

MUMBAI METRO RAIL CORPORATION LIMITED

Mumbai Metro Line-3 Project

Response to Bidders Queries (Set-1) for IFB No. MM3-CBS-TVE (Phase2) (P2L1 & P2L2)

Design, Manufacture, Supply, Installation, Testing and Commissioning of Tunnel Ventilation System & Environmental Control System - Package: 15 (Phase-2)

S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
<b>CONTRACTS &amp; FINANCE QUERIES</b>							
1	Part 1 Bidding Procedure Section III - Evaluation and Qualification Criteria	2.3.1 - Financial Performance	Page 13 of 18	The audited balance sheets or, if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, for the last 5 years shall be submitted and must demonstrate the current soundness of the Bidder's financial position(i) and its prospective long term profitability . As the minimum requirement, a Bidder's net worth calculated as the difference between total assets and total liabilities should be positive. The financial year as applicable in the country of origin of the bidders would be considered. The 'last financial year' will be the latest financial year for which Annual Financial Statements should be available before the final date of Bid Submission after extensions, if any.	We understand that the current soundness of the Bidder's Financial situation shall be demonstrated by its latest/ last financial statement available, i.e. the financial statements pertaining to the last audited financial year. Accordingly, the Bidder's net worth, i.e. difference between total assets and total liabilities shall also be positive as per the last audited financial statements. Kindly confirm.	Bid Conditions Prevail.  Net worth positive for all 5 years is the minimum requirement to assess current financial soundness and prospective long term profitability. Also , Only Audited Balance Sheets shall be acceptable.	No
2	Part 1 - Bidding Procedure Section IV-A - Bidding Forms	Bid Form 21 FIR-4: Bid Capacity		Maximum value of works executed in any one year during the last five years (Updated to 2016-17 price level)	Bidder understands the maximum value of works executed should be up to financial year 2017-2018 price level which is the latest one, and not 2016-17. Kindly confirm.	Please Refer Addendum No. 2	Yes
3	Part 1 - Bidding Procedure Section IV A - Bidding Forms	Form of Bid Security Bid Bond)-65 of 77			As we are providing BG towards Bid Security , Bid Bond is not required to be furnished . Please confirm	Bid Conditions Prevail Guarantee and Bond are alternative modes of providing Bid Security and only one of them - Either a Guarantee or a Bond - needs to be submitted.	No
4	Part 1 - Bidding Procedure Section IV-B - Pricing Document	8. Appendix A -Grand Summary (Rev: 2)		Schedule 7 is included in Appendix A -Details of Taxes/Duties/Levies etc. included in The Bid Price.	Since, Schedule 7 is not being included in the grand summary , bidder requests you to modify Appendix-A for taxes & duties from Schedule 1-5.	Bid Conditions Prevail	No
5	Part 3 - Conditions of Contract & Contract Form II Section VIII - Particular Conditions of Contract	PC 30.1 (b)		Limitation of liability clause deleted.	Bidder requests to aggregate liabilities of the Contractor to the Employer shall not exceed the total Contract Price. Kindly confirm.	Bid Conditions Prevail	No
6	Part 1 - Bidding Procedure Section IV B - Pricing Document	8. Appendix -A -Grand Summary (Rev: 2)		Taxes & Duties benefits.	Bidder requests Employer to declare any Taxes/Duties/Levies etc. benefits to be induced in this contract.	Bid Conditions Prevail	No
7	Part 1 - Bidding Procedure Section II - Bid Data Sheet	IT3 24.1		The deadline for Bid submission is: Date: 10-01-2019 Time: 3:00PM	As the architectural layouts of almost all the stations have changed & some critical inputs regarding the areas is pending from your end, we require time for carrying out heat loads and equipment selections. Thus we request you to grant an extension of 8 weeks from the date of query replies for the final submission of Bid.	Bid Conditions Prevail	No
8	Part 1 Section II - Bid Data Sheet	IT3 24.1	Page 5 of 5	The deadline for bid submission	Requesting you to extend the tender submission date till 12th February 2019.	Bid Conditions Prevail	No
9	Part 1 Section IV A - Bidding Forms	Bid forms	Page 28 of 77	Historic information for previous 5 audited years	Considering the tender due date as 10th January, for the countries where the Financial year is ending in 31st December the latest annual reports will be available till 2017. In this case we will be able to submit the annual reports and data of last 5 years starting from FY 13 to FY 17.	Agreed. Bid Conditions Prevail	No
