall havenodeleteriousreactionwithcement.

The necessary tests indicated in IS 383 Latest edition and IS 456 Latesteditionshallhavetocarriedouttoensuretheacceptabilityofthematerial.

Ifaggregateiscoveredwithdust,itshallbewashedwithwatertomakeitclean.

BrickBatsAggregate:

Brick bat aggregate shall be broken from well burnt or slightly over burntand dense bricks. It shall be homogeneous in texture, roughly cubical inshape, clean and free from dirt of any other foreign material. The brickbats shall be of 40 mm to 50 mm size unless otherwise specified in theitem.Theunderburntofoverbruntbrickbatsshallnotbeallowed.

Thebrickbatsshallbemeasuredbysuitableboxesasdirected.

Bricks:

Thebricksshallbehardormachinemouldedandmadefromsuitablesoilsand burnt. They shall be free from cracks and flaws and nodules of freelime. They shall have smooth rectangular faces with sharp corners andshallbeof uniformcolors.

The bricks shall be moulded with a frog of 100 mm x 40 mm and 10 mmto 20 mm deep on one of it's flat sides. The bricks shall not break whenthrownonthegroundfromaheightof600mm.

Thesizeofmodularbricksshallbe190mmx90mm.

Thesizeoftheconventionalbricksshallbeasunder:(9"x4 .3/8"x2,3/4")225x110x75mm

Only bricks of one standard size shall be used in one work. The followingtolerancesshallbepermittedintheconventionalsizeadoptedinaparti cularwork.
Length±1/8"(3mm)width:±1/16"(1.5mm)Hei ght:±1/16" (1.5mm)

Thecrushingstrengthofthebrickshallnotbelessthan35kg/sq.cm.Theaverage water absorption shall not be more than 20 percent by weight.Necessary tests for crushing strength and water absorption etc., shall becarriedoutasperIS:3495(PartItoIV)-latestedition.

Stone:

The stone shall be of the specified variety such as granite / trap stone /quarzite or any other type of good hard stones. The stones shall beobtainedonlyfromtheapprovedquarryandshallbehard,sound,durableand free fromdefects like cavities cracks, sandholes flaws, injuriousreins, patches of loose or soft materials etc. and weathered portion andotherstructuraldefectsorimperfectiontendingtoaffectedtheirsoundness and strength. The stone with round surface shall not be used.Thepercentageofwaterabsorptionshallnotbemorethan5%dryorwet.When tested in accordance with I.S.1124 - Latest edition. The minimumcrushingstrengthofthestonebe200kg/sq.cmunlessotherwisespecified.

The samples of the stone to be used shall be got approvedbefore theworkisstarted.

The khanki facing stone shall be dressed by chisel as specified in the itemforkhankifacinginrequiredshapeandsize.Thefaceofthestoneshallbesodressedthatthebushingontheexposedfaceshallnotprojectbymorethan 40 mm from the general wall surface and on face to be plastered itshall not project by more than 19 mm nor shall it have depressions morethan10 mmfromtheaveragewallsurface.

LateriteStone

Laterite stone shall be obtained from the approved quarry. It shall becompacted, in texture, sound, durable and free from soft patchs. Its shallhave minimum crushing strength of 10 Kg/sq.cm in its dry condition. Itshallnotabsorbwatermorethan20%ofitsownweight,whenimmersedfor 24 hours in water After quarrying, the stone shall be allowed toweatherforsometimebeforeusinginwork.'

Thestoneshallbedressedintoregularrectangularblockssothatallfacesarefree fromwavinessandunevenness,andtheedgestrueandsquare.

Thosetypesofstoneinwhichwhiteclyoccursshouldnotbeused.Special

cornerstonesshallbeprovidedwheresodirected.

MildSteelBars:

Mild steel bars reinforcement for RCC work shall confirm to IS 432 (Part-II) Latest edition and shall be of tested quality. It shall also comply withrelevantpartofIS456 Latestedition.

All the reinforcement shall be clean and free from dirt, paint, grease, millscaleorlooseorthickrustatthetimeofplacing.

For the purpose of payment, the bar shall be measured correct upto 10mmlengthandweightpayableworkedoutattheratespecifiedbelow:

1	6mm	0.22Kg/Rmt	8	20mm	2.47Kg/Rmt
2	8mm	0.39Kg/Rmt	9	22mm	2.98Kg/Rmt

3	10mm	0.62Kg/Rmt	10	25mm	3.85Kg/Rmt
4	12mm	0.89Kg/Rmt	11	28mm	4.83Kg/Rmt
5	14mm	1.21Kg/Rmt	12	32mm	6.31Kg/Rmt
6	16mm	1.58Kg/Rmt	13	36mm	7.99Kg/Rmt
7	18mm	2.00Kg/Rmt	14	40mm	9.86Kg/Rmt

HighYieldStrengthSteelDeformedBars:

High yield strength steel deformed bars shall be either cold twisted otherrolled and shall conform to IS 1786 Latest edition and IS 1139 Latesteditionrespectively.

Other provisions and requirements shall conform to specification No.M-18forMildSteelBars.

HighTensileSteelWires:

The high tensile wires for use in prestressed concrete work shall conformtoIS2090Latestedition.

The tensile strength of the high tensile steel bars shall be as specified inthe item. In absence of the given strength the minimum strength shall betaken as per part 6-1 of the IS 1785 Latest edition. Testing shall be doneasperISrequirements.

Thehightensileshallbefreefromloosemillscale,rust,oilgrease,oranyotherharmfulmatter.Cleaningofsteelbarsmaybecarriedoutimmersioninsolventsolution,wirebrushingorpassingthroughapressureboxcontainingcarborundum.

The high tensile wire shall be obtained from manufacturer in coil havingdiameter not less than 350 times the diameter of wire itself, so that wirespringsbackstraightonbeinguncoiled.

M-20(A) PlainCarbonDrawnSteelWires:

The plain carbon drawn steel wires for use in precast concrete work shallbeconformtoIS1785(Part-II)Latestedition.

The tensile strength of the P C steel bars shall be as specified in the item.Inabsenceofthegivenstrength,theminimumstrengthshall betakenasperIS:1785Latestedition.TestingshallbedoneasperISrequirements.

The P C steel bars shall be free from loose mill scale, rust, oil grease, orany other harmful matter. Cleaning of steel bars may be carried outimmersioninsolventsolution,wirebrushingorpassingthroughapressureboxcontainingcarborandum.

MildSteelBindingWire:

The mild steel wire shall be of 1.63 mm, 22 mm (16 or 18 gauge)diameterandshallconformtoIS280Latestedition.

The use of black wire will be permitted to binding reinforcement bars. Itshallbefreerust,oilpaint,grease,loosemillscaleoranyotherundesirablecoatingwhichmaypreventadhesionofcementmortar.

StructuralSteel:
AllstructuralsteelshallconfirmtoIS226Latestedition.Thesteelshallbefree from the defects mentioned in IS 226 Latest edition and shall have asmooth finish. the material shall be free from loose mill scale, rust pits orotherdefectsaffectingthestrengthanddurability.RiverbarsshallconformtoIS1148Latestedition.

Whenthe steelissuppliedbythecontractor,testcertificate ofthemanufacturer shall be obtained according to IS 226 Latest edition andotherrelevantIndianStandards.

GalvanizedIronSheets:
The galvanized iron sheets shall be plain or corrugated sheets of guagesas specified in item. The G.I. Sheets shall conform to I.S.latest edition.Thesheetsshallbeundamagedincarriageandhandlingeitherbyrubbin goff of zinc coating or otherwise. They shall have clean and bright surfaceandshallbefreefrombends,holes,rustorwhitepowderydeposit.

ThelengthandwidthG.I.sheetshallbeasdirectedaspersitecondition.

M-23-A:G.I.Valleysgutter,ridges:
TheG.I.ridgesandhipsshallbeofplaingalvanizedsheetsClass-3ofthethickness as specified in item. These shall be 600 mm in and width andproperly bent up to shape without damage to the sheets an in process ofbending.

Valleysguttersandflashingsshallalsobeofgalvanizedsheetsofthickness as specified in item. Valleys shall be 900 mm. wide overall andflashingshallbe380mm.wideoverall.Theyshallbebenttotherequiredshapewithoutdamagetothesheetintheprocessofbending.

M-24.AsbestosCementSheets:
Asbestos cement sheets plain, corrugated or semi-corrugated shall - conform shall conform to I.S. latest edition. The thickness of the sheetsshall be as specified in The item. the sheets shall be free from all defectssuchascracks,holes,deformities,edgesorotherwisedamaged.

Ridge&Hips:
Ridge and hips shall, be of same thickness as that of A.C. sheets. Thetypesofridgesshallbesuitableforthetypeofsheetsandlocation.
Other accessories to be used in roof such as flashing pieces eaves fillerpieces, valley gutters, north light and ventilator curves, barge boards etc.shall be of standard manufacture and shall be suitable for the type ofsheetsandlocation.

M-39AcrylicSheets:
Acrylic sheet shall be of thickness as specified in the item and of anspecked shape size as the case maybe. Panels may be flat or curved. Itshould be light in weight. It shall be colourless or coloured or opaque asspecified in the item. Colourless sheet shall be as transparent as thefinestopticalglass.Itslighttransmissionrateshallbeabout95%.

Transparency shall not be affected for the sheets thickness of it shall beextremelyresistanttosunlight,weatherandtemperatures. Itshallnotshowanysignificantyellowingorchangeinphysicalproperties or loss of light transmission over a longer period of use. Thesheet shall be impact resistant also. Sheets should be of such qualitythat they can be cut, bent and jointed, as desired. Solution or the jointsshallbeusedasperthe requirementofmanufacturer.

M-42.Resignbondedfiberglass:

The resign bonded fiber glass tiles or rolls shall be of approved make andshallbefollowed.

FortestofMineralwoolthermalinsulationBlankerIS.:latesteditionshallbeofsizes,thicknessandfinishasindicated.

Insulationwoodblanketshallbewiththefollowingcoveringsononeorbothsideas indicated.

(1) BituminisedhessainKraft paperforuseinposition wheremoisturehastobeexcluded.
(2) HessianclothorKraftpaper,forkeepingoutdust
(3) G.I.wirenetting,suitableforsurfacestobeplasteredover.

M-

43.Fixturesandfastening

sGeneral

The fixtures and fastenings, that is butt, hinges, tee and strap hingessliding door bolts tower bolts, door latch, bath-room latch, handless doorstoppers,casementwindow fasteners,casementstaysandventilatorscatchshallbemadeofthemetalasspeckedintheitemoritsspecification.

They shall be of iron, brass, aluminum, chromium plated iron, chromiumplated brass, copper oxidized iron, copper oxidized brass or anodizedaluminumasspecified.

The fixtures shall be heavy, medium or light type. The fixtures andfastenings shall be smooth finished and shall be such as will ensure easeofoperations.

Thesampleoffixtureandfasteningsshallbegotapprovedasregards,qualityand shapebeforeprovidingtheminposition.

Brassandanodizedaluminumfixtures andfasteningshallbebrightfinished.

Holdfasts:

Holdfasts shall be made from mild steel flat 30 cm. length and one of theholdfasts shall be bent at right angle and two nos. of 6 mm-diameterholes, shall be made in it for fixing it to the frame with screws. At theotherend,theholdfastshallbeforkedandbentatrightanglesinoppositedirections

Butthinges:
Railwaystandardheavytypebutthingesshallbeusedwhensospecified.Teean dstraphingesshallbemanufacturedfromM.S.Sheet

Sidingdoor-bolts(Aldrops):
The aldrops as specified in the item shall be used and shall be totapproved.

Towerbolts(BarrelType):
Tower bolts as specified in the item shall be used and shall be gotapproved.

DoorLatch
Thesizeofdoorlatchshallbetakenasthelengthoflatch.

BathroomLatch
Bathroomlatchshallbesimilartotowerbolt.

Handle
The size of the handles shall be determined by the inside grip length ofthe handles. Handles shall have a base plate of length 50 mm. more thanthesizeofthehandle.

DoorStoppers
Door Stoppers shall be either floor door stopper type or door catch type.Floor stopper shall be of overall size as specified and shall have a rubbercushion.

DoorCatch
Door catch shall be fled at a height of about 900 mm. from the floor levelsuch that one part of the catch is fitted on the inside of the shutter andtheotherpartisfixedinthewallwithnecessarywoodenplugarrangements for appropriate fixity. The catch shall be fixed 20 mm.insidethefaceofthedoorforeasyoperationofcatch.

WoodenDoorStopwithhinges
Wooden door stop of size 100 mm X 60 mm.X 40 mm. shall be fixed onthe door frame with a hinge of 75 mm. size and at a height of 900 mm.from the floor level. The wooden door stop shall be provided with 3 coatsofapprovedoilpaint.

CasementwindowFastener
Casement window fastener for single leaf window shutter shall be left orrighthandedasdirected.

Casementstays(StraightPegStay):

The stays shall be made from a channel section having three holes atappropriate position so that the window can be opened either fully orpartially as directed. Size of the stay shall be 250 mm to 300mm asdirected.

VentilatorCatch

Thepatternand,shapeofthecatchshallbeasapproved.

Pivot

The base and socket plate shall be made frommminimum 3 mm. thickplate, and projected pivot shall not be less than 12 mm. diameter and 12mm. length and shall be firmly riveted to the base plate in case of ironandinsinglepieceinthecaseofbrasspivot.

M-44.<u>Paints</u>:

Oilpaintsshallbeofthespecifiedcolouraridshade,andasapproved.Theready mixed paints shall only be used. However, if ready mixed paint ofspecified shade or tint is not available while ready mixed paint withapproved stained will be allowed. In such a case, the contractor shallensurethattheshadeofthepaintsoallowedshallbeuniform.

Allthepaintsshallmeetwiththefollowinggeneralrequirements

(i) Paint shall not show excessive setting in d freshly openedfull can andshalleasilyberedispresedwithapaddletoasmoothhomogeneousstate.The paintshall shownocurdling,livering,cakingorcolourseparationandshallbefreefromlump sandskins.

(ii) Thepaintsasreceivedshallbrusheasily,Possessgoodlevelingpropertiesandsh ownorunningorsaggingtendencies.

(iii) The paint shall not skin within 48 hour in a three quatereds filled closedcontainer.

(iv) The paint shall dry to the smooth uniform finish free from roughness,grift,unevennessandotherimperfections:

EnamelPaints:

The enamel paint shall satisfy in general requirements in specification ofoilpaints:EnamelpaintshallconformtoIS:latestedition.

M-45<u>FrenchPolish</u>

TheFrenchpolishofrequiredtintandshadeshallbepreparedwiththebelowment ionedingredientsandothernecessarymaterials

(i) Denaturedspiritofapprovedquality(ii)Chandras(iii)Pigment.

TheFrenchpolishsopreparedshallconformtoIS:Latestedition.

TestingMethod

FirePropagationTest	Class–0	B.S.476PART-6
Flamespread	Class1(0-25)	ASTM–E84
	Class-A	U.S.FederalSpec. SS.-S-118-b
	20	UnderwritersLaboratoriesInc.
	Class-1	BS.476Part-7
Thermalconductivity	0.045Kcal/mh^{0}C	JISA1412
Lightreflectance	LR-1(Over80%)	ASTM.C523
NRC	0.55-0.70	ASTM.C423
CAC	36	ASTM.E413

I. Size, thickness and otherspecialrequirement shall bespecifiedintheitemspecification.Thefabricationshallbedoneasdirected.

SignatureofContractor

ItemNo.1:
ExcavationofFoundationinSoftMurrum,SoilorSandfrom0.0 mtr.to 1.50 mtr depth including lifting and laying asinstructed

General:
Anysoilwhichgenerallyyieldstotheapplicationofthepickaxes and shovels, phawaras rakes or any such ordinary excavation implementororganicsoil,gravel, slit, sand turf lawn, clay, peat etc. fall under this category.

Cleaningthesite:
The site on which the structure is to be built shall be cleared, and all obstructions, loosestone,materialsandrubbishof all kind,bush, woodandtreesshallberemovedasdirected.Thematerialsso obtain shall be property of the governmentand shall be conveyed and stackedasdirectedwithin RMC limit. The roots of the tree coming in the sides shall be cut and coated with a asphalt.
Therateofsiteclearanceisdeemedtobeincludedintherateof earth work for which no extra will be paid.

3.0 Settingout:
Afterclearingthesite,thecenterlineswillbegivenbythe engineer-in-charge. Thecontractorshallassumefullresponsibilityforalignment,elevationanddi mensionandofeachandallpartsofthework.Contractorshallsupplylabors,ma terials,etcrequired for settingout the referencemarks and bench marks and shall maintain them as long as required and directed.

4.0 Excavation:
Theexcavationinfoundationshallbecarriedoutintruelineandlevelandshall have the width and depth as shownin the drawingsor as directed.The contractor
shalldothenecessaryshoringandstruttingorprovidingnecessaryslopesto a safeangle,athisown cost. The bottom of the excavated area shall be leveled both longitudinallyandtransverselyas directed by removing and watering as required.Noearthfillingwillbeallowedforbringingittolevel,if by mistakeor any other reason excavation is made deeper or wider than that shown on the planordirected. Theextra depth orwidth shall be made up with concrete of same proportion as specified for the foundationconcreteatthecostofthecontractor.Theexcavationupto 1.5 mt depth shall be measured under this item.

5.0 Disposaloftheexcavatedstuff:
The excavated stuff of the selected type shall be used in filling the trenches andplinth or leveling the ground in layers including ramming and watering etc.

The balance of the excavated quantity shall be removed by the contractorfromthesiteofworktoaplaceasdirectedwithinRMClimit and all lift.

After refilling, surplus earth shall have to carted by the contractor withinspecifiedlimitincludingloadingtransportingunloading spreading without any extra cost.

Thesurplusstuffshallbedisposedoffatthefollowingsites as directed within the prescribed limits of Notification as directed by the engineeringin charge.

1. BesideKothariaPoliceStationnearStoneQuarry
2. All QuarryareasofRaiyaSmartCity
3. TP Scheme No.10, FP-87, Dhebar Road (South), Atika Area, Nr. PGVCL Office
4. TPSchemeNo.23,FP-23,Nr.IOCGodown,MorbiRoad
5. TPreservationplotatSamratindustrialArea,Bh.STWorkshop
6. TPSchemeNo.9,FP-5,Nr.RaiyadharGarbageStation
7. TPSchemeNo.20,FP-35,Bh.PradhumanGreen
8. TPSchemeNo.28(Mavdi),FP-46/A,Nr.GETCOCircle
9. TP Scheme No.12, FP-38/A and 39/B, Nr. LijjatPapad, KothariyaNationla Highway

If the contractor fails to dispose the excavated stuff as specified, penalty will be imposed by Rajkot Municipal Corporation as per the Notification for C&D waste.

ModeofMeasurementandPayment:

Themeasurementofexcavationintrenchesforfoundationshallbemadeaccordingtothesectionsoftrenchesshownonthedrawingoraspersectionsgivenbytheengineer-in-charge.Nopaymentshallbemadeforsurplusexcavationmadeinexcessofaboverequirementorduetostoppingandslopingbackasfoundnecessaryonaccountofconditionsofsoilandrequirementsof safety.

TherateshallbeforaunitofonecubicMeter.

ItemNo.2:

A) Supplyingofhardmurrumbindingmaterial.

B) Spreadingbindageorroadcrustfillingthegapsinmetalandlevelingtocamberandgradientanddirectedmurrum.

A) Materialforthepurposeshallbeapprovedquality.Anymaterialwhich is foundinferior shall be rejected and contractor shall remove such rejected material from the site at his own cost.

The material shall be got approved by the CITY ENGINEER prior to collection on the site. It shall be free from all rubbish, dust and any organicmaterialsaswellas clouds of black cotton soils.

Forroadwork,completestockingofmaterialsasperrequirementsshallbe carried out 200 m length or as per condition of site or as per instructionsofsiteinchargebeforespreading.Thestacksofmaterials

shall be got cross checked by Dy.Ex.Engineer as per rules before spreading.

Where any doubt exists as whether quantity of stacking of murrumcorrectedbycontractor,no extra paymentshall be claimed by contractor. If the quantity of murrum in any stack found less than standardmeasurementviz;1.5cmt.The entire shall be paid on the basis of the quantity so found.

Thepaymentshallbeoncubicmeterbasiswithoutdeductionforvoids.Thecontractorshallmaintainallstacksinregularandpropersize till whole material shall not measure and finally accepted by the department.

Theratesincludescostofcollection,conveyancetothesitewithallleadandliftandfillingtheboxesincludingalllabours,tools, equipmentandotherexpenses. The ratesquotedareinclusiveof all such tools, duties, royalties, taxes etc.

B) Spreadingof material shall be started after the full supply in particular lengthiscollected,measuredandrecorded.PermissionofEngineer in-chargeshallbe obtained before spreading. It shall be seen that formationisdressedtorequiredcamberandgrade.Ifthemurrumis to be spread over the metaled surface then the spreading shall be uniformandasithastoactasbindingsurface.Itshallbeusedforfillingtheinterstices ofmetalandformingasmoothrunningsurface as faraspossible.Murrumbindageshallbespreadevenlywitha twisting motion ofthe baskets. No more murrum shall be used than specifiedasbindage.The contractor shall do good all unevenness, depression,projectionetc. during consolidationwork.Rate of these itemsincludesalltheseoperationexceptconsolidation.**Also,theworkistobecarriedoutwithMiniRoll/RoadRoller/ HandRollas may be requiredfor the workas per the requirementandinstructionsofengineerincharge.**Thepaymentshall be made on cubic meter basis.

The testingofmaterialistobecarriedoutbytheAgencyathisowncost.

ItemNo.3and4:
RCCwork1:2:4forcoppingusingaggregateofsize10-20mm,centring,curing, finishing etc. complete (without reinforcement) And
ProvidingandlayingcementconcreteinM-20or1:1½:3innominalmix(1cement:1½coarsesand:3gradedstoneaggregate20mm,nominalsize)curingcompleteexcludingreinforcementforreinforcedworkin(C) Slabs, landings shelves, balconies, lintels, chhajja,beams, girders and cantilever (E) Stair case

1.0 Materials:

WatershallconformtoM-1,cementshallconformtoM-2,Sandshall conformtoM-4,GritshallconformtoM-8.Gradedstoneaggregate20

mm,nominalsizeshallconformtoM-12.

2.0 General:

Theconcretemixisnotrequiredtobedesignedby preliminary tests. The proportionofconcretemixshallbe1:$1^1/_2$:3(1Cement:$1^1/_2$coarsesand: 3 graded stone aggregate) 20 mm nominal size) by volume.

Concrete work shall have exposed concrete surface or as specified in the item.

ThedesignationordinaryM-100,M-150,M-200,M-250specifiedasperIS correspond approximately to 1:3:6, 1:2:4, 1:$1^1/_2$:3 and 1:1:2 nominal mix of ordinary concrete by volume respectively.

The ingredients required for ordinary concrete containing one bag of cementof50Kgbyweight(0.0342Cu.M)fordifferentproportionsofmix shall be as under:

Gradeofconcrete	Total quantityof dry aggregate by volume per 50kgs of cement to be taken as the sum of individual volume of fineand coarse aggregates, max.	Proportion of fine aggregate to coarse aggregate	Quantityof water per50Kgs ofcement maximum
M-100(1:3:6) M-150(1:2:4) M-200 (1:$1^1/_2$:3) M-250(1:1:2)	300Litres 220Litres 160Litres 100Litres	Generally 1.2 for fine aggregate to coarseaggregateby volume but subject to an upper limit of 1:1.1/2andlower limit1:3	34Litres 32Litres 30Litres 27Litres

The water cement ratio shall not be more than specified in the above table. The cement concrete of the mix specified in the Table shall be increased if the quantity of water in mix has to be increased to overcome the difficulties of placements and compaction so that water cement ratio specified on the table is not exceeded.

Workability of the concrete shall be controlled by maintaining a water cement ratio that is found to give a concrete mix which is just sufficient wet to be placed and compacted without difficulty with the means available.

Themaximumsizeofcoarseaggregateshallbeaslargeaspossiblewithin the limits specified but in no case greater than one fourth of minimum thickness of the member, provided that the concrete can be placed withoutdifficultysoastosurroundallreinforcementthoroughlyandtofill the corners of the form.

2.7.For reinforced concrete work, coarse aggregates having a nominal size of 20 mm, are generally considered satisfactory.

Forheavilyreinforcedconcretemembersasinthecaseofribsmain

beams,thenominalmaximumsizeofcoarseaggregateshouldusuallybe restrictedto5mm,lessthantheminimumthedistancebetweenthemain bars, or 5 mm less than the minimum cover to the reinform or whichever is smaller.

Where the reinforcement is widely spaced as in solid slabs, limitations of sizeoftheaggregatemaynotbesoimportant,andthenominalmaximums izemaysometimesbeasgreaterasorgreaterthantheminimumcover.

Admixture may be used in concrete only with approval of engineer-in-chargebaseduponthеevidencethatwiththepassageoftime,neitherthe compressive strength of concrete is reduced nor are other requisite qualities of concrete and steel impaired by the use of such admixtures.

3.0 Workmanship:

Proportioning:

Proportioning shall be done by volume, except cement which shall be measured in terms of bags of 50 kg. weight the volume of one such bag being taken as 0.0342 cu.metre. Boxes of suitable size shall be used for measuring sand aggregate. the size of boxes (internal) shall be 35 x 25 cms,and40cmsdeepwhilemeasuringtheaggregateandsandtheboxes shall be filled without shaking ramming or hammering. The proportioning of sand shall be on the basis of its dry volume and in case of damp sand, allowances for bulkage shall be made.

Mixing:

For all work, concrete shall be mixed in a mechanical mixer which along withotheraccessoriesshallbekeptinfirstclassworkingconditionandso maintainedthroughouttheconstruction.Measuredquantityofaggregat e, sandandcementrequiredforeachbatchshallbepouredintothedrumof the mechanical mixer while it is continuously running. After about half a minute of dry mixing measured quantity of water required for each batch ofconcretemixshallbeaddedgraduallyandmixingcontinuedforanother one and a half minute. Mixing shall be continued till materials are uniformlydistributedanduniformcoloroftheentiremassisobtainedand eachindividualparticleofthecoarseaggregateshowscompletecoatingo f mortar containing its proportionate amount of cement. In no case shall themixingbedoneforlessthan2minutesafterallingredientshavebeen put into the mixer.

When hand mixing is permitted by the engineer-in-charge for small jobs or for certain other reasons, it shall be done on the smooth water tight platform large enough to allow efficient turning over the ingredients of concrete before and after adding water. Mixing platform shall be so arranged that no foreign material gets mixed with concrete nor does the mixingwaterflowout.Cementinrequirednumberofbagsshallbeplaced in a uniform layer on top of the measured quantity of fine and coarse aggregate, which shall also be spread in a layer of uniform thickness on themixingplatform.Drycoarseandfineaggregateandcementshallthen be mixed thoroughly by turning over to get a mixture to uniform color. Specified quantity of water shall then be added gradually through a rose

canandthemassturnedovertillamixofrequiredconsistencyis obtained.Inhandmixingquantityofcementshallbeincreasedby10 percent above that specified.

Mixers which have been out of use for more than 30 minutes shall be thorough cleaned before putting in a new batch. Unless otherwise agreed to by the engineer-in-charge the first batch of concrete form the mixture shall contain only two thirds of normal quantity of coarse aggregate. Mixingplantshallbethoroughlycleanedbeforechangingfromonetypeof cement to another.

Consistency:

Thedegreeofconsistencywhichshalldependuponthenatureofthework and the methods of vibration of concrete, shall be determined by regular slump tests in accordance with IS 1199 - Latest edition. The slump of 10 mmto25mmshallbeadoptedwhenvibratorsareusedand80mmwhen vibrators are not used.

Inspection:

Contractorshallgivetheengineer-in-chargeduenoticebeforeplacingany concrete in the forms to permit him to inspect and accept the false work and forms as to their strength, alignment, and general fineness but such inspection shall not relieve the contractor of his responsibility for the safetyofmen,machinery,materialsandforresultsobtained.Immediately before concreting, all forms shall be thoroughly cleaned.

Centeringdesignanditserectionshallbegotapprovedfromtheengineer- in-charge. One carpenter with helper shall invariably kept present throughouttheperiodofconcreting.Movementoflaborandotherpersons shall be totally prohibited for reinforcement laid in position. For access to different parts suitable mobile platforms shall be provided so that steel reinforcement in position is not disturbed. For ensuring proper cover, mortarblocksofsuitablesizeshallbecastandtiedtothereinforcement. Timber, kapachi or metal pieces shall not be used for this purpose.

TransportingandLaying:

The method of transporting and placing concrete shall be as approved. Concrete shall be so transported and placed that no contamination, segregation or loss of its constituent material takes place. All form work shall be cleaned and made free from standing water dust, show or ice immediatelybeforeplacingofconcrete.Noconcreteshallbeplacedinany partofthestructureuntiltheapprovaloftheengineer-in-chargehasbeen obtained.

Concretingshallproceedcontinuouslyoverthearebetweenconstruction joints.Freshconcreteshallnotbeplacedagainstconcretewhichhasbeen in position for more than 30 minutes unless a proper contraction joint is formed.Concreteshallbecompactedinitsfinalpositionwithin30minutes of its discharge from the mixer. Expert where otherwise agreed to by the engineer-in-charge concrete shall be deposited in horizontal layers to a compacteddepthofnotmorethan0.45meterwheninternalvibratorsare used and not exceeding 0.30 meter in all other cases.

Unless otherwise agreed to by the engineer-in-charge, concrete shall not be dropped in to place from a height exceeding 2 meters. When trunking or chutes are used they shall be kept close and used in such a way as to avoidsegregation.Whenconcretinghastoberesumedonasurfacewhich has hardened it shall be roughened swept clean, thoroughly wetted and coveredwitha13mmthicklayerofmortarcomposedofcementandsand inthesameratioasintheconcretemixitself.This13mmlayerofmortar shall be freshly mixed and placed immediately before placing of new concrete. Where concrete has not fully hardened all laitance shall be removed by scrubbing the wet surface with wire of bristle brushes care being taken to avoid dislodgement of any particles of coarse aggregate. The surface shall then be thoroughly wetted all free water removed and thencoatedwithneatcementgroutthefirstlayerofconcretetobeplaced on this surface shall not exceed 150 mm in thickness and shall be well rammed against old work particular attention being given to corners and close spots.

All concrete shall be compacted to produce a dense homogenous mass with the assistance of vibrators unless otherwise permitted by the engineer-in-charge for exceptional cases such as concreting under water where vibrators cannot be used. Sufficient vibrators in serviceable conditionshallbekeptatsitesothatspareequipmentisalwaysavailable in the event of breakdowns. Concrete shall be judge to be compacted whenthemortarfillsthespacesbetweenthecoarseaggregateandbegins to cream up to form an even surface mixture. During compaction, it shall beobservedthatneedlevibratorsarenotappliedonreinforcementwhich is likely to destroy the bond between concrete and reinforcement.

Curing:

Immediately after compaction, concrete shall be protected from weather including rain running water shocks vibration traffic rapid temperature changesfrostanddryingoutprocess.Itshallbecoveredwithwetsacking hassianorothersimilarabsorbentmaterialapprovedsoonaftertheinitial set and shall be kept continuously wet for a period of not less than 14 daysfromthedateofplacement.Masonaryworkoverfoundationconcrete may bestarted after 48 hours of its laying but curing of concrete shall be continued for a minimum period of 14 days.

Samplingandtestingofconcrete:

Samples from fresh concrete shall be taken as per IS 1199 - Latest edition,andcubesshallbemadecuredandtestedat7daysof28daysas per requirements in accordance with IS 516 - Latest edition. A random sampling procedure shall be adopted to ensure that each concrete batch shallhaveareasonablechanceofbeingtestedi.e.thesamplingshouldbespread overtheentireperiodofconcretingandcoverallmixingunits.The minimum frequency of sampling of concrete of each grade shall be in accordance with following:

Quantity of concrete in the work	No.ofsamples	Quantity of concrete in the work.	No.ofsamples
1-5cmt	1	16-30cmt	3

6-15cmt	2	31-50cmt	4
51andabove	4±oneadditionalforeachadditional50morparthereof		

NOTE:-At least one sample shall be taken from each shift. Ten test specimens shall be made from each sample five for testing at 7 days and the remaining five at 28 days. The samples of concrete shall be taken on each days of the concreting as per above frequency. The number of specimens may be suitably increased as deemed necessary by the engineer-in-charge when procedure of tests given above reveals a poor quality of concrete and in other special cases.

Theaveragestrengthofthegroupofcubescast for eachdayshallnotbe less than the specified cube strength of 150 Kg/Cm^2 at 28 days. 20% of the cubes cast for each day may have value less than the specified strength.Suchconcreteshallbeclassifiedasbelongingtotheappropriatelowergrade.Concretemadeinaccordancewiththeproportiongivenfora particular grade shall not, however, be placed in a higher grade on the ground that the test strength are higher than the minimum specified.

Stripping:

The engineer-in-charge shall be informed in advance by the contractor of his intention to strike the form work. While fixing the time for removal of form,dueconsiderationshallbegiventolocalconditions,characterofthe structure, the weather and other conditions that influence the setting of concrete and of the materials used in the mix. In normal circumstances (generally where temperatures are above 20^0C) and where ordinary concrete is used, forms may be struck after expiry of periods specified below for respective item of work.

StrippingTime:

In normal circumstances and where ordinary cement is used forms may be struck after expiry of following periods:

a) Sideofwalls,columnsandverticalfacesofbeams-24to48hours
b) Beamsoftish(props.leftunder) -7days
c) Removalofpropsslabs:
   i) Slabsspanningupto4.5m -7 days
   ii) Spanningover4.5m -14days
d) Removalofpropsforbeamsandarches
   i) Spanningupto6m -14days
   ii) Spanningover6m -21days

All form work shall be removed without causing any shock orvibration as would damage the concrete. Before the soffit and struts and struts are removed, the concrete surface shall be gradually exposed, where necessary in order to ascertain that concrete has sufficiently hardened.

Centeringshallbegraduallyanduniformlyloweredinsuchamannerasto permit the concrete to take stresses due to its own weight uniformly and gradually. Where internal metal ties are permitted, they or their removable parts shall be extracted without causing any damage to the concreteandremainingholesfilledwithmortar.Nopermanently

embedded metal part shall have less 25 mm cover to the finished concretesurface.Whereitisintendedtore-usetheformwork,itshallbe cleaned and made good to the satisfaction of the engineer-in-charge. After removal of work and shuttering, the City Engineer shall inspect the work and satisfy by random checks that concrete produced is of good quality.

Immediately after the removal of forms, all exposed bolts etc. passing through the cement concrete member and used for shuttering or any otherpurposeshallbecutinsidethecementconcretemembertoadepth of at least 25 m below thesurfaceof the concrete and theresultingholes be filled by cement mortar. All fins cussed by form joints, all cavities producedbytheremovalofformtiesandallotherholesanddepressions, honeycomb spots, broken edges or corners and other defects, shall be thoroughly cleaned, saturated with water and carefully pointed and rendered true with mortar of cement and fine aggregate mixed in proportions used in the grade of concrete that is being finished and of as dry consistency as is possible to use. Considerable pressure shall be applied in filling and pointing to ensure through filling in all voids. Surfaceswhicharepointedshallbekeptmoistforaperiodof24hours.If pockets/honeycombsintheopinionoftheengineer-in-chargeareofsuch anextentorcharacterastoaffectthestrengthofthestructurematerially or to endanger the life of the steel reinforcement, he may declare the concrete defective and require the removal and replacement of the portions of structure affected.

(a) thebarsshallbekeptinpositionbythefollowingmethods:

(i) Incaseofbeamandslabconstruction,sufficientnumberofprecast cover blocks in cement mortar 1 :2 (1 cement : 2 coarse sand) about 4 x 4 cms. section and of thickness equal to the specified cover shall be place between the bars and shuttering as to secure and maintain the requisite cover of concrete over the reinforce- ment. In case of cantilevered or doubly reinforce beams or slabs, the main reinforcing bars shall be held in position by introducing chain spacers or supports bars at 1.0. to 1.2 metres centers.

(ii) In case of columns and walls, the vertical bars shall be kept in position be means of timber templates slotes accurately out in them, the templates shall be removed after concreting has been done below it. The bars Ray also suitably tied by means of annealed steel wires to the shuttering to maintain position during concreting.

1.2.Allbars,projectingformpillars,Columnsbeams,slabsetc,towhich other bars and concrete are to be attached or bounded to later on, shall be protected with a coat of thin neat cement grout, if the bars are not likely to be incorporated with succeeding mass of concrete within the following10days,Thiscoatofthinneatcementshallberemoved before concreting.

Modeofmeasurements&payment.

The consolidated cubical contents of concrete, work as specified in item shall be measured. The concrete laid in excess of sections shown on drawing or as directed shall not be measured. No deduction shall be made forI

(a) Ends of dis-simmilar materials such as joints, beams, posts, girders, rafters, purline trusses, corbels and steps etc. upto 500 sq.cm. insection,
(b) Openingupto0.1Sq.M.

The rate includes cost of all materials labour, tools and plant requited for missing, placing in position, vibrating and compacting, finishing, as directed. curing and all other incidental expenses for producing concrete of specified strength. The rate excludes the cost of formwork.

4.3Therateshallbefora unitofonecubicmeter.

ItemNo.5:
BrickWork

Materials:
WatershallconformtoM-1.

Cement:
CementshallconformtoM-3.

Brick:
The bricks shall be hard or machine moulded and made from suitable soils and burnt. They shall be free from cracks and flaws and nodules of free lime. They shall have smooth rectangular faces with sharp corners and shall be of uniform colors.

The bricks shall be moulded with a frog of 100 mm x 40 mm and 10 mm to 20 mmdeepononeofitsflatsides.Thebricksshallnotbreakwhenthrownonthe ground from a height of 600 mm.
Thesizeofmodularbricksshallbe190mmx90mm.

Thesizeoftheconventionalbricksshallbeasunder:
(9"x4.3/8"x2,3/4")225x110x75mm

Only bricks of one standard size shall be used in one work. The following tolerances shall be permitted in the conventional size adopted in a particular work.

Length±1/8"(3mm)width:±1/16"(1.5mm) Height: ±
1/16" (1.5 mm)

The crushing strength of the bricks shall not be less than 35 kg/sq.cm. The average water absorption shall not be more than 20 percent by weight. Necessarytestsforcrushingstrengthandwaterabsorptionetc.,shallbecarried out as per IS: 3495 (Part I to IV) - latest edition.

Workmanship:

i)Proportion:

The proportion of the cement mortar shall be 1:6 (1-Cement, 6-Fine sand) by volume.

Wettingofbricks:

The bricks required formasonry shall be thoroughly wetted with clean water for about two hours before use or as directed. The cessation of bubbles, when the bricks are wetted with water is an indication of thorough wetting of bricks.

Laying:

Bricks shall be laid in English bond unless directed otherwise. Half or cut bricks shall not be used except when necessary to complete the bond; closer in such case shall be cut to required size and used near the ends of walls.

A layer of mortar shall be spread on full width for suitable length of the lower coarse.Eachbrickshallfirstbeproperlybeddedandsetframebygentlytapping with handle of trowel or wooden mallet. It's inside face shall be flushed with mortar before the next brick is laid and pressed against it. On completion of coarse the vertical joints shall be fully filled from the top with mortar.

The work shall be taken up truly in plumb. All coarses shall be laid truly horizontal and all vertical joint shall be truly vertical. Vertical joints in alternate coarse shall generally be directly one over the other. the thickness of brick coarse shall be kept uniform.

The brick shall be laid with frog upwards. A set of tools comprising of wooden straight edges, mason's spirit level, square half meter rub, and pins, string and plumbshallbekeptonsiteofworkforfrequentcheckingduringtheprogressof work.

Both the faces of walls of thickness greater than 23 cms shall be kept in proper place. All the connected brick work shall be kept not more than one meter over the rest of the work. Where this is not possible, the work shall be raked back according to bond (and not left toothed) at an angle not steeper than 45 degrees.

All fixtures, pipes, outlets of water, hold fasts of doors and windows etc. which are required to be built in wall shall be embedded in cement mortar.

Joints:

Bricks shall be so laid that all joints are quite flush with mortar. Thickness of joints shall not expose 12 mm. The face joints shall be raked out as directed by raking tools daily during the progress of work when the mortar is still green so as to provide key for plaster or pointing to done.

The face of brick shall be cleaned the very day on which the work is laid and all mortar dropping removed.

Curing:

Greenworkshallbeprotectedfromrainsuitably.Masonryworkshallbekept

moist on all thefaces for a period of seven days. Thetop of masonry workshall be kept well wetted at the close of the day.

Proportionoffoundationbed:

If the foundation is to be laid directly on the excavated bed, the bed shall be leveled,clearedofallloosematerials,cleanedandwettedbeforestringmasonry is to be laid on concrete footing, the top of concrete shall be cleaned and moistened.Thecontractorshallobtaintheengineer'sapprovalforthefoundation bed before foundation masonry is started. When precast flooring is to be provided flush with the top of plinth, the inside plinth offset shall be kept lower than the outside plinth top by the thickness of the following.

Modeofmeasurement&Payment:

The measurement of this item shall be taken for the brick masonry fully completed in foundation upto plinth. The limiting dimensions not exceeding those shown on the plains or as directed shall be final. Battered tapered and curved position shall be measured net.

ItemNo.6:
20mm.thicksandfacecementplasteronwallsandRCCstructureuptoheightof10mt.andaboveground levelconsistingof12mmthickbackingcoatingofC.M.1:3(1cement:3sand)and8mmthickfinishing coatinC.M.1:2(1cement:2sand)etc.complete

Material:

WatershallconformtoM-1.
CementMortarshallconformtoM-11

Workmanship:

Theworkshallbecarriedoutinthecoats.Thebackingcoat(basecoat)shallbe 12 mm thick in C.M. 1:3. The relevant specification is below:

Scaffolding:

Woodenbullies, bamboos, planks, treatles and other scaffoldingshallbesound. Theseshallbeproperexaminedbeforeerectionanduse.Stagescaffoldingshall be provided for ceiling plaster which shall be independent of the walls.

Preparationofbackground:

Thesurfaceshallbecleanedofalldust,loosemortar,droppings,tracesofalgar, efflorescence and other foreign matter by water or by brushing if it is not hard and by hacking if it is hard. In case of concrete surface, if a chemical retarder hasbeenappliedtotheformwork,theshallberoughedbywirebrushingandall theresultingdustandlooseparticleclearedoffandcareshallbetakenthatnone of the retarders is left on the surface. Trimming of projections on brick / concrete surfaces where necessaryshallbecarried out to get on even surface.

Raking of joints in case of masonry where necessary shall be allowed to dry out for sufficient period before carrying out the plaster work.
The work shall not be soaked but only damped evenly before applying the plaster. If the surface becomes dry, such are shall be moistened again.

Forexternalplaster,theplasteringoperationshallbestartedfromtopfloorand

carrieddownwardsforinternalplaster,theplasteringoperationsmaybestarted whenever the building frame and cladding work are ready and the temporary supports of the ceilings on the wall of the floor have been removed. Ceiling plaster shall be completed before starting plaster to walls.

Theplasterabout15x15cmsshallbefirstappliedhorizontallyandverticallyat notmorethan2metersintervalsovertheentiresurfacetoserveasgauge.The surfacesofthesegaugesshallbetrulyinplaneofthefinishedplasteredsurface. the mortar shall than be applied in uniform surface slightly more than the specifiedthickness,thenbroughttoatruesurfacebymarkingawoodenstraight edgereachingacrossthegaugeswithsmallupwardandsidewaysmovementsat a time finally the surface shall be finished off true with a trowel or wooden float according as a smooth or a sandy granular texture is required. Excessive troweling or over working the float shall be avoided. All corners, arises angles andjunctionsshallbetrulyverticalorhorizontalasthecasemaybeandshallbe carefullyfinished.Roundingorchamferingcorners,arisesjunctionsetc.shallbe carried out with proper templates to the size required.

Cementplastershallbeusedhalfanhourafteradditionofwater,andmortaror plaster which is partially set shall be rejected and removed forthwith from the site.

In suspending the work at the end of the day, the plaster shall be left out clean tothelinebothhorizontallyandvertically.Whenrecommencingtheplaster,the edges of the old work shall be scrapped clean and wetted with cement putty beforeplasterisappliedtotheadjacentareastoenablethetwotoproperlyjoin together. Plastering work shall be closed at the end of the day on the body of features such as plaster bonds and cornices nor at the corners or arises. Horizontaljointsinplasterworkshallnotalsooccuronparapettopsandcopings as these invariably lead to leakage. No portion of the surface shall be left out initiallybepackeduplaterontheoutsideoftheplasterandkeepingthem wet.

Thethicknessofbackcoatshallbe12mmaverage.Beforethefirstcoathardens its surface shall be beaten up by edges of wooden tapers and close dents shall bemadeonthesurface.Thesubsequentcoatshallbeappliedafterthiscoathas beenallowedtosetfor3to5daysdependinguponthe weatherconditions.The surface shall not be allowed to dry during this period.

the second coat be started over right after finishing of plaster. The plaster shall be keptwet for aperiodof7days.Duringthisperiod, itshallbeprotected from all damages.

Modeofmeasurements&Payments:

The rate shall include the cost of all materials labour and scaffolding etc. involved in the operations described under workmanship.

All plaster shall bemeasured in squaremeter unless otherwisespecified length, breadth or height shall be measured correct to a centimeter.

Thickness of the plaster shall be exclusive of the thickness of the key i.e. groovesoropenjointsinbrickwork,stoneworketc.orspacebetweenlaths.

Thickness of plaster shall be average thickness with minimum 10 mm at any point on this surface.

Thisitemincludesplasteringuptofloortwolevel.

Themeasurementofwallplasteringshallbetakenbetweenthewallsorpartition (dimensions before plastering being taken) for length and from the top of floor or skirting to ceiling for height, depth of cover of cornices, if any, shall be deducted.

Soffitsofstairsshallbemeasuredasplasteringonceilings.Elowignssoffitsshall be measured separately.

Forjambs,soffits,sides,etc.foropeningsnotexceeding0.5sq.mt.eachinarea for ends of joints, beams, posts girders, steps etc. not exceeding 0.5 sq.mt. each in area and for openings exceeding 0.5 sq.mt. and not exceeding 3.00 sq.mt. in each area deductions and additions shall be made in the following manner:

a) No deductions shall be made for ends of joints, beams, posts etc. and openingsnotexceeding0.5sq.mt.eachandnoadditionshallbemadefor reverse, jambs, soffits, side etc. of these openings, for finish to plaster around ends of joints, beams, posts etc.

b) Deductions for openings exceeding 0.5 sq.mt. but not exceeding 3.00 sq.mt. each shall be made as following and no addition shall be made for reverse, joints, soffits, sides, etc. of these openings.

   i) When both faces of all walls are plastered with same plaster. Deductions shall be made for one face only.

   ii)
   - For openings having door squares equal to or projecting beyond the thickness of wall. Full deduction for opening shall be made from each plastered face of the wall.
   - In case of openings of area above 3 dq.mt. each deduction shall be made for opening but Jambs, soffits and slits shall be measured.
   - Therateshallbeforaunitofsquaremeter.

ItemNo.7:
CementPlasterWithNeeru+CementFinish

Material:
WatershallconfirmtoM-1.
CementMortarshallconfirmtoM-11

Workmanship:
12mm thick cement plasterinsingle coat in CM 1:3 (1-cement : 3-sand) with a floating coat of neat cement slurry.

Scaffolding:
Wooden bullies, bamboos, planks,treatlesandotherscaffoldingshallbe sound.