10	Part 1 Section IV A - Bidding Forms	Bid forms	Page 35-54 of 77	Bid Form 22A to 23K - Evidence of previous service history (including Client's certificate)	As all sub vendors have worked under Main Contractor, they are unable to produce the satisfactory performance certificate from Client/agency responsible for performance monitoring of system. We request you to accept the PO placed by main Contractor on them for the Item and self certification by vendor.	Bid Conditions Prevail. For a sub Contractor, the Main Contractor can be treated as the Client for this certificate, if the Employer's Certificate is available for the Main Contractor, along with the Employers approval to deploy sub Contractor.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
11	PART 1 Section IV-A	Form of Bid Security (Bank Guarantee)	Page 65 of 77	Bank Notwithstanding clause for bank guarantee	Please note bank will add their standard Notwithstanding clause at the end "Notwithstanding anything contained hereinabove: A. Our liability under this guarantee shall not exceed Re. EMD BG Amount B. This bank guarantee shall be valid up to BG Validity Date C. We are liable to pay the guarantee amount under this bank Guarantee only and only if you serve upon us, a written claim or demand along with the original bank guarantee on or before BG Validity Date"  Request you to accept the same.	Bid Conditions Preval. This note that the Banks add to the given format is a standard practice in the Industry, and it can be accepted.	No
12	PART 1 Section IV-A	Form of Bid Security (Bank Guarantee)	Page 65 of 77	MMRC Bank details	Following details of MMRC bank a/c requested for preparation of the EMD BG: Bank Name: A/c Number: Type: Address: IFSC Code: BSR Code: SWIFT Code: MICR Code:	Bank Name: HDFC Bank Limited A/c Number: 5020004613380 Type: Current Account Address: Worli Sea Face Branch, Mumbai IFSC Code: HDFC000080 BSR Code: 0510093 SWIFT Code: HDFCINBBXXX MICR Code: 400240022	No
13	Part 3 Section VIII of Contract Particular Conditions of Contract	PC 27.10	Page 8 of 9	TVS and ECS Equipment failure During Defects Liability Period: If major TVS and/or ECS equipment is kept out of service causing the TVS and/or ECS system to become inoperable or compromised, Employer may impose a penalty of INR 100,000 and INR 50,000 per each such case for TVS and ECS equipment respectively	Request you to identify/define major equipment.	Any equipment, the non-operation of which causes the TVS/ECS system to become inoperable or technically compromised is a major equipment.	No
14	Part 3 Section VIII of Contract Particular Conditions of Contract	PC 45.1	Page 9 of 9	The DB shall consist of one sole member. MD/MMRCL shall be the authority for the appointment of Dispute Board (DB). It shall be appointed in consultation with the Contractor within 28 days after the Effective Date. The Employer will provide names of three short listed persons found suitable for working as DB after taking into consideration suggestions made by the Contractor. If any. The Contractor may select one of the members to be appointed as the sole member of the DB. The said short-list shall be provided after the Contract is awarded.	It is Proposed that DB should consist of 3 members each one selected by Contractor & SWPL & third selected by two representatives. It is also proposed that the Provisions of Arbitration & Conciliation Act 1996 should be made applicable	Bid Conditions Preval.	No
15	Part 3 Section VIII of Contract Particular Conditions of Contract	PC 45.2	Page 9 of 9	Appointment (if not agreed) to be made by International Federation of Consulting Engineers (FIDIC) or a person appointed by the President of FIDIC.	Request you to consider clauses of Arbitration & Conciliation Act 1996 should be applicable	Bid Conditions Preval.	No
16	Part-1 & Section I - Instruction to the Bidders	ITB 38.5	ITB-29	After evaluation of the price analyses, taking into consideration the terms of payments, the Employer may require that the amount of the Performance Security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.	Kindly clarify what shall be the maximum Performance Security as per the subject clause. If the same is not clarified we understand that the maximum Performance security shall be in accordance to the Clause PC 13.3.1 of Part - III, Section - VIII. Please confirm.	Bid Conditions Preval. ITB 38.5 is applicable only if the lowest evaluated bid is found to be front loaded, or asks for faster stream of payment than as provided in the RFP. However if the lowest evaluated bid is still found to be front loaded, the additional performance guarantee, over and above the performance guarantee as per PC13.3, shall be for the full amount of front loading without any limit	No
17	Part-1 & Section II - Bid Data Sheet	C. Preparation of Bids	Pg 03 of 05	There is no mentioned of documents to be submitted under "Technical Bid -Initial Filter -PQ Documents " and "Technical Bid - Other Documents "	Request to provide similar to Phase 01 Tender ,Part 1 - Bidding Procedure ,Section II - Bid Data Sheet,Page 3 of 6	Bid Conditions Preval. The documents submission requirement for "Internal filter-PQ" has been indicated for each item in the last column of the Table in Para 2.1 onwards, Section III, EQC, Part 1 of RFP.	No
18	Part-1 & Section III - Evaluation and Qualification Criteria	Pt. 1.1.1	Pg 4 of 19	Project Organization & Key Personnel	We understand that a bidder can propose the same person for a given key position for both Phase-2 Lot1 & Phase-2 Lot2 projects, as a in accordance to EQC, a bidder shall be awarded only one of the said contracts. Kindly Confirm.	Bid Conditions Preval.	No
19	Part-1 & Section III - Evaluation and Qualification Criteria	Pt. 1.1.2	Pg 5 of 19	Project Organization & Key Personnel - IDA	Kindly clarify weather the IDA shall report to the bidder or to the Employer.	Bid Conditions Preval.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
20	Part-1 Bidding Procedure Section - IV A, Bid Forms	Bid Form - 9	Pg 19 of 77	Bid Form - 9, Certificate of Compliance has been deleted.	We understand that if no - Non - Conformities are reported in Bid Form 7 & 7A, bidder's technical submission will be assumed in compliance to the Employer's Requirement and no other documentary evidence shall be required. Kindly Confirm.	Bid Conditions Prevail. Your attention is Invited to ITB 33, 34 and ITB 35 in this regard.	No
21	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.6	Pg 11 of 75	Quantity Variation	According to the following clause it is understood that since the subject contract is a lump sum design and build contract, no variation either (+) or (-) shall be considered for variation in contract price. Please confirm if the quantity of any Item enlisted in Schedule - 1 to Schedule-5 becomes zero during the design Phase, than also the payment shall be made to the Contractor.	Bid Conditions Prevail.	No
22	Part-1 Bidding Procedure Section - IV B, Pricing Document	General	General	Schedule- 1 & Schedule -2	We understand that if the Item is quoted in Foreign Currency In Schedule -1 & procured from within the country (India) and vice versa for Schedule-2, than the payment to the Contractor shall be made as per the Items quoted in respective schedules. Kindly Confirm	Bid Conditions Prevail. Bidders are advised to see the Notes below each Price Schedule for clarification.	No
23	Part-1 Bidding Procedure Section - IV B, Pricing Document	Notes 1,1	Pg 67 of 75	The total amount for quoted in Schedule-3, shall be minimum 10 % of the Grand Summary in Schedule - 6.	We understand that the price Indicated In Schedule - III, shall constitute 10% of the total price indicated in Schedule - VI, Grand Summary. Please note that such limit shall not be applied as the quoted prices under all schedules shall be balanced so as to meet cash flow requirements. The bidder should have the authority to decide the percentage proportion of each Schedule on the basis of actual cash flow requirement. Kindly Confirm.	Bid Conditions Prevail.	No
24	Part-1 Bidding Procedure Section - IV B, Pricing Document	Notes 1,1	Pg 69 of 75	The total amount for quoted in Schedule 4 shall be minimum 30 % of the Grand Summary in Schedule - 6.	We understand that the price Indicated In Schedule - IV shall constitute 30% of the total price indicated in Schedule - VI, Grand Summary. Please note that such limit shall not be applied as the quoted prices under all schedules shall be balanced so as to meet cash flow requirements. The bidder should have the authority to decide the percentage proportion of each Schedule on the basis of actual cash flow requirement. Kindly Confirm.	Bid Conditions Prevail.	No
25	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2.4	Pg 5 of 75	Deemed Export	Please confirm that the duty escalation due to delayed issuance of Payment Certificate shall be borne by Employer. Further the additional duty amount shall not be reimbursed by the Contractor to the Employer.	Bid Conditions Prevail.	No
26	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2.4	Pg 5 of 75	Deemed Export	If the item is quoted in foreign currency but procured through dealership network from within the country (India) then deemed export benefits shall not be reimbursed/passed to Employer, if any. Please confirm.	Bid Conditions Prevail. Please refer to Clause number 1.2.2 and 1.2.4 of Section IV B of Part 1 of RFP.	No