Theseshallbeproper examined beforeerectionanduse. Stagescaffoldingshall be provided for ceilingplasterwhichshallbeindependentofthewalls.
This kind of Plaster is normally for interior side or as specified location by Consultanttobeappliedasabove.NORMALCEMENTPLASTERandthe surface shall be rubbed smooth after coating it with a thick coat of pure Portland cement slurry while the base coat is still fresh. If Neeru plus cement finish is specified floating with neat cement willnot be required.

ModeofMeasurement&Payment:
The rate shall include the cost of all materials labour and scaffolding etc. involved in the operationsdescribed under workmanship.

All plaster shall be measured in squaremeter unless otherwisespecifiedlength, breadth or height shall be measuredcorrect toa centimeter.

Thickness of the plaster shall be exclusive of the thickness of the key i.e. grooves or openjoints in brick work, stone work etc. or space between laths. Thickness of plaster shall be average thickness with minimum 10 mm at any point on this surface.

Thisitemincludesplasteringuptofloortwolevel.
Themeasurementofwallplasteringshallbetakenbetweenthewallsorpartition (dimensions beforeplasteringbeingtaken)forlengthandfromthetopof floor or skirting toceiling for height, depthofcoverofcornices, if any, shall be deducted.

Soffitsofstairsshallbemeasuredasplasteringonceilings.Elowignssoffitsshall be measured separately.

For jambs, soffits, sides, etc. for openings not exceeding 0.5 sq.mt. each in area for ends of joints,beams, posts girders,stepsetc.not exceeding0.5 sq.mt.eachinareaandforopeningsexceeding0.5sq.mt.andnotexceeding 3.00 sq.mt. in each area deductionsandadditionsshallbemadeinthefollowingmanner:

a) No deductions shall be made for ends of joints, beams, posts etc. and openings not exceeding 0.5 sq.mt. each and no addition shall be made for reverse, jambs, soffits, side etc. of these openings, for finish to plaster around ends of joints, beams, posts etc.

b) Deductions for openings exceeding 0.5 sq.mt. but not exceeding 3.00 sq.mt.eachshallbemadeasfollowing and no additionshall be made for reverse, joints, soffits, sides, etc. of theseopenings.

   i) When both faces of all walls are plastered with same plaster. Deductionsshallbe made for one face only.

   ii)
   - ✓ For openings having door squares equal to or projecting beyond the thickness of wall. Full deduction for opening shall be made from each plastered face of the wall.
   - ✓ In case of openings of area above 3 dq.mt. each deduction shall be made for opening but Jambs, soffits and slits shall be measured.

Therateshallbeforaunitofsquaremeter.

ItemNo.8:
Apply3coatofputtyofbrandsasianpaints,JK,Birlacompanyafter12mmroughplasterincludingmaterialandlabourofapprovedbrandand manufacture on new wall surface to give an even shadeincludingthoroughlybrushingthesurfacefreefrommortardroppingand other foreign matter and sand papered smooth.

Inordertoachieveasuperiorfinishedsurface,puttypastefillersshallbeusedon,allsurfacestobepainted.Tofillpores,dents,etc.Theputty/ pastefillersshallbeapprovedqualityandmanufactureandshallbeapplied tothesurfacewithaknifeorothersharpedgedtoolsaftertheprimingcoat as well as after each undercoat. The surface, after filling with putty / paste tiller, shall be rubbed down with fine sand paper and dusted off before the application of the subsequent coat.

Therateforthisitemwillbepaidononesquaremeterbasis.

ItemNo.9:
PlasticEmulsionpaint(twocoats)(AsianPaint,ICI,Dulux,Nerolac,Berger,etc.ofapprovedtype(withprimecoat):

Materials:
Theenamelpaintshallsatisfyingeneralrequirementsinspecificationsofoil paints. Enamel paint shall confirm to I S Latest edition.

Workmanship:
Thematerialsrequiredforworkofpaintingworkshallbeobtaineddirectly from approved manufacturer or approved dealer and brought to the site in maker's drum, bags etc. with seal unbroken.

All materials not in actual use shall be kept properly protected, lids ofcontainers shall be kept closed and surface of paint in open or partially open containerscoveredwithathinlayerofturpentinetopreventformationof skin. Thematerials which have become state or flat due to improper and long storageshallnotbeused.Thepaintshallbestirredthoroughlyinits container before pouring into small containers. While applying also, the paint shallbecontinuouslystirredinsmallercontainer.Noleftoverpaintshallbeputbackintostoretins.Whennotinuse,thecontainersshallbekept properly closed.

Ifforanyreasons,thinningisnecessary,thebrandofthinnerrecommended by the manufacturer shall be used.

Thesurfacetobepaintedshallbethoroughlycleanedanddusted.Allrust, dirt and grease shall be thoroughly removed before painting is started. No paintingon exterior or other exposed parts of the work shall be carried out in wet, damp or otherwise unfavourable weather and all the surfaces shall be thoroughly dry before painting work is started.

Applicationofpaint:

Brushing operations are to be adjusted to the spreading capacity advised bythe manufacturer of particular paint. The paint shall be applied evenly and smoothly by means of crossing and laying off. the crossing and laying of consistsofcoveringtheareaoverwithpaint,brushingthesurfacehardfor the first time over and then brushing alternately in opposite directions two or threetimesandthenfinallybrushinglightlyinadirectionatrightangelsto the same. In this process, no brush marks shall be left after the laying off is finished.Thefullprocessofcrossingandlayingofwillconstituteone coat.

Eachcoatshallbeallowedtodrycompletelyandlightlyrubbedwithvery fine grade of san paper and loose particles brushed off before next coat is applied.Eachcoatshallvaryslightlyinshadeandshallbegotapproved from the engineer-in-charge before next coat is started.

Eachcoatexceptthelastcoatshallbelightlyrubbeddownwithsandpaperoffinepumices toneandclearedofdustbeforethenextcoatisapplied.Nohairmarksfromthebrushorclo ggingofpaintpuddlesinthecornersof panels, angles of moulding etc. shall be left on the work.

Specialcareshallbetakenwhilepaintingoverbolts,nuts,rivets,overlaps etc. Approved best quality brushes shall be used.

Modeofmeasurementandpayment:

Thenewsteelandothermetalsurfaceshallbemeasuredunderthisitem.
Alltheworkshallbemeasurednetinthedecimalsystemasexecutedsubjecttothefollow inglimitsunlessotherwisestatedhereinafter.

a) Dimensionsshallbemeasuredtothenearest0.01meter.
b) Areasshallbeworkedouttothenearest0.01meter.

Nodeductionsshallbemadeforopeningsnotexceeding0.5sq.m.eachand no addition shall be made for painting to beddings, moulding, edges, jambs, soffits, sills etc of such opening.

Incaseoffabricatedstructuralsteelandironwork,primingcoatofpaint shall be included with fabrication. In case of trusses, if measured is sq.mcompoundgriders,stanchions,lattices,girderandsimilarwork,actualare shallbemeasuredandnoextrashallbepaidforpaintingonboltsheads, nuts, washers etc. No addition shall be made to the weight calculated for the purposeofmeasurementsofsteelandironworksforpaintappliedonshop or at site.

Thedifferentsurfacesshallbegroupedintoonegeneralitem,areasof unevensurfacesbeingconvertedintoequivalentplainareasinaccordance with the table given as per Annexure-II for payment.

Therateisincludingprimingcoat.

Therateshallbeforaunitofonesquaremeter.

ItemNo.10:
Apex Color work on Outer side of Wall (Two coats) (with Base Coat)FINISHES

EXTENTANDINTENT

TheContractorshallsupplyallmaterials,labour,tools,ladders,scaffolding andotherequipmentnecessaryforthecompletionandprotectionof all painting / finishing work. Painting& finishing, as herein specified shall be appliedtoallsurfacesrequiringpainting/finishingthroughouttheinterior andexteriorofthebuildingsasgiveninthescheduleoffinishesorelsewhere.Thepaintin g/finishingshallbecarriedoutbyaspecialistworkers,approvedbytheEngineer-in-chargeofRMCforthis work.

STORAGE

Storage of materials to be used on the job shall be, only in a single place approvedbytheEngineer-in-chargeofRMCforthiswork.Suchstorage placeshallnotbelocatedwithinanyofthebuildingsincludedinthecontract.

MATERIALS

Materialsusedintheworkshallbeofmanufactureapprovedbythe Engineer-in-charge of RMC for this work, Ready mixed paints, varnishes, enamels,lacquers,stains,pastefillers,distempersandothermaterialsmust bedeliveredtothejobsiteintheoriginalcontainers,withthesealsunbrokenandlabelsin tact.Eachcontainershallgivethemanufacturer'sname,typeofpaint,colorofpaintandi nstructionsofreducing.Thinningshallbedoneonlyinaccordancewithdirections&man ufacturer's specification.Removerejectedmaterialsimmediatelyfromthepremises.

SHADES

All shades, as provided in the shade schedule, shall be approved by the Engineer- in-charge of RMC for this work. The Contractor shall as far aspossibleusepre-mixedmanufacturer'sshadesandshallpreparesampleof theshadesselectedandsubmitsameforapprovalbytheEngineer-in-charge ofRMC for thiswork. Noworkis to proceeduntiltheEngineer-in-chargeof RMC for this work has given his approval, preferably in writing, of the shade samples.

COMMENCEMENTOFWORK

Painting / finishing shall not be started until the surfaces to be painted / finishedareinaconditionfittoreceivepainting/finishingandsocertified by the Engineer-in-charge of RMC for this work.

Painting/finishingworkshallbetakeninhandonlyafterallothercivilwork is completed.

Buildingswherepainting/finishingworkistocommencedshallbethoroughlysweptand cleanedupbeforecommencementofpainting/ finishing.

SCAFFOLDING

Only double scaffolding having two sets of vertical supports shall be provided for all, painting / finishing work. The supports shall be tied together with horizontal pieces overwhich the scaffolding planks shall be fixed.

All the vertical and horizontal members of the scaffolding shall be placed sufficiently away from the surfaces to be painted to ensure proper and unit erupted application.

WORKMANSHIP

The workmanship shall be of the very best; all materials evenly spread and smoothly flowed as without running sags, using good quality tools, brushes, etc., as required. Only skilled painters / applicators shall be employed. A properly qualified foreman shall be constantly on the job whilst the work is proceeding. All surfaces to be painted / finished shall be cleaned free of allloosedirtanddustbeforepainting/finishingisstarted.AIIworkwherea coat of material has been applied must be inspected and approved before application of the succeeding specified coat. Each undercoat shall be distinct shade of the approved color.

Before painting / finishing, remove hardware, accessories, plates and similar items or provide portion to all such items. Upon completion of each space, replaceallfixturesremoved.Removedoorsifnecessarytopaintbottom edge. Use only skilled mechanics for the removal and replacement of above items.

CONCEALEDSURFACES

All interior and exterior trim, door frames, doors, shelving, cabinet work shallbe thoroughly andcarefully back painted as all surfaces and edges which willbe concealed when installed. Such surfaces shall be clean, dry, sanded and properlypreparedtoreceivethepaint.Tops,bottomandedgesofdoors shall be finished same as the rest of the door.

PROTECTANDCLEAN

The agency shall protect not only his own work at all times, but shall also protectalladjacentworkandmaterialsbysuitablecoveringduringprogress ofhiswork.Uponcompletionofhiswork,heshallremoveallpaintandvarnishspotsfromf loors,glassandothersurfaces.Anydefacedsurfaces shall be cleaned and the original finish restored. He shall remove from the premises all rubbish and accumulated material and shall leave the work in clean, orderly and acceptable conditions.

PREPARATIONOFSURFACES

PLASTER WORK: Fill all holes, cracks and abrasions with plaster of parish / cementslurryasdirected,properlypreparedandappliedandsmoothedofftomatchadj oiningsurfaces.Donotusesandpaperonplastersurfaces. Plaster shall be allowed to dry for at least 12 (twelve) weeks before the application of paint / finishes.

STEEL AND IRON: All surfaces shall be washed with mineral spirits to remove anydirtorgreasebeforeapplyingpaint.Whererustorscaleispresent,it shall be wire brushed and sand papered clean. All cleaned surfaces shall be givenonecoatofapprovedphosphatebeforeprimecoatinaccordancewith

themanufacturers,Instructions.Shopcoatsofpaintthathavebecome marred shall be cleaned off, wire brushed, and spot primed over the affected areas.

APPLICATION

Thepaintshallbecontinuouslystirredinthecontainersothatitsconsistency is kept uniform throughout.

The painting / finishing shall be laid on evenly and smoothly by means of crossingandlayingoff,thelatterinthedirectionofthegrainofthewood. The crossing and laying off consists of covering the area with paint, brushing the surface hard for the first time and then brushing alternatively in opposite directions,twoorthreetimesandthenfinallybrushinglightlyinadirection at right angles to the same. In this process no brush marks shall be left after the laying off is finished. The full process of crossing and laying off will constitute one coat.

Where so stipulated, the painting / finishing shall be carried out using spray machinessuitedforthenatureandlocationoftheworktobecarriedout. Onlyskilledandexperiencedworkmenshallbeemployedforthisclassof work. Paints used shall be brought to the requisite consistency by adding a suitable thinner. Spraying shall be carried out only in dry conditions. Noexterior painting / finishing shall be done in damp foggy or rainy weather. Surface to be painted shall be clean, dry, smooth and adequately protected from dampness. Each coat shall be applied in sufficient quantity to obtain complete coverage, shall be well brushed and evenly worked out over theentire surface and into all corners, angles and crevices allowed to thoroughly dry. Second coat shall be of suitable shade to match final color, and shall be approved by the Engineer-in-charge of RMC for this work before final coat is started. Allow at least 48 hours drying time between coats for interior and 7 daysforexteriorwork,andifinthejudgmentoftheEngineer-in-chargeofRMCforthisworkmoretimeisrequesteditshallbeallowed.Finished surfaces shall be protected from dampness and dust until completely dry. Finishedworkshallbeuniformofapprovedcolor,smoothandfreefrom runs, sags, defective brushing and clogging. Make edges of paints adjoining materials of colors sharp and clean, without overlapping.

Inordertoachieveasuperiorfinishedsurface,puttypastefillersshallbeusedon,allsurfacestobepainted.Tofillpores,dents,etc.Theputty/ pastefillersshallbeapprovedqualityandmanufactureandshallbeapplied tothesurfacewithaknifeorothersharpedgedtoolsaftertheprimingcoat as well as after each undercoat. The surface, after filling with putty / paste tiller, shall be rubbed down with fine sand paper and dusted off before the application of the subsequent coat.

Paste wood filler when set shall be wiped across the grains of the wood and then with the grain to secure a clean surface. Surface to be stained shall be covered with uniform coat of stain wiped off if required.

FINISH: The painted surfaces shall be finished to require texture. Matt finish shallbeachievedbyuseofspongerollersorstipplingbrushesascalledfor.

Therateshallbepaidforaunitofonesquaremeterbasis.

ItemNo.11:
Providing & laying Vitrified Tiles for flooring work in 1st Qualitysupplyandfixingofvitrifiedtilesflooringworkofsizemorethan 0.60x0.60mtr(1stquality)

Materials
Approvedqualityvitrifiedtilesasapprovedbyengineer-in-charge/architect.

BEDDING

Thesub-gradeshallbecleaned,wettedandmopped.Thebeddingshall then be laid evenly over the surface tamped and corrected to desired level and allowed to harden enough to offer a rigid cushion to tiles and to enable themasontoplacewoodenplanksacrossandequalon it.

The Color vitrified tiles shall be laid on cement mortar bedding of 10 mmthick in C.M. 1:3. The mortar shall have sufficient plasticity for laying and there shall be no hard lumps that would interfere with the evenness of bedding.Thebaseshallbeclearedandwellwetted.Themortarshallthen bespreadinthicknessnotlessthan10mmatanyplaceandaverage 12mmthickness.Theproportionofthecementmortarshallbeasspecified in the item.

FIXINGTILES

The tiles before laying shall be soaked in water for at least two hours. Neat grey cement grout at 3.3Kg. Cement/ Sq. Mt. of honey likeconsistency shall be spread over the mortar bedding as directed. The edges of the tiles are smeared with neat cement slurry. The tiles shall be well pressed and gentlytappedwithawoodenmallettilltheyareproperlybeddedandinlevelwiththead joiningtiles.Thereshallbenohollowsinbedorjoints.
Thejointsbetweenthetilesshallbeasthinaspossibleinstraightlineor as per pattern.

The tiles shall not have staggered joints. The joints shall be true to centreline both ways. The Nahni trap coming in the flooring shall be so positioned that its grating shall replace only one tile as far as possible. Where full size tiles cannot be fixed, they shallbe cut (Swan) to the required size and the edgesrubbedsmoothtoensurestraightandtruejoints.Thejointsshall bee filled with grey cementgrout with wire brush of trowel to a depth of5mm and loose material removed. White cement shall be used for pointing the joints. After fixing the tile finally in an even plane the flooring shall be keptwet and allowed to nature undisturbed for 7 days.

CLEANING

The surplus cement grout that may have come out of the joints shall be clearedoffbeforeitsets.Oncethefloorhasset,itshallbecarefullywashed,clearedbyd iluteacidanddried.Properprecautionandmeasures

shall be taken to ensure that the tiles are not damaged many ways till the completion of the construction.

ModeofMeasurement:

Therateforflooringworkshallbepaidonsquaremeterbasis.

ItemNo.12:

Providingandlayingglazedtilesof6mmthickofapprovedquality (1st quality)ofrequiredsizejointedwithcementpasteon12mmthickcement plaster1:3(1-cement3-Coarsesand)pointingwhitecementandjointedwithwhitecementslurry

MATERIALS

GlazedTiles

The tiles shall be of best quality as approved by the Engineer- in-charge. They shall be float and true to shape. They shall be free from cracks, crazing spots, chipped edges and corners.Theglazingshallbeofuniformshade.

Variationfromthestatedsizes,otherthanthethicknessoftileshallbeplusorminus 1.5 mm.Thethicknessoftileshallbe6mmexceptasabovethe tiles shall confirm to I.S. Latest edition.

BEDDING

The sub-grade shall be cleaned, wetted and mopped.Thebeddingshall then be laid evenly over the surface tamped and corrected to desired level and allowed to harden enough to offer a rigid cushion to tiles and to enable the mason to place wooden planks across and equal on it.

The Color glazedtilesshallbelaid oncementmortarbeddingof12 mmthickin C.M. 1:3.Themortarshall have sufficientplasticityforlaying and thereshall be nohardlumpsthatwouldinterferewiththeevennessofbedding.Thebaseshall be cleared and well wetted. The mortar shall then be spread in thicknessnot lessthan10mmatanyplaceandaverage12mmthickness.Theproportion ofthe cement mortarshall be as specified in the item.

FIXINGTILES

Thetilesbeforelayingshallbesoakedinwaterforatleasttwohours. Neat grey cement grout at 3.3 Kg. / Cement / Sq.Mt. of honey like consistency shall be spread over the mortar bedding as directed. The edgesofthetilesare smeared withneatcementslurry.Thetilesshallbewellpressedandgentlytapped with a woodenmallettilltheyareproperlybedded and inlevelwiththeadjoining tiles. There shall be no hollows in bed or joints. The joints between the tiles shall be as thin as possible in straight line or as per pattern.

The tiles shall not have staggered joints. The joints shall be true to centre line both ways. The Nahnitrap coming in the flooring shall be so positioned that its grating shall replace only one tile as far aspossible. Wherefull size tiles cannot be fixed, they shall be cut (Swan) to the required size and the edges rubbed smooth to ensure straight and true joints. The joints shall bee filled with grey cementgroutwithwirebrushoftroweltoadepthof5mmandloosematerial

removed.Whitecementshallbeused for pointingthejoints. Afterfixing the tile finally in an even plane the flooring shall be kept wet and allowed to nature undisturbed for 7 days.

CLEANING

Thesurpluscementgroutthatmay have comeoutofthejointsshallbe cleared off before it sets.Oncethe floor has set, itshallbe carefully washed, cleared by diluteacidanddried.Proper precaution and measures shall be taken to ensurethat the tilesare not damagedmanywaystillthecompletionof the construction.

Therateforthisitemwillbepaidononesquaremeterbasis.

ItemNo.13:
Providing&FixingOrissaPanW.C.&Europeantypeofappropriatemakeincl."P"or"S"trapasrequiredalongwithdrainconnectionandallthenecessaryfixturesandhalfturnflushcocketc.ofsize580mmx440mmcompleted asdirected.

MATERIALS

Orissatypewatercloset:

The specification of Orissa type white glazed water closet of first quality shall conformtoIS:latesteditionandrelevantspecificationofIndiantypewaterclosetexcept thatpanwillbewiththeintegralsquattingpanofsize 580x440mmwithraisedfootrest.

WORKMANSHIP

Thepanshallbesunkintothefloorandembeddedinacushionofaverage 15cm cement1:5:10(1Cement:5FineSand:10Gradedstoneaggregate 40mm.nominal size)or as specified.Thisconcreteshallbe left115mm below the top level of the pan so as to allow for flooring and its bed concrete. The floor shouldbesuitablystoppedso that thewastewaterisdrainedintothepan.Thepanshallbeprovidedwith100mm'P'or 'S' trapsas specified in with approximately 50mmseal. Thejointsin thepanandthetrapshallbemade leak-proof withcement mortar 1:1(1 Cement:1 Fine Sand).

Therateshallbepaidforaunitofnumberbasis.

ItemNo.14:
WhiteporcelainwashbasinS60/410mmindianmakeC.I.bracketwithfittingchromiumplattedtopes25cmplasticwastepipeand12mmpillarcock withcomp.

1.0: Materials:

1.1. Thewhiteglazedearthenwarewashbasinshallbe560mm.x410 mm.of1st qualityandmakeasapprovedbytheEngineer-in-charge. The wash basin shall conform to M-59.

Workmanship:

The wash basin shall be fixed on the wall as and where directed. The washbasinshallbesupportedonapairofR.S.orC.I.bracketsfixed in C.M.1:3. (1 cement : 3 sand). The bracket shall conform to I.S. :latest edition. The wall plaster on the rear shall be cut to rest the top edge of the wash basin. After fixing the basin, plaster shall be madegoodandsurfacefinishedtomatchwiththeexistingone.:

Thebracketshallbepaintedwhitewithready-mixedpaint.

TheC.I.brasstrapandunionshallbeconnectedto32mm.dia. wastepipewhichshallbesuitablybenttowardsthewallandwhichshalldischargeintoanopendrainleadingtoagullytrap.ordirectintothegully-traponthegroundfloorandshallbeconnectedtoawastepipethroughafloortrapontheupperfloors.C.P.brasstrapandunionmaynotbeprovidedwherethesurfacedrainorafloor trap is placed directly under the basin and the waste is discharged intovertically.

Theheightofthefrontedgeofthewashbasinfromthefloorlevel shall be 80 cms.

Thenecessaryinlet,outletconnectionsandfittingssuchaspillarcocks;CPGrass wastetrapwastepipe,stopcock,chainwish rubber plug etc. shall be fixed.
Thepaymentoffittingsshallbemadeseparatelyunderseparateitems.

3.0:Modeofmeasurements&payment

The rate includes cost of all labour, materials, tools and plant etc. required for satisfactory completion of this item as specified in workmanship.

TherateshallbeforaunitofOnenumber.

ItemNo.15:
FRPDoorsupplyallfittingandfixturecomplete

Providingandfixing28mmthicksingleshutterdoorwithflushdepressed panel designwithcorematerialPUfoamdoneinsitu&sandwichpanel of4 mmthickplywood&mouldedinwooden blocks for fixtures. FRPthickness to be 1.50 mm to 2.00 mm including providing and fixing FRP moulded section frameofsectionsize100mmx50mmchamferedtypewithFRPthickness of2.00mmandcoreofrigidpolyurethenefoamhavingdensity32Kg/cmt to 36 Kg/cmt., compressive strength 3.5 Kg./sqcm to 4.5 Kg./sqcm. and fire retardantgrade,PUfoamshallbedonesituwithCanadianPonderoza wooden blocks for fixtures. In built holdfast arrangement to use fasteners for fixingwithmasonryorR.C.C.Thewholesectionoframeandshuttershallbewaterproof, acid/alkaliresistant&wellcoatcolour.theframeand

shuttershallbefixedwithallnecessarystainlesssteelfixturesand fastenings etc. complete as per direction of engineer
incharge.

Materials:-

Frame materials shall be of fire extinguishing grade FRP skin having section100mmx50mmchamferedtypewiththicknessof1.50mmto2.00mm and core material shall be fire extinguishing grade rigid polyurethane foam havingdensity32Kg/cu.cmto36Kg/cu.cm,flexuralstrength1.8Kg/ Sqcm to 2.00 Kg / Sqcm and compressive strength

Kg / Sqcm to 4.5 Kg / Sqcm. Whole frame shall be water proof, weather proof,termiteproofandmildacid/alkaliresistance.P.Ufoamshallbedone insituwithplantationwoodenpiecesembeddedinsideforholdingfixtures andstiffening.Frameshallbestraightinline,levelandhavingthreejoint-lesspieces.Frameshallbefixedinmasonry/R.C.CwithMildSteelholdfast orwith115mmlongscrewsasholdfastwithsleeveinpositionandfinished in colour cement. 28 mm thick shutter in depressed panel design shall be having 1.5 mm to 2.0 mm thickness fire extinguishing grade FRP skin, sand-witchpanelof4mmthickplywoodandembeddedwoodenpiecesfor stiffening as well as holding hinges and fixture, all molded into a one piece shutter. Core material shall be injected fire extinguishing grade rigid polyurethanefoamdoneinsituhavingdensity32Kg/Cucmto36Kg/ Cucmcompressivestrength1.8Kg/Sqcmto2.00Kg/Sqcm,flexural strength3.5Kg/Sqcmto4.5Kg/Sqcm.Wholeshuttershallbewaterproof,weatherproof,termiteproofandmildacid/alkaliresistance.28mm thick depressed panel FRP shutter shall be joint-less. It shall be straight and smooth and of standard shape finished in gel coat. All necessary fixture and fasteningshall be fixed where wooden pieces are provided.

Workmanship:

Frameshallbefixedinmasonry/R.C.Cmember.Shuttershallbefixedin true line; level and proper manner having 2.0 to 3.0 ply i.e. air space for smooth and easy working. Pull handles, Door stopper, Door stopper, bearing hinges & S.S self tapping Philips cross head special screws conforming to anti corrosivehighgradeAISI304stainlesssteelofstandardmakeoras equivalent approved by Engineer-in-charge conforming to anti corrosive high grade AISI 304 stainless steel only,& Tower bolt of the make Orbit or as equivalentapprovedbyEngineer-in-chargeconformingtostandardsofORBIT&anticorrosivehighgradeAISI304stainlesssteel only.

All fixtures and fastenings of standard make shall conform to AISI 304 Grade Stainless Steel.

The following table presents main elements (forming the Chemicalcomposition) of AISI 316 Grade Stainless Steel.

- Itcanwithstandthecorrosioncausedbyatmospheric/environmental or major chemical reactions.
- Itcanresisthightemperatureswithoutgoingunderanydeformitywhichmakesit highlyrecommendedforfiresafetydoorsinanybuilding.
- ItshallhaveremarkablecreepstrengthandRupturestrength.
- It shall be repelled the Bacteria& shall be made higher degree of hygiene.

- Itshallbeofnaturalfinish,itshallnotrequiredregularcleaningor maintenance making it most suitable for public places.
- Itshalltolerateforcefulandintenseuse.
- Speciallydevelopedfixingstudandgrubsshallbeusedtoensureaccuratefitting ofelementsandeliminatesshakingofelements.

Fixtures&Fastenings:

Followingfixturesandfasteningshallbeusedforsingleshutter.Allfixtures and fastening of the make shall be of anti corrosive high grade AISI 304 stainlesssteelinGlossy&satincombinationfinishonly.Fixturesand fastening of standard makeshallbefixed by skill person only.

TherateshallincludeanticorrosivehighgradeAISI304stainlesspull handle, hinges, door stopper in Glossy& satin combination finish of the standardmakeincludingfixingwithS.SselftappingPhilipscrosshead special screws and Stainless steel tower bolt of the make Orbit. The size and numberofhingesshallbeaspertablegivenabove±1.50mmtolerancewill beallowedinthicknessofshutterand±1.20to2.00mmforsizeofframe.

Modeofmeasurements&payment:

The rate for shutter includes cost of anti corrosive high grade AISI 304stainlesspullhandle,Doorstopper,hinges,S.SselftappingPhilipscross head special screws in Glossy& satin combination finish of standard make, tower bolt of the make orbit. The dimensions of the door shall be measured clearsizeoftheopeningmadeforfixingofdoorwith frame.

Therateshallbeforaunitofonesq.metre.

ItemNo.16:
Aluminiumsectionwindowwork(with3track-onemosquitonet)(jindal)(withnecessaryallfittings)

ProvidingandfixingStructuralGlazingwithspidersusingthe17Micronanodisedofapprovedcolouraluminumsectionwithtransium.mulliumofsize62.5mmx25mmx2mmwithusing6mmthickreflectivestructuralglassofapprovedmake,colour,toughenedandshadeandfixedwithsiliconesealantandspacertapandatcornersealedneoprenefoamdustandAirsealedgasketmiredincludingscaffolding,cleaningofglassetc.completeatallheightsandliftswithallnecessaryfittingandfixtures,anchorefasteners,necessaryM.S.orAluminumbrackets,suitabledesignforopenablewindowasperArchitecturaldrawingandasdirectedbyEngineer-in-charge.Groovesbetweentheglassestobefilledwithsealantof Dowcorning-structuralsealant995,weathersealant789.Theentirefacadeshouldbewaterproof.Themullionsaretobeconnectedtobracketby SS-304nutbolts.Measurementshallbegivenasperactualexecutionofthework

ALUMINIUMEXTRUSION

Aluminium Extrusion used in Structural Glazing, Stick Glazing, all type of Windows,Doors.AluminiumExtrusionshallbe6060-T6alloyconformingtoBS- 1474-1987.TheextrusionshallbeClean.Straightwithsharplydefinedlinedand

free from distortion and defects impairing appearance, strength and durability. The extrusion shall be suitable for wall thickness and profile for rigidity and strength in respect to tensile, shear, bending and bearing stresses, capable of providing local and lateral stability.

FINISH

The extrusion shall be finished in 'electrolytic colour anodizing' of approved shade and colourfor an anodic coatingofminimum20microns (+/-2microns).

GLASSFORSTRUCTURALGLAZING,WINDOWS&FIXEDGLAZING

Theglasswillbeofapprovedmakeandwillbeabletospecifiedbythearchitect. The glass samples will be submitted for approval.

ANCHORAGESYSTEM

The structural glazing system, will be fixed to the main building structure using components of alloy steel or other materials appropriate and conforming to statutory requirements and code of practices. In general, Galvanized steel bracketshallbeusedastheanchoringsystem.Thetypesizeofthebracketisto be selected in accordance with engineering calculations to withstand 200 Kg/Sqmx1.5timesforsafetyfactor.Mullionsshallbemountedtothebrackets of desired thickness and size. All fastening and transoms shall be of stainless steel bolts and nuts with spring washers.

HARDWAREFITTINGS

All screws, plugs, nuts or other fastening devices shall be of stainless steel that will not result in the corrosion with installation. 4 bar stays stainless steel arm shall beusedinopenablewindowsalongwithpegstaysforopenable window.

SILICONSEALANT

Sealant for weather seals shall be Dow Corning 789 or Equivalent. Sealant for Structural Glazing shall be Dow Corning 995 or Equivalent and shall be applied in accordance with manufacturer's specification.

WEATHERSTRIPPING

Weather Stripping shall be extruded Neoprene / EPDM or Equivalent and of the required size.

GLAZINGTAPE

Glazing Tape for Structural Glazing will be special two ways adhesive Black coloured Tape equivalent to Norton Tape.

PROTECTION

The finished surface will be protected with a self-adhesive peel –off with two layers of white and black, tested to withstand at least 9 months exposure to local weather condition, without losing the original peel- off characteristic or causing stains or other damages.

Modeofmeasurement&Payment:

Nopaymentshallbemadeforweightofscrews,bolts,nutsetc.OnlyFinisharea shouldbemeasuredforpayment.Therateshallbeforunitofonesquaremetre.

ItemNo.17:
14.43,(A)Kotastone(Polished,Greencolour)flooringover 25mm(average)thickbaseofcementmortar1:6(1cement:6coarsesand,)laidoverandjointedwithgreycementslurryincludingrubbingandpolishingcomplete25mm.thick

Materials

Water shall confirm to M-1. Lime mortar shall confirm to M-10, Cement mortarshall confirmtoM-11,Polishedkotastoneshallconfirmto M-49.

Workmanship

Each slab shall be cut to the required size and shape and fine chisel dressed at all the edges. The sides t h u sdressed shall have a full contact if a straight edge is laid along. The sides shallbe table rubbed withcoarsesandbeforepaving.Allanglesandedgesofthe slabs shall be true square and free from chippings and giving a plane surface. The thickness shall be 25 mm. (Average) as specified inthisitembutnotless than 20 mm at any place.

Bedding for the Kota stone slabs shallbe of cement mortar 1:6 (1 cement : 6 coarse sand) of average thickness 20 mm as given in the description of theitem. Sub grade shall be cleaned, wetted and mopped. Mortar of the specified mix and thickness shall be spread on an area sufficient to receive one kota stone slab. The slab shall then be washed cleanbefore laying. Itshallbelaidontoppressed, tapped gently to bringitinlevel with the other slabs. It shall then beliftedandlaid aside. Topsurfaceofthemortarshallthenbecorrectedbyaddingfresh mortar at hollows or depressions. The mortar shall then be allowed to harden bit. Over this Surface, cement slurry of honey like consistency shall be applied. The slab shall then be gently placed in position and tapped with wooden I mallet till it is properly bedded in level. with and closetotheadjoiningslab.Thejointshallbeasfineaspossible. Theslabs fixed in the floor adjoining the walls shall enter not less than 10 mm. under the plaster, skirting or dedo. The junction between wall and floor shall be finished neatly. The finished surface shall be true to levels and slopes as directed.

The floor shall be kept wet for a minimum period of 7 days so that bedding and joints set properly.

Polishingshallbenormallycommencedafter14daysoflayingthe stone slab.

First polishing shall be done with carborundum stones of 120 grade grit fittedintheheavymachineandthendeaconpolishingshallbedonewithcarborundum stone of 220 to 350 grade grit fitted in heavymachine.Water shall be properlyusedduring polishing. The stone shall then be washed clean with water. When directed by the Engineer-in- charge; wax polishofapprovedqualityshallbeapplied on the surface with the help of soft cloth over aclean and dry surface. Then the polishing machinefitted with bobs shall berunoverit.

Theholesrequired for Nahni traps, pipes and other fittingsshall be made without any extra cost.

2.6Thekotastoneforplatformandc.b.shallbesuppliedandfixedwith two side polished and the work shall have to be completed as per requirementand instructions of engineer in-charge.

Modeofmeasurements&payment

Therateshallincludethecostofallmaterialsandlabourinvolvedin all the operations described above. The kota stone flooring shall be measured in squaremeters correct to two places of decimal, length and breadth shall be measured correct to a: centimeter and between the finished face ofskirtingdedo or wall plaster and no deduction shall be made nor extra paid for any opening in floor ofareasupto 0.1 sq.mt.

Therateforitemshallbeforaunitofonesq.meter

ItemNo.18:
ProvidingSteelworkforRCCworksupplying,bending,binding&hookingbybindingwirewithThermoMechanicallyTreated(TMT)barsconfirmingtoIS1786,Fe-500

1:0. Materials

1.11.TMTbarsofFe-500shouldbeconfirmingtoIS:1786.

Workmanship

The work shall consist of furnishing and placing reinforcement to the shape and dimensions shown as on the drawings or as directed.

Steel shall be clean and free from rust and loose mill scale at the timeof fixing in position and subsequent concreting.

Reinforcing steel shall conform accurate to the dimensions given in the bar bending schedules shown an relevant drawings. Bars shall be bent cold to specified shape and dimensions or as directed, using a proper bar bender, operated by hand or power to attain proper radius ofbends. Bars shall not be bent or straightened in a manner that will the material. Bars bent during transport or, handing shall be straightened before being used on the work. They shall not be heated to facilitate bending. Unless otherwise specified, a 'U' type hook at the end of each bar shall invariably be provided to main reinforcement. The radius ofthe bend shall not be less then twice the diameter of circle having an equivalent effective area. The hooks shall be suitably encased toprevent any splitting of the concrete.

All the reinforcement bars shall be accurately placed in exact position shown on the drawings, and shall be securely held in position during placingofconcretebyannealedbindingwirenotlessthan1mmin sizeandbyusingstayblocksormetalchairspacers,metalhangers,

supporting wires or other approved devices at sufficiently close intervals, Bars shall not be allowed to sag between supports nor displaced during concreting or any other operations of the work. All devicesusedforpositioningshallbeofnon-corrodiblematerial. Woodenandmetalsupportsshallnotextendtothesurfaceof concrete, except where shown on drawings. Placing bars on, layers of freshly laid concrete as the work progresses fro adjusting bar spacing shallnotbeallowed.Piecesofbrokenstoneorbrickandwooden blocks shall not be used. Layers of bars shall be separated by spacer bars, precast mortar bricks. or their approved devices. Reinforcement after being placed in position shall be maintained in a clean condition until completely embedded in concrete. Special care shall be exercised to prevent any displacement of reinforcement in concrete already placed: To prevent reinforcement form corrosion, concrete cover shall be provided as indicated on drawings. All the bars producing from concrete and to which other bars are to be spliced and which are, likely to be exposed for a period exceeding 10 days shall be protected by a thick coat of neat cement grout.

Bars crossing each other where required shall be secured bybinding wire (annealed) of size not less than 1 mm in such a manner that they do not slip; over each other at the time of fixing and concreting:

As far possible, bars of full length shall be used. In case this is not possible. Overlapping of bars shall be done as directed, Whenpracticable, overlapping bars shall not touch each other, but be kept apart by 25 mm. or 1.25 times the maximum size of the coarse aggregate whichever is greater by concrete between them. Where not feasible, overlapping bars shall be bound with annealed wires not less than 1 mm. thick twisted tight. The overlaps shall be staggered for different bars and located at points, along the span where neither shear not bending moment is maximum.

Whenever indicated on the drawings or desired by the Engineer-in-charge, bars shall be joined by couplings which shall have a cross-section sufficient to transit the full stresses of barso he ends of the bars that are joined by coupling shall be upset for sufficient length so that the effective cross section at the base of threads is not less than the normal cross-section of the bar. Threads shall be standard threads: Steel for coupling shall conform to I:S.226 (Latest edition)

When permitted or specified on the drawing's joints of reinforcementbars shall butt-welded so as to transit their full stresses. Welded joints shall preferably be located at points when steel will not be subject to morethan 75percentofthemaximumpermissiblestressesand weldsso staggered that at any one section not more than 20 percent of the rods are welded. Only electric are welding using a process which excludes air from the molten metal and conforms to any or all other specialprovisions for the work shall be accepted. Suitable means shall be provided for holding bars securely in position during welding. It shall be ensured that no voids are left in welding and when welding is done intwo or, three stages, previous surface shall be cleaned. properly. Ends of

the bars shall be cleaned of all loose scale, rust, grease, paint and other foreign matter before welding. Only competent welders shall beemployed on the work. The M.S. electrodes used for welding shall conform to I.S. 814 (Latest edition). Welded pieces of reinforcementshall be tested: Specimen shall be taken from the actual site and their number and frequency of test shall be as directed.

Modeofmeasurements&payment

Reinforcementshallbemeasured in length including overlaps, separately for different diameters as actually used in the work. Where welding or coupling is resorted to, in place of lap joints, shall be measured far payment as equivalent length of overlap as per design requirement.From the length so measured, the weight of reinforcement shall be calculated in Kgs. Length shall include hooks at the ends. Wastage and annealed steel wire for binding shall not be measured and the cost of theseitemsshallbedeemedtobeincluded in theratefor reinforcement.

Theratefor reinforcement includes cost of steel binding wires,its carting to work site, cutting, bending; placing, binding and fixing in position as shown on the drawings and as directed, It shall also include all devices for keeping reinforcement in approved position, cost of joining as per approved method and all wastage and spacer bars.
TherateshallbeforaunitofOneKg.

ItemNo.19:
Supplyandlayingofmachinecrushedaggregateof25-38mm

MachineCrushed metal shallbeofapproved quarry anditshould be approvedby the In-charge Site Engineerprior to collection.

Themachinecrushedmetalshallbehard,tough,sound,durable,blacktrapfield metal of close texture, with thedecay and weathering.Eachpieceofthe stone shallbeangularandroughlycubicalin shape and round elongated or flaky material shall be rejected.Noround or oblong pebbles or at guar chips larger or smallerthan specified size shall be allowed.

All unsound, weathered or disinclined stone obtained from the upper surface layer of the quarry or other layer of boulders shall be rejected. The physical requirementforstandardsizemetalshallconformtothetestresults indicated inTableNo.1.The metal shall be nearly uniform in size as possible and shall conform to following minimum requirements of passing through the rings.

The physical requirement for standard size metal shall conform to the test results indicatedin the Table No.1 below:

TableNo.1

TypeofConst.	TestMethod	Requirement
Base(a)LosAngelos abrasion Value Or	IS: 2386Partiv	50%(Max.)

AggregateImpactValue.	IS 2386Partiv orIS :5640	40%(Max.)
(b)Flakiness index& Elongation Index	IS:2386PartI	30%(Combined.)
(c)WaterAbsorption	IS:2386Part-3	2%(Max.)

TableNo.2

Grading No.	Size Range	IS Sieve Designation	Per cent by weightpassing
2	25mmto38mm	90mm	100
		63mm	90-100
		53mm	25-75
		45mm	0-15
		22.4mm	0-5

Whereveranddoubtexistsastowhethertheaboverequirementaresatisfiedinwholeor part.ThecollectionofM.C.metalshallbegotscreenedbythecontractor,itso ordered by the In-charge SiteEngineerandforwhichnoextrapaymentsshallbe claimed by the contractor.

Any collectionwhichdoesnot fully satisfythe above requirementsis liable to be rejected altogether. Frequency of test shall be as per Ministry of Surface TransportSpecifications.
Agencyhastosubmitcompletedrawingoflevelingaftereachlayerofworkasmentionedi n Special Conditions of Contract.

Also,theworkis to be carriedout with Mini Roll / RoadRoller/ Hand Rollas may be required for the work as per the requirement and instructions of engineer in charge.

Themeasurementsshallbetakenoncubicmeterbasis.

ItemNo.20:
Supply and fixing of 60 mm thick M-30 i.e. compressive strength of 300 Kg /sq.m. cement concreterubbermoldinterlockingpavingblocks(GreyColor)ISIMarktobesupplieda ndfixedasinstructedwithConcreting1:2:4theendof blocks(withCementjoints)inbeddingof blackstonesand for50mmthick leveling and fixing of interlocking blocks in line level on it with compactermachine and cleaning and filling the joints with sand (without cement vata)including cement concrete prop. 1:2:4 as per instruction ingap at end blockand color as per instruction including curing complete

PaverBlockManufacturingfacilities

RAJKOT MUNCIPAL CORPORATION, at its discretion shall nominate its representative for inspection of the factory. Party shall co-ordinate and co-operatewithrepresentativeofRAJKOTMUNCIPALCORPORATION.Thepartyshall inform the address, telephone numbers and other details of the workshop and the contact person to enable RAJKOT MUNCIPAL CORPORATION depute its representative. The party shall allow entry to RAJKOT MUNCIPAL CORPORATION representative during all working days and time.

The Paver Block shall be made in factory with following minimum facilities:

DesignMixConcrete:

(a) Allpaversdesignatedbystrengthshallbetreatedasdesign mix concrete. The aggregate and cement shall be measured by weight in an approved weigh batching equipment. Mixing watershall be measured in graduated litre cans. One or more complete bags of cement shall be used for each batch ofconcrete.

(b) The contractor shall be responsible for designing mixes of the specified performancetosuit the degree of workability and characteristic strength. The mix design shall be finalized before manufacturing of the paver considering a set of suppliers for cement, sand and aggregates. In caseofanychangeofsuppliersofcement,sandoraggregates, party should have design mix ready for alternate suppliers.

(c) The minimum cement content for compacted concrete of pavers shall not be less than 300/350/400 Kg / sqmtrasperdesign.

(d) The maximum water cement ratio for pavers concrete shall not be more than 0.40

(e) The design mix proportions for each set of raw material suppliers shallbe finalized and approved by the authorized lab for the required compressivestrengthandthelabreportwithproportionsshouldbeavailablewiththevendoratalltimesforscrutinyandverification purpose.

PaverBlockMakingMachine:

The machine should be capable of producing high quality Paver Blocks by obtaining high level of compaction by application of hydraulic compaction and also by high intensity vibration to the moulds. The machine should have automatic control panel and shall apply aminimum pressure of 3000psiandthen there shallbe automatic cutoff of hydraulic circuit without any manual interference.Innocase, paversmouldbymanualforceorbymachinewithoutautocutoffshallbeaccepted.All pavers shall have uniformity in strength.

WeighBatching&MixingEquipment:

(a) The proportioning of ingredients of concrete per batch of concrete shall be performed by an approved weigh batching machine. Water shall be fed into the mixer from a tank provided with means for adjusting the flow of water so as to supplythequantitydetermined for concrete as per mix design .Dueallowanceshallbemadefor the weight of water carried by aggregates so that actual amount added at the mixer can be reduced as necessary. For this purpose the moisture content of coarse and fine aggregates shall be ascertained as and when required and at other times when alteration of the moisture content may be expecteddue to new deliverance ofaggregates, inclement weather or other reasons.

(b) Volumetric batching of concrete may be allowed after the designmixisapprovedbylabaftertesting,byconvertingtheproportionofconcretefromweighttovolumetricmeasurementsubjectto

facilitiesbeingmadeavailablebythecontractorforverifyingand monitoring this.

(c) All necessary equipment such as measuring boxes, devices for determination of moisture and bulking in sand, slump cone, etc. shall be provided by the contractor. Concrete shall be machine mixed untilthere is auniform distribution of materialsanduniformcolour and consistency is achieved and undernocircumstances for less than two minutes.

TheconcreteMixDesignshouldbefollowedforeachbatchofmaterials.

Curing:

The factoryshould have well designed curing area to ensure adequate (minimum 14 days) curing of paver blocks.

Laboratory

Thefactoryshouldhavethefollowing:

(i) Compressiontestingmachineofcapacityminimum200MT
(ii) Other tools and equipment for testing raw materials and paver blocks.
(iii) (1)Systematicrecordoftestresultsofvariouspaverblocks manufactured in the factory.

(2)ConcreteMixDesignfordesiredgradeofconcreteusedfor making of paver blocks.

RawMaterials.

CEMENT

The cement used in the manufacture of high quality precast concrete paving blocks shall be conforming to IS 12269 (53 grade ordinaryPortland cement) or IS 8112 (43 grade ordinary Portland cement) or IS 1489 (Part 1) (Portand-pozzolana cement – fly ash based). The minimum cement content in concrete used for making paver blocks should be 380 kg/Cum.

AGGREGATES

The fine and coarse aggregates shall consist of naturally occurring crushed or uncrushedmaterials,whichapartfromthegradingrequirementscomplywith IS383-1970.Thefineaggregatesusedshallcontainaminimumof 25% naturalsiliconsand.Limestoneaggregates shall notbe used.

Aggregates shallcontain no more than 3%byweightofclay &shallbe free from deleterious salts and contaminants.Zone iv sand shall not be acceptable.Course aggregate shall be 10 mm and below.

WATER

The water shall be clean and free from any deleterious matter. It shall meetthe requirements stipulated in IS: 456-2000.

OTHERMATERIALS

Any other materials / ingredients used in the concrete shall conform to I.S. Specifications.

PIGMENT: The pigment shall be used only on wearing and top surface and throughout the paver block. The pigment used shall not be more than 10% of weight of cement used in the wearing course layer. However, use of pigment shall in no way alter the required strength of the paver block.