27	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2.6	Pg 5 of 75	Record of Taxes and Duties	If the item is quoted in foreign currency but procured through dealership network from within the country (India) then record of custom duties shall not be possible. However we shall maintain a record of applicable GST. Please confirm.	Bid Conditions Prevail. Please refer to Clause number 1.2.2 of Section IV B of Part 1 of RFP.	No
28	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2	Pg 4 of 75	Deemed Export	Please clarify weather the High Sea sales is applicable for the subject contract.	Bid Conditions Prevail. Not applicable	No
29	Part 3 Conditions of Contract and Contract Forms, Section IX - Contract Forms	Appendix -2 Table -1	Pg 14 of 28	Coefficients for Each Factor for Each Currency of Payment	We propose the Following coefficients: Fixed = 0.05 Labor = 0.25 Steel = 0.40 Copper = 0.3 Fuel = 0.05 Please confirm.	Bid Conditions Prevail.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
30	Part-3 & Section IX - Contract Forms	Appendix 1 Terms and Procedures of Payment	Pg 6 of 28	Schedule No. 3. Design Services	Kindly clarify ABG reduction mechanism for the subject Schedule. We propose proportionate reduction based upon design works completion.	Bid Conditions Prevail. Full amount of Advance Bank Guarantee against Schedule 3 shall be reduced after completion of the all design activities as per schedule 3.	No
31	Part-3 & Section IX - Contract Forms	Appendix 1 Terms and Procedures of Payment	Pg. 6 of 28	Schedule No. 4. Installation, Testing and Commissioning and other services Eighty percent (80%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month.	Kindly Clarify what is Program of Performance as per the subject Clause.	Refer Appendix 4 - Time Schedule. The bidder shall submit in the bid a detailed program of performance.	No
32	Part-3 & Section IX - Contract Forms	Appendix 1 Terms and Procedures of Payment	-	Schedule No. 7: Recommended Spare Parts and Special Tools	Payment Terms for Works & Supplies executed against the subject Price schedule have not been provided in the Bidding Document. Kindly Clarify.	Bid Conditions Prevail. The question of payment for items in schedule 7 will arise only if and when any of these items are ordered to be supplied within the validity of the Contract. Such an order for supply shall be treated as a supply under schedules 1 or 2 depending upon whether it is an imported or local item. Payment for such supply shall be governed by the terms and conditions applicable to the relevant schedule.	No
33	Part-3 & Section IX - Contract Forms	Appendix 3 Insurance Requirements	Pg. 17 of 28	Cargo Insurance	We understand that cargo Insurance shall be provided till the delivery of major equipment. Kindly Confirm.	Bid Conditions Prevail.	No
34	Part-3 & Section IX - Contract Forms	Appendix 3 Insurance Requirements	Pg. 17 of 28	Installation All Risks Insurance	We propose that the Installation All Risk Insurance shall be provided till issuance of Handover Certificate or ROD, whichever is earlier. For Defect Liability Period we shall provide Fire & Burglary Insurance. Kindly Confirm.	Bid Conditions Prevail.	No
35	Part-3 & Section IX - Contract Forms	Appendix 3 Insurance Requirements	Pg. 18 of 28	Third Party Liability Insurance	The Insurance shall cover for R 0.8 million for any one incident, however the number of Incidents can not be unlimited. Kindly Confirm the Total Insurance Amount.	Bid Conditions Prevail.	No
36	Part-3 & Section-VII, General Condition of Contract	Clause 4.1	GC-9	Communication	In this regard, it is proposed to include the electronic mode in addition to the written mode.	Bid Conditions Prevail.	No
37	Part-3 & Section-VII, General Condition of Contract	Clause 9.3	GC-11	Contractor's Responsibilities	With regards to payments for acquiring permits, approvals & license. It is proposed that, the Employer shall be responsible for making payments towards permits, approvals & license wherever required, and the Contractor shall provide due assistance in this regard. Kindly Confirm.	Bid Conditions Prevail.	No
38	Part-3 & Section-VII, General Condition of Contract	Clause 13	GC-14	Securities	In case, if execution time of the Contract gets extended, for the reasons not attributable to Contractor and EAT approval letter issued by the Employer to the Contractor to extend the actual completion date, in that case all expenses / charges with respect to extension of Bank Guarantee, shall be borne by the Employer only. Also the escalation and overrun cost incurred due to above reason shall be borne by Employer only. Please confirm.	Bid Conditions Prevail.	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