Pigment used for coloring paver blocks shall have durable color. It shall not contain matters detrimental to concrete. The pigment shall not contain Zinc compound. Lead pigment shall not be used.

PaversBlockCharacteristics

The inter locking concrete paver tiles should conform to IS-15658 (LATEST).They shall be tested as per the code and have to qualify limits specified by us down below.

ThepavertilesshouldbemadeofM-30(80 mm)designmixconcrete in approved size and shape. For acceptance the average of compressive strengthsof8 paversshallbeminimum30 N/mm^2(MPa).Anypaver in the tested lotshall not have compressive strength less than 30.1 MPa. If needed, pavers shall be designed and manufactured on higher side to concrete grade M-30 to meet this requirement without extra cost to RAJKOTMUNCIPALCORPORATION.Testing shall be done as per relevant clauses of IS-15658 (LATEST).

Theconcretepaversshouldhaveperpendicularitiesafterreleasefrom the mould and the same should be retained until the laying.

Thesurfaceshouldbeofantiskidandantiglaretype.

The paver should have uniform chamfers to facilitate easy drainage of surface run off.

The concrete mix design should be followed of each batch of materials separately andweighbatchingplantistobeusedtoachieveuniformity in strength and quality.

The pavers shall be manufactured in single layer or more to ensure smooth surface on top and to remove all voids.

Thepaversshallbeof cement Grey colourwithoutanypigmentor colored with pigment or with chemically treated top surface as specified.

Allpaverblocksshallbesoundandfreeofcracksorothervisual defects, whichwillinterferewiththeproperpavingoftheunitorimpairthestrengthorperformanceofthepavementconstructed with the paver blocks.

The compressive strength requirement of concrete paver block shall be minimum30MPa(N/sqmm)for28days(TestingasperIS-15658) after applying the correction factor as per IS-15658 (LATEST). (Please refer clause 3.1 also).

PaverBlockDimensions

Thickness	60/80mm

Shape	Regular(UniformshapewithnoHolloworCracks)
Chamfer	5mmto7mmalongtopedges
ThicknessofWearingLayer	Minimum 6 mm (The thickness of the wearing surface shall be measured at several points along the periphery of paver blocks. The arithmetic mean of the lowest two values shall betheminimumthicknessofthewearinglayer)
PlanAreaA_{sp}(Ref.Cl.B-3.3 Annex B, IS-15658(LATEST))	Maximum0.03 m^2
Colour	Natural cement Grey colour without use of any pigment OR colour as specified
DimensionalTolerance	TolerancesasperIS-15658(LATEST)

Note: All other visual/physical & dimensional acceptance on parameterslike aspect ratio, squareness etc to be as per IS-15658 (LATEST)

TestingofPaverBlocks

1FOR60/80MMPAVERTILES

TEST	SPECIFICATIONAverageValues
28 day Compressive Strength	Minimum30 MPa(N/Sqmm)
AbrasionResistance	Maximum 2 mm [i.e. 10 units of 1000 mm^3 per 5000 mm^2reported as per E-5 of Annex E of IS-15658 (LATEST)]
WaterAbsorption	Avg. of 3 units - Maximum 6% by mass (restrictedto7%inindividualtestunits)

Sampling and Testing Procedure strictly As Per IS-15658 (LATEST).

LayingofPaverBlocks

PRIMING

The contractor is required to verify the existing WBM driveway surface and ascertain the CBR value. Accordingly the total subgrade thickness required for achieving the desired CBR value shall be advised to RAJKOT MUNCIPAL CORPORATION within seven days of receipt of call-up. RAJKOT MUNCIPAL CORPORATION shall, through regular vendors arrange to carryout such WBM, wherever required. Before taking over thesite, the Paver block laying party is required to verify the stabilization of the surface with CBR values. In case, contractor does not advise the CBR value within seven days, RAJKOTMUNCIPAL CORPORATIONshallcarryoutWBMasperowndesign,andcontractor shall have no claim later particularly to the quality of WBM or sub-grade.

ItwillbetheresponsibilityofthePaverblockpartytoensurethatthe Manholes/Pipeline/Cabletrenches/circulardrainagesystemetc.is raised to driveway level using the requisite materials as per instruction of EIC. The areas of potholes / deep depressions at the isolated locations shall befilled up andproperly compacted beforelayingthepaverblocks. No extra payment will be made for this purpose. The area of raised manholes shall be included in the measurement of overall area of paver blocks for the purpose of payment.

BEDDINGSANDCOURSE

The bedding sand shall consist of naturally occurring, clean, well graded sand passing through 4.75mm sieve and suitable to concrete manufacture. The beddingshouldbefromeitherasinglesourceorblendedtoachievethefollowinggrading.

ISSIEVESIZE	**%PASSING**
9.52mm	100
4.75mm	95-100
2.36mm	80-100
1.18mm	50-100
600microns	25-60
300microns	10-60
150microns	5-15
75microns	0-10

Contractor shall be responsible toensurethatsingle-sized,gap-graded sands or sands containing an excessive amount of fines or plastic fines are not used. The sand particles should preferably be sharp, not rounded. The sand used for beddingshallbefreeof any deleterioussolublesaltsor other contaminants likely to cause efflorescence.

Thesandshallbeofuniformmoisturecontent, which shall bewithin4%- 8%, at the time ofspreadingandshallbe protected against rain when stockpiled prior to spreading. Saturated sand shall not be used.

The bedding sand shall be spread loose in a uniform layer as per drawing. The compacteduniformthicknessshallbe50mmandwithin<5mm.
Thicknessvariationshallnotbeusedtocorrectirregularitiesinthebase course surface.

The spread sand shall be carefully maintained in a loose dry condition and protectedagainst pre-compactionbothpriortoandfollowingspreading. Any pre-compacted sand left overnight shall be loosened before further laying of paver blocks takes place.

Sand shall be slightly spreadin a loose condition to the predetermined depth only slightly ahead of the laying of the paver block.

Anydepressionsinthespreadsandexceeding 5mmshallbe loosened, raked and re spread before laying of paver block.

LAYINGOFINTERLOCKINGPAVERBLOCK:

Paver block shall be laid in pattern as specified under cl. 7 throughout the pavement. Once the laying pattern has been established, it shall continuewithoutinterruptionovertheentirepavementsurface.Cuttingof blocks, the useofinfillconcreteordiscontinuitiesinlayingpatternisnottobe permitted in other than approved locations.

Paving units shall be placed on the uncompacted sand bed to the nominated layingpattern;careshallbe taken to maintain the specified bond throughoutthe job. The first row shall be located next to an edge restraint. Specially manufacturededgepavingunitsarepermittedoredgeunitsmaybecutusing a power saw, a mechanical or hydraulic guillotine, bolster or other approved cutting machine. No haphazardly broken pavers shall be used.

Paverblockshallbeplacedwiththehelpofspacerstoachievegaps nominally 2 to 3mm wide between adjacent paving joints. No joint shall be less than 2mmnor morethan 4 mm.**Howeveritismandatoryto use 3.0mmwidespacerwhilelayingpavertilessoastoensureuniform 3.0mmgap between adjacent pavers**. Frequent use of string lines shall be used to checkalignment.Inthisregard,the"layingface"shallbecheckedatleasteverytwometre asthefaceproceeds.Shouldthefacebecomeout of alignment, it must be corrected prior to initial compaction and before further laying job is proceeded with.

In each row, all full units shall be laid first. Closure units shall be cut andfitted subsequently. Such closure units shall consist ofnot less than 25%ofa fullunit.

To fill spaces between 25mm and 50mm wide, concrete having minimum1:1:2 cement : sand : coarse aggregate mix and a strength of 40 N/Sqmm shall be used. Within such mix the nominal aggregate size shall not exceedone third the smallestdimensionoftheinfillspace.Forsmallerspacesdry packed mortar shall be used.

Except where it is necessary to correct any minor variation occurring in thelaying bond, the paver block shall not be hammered into position. Where adjustment of position is necessary care shall be taken to avoid premature compaction of the sand bedding.

INITIALCOMPACTION

After laying the paver block, they shall be compacted to achieve consolidation of thesandbeddingandbroughttodesignlevelsandprofilesbynotlessthantwo (2)passesofasuitableplate compactor.

The compactor shall be a high-frequency, low amplitude mechanical flat plate vibratorhavingplateareasufficienttocoveraminimumoftwelvepavingunits.

Prior to compaction all debris shall be removed from the surface. Compaction shall proceed as closely as possible following laying and prior to any traffic. Compaction shall not, however, beattemptedwithin one meter of the laying face. Compaction shall continue until lipping has been eliminatedbetween adjoining units.Joints shall then be filled and recompacted as described in Clause 6.5

Allworkfurther than onemeterfromthelayingfaceshallbeleftfully compacted at the completion of each day's laying.

Anyblocksthatarestructurallydamagedpriortoorduringcompaction shall be immediately removed and replaced.

Sufficientplatecompactorsshallbeavailableatthepavingsiteforboth bedding compaction and joint filling.

JOINTFILLINGANDFINALCOMPACTION

Assoonaspracticalaftercompactionandinanycasepriortotheterminationofworkontha tdayandpriortotheacceptanceofanytraffic, sand for joint filling shall be spread over the pavement.

Jointsandshallpassa 2.36mm(No.8)sieveandshallbefreeofsoluble salts or contaminants likely to cause efflorescence. The same shall comply with the following grading limits:

ISSIEVESIZE	**%PASSING**
2.36mm	100
1.8mm	90-100
600mm	60-90
300 microns	30-60
150 microns	15-30
75microns	10-20

The Contractor shall supply a sample of the jointing sand to be used in the contract prior to delivering any such material to site for incorporation into the works. Certificates of test results issued by arecognisedtestinglaboratory confirming that the sand sample conforms to the requirements of this specificationshallbesubmittedpriortosupplyoftotalvolume required.

The jointing sand shall be broomed to fill the joints. Excess sand shall then be removed from the pavementsurface and the jointing sand shall be compacted withnotlessthanone(1)passoftheplatevibratorandjointsrefilledwithsandtofulldepth. Thisprocedureshallberepeateduntilalljointsare completely filled with sand. No traffic shall be permitted to use the pavement untilalljointshavebeencompletelyfilledwithsandand compacted.

Boththesandandpaverblockshallbedrywhensandisspreadand broomed into the joints to prevent premature setting of the sand.

The difference in level (lipping) between adjacent units shall not exceed 3mm withnotmorethan1%inany 3m X3m areaexceeding 2mm. Pavement portionswhicharedeformedbeyondabovelimitsafterfinal compaction, shall be taken out and relaid to the satisfaction of the Engineer in charge.

UNIFORMINTERLOCKINGSPACES

Thepaversshouldhaveuniforminterlockingspaceof2mmto3mmto ensure compacted sand filling after vibration on the paver surface.

SKILLEDLABOUR

Skilledlabourshouldbeemployedforlayingblockstoensurelineandlevel of pavers, desired shape of the surface and adequate compaction of the sand in the joints.

The rubber mold C C Precast interlocking paving block of approved quality 80 mm thickness,Grey Color and of M-40 And/Or M-30Gradewith concreting 1:2:4 and design shall be supplied by RMC. The bedding of black stone sand of interlocking block shall be done and the interlocking block shall be fixed hard on it in line and level. The contractor shall have to purchase the block of ISI Mark from the market and same shall have to be got approved from Rajkot Municipal Corporation.

Therateforthisworkshallbepaidononesquaremeterbasis.

ItemNo.21:
SupplyofGardenBlacksoil:

Theblacksoilshallhavetosuppliedasperrequirementandthesoilshall have to be got approved from the engineer in charge thereby spreading and leveling shall also have to be carried out to the satisfaction of engineer in charge.

Theratewillbepaidforaunitofonecubicmeterbasis.

ItemNo.22:
Supplyandlayingofredsoil

Theredsoilshallhavetosuppliedasperrequirementandsoilshallhaveto be got approved from the engineer in charge thereby laying, spreading and leveling shall also have to be carried out to the satisfaction of engineer in charge.

Theratewillbepaidforaunitofonecubicmeterbasis.

ItemNo.23:
Selection-1grass supply as required cricket ground and instructedand selected by engineer-in-charge

The grass has to be supplied as per requirement for cricket ground and shall have to be got approved from the engineer in charge thereby planting shallalsohavetobecarriedouttothesatisfactionofengineerincharge.

Theratewillbepaidforaunitofsquaremeterbasis.

ItemNo.24:
Plantationoflawn,tree,flowerbedetcinfieldarea
Planting of lawn of approved quality at 15 cms diagonally, with finedressing and maintenance of the lawn till virtual completion of softlandscape work removal of all thatching throughout the area alongwith appropriate use of anti weed when required grassing lawn,including watering and fertilization.

Plantingoflawnofapprovedqualityat15cmsdiagonally,withfinedressing and,maintenanceofthelawntillvirtualcompletionofsoftlandscapework

removalofallthatchingthroughoutthe areaalongwithappropriateuseofantiweedwhe nrequiredgrassinglawn.Includingwateringandfertilization.

- TheNaturalgrass(Lawn)areusedstandardandapprovedquality.
- Before the Planting of lawn quality contractor should be approved by Architect or engineer in charge.
- After the planting of lawn on regularly cleaning, watering, cuttingthrough cutting machine and time to time remove to un use weeds for date of completion to next two year.
- If for any reason some part of landscaping gets damage or dry agency have to re plant it at his cost in maintenance period.

Modeofmeasurements&payment

The rate shall include the cost of all materials and labour involved in all the operations described above. The Planting of lawn of approved quality shall be measured in Sq.mt.

ItemNo.25:
IronWorkasperdrawingandInstructionsallcomplete:

All structural steel shall confirm to IS 266 - Latest edition. The steel shall be free from the defects mentioned in IS 226 (Latest edition) and shall have a smooth finish. The material shall be free from loose mill scale, rust, pits orotherdefectsaffectingthestrengthanddurability.Riverbarsshallconfirm to IS 1148 Latest edition.

When the steel is supplied by the contractor, test certificate of themanufacturer shall be obtained according to IS 226 Latest edition and other relevant Indian Standards.

Thedesignshouldbemadeaspertheinstructionsofengineer-in-charge. The rate includes supplying and welding (along with labours), transportation and fixing in position of the steel work.

TherateshallbeforaunitofoneKilogram.

ItemNo.26:
HockeyPracticeNet2.4mmthickbraidedthread1.75InchesBlockswithallGST.transportationEtc.Complete

Mchine made Net should be provided to ensure uniform square meshes, providing better strength when faced with High Shock

HEAVY-DUTYWEATHERRESISTANTMATERIAL:
Nets to be specially treated to provide resistance to UV degradation which ensure better durability to be used for outdoor

INTERNATIONALSTANDARDS:
Hockey Net to Meet International Standards to practice

professionally.The rate will be paid for a unit of square meter basis.

ItemNo.27:
Supplyandfixing13mmto15mmSyntheticcricketpitchturf

ProvidingandLayingSyntheticGrassmultipleSportsofapprovedmake.Grass staple size - 13/15mm, Roll width- 410 cm± 2cm.Machine Gauge - 3/16" , Stitch Rate - 23/10 cm, Pile weight - 1150 gms/m2Number of Tufts - 300/m2 Total Pile height - 15mm. Woven Polyproplyene backing with fiber locked fleece. Latex Compound. All the edges to be seamed with PU Adhesive and polyester liner.

1) Thesyntheticturfhastocomplytothefollowingconditions:
   Synthetic Turf should be FIH approved with minimum **National Level Turf** certification. It should conform to FIH playing specifications in National level class-2 certification. After the installation, the bidder should be able to provide minimum**FIH certification for the National level Competition**. All costs towards testing of installed turf by FIH approved independent laboratories shall be borne by the agency.
2) Theshockpadhastocomplytothefollowingconditions:
   Installation of shockpadhas to be done as per FIH certification of the turf. Engineer-incharge / Project Management Consultant (PMC) will approve shockpad specifications based on FIH certification before commencing work. TheContractormustsubmitApprovedCertificationofthatshockpadhasbeen installed as per FIH recommendation and manufacturer guidelines before laying of turf above the shockpad.
3) The rate will be paid for a unit of one square meter basis. No extra payment made for any subsidiary work made by agency for this process required in laying of artificial turf.

ItemNo.28:
Fixing of CC Precast Road Divider stone 0.38x 0.30 x 0.20 cm includingrequiredmaterialandlabour(withoutcolour)

If Rajkot MunicipalCorporationwillprovidecementconcreteblocks prepared at Departmental Production Unit of Rajkot Municipal Corporation as per specifiedrate then AboveCC Block is to be collectedby the agencyat their cost and transport it to the required site. No transportation will be paid. If Divider Block isnot available inRMC Production Unit then the contractor shall havetopurchasethesamefromthe market. Required excavation work shall becarriedoutbytheagencyonthepaverroadorconventional asphalt road as per depth and width as directed by Site Engineer. No extra payment will be made. The excavated stuff shall be disposed off as directed by the site incharge.Limemortarof 1 part limeand 4 part of sand shallbe well mixed and laid inminimum 50 mm thickness and C C precast rubber mould blocks shall be laid as per proper alignment keeping in mind the projection of tiles layingbedintheinner sideoftheblock.Cementmortarof1:6isrequired to be used for 18 mm vatta and aesthetic groove shall be made as directed between the two blocks with proper vatta along with cementpastewithrequiredtampingetccompleteasdirectedbySiteEngineer.
Minimum 75 mm x 75 mm triangular shaped lodhiya shall be casted with 1:2:4cement concreteonbothoutersideoftheblock.Theportionbetweenthetwoblocks

belowthetileflooringlevelshallbefilledwithqualityhardmurrumandshallbewateredf or achieving proper compaction as directed and shall be tampered properly.

If Cement concrete blocks shall be purchased from Corporation Departmental Production Unitbydeductionfrombillamount.Ifthematerialissupplied from RMCStore, Rajkot Municipal Corporation will be deduct the amount for such supply as per the current S.O.R. rate of Rajkot Municipal Corporation. Excavated stuff shall be removed and spread within 90m lead as directed and no extra cost will be given.

The requiredstoneshalleitherbesuppliedby Store or if required,as and when it is tobe purchased from market shall be got approved from RMC. The stone shall be of good in qualityif it ispurchasedfrommarketandofsharpenededgeandofsufficient crushing strength as per I.S. The testing shall be carried out at the cost of the bidder

Modeofmeasurementshallbeasperunitofonenumber.

ItemNo.29:
PaintingofTrafficStripFoothpath/Circle&dividerblocksize0.38x0.30x0.30i ntwocoatsusingenamlepaintindifferentcolors

In this work the color work to road divider blocks except flooring including top theportionoutsidetheroad (fromground) istobecarriedoutwiththeoilpaint of approved quality. The shade of various colors shall be used as approved by the engineer-in-charge. The work is to be carried out as per the instructions of engineer-in-charge.

Forthiscolorwork, first of all primer is to be applied to old road divider blocks thereafter one coat is to be applied for whole work and shall have to be got checked from the engineer-in-charge and thereafter only the secondcoatistobeapplied.Theliquidbetweenthetwocolorsshallbedonewithduecare and in line level.

Therateforthisworkshallbeforrunningmeterbasis.

ItemNo.30and31:
Providing laying and jointing in true line and level 65 mm dia. U.P.V.C.Pipe (SCH- 80) for cold water including fittings of make PRINCE /SUPREME/ASTRAL/FINOLEXasapprovedbyEngineerInCharge.Pipeshall befixedonthewallwiththehelpofclampateverytwometreC/Cor shall be concelled as directed including necessary fittings etc.including testing of pipe and joints and fixing the same with adhesivesolvent.including cost of allmaterials

1. AIMANDFIELDOFAPPLICATION

- Thisspecificationhastheaimtoregulatethemodalitiesofdeliveryandtestingof UPV Cpipes.forconductionofwaterandfood-fluidsunder

pressure, conforming to Dlgs 06/04/2004 n. 174 " regulation . concerning materialsand objects which can be used within fixed plants of purification, treatment, conduction, and distribution of water used for human consumption".

2. STANDARDSOFREFERENCE

- UNI EN 1452 pipes systems of plastic material for conduction – unplastified Polyvinyl- chloride – UPVC.

3. REQUIREMENTPRESCRIBED

- RAW MATERIAL The blend has mainly to be made of PVC (polyvinyl-chloride) with the sole addition of not toxic fluidification material and stabilizers, inert charges and other additives in quantities necessary to extrusion and to give a guarantee of stability of the characteristics of the polymer both during the working process and the life of the product.
- The blend used for the production of pipes, either in granules or powder, must not be used for any other utilization or working process than the required for the production of pipes.

Theuseofthefollowingmaterialsisnotadmitted:

- plastifiers and/or mineral charges which may alter the mechanical and hygienical characteristics of the pipe.
- PVCfromregenerationofalreadyusedpolymers,evenifselected.
- The use of material having been extruded once, obtained from grinding of pipes and fittings, which had already been extruded, even if they have the characteristics which conform to this specification.
- ThecharacteristicsfromPVCpowderhavetobeconformtothe requirements of UNI EN 1452-1 and satisfy the data indicated in the following table:

Characteristics	Requirements
K Value	65÷70
apparentspecific weight	0,5 ÷0,6
Particlesizemeasurement	>250mm 5%max. <63mm
ResidualVCM(Vinylchloride-	<1ppm(1mg/kgmax.)
Volatile substances	≤0,3%

CARACTERISTICSOFU-PVCBLEND

- Thecharacteristicsoftheblendinshapeofapipe,mustcorrespondtothe requirements of UNI EN 1452-1 and satisfy the following table

Characteristics	Requirements
M.R.S.(accordingtoISO/TR 9080)	≥25MPa
specifcweightunitaryyeldpointyield	1,35÷1,46g/cm3
coefficientof elasticity	≥48MPa
coefficientoflinearthermalexpansion	<10%
thermalconductivity	>3.000MPa
	0,06÷0,08mm/m°C
	0,13kcal/mh°C

PIPES

- Thepipeshavetobeproducedwithrawmaterial(PVCblend)corresponding totherequirementsas indicated in the previous table and as follows:

Colour	**Grey** considering that pipes may be exposed to sun- rays, a minimum fading of the colour on one part of the pipe must not compromise the quality of the pipe to be used and therefore may not be a reason of rejection of the same, ondelivery.RAL7011	**RAL7011**
Aspect	theinsideandoutsidesurfacesofthe pipes must be smooth, clean and without cavities, impurities and porosities or anyotherirregularityonthesurfaceswhich might hindertheirconformitytothenormsofreferencea ndthesespecifications.UNI EN1452	**UNIEN1452**

MECHANICALANDPYSICALCHARACTERISTICS

- ThecharacteristicsofthepipesmustconformtotherequirementsofUNI EN1452-2 and satisfy the requirements of the following table:

Characteristics	**Requirement**				**Methods**
shockresistance	T=0°C-TIR<10% conformtoschedule6ofUNIEN1452-2				UNI EN 1452-2744
Resistance to interiorpressure	Noyeldduringthetest 20°C/1h/sigma=42Mpa921 20 °C / 100h / sigma= 35 MPa 60°C/1000h/sigma=12.5MPa				UNIEN 921
Temperatureof softeringVicat(VST)	≥80 °C	ConformtoUNIEN727			UNIEN 727
Longitudinal shrinkage	≤5% thepipemust non show delimitation, blister or breakage	Testing Temperature Timeofimmersion For: e≤8mme>8 mm	150°C 15min 30min		UNIEN743 MethodA: Bathliquid
		Or			
		Testing Temperature Timeofimmersion e ≤ 8 mm e> 8mm	150°C 30min 60min	UNIEN743 MethodB:Inair	

Resistance to dichloromethane At a specified temperature	No attackin any part of the surfaceofthe testpiece	Testing Temperature Timeofimmersion	150°C 30min	UNIEN580

CONNECTIONSSOCKET/GASKETS

- the connections are made by means of sockets with elastomeric gasket. Gaskets have not to be toxic at all according to the present norms for this subject (sanitary discipline) and conforming to norm UNI EN 681/1.
- The system of connection has to correspond to the requirements of UNI EN 1452-5 for every single class of pressure (PN) and has to be tested according to:
  a) ENISO13844elastomericgasketsforsocketconnectionstobeused withUPVC pipes – testingmethod for tightness of negative pressures;
  b) EN ISO 13845 elastomeric gaskets for socket connections to be usedwith UPVC pipes – testing method for tightness of internal pressure with angular deflection of the connection.

MINIMUMMARKING

theminimummarkingoneachmeterofpipemustbeindelibleandshowat least the following data:

- nameoftheproducerand/ortrademarkoftheproduct
- numberofthenormofthesystem(UNIEN1452)
- qualitymarkofthe product-rawmaterial(U-PVC)
- outsidediameterofthepipesxwallthickness
- nominalpressure(PN)andSDRand/orseries(s…)
- day,month,yearandshiftofproduction
- numberoftheextrusionline
- date ofproduction

GEOMETRICALCHARACTERISTICS-DIMENSIONOFPIPES

- Diameters,thicknessandtolerances:

pipeshavetobeformed(SDR)asforseenbytheNationalIntroductionof UNIEN 1452 and have dimensions conforming to schedules 1,2,3 of Chapter 6 of UNI EN 1452-2 "geometrical characteristics".

Particularlyin this disciplinethereisshowntheprospectusincludingminimum wall thicknesses indicated in mm

Nominaloutsidediameter	**NominalWallthicknesses(minimum)(mm)**			
(MM)	PN6bar	PN10bar	PN16bar	PN20bar
20			1.5	1.9
25			1.9	2.3
32		1.6	2.4	2.9
40	1.5	1.9	3.0	3.7
50	1.6	2.4	3.7	4.6
63	2.0	3.0	4.7	5.8
75	2.3	3.6	5.6	6.8
90	2.8	4.3	6.7	8.2
110	2.7	4.2	6.6	8.1

125	3.1	4.8	7.4	9.2
140	3.5	5.4	8.3	10.3
160	4.0	6.2	9.5	11.8
180	4.4	6.9	10.7	13.3
200	4.9	7.7	11.9	14.7
225	5.5	8.6	13.4	16.6
Nominaloutsidediameter	**Nominalwallthickness(minimum)(mm)**			
(MM)	PN6bar	PN10bar	PN16bar	PN20bar
250	6.2	9.6	14.8	18.4
280	6.9	10.7	16.6	20.6
315	7.7	12.1	18.7	23.2
355	8.7	13.6	21.1	26.1
400	9.8	15.3	23.7	29.4
450	1.0	17.2	26.7	33.1
500	12.3	19.1	29.7	36.8
630	15.4	24.1		
710	17.4	27.2		
800	19.6	30.6		
900	22.0			
1000	24.5			

Lengths

- pipes have to be deliveredfor all outside- diametersaskedfor in lengthsof 6 meters

(socketincluded).

Endsofpipes

- thepipehastohaveplainends,sharplycutandmustbeperpendiculartotheaxisofthe same pipe, having an outside chamfer of about 15°.

CONTROLSANDRESPONSABILITY

- The contractor reserves the right to himself and to the person he is going to uncharged to assist the tests and controls carried out to check if the requirements prescribed by the norms of production and by these specifications are fulfilled.
- The supplier, therefore, will do his best to favor the free access of the persons uncharged bythecontractortotheproduction plants ofthe pipes inamoment whatever during the different phases of production and to the laboratories during the phases of control and testing, communicating within a reasonable period of time the beginning date of production of the pipes ordered. He will further give to the persons incharge, full liberty of actions tomake the controls necessary, inline with the requirements of production.
- The contractor reserves himself the right to check by means of taking samples of pipes and/or ofthetherawmaterial, thecorrespondence of thesametothepresent specifications and to the supplier's declarations.
- It is understood that the presence of the persons uncharged, during the tests, will not be a substitute of the controls to be carried out by the seller, who is the only one responsible for the quality of the pipes he produces.
- The seller will bear any costs deriving from the delivery of pipes not conforming to the requirements of thesespecifications.

DOCUMENTSANDCERTIFICAZIONSOFQUALITY

- thesupplierhastoenclosetohisoffer:
- the certification of conformity of the Internal Quality System conforming to UNI EN ISO 9000, issued by an independ Institute or Company inconformity with UNI CEI EN 45012;
- a signed declaration regarding the use of vergin raw material (blend), which does not contain already worked material or substances which can damage the human body;
- acertificateofconformityoftheproduct tonormUNIEN1452forpipes, issued byanindependentIstitute, Body or Company,inconformtiy with UNI CEI EN 45011.

AFTERSALEASSISTANCE

- If agreed upon , when the order had been made, the supplier has to guarantee as follows:
  - assistance by means of qualified technicians at the begin of work within the building yard in order to check the correct way of installation (recommendations according to UNI EN 1452-6 and ENV 1046).
  - Assistance of competent personnel regarding the procedures of testing the layingwithinthebuildingyeard(incaseofwaterconducts, forseenbythe law according the the Ministerial Decree DM 12.12.85) of buried pipe- lines for fluids under pressure (execution according to method UNI EN 805, hydraulic test of conducts with a viscoelastic behavior).

HANDLINGANDTRASPORTOFMATERIALS

- Forthehandlingandtransportofthepipestherehavetobeadoptedallthose procedures whichareidoneoustomakesurethatthesame reach atdestination completely integral. A possible deterioration of the pipes, ascertained ondelivery of the same, will turn out into a claim of defect material. The pieces claimed will remain at the disposal of the supplier.Possiblerepairingorcontrolswill be at the supplier'scharge.Asfor loading, transport, unloading and storing of the pipes and special pieces, reference will be made to the prescription of the Ministerial Decree (D. M.) 12.12.1985(andsuccessivemodificationsandintegration).

TRANSPORTOFPIPES

- When transporting pipes, the loading surface must not be rough. It is necessary to support pipes for their whole length, thus avoiding the possibilitythatpipesget damaged duetovibration. Inordertofixthe load, straps of hemp, nylon or similarmaterialcanbeused,takingcarethat the pipes will not get damaged.

LOADING;UNLOADINGANDHANDLING

- ifloadingandunloadingofameansoftransportor,anywaythehandlingofthemateri alisdonebymeansofacraneorthearmofanexcavator,pipes have to be lifted in the center by an equalizing rocker arm of at least 3 meters. Ifthese works are done byhand,ithastobeavoidedtoslide pipes ontotheside boards ofthemean of transportor, anyway,on hard andsharpobjects.Thepersoninchargeofthebuildingsitehastocheck all workingprocessesofunloadinginordertobesureoftheirregularity.

Eachdamaged product willbeidentifiedbywriting ‘’nottobeused’’andwillbeisolatedinanextraarea.Thepersoninchargehastocomunica teas soon as possible, the existence of a damaged product to the Contractor’s Director of Work, who then will take the actions necessary, according his unobjectionableopinion.Ifacraneisused,therehastobeanefficientsystemofcommuni cationbetweentheworkerinsidethecraneandthe worker beside the mean of transport.

STORINGOF PIPES

- the best solution for the storage of pipes would be to use wooden crates or crates of other materials,to be able to resist to the weightof the pallet put ontop.Thestoragehastobecarriedoutwithgreatcareandthepalletshave to be aligned. The supporting surface of the palletsstoredhs to be levelled, not to be rough and must not have stones with sharpedges. Everypossible idoneous solution has to be adopted in orderto avoid any interference with the local traffic, both Vehicles and pedestrians,and with any other already existing structure. The pipes have to stored in a way to avoid possible accidentsduetoanunforseenmovementofthesame.

CONSERVATIONOFTHMATERIALS

- It is absolutely necessary to adopt measures , that in case of long term storage, pipesofUPVCandplasticfittingscan be put inside,awayfromsun- rays, in order to avoid the riskofdegradationofthepolymersandthe decay oftheirchemical, physical, and mechanical properties. Fittings may bepacked indifferent waysaccordingtotheir shape, dimensionsand type oftransport. Iftheyaredelivered without packaging, it hastobetaken care not to pile them up without method, thus avoiding a collisionbetween the single pieces or betweenthefittingsand other heaviermaterials.In any case they cannot be put near heating devices or exposedto direct sun-rays until they are used. Similar indications have to be followed for the conservation of lubricants.

MODALITYANDPROCEDURESOFLAYINGINSITE

- Tipologiesoftrenches:Thetypeoftrenchrequiredbytheprojectbasedonthe evaluation of loads, the type of soil and the organization of the buildingyard, has to bescrupulouslycarried out in the next phase of execution.. During the phase of execution it is therefore important to have a scrupulouscorrespondencebetweentheprojectanditseffectiverealization. In the table below there are some main typologies of trenches showing the relationship between the diameter of the pipes (D indicated in meters), the widthofthetrenchatthelevelofttheupperpartofpipe(Binmeters) andtheheightof filling on the upperpart of the pipes (H in meters).

TypeofTrench	**B(widthofthe**
Small Trench	≤3D <H/2
LargeTrench	3<D <10<H/2
Embankment	≥10D≥H/2

SmallTrench

- this is the best way to lay a U-PVCpipes.The pipe does not haveto bear all the load from above, as it transmits part of it to the surrounding soil dependingonthedeformationduetothedeflection,theproductissubmittedto.

LargeTrench

- the load the pipe has tobear will bemore than the one ithastosupportinasmall trench. For this reason this has to be considerедduring the planning. This hypothesis hastobeborninmindinordertoobtaina certain security when making the calculations of thedimensions.

Embankment(positiveposition)

- theupperpartofthepipeisputonanaturallevelofthesoil.Ifthereismuchloadpassingthrough,thistypologyhasnottobeadoptedduetosinkingofthesoilinabsence of excavations on the sides.

Terrapieno(negativeposition)

- Thepipeisputatalowerlevelthanthenaturaloneofthesoil.Duetofriction, even if a verylightone,betweenthefilling material putonthe embankment and the natural sides of the trench, the pipes can support slightly more load than those in the positive position, but in any case less than those laid in a small and large trench. Therefore, eventhistypology is not advisable.

Depthofthetrench

- ThedepthofthepipesH(inmeters)understoodasdistancebetweenthe soil and the upper part of the pipes must satisfy the most protective of the followingrequirements, where D is the outside diameter expressed in meters.

  $H \geq 1,0$

  $H \geq 1,5D$

Width ofthetrench

- Thisisdeterminedbythelaying depth andbythediameterofthepipe,asithasto allow thesettlementofthebottom, theconnectionofthepipes and the movement of the workers. The minimum width of the soil B (in meters) is normally:

  $B = D + 0,5$ with $D \leq 0,4$ m $B =$

  $2D$ with $D \geq 0,5$ m.

- Ontheotherside,theinferiorlimitvalueshavenottobeexceededverymuchastheefficiencyof the trenchishigherwhen the widthis smaller.

Bottomofthetrench

- The trenches have to be made without bumps or unevenness in order to establish a continuous support for the pipes. It is not advisable to use a bottom with aconcretebedorsimilarasthiswillmakethestructure rigid.
- Whenthetrenchesareopenonheterogeneoussoil,situatedonhillsorinthe mountains, it is necessary to anchor in order to avoid possible sliding of the soil.
- If there might be an instability of the soil due to water within the trench, itis necessary to re-inforce the soil bottom by means of draining pipes under the canalization.
- Around these pipes has to be put a compact strata of gravel or other material suitable to this purpose.

- In other words, it is necessary to make sure that there won't be any possibility thatthe filling material couldmoveduetoground water.

LayingBed

- TherehastobeastabillayingbedonanevenlevelforcanalizationofU-PVC pipes. It has to be free from pebbles, heap of stones and possible other materials. The laying bed must not be build before having a complete stabilization of the trench bottom. The material used in normal laying conditionsis sand mixed with gravel of a maximum diameter of 20 mm. If thesoilhasslopes,itisadvisabletoavoidsand,givingpreferenceto gravelorcrushedstoneswithoutedges,cuttopiecesofmaximum10/15 mm. The material has then to be accurately compacted and has to achieve a thickness of minimum (10 + 1/10 D) cm.

Normsofcompactingandqualitycontrol

- As U-PVC pipes are flexible, the uniformity of the surrounding soil is basicallyfor a correct constructionof a carrying structure, because the soil, deformed bythepipes, reacts inawaytogiveahelpinsupporting the load. In order to assure stability and integrity of he pipes laid, within the time,itispointedoutthatthecontractorhastotakeagreatcare regarding thelayingofthepipebed,thesupportandthefirstcoveringof U-PVC andhastoapplyscrupulouslythepresent norms.
- The degree of compacting of the material, which forms the supports, has a determining influence on the value of diametric deformations (x /D) of the pipes. This value, which must not exceed the limits permitted, can be deduced by the formula of Spangler,

$$X=\frac{0,125.Q}{A.\ (s/D)3+0,0915.\ E1}$$

with:

Q=totalexternalloadonthepipe[kg/m];
E = modulus ofelasticity of thepipe[kg/m2]; s
= thickness of the pipe [m];
D=diameterofthe pipe[m];
E1=modulusofelasticityofthesoil[kg/m2].

ParticularlyE1dependsonthefactorof compactingα'accordingtotherelation:

$$E1=\frac{9.104.}{(H+4),a}$$

whereH[m]istheheightoffillingmeasuredfromtheuppersideofthepipe.

Furthermore α ' is connected to the Proctor indexas indicated in thefollowingtable:

Proctor Test	a'
95%	1,0
90%	1,5
85%	$1,5^2$
80%	$1,5^3$
75%	$1,5^4$

- The Proctor index defines normally the degree of compacting of the soil. For U-PVC pipes a Proctor index of at least 90% has to be considered. The achievement of the value required for the Proctor index hasto be verifiedby means of appropriate tests and respective certifications, the number of which is fixed during the planning.
- The above-mentioned tests, defined as tests of compaction and determination of the characteristics of density of materials, must be carried out with the standard method AASHO with 4 points of the curve density/content of water.In order to obtainthedensityrequiredmethodsof compacting are used (by hand with flat presses or with light mechanical apparata).

Layingofthepipe

- before laying the pipes, they have to be checked one by one in order to discover possible defects; the end part and the socket of the pipes have ot be integral. The pipes and fittings must be put on the layingbed in a way to have a continuous contract with the bed.
- Theniches, excavated before, fortheaccommodationofthesockets (even ifthe dimension of the socket is minimum, it is normal to for see a nicheincorrespondenceofitssupport),ifnecessary,havetobe accurately filled inordertoavoidpossibleempty spaces under thesockets.

Procedureoffilling

- The filling of a trench and generally of the excavation, is fundamental for the laying.AsweardealingwithUPVCpipes,theuniformityofthesoilis absolutely necessary in order to have a perfect construction of the carrying structure,asthe soil reacts inaway,givingacontributiontosupportthe given load. The material already used for the construction of the bed is put aroundthepipeandsolidatedbyhandinordertoformsuccessivestrataof 20cm.uptohalfheight ofthepipe. Ithastobetaken care that there won't remain any empty spaces under the pipes and that the strata L1 ofthe filling material between the pipe and the wall will be continuous and compact.
- The second strata of filling L 2, reaches the upper part of the pipe. Its compactness has to be carried out with maximum care. The third strata L3 reaches 15 cm overtheupper part of the pipe.Compactness has to be only at the sides of the pipes, never vertically on the same.
- The solidation of fillingaround the pipe must be uniform and reach 90% of the optimalvaluedeterminedbythemodifiedProctortest.Thesupportwithturfy,muddy,cl ayly,orfrozensoilisnotallowedasthiskindofsoilcannot besolidatedasitcontainstoomuch water.
- Further filling is made (strata L4 and L5) by material obtained from excavation. This material iscleanedfromelementshavingabigger diameterthan10cmandfrom vegetal and animal fragments. The filling has to be madeforthefollowingstrataup to 20 cm.Ithasto be compacted andeventuallywateredforathicknessof1m(measuredfromtheupperpart of the pipe), so that the densityof the soil, once solidated, reaches 90% of the optimal value determined by the modified Proctor test. The bigger material (stonesofa diameter > 2 cm)mustnotexceedthelimitof30%.At lasttherehasto be a freespaceforthelaststrataofvegetal soil.

Speciallayingconditions

- Ifthereisaground water table, ithastobeascertainedthatthistable does not cause any movement of the filling material surrounding the pipe. The surrounding soil has therefore to be solidated by meansof draining, operating under thelevelofexcavation,and thus avoidingeverypossibleinstabilityof the laying soil and brickworks.
- Ifduringthework,forlimiteddistances,therewillappearsomeharderlaying conditions thanthoseforseenbytheproject (enlargements ofwalls, landslidesetc) worksofprotectionhavetobecarriedoutinorderto come back to laying conditions as described. There must be extra-walls of heaps of stones or concretein order to reduce the length of the section of excavation orthere must be adopted other solutions authorized by the Direction of Work.
- In case, for technical reasons the height H of recovering is in some points lower than the minimumprescribed, it is necessaryto absorb vertical loads by using appropriate protectiondevices (rigid diaphragms of protection and distribution of the loads, to be put above the last compact strata of material),followingtheimput of the Directionof Work.

- Incaseofcrossingrailways,itispossibleto:
  - Forseeasteelcoveredprotectivepipe(casing)
  - Laypipesinatunnelofre-inforcedconcrete

ESECUTIONSOFCONNECTIONS

- Connections are made, respecting the indications given in the following,both for pipes and special pieces. An accurate cleaning of the parts to be joint is for seen making sure that they are integral. The gasket has to be inserted (if not already inserted during production) in it seat, situated in the internal side of the socket. Successive steps are:
- Lubrification of the external surface of the end of the pipe (plain ended side of the pipe) and the internal surfact of the socket, using an appropriate lubricant (grease of silicone-oil, Vaseline, soapy water, etc.) Avoid the useof mineral oils or greases which may damage the gasket.
- Insert the head of the pipe until the end of the socket and do not force further. The perfect execution of this working process depends only on a precise alignmentof the pipesandon an accurate lubrification.

ItemNo.32to37:

Providing and fixing uPVC fittings viz. coupler bend, elba, tee, etc. ofSchedule-40 of any approved brand and quality -200 mm / 100 mm /63 mm / 40 mm 25 mm / 15 mm

ThecontractorshallhavetosupplyUPVC fittings vz. Bends, tees, coupler, etc.of required dia size as per the requirement and of approved quality by the engineer in charge.Subsequently the fixingofthesameshall have to be carriedoutwithallrequiredmaterialetc.andcompletethewholeworkaspertherequirementandtothesatisfactionofengineerincharge.

TherateshallbeforaunitofOnenumberbasis.

ItemNo.38:

FixingofGunmetalfullwaywheelvalveetc.25mmdia:

TheISIMarkedGunmetalfullwaywheelvalveof25mmdiashallhavetofitted as per instructions of engineer-in-charge.

TherateforthisworkwillpaidperNumberbasis.

ItemNo.39to44:
Providing and fixing GI fittings if ISI:1239 viz. coupler bend,reducers, elba, tee, etc. of approved brand and quality -

The contractorshall have to supply GIfittings viz. Bends, tees, coupler, reducer, etc. of required dia size as per the requirement and of approvedquality by the engineer in charge.Subsequently the fixingof the same shall have to be carried out with all required material etc. and complete the whole workaspertherequirementandtothesatisfactionofengineerincharge.

TherateshallbeforaunitofOnenumberbasis.

ItemNo.45:
ProvidingandfixingOverheadWaterTanks"Sintex"orequivalentof1000 Literscapacitywithallnecessaryplumbingfittingsetc.comp.asdirected byEngineer-in-charge.

MATERIALSANDWORKMANSHIP:

Overhead water tanks "Sintex" or equivalent of cylindrical vertical tanks with closedtopwithofself-supportedtypehavingapprovedgradeof polyethylene, molded to seamless and suitable for potable water tank of capacity as mentioned in Schedule-B as per company's dimensions provided with G.I. fittings of size 25mm Dia for inlet, outlet, overflow and scour connections and float valves etc. complete placed with all fittings fixing as directed by engineer in charge.

TherateforthisworkwillbepaidpernumberbasisTherateforthisworkwillbepaidpernumberbasis.

Addl/Asst.Engineer R.M.C.	**Dy.Ex.Engineer R.M.C.**	**ADD. CITY ENGINEER R.M.C.**

SignatureofContractorwithSeal

LISTOFAPPROVEDMAKE(CivilWork)					
NO.	SPACE	PARTICULAR	COMP		
1	ReadymixedConcrete		Lafarge/Bhanu/ultratech/RJ/Krishna		
2	OrdinaryPortlandCement (Minimum53Grade)		UltraTech/Birla/ACC/Ambuja/Hathi/Sanghi		
3	Flushdoors		BISapprovedbrand(ISIMark)		
4	FRPDoors		Fibrevent,TechnoskillsorEquivalent(orasapprovedby EngineerIncharge)		
5	PVCDoorswithFrame		ISIandapprovedbyEngineerIncharge		
6	HydraulicfloorSpring/Door		Everite,Garnish,Hardwyn		
7	WhiteCement		JKWhite	Birlawhite	Nihon White
8	Reinforcement/Structural Steel (Each LOT shall accompany manufacturer's TestCertificate)		(TMT BARS Fe-500)Gallent/ET/ASR/Friend or BIS approved manufacturers		
9	Dining, Drawing, Bed Room, Kitchen,Toilet/Bath/Wash etc,	Vitrified/ Ceramic /Glaze Tiles/Wall Tiles/Parking Floor Tiles	Somani/Nitco/Kajaria/RAK/Jhonson/Simpolo/Bell/Asian/Euro/Vermora		
10	Toilet/Bath/Wash	PVC/UPVC pipes&Fittings	Astral/Supreme/Prince/finolex /Simco/Plumber With Clamp open type of outer side of Building		
11		Sanitary ware	Jaquar/cera/Hindware/Jhonson and any other standard brandh as approved by engineer-in-charge		
12	TeakWood		Bulsar	C.P.Teak	
13	InterlockingPaverblocks		ISIMark–Balaji,Regency,Supreme		
14	Plywood Products Commercial BlockBoardCommercial PlyTeakPly		ISIMarkasapprovedbyengineer-in-charge		
15	Glass/Float/Sheet		SaintGobain	Modi/HNG	Asahi
16		Laminates	Neolux/Formica/Sunmica/MerinoorasperIS		
17	Aluminumsections		Jindal	Indal	Banco

A) ThecontractorshallproducesamplesofthematerialsforapprovaloftheRMC/PMC. Thematerialsofthemakesoutoftheaboveasapprovedbytheo RMC/PMCshallbe usedonthework.RMC/PMCmemberhasnotbidetogiveanyreasonforrejectionof anybrandfromtheabovelistanditsdecisionwillbeconsiderasfinal.

B) Inrespectofmaterialsforwhichapprovedmakesarenotspecifiedabove,these will be of makes to be decided by the RMC / PMC.

C) Contractorcanuseforanymaterialofequivalentmakeoftheabovespecified company after taking prior permission of RMC/PMC.

The agency has to use item/material mentioned in the list above. In no case other item/material shall be allowed except those mentioned in the list unless and until the unavailability of the above said item/material noticed that too, prior approved of RMC/PMC

D.ADDITIONALCONDITIONS

D. ADDITIONALCONDITIONS:

1. The work shall consist of removing, ashereinafter set forth;existing culverts, bridges,pavement,kerbs and other structureslike guards-rails, fences, utility poles,manholes,catch basins,inlets,etc.Whichareinplacebutinterferewith thenewconstructionorarenotsuitableto remain in place and ofsalvaging and disposing of the resulting materials and back-fillingtheresultingtrenchesandpits.

2. Existing culverts, bridges, pavementsandother structures whichare within the work area and which are designated to be removed,shallbe removedup tothelimits andextentspecifiedin thedrawingsorasindicatedbytheEngineer-in-charge.

3. Dismantling and removal operations shall be carried outwithsuchequipmentandin sucha manner as to leaveundisturbed, adjacent pavement, structures and other work to be leftintact.

4. All operations necessary for the removal of anyexistingstructurewhichmightendangernewconstructionshallbecompl etedpriortothestartofnewwork.