39	Part 3 & Section VII, General Condition of Contract	Clause 21.4	GC-27	Customs Clearance	In addition to it, the Employer may provide all the facilities and assistances to the Contractor, which may be required to get the material cleared from customs. Further any cost on account of delay so incurred by the Contractor, which are not due to it's own fault shall be paid by the Employer.	Bid Conditions Preval. Bidder advised to note that GC 14.2 and 14.3 has been deleted in PC.	No
40	Part 3 & Section VII, General Condition of Contract	Clause 26	GC-42	Completion Time Guarantee:	In any case before levying any LD charges, the Employer shall give proper opportunity to the Contractor for submitting clarification regarding delay in works, and only after considering the same shall the Employer proceed for levy LD charges.	Bid Conditions Preval.	No
41	Part 3 & Section VII, General Condition of Contract	Clause 34	GC-50	Insurance	All kind of Insurance Policies mentioned, shall be required till Issuance of Taking over Certificate, except for Cargo Insurance during Transport which shall be required till delivery of material. Kindly confirm.	Any Insurance policy shall have to remain valid till such time within the validity of the Contract including period of maintenance, if any, as the risk(s) covered by the policy may actually materialize.	No
47	Part 3 & Section VII, General Condition of Contract	Clause 40	GC-62	Extension Of Time Of Completion	In the event of project gets delayed due to reasons attributable to Employer, the Contractor shall be eligible for extended time and cost.	Bid Conditions Preval.	No
43	Part-3 & Section- VII, General Condition of Contract	Clause 41	GC-63	Suspension	Before the Employer Issues any notice for suspension of the project, a reasonable opportunity of being heard, shall be given to the Contractor to clarify their part. Also, when Employer issues any such notice other than the reason of the Contractor' default, in that event the Contractor shall be eligible to claim damages or cost incurred due to the same.	Bid Conditions Preval.	No
44	Part-3 & Section- VII, General Condition of Contract	Clause 42.1.3	GC-66	Termination	It is proposed that, before terminating or taking any action in this clause, the Employer shall give to the Contractor a reasonable opportunity of being heard. Also, apart from the payments mentioned in clause 42.1.3, if there is/are any other claim(s) which the Contractor deems fit to make, shall be allowed to the Contractor.	Bid Conditions Preval.	No
45		Bid form 22A-23K Clause 45	9 of 9	*The DB shall consist of one sole member. Parties shall appoint the Dispute Board (DB). It shall be appointed within 28 days after the Effective Date	Please confirm in case of arbitration the Arbitration & Conciliation Act 1996 should be applicable.	Bid Conditions Preval.	No
46	GENERAL	ITB 24.1	Page 5 of 5	Date: 10-01-2019 Time: 3:00PM	We to extend bid submission by 8 weeks from 10-01-2019	Bid Conditions Preval.	No
47	Part-1 & Section I - Instruction to the Bidders	ITB 38.5	ITB-29	After evaluation of the price analyses, taking into consideration the terms of payments, the Employer may require that the amount of the Performance Security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.	Kindly clarify what shall be the maximum Performance Security as per the subject clause. If the same is not clarified we understand that the maximum Performance security shall be in accordance to the Clause PC 13.3.1 of Part - III, Section - VIII. Please confirm.	Bid Conditions Preval. ITB 38.5 is applicable only if the lowest evaluated bid is found to be front loaded, or asks for faster stream of payment than as provided in the RFP. However if the lowest evaluated bid is still found to be front loaded, the additional performance guarantee, over and above the performance guarantee as per PC13.3, shall be for the full amount of front loading without any limit.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
48	Part-1 & Section II - Bid Data Sheet	C Preparation of Bids	Pg 03 of 05	There is no mentioned of documents to be submitted under "Technical Bid -Initial Filter -PQ Documents " and "Technical Bid -Other Documents "	Request to provide similar to Phase 01 Tender ,Part 1 - Bidding Procedure ,Section II - Bid Data Sheet,Page 3 of 6	Bid Conditions Preval. The documents submission requirement for "Internal filter-PQ" has been indicated for each item in the last column of the Table in Para 2.1 onwards, Section III, EQC, Part 1 of RFP.	No
49	Part-1 & Section III - Evaluation and Qualification Criteria	Pt. 1.1.1	Pg 4 of 19	Project Organization & Key Personnel	We understand that a bidder can propose the same person for a given key position for both Phase 2 Lot1 & Phase-2 Lot2 projects, as a in accordance to EQC, a bidder shall be awarded only one of the said contracts. Kindly Confirm.	Bid Conditions Preval. No objection subject to the personnel meeting the qualification and experience requirements of bid.	No