5. Thestructuresshallbedismantledcarefullyandthe resultingmaterialssoremovedasnottocause any damage to theserviceable materials to be salvaged, the part of structure toberetainedandanyotherpropertiesorstructuresnearby.

6. Unless otherwise specified, the superstructure portion ofculverts/bridgesshallbeentirelyremovedand other partsremoved to below the groundlevel or as necessary dependinguponthe interferencethey cause to the new construction.Removalofoverlying ofadjacent material if required inconnection with the dismantling of thestructures shall be incidentaltothisitem.

7. Where existing culverts / bridges are to be extended orotherwiseincorporatedinthenewwork only such part or partsof the existing structure shall be removed as are necessarytoprovide a proper connection to the new work. The connectingedges, shall be cut, chipped and trimmed to the required linesandgradeswithoutweakening or damaging any part of thestructure to be retained. Reinforcing bars which are to be left inplaceso as to project into new work as dowels or ties shall not beinjuredduringremovalofconcrete.

8. Pipe culverts shall be carefullyremovedin such a manner as toavoiddamagetothepipes.

9. Steelstructuresshallunlessotherwiseprovided becarefullydismantledinsuchamannerasto avoid damage to membersthereof.Ifspecifiedinthe drawingordirectedbytheEngineer-in-

charge that structure is to be removed in a condition suitable for re-erection, all members shall be match marked by the contractor withwhite lead paint before dismantling. End pins, nuts, loose, plates, etc.shall be similarly marked to indicate their proper location. Allpins,pinholesandmachinedsurfaces shall be painted with amixture of white lead and tallow and loose parts shall besecurelywiredtoadjacentmembersorpackedinboxes.

10. Timber structures shall be removed in such a manner asto avoid damages to such timber or lumber as is designated by theEngineer-in-chargetobesalvaged.

11. In removing pavements, kerbs, gutters, andotherstructures, likeguard rails, fences, manholes, catch, basins, inlets etc. whereportionsof the existingconstruction are to be left in the finished work, thesame shall be removedto anexistingjoint or cut and chipped to atruelinewithafaceperpendiculartothesurfaceoftheexistingstructure. Sufficient removal shall be made toprovide for propergradesandcorrespondingwiththenewworkasdirectedbytheEngineer-in-charge.

12. All concrete pavementsbasecourse in carriageway and shouldersetc.designatedforremoval shall be broken to pieces whosevolumesshallnotbeexceed0.02cubicmeterand,stockpiledatdesignated locations if the material is to be used later or otherwisearrangedfordisposalasdirected.

13. Wheredirectedbytheengineer-in-chargeholesand depressionscaused by dismantling operations shall be backfilled withexcavated or other approved material and thoroughly compactedinlinewithsurroundingarea.

14. AllmaterialsobtainedbydismantlingshallbethepropertyofGovernment.Unless otherwise specified, materials having anysalvage value shall be placed in neat stack of like materialwithin the right-of- way as directed by the Engineer-in-charge,for which contractor will remain responsible for its safe custodyand preservation for 60 days after recording measurements of thesalvagedmaterial.

15. Pipe culverts that are removed shall be cleared and neatly piled ontheright-of-wayatpointsdesignatedbytheEngineer-in-charge.

16. Structural steel removed from old structure shall, unless otherwisespecified or directed be stored in a neat and presentable manner onblocking in locations suitable for loading. Structures or portions thereofwhich are specified in the contract for re-erections shall be stored inseparatepiles.

17. Timber of lumber from old structures which is designatedbythe Engineer-in-charge as materials to be salvaged shall haveallnutsandboltsremovedfromandshallbestoredinneatpilesin

locationssuitableforloading.

18. All the products of dismantling operations which in the opinionoftheEngineer-in-chargecannotbeusedorauctionedshall bedisposedasdirected,within100meters.

19. The work of dismantling structure shall be paid for in units indicatedbelowbytakingmeasurementbeforeandafter,asapplica ble;

i)	Dismantlingbrick/stone/concrete Cubic Meter(Plainandreinforced)masonry	
ii)	Dismantlingflexibleandcement Cubic Meterconcretepavement	
iii)	Dismantlingsteelstructure	Ton
iv)	Dismantlingtimberstructure	CubicMeter
v)	Dismantlingpipes,guardrails,kerbs, guttersandfencing	LinearMeter
vi)	Utilitypoles	No.s
vii)	Removaloffflooring–CCPrecastTiles/ Shahbadiladi/tilesflooring	Sqr.Mtr
viii)	Removalofroaddividerstrip	No.s

20. The contract unit ratesforthe various items of dismantling shall befor paymentin full for carrying out the required operationsincluding full compensation for all labor, materials, toolsequipment, safeguard and incidentals necessary to complete the work.These will also includeexcavation and backfilling where necessaryand for handling, salvaging, pilling and disposing of the dismantledmaterialwithinallliftsanduptoa leadof100meters.

DETAILEDTECHNICALSPECIFICATIONS

ItemNo.1: ExcavationofFoundationinSoftMurrum,SoilorSandfrom0.0 mtr.to 1.50 mtr depth including lifting and laying asinstructed

1.0 General:

1.1 Anysoilwhichgenerallyyieldstotheapplicationofthepickaxes and shovels, phawaras rakes or any such ordinary excavation implementororganicsoil,gravel, slit, sand turf lawn, clay, peat etc. fall under this category.

2.0 Cleaningthesite:

2.1 The site on which the structure is to be built shall be cleared, and all obstructions, loosestone,materialsand rubbishof all kind,bush, woodandtreesshallbe removedasdirected.Thematerialsso obtain shall be property of the governmentand shall be conveyed and stackedas directedwithin RMC limit. The roots of the tree coming in the sides shall be cut and coated with a asphalt.

2.2 Therateofsiteclearanceisdeemedtobeincludedintherateof earth work for which no extra will be paid.

3.0 Settingout:

Afterclearingthesite,thecenterlineswillbegivenbythe engineer-in-charge. Thecontractorshallassumefullresponsibility foralignment,elevationanddimensionandofeachandallparts ofthework.Contractorshallsupplylabors,materials,etcrequired for settingout the referencemarks and bench marks and shall maintain them as long as required and directed.

4.0 Excavation:

Theexcavationinfoundationshallbecarriedoutintruelineand levelandshall have the width and depth as shownin the drawingsor as directed.The contractor shalldothenecessaryshoringand struttingor providingnecessaryslopesto a safeangle,at hisown cost. The bottom of the excavated area shall be leveled both longitudinallyand transverselyas directed by removing and watering as required.Noearthfillingwillbeallowedforbringingittolevel,if by mistakeor any other reason excavation is made deeper or wider than that shown on the planordirected. Theextra depth orwidth shall be made up with concrete of same proportion as specified for the foundationconcreteatthecostofthecontractor.Theexcavation upto 1.5 mt depth shall be measured under this item.

5.0 Disposaloftheexcavatedstuff:

The excavated stuff of the selected type shall be used in filling the trenches andplinth or leveling the ground in layers including ramming and watering etc.

The balance of the excavated quantity shall be removed by the contractorfromthesiteofworktoaplaceasdirectedwithinRMC limit and all lift.

After refilling, surplus earth shall have to carted by the contractor withinspecifiedlimit includingloading transportingunloading spreading without any extra cost.

Thesurplusstuffshallbe disposedoffatthefollowingsites as directed within the prescribed limits of Notification as directed by the engineeringin charge.

1. BesideKothariaPoliceStationnearStoneQuarry
2. All QuarryareasofRaiyaSmartCity
3. TP Scheme No.10, FP-87, Dhebar Road (South), Atika Area, Nr. PGVCL Office
4. TPSchemeNo.23,FP-23,Nr.IOCGodown,MorbiRoad
5. TPreservationplotatSamratindustrialArea,Bh.STWorkshop
6. TPSchemeNo.9,FP-5,Nr.RaiyadharGarbageStation
7. TPSchemeNo.20,FP-35,Bh.PradhumanGreen
8. TPSchemeNo.28(Mavdi),FP-46/A,Nr.GETCOCircle
9. TP Scheme No.12, FP-38/A and 39/B, Nr. LijjatPapad, KothariyaNationla Highway

If the contractor fails to dispose the excavated stuff as specified, penalty will be imposed by Rajkot Municipal Corporation as per the Notification for C&D waste.

ModeofMeasurementandPayment:

Themeasurementofexcavationintrenchesforfoundationshallbe madeaccordingtothesectionsoftrenchesshownonthedrawingoras persections givenbytheengineer-in-charge.Nopaymentshallbe madeforsurplus excavationmadeinexcessofaboverequirementordue tostoppingandsloping backasfoundnecessaryonaccountofconditions ofsoilandrequirementsof safety.

Therateshallbefora unitofonecubicMeter.

ItemNo.2:

A) Supplyingofhardmurrumbindingmaterial.

B) Spreadingbindageorroadcrustfillingthegapsinmetalandlevelingto camberandgradientanddirectedmurrum.

A) Materialforthepurposeshallbeapprovedquality.Anymaterialwhich is found inferior shall be rejected and contractor shall remove such rejected material from the site at his own cost.

The material shall be got approved by the CITY ENGINEER prior to collection on the site. It shall be free from all rubbish, dust and any organicmaterialsaswellas clouds of black cotton soils.

Forroadwork,completestockingofmaterialsasperrequirements shallbe carried out 200 m length or as per condition of site or as per instructionsofsiteinchargebeforespreading.Thestacksofmaterials

shall be got cross checked by Dy.Ex.Engineer as per rules before spreading.

Where any doubt exists as whether quantity of stacking of murrum correctedby contractor,no extra paymentshall be claimed by contractor. If the quantity of murrum in any stack found less than standardmeasurementviz;1.5cmt.The entire shall be paid on the basis of the quantity so found.

Thepaymentshallbeoncubicmeterbasiswithoutdeductionfor voids.The contractorshallmaintainallstacksinregularandproper size till whole material shall not measure and finally accepted by the department.

Theratesincludescostofcollection,conveyancetothesitewithall leadandliftandfillingtheboxesincludingalllabours,tools, equipmentandotherexpenses. The ratesquotedare inclusiveof all such tools, duties, royalties, taxes etc.

B) Spreading of material shall be started after the full supply in particular lengthis collected,measuredandrecorded.PermissionofEngineer in-chargeshallbe obtained before spreading. It shall be seen that formationisdressedtorequiredcamberandgrade.Ifthemurrumis to be spread over the metaled surface then the spreading shall be uniformandasithastoactasbindingsurface.Itshallbe usedfor fillingtheintersticesofmetalandformingasmoothrunningsurface as faraspossible.Murrumbindageshallbespreadevenlywitha twisting motion ofthe baskets. No more murrum shall be used than specifiedasbindage.The contractor shall do good all unevenness, depression,projectionetc. during consolidationwork.Rate of these itemsincludesalltheseoperationexceptconsolidation.**Also,the workistobecarriedoutwithMiniRoll/RoadRoller/ HandRollas may be requiredfor the workas per the requirementandinstructionsofengineerincharge.**The paymentshall be made on cubic meter basis.

The testingof materialis tobecarriedoutbytheAgencyathisowncost.

ItemNo.3and4:
RCCwork1:2:4forcoppingusingaggregateofsize10-20mm,centring,curing, finishing etc. complete (without reinforcement) And
ProvidingandlayingcementconcreteinM-20or1:1½:3innominalmix(1cement:1½coarsesand:3gradedstoneaggregate 20mm,nominalsize)curingcompleteexcludingreinforcementforreinforcedwork in(C) Slabs, landings shelves, balconies, lintels, chhajja,beams, girders and cantilever (E) Stair case

1.0 Materials:

WatershallconformtoM-1,cementshallconformtoM-2,Sandshall conformtoM-4,GritshallconformtoM-8.Gradedstoneaggregate20

mm,nominalsizeshallconformtoM-12.

2.0 General:

2.1 Theconcretemixis notrequiredtobe designedby preliminary tests. The proportionofconcretemixshallbe1:$1^1/_2$:3(1Cement:$1^1/_2$coarsesand: 3 graded stone aggregate) 20 mm nominal size) by volume.
Concrete work shall have exposed concrete surface or as specified in the item.

2.2 ThedesignationordinaryM-100,M-150,M-200,M-250specifiedasperIS correspond approximately to 1:3:6, 1:2:4, 1:$1^1/_2$:3 and 1:1:2 nominal mix of ordinary concrete by volume respectively.

2.3 The ingredients required for ordinary concrete containing one bag of cementof50Kgbyweight(0.0342Cu.M)fordifferentproportionsofmix shall be as under:

Gradeof concrete	Total quantity of dry aggregate by volume per 50kgs of cement to be taken as the sum of individual volume of fineand coarse aggregates, max.	Proportion of fine aggregate to coarse aggregate	Quantityof water per50Kgs ofcement maximum
M-100(1:3:6) M-150(1:2:4) M-200 (1:$1^1/_2$:3) M-250(1:1:2)	300Litres 220Litres 160Litres 100Litres	Generally 1.2 for fine aggregate to coarseaggregateby volume but subject to an upper limit of 1:1.1/2andlower limit1:3	34Litres 32Litres 30Litres 27Litres

2.4 The water cement ratio shall not be more than specified in the above table. The cement concrete of the mix specified in the Table shall be increased if the quantity of water in mix has to be increased to overcome the difficulties of placements and compaction so that water cement ratio specified on the table is not exceeded.

2.5 Workability of the concrete shall be controlled by maintaining a water cement ratio that is found to give a concrete mix which is just sufficient wet to be placed and compacted without difficulty with the means available.

2.6 Themaximumsizeofcoarseaggregateshallbeaslargeaspossiblewithin the limits specified but in no case greater than one fourth of minimum thickness of the member, provided that the concrete can be placed withoutdifficultysoastosurroundallreinforcementthoroughlyandtofill the corners of the form.

2.7.For reinforced concrete work, coarse aggregates having a nominal size of 20 mm, are generally considered satisfactory.

2.8 Forheavilyreinforcedconcretemembersasinthecaseofribsmain

beams,thenominalmaximum sizeofcoarseaggregateshould usuallybe restrictedto5mm,lessthantheminimumthedistancebetweenthemain bars, or 5 mm less than the minimum cover to the reinform or whichever is smaller.

2.9 Where the reinforcement is widely spaced as in solid slabs, limitations of sizeoftheaggregatemaynotbesoimportant,andthenominalmaximum sizemaysometimesbeasgreaterasorgreaterthantheminimumcover.

2.10 Admixture may be used in concrete only with approval of engineer-in-chargebaseduponthеevidencethatwiththepassageoftime,neitherthe compressive strength of concrete is reduced nor are other requisite qualities of concrete and steel impaired by the use of such admixtures.

3.0 Workmanship:

3.1 Proportioning:

Proportioning shall be done by volume, except cement which shall be measured in terms of bags of 50 kg. weight the volume of one such bag being taken as 0.0342 cu.metre. Boxes of suitable size shall be used for measuring sand aggregate. the size of boxes (internal) shall be 35 x 25 cms,and40cmsdeepwhilemeasuringtheaggregateandsandtheboxes shall be filled without shaking ramming or hammering. The proportioning of sand shall be on the basis of its dry volume and in case of damp sand, allowances for bulkage shall be made.

3.2 Mixing:

3.2.1 For all work, concrete shall be mixed in a mechanical mixer which along withotheraccessoriesshallbekeptinfirstclassworkingconditionandso maintainedthroughouttheconstruction.Measuredquantityofaggregate, sandandcementrequiredforeachbatchshallbepouredintothedrumof the mechanical mixer while it is continuously running. After about half a minute of dry mixing measured quantity of water required for each batch ofconcretemixshallbeaddedgraduallyandmixingcontinuedforanother one and a half minute. Mixing shall be continued till materials are uniformlydistributedanduniformcoloroftheentiremassisobtainedand eachindividualparticleofthecoarseaggregateshowscompletecoatingof mortar containing its proportionate amount of cement. In no case shall themixingbedoneforlessthan2minutesafterallingredientshavebeen put into the mixer.

3.2.2 When hand mixing is permitted by the engineer-in-charge for small jobs or for certain other reasons, it shall be done on the smooth water tight platform large enough to allow efficient turning over the ingredients of concrete before and after adding water. Mixing platform shall be so arranged that no foreign material gets mixed with concrete nor does the mixingwaterflowout.Cementinrequirednumberofbagsshallbeplaced in a uniform layer on top of the measured quantity of fine and coarse aggregate, which shall also be spread in a layer of uniform thickness on themixingplatform.Drycoarseandfineaggregateandcementshallthen be mixed thoroughly by turning over to get a mixture to uniform color. Specified quantity of water shall then be added gradually through a rose canandthemassturnedovertillamixofrequiredconsistencyis

obtained.Inhandmixingquantityofcementshallbeincreasedby10 percent above that specified.

3.2.3 Mixers which have been out of use for more than 30 minutes shall be thorough cleaned before putting in a new batch. Unless otherwise agreed to by the engineer-in-charge the first batch of concrete form the mixture shall contain only two thirds of normal quantity of coarse aggregate. Mixingplantshallbethoroughlycleanedbeforechangingfromonetypeof cement to another.

3.3 Consistency:

3.3.1 Thedegreeofconsistencywhichshalldependuponthenatureofthework and the methods of vibration of concrete, shall be determined by regular slump tests in accordance with IS 1199 - Latest edition. The slump of 10 mmto25mmshallbeadoptedwhenvibratorsareusedand80mmwhen vibrators are not used.

3.4 Inspection:

3.4.1 Contractorshallgivetheengineer-in-chargeduenoticebeforeplacingany concrete in the forms to permit him to inspect and accept the false work and forms as to their strength, alignment, and general fineness but such inspection shall not relieve the contractor of his responsibility for the safetyofmen,machinery,materialsandforresultsobtained.Immediately before concreting, all forms shall be thoroughly cleaned.

3.4.2 Centeringdesignanditserectionshallbegotapprovedfromtheengineer- in-charge. One carpenter with helper shall invariably kept present throughouttheperiodofconcreting.Movementoflaborandotherpersons shall be totally prohibited for reinforcement laid in position. For access to different parts suitable mobile platforms shall be provided so that steel reinforcement in position is not disturbed. For ensuring proper cover, mortarblocksofsuitablesizeshallbecastandtiedtothereinforcement. Timber, kapachi or metal pieces shall not be used for this purpose.

3.5. TransportingandLaying:

3.5.1 The method of transporting and placing concrete shall be as approved. Concrete shall be so transported and placed that no contamination, segregation or loss of its constituent material takes place. All form work shall be cleaned and made free from standing water dust, show or ice immediatelybeforeplacingofconcrete.Noconcreteshallbeplacedinany partofthestructureuntiltheapprovaloftheengineer-in-chargehasbeen obtained.

3.5.2 Concretingshallproceedcontinuouslyoverthearebetweenconstruction joints.Freshconcreteshallnotbeplacedagainstconcretewhichhasbeen in position for more than 30 minutes unless a proper contraction joint is formed.Concreteshallbecompactedinitsfinalpositionwithin30minutes of its discharge from the mixer. Expert where otherwise agreed to by the engineer-in-charge concrete shall be deposited in horizontal layers to a compacteddepthofnotmorethan0.45meterwheninternalvibratorsare used and not exceeding 0.30 meter in all other cases.

3.5.3 Unless otherwise agreed to by the engineer-in-charge, concrete shall not be dropped in to place from a height exceeding 2 meters. When trunking or chutes are used they shall be kept close and used in such a way as to avoidsegregation.Whenconcretinghastoberesumedonasurfacewhich has hardened it shall be roughened swept clean, thoroughly wetted and coveredwitha13mmthicklayerofmortarcomposedofcementandsand inthesameratioasintheconcretemixitself.This13mmlayerofmortar shall be freshly mixed and placed immediately before placing of new concrete. Where concrete has not fully hardened all laitance shall be removed by scrubbing the wet surface with wire of bristle brushes care being taken to avoid dislodgement of any particles of coarse aggregate. The surface shall then be thoroughly wetted all free water removed and thencoatedwithneatcementgroutthefirstlayerofconcretetobeplaced on this surface shall not exceed 150 mm in thickness and shall be well rammed against old work particular attention being given to corners and close spots.

3.5.4 All concrete shall be compacted to produce a dense homogenous mass with the assistance of vibrators unless otherwise permitted by the engineer-in-charge for exceptional cases such as concreting under water where vibrators cannot be used. Sufficient vibrators in serviceable conditionshallbekeptatsitesothatspareequipmentisalwaysavailable in the event of breakdowns. Concrete shall be judge to be compacted whenthemortarfillsthespacesbetweenthecoarseaggregateandbegins to cream up to form an even surface mixture. During compaction, it shall beobserved thatneedlevibratorsarenotappliedonreinforcementwhich is likely to destroy the bond between concrete and reinforcement.

3.6 Curing:

Immediately after compaction, concrete shall be protected from weather including rain running water shocks vibration traffic rapid temperature changesfrostanddryingoutprocess.Itshallbecoveredwithwetsacking hassianorothersimilarabsorbentmaterialapprovedsoonaftertheinitial set and shall be kept continuously wet for a period of not less than 14 daysfromthedateofplacement.Masonaryworkoverfoundationconcrete may bestarted after 48 hours of its laying but curing of concrete shall be continued for a minimum period of 14 days.

3.7 Samplingandtestingofconcrete:

3.7.1. Samples from fresh concrete shall be taken as per IS 1199 - Latest edition,andcubesshallbemadecuredandtestedat7daysof28daysas per requirements in accordance with IS 516 - Latest edition. A random sampling procedure shall be adopted to ensure that each concrete batch shallhaveareasonablechanceofbeingtestedi.e.thesamplingshouldbe spreadovertheentireperiodofconcretingandcoverallmixingunits.The minimum frequency of sampling of concrete of each grade shall be in accordance with following:

Quantity of concrete in the work	No.ofsamples	Quantity of concrete in the work.	No.ofsamples
1-5cmt	1	16-30cmt	3

6-15cmt	2	31-50cmt	4
51andabove	4±oneadditionalforeachadditional50morparthereof		

NOTE:-At least one sample shall be taken from each shift. Ten test specimens shall be made from each sample five for testing at 7 days and the remaining five at 28 days. The samples of concrete shall be taken on each days of the concreting as per above frequency. The number of specimens may be suitably increased as deemed necessary by the engineer-in-charge when procedure of tests given above reveals a poor quality of concrete and in other special cases.

3.7.2. Theaveragestrengthofthegroupofcubescast for eachdayshallnotbe less than the specified cube strength of 150 Kg/Cm^2 at 28 days. 20% of the cubes cast for each day may have value less than the specified strength.Suchconcreteshallbeclassifiedasbelongingtotheappropriate lowergrade.Concretemadeinaccordancewiththeproportiongivenfora particular grade shall not, however, be placed in a higher grade on the ground that the test strength are higher than the minimum specified.

3.8 Stripping:

3.8.1. The engineer-in-charge shall be informed in advance by the contractor of his intention to strike the form work. While fixing the time for removal of form,dueconsiderationshallbegiventolocalconditions,characterofthe structure, the weather and other conditions that influence the setting of concrete and of the materials used in the mix. In normal circumstances (generally where temperatures are above 20^0C) and where ordinary concrete is used, forms may be struck after expiry of periods specified below for respective item of work.

StrippingTime:

In normal circumstances and where ordinary cement is used forms may be struck after expiry of following periods:

a) Sideofwalls,columnsandverticalfacesofbeams-24to48hours
b) Beamsoftish(props.leftunder) -7days
c) Removalofpropsslabs:
   i) Slabsspanningupto4.5m -7 days
   ii) Spanningover4.5m -14days
d) Removalofpropsforbeamsandarches
   i) Spanningupto6m -14days
   ii) Spanningover6m -21days

3.8.2. All form work shall be removed without causing any shock orvibration as would damage the concrete. Before the soffit and struts and struts are removed, the concrete surface shall be gradually exposed, where necessary in order to ascertain that concrete has sufficiently hardened. Centeringshallbegraduallyanduniformlyloweredinsuchamannerasto permit the concrete to take stresses due to its own weight uniformly and gradually. Where internal metal ties are permitted, they or their removable parts shall be extracted without causing any damage to the concreteandremainingholesfilledwithmortar.Nopermanently

embedded metal part shall have less 25 mm cover to the finished concretesurface.Whereitisintendedtore-usetheformwork,itshallbe cleaned and made good to the satisfaction of the engineer-in-charge. After removal of work and shuttering, the City Engineer shall inspect the work and satisfy by random checks that concrete produced is of good quality.

3.8.3. Immediately after the removal of forms, all exposed bolts etc. passing through the cement concrete member and used for shuttering or any otherpurposeshallbecutinsidethecementconcretemembertoadepth of at least 25 m below thesurfaceof the concrete and theresultingholes be filled by cement mortar. All fins cussed by form joints, all cavities producedbytheremovalofformtiesandallotherholesanddepressions, honeycomb spots, broken edges or corners and other defects, shall be thoroughly cleaned, saturated with water and carefully pointed and rendered true with mortar of cement and fine aggregate mixed in proportions used in the grade of concrete that is being finished and of as dry consistency as is possible to use. Considerable pressure shall be applied in filling and pointing to ensure through filling in all voids. Surfaceswhicharepointedshallbekeptmoistforaperiodof24hours.If pockets/honeycombsintheopinionoftheengineer-in-chargeareofsuch anextentorcharacterastoaffectthestrengthofthestructurematerially or to endanger the life of the steel reinforcement, he may declare the concrete defective and require the removal and replacement of the portions of structure affected.

(a) thebarsshallbekeptinpositionbythefollowingmethods:

(i) Incaseofbeamandslabconstruction,sufficientnumberofprecast cover blocks in cement mortar 1 :2 (1 cement : 2 coarse sand) about 4 x 4 cms. section and of thickness equal to the specified cover shall be place between the bars and shuttering as to secure and maintain the requisite cover of concrete over the reinforce- ment. In case of cantilevered or doubly reinforce beams or slabs, the main reinforcing bars shall be held in position by introducing chain spacers or supports bars at 1.0. to 1.2 metres centers.

(ii) In case of columns and walls, the vertical bars shall be kept in position be means of timber templates slotes accurately out in them, the templates shall be removed after concreting has been done below it. The bars Ray also suitably tied by means of annealed steel wires to the shuttering to maintain position during concreting.

1.2.Allbars,projectingformpillars,Columnsbeams,slabsetc,towhich other bars and concrete are to be attached or bounded to later on, shall be protected with a coat of thin neat cement grout, if the bars are not likely to be incorporated with succeeding mass of concrete within the following10days,Thiscoatofthinneatcementshallberemoved before concreting.

4.0. Modeofmeasurements&payment.

4.1. The consolidated cubical contents of concrete, work as specified in item shall be measured. The concrete laid in excess of sections shown on drawing or as directed shall not be measured. No deduction shall be made forI

(a) Ends of dis-simmilar materials such as joints, beams, posts, girders, rafters, purline trusses, corbels and steps etc. upto 500 sq.cm. insection,

(b) Openingupto0.1Sq.M.

4.2. The rate includes cost of all materials labour, tools and plant requited for missing, placing in position, vibrating and compacting, finishing, as directed. curing and all other incidental expenses for producing concrete of specified strength. The rate excludes the cost of formwork.

4.3Therateshallbefora unitofonecubicmeter.

ItemNo.5:
BrickWork

Materials:
WatershallconformtoM-1.

Cement:
CementshallconformtoM-3.

Brick:
The bricks shall be hard or machine moulded and made from suitable soils and burnt. They shall be free from cracks and flaws and nodules of free lime. They shall have smooth rectangular faces with sharp corners and shall be of uniform colors.

The bricks shall be moulded with a frog of 100 mm x 40 mm and 10 mm to 20 mmdeepononeofitsflatsides.Thebricksshallnotbreakwhenthrownonthe ground from a height of 600 mm.
Thesizeofmodularbricksshallbe190mmx90mm.

Thesizeoftheconventionalbricksshallbeasunder:
(9"x4.3/8"x2,3/4")225x110x75mm

Only bricks of one standard size shall be used in one work. The following tolerances shall be permitted in the conventional size adopted in a particular work.

Length±1/8"(3mm)width:±1/16"(1.5mm) Height: ±
1/16" (1.5 mm)

The crushing strength of the bricks shall not be less than 35 kg/sq.cm. The average water absorption shall not be more than 20 percent by weight. Necessarytestsforcrushingstrengthandwaterabsorptionetc.,shallbecarried out as per IS: 3495 (Part I to IV) - latest edition.

Workmanship:

i)Proportion:

The proportion of the cement mortar shall be 1:6 (1-Cement, 6-Fine sand) by volume.

Wettingofbricks:

The bricks required formasonry shall be thoroughly wetted with clean water for about two hours before use or as directed. The cessation of bubbles, when the bricks are wetted with water is an indication of thorough wetting of bricks.

Laying:

Bricks shall be laid in English bond unless directed otherwise. Half or cut bricks shall not be used except when necessary to complete the bond; closer in such case shall be cut to required size and used near the ends of walls.

A layer of mortar shall be spread on full width for suitable length of the lower coarse.Eachbrickshallfirstbeproperlybeddedandsetframebygentlytapping with handle of trowel or wooden mallet. It's inside face shall be flushed with mortar before the next brick is laid and pressed against it. On completion of coarse the vertical joints shall be fully filled from the top with mortar.

The work shall be taken up truly in plumb. All coarses shall be laid truly horizontal and all vertical joint shall be truly vertical. Vertical joints in alternate coarse shall generally be directly one over the other. the thickness of brick coarse shall be kept uniform.

The brick shall be laid with frog upwards. A set of tools comprising of wooden straight edges, mason's spirit level, square half meter rub, and pins, string and plumbshallbekeptonsiteofworkforfrequentcheckingduringtheprogressof work.

Both the faces of walls of thickness greater than 23 cms shall be kept in proper place. All the connected brick work shall be kept not more than one meter over the rest of the work. Where this is not possible, the work shall be raked back according to bond (and not left toothed) at an angle not steeper than 45 degrees.

All fixtures, pipes, outlets of water, hold fasts of doors and windows etc. which are required to be built in wall shall be embedded in cement mortar.

Joints:

Bricks shall be so laid that all joints are quite flush with mortar. Thickness of joints shall not expose 12 mm. The face joints shall be raked out as directed by raking tools daily during the progress of work when the mortar is still green so as to provide key for plaster or pointing to done.

The face of brick shall be cleaned the very day on which the work is laid and all mortar dropping removed.

Curing:

Greenworkshallbeprotectedfromrainsuitably.Masonryworkshallbekept

moist on all thefaces for a period of seven days. Thetop of masonry workshall be kept well wetted at the close of the day.

Proportionoffoundationbed:

If the foundation is to be laid directly on the excavated bed, the bed shall be leveled,clearedofallloosematerials,cleanedandwettedbeforestringmasonry is to be laid on concrete footing, the top of concrete shall be cleaned and moistened.Thecontractorshallobtaintheengineer'sapprovalforthefoundation bed before foundation masonry is started. When precast flooring is to be provided flush with the top of plinth, the inside plinth offset shall be kept lower than the outside plinth top by the thickness of the following.

Modeofmeasurement&Payment:

The measurement of this item shall be taken for the brick masonry fully completed in foundation upto plinth. The limiting dimensions not exceeding those shown on the plains or as directed shall be final. Battered tapered and curved position shall be measured net.

ItemNo.6:
20mm.thicksandfacecementplasteronwallsandRCCstructureuptoheightof10mt.andaboveground levelconsistingof12mmthickbackingcoatingofC.M.1:3(1cement:3sand)and8mmthickfinishing coatinC.M.1:2(1cement:2sand)etc.complete

Material:

WatershallconformtoM-1.
CementMortarshallconformtoM-11

Workmanship:

Theworkshallbecarriedoutinthecoats.Thebackingcoat(basecoat)shallbe 12 mm thick in C.M. 1:3. The relevant specification is below:

Scaffolding:

Woodenbullies, bamboos, planks, treatles and other scaffoldingshall besound. Theseshall beproperexaminedbeforeerection anduse.Stagescaffoldingshall be provided for ceiling plaster which shall be independent of the walls.

Preparationofbackground:

Thesurfaceshallbecleanedofalldust,loosemortar,droppings,tracesofalgar, efflorescence and other foreign matter by water or by brushing if it is not hard and by hacking if it is hard. In case of concrete surface, if a chemical retarder hasbeenappliedtotheformwork,theshallberoughedbywirebrushingandall theresultingdustandlooseparticleclearedoffandcareshallbetakenthatnone of the retarders is left on the surface. Trimming of projections on brick / concrete surfaces where necessaryshall becarried out to get on even surface.

Raking of joints in case of masonry where necessary shall be allowed to dry out for sufficient period before carrying out the plaster work.
The work shall not be soaked but only damped evenly before applying the plaster. If the surface becomes dry, such are shall be moistened again.

Forexternalplaster,theplasteringoperationshallbestartedfromtopfloorand

carrieddownwardsforinternalplaster,theplasteringoperationsmaybestarted whenever the building frame and cladding work are ready and the temporary supports of the ceilings on the wall of the floor have been removed. Ceiling plaster shall be completed before starting plaster to walls.

Theplasterabout15x15cmsshallbefirstappliedhorizontallyandverticallyat notmorethan2metersintervalsovertheentiresurfacetoserveasgauge.The surfacesofthesegaugesshallbetrulyinplaneofthefinishedplasteredsurface. the mortar shall than be applied in uniform surface slightly more than the specifiedthickness,thenbroughttoatruesurfacebymarkingawoodenstraight edgereachingacrossthegaugeswithsmallupwardandsidewaysmovementsat a time finally the surface shall be finished off true with a trowel or wooden float according as a smooth or a sandy granular texture is required. Excessive troweling or over working the float shall be avoided. All corners, arises angles andjunctionsshallbetrulyverticalorhorizontalasthecasemaybeandshallbe carefullyfinished.Roundingorchamferingcorners,arisesjunctionsetc.shallbe carried out with proper templates to the size required.

Cementplastershallbeusedhalfanhourafteradditionofwater,andmortaror plaster which is partially set shall be rejected and removed forthwith from the site.

In suspending the work at the end of the day, the plaster shall be left out clean tothelinebothhorizontallyandvertically.Whenrecommencingtheplaster,the edges of the old work shall be scrapped clean and wetted with cement putty beforeplasterisappliedtotheadjacentareastoenablethetwotoproperlyjoin together. Plastering work shall be closed at the end of the day on the body of features such as plaster bonds and cornices nor at the corners or arises. Horizontaljointsinplasterworkshallnotalsooccuronparapettopsandcopings as these invariably lead to leakage. No portion of the surface shall be left out initiallybepackedup lateron theoutsideoftheplaster andkeepingthem wet.

Thethicknessofbackcoatshallbe12mmaverage.Beforethefirstcoathardens its surface shall be beaten up by edges of wooden tapers and close dents shall bemadeonthesurface.Thesubsequentcoatshallbeappliedafterthiscoathas beenallowedtosetfor3to5daysdependinguponthe weatherconditions.The surface shall not be allowed to dry during this period.

the second coat be started over right after finishing of plaster. The plaster shall be keptwet for aperiodof7days.Duringthisperiod, itshallbeprotected from all damages.

Modeofmeasurements&Payments:

The rate shall include the cost of all materials labour and scaffolding etc. involved in the operations described under workmanship.

All plaster shall bemeasured in squaremeter unless otherwisespecified length, breadth or height shall be measured correct to a centimeter.

Thickness of the plaster shall be exclusive of the thickness of the key i.e. groovesoropenjointsinbrickwork,stoneworketc.orspacebetweenlaths.

Thickness of plaster shall be average thickness with minimum 10 mm at any point on this surface.

Thisitemincludesplasteringuptofloortwolevel.

Themeasurementofwallplasteringshallbetakenbetweenthewallsorpartition (dimensions before plastering being taken) for length and from the top of floor or skirting to ceiling for height, depth of cover of cornices, if any, shall be deducted.

Soffitsofstairsshallbemeasuredasplasteringonceilings.Elowignssoffitsshall be measured separately.

Forjambs,soffits,sides,etc.foropeningsnotexceeding0.5sq.mt.eachinarea for ends of joints, beams, posts girders, steps etc. not exceeding 0.5 sq.mt. each in area and for openings exceeding 0.5 sq.mt. and not exceeding 3.00 sq.mt. in each area deductions and additions shall be made in the following manner:

a) No deductions shall be made for ends of joints, beams, posts etc. and openingsnotexceeding0.5sq.mt.eachandnoadditionshallbemadefor reverse, jambs, soffits, side etc. of these openings, for finish to plaster around ends of joints, beams, posts etc.

b) Deductions for openings exceeding 0.5 sq.mt. but not exceeding 3.00 sq.mt. each shall be made as following and no addition shall be made for reverse, joints, soffits, sides, etc. of these openings.

   i) When both faces of all walls are plastered with same plaster. Deductions shall be made for one face only.

   ii)
   - For openings having door squares equal to or projecting beyond the thickness of wall. Full deduction for opening shall be made from each plastered face of the wall.
   - In case of openings of area above 3 dq.mt. each deduction shall be made for opening but Jambs, soffits and slits shall be measured.
   - Therateshallbeforaunitofsquaremeter.

ItemNo.7:
CementPlasterWithNeeru+CementFinish

Material:
WatershallconfirmtoM-1.
CementMortarshallconfirmtoM-11

Workmanship:
12mm thick cement plasterinsingle coat in CM 1:3 (1-cement : 3-sand) with a floating coat of neat cement slurry.

Scaffolding:
Wooden bullies, bamboos, planks,treatlesand otherscaffolding shallbe sound.

Theseshallbeproper examined beforeerection anduse. Stagescaffoldingshall be provided for ceilingplaster whichshall beindependent ofthewalls.
This kind of Plaster is normally for interior side or as specified location by Consultanttobeappliedasabove.NORMALCEMENTPLASTERandthe surface shall be rubbed smooth after coating it with a thick coat of pure Portland cement slurry while the base coat is still fresh. If Neeru plus cement finish is specified floating with neat cement willnot be required.

ModeofMeasurement&Payment:
The rate shall include the cost of all materials labour and scaffolding etc. involved in the operationsdescribed under workmanship.

All plaster shall be measured in squaremeter unless otherwisespecifiedlength, breadth or height shall be measuredcorrect toa centimeter.

Thickness of the plaster shall be exclusive of the thickness of the key i.e. grooves or openjoints in brick work, stone work etc. or space between laths. Thickness of plaster shall be average thickness with minimum 10 mm at any point on this surface.

Thisitemincludesplasteringuptofloortwolevel.
Themeasurementofwallplasteringshallbetakenbetweenthewallsorpartition (dimensions beforeplasteringbeingtaken)forlengthandfromthetopof floor or skirting toceiling for height, depthof coverofcornices, if any, shall be deducted.

Soffitsofstairsshallbemeasuredasplasteringonceilings.Elowignssoffitsshall be measured separately.

For jambs, soffits, sides, etc. for openings not exceeding 0.5 sq.mt. each in area for ends of joints,beams, posts girders,stepsetc.not exceeding0.5 sq.mt.eachinareaandforopeningsexceeding0.5sq.mt.andnotexceeding 3.00 sq.mt. in each area deductionsandadditionsshallbemadeinthefollowing manner:

a) No deductions shall be made for ends of joints, beams, posts etc. and openings not exceeding 0.5 sq.mt. each and no addition shall be made for reverse, jambs, soffits, side etc. of these openings, for finish to plaster around ends of joints, beams, posts etc.

b) Deductions for openings exceeding 0.5 sq.mt. but not exceeding 3.00 sq.mt.eachshall bemade asfollowing and no additionshall be made for reverse, joints, soffits, sides, etc. of theseopenings.

   i) When both faces of all walls are plastered with same plaster. Deductionsshallbe made for one face only.

   ii)
   - ✓ For openings having door squares equal to or projecting beyond the thickness of wall. Full deduction for opening shall be made from each plastered face of the wall.
   - ✓ In case of openings of area above 3 dq.mt. each deduction shall be made for opening but Jambs, soffits and slits shall be measured.

Therateshallbeforaunitofsquaremeter.

ItemNo.8:
Apply3coatofputtyofbrandsasianpaints,JK,Birlacompanyafter12mmroughplasterincludingmaterialandlabourofapprovedbrandand manufacture on new wall surface to give an even shadeincludingthoroughlybrushingthesurfacefreefrommortardroppingand other foreign matter and sand papered smooth.

Inordertoachieveasuperiorfinishedsurface,puttypastefillersshallbe usedon,allsurfacestobepainted.Tofillpores,dents,etc.Theputty/ pastefillersshallbeapprovedqualityandmanufactureandshallbeapplied tothesurfacewithaknifeorothersharpedgedtoolsaftertheprimingcoat as well as after each undercoat. The surface, after filling with putty / paste tiller, shall be rubbed down with fine sand paper and dusted off before the application of the subsequent coat.

Therateforthisitemwillbepaidononesquaremeterbasis.

ItemNo.9:
PlasticEmulsionpaint(twocoats)(AsianPaint,ICI,Dulux,Nerolac,Berger,etc.ofapprovedtype(withprimecoat):

Materials:
Theenamelpaintshallsatisfyingeneralrequirementsinspecificationsofoil paints. Enamel paint shall confirm to I S Latest edition.

Workmanship:
Thematerialsrequiredforworkofpaintingworkshallbeobtaineddirectly from approved manufacturer or approved dealer and brought to the site in maker's drum, bags etc. with seal unbroken.

All materials not in actual use shall be kept properly protected, lids ofcontainers shall be kept closed and surface of paint in open or partially open containerscoveredwithathinlayerofturpentinetopreventformationof skin. Thematerials which have become state or flat due to improper and long storageshallnotbeused.Thepaintshallbestirredthoroughlyinits container before pouring into small containers. While applying also, the paint shallbecontinuouslystirredinsmallercontainer.Noleftoverpaintshallbe putbackintostoretins.Whennotinuse,thecontainersshallbekept properly closed.

Ifforanyreasons,thinningisnecessary,thebrandofthinnerrecommended by the manufacturer shall be used.

Thesurfacetobepaintedshallbethoroughlycleanedanddusted.Allrust, dirt and grease shall be thoroughly removed before painting is started. No paintingon exterior or other exposed parts of the work shall be carried out in wet, damp or otherwise unfavourable weather and all the surfaces shall be thoroughly dry before painting work is started.

Applicationofpaint:

Brushing operations are to be adjusted to the spreading capacity advised bythe manufacturer of particular paint. The paint shall be applied evenly and smoothly by means of crossing and laying off. the crossing and laying of consistsofcoveringtheareaoverwithpaint,brushingthesurfacehardfor the first time over and then brushing alternately in opposite directions two or threetimesandthenfinallybrushinglightlyinadirectionatrightangelsto the same. In this process, no brush marks shall be left after the laying off is finished.Thefullprocessofcrossingandlayingofwillconstituteone coat.

Eachcoatshallbeallowedtodrycompletelyandlightlyrubbedwithvery fine grade of san paper and loose particles brushed off before next coat is applied.Eachcoatshallvaryslightlyinshadeandshallbegotapproved from the engineer-in-charge before next coat is started.

Eachcoatexceptthelastcoatshallbelightlyrubbeddownwithsandpaper offinepumicestoneandclearedofdust beforethenextcoat isapplied.No hairmarksfromthebrushorcloggingofpaintpuddlesinthecornersof panels, angles of moulding etc. shall be left on the work.

Specialcareshallbetakenwhilepaintingoverbolts,nuts,rivets,overlaps etc. Approved best quality brushes shall be used.

Modeofmeasurementandpayment:

Thenewsteelandothermetalsurfaceshallbemeasuredunderthisitem.
Alltheworkshallbemeasurednetinthedecimalsystemasexecuted subjecttothefollowinglimitsunlessotherwisestatedhereinafter.

a) Dimensionsshallbemeasuredtothenearest0.01meter.
b) Areasshallbeworkedouttothenearest0.01meter.

Nodeductionsshallbemadeforopeningsnotexceeding0.5sq.m.eachand no addition shall be made for painting to beddings, moulding, edges, jambs, soffits, sills etc of such opening.

Incaseoffabricatedstructuralsteelandironwork,primingcoatofpaint shall be included with fabrication. In case of trusses, if measured is sq.m compoundgriders,stanchions,lattices,girderandsimilarwork,actualare shallbemeasuredandnoextrashallbepaidforpaintingonboltsheads, nuts, washers etc. No addition shall be made to the weight calculated for the purposeofmeasurementsofsteelandironworksforpaintappliedonshop or at site.

Thedifferentsurfacesshallbegroupedintoonegeneralitem,areasof unevensurfacesbeingconvertedintoequivalentplainareasinaccordance with the table given as per Annexure-II for payment.

Therateisincludingprimingcoat.

Therateshallbeforaunitofonesquaremeter.

ItemNo.10:
Apex Color work on Outer side of Wall (Two coats) (with Base Coat)FINISHES

EXTENTANDINTENT

TheContractorshallsupplyallmaterials,labour,tools,ladders,scaffolding andotherequipmentnecessary forthe completionandprotectionof all painting / finishing work. Painting & finishing, as herein specified shall be appliedtoallsurfacesrequiringpainting/finishingthroughouttheinterior andexteriorofthebuildingsasgiveninthescheduleoffinishesor elsewhere.Thepainting/finishingshallbecarriedoutbyaspecialist workers,approvedbytheEngineer-in-chargeofRMCforthis work.

STORAGE

Storage of materials to be used on the job shall be, only in a single place approvedbytheEngineer-in-chargeofRMCforthiswork.Suchstorage placeshallnotbelocatedwithinanyofthebuildingsincludedinthecontract.

MATERIALS

Materialsusedintheworkshallbeofmanufactureapprovedbythe Engineer-in-charge of RMC for this work, Ready mixed paints, varnishes, enamels,lacquers,stains,pastefillers,distempersandothermaterialsmust bedeliveredtothejobsiteintheoriginalcontainers,withtheseals unbrokenandlabelsintact.Eachcontainershallgivethemanufacturer's name,typeofpaint,colorofpaintandinstructionsofreducing.Thinning shallbedoneonlyinaccordancewithdirections&manufacturer's specification.Removerejectedmaterialsimmediatelyfromthepremises.

SHADES

All shades, as provided in the shade schedule, shall be approved by the Engineer- in-charge of RMC for this work. The Contractor shall as far aspossibleusepre-mixedmanufacturer'sshadesandshallpreparesampleof theshadesselectedandsubmitsameforapprovalbytheEngineer-in-charge ofRMC for thiswork. Noworkis to proceeduntil theEngineer-in-chargeof RMC for this work has given his approval, preferably in writing, of the shade samples.

COMMENCEMENTOFWORK

Painting / finishing shall not be started until the surfaces to be painted / finishedareinaconditionfittoreceivepainting/finishingandsocertified by the Engineer-in-charge of RMC for this work.

Painting/finishingworkshallbetakeninhandonlyafterallothercivilwork is completed.

Buildingswherepainting/finishingworkistocommencedshallbe thoroughlysweptandcleanedupbeforecommencementofpainting/ finishing.

SCAFFOLDING

Only double scaffolding having two sets of vertical supports shall be provided for all, painting / finishing work. The supports shall be tied together with horizontal pieces overwhich the scaffolding planks shall be fixed.

All the vertical and horizontal members of the scaffolding shall be placed sufficiently away from the surfaces to be painted to ensure proper and unit erupted application.

WORKMANSHIP

The workmanship shall be of the very best; all materials evenly spread and smoothly flowed as without running sags, using good quality tools, brushes, etc., as required. Only skilled painters / applicators shall be employed. A properly qualified foreman shall be constantly on the job whilst the work is proceeding. All surfaces to be painted / finished shall be cleaned free of allloosedirtanddustbeforepainting/finishingisstarted.AIIworkwherea coat of material has been applied must be inspected and approved before application of the succeeding specified coat. Each undercoat shall be distinct shade of the approved color.

Before painting / finishing, remove hardware, accessories, plates and similar items or provide portion to all such items. Upon completion of each space, replaceallfixturesremoved.Removedoorsifnecessarytopaintbottom edge. Use only skilled mechanics for the removal and replacement of above items.

CONCEALEDSURFACES

All interior and exterior trim, door frames, doors, shelving, cabinet work shallbe thoroughly andcarefully back painted as all surfaces and edges which willbe concealed when installed. Such surfaces shall be clean, dry, sanded and properlypreparedtoreceivethepaint.Tops,bottomandedgesofdoors shall be finished same as the rest of the door.

PROTECTANDCLEAN

The agency shall protect not only his own work at all times, but shall also protectalladjacentworkandmaterialsbysuitablecoveringduringprogress ofhiswork.Uponcompletionofhiswork,heshallremoveallpaintand varnishspotsfromfloors,glassandothersurfaces.Anydefacedsurfaces shall be cleaned and the original finish restored. He shall remove from the premises all rubbish and accumulated material and shall leave the work in clean, orderly and acceptable conditions.

PREPARATIONOFSURFACES

PLASTER WORK: Fill all holes, cracks and abrasions with plaster of parish / cementslurryasdirected,properlypreparedandappliedandsmoothedoff tomatchadjoiningsurfaces.Donotusesandpaperonplastersurfaces. Plaster shall be allowed to dry for at least 12 (twelve) weeks before the application of paint / finishes.

STEEL AND IRON: All surfaces shall be washed with mineral spirits to remove anydirtorgreasebeforeapplyingpaint.Whererustorscaleispresent,it shall be wire brushed and sand papered clean. All cleaned surfaces shall be givenonecoatofapprovedphosphatebeforeprimecoatinaccordancewith

themanufacturers,Instructions.Shopcoatsofpaintthathavebecome marred shall be cleaned off, wire brushed, and spot primed over the affected areas.

APPLICATION

Thepaintshallbecontinuouslystirredinthecontainersothatitsconsistency is kept uniform throughout.

The painting / finishing shall be laid on evenly and smoothly by means of crossingandlayingoff,thelatterinthedirectionofthegrainofthewood. The crossing and laying off consists of covering the area with paint, brushing the surface hard for the first time and then brushing alternatively in opposite directions,twoorthreetimesandthenfinallybrushinglightlyinadirection at right angles to the same. In this process no brush marks shall be left after the laying off is finished. The full process of crossing and laying off will constitute one coat.

Where so stipulated, the painting / finishing shall be carried out using spray machinessuitedforthenatureandlocationoftheworktobecarriedout.
Onlyskilledandexperiencedworkmenshallbeemployedforthisclassof work. Paints used shall be brought to the requisite consistency by adding a suitable thinner. Spraying shall be carried out only in dry conditions. Noexterior painting / finishing shall be done in damp foggy or rainy weather. Surface to be painted shall be clean, dry, smooth and adequately protected from dampness. Each coat shall be applied in sufficient quantity to obtain complete coverage, shall be well brushed and evenly worked out over theentire surface and into all corners, angles and crevices allowed to thoroughly dry. Second coat shall be of suitable shade to match final color, and shall be approved by the Engineer-in-charge of RMC for this work before final coat is started. Allow at least 48 hours drying time between coats for interior and 7 daysforexteriorwork,andifinthe judgmentoftheEngineer-in-chargeof
RMCforthisworkmoretimeisrequesteditshallbeallowed.Finished surfaces shall be protected from dampness and dust until completely dry. Finishedworkshallbeuniformofapprovedcolor,smoothandfreefrom runs, sags, defective brushing and clogging. Make edges of paints adjoining materials of colors sharp and clean, without overlapping.

Inordertoachieveasuperiorfinishedsurface,puttypastefillersshallbe
usedon,allsurfacestobepainted.Tofillpores,dents,etc.Theputty/
pastefillersshallbeapprovedqualityandmanufactureandshallbeapplied
tothesurfacewithaknifeorothersharpedgedtoolsaftertheprimingcoat as well as after each undercoat. The surface, after filling with putty / paste tiller, shall be rubbed down with fine sand paper and dusted off before the application of the subsequent coat.

Paste wood filler when set shall be wiped across the grains of the wood and then with the grain to secure a clean surface. Surface to be stained shall be covered with uniform coat of stain wiped off if required.

FINISH: The painted surfaces shall be finished to require texture. Matt finish shallbeachievedbyuseofspongerollersorstipplingbrushesascalledfor.

Therateshallbepaidforaunitofonesquaremeterbasis.

ItemNo.11:
Providing & laying Vitrified Tiles for flooring work in 1st Qualitysupplyandfixingofvitrifiedtilesflooringworkofsizemorethan 0.60x0.60mtr(1stquality)

Materials
Approvedqualityvitrifiedtilesasapprovedbyengineer-in-charge/architect.

BEDDING

Thesub-gradeshallbecleaned,wettedandmopped.Thebeddingshall then be laid evenly over the surface tamped and corrected to desired level and allowed to harden enough to offer a rigid cushion to tiles and to enable themason toplacewoodenplanksacrossandequalon it.

The Color vitrified tiles shall be laid on cement mortar bedding of 10 mmthick in C.M. 1:3. The mortar shall have sufficient plasticity for laying and there shall be no hard lumps that would interfere with the evenness of bedding.Thebaseshallbeclearedandwellwetted.Themortarshallthen bespreadinthicknessnotlessthan10mmatanyplaceandaverage 12mmthickness.Theproportionofthecementmortarshallbeasspecified in the item.

FIXINGTILES

The tiles before laying shall be soaked in water for at least two hours. Neat grey cement grout at 3.3Kg. Cement/ Sq. Mt. of honey likeconsistency shall be spread over the mortar bedding as directed. The edges of the tiles are smeared with neat cement slurry. The tiles shall be well pressed and gentlytappedwithawoodenmallettilltheyareproperlybeddedandin levelwiththeadjoiningtiles.Thereshallbenohollowsinbedorjoints. Thejointsbetweenthetilesshallbeasthinaspossibleinstraightlineor as per pattern.

The tiles shall not have staggered joints. The joints shall be true to centreline both ways. The Nahni trap coming in the flooring shall be so positioned that its grating shall replace only one tile as far as possible. Where full size tiles cannot be fixed, they shallbe cut (Swan) to the required size and the edgesrubbedsmoothtoensurestraightandtruejoints.Thejointsshall bee filled with grey cementgrout with wire brush of trowel to a depth of5mm and loose material removed. White cement shall be used for pointing the joints. After fixing the tile finally in an even plane the flooring shall be keptwet and allowed to nature undisturbed for 7 days.

CLEANING

The surplus cement grout that may have come out of the joints shall be clearedoffbeforeitsets.Oncethefloorhasset,itshallbecarefully washed,clearedbydiluteacidanddried.Properprecautionandmeasures

shall be taken to ensure that the tiles are not damaged many ways till the completion of the construction.

ModeofMeasurement:

Therateforflooringworkshallbepaidonsquaremeterbasis.

ItemNo.12:

Providingandlayingglazedtilesof6mmthickofapprovedquality (1st quality)ofrequiredsizejointedwithcementpasteon12mmthickcement plaster1:3(1-cement3-Coarsesand)pointingwhitecementandjointedwithwhitecementslurry

MATERIALS

GlazedTiles

The tiles shall be of best quality as approved by the Engineer- in-charge. They shall be float and true to shape. They shall be free from cracks, crazing spots, chipped edges and corners.Theglazingshall beofuniformshade.

Variationfromthestatedsizes,otherthanthethicknessoftileshallbeplus orminus 1.5 mm.Thethicknessoftileshallbe6mmexceptasabovethe tiles shall confirm to I.S. Latest edition.

BEDDING

The sub-grade shall be cleaned, wetted and mopped.The beddingshall then be laid evenly over the surface tamped and corrected to desired level and allowed to harden enough to offer a rigid cushion to tiles and to enable the mason to place wooden planks across and equal on it.

The Color glazedtilesshallbelaid oncementmortarbeddingof12 mmthickin C.M. 1:3.Themortarshall have sufficientplasticityforlaying and thereshall be nohardlumpsthatwouldinterferewiththeevennessof bedding.Thebaseshall be cleared and well wetted. The mortar shall then be spread in thicknessnot lessthan10mmatanyplaceandaverage12mmthickness.Theproportion ofthe cement mortarshall be as specified in the item.

FIXINGTILES

Thetilesbeforelayingshallbesoakedinwaterforatleasttwohours. Neat grey cement grout at 3.3 Kg. / Cement / Sq.Mt. of honey like consistency shall be spread over the mortar bedding as directed. The edgesof thetilesare smeared withneatcementslurry.Thetilesshallbewellpressedandgentlytapped with a woodenmallet tilltheyareproperlybedded and inlevel withtheadjoining tiles. There shall be no hollows in bed or joints. The joints between the tiles shall be as thin as possible in straight line or as per pattern.

The tiles shall not have staggered joints. The joints shall be true to centre line both ways. The Nahnitrap coming in the flooring shall be so positioned that its grating shall replace only one tile as far aspossible. Wherefull size tiles cannot be fixed, they shall be cut (Swan) to the required size and the edges rubbed smooth to ensure straight and true joints. The joints shall bee filled with grey cementgroutwithwirebrushoftroweltoadepthof5mmandloosematerial

removed.Whitecementshall beused for pointingthejoints. Afterfixing the tile finally in an even plane the flooring shall be kept wet and allowed to nature undisturbed for 7 days.

CLEANING

Thesurpluscementgroutthatmay have comeoutofthejoints shallbe cleared off before it sets.Oncethe floor has set, itshallbe carefully washed, cleared by diluteacidand dried.Proper precaution and measures shall be taken to ensurethat the tilesare not damagedmanywaystill thecompletionof the construction.

Therateforthisitemwillbepaidononesquaremeterbasis.

ItemNo.13:
Providing&FixingOrissaPanW.C.&Europeantypeofappropriatemakeincl."P"or"S"trapasrequiredalongwithdrainconnectionandallthenecessaryfixturesandhalfturnflushcocketc.ofsize580mmx440mmcompleted asdirected.

MATERIALS

Orissatypewatercloset:

The specification of Orissa type white glazed water closet of first quality shall conformtoIS:latesteditionandrelevantspecificationofIndiantype waterclosetexceptthatpanwillbewiththeintegralsquattingpanofsize 580x440mmwithraisedfootrest.

WORKMANSHIP

Thepanshallbesunkintothefloorandembeddedinacushionofaverage 15cm cement1:5:10(1Cement:5FineSand:10Gradedstoneaggregate 40mm.nominal size)or as specified.Thisconcreteshallbe left115mm below the top level of the pan so as to allow for flooring and its bed concrete. The floor shouldbe suitablystoppedso that thewastewaterisdrainedinto thepan.Thepanshallbeprovidedwith100mm'P'or 'S' trapsas specified in with approximately 50mmseal. Thejoints in thepanand thetrapshall bemade leak-proof withcement mortar 1:1(1 Cement:1 Fine Sand).

Therateshallbepaidforaunitofnumberbasis.

ItemNo.14:
WhiteporcelainwashbasinS60/410mmindianmakeC.I.bracketwithfittingchromiumplattedtopes25cmplasticwastepipeand12mmpillarcockwithcomp.

1.0: Materials:

1.1. Thewhiteglazedearthenwarewashbasinshallbe560mm.x410 mm.of1st qualityandmakeasapprovedbytheEngineer-in-charge. The wash basin shall conform to M-59.

2.0 Workmanship:

2.1 The wash basin shall be fixed on the wall as and where directed. The washbasinshallbesupportedonapairofR.S.orC.I.bracketsfixed in C.M.1:3. (1 cement : 3 sand). The bracket shall conform to I.S. :latest edition. The wall plaster on the rear shall be cut to rest the top edge of the wash basin. After fixing the basin, plaster shall be madegoodandsurfacefinishedtomatchwiththeexistingone.:

2.2 Thebracketshallbepaintedwhitewithready-mixedpaint.

2.3. TheC.I.brasstrapandunionshallbeconnectedto32mm.dia. wastepipewhichshallbesuitablybenttowardsthewallandwhich shalldischargeintoanopendrainleadingtoagullytrap.ordirectin tothegully-traponthegroundfloorandshallbeconnectedtoa wastepipethroughafloortrapontheupperfloors.C.P.brasstrap andunionmaynotbeprovidedwherethesurfacedrainorafloor trap is placed directly under the basin and the waste is discharged intovertically.

2.4. Theheightofthefrontedgeofthewashbasinfromthefloorlevel shall be 80 cms.

2.5. Thenecessaryinlet,outletconnectionsandfittingssuchaspillar cocks;CP Grasswastetrapwastepipe,stopcock,chainwish rubber plug etc. shall be fixed.

2.6. Thepaymentoffittingsshallbemadeseparatelyunderseparate items.

3.0:Modeofmeasurements&payment

3.1. The rate includes cost of all labour, materials, tools and plant etc. required for satisfactory completion of this item as specified in workmanship.

3.2. TherateshallbeforaunitofOnenumber.

ItemNo.15:
FRPDoorsupplyallfittingandfixturecomplete

Providingandfixing28mmthicksingleshutterdoorwithflushdepressed panel designwithcorematerial PUfoamdoneinsitu &sandwichpanel of4 mmthickplywood &moulded inwooden blocks for fixtures. FRPthickness to be 1.50 mm to 2.00 mm including providing and fixing FRP moulded section frameofsectionsize100mmx50mmchamferedtypewithFRPthickness of2.00mmandcoreofrigidpolyurethenefoamhavingdensity32Kg/cmt to 36 Kg/cmt., compressive strength 3.5 Kg./sqcm to 4.5 Kg./sqcm. and fire retardantgrade,PUfoamshallbedonesituwithCanadianPonderoza wooden blocks for fixtures. In built holdfast arrangement to use fasteners for fixingwithmasonryorR.C.C.Thewholesectionoframeandshuttershall bewaterproof,acid/alkaliresistant&wellcoatcolour.theframeand

shuttershallbefixedwithallnecessarystainlesssteelfixturesand fastenings etc. complete as per direction of engineer
incharge.

Materials:-

Frame materials shall be of fire extinguishing grade FRP skin having section100mmx50mmchamferedtypewiththicknessof1.50mmto2.00mm and core material shall be fire extinguishing grade rigid polyurethane foam havingdensity32Kg/cu.cmto36Kg/cu.cm,flexuralstrength1.8Kg/ Sqcm to 2.00 Kg / Sqcm and compressive strength
3.5 Kg / Sqcm to 4.5 Kg / Sqcm. Whole frame shall be water proof, weather proof,termiteproofandmildacid/alkaliresistance.P.Ufoamshallbedone insituwithplantationwoodenpiecesembeddedinsideforholdingfixtures andstiffening.Frameshallbestraightinline,levelandhavingthreejoint-lesspieces.Frameshallbefixedinmasonry/R.C.CwithMildSteelholdfast orwith115mmlongscrewsasholdfastwithsleeveinpositionandfinished in colour cement. 28 mm thick shutter in depressed panel design shall be having 1.5 mm to 2.0 mm thickness fire extinguishing grade FRP skin, sand-witchpanelof4mmthickplywoodandembeddedwoodenpiecesfor stiffening as well as holding hinges and fixture, all molded into a one piece shutter. Core material shall be injected fire extinguishing grade rigid polyurethanefoamdoneinsituhavingdensity32Kg/Cucmto36Kg/ Cucmcompressivestrength1.8Kg/Sqcmto2.00Kg/Sqcm,flexural strength3.5Kg/Sqcmto4.5Kg/Sqcm.Wholeshuttershallbewater proof,weatherproof,termiteproofandmildacid/alkaliresistance.28mm thick depressed panel FRP shutter shall be joint-less. It shall be straight and smooth and of standard shape finished in gel coat. All necessary fixture and fasteningshall be fixed where wooden pieces are provided.

Workmanship:

Frameshallbefixedinmasonry/R.C.Cmember.Shuttershallbefixedin true line; level and proper manner having 2.0 to 3.0 ply i.e. air space for smooth and easy working. Pull handles, Door stopper, Door stopper, bearing hinges & S.S self tapping Philips cross head special screws conforming to anti corrosivehighgradeAISI304stainlesssteelofstandardmakeoras equivalent approved by Engineer-in-charge conforming to anti corrosive high grade AISI 304 stainless steel only, & Tower bolt of the make Orbit or as equivalentapprovedbyEngineer-in-chargeconformingtostandardsofORBIT&anticorrosivehighgradeAISI304stainlesssteel only.
All fixtures and fastenings of standard make shall conform to AISI 304 Grade Stainless Steel.

The following table presents main elements (forming the Chemicalcomposition) of AISI 316 Grade Stainless Steel.

- Itcanwithstandthecorrosioncausedbyatmospheric/environmental or major chemical reactions.
- Itcanresisthightemperatureswithoutgoingunderanydeformity whichmakesithighlyrecommendedforfiresafetydoorsinany building.
- ItshallhaveremarkablecreepstrengthandRupturestrength.
- It shall be repelled the Bacteria & shall be made higher degree of hygiene.

- Itshallbeofnaturalfinish,itshallnotrequiredregularcleaningor maintenance making it most suitable for public places.
- Itshalltolerateforcefulandintenseuse.
- Speciallydevelopedfixingstudandgrubsshallbeusedtoensure accuratefittingofelementsand eliminatesshakingofelements.

Fixtures&Fastenings:

Followingfixturesandfasteningshallbeusedforsingleshutter.Allfixtures and fastening of the make shall be of anti corrosive high grade AISI 304 stainlesssteelinGlossy&satincombinationfinishonly.Fixturesand fastening of standard makeshall befixed by skill person only.

TherateshallincludeanticorrosivehighgradeAISI304stainlesspull handle, hinges, door stopper in Glossy & satin combination finish of the standardmakeincludingfixingwithS.SselftappingPhilipscrosshead special screws and Stainless steel tower bolt of the make Orbit. The size and numberofhingesshallbeaspertablegivenabove±1.50mmtolerancewill beallowedinthicknessofshutterand±1.20to2.00mmforsizeofframe.

Modeofmeasurements&payment:

The rate for shutter includes cost of anti corrosive high grade AISI 304stainlesspullhandle,Doorstopper,hinges,S.SselftappingPhilipscross head special screws in Glossy & satin combination finish of standard make, tower bolt of the make orbit. The dimensions of the door shall be measured clearsizeoftheopeningmadeforfixingofdoorwith frame.

Therateshallbeforaunitofonesq.metre.

ItemNo.16:
Aluminiumsectionwindowwork(with3track-onemosquitonet)(jindal)(withnecessaryallfittings)

ProvidingandfixingStructuralGlazingwithspidersusingthe17Micronanodisedofapprovedcolouraluminumsectionwithtransium.mulliumofsize62.5mmx25mmx2mmwithusing6mmthickreflectivestructuralglassofapprovedmake,colour,toughenedandshadeandfixedwithsiliconesealantandspacertapandatcornersealedneoprenefoamdustandAirsealedgasketmiredincludingscaffolding,cleaningofglassetc.completeatallheightsandliftswithallnecessaryfittingandfixtures,anchorefasteners,necessaryM.S.orAluminumbrackets,suitabledesignforopenablewindowasperArchitecturaldrawingandasdirectedbyEngineer-in-charge.Groovesbetweentheglassestobefilledwithsealantof Dowcorning-structuralsealant995,weathersealant789.Theentirefacadeshouldbewaterproof.Themullionsaretobeconnectedtobracketby SS-304nutbolts.Measurementshallbegivenasperactualexecutionofthework

ALUMINIUMEXTRUSION

Aluminium Extrusion used in Structural Glazing, Stick Glazing, all type of Windows,Doors.AluminiumExtrusionshallbe6060-T6alloyconformingtoBS- 1474-1987.TheextrusionshallbeClean.Straightwithsharplydefinedlinedand

free from distortion and defects impairing appearance, strength and durability. The extrusion shall be suitable for wall thickness and profile for rigidity and strength in respect to tensile, shear, bending and bearing stresses, capable of providing local and lateral stability.

FINISH

The extrusion shall be finished in 'electrolytic colour anodizing' of approved shade and colourfor an anodic coatingofminimum20microns (+/-2microns).

GLASSFORSTRUCTURALGLAZING,WINDOWS&FIXEDGLAZING

Theglasswillbeofapprovedmakeandwillbeabletospecifiedbythearchitect. The glass samples will be submitted for approval.

ANCHORAGESYSTEM

The structural glazing system, will be fixed to the main building structure using components of alloy steel or other materials appropriate and conforming to statutory requirements and code of practices. In general, Galvanized steel bracketshallbeusedastheanchoringsystem.Thetypesizeofthebracketisto be selected in accordance with engineering calculations to withstand 200 Kg/Sqmx1.5timesforsafetyfactor.Mullionsshallbemountedtothebrackets of desired thickness and size. All fastening and transoms shall be of stainless steel bolts and nuts with spring washers.

HARDWAREFITTINGS

All screws, plugs, nuts or other fastening devices shall be of stainless steel that will not result in the corrosion with installation. 4 bar stays stainless steel arm shall beused inopenablewindowsalong withpegstaysforopenable window.

SILICONSEALANT

Sealant for weather seals shall be Dow Corning 789 or Equivalent. Sealant for Structural Glazing shall be Dow Corning 995 or Equivalent and shall be applied in accordance with manufacturer's specification.

WEATHERSTRIPPING

Weather Stripping shall be extruded Neoprene / EPDM or Equivalent and of the required size.

GLAZINGTAPE

Glazing Tape for Structural Glazing will be special two ways adhesive Black coloured Tape equivalent to Norton Tape.

PROTECTION

The finished surface will be protected with a self-adhesive peel –off with two layers of white and black, tested to withstand at least 9 months exposure to local weather condition, without losing the original peel- off characteristic or causing stains or other damages.

Modeofmeasurement&Payment:

Nopaymentshallbemadeforweightofscrews,bolts,nutsetc.OnlyFinisharea shouldbemeasuredforpayment.Therateshallbeforunitofonesquaremetre.

ItemNo.17:
14.43,(A)Kotastone(Polished,Greencolour)flooringover 25mm(average)thickbaseofcementmortar1:6(1cement:6coarsesand,)laidoverandjointedwithgreycementslurryincludingrubbingandpolishingcomplete25mm.thick

1.0. Materials

1.1. Water shall confirm to M-1. Lime mortar shall confirm to M-10, Cement mortarshall confirmtoM-11,Polishedkotastoneshall confirmto M-49.

2.0. Workmanship

2.1. Each slab shall be cut to the required size and shape and fine chisel dressed at all the edges. The sides t h u sdressed shall have a full contact if a straight edge is laid along. The sides shallbe table rubbed withcoarsesandbeforepaving.All anglesandedges ofthe slabs shall be true square and free from chippings and giving a plane surface. The thickness shall be 25 mm. (Average) as specified inthisitembutnotless than 20 mm at any place.

2.2. Bedding for the Kota stone slabs shallbe of cement mortar 1:6 (1 cement : 6 coarse sand) of average thickness 20 mm as given in the description of theitem. Sub grade shall be cleaned, wetted and mopped. Mortar of the specified mix and thickness shall be spread on an area sufficient to receive one kota stone slab. The slab shall then be washed cleanbefore laying. Itshallbelaidontoppressed, tapped gently to bringitinlevel with the other slabs. It shall then belifted andlaid aside. Topsurfaceofthemortarshallthenbecorrectedbyaddingfresh mortar at hollows or depressions. The mortar shall then be allowed to harden bit. Over this Surface, cement slurry of honey like consistency shall be applied. The slab shall then be gently placed in position and tapped with wooden I mallet till it is properly bedded in level. with and closetotheadjoiningslab.Thejointshallbeasfineaspossible. Theslabs fixed in the floor adjoining the walls shall enter not less than 10 mm. under the plaster, skirting or dedo. The junction between wall and floor shall be finished neatly. The finished surface shall be true to levels and slopes as directed.

2.3. The floor shall be kept wet for a minimum period of 7 days so that bedding and joints set properly.

2.4. Polishingshallbenormallycommencedafter14daysoflayingthe stone slab.

First polishing shall be done with carborundum stones of 120 grade grit fittedin theheavymachineandthendeaconpolishingshallbedone withcarborundum stone of 220 to 350 grade grit fitted in heavymachine.Water shall be properlyusedduring polishing. The stone shall then be washed clean with water. When directed by the Engineer-in- charge; wax polishof approvedquality shallbeapplied on the surface with the help of soft cloth over aclean and dry surface. Then the polishing machinefitted with bobs shall berun overit.

2.5. Theholesrequired for Nahni traps, pipes and other fittingsshall be made without any extra cost.

2.6Thekotastoneforplatformandc.b.shallbesuppliedandfixedwith two side polished and the work shall have to be completed as per requirementand instructions of engineer in-charge.

3.0. Modeofmeasurements&payment

3.1. Therateshallincludethecostofallmaterialsandlabourinvolvedin all the operations described above. The kota stone flooring shall be measured in squaremeters correct to two places of decimal, length and breadth shall be measured correct to a: centimeter and between the finished face ofskirting dedo or wall plaster and no deduction shall be made nor extra paid for any opening in floor ofareasupto 0.1 sq.mt.

3.2. Therateforitemshallbeforaunitofonesq.meter

ItemNo.18:
ProvidingSteelworkforRCCworksupplying,bending,binding&hookingbybindingwirewithThermoMechanicallyTreated(TMT)barsconfirmingtoIS1786,Fe-500

1:0. Materials

1.11.TMTbarsofFe-500shouldbeconfirmingtoIS:1786.

2.0. Workmanship

2.1. The work shall consist of furnishing and placing reinforcement to the shape and dimensions shown as on the drawings or as directed.

2.2. Steel shall be clean and free from rust and loose mill scale at the timeof fixing in position and subsequent concreting.

2.3. Reinforcing steel shall conform accurate to the dimensions given in the bar bending schedules shown an relevant drawings. Bars shall be bent cold to specified shape and dimensions or as directed, using a proper bar bender, operated by hand or power to attain proper radius ofbends. Bars shall not be bent or straightened in a manner that will the material. Bars bent during transport or, handing shall be straightened before being used on the work. They shall not be heated to facilitate bending. Unless otherwise specified, a 'U' type hook at the end of each bar shall invariably be provided to main reinforcement. The radius ofthe bend shall not be less then twice the diameter of circle having an equivalent effective area. The hooks shall be suitably encased toprevent any splitting of the concrete.

2.4. All the reinforcement bars shall be accurately placed in exact position shown on the drawings, and shall be securely held in position during placingofconcretebyannealedbindingwirenotlessthan1mmin sizeandbyusingstayblocksormetalchairspacers,metalhangers,

supporting wires or other approved devices at sufficiently close intervals, Bars shall not be allowed to sag between supports nor displaced during concreting or any other operations of the work. All devicesusedforpositioningshallbeofnon-corrodiblematerial. Woodenandmetalsupportsshallnotextendtothesurfaceof concrete, except where shown on drawings. Placing bars on, layers of freshly laid concrete as the work progresses fro adjusting bar spacing shallnotbeallowed.Piecesofbrokenstoneorbrickandwooden blocks shall not be used. Layers of bars shall be separated by spacer bars, precast mortar bricks. or their approved devices. Reinforcement after being placed in position shall be maintained in a clean condition until completely embedded in concrete. Special care shall be exercised to prevent any displacement of reinforcement in concrete already placed: To prevent reinforcement form corrosion, concrete cover shall be provided as indicated on drawings. All the bars producing from concrete and to which other bars are to be spliced and which are, likely to be exposed for a period exceeding 10 days shall be protected by a thick coat of neat cement grout.

2.5. Bars crossing each other where required shall be secured bybinding wire (annealed) of size not less than 1 mm in such a manner that they do not slip; over each other at the time of fixing and concreting:

2.6. As far possible, bars of full length shall be used. In case this is not possible. Overlapping of bars shall be done as directed, Whenpracticable, overlapping bars shall not touch each other, but be kept apart by 25 mm. or 1.25 times the maximum size of the coarse aggregate whichever is greater by concrete between them. Where not feasible, overlapping bars shall be bound with annealed wires not less than 1 mm. thick twisted tight. The overlaps shall be staggered for different bars and located at points, along the span where neither shear not bending moment is maximum.

2.7. Whenever indicated on the drawings or desired by the Engineer-in-charge, bars shall be joined by couplings which shall have a cross-section sufficient to transit the full stresses of barso he ends of the bars that are joined by coupling shall be upset for sufficient length so that the effective cross section at the base of threads is not less than the normal cross-section of the bar. Threads shall be standard threads: Steel for coupling shall conform to I:S.226 (Latest edition)

2.8. When permitted or specified on the drawing's joints of reinforcementbars shall butt-welded so as to transit their full stresses. Welded joints shall preferably be located at points when steel will not be subject to morethan 75percentofthemaximumpermissiblestressesand weldsso staggered that at any one section not more than 20 percent of the rods are welded. Only electric are welding using a process which excludes air from the molten metal and conforms to any or all other specialprovisions for the work shall be accepted. Suitable means shall be provided for holding bars securely in position during welding. It shall be ensured that no voids are left in welding and when welding is done intwo or, three stages, previous surface shall be cleaned. properly. Ends of

the bars shall be cleaned of all loose scale, rust, grease, paint and other foreign matter before welding. Only competent welders shall beemployed on the work. The M.S. electrodes used for welding shall conform to I.S. 814 (Latest edition). Welded pieces of reinforcementshall be tested: Specimen shall be taken from the actual site and their number and frequency of test shall be as directed.

3.0. Modeofmeasurements&payment

3.1. Reinforcementshall bemeasured in length including overlaps, separately for different diameters as actually used in the work. Where welding or coupling is resorted to, in place of lap joints, shall be measured far payment as equivalent length of overlap as per design requirement.From the length so measured, the weight of reinforcement shall be calculated in Kgs. Length shall include hooks at the ends. Wastage and annealed steel wire for binding shall not be measured and the cost of theseitemsshall bedeemed tobeincluded in theratefor reinforcement.

3.2. Theratefor reinforcement includes cost of steel binding wires,its carting to work site, cutting, bending; placing, binding and fixing in position as shown on the drawings and as directed, It shall also include all devices for keeping reinforcement in approved position, cost of joining as per approved method and all wastage and spacer bars.

3.3. Therateshall beforaunit ofOne Kg.

ItemNo.19:
Supplyandlayingofmachinecrushedaggregateof25-38mm

MachineCrushed metal shallbeofapproved quarry anditshould be approvedby the In-charge Site Engineerprior to collection.

Themachinecrushedmetalshallbehard,tough,sound,durable,blacktrapfield metal of close texture, with thedecay and weathering.Eachpiece ofthe stone shallbe angularand roughlycubicalin shape and round elongated or flaky material shall be rejected.Noround or oblong pebbles or at guar chips larger or smallerthan specified size shall be allowed.

All unsound, weathered or disinclined stone obtained from the upper surface layer of the quarry or other layer of boulders shall be rejected. The physical requirementforstandardsizemetalshallconformtothetestresults indicated inTableNo.1.The metal shall be nearly uniform in size as possible and shall conform to following minimum requirements of passing through the rings.

The physical requirement for standard size metal shall conform to the test results indicatedin the Table No.1 below:

TableNo.1

Typeof Const.	TestMethod	Requirement
Base(a)LosAngelos abrasion Value Or	IS: 2386Partiv	50%(Max.)

AggregateImpactValue.	IS 2386Partiv orIS :5640	40%(Max.)
(b)Flakiness index& Elongation Index	IS:2386PartI	30%(Combined.)
(c)WaterAbsorption	IS:2386Part-3	2%(Max.)

TableNo.2

Grading No.	Size Range	IS Sieve Designation	Per cent by weightpassing
2	25mmto38mm	90mm	100
		63mm	90-100
		53mm	25-75
		45mm	0-15
		22.4mm	0-5

Whereveranddoubtexistsastowhethertheaboverequirementare satisfiedin wholeorpart.ThecollectionofM.C.metalshallbegotscreenedby thecontractor,itso ordered by the In-charge SiteEngineerandforwhich noextrapaymentsshallbe claimed by the contractor.

Any collectionwhich doesnot fully satisfythe above requirementsis liable to be rejected altogether. Frequency of test shall be as per Ministry of Surface TransportSpecifications. Agencyhastosubmitcompletedrawingof levelingaftereachlayerofworkas mentionedin Special Conditions of Contract.

Also,the workis to be carriedout with Mini Roll / RoadRoller/ Hand Rollas may be required for the work as per the requirement and instructions of engineer in charge.

Themeasurementsshallbetakenoncubicmeterbasis.

ItemNo.20:
Supply and fixing of 60 mm thick M-30 i.e. compressive strength of 300 Kg /sq.m. cement concreterubbermold interlockingpavingblocks(GreyColor)ISIMarktobesuppliedandfixedasinstructed withConcreting1:2:4theendof blocks(withCementjoints)inbeddingof blackstonesand for50mmthick leveling and fixing of interlocking blocks in line level on it with compactermachine and cleaning and filling the joints with sand (without cement vata)including cement concrete prop. 1:2:4 as per instruction ingap at end blockand color as per instruction including curing complete

5.1 PaverBlockManufacturingfacilities

RAJKOT MUNCIPAL CORPORATION, at its discretion shall nominate its representative for inspection of the factory. Party shall co-ordinate and co-operatewithrepresentative ofRAJKOTMUNCIPALCORPORATION.Thepartyshall inform the address, telephone numbers and other details of the workshop and the contact person to enable RAJKOT MUNCIPAL CORPORATION depute its representative. The party shall allow entry to RAJKOT MUNCIPAL CORPORATION representative during all working days and time.

The Paver Block shall be made in factory with following minimum facilities:

5.1.1 DesignMixConcrete:

(a) Allpaversdesignatedbystrengthshallbetreatedasdesign mix concrete. The aggregate and cement shall be measured by weight in an approved weigh batching equipment. Mixing watershall be measured in graduated litre cans. One or more complete bags of cement shall be used for each batch ofconcrete.

(b) The contractor shall be responsible for designing mixes of the specified performancetosuit the degree of workability and characteristic strength. The mix design shall be finalized before manufacturing of the paver considering a set of suppliers for cement, sand and aggregates. In caseofanychangeofsuppliers ofcement,sandoraggregates, party should have design mix ready for alternate suppliers.

(c) The minimum cement content for compacted concrete of pavers shall not be less than 300/350/400 Kg / sqmtrasperdesign.

(d) The maximum water cement ratio for pavers concrete shall not be more than 0.40

(e) The design mix proportions for each set of raw material suppliers shallbe finalized and approved by the authorized lab for the required compressivestrengthandthelabreportwithproportionsshouldbe availablewiththevendoratalltimes forscrutinyandverification purpose.

5.1.2 PaverBlockMakingMachine:

The machine should be capable of producing high quality Paver Blocks by obtaining high level of compaction by application of hydraulic compaction and also by high intensity vibration to the moulds. The machine should have automatic control panel and shall apply aminimum pressure of 3000psiandthen there shallbe automatic cutoff of hydraulic circuit without any manual interference.Innocase, paversmouldbymanualforceorbymachinewithoutautocutoff shallbeaccepted.All pavers shall have uniformity in strength.

5.1.3 WeighBatching&MixingEquipment:

(a) The proportioning of ingredients of concrete per batch of concrete shall be performed by an approved weigh batching machine. Water shall be fed into the mixer from a tank provided with means for adjusting the flow of water so as to supplythe quantitydetermined for concrete as per mix design .Due allowanceshallbemadefor the weight of water carried by aggregates so that actual amount added at the mixer can be reduced as necessary. For this purpose the moisture content of coarse and fine aggregates shall be ascertained as and when required and at other times when alteration of the moisture content may be expecteddue to new deliverance ofaggregates, inclement weather or other reasons.

(b) Volumetric batching of concrete may be allowed after the designmixisapproved bylab aftertesting,byconvertingtheproportionof concretefromweighttovolumetricmeasurementsubjectto

facilitiesbeingmadeavailableby thecontractorfor verifyingand monitoring this.

(c) All necessary equipment such as measuring boxes, devices for determination of moisture and bulking in sand, slump cone, etc. shall be provided by the contractor. Concrete shall be machine mixed untilthere is auniform distribution of materialsanduniform colour and consistency is achieved and undernocircumstances for less than two minutes.

TheconcreteMixDesignshouldbefollowedforeachbatchofmaterials.

5.1.4 Curing:

The factoryshould have well designed curing area to ensure adequate (minimum 14 days) curing of paver blocks.

5.1.5 Laboratory

Thefactoryshouldhavethefollowing:

(i) Compressiontestingmachineofcapacityminimum200MT
(ii) Other tools and equipment for testing raw materials and paver blocks.
(iii) (1)Systematicrecordoftestresultsofvariouspaverblocks manufactured in the factory.

(2)ConcreteMixDesignfordesiredgradeofconcreteusedfor making of paver blocks.

5.2. RawMaterials.

5.2.1 CEMENT

The cement used in the manufacture of high quality precast concrete paving blocks shall be conforming to IS 12269 (53 grade ordinaryPortland cement) or IS 8112 (43 grade ordinary Portland cement) or IS 1489 (Part 1) (Portand-pozzolana cement – fly ash based). The minimum cement content in concrete used for making paver blocks should be 380 kg/Cum.

5.2.2 AGGREGATES

The fine and coarse aggregates shall consist of naturally occurring crushed or uncrushedmaterials,whichapartfromthegradingrequirementscomplywith IS383-1970.Thefineaggregatesusedshallcontainaminimumof 25% naturalsiliconsand.Lime stoneaggregates shall notbe used.

Aggregates shallcontain no more than 3%byweightofclay & shallbe free from deleterious salts and contaminants.Zone iv sand shall not be acceptable.Course aggregate shall be 10 mm and below.

5.2.3 WATER

The water shall be clean and free from any deleterious matter. It shall meetthe requirements stipulated in IS: 456-2000.

5.2.4 OTHERMATERIALS

Any other materials / ingredients used in the concrete shall conform to I.S. Specifications.

PIGMENT: The pigment shall be used only on wearing and top surface and throughout the paver block. The pigment used shall not be more than 10% of weight of cement used in the wearing course layer. However, use of pigment shall in no way alter the required strength of the paver block.

Pigment used for coloring paver blocks shall have durable color. It shall not contain matters detrimental to concrete. The pigment shall not contain Zinc compound. Lead pigment shall not be used.

5.3. PaversBlockCharacteristics

5.3.0 The inter locking concrete paver tiles should conform to IS-15658 (LATEST).They shall be tested as per the code and have to qualify limits specified by us down below.

5.3.1 ThepavertilesshouldbemadeofM-30(80 mm)designmixconcrete in approved size and shape. For acceptance the average of compressive strengthsof8 paversshallbeminimum30 N/mm^2(MPa).Anypaver in the tested lotshall not have compressive strength less than 30.1 MPa. If needed, pavers shall be designed and manufactured on higher side to concrete grade M-30 to meet this requirement without extra cost to RAJKOTMUNCIPALCORPORATION.Testing shall be done as per relevant clauses of IS-15658 (LATEST).

5.3.2 Theconcretepaversshouldhaveperpendicularitiesafterreleasefrom the mould and the same should be retained until the laying.

5.3.3 Thesurfaceshouldbeofantiskidandantiglaretype.

5.3.4 The paver should have uniform chamfers to facilitate easy drainage of surface run off.

5.3.5 The concrete mix design should be followed of each batch of materials separately andweighbatching plantistobe usedtoachieveuniformity in strength and quality.

5.3.6 The pavers shall be manufactured in single layer or more to ensure smooth surface on top and to remove all voids.

5.3.7 Thepaversshall beof cement Grey colourwithoutany pigmentor colored with pigment or with chemically treated top surface as specified.

5.3.8 Allpaverblocksshallbesoundandfreeofcracksorothervisual defects, whichwillinterferewiththeproperpavingoftheunitor impairthestrength orperformance ofthepavementconstructed with the paver blocks.

5.3.9 The compressive strength requirement of concrete paver block shall be minimum30MPa(N/sqmm)for28days(TestingasperIS-15658) after applying the correction factor as per IS-15658 (LATEST). (Please refer clause 3.1 also).

5.4. PaverBlockDimensions

Thickness	60/80mm

Shape	Regular(UniformshapewithnoHollowor Cracks)
Chamfer	5mmto7mmalongtopedges
ThicknessofWearing Layer	Minimum 6 mm (The thickness of the wearing surface shall be measured at several points along the periphery of paver blocks. The arithmetic mean of the lowest two values shall betheminimumthicknessofthe wearinglayer)
PlanAreaA_{sp}(Ref.Cl.B-3.3 Annex B, IS-15658 (LATEST))	Maximum0.03 m^2
Colour	Natural cement Grey colour without use of any pigment OR colour as specified
DimensionalTolerance	TolerancesasperIS-15658(LATEST)

Note: All other visual/physical & dimensional acceptance on parameterslike aspect ratio, squareness etc to be as per IS-15658 (LATEST)

5.5. TestingofPaverBlocks

1FOR60/80MMPAVERTILES

TEST	SPECIFICATIONAverageValues
28 day Compressive Strength	Minimum30 MPa(N/Sqmm)
AbrasionResistance	Maximum 2 mm [i.e. 10 units of 1000 mm^3 per 5000 mm^2reported as per E-5 of Annex E of IS-15658 (LATEST)]
WaterAbsorption	Avg. of 3 units - Maximum 6% by mass (restrictedto7%inindividualtestunits)

Sampling and Testing Procedure strictly As Per IS-15658 (LATEST).

5.6. LayingofPaverBlocks

5.6.1 PRIMING

The contractor is required to verify the existing WBM driveway surface and ascertain the CBR value. Accordingly the total subgrade thickness required for achieving the desired CBR value shall be advised to RAJKOT MUNCIPAL CORPORATION within seven days of receipt of call-up. RAJKOT MUNCIPAL CORPORATION shall, through regular vendors arrange to carryout such WBM, wherever required. Before taking over thesite, the Paver block laying party is required to verify the stabilization of the surface with CBR values. In case, contractor does not advise the CBR value within seven days, RAJKOTMUNCIPAL CORPORATIONshallcarryoutWBMasperowndesign,andcontractor shall have no claim later particularly to the quality of WBM or sub-grade.

ItwillbetheresponsibilityofthePaverblockpartytoensurethatthe Manholes/Pipeline/Cabletrenches/circulardrainagesystemetc.is raised to driveway level using the requisite materials as per instruction of EIC. The areas of potholes / deep depressions at the isolated locations shall befilled up andproperly compacted beforelayingthe paverblocks. No extra payment will be made for this purpose. The area of raised manholes shall be included in the measurement of overall area of paver blocks for the purpose of payment.

5.6.2 BEDDINGSANDCOURSE

The bedding sand shall consist of naturally occurring, clean, well graded sand passing through 4.75mm sieve and suitable to concrete manufacture. The beddingshouldbe fromeitherasinglesourceorblended toachieve thefollowing grading.

ISSIEVESIZE	%PASSING
9.52mm	100
4.75mm	95-100
2.36mm	80-100
1.18mm	50-100
600microns	25-60
300microns	10-60
150microns	5-15
75microns	0-10

Contractor shall be responsible toensurethatsingle-sized,gap-graded sands or sands containing an excessive amount of fines or plastic fines are not used. The sand particles should preferably be sharp, not rounded. The sand used for beddingshallbefreeof any deleterioussolublesaltsor other contaminants likely to cause efflorescence.

Thesandshall beof uniformmoisturecontent, which shall bewithin4%- 8%, at the time ofspreadingandshallbe protected against rain when stockpiled prior to spreading. Saturated sand shall not be used.

The bedding sand shall be spread loose in a uniform layer as per drawing. The compacteduniformthicknessshallbe50mmandwithin<5mm. Thicknessvariationshallnotbeusedtocorrectirregularitiesinthebase course surface.

The spread sand shall be carefully maintained in a loose dry condition and protectedagainst pre-compactionbothpriortoandfollowingspreading. Any pre-compacted sand left overnight shall be loosened before further laying of paver blocks takes place.

Sand shall be slightly spreadin a loose condition to the predetermined depth only slightly ahead of the laying of the paver block.

Anydepressionsin thespread sandexceeding 5mmshallbe loosened, raked and re spread before laying of paver block.

5.6.3 LAYINGOFINTERLOCKINGPAVERBLOCK:

Paver block shall be laid in pattern as specified under cl. 7 throughout the pavement. Once the laying pattern has been established, it shall continuewithoutinterruptionovertheentirepavementsurface.Cuttingof blocks, the useofinfillconcreteordiscontinuitiesinlayingpatternisnottobe permitted in other than approved locations.

Paving units shall be placed on the uncompacted sand bed to the nominated layingpattern;care shallbe taken to maintain the specified bond throughoutthe job. The first row shall be located next to an edge restraint. Specially manufacturededgepavingunitsarepermittedoredgeunitsmaybecutusing a power saw, a mechanical or hydraulic guillotine, bolster or other approved cutting machine. No haphazardly broken pavers shall be used.

Paverblockshallbeplacedwiththehelpofspacerstoachievegaps nominally 2 to 3mm wide between adjacent paving joints. No joint shall be less than 2mmnor morethan 4 mm.**Howeverit ismandatoryto use 3.0mmwidespacerwhilelayingpavertilessoastoensureuniform 3.0mmgap between adjacent pavers**. Frequent use of string lines shall be used to checkalignment.Inthisregard,the"layingface"shallbechecked atleast everytwometreasthefaceproceeds.Shouldthefacebecomeout of alignment, it must be corrected prior to initial compaction and before further laying job is proceeded with.

In each row, all full units shall be laid first. Closure units shall be cut andfitted subsequently. Such closure units shall consist ofnot less than 25%ofa fullunit.

To fill spaces between 25mm and 50mm wide, concrete having minimum1:1:2 cement : sand : coarse aggregate mix and a strength of 40 N/Sqmm shall be used. Within such mix the nominal aggregate size shall not exceedone third the smallestdimensionoftheinfillspace.For smallerspacesdry packed mortar shall be used.

Except where it is necessary to correct any minor variation occurring in thelaying bond, the paver block shall not be hammered into position. Where adjustment of position is necessary care shall be taken to avoid premature compaction of the sand bedding.

5.6.4 INITIALCOMPACTION

After laying the paver block, they shall be compacted to achieve consolidation of thesandbeddingandbroughttodesignlevelsandprofilesbynotlessthantwo (2)passesofasuitableplate compactor.

The compactor shall be a high-frequency, low amplitude mechanical flat plate vibratorhavingplateareasufficienttocoveraminimumoftwelvepaving units.

Prior to compaction all debris shall be removed from the surface. Compaction shall proceed as closely as possible following laying and prior to any traffic. Compaction shall not, however, beattemptedwithin one meter of the laying face. Compaction shall continue until lipping has been eliminatedbetween adjoining units.Joints shall then be filled and recompacted as described in Clause 6.5

Allworkfurther than onemeterfrom thelayingfaceshall beleftfully compacted at the completion of each day's laying.

Anyblocksthatarestructurallydamagedpriortoorduringcompaction shall be immediately removed and replaced.

Sufficientplatecompactorsshallbeavailableatthepavingsiteforboth bedding compaction and joint filling.

5.6.5 JOINTFILLINGANDFINALCOMPACTION

Assoonaspracticalaftercompactionandinanycasepriortothe terminationofworkonthatdayandpriortotheacceptanceofanytraffic, sand for joint filling shall be spread over the pavement.

Jointsandshallpassa 2.36mm(No.8)sieveandshallbefreeofsoluble salts or contaminants likely to cause efflorescence. The same shall comply with the following grading limits:

ISSIEVESIZE	**%PASSING**
2.36mm	100
1.8mm	90-100
600mm	60-90
300 microns	30-60
150 microns	15-30
75microns	10-20

The Contractor shall supply a sample of the jointing sand to be used in the contract prior to delivering any such material to site for incorporation into the works. Certificates of test results issued by arecognisedtestinglaboratory confirming that the sand sample conforms to the requirements of this specificationshallbesubmittedpriortosupplyoftotalvolume required.

The jointing sand shall be broomed to fill the joints. Excess sand shall then be removed from the pavementsurface and the jointing sand shall be compacted withnotlessthanone(1)passoftheplatevibratorandjoints refilledwith sandtofulldepth.Thisprocedureshallbe repeateduntilall jointsare completely filled with sand. No traffic shall be permitted to use the pavement untilalljointshavebeencompletelyfilledwithsandand compacted.

Boththesandandpaverblockshallbedrywhensandisspreadand broomed into the joints to prevent premature setting of the sand.

The difference in level (lipping) between adjacent units shall not exceed 3mm withnotmorethan1%inany 3m X3m areaexceeding 2mm. Pavement portionswhicharedeformedbeyondabovelimitsafterfinal compaction, shall be taken out and relaid to the satisfaction of the Engineer in charge.

5.6.6 UNIFORMINTERLOCKINGSPACES

Thepaversshouldhaveuniforminterlockingspaceof2mmto3mmto ensure compacted sand filling after vibration on the paver surface.

5.6.7 SKILLEDLABOUR

Skilledlabourshouldbeemployedforlayingblockstoensurelineandlevel of pavers, desired shape of the surface and adequate compaction of the sand in the joints.

The rubber mold C C Precast interlocking paving block of approved quality 80 mm thickness,Grey Color and of M-40 And/Or M-30Gradewith concreting 1:2:4 and design shall be supplied by RMC. The bedding of black stone sand of interlocking block shall be done and the interlocking block shall be fixed hard on it in line and level. The contractor shall have to purchase the block of ISI Mark from the market and same shall have to be got approved from Rajkot Municipal Corporation.

Therateforthisworkshallbepaidononesquaremeterbasis.

ItemNo.21:
SupplyofGardenBlacksoil:

Theblacksoilshallhavetosuppliedasperrequirementandthesoilshall have to be got approved from the engineer in charge thereby spreading and leveling shall also have to be carried out to the satisfaction of engineer in charge.

Theratewillbepaidforaunitofonecubicmeterbasis.

ItemNo.22:
Supplyandlayingofredsoil

Theredsoilshallhavetosuppliedasperrequirementandsoilshallhaveto be got approved from the engineer in charge thereby laying, spreading and leveling shall also have to be carried out to the satisfaction of engineer in charge.

Theratewillbepaidforaunitofonecubicmeterbasis.

ItemNo.23:
Selection-1grass supply as required cricket ground and instructedand selected by engineer-in-charge

The grass has to be supplied as per requirement for cricket ground and shall have to be got approved from the engineer in charge thereby planting shallalsohavetobecarriedouttothesatisfactionofengineerincharge.

Theratewillbepaidforaunitofsquaremeterbasis.

ItemNo.24:
Plantationoflawn,tree,flowerbedetcinfieldarea
Planting of lawn of approved quality at 15 cms diagonally, with finedressing and maintenance of the lawn till virtual completion of softlandscape work removal of all thatching throughout the area alongwith appropriate use of anti weed when required grassing lawn,including watering and fertilization.

Plantingoflawnofapprovedqualityat15cmsdiagonally,withfinedressing and,maintenanceofthelawntillvirtualcompletionofsoftlandscapework

removalofallthatchingthroughoutthe areaalongwithappropriateuseof antiweedwhenrequiredgrassinglawn.Includingwateringandfertilization.

- TheNaturalgrass(Lawn)areusedstandardandapprovedquality.
- Before the Planting of lawn quality contractor should be approved by Architect or engineer in charge.
- After the planting of lawn on regularly cleaning, watering, cuttingthrough cutting machine and time to time remove to un use weeds for date of completion to next two year.
- If for any reason some part of landscaping gets damage or dry agency have to re plant it at his cost in maintenance period.

Modeofmeasurements&payment

The rate shall include the cost of all materials and labour involved in all the operations described above. The Planting of lawn of approved quality shall be measured in Sq.mt.

ItemNo.25:

IronWorkasperdrawingandInstructionsallcomplete:

All structural steel shall confirm to IS 266 - Latest edition. The steel shall be free from the defects mentioned in IS 226 (Latest edition) and shall have a smooth finish. The material shall be free from loose mill scale, rust, pits orotherdefectsaffectingthestrengthanddurability.Riverbarsshallconfirm to IS 1148 Latest edition.

When the steel is supplied by the contractor, test certificate of themanufacturer shall be obtained according to IS 226 Latest edition and other relevant Indian Standards.

Thedesignshouldbemadeaspertheinstructionsofengineer-in-charge. The rate includes supplying and welding (along with labours), transportation and fixing in position of the steel work.

TherateshallbeforaunitofoneKilogram.

ItemNo.26:

NYLON NET - Hockey Practice Net 2.5 mm thick braided thread 1.75 Inches Blocks, Heavy duty, in either Blue / Green color, covering all the four sides and top. The same will be entangled in hooks and tied with stainless steel ties, with all GST,transportation Etc.Complete

Mchine made Net should be provided to ensure uniform square meshes, providing better strength when faced with High Shock

HEAVY-DUTYWEATHERRESISTANTMATERIAL:
Nets to be specially treated to provide resistance to UV degradation which ensure better durability to be used for outdoor

INTERNATIONALSTANDARDS:
Hockey Net to Meet International Standards to practice

professionally.The rate will be paid for a unit of square meter basis.

ItemNo.27:
Supply and fixing 13mm to 15mm Synthetic cricket pitch turf

ProvidingandLayingSyntheticGrassmultipleSportsofapprovedmake.Grass staple size - 13/15mm, Roll width- 410 cm± 2cm.Machine Gauge - 3/16" , Stitch Rate - 23/10 cm, Pile weight - 1150 gms/m2Number of Tufts - 300/m2 Total Pile height - 15mm. Woven Polyproplyene backing with fiber locked fleece. Latex Compound. All the edges to be seamed with PU Adhesive and polyester liner.

1) Thesyntheticturfhastocomplytothefollowingconditions:
   Synthetic Turf should be FIH approved with minimum **National Level Turf** certification. It should conform to FIH playing specifications in National level class-2 certification. After the installation, the bidder should be able to provide minimum **FIH certification for the National level Competition**. All costs towards testing of installed turf by FIH approved independent laboratories shall be borne by the agency.
2) Theshockpadhastocomplytothefollowingconditions:
   Installation of shockpadhas to be done as per FIH certification of the turf. Engineer-incharge / Project Management Consultant (PMC) will approve shockpad specifications based on FIH certification before commencing work. TheContractormustsubmitApprovedCertificationofthatshockpadhasbeen installed as per FIH recommendation and manufacturer guidelines before laying of turf above the shockpad.
3) The rate will be paid for a unit of one square meter basis. No extra payment made for any subsidiary work made by agency for this process required in laying of artificial turf.

ItemNo.28:
Fixing of CC Precast Road Divider stone 0.38x 0.30 x 0.20 cm includingrequiredmaterialandlabour(withoutcolour)

If Rajkot MunicipalCorporationwill providecementconcreteblocks prepared at Departmental Production Unit of Rajkot Municipal Corporation as per specifiedrate then AboveCC Block is to be collectedby the agencyat their cost and transport it to the required site. No transportation will be paid. If Divider Block isnot available inRMC Production Unit then the contractor shall haveto purchasethe samefromthe market. Required excavation work shall becarried outbytheagency onthepaver roadorconventional asphalt road as per depth and width as directed by Site Engineer. No extra payment will be made. The excavated stuff shall be disposed off as directed by the site incharge.Limemortarof 1 part limeand 4 part of sand shallbe well mixed and laid inminimum 50 mm thickness and C C precast rubber mould blocks shall be laid as per proper alignment keeping in mind the projection of tiles layingbedintheinner sideoftheblock.Cementmortarof1:6isrequired to be used for 18 mm vatta and aesthetic groove shall be made as directed between the two blocks with proper vatta along with cementpastewith requiredtampingetccompleteasdirectedbySiteEngineer. Minimum 75 mm x 75 mm triangular shaped lodhiya shall be casted with 1:2:4cement concreteonbothoutersideoftheblock.Theportionbetweenthetwoblocks

belowthe tileflooringlevelshallbefilledwithqualityhardmurrumand shallbewateredfor achieving proper compaction as directed and shall be tampered properly.

If Cement concrete blocks shall be purchased from Corporation Departmental Production Unitbydeduction frombillamount.Ifthematerialissupplied from RMCStore, Rajkot Municipal Corporation will be deduct the amount for such supply as per the current S.O.R. rate of Rajkot Municipal Corporation. Excavated stuff shall be removed and spread within 90m lead as directed and no extra cost will be given.

The requiredstoneshall eitherbe suppliedby Store or if required,as and when it is tobe purchased from market shall be got approved from RMC. The stone shall be of good in qualityif it ispurchasedfrommarketandof sharpenededgeandofsufficient crushing strength as per I.S. The testing shall be carried out at the cost of the bidder

Modeofmeasurementshallbeasperunitofonenumber.

ItemNo.29:
PaintingofTrafficStripFoothpath/Circle&dividerblocksize0.38x0.30x0.30in twocoatsusingenamlepaintindifferentcolors

In this work the color work to road divider blocks except flooring including top theportionoutsidetheroad (fromground) isto becarried outwiththeoilpaint of approved quality. The shade of various colors shall be used as approved by the engineer-in-charge. The work is to be carried out as per the instructions of engineer-in-charge.

Forthiscolorwork, first of all primer is to be applied to old road divider blocks thereafter one coat is to be applied for whole work and shall have to be got checked from the engineer-in-charge and thereafter only the secondcoat isto beapplied.Theliquidbetweenthetwocolorsshallbedonewithduecareand in line level.

Therateforthisworkshallbeforrunningmeterbasis.

ItemNo.30and31:
Providing laying and jointing in true line and level 65 mm dia. U.P.V.C.Pipe (SCH- 80) for cold water including fittings of make PRINCE /SUPREME/ASTRAL/FINOLEXasapprovedbyEngineerInCharge.Pipeshall befixedonthewallwiththehelpofclampateverytwometreC/Cor shall be concelled as directed including necessary fittings etc.including testing of pipe and joints and fixing the same with adhesivesolvent.including cost of allmaterials

1. AIMANDFIELDOFAPPLICATION

- Thisspecificationhastheaimtoregulatethemodalitiesofdeliveryand testingofUPVCpipes.forconductionofwaterandfood-fluidsunder

pressure, conforming to Dlgs 06/04/2004 n. 174 " regulation . concerning materialsand objects which can be used within fixed plants of purification, treatment, conduction, and distribution of water used for human consumption".

2. STANDARDSOFREFERENCE

- UNI EN 1452 pipes systems of plastic material for conduction – unplastified Polyvinyl- chloride – UPVC.

3. REQUIREMENTPRESCRIBED

- RAW MATERIAL The blend has mainly to be made of PVC (polyvinyl-chloride) with the sole addition of not toxic fluidification material and stabilizers, inert charges and other additives in quantities necessary to extrusion and to give a guarantee of stability of the characteristics of the polymer both during the working process and the life of the product.
- The blend used for the production of pipes, either in granules or powder, must not be used for any other utilization or working process than the required for the production of pipes.

Theuseofthefollowingmaterialsisnotadmitted:

- plastifiers and/or mineral charges which may alter the mechanical and hygienical characteristics of the pipe.
- PVCfromregenerationofalreadyusedpolymers,evenifselected.
- The use of material having been extruded once, obtained from grinding of pipes and fittings, which had already been extruded, even if they have the characteristics which conform to this specification.
- ThecharacteristicsfromPVCpowderhavetobeconformtothe requirements of UNI EN 1452-1 and satisfy the data indicated in the following table:

Characteristics	Requirements
K Value	65÷70
apparentspecific weight	0,5 ÷0,6
Particlesizemeasurement	>250mm 5%max. <63mm
ResidualVCM(Vinylchloride-	<1ppm(1mg/kgmax.)
Volatile substances	≤0,3%

CARACTERISTICSOFU-PVCBLEND

- Thecharacteristicsoftheblendinshapeofapipe,must correspondtothe requirements of UNI EN 1452-1 and satisfy the following table

Characteristics	Requirements
M.R.S.(accordingtoISO/TR 9080) specifcweightunitaryyeld pointyield coefficientof elasticity coefficientof linearthermalexpansion thermalconductivity	≥25MPa 1,35÷1,46g/cm3 ≥48MPa <10% >3.000MPa 0,06÷0,08mm/m°C 0,13kcal/mh°C

PIPES

- Thepipeshavetobeproduced withrawmaterial(PVCblend)corresponding totherequirementsas indicated in the previous table and as follows:

Colour	**Grey** considering that pipes may be exposed to sun- rays, a minimum fading of the colour on one part of the pipe must not compromise the quality of the pipe to be used and therefore may not be a reason of rejection of the same, ondelivery.RAL7011	**RAL7011**
Aspect	theinsideandoutsidesurfacesofthe pipes must be smooth, clean and without cavities, impurities and porosities or anyotherirregularityonthe surfaceswhich might hindertheirconformity tothenorms ofreferenceandthesespecifications.UNI EN1452	**UNIEN1452**

MECHANICALANDPYSICALCHARACTERISTICS

- ThecharacteristicsofthepipesmustconformtotherequirementsofUNI EN1452-2 and satisfy the requirements of the following table:

Characteristics	**Requirement**			**Methods**
shockresistance	T=0°C-TIR<10% conformtoschedule6ofUNIEN1452-2			UNI EN 1452-2744
Resistance to interiorpressure	Noyeldduringthetest 20°C/1h/sigma=42Mpa921 20 °C / 100h / sigma= 35 MPa 60°C/1000h/sigma=12.5MPa			UNIEN 921
Temperatureof softeringVicat(VST)	≥80 °C	ConformtoUNIEN727		UNIEN 727
Longitudinal shrinkage	≤5% thepipemust non show delimitation, blister or breakage	Testing Temperature Timeofimmersion For: e≤8mme>8 mm	150°C 15min 30min	UNIEN743 MethodA: Bathliquid
		Or		
		Testing Temperature Timeofimmersion e ≤ 8 mm e> 8mm	150°C 30min 60min	UNIEN743 MethodB:Inair

Resistance to dichloromethane At a specified temperature	No attack in any part of the surfaceofthe testpiece	Testing Temperature Timeofimmersion	150°C 30min	UNIEN580

CONNECTIONSSOCKET/GASKETS

- the connections are made by means of sockets with elastomeric gasket. Gaskets have not to be toxic at all according to the present norms for this subject (sanitary discipline) and conforming to norm UNI EN 681/1.
- The system of connection has to correspond to the requirements of UNI EN 1452-5 for every single class of pressure (PN) and has to be tested according to:
  a) ENISO13844elastomericgasketsforsocketconnectionstobeused withUPVC pipes – testingmethod for tightness of negative pressures;
  b) EN ISO 13845 elastomeric gaskets for socket connections to be usedwith UPVC pipes – testing method for tightness of internal pressure with angular deflection of the connection.

MINIMUMMARKING

theminimummarkingoneachmeterofpipemustbeindelibleandshowat least the following data:

- nameoftheproducerand/ortrademarkoftheproduct
- numberofthenormofthe system(UNIEN1452)
- qualitymarkofthe product-rawmaterial(U-PVC)
- outsidediameterofthepipesxwallthickness
- nominalpressure(PN)andSDRand/orseries(s…)
- day,month,yearand shiftofproduction
- numberoftheextrusionline
- date ofproduction

GEOMETRICALCHARACTERISTICS-DIMENSIONOFPIPES

- Diameters,thicknessandtolerances:

pipeshavetobeformed(SDR)asforseenbytheNationalIntroductionof UNIEN 1452 and have dimensions conforming to schedules 1,2,3 of Chapter 6 of UNI EN 1452-2 "geometrical characteristics".

Particularlyin this disciplinethereis shownthe prospectusincludingminimum wall thicknesses indicated in mm

Nominaloutsidediameter	**NominalWallthicknesses(minimum)(mm)**			
(MM)	PN6bar	PN10bar	PN16bar	PN20bar
20			1.5	1.9
25			1.9	2.3
32		1.6	2.4	2.9
40	1.5	1.9	3.0	3.7
50	1.6	2.4	3.7	4.6
63	2.0	3.0	4.7	5.8
75	2.3	3.6	5.6	6.8
90	2.8	4.3	6.7	8.2
110	2.7	4.2	6.6	8.1

125	3.1	4.8	7.4	9.2
140	3.5	5.4	8.3	10.3
160	4.0	6.2	9.5	11.8
180	4.4	6.9	10.7	13.3
200	4.9	7.7	11.9	14.7
225	5.5	8.6	13.4	16.6
Nominaloutsidediameter	**Nominalwallthickness(minimum)(mm)**			
(MM)	PN6bar	PN10bar	PN16bar	PN20bar
250	6.2	9.6	14.8	18.4
280	6.9	10.7	16.6	20.6
315	7.7	12.1	18.7	23.2
355	8.7	13.6	21.1	26.1
400	9.8	15.3	23.7	29.4
450	1.0	17.2	26.7	33.1
500	12.3	19.1	29.7	36.8
630	15.4	24.1		
710	17.4	27.2		
800	19.6	30.6		
900	22.0			
1000	24.5			

Lengths

- pipes have to be deliveredfor all outside- diametersaskedfor in lengthsof 6 meters

(socketincluded).

Endsofpipes

- thepipehastohaveplainends,sharplycutandmustbeperpendicularto theaxisofthe same pipe, having an outside chamfer of about 15°.

CONTROLSANDRESPONSABILITY

- The contractor reserves the right to himself and to the person he is going to uncharged to assist the tests and controls carried out to check if the requirements prescribed by the norms of production and by these specifications are fulfilled.
- The supplier, therefore, will do his best to favor the free access of the persons uncharged bythecontractor totheproduction plants ofthe pipes inamoment whatever during the different phases of production and to the laboratories during the phases of control and testing, communicating within a reasonable period of time the beginning date of production of the pipes ordered. He will further give to the persons incharge, full liberty of actions tomake the controls necessary, inline with the requirements of production.
- The contractor reserves himself the right to check by means of taking samples of pipes and/or ofthetherawmaterial, thecorrespondence of thesame tothepresent specifications and to the supplier's declarations.
- It is understood that the presence of the persons uncharged, during the tests, will not be a substitute of the controls to be carried out by the seller, who is the only one responsible for the quality of the pipes he produces.
- The seller will bear any costs deriving from the delivery of pipes not conforming to the requirements of thesespecifications.

DOCUMENTSANDCERTIFICAZIONSOFQUALITY

- thesupplier hasto enclosetohisoffer:
- the certification of conformity of the Internal Quality System conforming to UNI EN ISO 9000, issued by an independ Institute or Company inconformity with UNI CEI EN 45012;
- a signed declaration regarding the use of vergin raw material (blend), which does not contain already worked material or substances which can damage the human body;
- acertificateofconformityoftheproduct tonormUNIEN1452forpipes, issued byanindependentIstitute, Body or Company,in conformtiy with UNI CEI EN 45011.

AFTERSALEASSISTANCE

- If agreed upon , when the order had been made, the supplier has to guarantee as follows:
  - assistance by means of qualified technicians at the begin of work within the building yard in order to check the correct way of installation (recommendations according to UNI EN 1452-6 and ENV 1046).
  - Assistance of competent personnel regarding the procedures of testing the layingwithinthebuilding yeard(incaseofwaterconducts, forseenbythe law according the the Ministerial Decree DM 12.12.85) of buried pipe- lines for fluids under pressure (execution according to method UNI EN 805, hydraulic test of conducts with a viscoelastic behavior).

HANDLINGANDTRASPORTOFMATERIALS

- Forthehandlingandtransportofthepipestherehavetobeadopted allthose procedures whichareidoneoustomakesurethatthesame reach atdestination completely integral. A possible deterioration of the pipes, ascertained ondelivery of the same, will turn out into a claim of defect material. The pieces claimed will remain at the disposal of the supplier.Possiblerepairingor controlswill be at the supplier'scharge.Asfor loading, transport, unloading and storing of the pipes and special pieces, reference will be made to the prescription of the Ministerial Decree (D. M.) 12.12.1985(andsuccessivemodificationsandintegration).

TRANSPORTOFPIPES

- When transporting pipes, the loading surface must not be rough. It is necessary to support pipes for their whole length, thus avoiding the possibilitythatpipesget damaged duetovibration. Inordertofixthe load, straps of hemp, nylon or similarmaterialcanbeused,takingcarethat the pipes will not get damaged.

LOADING;UNLOADINGANDHANDLING

- ifloadingandunloading ofameansoftransport or,anyway thehandling ofthematerialisdonebymeansofacraneorthearmofanexcavator,pipes have to be lifted in the center by an equalizing rocker arm of at least 3 meters. Ifthese works are done byhand,ithastobeavoidedtoslide pipes ontotheside boards ofthemean of transportor, anyway,on hard andsharpobjects.Thepersonin chargeof thebuildingsitehastocheck all workingprocessesofunloadinginordertobesureoftheirregularity.

Eachdamaged product willbeidentified bywriting ''nottobeused''andwill beisolatedinanextraarea.Thepersoninchargehastocomunicateas soon as possible, the existence of a damaged product to the Contractor's Director of Work, who then will take the actions necessary, according his unobjectionableopinion.Ifacraneisused,therehastobeanefficient systemofcommunicationbetweentheworkerinsidethecraneandthe worker beside the mean of transport.

STORINGOF PIPES

- the best solution for the storage of pipes would be to use wooden crates or crates of other materials,to be able to resist to the weightof the pallet put ontop.The storagehastobecarriedoutwithgreatcareandthepalletshave to be aligned. The supporting surface of the palletsstoredhs to be levelled, not to be rough and must not have stones with sharpedges. Everypossible idoneous solution has to be adopted in orderto avoid any interference with the local traffic, both Vehicles and pedestrians,and with any other already existing structure. The pipes have to stored in a way to avoid possible accidentsduetoanunforseen movementofthesame.

CONSERVATIONOFTHMATERIALS

- It is absolutely necessary to adopt measures , that in case of long term storage, pipesof UPVCand plasticfittingscan be put inside,awayfromsun-rays, in order to avoid the riskofdegradation ofthepolymers andthe decay oftheirchemical, physical, and mechanical properties. Fittings may bepacked indifferent waysaccording totheir shape, dimensionsand type oftransport. Iftheyaredelivered without packaging, it hastobetaken care not to pile them up without method, thus avoiding a collisionbetween the single pieces or betweenthe fittingsand other heaviermaterials.In any case they cannot be put near heating devices or exposedto direct sun-rays until they are used. Similar indications have to be followed for the conservation of lubricants.

MODALITYANDPROCEDURESOFLAYINGINSITE

- Tipologiesoftrenches:Thetypeoftrenchrequiredbytheproject basedonthe evaluation of loads, the type of soil and the organization of the buildingyard, has to bescrupulouslycarried out in the next phase of execution.. During the phase of execution it is therefore important to have a scrupulouscorrespondencebetweentheprojectanditseffectiverealization. In the table below there are some main typologies of trenches showing the relationship between the diameter of the pipes (D indicated in meters), the widthofthetrenchatthelevelof theupperpartofpipe(Binmeters) andtheheightof filling on the upperpart of the pipes (H in meters).

TypeofTrench	**B(widthofthe**
Small Trench	≤3D <H/2
LargeTrench	3<D <10<H/2
Embankment	≥10D≥H/2

SmallTrench

- this is the best way to lay a U-PVCpipes.The pipe does not haveto bear all the load from above, as it transmits part of it to the surrounding soil dependingonthedeformationduetothedeflection,theproductissubmitted to.

LargeTrench

- the load the pipe has tobear will bemore than the one ithastosupportin asmall trench. For this reason this has to be considerедduring the planning. This hypothesis hastobeborninmindinordertoobtaina certain security when making the calculations of thedimensions.

Embankment(positiveposition)

- theupperpartofthepipeisputonanaturallevelofthesoil.Ifthereis muchloadpassingthrough,thistypologyhasnottobeadopteddueto sinkingofthesoilinabsence of excavations on the sides.

Terrapieno(negativeposition)

- Thepipeisputatalowerlevelthanthenaturaloneofthesoil.Duetofriction, even if a verylightone,between thefilling material putonthe embankment and the natural sides of the trench, the pipes can support slightly more load than those in the positive position, but in any case less than those laid in a small and large trench. Therefore, eventhistypology is not advisable.

Depthofthetrench

- ThedepthofthepipesH(inmeters)understoodasdistancebetweenthe soil and the upper part of the pipes must satisfy the most protective of the followingrequirements, where D is the outside diameter expressed in meters.

  $H \geq 1,0$

  $H \geq 1,5D$

Width ofthetrench

- Thisisdeterminedbythelaying depth andbythediameterofthepipe,as ithasto allow thesettlement ofthebottom, theconnection ofthepipes and the movement of the workers. The minimum width of the soil B (in meters) is normally:

  $B = D + 0,5$ with $D \leq 0,4$ m $B =$

  $2D$ with $D \geq 0,5$ m.

- Ontheotherside,theinferiorlimitvalueshavenottobeexceededvery muchastheefficiencyof the trenchis higherwhen the widthis smaller.

Bottomofthetrench

- The trenches have to be made without bumps or unevenness in order to establish a continuous support for the pipes. It is not advisable to use a bottom with aconcrete bedorsimilar asthiswillmakethestructure rigid.
- Whenthetrenchesareopenonheterogeneoussoil,situatedonhills orinthe mountains, it is necessary to anchor in order to avoid possible sliding of the soil.
- If there might be an instability of the soil due to water within the trench, itis necessary to re-inforce the soil bottom by means of draining pipes under the canalization.
- Around these pipes has to be put a compact strata of gravel or other material suitable to this purpose.

- In other words, it is necessary to make sure that there won't be any possibility thatthe filling material couldmoveduetoground water.

LayingBed

- TherehastobeastabillayingbedonanevenlevelforcanalizationofU-PVC pipes. It has to be free from pebbles, heap of stones and possible other materials. The laying bed must not be build before having a complete stabilization of the trench bottom. The material used in normal laying conditionsis sand mixed with gravel of a maximum diameter of 20 mm. If thesoilhasslopes,itisadvisable toavoidsand,giving preferenceto gravelorcrushedstoneswithoutedges,cuttopiecesofmaximum10/15 mm. The material has then to be accurately compacted and has to achieve a thickness of minimum (10 + 1/10 D) cm.

Normsofcompactingandqualitycontrol

- As U-PVC pipes are flexible, the uniformity of the surrounding soil is basicallyfor a correct constructionof a carrying structure, because the soil, deformed bythepipes, reacts inaway togive ahelp insupporting the load. In order to assure stability and integrity of he pipes laid, within the time,itispointed outthatthecontractor hastotakeagreatcare regarding thelayingofthepipebed,thesupport andthefirstcoveringof U-PVC andhastoapplyscrupulously thepresent norms.
- The degree of compacting of the material, which forms the supports, has a determining influence on the value of diametric deformations (x /D) of the pipes. This value, which must not exceed the limits permitted, can be deduced by the formula of Spangler,

$$X=\frac{0,125.Q}{A.\ (s/D)3+0,0915.\ E1}$$

with:

Q=totalexternalloadonthepipe[kg/m];
E = modulus ofelasticity of thepipe[kg/m2]; s
= thickness of the pipe [m];
D=diameterofthe pipe[m];
E1=modulusofelasticityofthesoil[kg/m2].

ParticularlyE1dependsonthefactorof compactingα'accordingtotherelation:

$$E1=\frac{9.104.}{(H+4),a}$$

whereH[m]istheheightoffillingmeasuredfromtheupperside ofthepipe.

Furthermore α ' is connected to the Proctor indexas indicated in thefollowing table:

Proctor Test	a'
95%	1,0
90%	1,5
85%	$1,5^2$
80%	$1,5^3$
75%	$1,5^4$

- The Proctor index defines normally the degree of compacting of the soil. For U-PVC pipes a Proctor index of at least 90% has to be considered. The achievement of the value required for the Proctor index hasto be verifiedby means of appropriate tests and respective certifications, the number of which is fixed during the planning.
- The above-mentioned tests, defined as tests of compaction and determination of the characteristics of density of materials, must be carried out with the standard method AASHO with 4 points of the curve density/content of water.In order to obtainthedensityrequiredmethodsof compacting are used (by hand with flat presses or with light mechanical apparata).

Layingofthepipe

- before laying the pipes, they have to be checked one by one in order to discover possible defects; the end part and the socket of the pipes have ot be integral. The pipes and fittings must be put on the layingbed in a way to have a continuous contract with the bed.
- Theniches, excavated before, fortheaccommodation ofthesockets (even ifthe dimension of the socket is minimum, it is normal to for see a nicheincorrespondenceofitssupport),ifnecessary,havetobe accurately filled inorder toavoid possibleempty spaces under thesockets.

Procedureoffilling

- The filling of a trench and generally of the excavation, is fundamental for the laying.Asweardealing withUPVCpipes,theuniformity ofthesoilis absolutely necessary in order to have a perfect construction of the carrying structure,asthe soil reacts inaway,givingacontributiontosupportthe given load. The material already used for the construction of the bed is put aroundthepipeandsolidatedbyhandinordertoformsuccessivestrataof 20cm.uptohalfheight ofthepipe. Ithastobetaken care that there won't remain any empty spaces under the pipes and that the strata L1 ofthe filling material between the pipe and the wall will be continuous and compact.
- The second strata of filling L 2, reaches the upper part of the pipe. Its compactness has to be carried out with maximum care. The third strata L3 reaches 15 cm overtheupper part of the pipe.Compactness has to be only at the sides of the pipes, never vertically on the same.
- The solidation of fillingaround the pipe must be uniform and reach 90% of the optimalvaluedeterminedbythemodifiedProctortest.Thesupportwith turfy,muddy,clayly,orfrozensoilisnotallowedasthiskindofsoilcannot besolidated asitcontains toomuch water.
- Further filling is made (strata L4 and L5) by material obtained from excavation. This material iscleaned fromelements havingabigger diameterthan10cmandfrom vegetal and animal fragments. The filling has to be madefor thefollowing strataup to 20 cm.It hasto be compacted andeventuallywateredforathicknessof1m(measuredfromtheupperpart of the pipe), so that the densityof the soil, once solidated, reaches 90% of the optimal value determined by the modified Proctor test. The bigger material (stonesofa diameter > 2 cm)mustnotexceedthelimitof30%.At lasttherehasto be a freespaceforthelaststrataofvegetal soil.

Speciallayingconditions

- Ifthere isaground water table, ithastobeascertainedthatthistable does not cause any movement of the filling material surrounding the pipe. The surrounding soil has therefore to be solidated by meansof draining, operating under thelevel ofexcavation,and thus avoidingevery possibleinstabilityof the laying soil and brickworks.
- Ifduringthework,forlimiteddistances,therewillappearsome harderlaying conditions thanthose forseen bytheproject (enlargements ofwalls, landslidesetc) worksofprotectionhavetobecarriedoutinorderto come back to laying conditions as described. There must be extra-walls of heaps of stones or concretein order to reduce the length of the section of excavation orthere must be adopted other solutions authorized by the Direction of Work.
- In case, for technical reasons the height H of recovering is in some points lower than the minimumprescribed, it is necessaryto absorb vertical loads by using appropriate protectiondevices (rigid diaphragms of protection and distribution of the loads, to be put above the last compact strata of material),followingthe imput of the Directionof Work.

- Incaseof crossingrailways,itispossibleto:
  - Forseeasteelcoveredprotectivepipe(casing)
  - Laypipesinatunnelofre-inforcedconcrete

ESECUTIONSOFCONNECTIONS

- Connections are made, respecting the indications given in the following,both for pipes and special pieces. An accurate cleaning of the parts to be joint is for seen making sure that they are integral. The gasket has to be inserted (if not already inserted during production) in it seat, situated in the internal side of the socket. Successive steps are:
- Lubrification of the external surface of the end of the pipe (plain ended side of the pipe) and the internal surfact of the socket, using an appropriate lubricant (grease of silicone-oil, Vaseline, soapy water, etc.) Avoid the useof mineral oils or greases which may damage the gasket.
- Insert the head of the pipe until the end of the socket and do not force further. The perfect execution of this working process depends only on a precise alignmentof the pipesandon an accurate lubrification.

ItemNo.32to37:

Providing and fixing uPVC fittings viz. coupler bend, elba, tee, etc. ofSchedule-40 of any approved brand and quality -200 mm / 100 mm /63 mm / 40 mm 25 mm / 15 mm

Thecontractorshallhaveto supplyUPVC fittings vz. Bends, tees, coupler, etc.of required dia size as per the requirement and of approved quality by the engineer in charge.Subsequently the fixingofthesameshall have to be carriedoutwithallrequiredmaterialetc.andcompletethewholeworkas pertherequirementandtothesatisfactionofengineerincharge.

TherateshallbeforaunitofOnenumberbasis.

ItemNo.38:

FixingofGunmetalfullwaywheelvalveetc.25mmdia:

TheISIMarkedGunmetalfullwaywheelvalveof25mmdiashallhavetofitted as per instructions of engineer-in-charge.

TherateforthisworkwillpaidperNumberbasis.

ItemNo.39to44:
Providing and fixing GI fittings if ISI:1239 viz. coupler bend,reducers, elba, tee, etc. of approved brand and quality -

The contractorshall have to supply GIfittings viz. Bends, tees, coupler, reducer, etc. of required dia size as per the requirement and of approvedquality by the engineer in charge.Subsequently the fixingof the same shall have to be carried out with all required material etc. and complete the whole workaspertherequirementandtothesatisfactionofengineerincharge.

TherateshallbeforaunitofOnenumberbasis.

ItemNo.45:
ProvidingandfixingOverheadWaterTanks"Sintex"orequivalentof1000 Literscapacitywithallnecessaryplumbingfittingsetc.comp.asdirected byEngineer-in-charge.

MATERIALSANDWORKMANSHIP:

Overhead water tanks "Sintex" or equivalent of cylindrical vertical tanks with closedtopwithofself-supportedtypehavingapprovedgradeof polyethylene, molded to seamless and suitable for potable water tank of capacity as mentioned in Schedule-B as per company's dimensions provided with G.I. fittings of size 25mm Dia for inlet, outlet, overflow and scour connections and float valves etc. complete placed with all fittings fixing as directed by engineer in charge.

TherateforthisworkwillbepaidpernumberbasisTherateforthisworkwillbepaidpernumberbasis.

Addl/Asst.Engineer R.M.C.	**Dy.Ex.Engineer R.M.C.**	**CITYENGINEER(SPL) R.M.C.**

SignatureofContractorwithSeal

LISTOFAPPROVEDMAKE(CivilWork)					
NO.	SPACE	PARTICULAR	COMP		
1	ReadymixedConcrete		Lafarge/Bhanu/ultratech/RJ/Krishna		
2	OrdinaryPortlandCement (Minimum53Grade)		UltraTech/Birla/ACC/Ambuja/Hathi/Sanghi		
3	Flushdoors		BISapprovedbrand(ISIMark)		
4	FRPDoors		Fibrevent,TechnoskillsorEquivalent(orasapprovedby EngineerIncharge)		
5	PVCDoorswithFrame		ISIandapprovedbyEngineerIncharge		
6	HydraulicfloorSpring/Door		Everite,Garnish,Hardwyn		
7	WhiteCement		JKWhite	Birlawhite	Nihon White
8	Reinforcement/Structural Steel (Each LOT shall accompany manufacturer's TestCertificate)		(TMT BARS Fe-500)Gallent/ET/ASR/Friend or BIS approved manufacturers		
9	Dining, Drawing, Bed Room, Kitchen,Toilet/Bath/Wash etc,	Vitrified/ Ceramic /Glaze Tiles/Wall Tiles/Parking Floor Tiles	Somani/Nitco/Kajaria/RAK/Jhonson/Simpolo/Bell/Asian/Euro/Vermora		
10	Toilet/Bath/Wash	PVC/UPVC pipes&Fittings	Astral/Supreme/Prince/finolex /Simco/Plumber With Clamp open type of outer side of Building		
11		Sanitary ware	Jaquar/cera/Hindware/Jhonson and any other standard brandh as approved by engineer-in-charge		
12	TeakWood		Bulsar	C.P.Teak	
13	InterlockingPaverblocks		ISIMark–Balaji,Regency,Supreme		
14	Plywood Products Commercial BlockBoardCommercial PlyTeakPly		ISIMark asapprovedbyengineer-in-charge		
15	Glass/Float/Sheet		SaintGobain	Modi/HNG	Asahi
16		Laminates	Neolux/Formica/Sunmica/MerinoorasperIS		
17	Aluminumsections		Jindal	Indal	Banco

A) ThecontractorshallproducesamplesofthematerialsforapprovaloftheRMC/PMC. Thematerialsofthemakesoutoftheaboveasapprovedbytheengineer-in-charge/PMCshallbe usedonthework.RMC/PMCmemberhasnotbidetogiveanyreasonforrejectionof anybrandfromtheabovelistanditsdecisionwillbeconsiderasfinal.

B) Inrespectofmaterialsforwhichapprovedmakesarenotspecifiedabove,thesewill be of makesto be decided by the RMC / PMC.

C) Contractorcanuseforanymaterialofequivalentmakeoftheabovespecified company after takingprior permissionof RMC/PMC.

The agency has to use item/material mentioned in the list above. In no case other item/material shall be allowed except those mentioned in the list unless and until the unavailabilityoftheabovesaiditem/materialnoticedthattoo,priorapprovedof RMC/PMC

D. ADDITIONALCONDITIONS

D. ADDITIONALCONDITIONS:

1. The contractorshallhaveto providehisown levelinstrument forthiswork.

2. The safety ofthe trafficandsurroundingproperties is the primeimportant factor. As it is the renovation work in existing residentialandcommercialareathefencing,lighting,coveringetc.,requires tobe provided as per clause 1.1.15. and as per the site requirement.Sign Board shall have to be provided at required locations, so thattherewillnotbeany fatalaccident.

3. Incaseofanyambiguityfoundininspections/drawings,specifications, etc,the decision of engineer-in-chargeshall befinalandbindingtothecontractor.

4. Rates quoted in Bill of Quantities to cover everything necessary forcompleteExecutionofwork:

   Theratesquotedwillbeheldtocovereverythingnecessaryofthedue and complete execution ofthe workaccording to the drawingsandtheseveralconditionsandthestipulationsofthecontract,including specification, or the evident intent and meaning of all oreitherofthemoraccordingtocustomaryusageandfortheperiodical and final inspection and test and proOF the work in everyrespectandformeasuring,numberingorweighingthesameincluding settingoutandlayingorfixinginpositionandtheprovisionofallmaterials,

   Power,toolrammers,beaters,labour,tackleplatformswithimperviouslapp edjointsforscaffoldingrangingrods,straightedges,centeringandboxes,w edges,moulds,templates,poststraight rails, boning-staves, measuring rods, page boards, shores,barriers,fencing,lighting,pumpingapparatus,temporaryarrange mentsofpassageoftraffic,accesstopremisesandcontinuance of drainage, water supply and lighting (if interrupted bythe work) lard temporary sheds and buildings nahanis roofed in orotherwisehaulage,painting,varnishing,polishing,establishmentsfor efficient supervision and watching arrangements for the efficientprotectionoflifeand propertyandall requisite plant, implementsand appliances every kind, except only such matter and things as itmaybedistinctlystatedhereinaretobesuppliedbythecontractors. A rate for anyone description of work is to be held toinclude such items of other classes of and for these on separatespecific charge will be admitted. The contractors shall keep everyportionoftheworkclearofaccumulationfromtimetotimeandshallleav eeveryportionoftheworkclean,clear,perfectandatthe

conclusion of whole, providing at their own cost all such materialimplement appliancesandlabouras the Engineermayrequiretoproveifitistobeso.

5. The contractors are particularly directed to observe from the Articlesof Agreement and the specifications, what is to be included in theirratesfortheseveralportionsoftheworkandalsounderwhatconditions paymentsaretobemade.

6. The contractor shall have to avail P F Code as per the prevailingCircular of Government for the employees on work. The process forpreparationofbillwillbetakenuponlyaftersubmissionoftheChallanforth eamountofP.F.depositedeverymonthfortheemployeesonwork,whichwill bindingtothecontractor.Therequired documents shall have to be submitted every month by thecontractortothecompetentauthority.

7. The contractor shall have to get registered under ESI (Employer'sStateInsurance)ActandobtainESIRegistrationnumberifthen umber of workers are 10 Nos. or more. Also, the agency shall havetogiveallthebenefitstotheworkersasavailableundertheESIAct.Thea gencyshouldfollowalltherulesandregulationsofESIActasperprevailingnor ms.

8. ThisofficeCircularbearingNo.RMC/C/329dated22-12-2012andOrderNo.RMC/C/132dated10-06-2013areuploadedseparatelyasapartoftenderdocument.TheContractors/ Consultantsquotingtheir rates shall have to read, implement, and submit the same dulysigned along with the documents to be submitted during physicalsubmission.

9. In reference to the above Circular and Order cited para above, theContractors/Consultant who havequotedtheirratesforthisworkwill becalledinpersonfor verificationoforiginal documents. Thedateandtimeforverificationoforiginaldocumentswillbeasprescribedin thetenderdocument.

10. Afterissuanceofworkorderforthistender,iftheworkfallsunderany kind of dispute then Rajkot Municipal Corporation reserves therighttoterminatethecontractforthisworkawardedtothecontractor or execute part work. The decision of Rajkot MunicipalCorporationinthisregardwillbefinalandbindingtothecontractor.

11. TilltheCompletionCertificateisissuedbyRajkotMunicipalCorporation, the agency will be the sole responsible for security ofmaterialandstructureat site.

12. The quantities given in the Schedules are provisional. The RajkotMunicipal Corporation reserves the right to increase or decrease thequantity of workor totallyomit any item workand the contractorshallnotbeentitledtoclaimanyextrasordamagesonthesegrounds & he is bound to execute the work as per the instruction oftheEngineer-in-charge.RajkotMunicipalCorporationwillnotentertainanydisputeinthisregard.

13. ItisfurtherclarifiedthatPerformanceGuarantee(SD)forextrawork will also be recovered @ 10% from the bill of extra work i.e.works beyondtenderamount.

14. The biddermust understandclearlythat the pricesquotedare forthetotallyworksorthepartofthetotalworksquotedforandinclude all costs due to materials, labour, equipments, supervision,otherservices,royalties,taxes,duties,etc.,andtoincludeallextrato cover the cost. No claim for additional payment beyond the pricesquotedwillbeentertainedandthebidderwillnotbeentitledsubsequentlytomakeanyclaimonanyground.

15. QualifiedengineermustbedeployedonsiteandatPlant.Thedetails of qualified engineers are to be given to RMC at the time ofbiddingofthistender.

16. Ifanyirregularitiesfoundduringtheworkthenpenaltywillbeimposed by Engineer-in-charge or any higher officer. If any disputesarisesregardingpenaltyimposedbyEngineer-in-chargethendecisionofMunicipalCommissionerwillbefinalandbindingtoagency.

17. Thetimelimitwillremainsameasmentionedinthetenderdocumentand theworkistobecompletedaccordingly.

18. TenderofsuchContractornothavingregistrationinappropriateClassandCategory, will betreatedasnon-responsive. Incaseofanyconflictingprovisionsbetweenregistrationofappropriatecategoryand Pre-qualificationcriteria,thelatershallgoverntheprocessofbidevaluation.

19. The agency shall have to quote their rates only after visiting the siteandlookingtothesiteconditions.

20. DEFECTS:Dateofcompletionforstartofdefectliabilityperiodforthe entire work will be considered as the last date mentioned in thecompletion of work recorded in Measurement Book. The contractorshall be requiredto makegoodall thedamages/ defects identifiedandconveyedtohim,duringtheentiredefectliabilityperiod.The

methodandtimelimitofrectificationwillbedecidedbytheEngineerincharge. If the contractorfailsto carryout rectificationaspertheinstructions,thesamewillbecarriedoutathiscostandthe costwillberecoveredfromtheamountretained.

21. Jointventureshallnotbeallowedunderthistender.

22. After the completion of work, at the interval of every three months,joint inspection must be done by the agency and RMC staff and thenagency has to submit the report stating the condition of work toRajkot Municipal Corporation. The final checking report stating thecondition of work is also to be submitted by the agency before onemonthoftheexpiryofdefectliabilityperiodtothecompetentauthority.

23. The Royalty of each and every material, required to be paid is to bebornebythecontractor.

24. Testing of each material as and when required by Rajkot MunicipalCorporation, is to be carried out in Government approved laboratorybythecontractorathisowncost.ScheduleoftestingofmaterialwillbeasperR&B,StateGovernmentManualandISCodeprovision.

25. Necessarytestsformaterialquality,soiltestsetc.shallbecarriedout aspertheinstructionsof engineer-in-chargeby contractorathisowncostandreportstobesubmittedtotheengineer-in-charge.

26. As this work is to be done in existing structure and also keeping inmind surrounding properties, all due precautions should be taken sothatnodamageoccurstoanyoftheserviceslike;waterconnection,drainageconnection,waterpipeline,drainagelineorany other services. However, if any damage occurs to any of suchservice(s)thenthecontractorshallhavetocarryoutnecessaryrepairsimmediatelyandsatisfactorily,athisowncost.

27. Wherever the rolling with the road roller is not possible on metallingwork and murrum work, the compaction with hand roller or by anyother means atsuch places shallhave tobecarriedout bythecontractorsatisfactorilyasperinstructionsofengineer-in-charge.

28. TheContractorshallcarryoutmodificationsintheprocedureofwork,iffound necessary,asdirectedbytheEngineerduringinspection.Worksfallingshortofqualityshallberectified/redoneby the Contractor at his own cost, and defective work shall also beremovedfromthesiteofworksbythe Contractorathisowncost.

29. DefectiveMaterials:AllmaterialswhichtheEngineer/hisrepresentativehas determinedasnotconfirmingtotherequirements of the Contract shall be rejectedwhether in place ornot; they shall be removed immediately from the site as directed.Materials,whichhavebeensubsequentlycorrected,shallnotbeus edintheworkunlessapprovalisaccordedinwritingbytheEngineer. Upon failure of the Contractor to comply with any order oftheEngineer/hisrepresentativegivenunderthisclause,theEngineer-in-chargeshallhaveauthoritytocausetheremovalofrejected material and to deduct the removal cost thereof from anypaymentsduetothecontractor.

30. TheDefectLiabilityperiodforthisworkis24Months.Aftercompletion of work, a report at the interval of every six months byway of joint inspection shall have to be submitted to the competentauthority. The portion whichis observed defective / damaged bynormalcauseduringthejointinspectionshallhavetoberepaired/rectified andnecessaryevidencealongwithphotographsshall alsohavetobesubmittedtothecompetentauthority.

31. TheagencyshallhavetogetinteriordonefromtheapprovedArchitect/Engineerandalsotogetapprovedfromengineer-in-charge. The agency shall have to get theapproval within aperiodof7(Seevn)days.

32. The structure design to be prepared by the agency through RMCapprovedStructuralEngineer,thecostofwhichalsoistobebornebythea gency.

33. TheworkorderwillbegivenonlyaftergettingthepreliminaryapprovalfromT ownPlanning Department.

34. Providing and fixing of precast RCC slab and column shall have to becarriedoutin lineandlevel.

35. For excavation of trench, use of JCB machine will not be permitteddirectlyonthetopsurfaceoftheroad.Afterexcavationuptominim um 1.00 mt. depth from road surface or existing ground level,same shall have to be carried out manually or by using Breaker andafterlocatingundergroundserviceslike;watersupplypipeline,waterco nnectionlines,pipegutters,telephonecables,electriccables etc., and thereafter upon taking the prior approval of theEngineer-In-Charge, the excavation can be carried out by using JCBmachine.

36. RajkotMunicipalCorporationshallrecommendtothecompetentauthorityt ogiveControlledBlastingLicensetothecontractorfor

carrying out excavation in hard rock. In case of blasting license notpermissiblefromthecompetentauthorityinsomeplacesthenexcavation is to be done by using wedges and hammers, chiseling,breakers, pneumatic tools, etc. Also in case where blasting license ispermitted but even then if there is no possibility of carrying out theblastingforwhatsoeverreason, theexcavationis tobedonebyusingWedgesandhammers, chiseling, breakers, pneumatic toolsetc.Noextrapayment shall bemade forexcavation tobecarriedoutinanyoftheabovementionedboththesituations.

37. Excavationinsoftrockandhardrockshallhavetobecarriedoutonly by Chiseling, Breaker (pneumatic tools)etc., as far as possible.If excavation is not possible in terms of above and if excavation isrequired to becarried out with the help of blasting then the sameshall have to be carried out only after taking prior approval andnecessarylicenseforblastingfromthecompetentauthority.

38. Incaseofexcavationnotpossiblemanuallyorbychiselingincertain place(s)as well asif blastingis alsonot possibleduetovarious reasons i.e. to avoid damage to nearby water pipeline, pipegutter,telephonecables/Duct,Rawhouses/weekbuildings/narrowstreetetc.,thentheexcavationbyblastingwillnotbepermitted. Under these circumstances, excavation shall have to becarriedoutonlybyBreaker(pneumatictools)aspertheinstructionsof theEngineer-In-Charge.Noextrapayment will bemadefor suchtypeof excavation done byusingBreaker. The rateforexcavationshallbepaidaspertherateofrelateditemmentionedinSchedule-B.

39. Regardingthe width of excavation, as (a) it is difficult tocarryoutheverticaltrenchexcavation,(b)possibilityofslidingthesoil,and
(c)unevenexcavationtrenchwidthincaseofblasting.Inthisconnection, forevery1.5 mt lift if there is less width up to 5 cm atthebottomthenthetopwidthofexcavatedtrench,itshallbeconsidered as per the specified trench width or actual trench widthcarriedoutatthegroundlevelbythecontractorwhicheverisless.If excavation is carried out more than the specified width then thepaymentwillbemadeonlyfor thespecifiedwidthofexcavation.

40. After enteringinto an agreement, the agency shall haveto finalizetheagencyforsupplyof the materiallikePrecast RCCslabandcolumnandthenameofmanufacturer/suppliershouldimmediatelybeinformedtoRajkotMunicipalCorporationsothatRajkot Municipal Corporation can also expedite the manufacturer /supplier for the material. If necessary, Rajkot Municipal Corporationwill visit and inspect the factory. During the inspection, if RajkotMunicipalCorporationisnotsatisfiedthenthecontractorshallhave

toprocurethematerialfromothermanufacturer(s).

41. ForthisprojectworksThirdPartyInspection(TPI)ismandatory.TheTPIagencywillbeappointedbyRajkotMunicipalCorporationand remittance of charges @ 0.70% ofcontractvalue for thesameis to be borne by the agency, which will be deducted fromthe contractor'sbill.

42. During construction activity, proper care must betaken for laborsafetyand all the provisions of thelaborlaws must be followed bythecontractor.

43. The G.A. Drawings and other Drawings as providedat present withthe tender document are indicative, however, there is possibility ofany change or modificationin the saiddrawing and as suchthecontractorshallhavetocarryouttheworkaccordinglyattheapproved rateswithoutanyextracost.

44. ThecontractingAgencythenhastopreparebarbendingscheduleas perStructural Drawings and submit it to RMC after then RMCshall permit to worktostart. Structuredesignis inthescopeofwork of contractor and its cost is to be borne by the contractor. Thestructure designer should be RMC license holder. The proof check ofthestructuredesignshouldbedonebyoneofthestructuredesigners,assuggestedbyRMC.(IfthestructuredesignerissuggestedbyRMC,thentheproofcheckisnotneeded.)BarBendingSchedule,registershallbemaintainedonsitewiththedetailsofcutlengthofbar.Thecertificateforsameshallbedenotedinpourcard.

45. ContractAgencyhastoprovideaSiteOfficeRoom,aseparateLaboratory included with necessary lab instruments for slump test,sieve analysis, etc. whateversuggested by SiteEngineer in chargeonsitepremises.Thereshallbeprovisionofminimum24cubemould of 15 x 15 x 15 cm size and 12 mould of 7.5 x 7.5 x 7.5 cm.There shall be a provision of necessary stationary & Furniture. TheperiodicalcalibrationofinstrumentslikeweighbatchPlant,ElectronicBalanceetc.shallbecarriedoutasperinstructionofEngineer in Charge. Without satisfactory report forthe sametheworkmaynot becontinued.

46. The Mix Design of Cement Concrete shall be revised submitted withrespecttochangesinMaterialslikeCement,Sand,Aggregate

47. TheFinalCompletionDrawingsshallbesubmittedinhardcopyandas Auto Cad format by Agency. If the same is not submitted, thepermanentdeposit0.25%ofFinalBillamountwillbededucted

fromFinalbill.

48. After the drawings for the proposed work are finalized by RMC, theagency has to submit the same to qualified & experienced structureengineer.

49. The agency has to submit the approved & signed copier of structuredesign3setstoRajkotMunicipalCorporation

50. Agencyhastogetthestructuredesignsproofcheckedbythestructureengineer suggested byRajkot Municipal Corporation andthe feesforthesameshallbebornebytheagency.

51. Additionalalternationchangesduringtheworkshallhastobeincorporated in the structure drawing & shall be re submittedtoRajkotMunicipalCorporationaccordingly.

52. The contracting Agency then has to prepare bar bending schedule,submit it to Rajkot Municipal Corporation. &After checking the barbending schedule, then Rajkot Municipal Corporation shall permit toworktostart.

53. Approval to the samples of various materials given by the Engineer-in-charge shall not absolve the contractor from the responsibility ofreplacing defective material brought on site of materials used in thework found defective at a later date. The contractor shall have noclaimtoanypaymentofcompensationwhatsoeveronaccountofanysuch materials beingrejectedbytheEngineer-in-charge.

54. The agency has to facilitate the Town Planning department in allrespectivetermsandhastoprovideallthe requireditemsasinstructed by a surveyor of Town planning Dept. The items which arerequired for demarcation are colors, Tags, Nails, labors and agencywill alsoberesponsible forcleaning of the plot without anyextracost.

55. The agency has to create the passage/access to the plot where theworkissupposedtostart.Ifincasetheaccesstoplotisrestrictedbyanyfarmingland,thentheagencyhastotakeaproperarrangementforpassageand whateverthecostoccurredintheconstruction of thepassage, the agencyhas topaythe cost of itsown.

56. Thecompoundwallhastobeconstructedwiththeproperguidanceby the Engineer- in- charge, such as if the land has difference in thelevel (irregular topography), then the agency has to construct thecompoundwallinthesteppatternform.

57. ThetopoftheprecastwallwillbeeitherinSemi-circularortriangularwhicheverinstructedbytheEngineer-in-charge.TheMeasurement of the Semi-circular or triangular item of the precastwallwillbetakenfromthemiddleofthesectionoftheitem.

58. If in case the Semi-circular or triangular item of the precast wall willnot be fixed, then the agency has to keep the top section of precastpole empty, without anycurtailment inthe height of the pole. Butthemeasurementwillbecountedonlyfortheconstructedslabs.

59. In the precast wall, either the cement mortar in the ratio of 1:1 orStandardchemicalmortartobefilledinGroovei.e.theareabetween two precast slabs and the area between the slabs and pole,whicheverinstructedbytheEngineer-in-charge.

60. The restoration work for the excavation done is to be carried outimmediately as per the instructions of engineer in charge. Theexcessmaterialshall have to bedisposedwith no extra cost atthesitespecifiedbyengineer-in-charge.

The word "Arbitration" or "Arbitration Clause" wherever mentioned in thistender document, is now to be treated as "Deleted". In this context, anOrder bearing No.RMC/Legal/1858dated 18-02-2017 ofLegal DepartmentofRajkotMunicipalCorporationisuploadedseparatelyalongwiththistender,whichOrder,willhereafterbereferredandtakenintoconsiderationforArbitrationrelatedpurposeforthetendersofRajkotMunicipalCorporation.

ADDL.CITYENGINEER
RajkotMunicipalCorporation

SignatureofContractorwithSeal

RajkotMunicipalCorporation

::SPECIALCONDITIONS ::

1. The Royalty of each and every material, required to be paid is tobebornebythecontractor.

2. TestingofeachmaterialasandwhenrequiredbyRajkotMunicipalCorporation, is to be carried out by the contractor athisown cost. Schedule of testing of material will be as per R&B,StateGovernmentManualandISCodeprovision.

3. The wholeworkshallbe executedby qualified Site Engineer.The requiredL- Section and Cross section is to be prepared bycontractor at his own cost. The work should be done by levellinginstrument.TheDrawingsshallbesubmittedaccordinglyinadvancebeforestartingthework.Noextrapaymentwillbemade for the above work. Contractorhasto submit Bill formwithhardcopyandsoft copyof cross section and L-sectionofworkcompleted.Nobillwillbeacceptedwithoutabovedrawings.

4. Necessary tests for material quality, Paving Blocks, soil tests etc.shallbecarriedoutaspertheinstructionsofengineer-in-chargebycontractorathisowncostandreportstobesubmittedtotheengineer-in-charge.

5. ThecontractorshallhavetogetregisteredunderESI(Employer'sStateInsurance)ActandobtainESIRegistrationnumber if the numberof workersare 10Nos.ormore. Also,the agency shall have to give all the benefits to the workers asavailable under the ESI Act. The agency should follow all the rulesandregulationsofESIActasperprevailingnorms.

6. ThetestingofmetalandthedesignasperIRCshallhavetobecarriedoutbythecontractorathisowncost.

7. Structuredesign is to be prepared by contractor and after approvalofengineer-in-chargetheworkcan bestarted.

ADDL.CITYENGINEER
RajkotMunicipalCorporation

SignatureofContractorwithSeal

PART-III
BILLOFQUANTITIES
(AttachedinSeparateFolder)

BIDFORM(WITHPRICE)

CONTRACTNo:RMC/ENGG/CZ/23-24/24

BiddersarerequiredtofillupallblankspacesinthisBidFormTheCommiss

ioner
RajkotMunicipalCorporation
Dr.AmbedkarBhavanD
hebarRoad
RajkotDea

rSir,

SUB:CONSTRUCTIONOF BOX CRICKET AT RACECOURSE (RE-TENDER)

1. Having visited the site and examined the Bid Documents, Drawings,ConditionsofContract,Specifications,Schedules,Annexures,PreambletoPriceSchedules,PriceSchedulesetc.includingAddenda/Amendments to the above, for the execution of the aboveContract,wetheundersignedoffertocarryoutasgiveninConditionsofContractandinconformitywiththeDrawings,Conditions of Contract, Specifications, Preamble to Price Schedules,Price Schedules, Annexures, Bidding Documents, including AddendaNos. (insertnumbers)for____
%age(in figure)
_____
(inwords)below/abovethantheratesgiveninPriceSchedule.

2. I/Weagreethat

   (a) ifwefailtoprovideequiredfacilitiestotheEmployer'srepresentative or any other person/agency by the employer toperformonhisbehalfforcarryingouttheinspectionandtestingofmaterialsandworkmanship

   OR

   (b) if we incorporate into the Works, materials before they aretestedandapprovedbytheEngineer'srepresentative

   OR

   (c) if we fail to deliver raw water of required quantity according tothe conditions/stipulations of the Contract, the EngineerwillbeatlibertytotakeanyactionincludingterminationofContract and impose at his absolute discretion any penalties,and/orrejectthework.

3. We undertake, if our Bidis accepted, to complete and deliver theWorksinaccordancewiththeContractwithin**90 Days**ofconstructionperiodfromthedateofWorkOrderissuedtousbyyou.
4. We agree to abide by this Bid for a period of 180 days from the datefixed for receiving the same and it shall remain binding upon us andmaybeacceptedatanytimebeforetheexpiryofthatperiod.
5. In the event of our Bid being accepted, weagree toenterinto aformal Contract Agreement with you incorporating the conditions ofContract thereto annexed butuntil such agreement ispreparedthisBid together with your written acceptance thereof shall constitute abindingContractbetweenus.
6. Weagree,ifourBidisaccepted,tofurnishPerformanceBond/Securityinthefor msandofvaluespecifiedintheConditionsof Contract of a sum equivalent to 5% of the Contract price for dueperformanceoftheContract.
7. Wehaveindependentlyconsideredtheamountsofliquidateddamagesshown inAppendixtoBidandagreethattheyrepresentafairestimateofthedamagesli kelytobesufferedbyyouintheeventoftheWorknotbeingcompletedbyusinti me.
8. Weunderstandthatyouarenotboundtoacceptthelowestoranybidyoumayre ceive.

Dated_____this_____dayof_____20____.

_____
(Signature)

CompanySeal

_____
(Nameoftheperson)

_____ _____
(Nameoffirm) (Inthecapacityof)
DulyauthorisedtosignBidforand
onbehalfof
(Fillinblockcapitals)

_____
_____
_____

Witness
Signature_____
Name_____
Address _____
_____

PREAMBLETOPRICE SCHEDULES

NoteonSchedule:

The bid is percentage rate bid for CONSTRUCTIONOF BOX CRICKET AT RACECOURSE (RE-TENDER)

1. Thebidispercentageratebid.

2. The ratesand pricesshall be submittedin the formats given intheonlinePriceSchedules.RatesandpricesreceivedinanyotherformatswillberejectedandtheBidswillbedisqualified.

3. Itwill beentirelyat thediscretionoftheEmployerto acceptorrejectthebidder'sproposal,withoutgivinganyreasonswhatsoever.

4. InPriceSchedule,biddershallquotehispercentageEqual/Above/Below for items listed in the schedule. Prices quotedinScheduleonlywillbeconsideredforpriceevaluation&shallforma partoftheContract Agreement.

5. The Only Price Schedule will be considered for financial evaluation ofthebidwiththesuccessfulbidder.

6. Thebiddershallbedeemedtohaveallowedinhispriceforprovision, maintenanceand finalremoval of all temporaryworksofwhatsoevernaturerequiredforconstructionincludingtemporary bunds, diverting water, pumping, dewatering etc. for theproperexecutionofworks.Theratesshallalsobedeemedtoincludeanyworksandsettingoutthatmayberequiredtobecarriedoutforlayingoutofalltheworksinvolved.

7. Wherethereisadiscrepancybetweentheunitratesandtheamountentered,thelattershallgovern.

8. ThePriceSchedulesaretobereadinconjunctionwiththeConditionsofContract,theSpecificationsandothersectionsofthesebiddocumentsandthesedocumentsaretobetakenasmutuallyexplanatoryofoneanother.

9. Prices quoted by the bidder shall be firm for the entire period ofContractwithout anyescalation.

10. Thebiddershallinterpretthedatafurnishedandcarryoutanyadditional surveywork, or investigativeworkrequiredat hisowncost.

11. The prices quoted shall also include the cost of materials utilized fortesting.

12. The bidder should acquaint himself with the site conditions includingthe access to Worksite. The successful bidder shall have to makesuitable access to worksites at his own cost. These accesses will beusedbytheothercontractorsworkingforRMC.

13. The material shall be inspected Departmentally, the cost of which, ifany,istobeborne bycontractor.

14. Incaseofextraitemworkifquotedand approved tenderpriceis above Percentage Rate then no above percentage rate willbegiven,onlytheratesasperS.O.R.willbepaidforsuchextraitem.But,ift hequotedandapprovedtenderpriceisbelowpercentage rate then thatbelowpercentage rate will be consideredforpayingofanyextraitem.

15. ThewholeworkistobedoneunderthesupervisionofRMC.

16. The rates and prices shall be submitted in the formats given in theenclosed Price Schedules. Ratesand prices receivedin any otherformatswillberejectedandtheBidswillbedisqualified.

17. ItwillbeentirelyatthediscretionoftheEmployertoacceptorrejectthebidder' sproposal,withoutgivinganyreasonswhatsoever.

18. InPriceSchedule,biddershallquotehispercentageEqual/Above/Below for items listed in the schedule. Prices quoted inSchedule only will be considered for price evaluation & shall form apartoftheContract Agreement.

19. Only Price Schedule will be considered for financial evaluation of thebid withthesuccessfulbidder.

20. ThePriceSchedulesaretobereadinconjunctionwiththeConditionsofContra ct,theSpecificationsandothersectionsofthesebiddocumentsandthesedoc umentsaretobetakenasmutuallyexplanatoryofoneanother.

21. Prices quoted by the bidder shall be firm for the entire period ofContractwithout anyescalation.

22. Thebiddershallinterpretthedatafurnishedandcarryoutanyadditional surveywork, orinvestigation work requiredat hisowncost.

23. The prices quoted shall also include the cost of materials utilized fortesting.

24. The bidder should acquaint himself with the site conditions includingthe access to Worksite. The successful bidder shall have to makesuitable access to worksites at his own cost. These accesses will beusedbytheothercontractorsworkingforRMC.

25. From each Running Account Bill, labourcess will be deducted as pernorms.

26. InEveryrunningbill0.25%amountshallberetainedasextrasecuritydeposit ifDrawingsofworkdonearenotsubmittedbyagency.

27. Thequotedratesshouldbeinclusiveofalltaxesandduties.

28. Thepricesshallhavetobequotedfirm&fixincludingallthetaxes& duties without any statutory variation. RMC will not consider anystatutory variation as well as the price rise in the market and if any,thoseshallbeonaccountofcontractor.

29. Theworkcontracttaxwillbebornebytheagency.

30. While considering experience of ongoing sewer/storm water pipelineworks,partworkcompletedinallrespectwillbeconsideredforevalua tionofbid.Inthisregardcontractorshallberequiredtosubmitpartcompletio ncertificatealongwithbiddocumentfromcompetentauthority.

31. Useofreadymixconcretemaybepermittedifitfulfilstenderspecifications.

32. Noextraitemorextrawidthwillbepaidduetoexcavatingmethodortypeofma chinery.

33. For any type of license regarding labour, etc. has to be achieved byagency.

34. This office Circular bearing No. RMC/C/329 dated 22-12-2012 andOrderNo.RMC/C/132dated10-06-2013areuploadedintenderdocument.

35. In reference to the above Circular and Order cited at above, theContractor firm who havequoted their ratesfor this workwill becalledinpersonforverificationoforiginaldocuments.Thedateand

timeforverificationoforiginaldocumentswillbeintimatedtotheContractors
.

36. If theprogress ofworkis found slowthen ExtrasecurityDepositmay be recovered from any running bill as decided by Engineer inchargeuptomaximum5%amountofconcernedR.A.Billamount.

37. In case of Extra Item, No "**On**" %age i.e. +ve % age Rate will begiven but if there is Down %age i.e, -ve % age Rate that will beappliedtothatrateofthatExtraItem.

ADDL.CITYENGINEER
RajkotMunicipalCorporation

SignatureofContractorwithSeal

CheckListforsubmissionofDocuments	
TenderFeesubmittedasperTender	Yes/No
Tender Earnest Money DepositsubmittedasperTender	Yes/No
Registrationdocumentssubmittedaspertenderrequirement	Yes/No
FinancialDetails:	
Turnoverdetailssubmittedasperrequirement	Yes/No
WorkingCapitalasperrequirement of tender issubmitted	Yes/No
ValidBankSolvencysubmitted	Yes/No
ValidityofBankSolvency	Date:
ExperienceDetails:	
DetailsofTechnicalStaffanddetailsofmachineriessubmitted	Yes/No
Addressproofsubmitted	Yes/No
Identityproofsubmitted	Yes/No
FreshDeclarationonNon-JudicialStampPaperregardingnotblacklistedorTerminatedorDebarred,issubmitted	Yes/No
ProfessionalTaxReceiptofcurrentyear	Yes/No

Note:
Overandabove,theagencyshallalsohavetosubmitallothernecessarydocuments as mayberequiredforpre-qualification,failingwhich,theagencywill betreatedasNon-responsiveandwillbeDISQUALIFIEDandalsotheonlinepricebidofsuchagencywillnotbeopened.

SignatureofContractorwithseal

PRICESCHEDULE

RajkotMunicipalCorporationP riceSchedule–B

Nameofwork:CONSTRUCTIONOF BOX CRICKET AT RACECOURSE (RE-TENDER)

Item No.	Quantity	Description of Item	Rate	Unit	Amount
1	755.00	Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting and laying in 90 mtr. lead area as instructed	133	cumt	100415.00
2	50.00	Supply & Laying of Hard Murrum	294.0	cumt	14700.00
3	22.10	RCC work 1:2:4 for copping using aggregate of size 10-20 mm, centring, curing, finishing etc. complete (without reinforcement)	4944.00	cumt	109262.40
4	1.80	RCC work 1:1.5:3 for RCC slab using aggregate of size 10-20 mm, centring, curing, finishing etc. complete (without reinforcement)	6083.00	cumt	10949.40
5	47.00	Brick Masonry work in Cement:Mortar 1:6	5761.00	cumt	270767.00
6	280.00	20mm thick Sand Face Cement Plaster Work in which 1 paster in proportion of 1:3 and 2nd plaster inteh proportion of 1:2 using Cement:Mortar with spong finishing etc. complete (Note: Before carringout Plaster work on RCC, required tipping work should be carried out as instructed)	263.00	sqmt	73640.00
7	70.00	Cement Plaster 12 mm thick using Cement:Mortar in proportion 1:3 with Niru Finishing curing, etc. complete	223.00	sqmt	15610.00
8	70.00	Birla or JK putti work on rough plaster (three times) with labour and material	82.00	sqmt	5740.00
9	70.00	Plastic Imulsion Paint (Two coats) (Asian Paint, ICI, Dulux, Nerolac, Berger etc. of approved type) (with Prime Coat)	145.00	sqmt	10150.00
10	200.00	Apex Color work on Outer side of Wall (Two coats) (without Base Coat)	92.00	sqmt	18400.00
11	7.50	supply and fixing of vitrified tiles flooring work of size more than 0.60 x 0.60 mtr (1st quality)	1082.00	sqmt	8115.00

Item No.	Quantity	Description of Item	Rate	Unit	Amount
12	20.50	Supply & Fixing of Glazed tiles (1st Quality) of required size inCement Roga and joints to be filled with white cement after12mm rough plaster in proportion of 1:3	493.00	sqmt	10106.50
13	1.00	Uropean type w/c with sit, cover fixing with comp. standard quality.	1784.00	Nos	1784.00
14	1.00	White porselin wash bassin 560/410mm indian make c.i. bracket with fitting cromium platted topes 25cm plastic waste pipe and 12mm pillar cock with comp.	1434.00	Nos	1434.00
15	4.30	Providing & fixing FRP door.	4200.00	sqmt	18060.00
16	1.50	aluminium section window work (with 3 track mosquito net) (jindal)(with necessary all fittings)	7061.00	sqmt	10591.50
17	13.00	Supply, Fixing & Polishing of Kota Stone work thickness 20-25 mm to be fixed in Lime:Mortar 1:2 and liquid Cement and as instructed	913.00	sqmt	11869.00
18	1350.00	Supplying, Cutting, Beding, Binding and Hooking and binding with wire for RCC work Tor steel TMT round bar including all cost	65.00	kg	87750.00
19	95.00	Supply & Laying of Machine crushed agregate of size 25-38 mm	916.00	cumt	87020.00
20	900.00	Supply &Fixing of 80mm M-30 Grade cement concrete rubber mold paving inter locking paving block (Grey colour) after beding of black stone powder in line and CC on the edge in proportion of 1:2:4 with curing etc. complete	500.00	sqmt	450000.00
21	415.00	Supply and laying garden black soil	442.00	cumt	183430.00
22	140.00	Supply and laying Red soil	1160.00	cumt	162400.00
23	14800.00	selection -1 grass supply as required cricket ground and instructed and selected by engineer incharge	39.00	sqft	577200.00
24	1375.00	Plantation of lawn, tree, flower bed etc in field area	20.00	sqmt	27500.00
25	3000.00	Iron work as per drawing and instruction including all	109.00	kg	327000.00
26	2400.00	NYLON NET-Hockey Practice Net 2.5 mm thick braided thread 1.75 Inches Blocks with aal GST Stansportation Etc. Complete	67.58	sqmt	162192.00
27	33.00	supply and fixing 13mm to 15mm Synthetic cricket pitch turf	3228.00	sqmt	106524.00

Item No.	Quantity	Description of Item	Rate	Unit	Amount
28	700.00	Fixing of CC Precast Road Divider stone 0.38 x 0.30 x 0.20 cm including required material and labour (without colour)	134.00	Nos	93800.00
29	180.00	Painting of Traffic Strip Foothpath / Circle & divider block size 0.38x 0.30 x 0.30 in two coats using enamle paint in different colors	54.00	RMT	9720.00
30	160.00	uPVC pipes of Shedule-80 of any standard approved brand & quality-25MM	92.91	RMT	14865.60
31	30.00	uPVC pipes of Shedule-80 of any standard approved brand & quality-20mm	63.84	RMT	1915.20
32	20.00	uPVC coupler for pipes of Shedule-80 of any standard approved brand & quality-25 mm	10.26	Nos	205.20
33	5.00	uPVC coupler for pipes of Shedule-80 of any standard approved brand & quality-20 mm	6.55	Nos	32.75
34	5.00	uPVC Bend of 90° Shedule-80 of ASTRAL, WATER FLO, FINOLEX, ASHIRVAD, POLYSIL Orany standard approved brand & quality-25mm	17.67	Nos	88.35
35	5.00	uPVC Bend of 90° Shedule-80 of ASTRAL, WATER FLO, FINOLEX, ASHIRVAD, POLYSIL Orany standard approved brand & quality-20mm	11.40	Nos	57.00
36	5.00	uPVC Tee of Shedule-80 of any standard approved brand & quality-25mm	22.51	Nos	112.55
37	5.00	uPVC Tee of Shedule-80 of any standard approved brand & quality-20mm	13.39	Nos	66.95
38	6.00	Gunmetal full way valve with ISI- 778 mark Of any ISI mark Approved brand.-25mm	833.20	Nos	4999.20
39	10.00	GI Reducing TEE with ISI-1239 mark for ISI marked GI pipe-25mm	44.07	Nos	440.70
40	5.00	GI Reducing TEE with ISI-1239 mark for ISI marked GI pipe-20mm	30.77	Nos	153.85
41	10.00	GI BEND with inside threaded with ISI-1239 mark for ISI marked GI pipe-25mm	40.21	Nos	402.10
42	10.00	GI BEND with inside threaded with ISI-1239 mark for ISI marked GI pipe-20mm	26.34	Nos	263.40
43	10.00	GI NIPPLE with ISI-1239 mark for ISI marked GI pipe-25mm	50.40	Nos	504.00
44	10.00	GI NIPPLE with ISI-1239 mark for ISI marked GI pipe-20mm	35.70	Nos	357.00

Item No.	Quantity	Description of Item	Rate	Unit	Amount
45	1.00	Water Storage Tank of HDPE material cylindrical Vertical Black with closed Top 'SINTEX' Brand. (1000 Liter Capacity).	13396.00	Nos	13396.00
				Total	**3003989.65**
			Add GST on 18%		540718.14
				Grand Total	3544707.79
				Say	3545000.00

Addl/Asst.Engineer R.M.C. **Dy.Ex.Engineer R.M.C.** **ADDL.CITYENGINEER R.M.C.**

I/We agree to carry out the abovesaidwork at _(to be quotedonline)%Equal/ above/ belowon thetenderedratesshowninSchedule.

SignatureofContractorwithSeal

રાજકોટ મહાનગરપાલિકા

ડો. આંબેડકર ભવન, ઢેબરભાઈ રોડ, રાજકોટ - ૩૬૦ ૦૦૧.
વેબસાઈટ : www.rmc.gov.in

આર.એમ.સી./સી./વીજ્યુ.(ટેક્ક) /જા. નં.- ૨૩૧ તા. ૧૧/૦૩/૨૦૨૨

પરીપત્ર-:

રાજકોટ મહાનગરપાલિકા અને RSCDL ખાતે ટેન્ડરથી થતા કામમાં સિમેન્ટ કોન્ક્રીટની કામગીરી કરવામાં આવે છે. આ કામોમાં ક્વોલીટી કન્ટ્રોલ જળવાઈ રહે તે માટે નીચે દર્શાવેલ દર્શાવ્યા મુજબ જુદા જુદા સિમેન્ટ કોન્ક્રીટ ગ્રેડ વાઈઝ મીનીમમ સિમેન્ટ કન્ટેન્ટના ધોરણો અનુસરવા અને તેનો સમાવેશ ટેન્ડર ડોક્યુમેન્ટમાં કરવા આથી હુકમ કરવામાં આવે છે.

(અ)	NABL માન્ય લેબ દ્વારા IS, IRC કે MORTH મુજબ તૈયાર કરાયેલ સિમેન્ટ કોન્ક્રીટ મીક્સ ડીઝાઈન રીપોર્ટ મુજબ ક્રિગ્રા સિમેન્ટ કન્ટેન્ટ પ્રતિ ઘનમીટર
(બ)	નીચે દશાવેલ ટેબલ મુજબ મીનીમમ ક્રિગ્રા સિમેન્ટ કન્ટેન્ટ પ્રતિ ઘનમીટર

Sr. No.	Cement Concrete Grade	28 Days Strength in N/mm^2	Minimum Cement in Kg
1	M-7.5 for PCC Work	7.5 N/mm^2	160 Kg
2	M-10 for PCC Work	10 N/mm^2	220 Kg
3	M-15 for PCC Work	15 N/mm^2	290 Kg
4	M-20 for RCC Work	20 N/mm^2	360 Kg
5	M-25 for RCC Work	25 N/mm^2	380 Kg
6	M-30 for RCC Work	30 N/mm^2	410 Kg
7	M-35 for RCC Work	35 N/mm^2	425 Kg
8	M-40 for RCC Work	40 N/mm^2	440 Kg
9	M-45 for RCC Work	45 N/mm^2	450 Kg

ઉપરોક્ત (અ) અને (બ) પૈકી જે વધુ હોય, તે સિમેન્ટ કન્ટેન્ટ ને ફાઈનલ મીનીમમ સિમેન્ટ કન્ટેન્ટ પ્રતિ ઘનમીટર ગણવા હુકમ કરવામાં આવે છે.

ઉપરોક્ત બાબતની અમલવારી તાત્કાલિક અસરથી ચુસ્તપણે કરવાની રહેશે.

કમિશ્નર
રાજકોટ મહાનગરપાલિકા

નકલ રવાના (જાણ તથા અમલવારી અર્થે)

- નાયબ કમિશ્નરશ્રી (ઝોન-વેસ્ટ ,સેન્ટ્રલ ,ઇસ્ટ)

નકલ રવાના -(અમલવારી અર્થે)

- તમામ સીટી એન્જીનીયરશ્રી, એડી. સીટી એન્જીનીયરશ્રી, એક્ઝીક્યુટીવ એન્જીનીયરશ્રી, એન્વાયરમેન્ટ એન્જીનીયરશ્રી (S.W.M.)

R.M.C./C./ 832

કમિશ્નર વિભાગ,
રાજકોટ મહાનગર સેવાસદન
તા. 20/6/2013

હુકમ :–

વિષયઃ– ઈ–ટેન્ડર / ઓપન ટેન્ડર પધ્ધતિથી મંગાવવામાં આવતી તમામ પ્રકારની ઓફરો સાથે બિનઅધિકૃત રજુ થતાં ડોકયુમેન્ટસ સામે કડક કાર્યવાહી હાથ ધરવા બાબત.

સંદર્ભ :– આ સ્થળાંતરનાં પરીપત્ર નં. આર.એમ.સી./સી./૩૨૯, તા.૨૨/૧૨/૨૦૧૨.

રાજકોટ મહાનગર સેવાસદનના તમામ ઝોનનાં તમામ વોર્ડમાં શહેરનાં વિકાસ તથા જાળવણી માટે વિવિધ કામગીરી કરાવવા ઈ–ટેન્ડર / ઓપન ટેન્ડર પધ્ધતિથી અલગ અલગ એજન્સીઓ પાસેથી સ્પર્ધાત્મક ધોરણે અખબારી પ્રસિધ્ધિથી ભાવો ટુ બીડ સીસ્ટમ (૧) ટેકનીકલ બીડ (૨) પ્રાઈઝ બીડ થી મંગાવવામાં આવે છે.

સંદર્ભના પ્રસિધ્ધ કરેલ પરીપત્ર મુજબ તમામ ઈ–ટેન્ડર / ઓપન ટેન્ડરથી મંગાવવામાં આવતાં ભાવો સાથે ભાવ ભરનાર એજન્સીઓ / બીડરો દ્વારા ટેન્ડર બીડ માટે રજુ કરવાનાં થતાં તમામ ડોકયુમેન્ટસ ફરજીયાતપણે ખરી નકલમા અથવા સેલ્ફ એટેસ્ટેડ રજુ કરવા આદેશ કરવામાં આવેલ છે. જે સંબધે નીચે મુજબનાં હુકમની અમલવારી તાત્કાલીક અસરથી કરવા આદેશ કરવામાં આવે છે.

(૧) તમામ ટેન્ડરકામોના ટેકનીકલ બીડ ઓપન કરતી વખતે જે ટેન્ડર બીડ ભરનાર એજન્સીઓ દ્વારા તમામ ડોકયુમેન્ટસ કે તે પૈકી કોઈપણ એક ડોકયુમેન્ટસ ખરી નકલમાં અથવા સેલ્ફ એટેસ્ટેડ રજુ કરેલ ન હોય તો રજુ થયેલ ટેકનીકલ બીડ ઓપન કરવાની કાર્યવાહી દરમ્યાન ટેકનીકલ બીડ ઓપન કરનાર સંબંધીત અધિકારીશ્રી / કર્મચારીશ્રીએ Disqualify પ્રકારનો રબ્બર સ્ટેમ્પ બિનઅધિકૃત રજુ થયેલ ટેન્ડરનાં તમામ પાને લગાવી ટેકનીકલ બીડમાં ટેન્ડર Disqualify ફરજીયાતપણે કરવાનું રહેશે.

જે ટેન્ડર ખરી નકલ કે સેલ્ફ એટેસ્ટેડ સાથે રજુ થયેલ નથી, તેવું ટેકનીકલ બીડમાં ધ્યાને આવ્યેથી રજુ થયેલ ટેન્ડરને Disqualify ન કરી, તે બીડરનું જો પ્રાઈઝ બીડ ખોલવામાં આવશે તો આવા પ્રાઈઝ બીડ ખોલનાર તમામ સંબંધીત અધિકારીશ્રી / કર્મચારીશ્રી સામે સખત શિક્ષાત્મક પગલાં લેવાની ફરજ પડશે.

(૨) તમામ ટેન્ડરોનાં કિસ્સાઓમાં સંબંધીત ખરી નકલમાં રજુ થયેલ તમામ ડોકયુમેન્ટસની મુળ (ઓરીજીનલ)નકલ મંગાવી તેની ખરી નકલની ચકાસણી ફરજીયાતપણે સંબંધીત ડી.ઈ.ઈ.શ્રી તથા મ.ઈ.શ્રી / અ.મ.ઈ.શ્રીએ કરવાની રહેશે. **જે મુળ નકલ સાથે વેરીફાય કર્યાની સહી ફરજીયાતપણે દરેક ખરી નકલમાં સંબંધીત ડી.ઈ.ઈ.શ્રી / મ.ઈ.શ્રી / અ.મ.ઈ.શ્રીએ કરવાની રહેશે. તે પહેલાં તે ટેન્ડરની પ્રાઈઝ બીડ ઓપન કરી શકાશે નહી.** જેમા ફરજચુક થયેથી સંબંધીત જવાબદાર ડી.ઈ.ઈ.શ્રી / મ.ઈ.શ્રી / અ.મ.ઈ.શ્રી ની સામે કડક ખાતાકીય પગલાં લેવાની ફરજ પડશે.

(૩) ક્રમ નં.(૧) તથા (૨) મુજબની ચકાસણી કરવા છતાં જે કિસ્સામાં ટેકનીકલ બીડ ઓપન કરતાં બીડર દ્વારા કોઈપણ પ્રકારનાં ક્રોડ ડોકયુમેન્ટસ રજુ કરી કામ મેળવવા માટે પ્રયાસ કર્યાનું સાબિત થશે, તેવા કિસ્સામાં બીડર / એજન્સીને બ્લેકલીસ્ટ કરી, આવા બીડર સામે ફરજીયાતપણે ફોજદારી કાર્યવાહી સંબંધીત શાખાના વડા તથા વીજીલન્સ અધિકારીશ્રી (પ્રોટેકશન) દ્વારા જોઈન્ટલી દિન–૭ માં કરવા આદેશ કરવામાં આવે છે. જેની લેખિતમાં

જાણ તાત્કાલીક અત્રે કરવાની રહેશે. જેમાં ચુક થયેથી સંબંધીત તમામ અધિકારીશ્રી / કર્મચારીશ્રી સામે કડક પગલાં લેવા ફરજ પડશે.

(૪) સંદર્ભનો પરીપત્ર તથા આ હુકમ તમામ પ્રકારનાં ટેકનીકલ કામના દરેક ટેન્ડર પ્રસિધ્ધ કરતી વખતે ટેન્ડરનો હિસ્સો ગણી ટેન્ડરના ભાગ તરીકે પ્રસિધ્ધ કરવાનું ફરજીયાત રહેશે, તથા બીડર દ્વારા ટેન્ડરમા પ્રશિધ્ધ થતા સંદર્ભનાં પરીપત્ર તથા આ હુકમનાં દરેક પાને સહી સિકકા સાથે ભરેલ ટેન્ડરની ટેકનીકલ બીડ ફરજીયાત રજુ કરવાની રહેશે.

ઉપરોકત હુકમનો તાત્કાલીક અસરથી ચુસ્તપણે અમલ કરવા આદેશ કરવામાં આવે છે.

કમિશ્નર.
રાજકોટ મહાનગર સેવાસદન

<u>નકલ રવાના (જાણ અર્થે):-</u>
નાયબ કમિશ્નરશ્રીઓ (તમામ)

<u>નકલ જાણ તથા અમલવારી અર્થે</u> :-
(૧) સહાયક કમિશ્નરશ્રીઓ (તમામ)
(૨) શાખાધિકારીશ્રીઓ (તમામ)

આર.એમ.સી./સી. ૩૨૮

રાજકોટ મહાનગરપાલિકા
કમિશનર વિભાગ
તા.૨૨/૧૨/૨૦૧૨

પરિપત્ર:-

ઇ-ટેન્ડર પદ્ધતિ / ઓપન ટેન્ડર પદ્ધતિથી માંગવામાં આવતી ઓફરોમાં એજન્સીઓ દ્વારા ટેકનીકલ બીડમાં રજુ કરવામાં આવતા ડોક્યુમેન્ટ્સ જેવા કે ટર્નઓવર, અનુભવના પ્રમાણપત્રો વિગેરે ખરી નકલમાં રજૂ કરવામાં આવતા નથી. આથી હવે પછીથી એજન્સીઓ દ્વારા રજૂ થતાં ટેકનીકલ બીડમાં રજુ કરવામાં આવતા ડોક્યુમેન્ટ્સ ખરી નકલમાં અથવા સેલ્ફ એટેસ્ટેડ હોવા જરૂરી છે તેમજ જે એજન્સીનું ટેન્ડર ટેકનીકલ બીડમાં ક્વોલીફાય થાય અને ખરી નકલ ગેઝેટેડ ઓફીસર મારફત પ્રમાણિત કરાવેલ ન હોય તેવા કેસમાં તેના ઓરીજીનલ ડોક્યુમેન્ટ્સ પ્રાઇસબીડ ખોલતા પહેલા ચકાસી અને ખરી નકલ રજૂ કરાવીને જ ખોલવાના રહેશે તથા આ બાબતનું શાખાધિકારીશ્રીઓએ ચુસ્તપણે પાલન કરાવવાનું રહેશે. આમ ન થયેથી પુરતી ચકાસણીને અભાવે જો કોઇ એજન્સીને ખોટા કે અધુરા આધારો સાથે કામ આપવાની ક્ષતિજનક બાબત જાણમાં આવ્યે તે ટેન્ડર ડોક્યુમેન્ટ્સની ચકાસણી કરનાર કર્મચારીશ્રીઓ તેમજ શાખાધિકારીશ્રીની જવાબદારી નક્કી કરવામાં આવશે, જેની સર્વે શાખાધિકારીશ્રીઓએ નોંધ લેવી.

ઉપરોક્ત બાબતનો અમલ તાત્કાલિક અસરથી કરવો.

22/12

કમિશનર
રાજકોટ મહાનગરપાલિકા

નકલ રવાના :- (જાણ અર્થે)
- નાયબ કમિશનરશ્રીઓ (તમામ)

નકલ જાણ તથા અમલવારી અર્થે :-
- સહાયક કમિશનરશ્રીઓ (તમામ)
- શાખાધિકારીશ્રીઓ (તમામ)

જાહેરનામુ

ફોજદારી કાર્યરીતી અધિનિયમ ૧૯૭૩ (૧૯૭૪ના નં.૨) ની કલમ ૧૪૪ અન્વયે કાઢેલ હુકમ

ક્રમાંક: એસ.બી/મજુર/જાહેરનામુ/૧૩૭/૨૦૧૪.
પોલીસ કમિશ્નરશ્રીની કચેરી,
રાજકોટ શહેર,રાજકોટ.
તા.૨૯/૦૪/૨૦૧૪

તાજેતરમાં રાજકોટ શહેરમાં ઘરફોડ ચોરીના બનાવો વધતા પામેલ છે ભુતકાળમાં રાજકોટ શહેરમાં બનેલ ઘરફોડ ચોરીના બનાવોની તપાસ કરતા તપાસમાં આવા ગુન્હો કરનાર (આરોપીઓ) પકડાયેલ છે. ત્યારે તપાસમાં આવા ગુન્હા વાળા આરોપીઓ ગુન્હાના બનાવના દિવસો અગાઉ રાજકોટ શહેરમાં નવા બંધાતા મકાનોમાં જુદી જુદી ઔધોગીક કંપનીઓમાં, કોર્પોરેશનમાં મજુરી કામ અને ટેલીફોન કંપનીઓ દ્વારા તથા ગેસ પાઇપ લાઇન માટે ખોદાતા ખાડાઓની મજુરી કામ મેળવી અથવા તેના બહાના હેઠળ આવી રોકાણ કરી આજુબાજુની સ્થાનિક પરીસ્થિતીનુ સર્વે કરી માહિતગાર થઇ મિલ્કત વિરુધ્ધના ગુન્હાઓ આચરતા હોય છે. મજુરી કામના બહાના હેઠળ આતંકવાદીઓ પણ આશરો મેળવી લેતા હોય છે જેથી જાહેર જનતાની જાન-માલ (મિલ્કત)ની સલામતી તથા સુરક્ષા સારૂ થોડા નિયંત્રણો મુકવા જરૂરી જણાય છે.

જેથી હું મોહન ઝા (I.P.S.), પોલીસ કમિશ્નર, રાજકોટ શહેર ફોજદારી કાર્યરીતી અધિનિયમ (સી.આર.પી.સી.) ૧૯૭૩ (૧૯૭૪ ના નં.૨) ની કલમ ૧૪૪ અન્વયે અમોને મળેલ સત્તાની રૂએ આથી હું હુકમ કરૂ છુ કે, રાજકોટ શહેરના પોલીસ કમિશ્નર વિસ્તારમા લેબર કોન્ટ્રાકટર/મુકાદમનાઓએ પોતાની પાસે જે મજુર કામે રાખેલ હોય અને મજુરી કામકાજ માટે સપ્લાય કરતા હોય તેઓએ નીચે જણાવેલ ફોર્મ મુજબ દરેક મજુરીના અલગ-અલગ ફોર્મ ભરી ફરજીયાત પણે સ્થાનીક પોલીસ સ્ટેશનને જાણ કરવાની રહેશે તથા મજુરો જ્યારે મજુરી કામ તથા રાજકોટ શહેર છોડી જતા રહે ત્યારે લેબર કોન્ટ્રાકટર/મુકાદમે તે અંગેની જાણ નામ/સરનામા સહિતની વિગત સાથે સ્થાનીક પો.સ્ટે.મા કરવાની રહેશે

૧	લેબર કોન્ટ્રાકટર / મુકાદમ (સપ્લાયર) નુ પુરૂ નામ સરનામુ મો.નં., નંબર સહિત	:-	
૨	મજુરનુ નામ તથા ઉ.વ.	:-	
૩	મજુરનું હાલનુ સરનામુ ટેલીફોન નંબર	:-	
૪	મજુરનુ મુળ વતનનું સરનામું ગામ, તાલુકો, જીલ્લો	:-	
૫	હાલની મજુરીનુ સ્થળ / કંપનીનુ નામ	:-	
૬	મજુરનુ વતનનું સ્થાનીક પો.સ્ટે.નું નામ તથા ટેલીફોન નંબર	:-	
૭	મજુરના વતનના આગેવાનનું નામ, સરનામુ, ટેલીફોન નંબર	:-	
૮	મજુર અગાઉ કોઇ પોલીસ ગુન્હામાં પકડાયેલ હોય તો તેની વિગત	:-	
૯	ક્યારથી મુકાદમ / કોન્ટ્રાકટરે મજુરી કામ માટે રાખેલ છે	:-	
૧૦	મજુરનુ ઓળખ માટેનુ આઇ.ડી.પ્રુફ (ફોટા સાથે નું)	:-	
૧૧	રાજકોટ શહેરમાં કઇ તારીખથી મજુરી કામ કરે છે ? અને કઇ તારીખે જવાનો છે ?	:-	
૧૨	રાજકોટ શહેરમાં નજીકના સંબંધી કોઇ હોયતો તેનુ નામ, સરનામુ	:-	

મજુરનો તાજેતરનો ફોટો

મજુરના અંગુઠાનુ નિશાન..
મુકાદમ/સપ્લાયર/કોન્ટ્રાકટરની સહિ..
નામ..

આ હુકમ તા. ૦૧/૦૫/૨૦૧૪ થી તા.૩૦/૦૬/૨૦૧૪ સુધી અમલમાં રહેશે.

આ હુકમનો ભંગ કરનાર વ્યકિત ભારતીય દંડ સંહિતાની કલમ ૧૮૮ મુજબ શિક્ષાને પાત્ર થશે.

તમામને વ્યક્તિગત રીતે નોટીસની બજવણી કરવી શક્ય ન હોય આથી એકતરફી હુકમ કરું છું. જાહેર જનતાની જાણ સારૂ સ્થાનીક વર્તમાન પત્ર આકાશવાણી અને દુરદર્શન કેન્દ્ર મારફતે પ્રસિધ્ધી દ્વારા તથા પોલીસ સ્ટેશનના પોલીસ ઇન્સ્પેકટર, મદદનીશ પોલીસ કમિશ્નર, નાયબ પોલીસ કમિશ્નર તથા પોલીસ કમિશ્નર કચેરીના નોટીસ બોર્ડ ઉપર હુકમની નકલ ચોંટાડી પ્રસિધ્ધી કરવામાં આવશે તેમજ સહેલાઇથી જોઇ શકાય તેવી જાહેર જગ્યાઓ ઉપર હુકમની નકલ ચોંટાડી પ્રસિધ્ધી કરવામા આવશે ગુજરાત પોલીસ અધિનિયમ કલમ ૧૩૨ મુજબ પોલીસ અધિકારીઓ પણ આ હુકમની જાહેરાત કરવા અધિકૃત ગણાશે.

આજ તા.૨૯માહે એપ્રીલ-૨૦૧૪ ના રોજ મારી સહી અને સિક્કો કરી આપેલ છે.

(મોહન ઝા)
પોલીસ કમિશ્નર
રાજકોટ શહેર,રાજકોટ

નકલ રવાના:

(૧) અગ્ર સચિવશ્રી, ગૃહ વિભાગ, ગાંધીનગર.
(૨) પોલીસ મહાનિદેશક અને મુખ્ય પોલીસ અધિકારીશ્રી, ગુ. રા. ગાંધીનગર
(૩) અધિક પોલીસ મહા નિર્દેશકશ્રી (ઇન્ટે.) ગુ.રા.ગાંધીનગર.
(૪) પોલીસ કમિશ્નરશ્રી, અમદાવાદ શહેર, વડોદરા શહેર, સુરત શહેર.
(૫) ખાસ મુખ્ય પોલીસ અધિકારીશ્રી, રાજકોટ રેન્જ, રાજકોટ.
(૬) જીલ્લા પોલીસ અધિક્ષકશ્રી, રાજકોટ ગ્રામ્ય, રાજકોટ.
(૭) કલેકટરશ્રી , રાજકોટ શહેર.
(૮) મ્યુનિસિપલ કમિશ્નરશ્રી, રાજકોટ શહેર.
(૯) નિયામકશ્રી, માહીતી ખાતું ડૉ.જીવરાજ મહેતા ભવન જુના સચિવાલય બ્લોક નં.૭, બીજા માળે,ગુ.રા., ગાંધીનગર.
(૧૦) જીલ્લા સરકારી વકિલશ્રી, સેસન્સ કોર્ટ, રાજકોટ.
(૧૧) મેનેજરશ્રી, ગર્વમેન્ટ પ્રેસ, રાજકોટ. (ગેઝેટ ભાગ-૧ માં પ્રસિધ્ધ કરવા સારૂ).
(૧૨) મદદનીશ પોલીસ કમિશ્નરશ્રી, પુર્વ/ પશ્ચિમ વિભાગ, રાજકોટ શહેર.
(૧૩) આર્ટ.કમિશ્નરશ્રી, (ઇન્ટે.), રાજકોટ રીજીયન, રાજકોટ.
(૧૪) નાયબ પોલીસ અધિક્ષકશ્રી,/પો.ઇન્સ.શ્રી. રાજકોટ રેલ્વે જંકશન પો.સ્ટે.
(૧૫) તમામ પો.સ્ટે.ઈન્ચાર્જશ્રીઓ,રાજકોટ શહેર(નકલો ચોંટાડી લાઉડ સ્પીકર વાહન દ્વારા જાહેરાત કરાવવા સારૂ)
(૧૬) તમામ શાખા તથા બ્રાંચ ઈન્ચાર્જશ્રીઓ, રાજકોટ શહેર.
(૧૭) કન્ટ્રોલ ઈન્ચાર્જશ્રી, રાજકોટ શહેર (૨૦ નકલો) વર્તમાનપત્રોને આપવી.
(૧૮) લેબર કમિશ્નરશ્રી, ... તમામ ખાનગી સંસ્થાઓને અવગત કરવા સારૂ

નકલ સવિનય રવાના:-

(૧) રજીસ્ટ્રારશ્રી, હાઈકોર્ટ, ગુ.રા.સોલારોડ અમદાવાદ.
(૨) રજીસ્ટ્રારશ્રી, ડીસ્ટ્રીક્ટ એન્ડ સેશન્સ કોર્ટ, રાજકોટ.
(૩) રજીસ્ટ્રારશ્રી, ચીફ જ્યુડીશ્યલ મેજી.શ્રી કોર્ટ, રાજકોટ.
(૪) રજીસ્ટ્રારશ્રી, એડીશનલ સેશન્સ જજ કોર્ટ, રાજકોટ.
(૫) એક્ઝીક્યુટીવ મેજી.શ્રી, રાજકોટ શહેર
(૬) એક્ઝીક્યુટીવ મેજી.શ્રી, રાજકોટ તાલુકા
(૭) સયુંકત માહીતી નિયામકશ્રી, રાજકોટ.
(સ્થાનીક વર્તમાનપત્રો, આકાશવાણી તથા દુરદર્શન કેન્દ્રમાં પ્રસિધ્ધ કરવા અને વર્તમાનપત્રોની છાપેલીઓ મોકલવા સારૂ)

રાજકોટ મહાનગરપાલિકા

હિસાબી શાખા

ડૉ.આંબેડકર ભવન, ઢેબરભાઇ રોડ, રાજકોટ – ૩૬૦ ૦૦૧.

રા.મ.ન.પા./હિસાબી/જા.નં. ૪૨૧ તા. ૧૬/૬/૨૦૧૭

નોંધ -

વિષય – Vendor Regi. માં GST No. Update કરવા બાબત

ઉપરોકત વિષયે જણાવવાનું કે રાજકોટ મહાનગરપાલીકા નાં તમામ વેન્ડર / કોન્ટ્રાકટરો ના Vendor Registration માં GST No. ની જરૂરીયાત હોય તાત્કાલીક અપડેટ કરવા વિનંતિ. Temporary Vendor નાં Regi. આપની શાખામાં જ થઇ જશે જ્યારે Permanent Vendor નાં GST No. અપડેટ કરવા શાખા અધિકારીશ્રી નાં જરૂરી સહી સીક્કા સાથે નીચે મુજબ વિગત નું પત્રક બનાવી દિવસ – ૭ માં હિસાબી શાખામાં માહિતી મોકલાવી આપવા વિનંતી.

Vendor Name	Exiting Vendor Regi. No.	PAN	GST NO.

ચીફ એકાઉન્ટન્ટ
રાજકોટ મહાનગરપાલીકા

નોંધ - તમામ વિગતો ચકાસીને અપડેટ કરવી / ચકાસીને મોકલવી અન્યથા સપ્લાયર્સ ને TDS ની કેડીટ મળશે નહી જેની નોંધ લેવા વિનંતી.

રાજકોટ મહાનગરપાલિકા
સે. ઝોન બાંધકામ શાખા
ઈન્વર્ડ નંબર ૧૩૭
તારીખ ૧૬/૬/૧૭

નકલ અમલવારી અર્થે

1. તમામ શાખા અધિકારીશ્રી ઓ

નકલ સવિનય જાણ અર્થે

1. માન. કમિશ્નર સાહેબશ્રી
2. માન. નાયબ કમિશ્નર સાહેબશ્રી

રા.મ.ન.પા./મ.ઓ./સો.વે.મે./જા.નં. ૬૪૩૫ ૦૩/૦૬/૨૨

જાહેરનામું

આથી હું અમિત અરોરા (IAS), મ્યુનિસીપલ કમિશનર, રાજકોટ મહાનગરપાલિકા, રાજકોટ ગુજરાત પ્રોવિન્સીયલ મ્યુનિસીપલ કોર્પોરેશન એકટ-૧૯૪૯ની જોગવાઇ અનુસંધાને મળેલ સતા મુજબ, જાહેર હિતને ધ્યાને લઇ, રાજકોટ મહાનગરપાલિકા વિસ્તારમાં ઇમારત તોડવા, સમારકામ અથવા તો નવા બાંધકામ દરમ્યાન ઉપસ્થિત થતા બાંધકામએ લગત કચરા (Construction and Demolition Waste) નો રાજકોટ મહાનગરપાલિકા દ્વારા નિયત કરાયેલ જગ્યા સિવાય નિકાલ કરવા પ્રતિબંધ ફરમાવું છું.

એવું ધ્યાનમાં આવેલ છે જે, રાજકોટ મહાનગરપાલિકા વિસ્તારમાં ઇમારત, ઇમારતોના બાંધકામ દરમ્યાન નળીયા, પથરા, ઇંટો, ઇમારત બાંધવાના માલ સામાન અને એવા માલ સામાનનો કાટમાળ ગમે તે જગ્યાએ નિકાલ / એકઠો કરવામાં આવે છે. જેનાથી એવી જગ્યાએ ઉંદરો અથવા અન્ય જીવ જંતુઓનું આશ્રય સ્થાન અથવા ઉત્પતિ સ્થાન બને છે. તેમજ સદરહું જગ્યાનો ભોગવટો કરનારાઓને અથવા પડોશમાં રહેતી વ્યક્તિઓના ભય અને ઉપદ્રવનું કારણ બને છે. તેના કારણે રોગચાળો ફેલાવવાનો ભય અને લોકોના આરોગ્ય તથા જાનમાલને નુકસાન થાય તેવી સ્થિતી ઉત્પન્ન થાય છે. તેમજ તે કચરો (Construction and Demolition Waste) દુર કરવા રાજકોટ મહાનગરપાલિકાને ખુબજ મોટો ખર્ચ થાય છે, તેમજ માનવ સમય બગડે છે. આમ, લોકોના જાનમાલના અને આરોગ્યના નુકસાનના ભોગે આવી ગેરકાયદેસર પ્રવૃતિ ચાલી રહેલ છે, આવી કોઇપણ પ્રવૃતિ જન આરોગ્ય માટે બિન સલામતી નોતરે તેમ હોય, ગુજરાત પ્રોવિન્સીયલ મ્યુનિસીપલ કોર્પોરેશન એકટ અનુસુચી-ક ના પ્રકરણ-૧૪ ની જોગવાઇઓ અનુસંધાને આવી તમામ પ્રવૃતિ કરવાનો અગાઉના જાહેરનામા નં.રા.મ.ન.પા./મ.ઓ./સો.વે.મે./જા.નં.૧૯૪૧, તા.૦૬/૦૮/૨૦૧૯ થી પ્રતિષેધ ફરમાવવામાં આવેલ અને આવા કચરા (Construction and Demolition Waste)ના નિકાલ માટે રાજકોટ મહાનગરપાલિકાએ નીચે દર્શાવેલ સ્થળો નિયત કરવામાં આવેલ.

૧. કોઠારીયા પોલીસ ચોકીની બાજુમાં પથ્થરની ખાણ પાસે,
૨. રૈયા સ્માર્ટ સીટીના તમામ ખાણ વિસ્તાર,
૩. ટી.પી.સ્કીમ નં.૧૦, એફ.પી.-૮૭, ઢેબર રોડ, સાઉથ અટીકા વિસ્તાર, પી.જી.વી.સી.એલ. ઓફિસ પાસે,
૪. ટી.પી.સ્કીમ નં.૨૩, એફ.પી.-૨૩, મોરબી રોડ,પોપટપરા આઇ.ઓ.સી. ગોડાઉન પાસે,
૫. સમ્રાટ ઇન્ડ. એરિયા, એસ.ટી. વર્કશોપ પાછળ, અનામત પ્લોટ,
૬. ટી.પી.સ્કીમ નં.૯, એફ.પી.-૫, રૈયાધાર ગાર્બેજ ટ્રાન્સફર સ્ટેશન પાસે,
૭. ટી.પી.સ્કીમ નં.૨૦, એફ.પી.-૩૫, પ્રધ્યુમન ગ્રીન પાછળ

ઉપરોકત સ્થળો ઉપરાંત નીચે મુજબના સ્થળો Construction and Demolition Waste ના નિકાલ માટે નિયત કરવામાં આવે છે.

૧. જેટકો ચોકડી, ટી.પી.સ્કીમ નં.૨૮, મવડી, એફ.પી.-૪૬/એ,
૨. ટી.પી.સ્કીમ નં.૧૨, કોઠારીયા નેશનલ હાઇવે, લીજ્જત પાપડ પાસે, એફ.પી.-૩૮/એ, ૩૯/બી.

ઉપરોકત નિયત કરેલ સ્થળો સિવાય અન્ય કોઇપણ જગ્યાએ કોઇપણ ઇસમ/ઇસમો છકડો, ટ્રેકટર અથવા ડમ્પર દ્વારા (Construction and Demolition Waste) નો નિકાલ કરતાં પકડાશે તો પ્રથમ વખત છકડો/ટ્રેકટર દીઠ રૂા.૭,૫૦૦/- તથા ડમ્પર દીઠ રૂા.૧૫,૦૦૦/-, બીજી વખત છકડો/ટ્રેકટર દીઠ રૂા.૧૫,૦૦૦/- તથા ડમ્પર દીઠ

રૂ।.૩૦,૦૦૦/- અને ત્રીજી વખત છકડો/ટ્રેકટર દીઠ રૂ।.૫૦,૦૦૦/- તથા ડમ્પર દીઠ રૂ।.૧,૦૦,૦૦૦/-લેખે વહીવટી ચાર્જ વસુલ કરવામાં આવશે. તેમજ વાહન જપ્ત કરવા સુધીની કાર્યવાહી કરવામાં આવશે.

શહેરમાં વસતાં નાગરીકો દ્વારા ઉપરોકત Construction and Demolition Waste ના નિકાલ માટે રાજકોટ મહાનગરપાલિકા દ્વારા ઝોન વાઇઝ કામગીરી માટે Construction and Demolition Waste સેલની રચના કરવામાં આવેલ છે. શહેરના નાગરિકો રાજકોટ મહાનગરપાલિકાના કોલ સેન્ટર – ૦૨૮૧-૨૪૫૦૦૭૭ પર ફોન કરી તેમની મિલ્કતનાં રીપેરીંગ કે કાટમાળનો નિકાલ નીચે મુજબનાં નિયત થયેલ ચાર્જીસ ભરપાઇ કરી નિકાલ કરવાની વ્યવસ્થાનો લાભ મેળવી શકશે.

- રીક્ષા કે ૧/૨ ટ્રેકટર રૂ।.૩૦૦/-
- ટ્રેકટર જેટલો જથ્થો રૂ।.૫૦૦/-
- ટ્રક / ડમ્પર જેટલો જથ્થો રૂ।.૧,૦૦૦/-

ઉપરોકત નિયત કરાયેલ સ્થળોએથી ખાનગી માલિકો, જુનો એકત્રિત થયેલ બાંધકામનો કાટમાળ પોતાના ઉપયોગ માટે સ્વખર્ચે ઉપાડી લઇ જઇ શકશે.

ઉકત જાહેરનામાનો ચુસ્તપણે અમલ કરવો.

રાજકોટ.
તા.4/6/૨૦૨૨

કમિશનર
રાજકોટ મહાનગરપાલિકા

ક્રમાંક, અશાન/ ૨૯૯ /૨૦૦૨/ ×૯૮

સુપ્રિ. ઓફ સ્ટેમ્પની કચેરી,
સ્ટેમ્પ અને નોંધણી ભવન,
સેક્ટર - ૧૩-સી "ચ" રોડ,
ગાંધીનગર.
તા. ૩ /૮/૨૦૦૨

પ્રતિ,
કાર્યપાલક ઇજનેરશ્રીની કચેરી,
માર્ગ અને મકાન વિભાગ
જુનાગઢ

વિષયઃ- કરારખત પર સ્ટેમ્પ ડ્યુટી વસુલાત બાબત.

સંદર્ભઃ- આપની કચેરીનાં તા. ૩૦/૭/૨૦૦૨નો પત્ર

ઉપરોક્ત વિષય અને સંદર્ભ પત્ર દ્વારા આપની કચેરી દ્વારા "કરાર ખત" પર વસુલવાની સ્ટેમ્પ ડ્યુટીના માર્ગદર્શન બાબતે જણાવવાનું કે, અત્રેની કચેરીના પરિપત્ર નં. સ્ટેમ્પ/[illegible]/૨૦૦૭/૯૯૯ તા. ૫/૨/૨૦૦૭ ના પરિપત્રની નકલ મોકલવામાં આવે છે. જેના પેરા-[illegible] અને (૯)માં જણાવેલ સ્ટેમ્પ ડ્યુટી વાપરવાની થાય છે.

વિશેષમાં જણાવવાનું કે, આપના દ્વારા અત્રે રજૂ થયેલ વિગત અન્વયે અત્રેનાં તા. [illegible] ના પરિપત્ર ના મુદ્દા નં. ૨ મુજબ એગ્રીમેન્ટ માટે રૂ. ૧૦૦/- તથા ડિપોઝીટ તરીકે [illegible] નેશનલાઇઝડ બેંકની ફીક્સ ડીપોઝીટ તથા નાની બચત પત્રોની ૨.૫ % (અઢી ટકા) રકમ રૂ. [illegible] ૪૦૦/- ઉપર આર્ટીકલ -૩૬ (ક) સાથે આર્ટીકલ - ૨૦(ક)માં પ્રસ્તાવિત દર તથા [illegible] મુજબ સરચાર્જસહિત ૧૦૦ એ ૮.૫% મુજબ સ્ટેમ્પ ડ્યુટી ભરપાઈ કરાવવાપાત્ર હોવાનું [illegible] થાય છે. જે વિદિત થાય.

બિડાણ :- પરિપત્રની નકલ.

Off. of the E.E. PWD, R&B Div., Junagadh
2 AUG 200[illegible]

સહી/-
અધિક સુપ્રિ. ઓફ સ્ટેમ્પ્સ
ગુજરાત રાજ્ય, ગાંધીનગર.

ન.સ્ટેમ્પ–અનામ–૧૪ –૨૦૦૭ – ૯૩૮

સુપ્રિ.ઓફ સ્ટેમ્પસની કચેરી,
સ્ટેમ્પ અને નોંધણી ભવન,
સેકટર–૧૩–સી, ખ રોડ,
ગાંધીનગર.
તા.૫ –૨–૦૭

પરિપત્ર:-

અત્રેની કચેરીનાં ધ્યાન ઉપર આવેલ વિગત મુજબ ગુજરાત રાજ્યમાં આવેલ જીલ્લા પંચાયત, નગર પાલિકાઓ તરફથી કરવાના થતા બાંધકામ તથા અન્ય કામો માટે ટેન્ડર બહાર પાડી. કોન્ટ્રાકટરો પાસે કામગીરી કરાવવામાં આવે છે. આવી કામગીરી માટે જે કોન્ટ્રાકટરનું ટેન્ડર મંજુર કરવામાં આવે છે. તે ટેન્ડરની અંદાજીત રકમ પૈકી નિયમોનુસાર અનામતની (સીકયુરીટી – ડીપોઝીટની) રકમ લેવામાં આવે છે. તે અંગે જીલ્લા પંચાયત / નગરપાલિકા / મહાનગરપાલિકા અને કોન્ટ્રાકટર વચ્ચે કરાર કરવામાં આવે છે. આવા કરારો સ્ટેમ્પ ડયુટીના અભિપ્રાય માટે અત્રે રજુ કરવામાં આવે છે. તેમાં જે ડિપોઝીટની રકમ અનામત મુકવાની થાય છે. તે રોકડ, ચેક, ડીમાન્ડ ડ્રાફ્ટ બેંક ગેરંટી ફિકસ ડીપોઝીટ રીસીપ્ટ એન.એસ.સી. બચતપત્ર વિગેરે પૈકીના એક યા વધુ માધ્યમથી આપવામાં આવે છે. તેમાં ટેન્ડર અન્વયે કેટલી રકમ સીકયુરીટી ડીપોઝીટ પેટે મુકવાની છે અને કયા માધ્યમથી મુકવામાં આવે છે. તેની પુરેપુરી વિગત રજુ કરેલ ન હોય તો આવા કેસોમાં પુરેપુરી વિગત રજુ કરવામાં ન આવે ત્યાં સુધી અભિપ્રાય આપી શકાતો નથી અથવા વિલંબ થાય છે. આવી પરિસ્થિતિ નિવારવા અને ટેન્ડરની રકમ અન્વયે જે કરાર કરવામાં આવે છે. તેમાં નીચેની વિગતે સ્ટેમ્પ ડયુટી લેવાની થાય છે.

(૧) અનામતની જે રકમ રોકડ, ચેક યા ડ્રાફ્ટથી લેવામાં આવે અથવા તો બેંક ગેરંટીથી આપવામાં આવે તો કરારનાં લેખ ઉપર મુંબઈ સ્ટેમ્પ અધિનિયમ –૧૯૫૮ની અનુસુચિ–૧ ના આર્ટીકલ –૫ (જ) મુજબ કરાર ઉપર રૂા. ૧૦૦/– સ્ટેમ્પ ડયુટી વાપરવાની થાય છે.

(૨) ટેન્ડર અન્વયે જે અનામતની રકમ ફિકસ ડીપોઝીટ રીસીપ્ટ, એન.એસ.સી. યા અન્ય કોઈ બચતપત્રના માધ્યમ થી અનામત મુકવામાં આવે તો તેટલી અનામતની રકમ ઉપર મુંબઈ સ્ટેમ્પ અધિનિયમ– ૧૯૫૮ની અનુસુચિ–૧ ના આર્ટીકલ –૩૬ (ક) સાથે આર્ટીકલ ૨૦ (ક) મુજબ આ રીતે આપવામાં આવેલ અનામતની રકમના પ્રત્યેક રૂા. ૧૦૦/– અથવા તેના ભાગ માટે ૪.૨૫% પ્રમાણે સ્ટેમ્પ ડયુટીને પાત્ર બને છે.

આપના તરફથી જે કામો માટે ટેન્ડર બહાર પાડવામાં આવે અને તેમાં ટેન્ડરની રકમ અન્વયે જે રકમ ડિપોઝીટ (અનામત) મુકવામાં આવે છે. તેમાં ઉપર દર્શાવ્યા મુજબ સ્ટેમ્પ ડયુટીને પાત્ર બને છે. તે મુજબ અમલ કરવા વિનંતી છે. સાથોસાથ આપના તાબા

ASHN

કોન્ટ્રાક્ટરને વર્ક ઓર્ડર આપવામાં આવે તે સમયે કરારનામા ઉપર ઉકત વિગતે યોગ્ય સ્ટેમ્પ ડયુટી ભરપાઈ કરેલ છે. કેમ ? તેની ખાત્રી કરવા પણ જણાવવામાં આવે છે.

અધિક મુખ્ય અધિકારી
ગુજરાત રાજ્ય

પ્રતિ,
(૧) મુખ્ય અધિકારી,
(૨) જીલ્લા વિકાસ અધિકારી,
જીલ્લા વિકાસ અધિકારીની કચેરી
.....
(૩) મ્યુનીસીપલ કમિશ્નરશ્રી,
મ્યુ. કમિશ્નરશ્રીની કચેરી
.....
(૪) ચીફ ઓફિસરશ્રી તમામ
નગરપાલિકા કચેરી,
.....

RAJKOT MUNICIPAL CORPORATION
ACCOUNTS DEPARTMENT
Room No. 4, 2nd Floor
Dr. Ambedkar Bhavan,
Debar Road,
Rajkot - 360001

PARTY/VENDOR REGISTRATION FORM

VENDOR CODE	:	
Party Name	:	
Authorized Person	:	
PAN Card No.	:	
GST No.	:	
Address	:	
City	:	
Phone No.	:	
Mobile No.	:	
eMail ID	:	
Website	:	
Area Of Work	:	
Bank Details (attach copy of cancelled cheque)		
Bank Name	:	
Branch Name	:	
MICR Code	:	IFSC Code :
Account Type	:	
Account No.	:	

(1) Any vendor while filling a tender shall quote registration details; if he is not registred he will give fresh details along with tender.
(2) Acounts branch will designate a person who will keep the forms and also authorize new registrations or edit existing registrations.

TO,
CHIF ACCOUNTANT,
ACCOUNT DEPARTMENT,
RAJKOT MUNICIPAL CORPORATION

THE ABOVE MENTIONED DETAILS FOR VENDOR REGISTRATION HAS BEEN VERIFIED BY US & FOUND CORRECT. KINDLY REGISTER ABOVE VENDOR.

SIGN
NAME
DESIGNATION
DEPARTMENT NAME

રાજકોટ મહાનગરપાલિકા
હિસાબી શાખા
તા૨૦/૦૯/૨૦૧૮

જા.નં. ૧૬૧૭

પરિપત્ર :-

વિષય :- તા. ૦૧/૧૦/૨૦૧૮ થી જી.એસ.ટી. ટી.ડી.એસ. ની કપાત બાબત

સંદર્ભ :- (૧) GoI, MoF (Department of Revenue) Central Board Indirect Taxes and Customs Nobification No. 50/2018-Central Tax

(૨) GoG. Finance Department Nobification No. 50/2018-State Tax

ઉપરોક્ત વિષય અને સંદર્ભે ગુજરાત ગુડ્સ એન્ડ સર્વિસ ટેક્ષ એક્ટ, ૨૦૧૭ તથા સેન્ટ્રલ ગુડ્સ એન્ડ સર્વિસ ટેક્ષ એક્ટ, ૨૦૧૭ ની કલમ ૫૧ અનુસાર *રૂ ૨,૪૦,૦૦૦ થી વધુ રકમના વેરાપાત્ર વીજવસ્તુઓ ખરીદે કે વેરાપાત્ર સેવાઓ કોન્ટ્રાક્ટથી મેળવે તો કુલ ૨% (બે ટકા) ટેક્ષ ડીડક્શન એટ સોર્સ (જી.એસ.ટી. ટી.ડી.એસ) કાપવાનો થાય છે.*

આમ ઉપરોક્ત બાબતો ધ્યાને લઇ વધારાની ૨% ની વધારાની નિયમો અનુસાર બિલમાંથી તા ૦૧/૧૦/૨૦૧૮ થી જી.એસ.ટી. ટી.ડી.એસ. ની કપાત કરવાની થાય છે.

નાયબ કમિશ્નર
રાજકોટ મહાનગરપાલિકા

બિડાણ :- GST FAQ's

નકલ સવિનય જાણ અર્થે:-

(૧) માન. કમિશ્નર સાહેબશ્રી

(૨) માન. નાયબ કમિશ્નર સાહેબશ્રી. (વે.ઝોન, ઈ.ઝોન)

નકલ અમલવારી અર્થે:-

(૧) તમામ શાખા અધિકારીશ્રી

રા.મ.ન.પા.લીગલ/જા.નં.૧૬૨૧

રાજકોટ મહાનગરપાલિકા
લીગલ શાખા
તા. ૨૮/૧૨/૨૦૧૬

પરિપત્ર :

વિષય : જી.પી.એફ. યોજના અંતર્ગત આપવાની થતી માહિતી

રાજકોટ મહાનગરપાલિકાની જુદી-જુદી શાખાઓમાં ફરજ બજાવતા કર્મચારી કે જેઓને જી.પી.એફ. યોજના લાગુ પડે છે, અથવા તો જેઓને એક વખત આ યોજના લાગુ પડી ગયેલ હોય, તેઓના જી.પી.એફ. એકાઉન્ટમાં કે.વાય.સી. (K.Y.C.) ફોર્મમાં આધાર કાર્ડ, પાનકાર્ડ, બેંક એકાઉન્ટની વિગતો તથા નોમીનેશન અપડેટ કરવાના બાકી હોય તેનું લીસ્ટ જી.પી.એફ. કચેરીમાં જે કર્મચારી/એકાઉન્ટ હોલ્ડરની જરૂરી વિગતો પુરી પાડવામાં આવેલ ન હોય તે સત્વરે પુરી પાડવાની થાય છે. તથા અત્રેથી આ કામગીરીના અંકડાના અર્થે નિયુક્ત કરવામાં આવેલ પેનલ એડવોકેટ તરફથી ઇ-મેઇલ મારફતે યાદી પુરી પાડેલ છે, જે આ સાથે સામેલ છે. સદરહું લીસ્ટના કર્મચારીઓની વિગત સબંધિત શાખાએ દિન-૨ માં પેનલ એડવોકેટ "અમરત કન્સલ્ટન્ટ" ને અચુકપણે પહોંચતી કરવાની થાય છે.

આ ઉપરાંત રાજકોટ મહાનગરપાલિકાની જુદી-જુદી શાખાઓ દ્વારા સને ૨૦૧૬ થી આજદિન સુધી કોન્ટ્રાક્ટરો મારફતે કામ કરાવેલ હોય જેમાં માનવશ્રમનો ઉપયોગ થયો હોય, તે સબંધિત કોન્ટ્રાક્ટરે જી.પી.એફ. એક્ટ તથા ઇ.એસ.આઇ. એક્ટ હેઠળ રજીસ્ટ્રેશન કરાવેલ છે કે કેમ? તેની ખરાઇ બાદ જ સબંધિત કોન્ટ્રાક્ટરશ્રીઓના બીલ પાસ કરવા અગાઉ સુચના આપવામાં આવેલ હતી. જેને ફરીથી કડક અમલ માટે સુચના આપવામાં આવે છે. સબંધિત કોન્ટ્રાક્ટરોની તથા તેમણે રોકેલા શ્રમિકોની જી.પી.એફ. અંગેની આવેલ પત્રમાં દર્શાવેલ વિગતો તાત્કાલિક અસરથી પેનલ એડવોકેટશ્રીને દિન-૭ માં પહોંચતી કરવા તે શાખાધિકારીને સુચિત કરવામાં આવે છે.

રાજકોટ મહાનગરપાલિકા
હિસાબી શાખા
ટપાલ નં. ૩૫૪૯

સદરહું વિગત નિયત સમયમર્યાદામાં ન પહોંચવાના સંજોગોમાં અથવા તો અપૂર્ણ અને ખોટી વિગતો મોકલવા બદલ સંબંધિત શાખાધિકારીની વ્યક્તિગત જવાબદારી નક્કી કરવામાં આવશે. જેથી ટીકામાં દર્શાવ્યા મુજબના **રાજકોટ મહાનગરપાલિકાના કર્મચારીઓની** વિગતો તથા આપની કચેરી હસ્તકના કોન્ટ્રાક્ટર તથા તેમણે રોકેલા **શ્રમિકોની** વિગતો **યોગ્ય** ચકાસણી કરી નિયત કરેલ સમયમર્યાદામાં પેનલ એડવોકેટને પહોંચતી કરવી. તથા તેની જાણ લીગલ શાખાને કરવી.

ઉપરોક્ત પરિપત્રનો **ચુસ્તપણે** તાત્કાલિક અસરથી અમલ કરવો.

નાયબ કમિશનર
રાજકોટ મહાનગરપાલિકા

__નકલ સવિનય રવાના :-__
- માન. કમિશનર સાહેબ
- નાયબ કમિશનર (ઇ.ઝો./વે.ઝો.)

__નકલ રવાના :-__
તમામ શાખાધિકારી (અમલ સારૂ)

પેનલ એડવોકેટનું સરનામું : ખખ્ખર કમલેશ
૫૦૨ એમ્પાયર ટાવર
ઢેબર રોડ, સાયકલ ઝોન ઉપર
રાજકોટ. ફોન નં. ૨૨૬૩૩૨૮૦

નોંધ : સંબંધિત કોન્ટ્રાક્ટરો ઇ.પી.એફ. એક્ટ તથા ઇ.એસ.આઇ. એક્ટ હેઠળ રજીસ્ટ્રેશન ન કરાવેલ હોય તેવા તમામ કોન્ટ્રાક્ટરોના બીલો ઓડીટ તથા હિસાબી શાખાએ મંજુર કરવા નહીં.

C-385-
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રા.મ.ન.પા./લીગલ/જા.નં. ૬૮૦૧/૧૮

રાજકોટ મહાનગરપાલિકા
લીગલ શાખા
તા.૨૮/૨/૨૦૧૭

હુકમ:

તમામે : લીગલ ફાઇલ નં.૩૭૧/૨૦૧૬-૧૭

રાજકોટ મહાનગરપાલિકાની કામગીરી માટે જુદી-જુદી શાખાઓ દ્વારા કામગીરીના પ્રકારને ધ્યાને લઇ નિયમ અનુસારની પ્રક્રિયા અનુસરીને એજન્સી/સપ્લાયર/કોન્ટ્રાક્ટર સાથે જોગવાઇઓ સાથેનો કરાર કરવામાં આવે છે. મહાનગરપાલિકાની કામગીરી સંદર્ભે તૈયાર કરવામાં આવતા ટેન્ડર/કરારનામામાં વખતો વખતની જરૂરીયાતને ધ્યાને લઇ આર્બીટ્રેશન (Arbitration) ની જોગવાઇઓનો સમાવેશ કરવામાં આવેલ છે.

રાજકોટ મહાનગરપાલિકાની કામગીરી માટે કરવામાં આવેલ કરારનામાની શરતો અનુસંધાને અમુક એજન્સી/સપ્લાયર/કોન્ટ્રાક્ટર દ્વારા છેલ્લા કેટલાક વર્ષોથી નામદાર હાઇકોર્ટ સમક્ષ આર્બીટ્રેટરશ્રીની નિયુક્તિ અંગે પીટીશનો કરવામાં આવે છે, જેના કારણે મહાનગરપાલિકાની કામગીરીના ભારણમાં વધારો થયેલ છે, અને સંબંધિત અધિકારીશ્રીઓને વારવાંર અમદાવાદ ખાતે હાજર રહેવુ પડતુ હોય તેના કારણે અગત્યના પ્રોજેકટો સહીત કચેરીની કામગીરી તેમજ પ્રજાકીય કામો ઉપર વિપરીત અસર થવા પામેલ છે, તેમજ અરજદારોને હેરાન થવું પડે છે. આ અંગે કાયદાકીય, શાખાના અભિપ્રાય અને પ્રકરણની વિગતો જોતા આ કામે વૈકલ્પિક ઉપાય (alternate remedy) ઉપલબ્ધ હોય મહાનગરપાલિકાના ટેન્ડર/કરારનામામાં આર્બીટ્રેશનની જોગવાઇઓને લાગેલ કરવાનું ઉચીત જણાતું નથી.

આથી " રાજકોટ મહાનગરપાલિકાના કામે કરવામાં આવતા ટેન્ડર ડોક્યુમેન્ટ અને કરારનામામાં આર્બીટ્રેશન (Arbitration) ને લગત જોગવાઇઓ દુર કરવાનો," અને તેના બદલે "ટેન્ડરની શરત/કરારનામાની શરતના અર્થઘટન સંદર્ભે મહાનગરપાલિકાના કમિશનરશ્રીનો નિર્ણય આખરી અને બંધનકર્તા રહેશે," અને "ટેન્ડરની/કરારનામાની શરતો અંગે કોઇ પણ બાબતે વિવાદ ઉપસ્થિત થયે રાજકોટની દિવાની અદાલતની હકુમત રહેશે," તેવી શરતોનો મહાનગરપાલિકાના કામ અર્થે તૈયાર કરવામાં આવતા તમામ કામગીરીના પરિપત્રો/ટેન્ડર ડોક્યુમેન્ટ તેમજ કરારનામામાં સમાવેશ કરવાનો આથી હુકમ કરવામાં આવે છે.

આ હુકમનો અમલ તાત્કાલિક અસરથી યુસ્તપણે કરવો.

કમિશનર
રાજકોટ મહાનગરપાલિકા

નકલ રવાના જાણ અર્થે : નાયબ કમિશનરશ્રી (તમામ)

નકલ રવાના જરૂરી કાર્યવાહી અર્થે : તમામ શાખાધિકારીશ્રીઓ

રા.મ.ન.પા./ લીગલ/ જા.નં. 1224

રાજકોટ મહાનગરપાલિકા
લીગલ શાખા,
રાજકોટ.
તા. 25/08/2023

પરિપત્ર:

વિષય: ઇ.પી.એફ. તથા ઇ.એસ.આઇ.સી. બાબતેનો અભિપ્રાય.

સંદર્ભ: ૧) રા.મ.ન.પા./હિસાબી/જા.નં. ૧૨૦૯ તા. ૧૦/૮/૨૦૨૩
૨) રા.મ.ન.પા. ઇન્વર્ડ નં. ૮૧૨ તા. ૨૧/૦૮/૨૦૨૩

ઉપરોકત વિષય તથા સંદર્ભે અન્વયે જણાવવાનું કે, સંદર્ભ - ૧ અન્વયેના પત્રથી હિસાબી શાખા દ્વારા ઇ.પી.એફ. તથા ઇ.એસ.આઇ.સી. લાગુ પાડવા બાબતેનો અભિપ્રાય માંગવામાં આવેલ હતો જે અનુસંધાને પેનલના એડવોકેટશ્રી તરફથી સંદર્ભ - ૨થી અભિપ્રાય આવેલ છે. સદરહું અભિપ્રાય રાજકોટ મહાનગરપાલિકાની તમામ શાખાને તથા શાખા હસ્તકના કોન્ટ્રાકટરોને લાગુ પડતો હોય જેથી સંબંધિત તમામ શાખાને સદરહું અભિપ્રાય વંચાણે લેવા સુચિત કરવામાં આવે છે.

આ ઉપરાંત આપની શાખાના કર્મચારી તથા કોન્ટ્રાકટરશ્રીઓની ઇ.એસ.આઇ.સી. અન્વયેની માહિતી આપવાની બાકી હોય તે તમામે દિન - ૦૨માં પેનલના એડવોકેટશ્રીને માહિતી પહોંચતી કરે અને તેની જાણ લીગલ શાખાને કરે અન્યથા તેમાંથી ઉત્પન્ન થતી તમામ જવાબદારી માટે વ્યકિતગત રીતે જવાબદાર ઠેરવવામાં આવશે.

સદરહું પરિપત્રનો તાત્કાલિક અસરથી યુસ્તપણે પાલન કરવું.

નાયબ કમિશનરશ્રી
રાજકોટ મહાનગરપાલિકા

બિડાણ: સંદર્ભ અન્વયેના પત્રો

નકલ સવિનય રવાના:

- નાયબ કમિશનરશ્રી (વે. ઝોન, ઇ. ઝોન)
- તમામ શાખાશિકારીશ્રીઓ (અમલ સારૂ)

રાજકોટ મહાનગરપાલિકા
ઇન્વર્ડ નં. 2916
તારીખ 25/8/23

c-57

Shraddha Associates

LABOUR LAW CONSULTANT

Corrosp. Add. :
502, Accurate Square, Tagore Road,
Nr. Atul Motors, Above Cycle Zone, Rajkot.
Ph. O. 2463380, 93767 68952 E-Mail : dodiaparag@yahoo.in

Prop. : Parag J. Dodi
(Advocate & Labour Law Advisor)
Address : 2-Nalanda Bunglow
6-Pragati Society, Raiya Road, Rajkot-7

Ref.

Date : -૦૮-૨૦૨૩.

પ્રતિ,
લેબર ઓફીસરશ્રી,
રાજકોટ મહાનગરપાલીકા,
રા જ કો ટ.

વિષય :- ઈપીએફ તથા ઈએસઆઈસી લાગુ પડવા રામનપા/હીસાબી/જા.ન.૧૨૦૯ આબતે અભિપ્રાય.
રેફ. :- રા.મ.ન.પા./લીગલ/જા.નં. ૧૦૯૦, તારીખ ૧૦/૦૮/૨૦૨૩.

મે. સાહેબશ્રી,

સવિનય સાથ જણાવવાનું કે, ઉપરોકત વિષય અને રેફરન્સથી આપના તરફથી અભિપ્રાય માંગવામાં આવેલ. જેની સાથે મોકલેલ ફોર્મેટ મુજબ વિગતવાર રીમાર્કસ આપેલ છે.
રાજકોટ મહાનગરપાલીકાનાં શાખા અધિકારીએ બીલ બનાવતી વખતે બીલ બનાવતી વખતે નીચે મુજબનાં ડોકયુમેન્ટસ ચેક કરી બીલ સાથે સામેલ કરવા જરૂરી છે.

દર મહીને લેવાનાં ડોકયુમેન્ટ.

૧. પગારપત્રક (જેમાં દરેક કર્મચારી તથા કોન્ટ્રાકટરની સહી/સિકકો અને જે તે શાખા અધિકારીની સહી/સિકકો)
૨. હાજરી પત્રક.
૩. પી. એફ. ચલણ.
૪. પી.એફ. ઈ.સી.આર.
૫. ઈ.એસ.આઈ.સી. પેઈડ ચલણ.
૬. ઈ.એસ.આઈ.સી. લાગુ ન પડતો હોય તેવા કર્મચારી (રૂા.૨૧૦૦૦/- થી વધુ પગારવાળા) ની WC પોલીસી.
૭. પી.ટી. નાં ચલણ. (જે કર્મચારીનો પગાર રૂા.૧૨૦૦૦/- કે તેથી વધુ થતો હોય તેનાં.)

વાર્ષિક લેવાનાં ડોકયુમેન્ટ.

૧. જો ૫૦ કે તેથી વધુ માણસો કોન્ટ્રાકટરમાં કામ કરતા હોય તો લેબર લાઈસન્સ.
૨. લેબર વાર્ષિક પત્રક.
૩. બોનસ પત્રક.
૪. જે તે ડીપાર્ટમેન્ટને લાગુ પડતા સરકારશ્રીનાં લાયસન્સની નકલ (ફુડ , ઈલેકટ્રીસીટી વગેરે)

દરેક શાખા હસ્તકનાં કોન્ટ્રાકટર / એજન્સી ઉપરોકત સંદર્ભ અન્વયે પાલન કરાવવાની જવાબદારી મુખ્ય માલીક તરીકે જે તે શાખાનાં શાખા અધિકારીની ઠરાવી શકાય.

સહકારની અપેક્ષા સહ.

આપનો વિશ્વાસુ,
SHRADDHA ASSOCIATES
PROPRIETOR

બિડાણ :- ઉપર મુજબ.

લીગલ ઈન્વર્ડ નં. 812
મરામરી ઈન્વર્ડ નં. -
25/08/23

EPF તથા ESI લાગુ પડે છે કે કેમ ?

ક્રમ	વારંવાર ઉદભવતા પ્રશ્નો.	લાગુ પડે છે કે કેમ ?	
		EPF	ESI
1	કોમ્પ્યુટર ખરીદી કરી અને રાજકોટ મહાનગરપાલીકાની જગ્યામાં ઈન્સ્ટોલેશન કરવાનું થાય તો લાગુ પડે કે કેમ ?	ના	હા
2	રાજકોટ મહાનગરપાલીકાની જગ્યાનું સંચાલન કરતા કોન્ટ્રાકટર, વેન્ડર , ટ્રસ્ટ ને લાગુ પડે કે કેમ ? (જેમ કે સ્પોર્ટ સંકુલ, ગાર્ડન, પાર્કીંગ વગેરેનું સંચાલન કોન્ટ્રકટર, ટ્રસ્ટ સંસ્થા વગેરે ધ્વારા કરવામાં આવે)	હા	હા
3	રસ્તા કામ, ડ્રેનેજ કામ, પાણી વિતરણની કામગીરી સાથે સંકળાયેલા કોન્ટ્રાકટરોને લાગુ પડે કે કેમ ?	હા	હા
4	જનરલ બોર્ડનાં માઈક સંચાલનનાં કોન્ટ્રાકટમાં લાગુ પડે કે કેમ ?	હા	હા
5	રાજકોટ મહાનગરપાલીકાનાં ગ્રાઉન્ડ સંચાલન કરતા કોન્ટ્રાકટરોને લાગુ પડે કે કેમ ?	હા	હા
6	આઉટ સોર્સીંગ સ્ટાફનાં કીસ્સામાં વેન્ડરને લાગુ પડે કે કેમ ?	હા	હા
7	રાજકોટ મહાનગરપાલીકાનાં રેનબસેરાનું સંચાલન કરતા કોન્ટ્રાકટરોને લાગુ પડે કે કેમ ?	હા	હા
8	રાજકોટ મહાનગરપાલીકાની જગ્યામાં ઈવેન્ટમેનેજમેન્ટ કરવામાં આવે ત્યારે ઈવેન્ટમેનેજમેન્ટ કંપનીને તથા ગાયક / આર્ટીસ્ટ / મ્યુઝીશીયનને લાગુ પડે છે કે કેમ ?	ના	ના
9	મશીન / વાહન ફકત પાર્ટસ ખરીદીનાં કિસ્સામાં લાગુ પડે છે કે કેમ ?	ના	ના
10	મશીન / વાહન ફકત પાર્ટસ ખરીદી અને ફીટીંગ / રીપેરીંગ રાજકોટ મહાનગરપાલીકાની જગ્યામાં કરવામાં આવતુ હોય તેવા કિસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
11	મશીન / વાહન ફકત પાર્ટસ ખરીદી અને ફીટીંગ / રીપેરીંગ રાજકોટ મહાનગરપાલીકાની જગ્યામાં કરવામાં આવતુ હોય તેવા કિસ્સામાં લાગુ પડે છે કે કેમ ?	ના	ના
12	કોઈપણ ઈલેકટ્રીક વસ્તુની ખરીદી તથા તેનુ ઈસ્ટોલેશન જેમ કે કેમેરા લાઈટ ફીટીંગ, કોમ્પ્યુટર, પ્રીન્ટર વગેરે કીસ્સામાં લાગુપડે છે કે કેમ ?	ના	હા
13	મિત્ર મંડળ તથા સખી મંડળનાં કિસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
14	ઓપરેશન અને મેઈન્ટેનન્સ સર્વિસીઝ કોન્ટ્રાકટનાં કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
15	ટુર્સ / ટ્રાવેલ્સ ભાડે રાખવામાં આવેલ ડાઈવર સહીત તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
16	ઈલેકટ્રીક પોલ ફીટ કરવા શિફટ કરવા અથવા નવા ઈન્સ્ટોલ કરવા વગેરે કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા

EPF તથા ESI લાગુ પડે છે કે કેમ ?			
17	એર કુલર, એ.સી. , વોટર કુલર રીપેરીંગ વગેરે કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
18	રાજકોટ મહાનગરપાલીકાનાં કરાર આધારીત કર્મચારીનાં કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
19	રજીસ્ટેશન સમયે કુલ પગાર ઈ.પી.એફ. / ઈ.એસ.આઈ.સી. નાં નિયમ મુજબનાં પગારમર્યાદા કરતા ઓછી હોય પરંતુ ત્યારબાદ પગાર ઈપીએફ, ઈએસઆઈસી નાં નિયમ મુજબ પગાર મર્યાદા કરતા વધે તો કયાં સુધી કપાત કરવી. (ફીકસમાંથી કાયમીનાં કીસ્સામાં / ફીકસ પગાર વધી જાય તેવા કીસ્સામાં)	હા	ના
20	ફીકસ / કાયમી થાય તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
21	વાલ્વ ઓપરેટર તથા પમ્પ ઓપરેટરનાં કીસ્સામાં લાગુ પડે છે કે કેમ?	હા	હા
22	લીગલ, પ્રોફેશનલ સર્વિસ રાજકોટ મહાનગરપાલીકાની જગ્યા પર આપવામાં આવે તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
23	રાજકોટ મહાનગરપાલીકા ધ્વારા વિડીયોગ્રાફી / ફોટોગ્રાફી કરાવવામાં આવે તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
24	રાજકોટ મહાનગરપાલીકાની જગ્યામાં ઝેરોક્ષ મશીન ચલાવે તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	ના	ના
25	ન્યુઝ પેપર અથવા કોઈપણ વસ્તુ કે જેની ખરીદી કરી હોય અને જે રાજકોટ મહાનગરપાલીકાના પ્રીમાઈસીસ સુધી પહોંચાડવાની જવાબદારી વેન્ડરની હોય તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	ના	ના
26	રાજકોટ શહેરમાં મોબાઈલ ડિસ્પેન્સરી ચલાવવા આપવામાં આવે તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
27	ફકત એક વખત કામગીરી કરવાની હોય તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	ના	ના
28	હોર્ડીંગ બોર્ડ ચડાવવા તથા ઉતારવાની કામગીરીનો એજન્સીને કોન્ટ્રાકટ આપેલ હોય તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
29	રાજકોટ મહાનગરપાલીકાની જગ્યામાં કાર્ટીઝ રીપેરીંગ તથા રીફીલીંગ તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા
30	કેટરીંગ સર્વિસ અથવા હોટલમાંથી ફુડ પાર્સલ તેમજ કુરીયર સર્વિસ રાજકોટ મહાનગરપાલીકાને ડીલીવરી કરવામાં આવે તેવા કીસ્સામાં લાગુ પડે છે કે કેમ ?	ના	ના
31	સોલાર પેનલ તથા રૂફ ટોપ સોલાર પેનલનાં રાજકોટ મહાનગરપાલીકાની જગ્યામાં ઈન્સ્ટોલેશન તથા મેઈન્ટેનન્સનાં કીસ્સામાં લાગુ પડે છે કે કેમ ?	હા	હા