50	Part-1 & Section III - Evaluation and Qualification Criteria	Pt. 1.1.2	Pg 5 of 19	Project Organization & Key Personnel - IDA	Kindly clarify weather the IDA shall report to the bidder or to the Employer.	Bid Conditions Preval. IDA is Independent key entity as far as performance of work is concerned,	No
51	Part-1 Bidding Procedure Section - IV A, Bid Forms	Bid Form - 9	Pg 19 of 77	Bid Form - 9, Certificate of Compliance has been deleted.	We understand that if no - Non - Conformities are reported in Bid Form 7 & 7A, bidder's technical submission will be assumed in compliance to the Employer's Requirement and no other documentary evidence shall be required. Kindly Confirm.	Bid Conditions Preval. Please refer to ITB 33, 34 and ITB 35 in this regard.	No
52	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.6	Pg 11 of 75	Quantity Variation	According to the following clause It is understood that since the subject contract is a lump sum design and build contract, no variation either (+) or (-) shall be considered for variation in contract price. Please confirm if the quantity of any item enlisted in Schedule -1 to Schedule-5 becomes zero during the design Phase, than also the payment shall be made to the Contractor.	Bid Conditions Preval.	No
53	Part-1 Bidding Procedure Section - IV B, Pricing Document	General	General	Schedule- 1 & Schedule -2	We understand that If the Item is quoted in Foreign Currency In Schedule -1 & procured from within the country (India) and vice versa for Schedule-2, than the payment to the Contractor shall be made as per the items quoted in respective schedules. Kindly Confirm	Bid Conditions Preval. Bidders are advised to see the Notes below each Price Schedule for clarification.	No
54	Part-1 Bidding Procedure Section - IV B, Pricing Document	Notes 1,1	Pg 67 of 75	The total amount for quoted in Schedule-3, shall be minimum 10 % of the Grand Summary in Schedule - 6 .	We understand that the price indicated in Schedule - III, shall constitute 10% of the total price indicated in Schedule - VI, Grand Summary. Please note that such limit shall not be applied as the quoted prices under all schedules shall be balanced so as to meet cash flow requirements. The bidder should have the authority to decide the percentage proportion of each Schedule on the basis of actual cash flow requirement. Kindly Confirm.	Bid Conditions Preval.	No
55	Part-1 Bidding Procedure Section - IV B, Pricing Document	Notes 1,1	Pg 69 of 75	The total amount for quoted in Schedule 4 shall be minimum 30 % of the Grand Summary in Schedule - 6 .	We understand that the price indicated in Schedule - IV shall constitute 30% of the total price indicated in Schedule - VI, Grand Summary. Please note that such limit shall not be applied as the quoted prices under all schedules shall be balanced so as to meet cash flow requirements. The bidder should have the authority to decide the percentage proportion of each Schedule on the basis of actual cash flow requirement. Kindly Confirm.	Bid Conditions Preval.	No
56	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2.4	Pg 5 of 75	Deemed Export	Please confirm that the duty escalation due to delayed issuance of Payment Certificate shall be borne by Employer. Further the additional duty amount shall not be reimbursed by the Contractor to the Employer.	Bid Conditions Preval.	No
57	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2.4	Pg 5 of 75	Deemed Export	If the item is quoted in foreign currency but procured through dealership network from within the country (India) then deemed export benefits shall not be reimbursed/passed to Employer, if any. Please confirm.	Bid Conditions Preval. Please refer to clause number 1.2.2 and 1.2.4 of Section IVB of Part 1 of RFP.	No
58	Part 1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2.6	Pg 5 of 75	Record of Taxes and Duties	If the item is quoted in foreign currency but procured through dealership network from within the country (India) then record of custom duties shall not be possible. However we shall maintain a record of applicable GST. Please confirm.	Bid Conditions Preval. Please refer to clause number 1.2.2 of Section IVB of Part 1 of RFP.	No
59	Part-1 Bidding Procedure Section - IV B, Pricing Document	Clause 1.2	Pg 4 of 75	Deemed Export	Please clarify weather the High Sea sales is applicable for the subject contract.	Bid Conditions Preval. Not applicable.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
60	Part 3 - Condition of Contract and Contract Forms, Section IX - Contract Forms	Appendix -2 Table -1	Pg 14 of 28	Coefficients for Each Factor for Each Currency of Payment	We propose the Following coefficients: Fixed = 0.05 Labor = 0.25 Steel = 0.40 Copper = 0.3 Fuel = 0.05 Please confirm.	Bid Conditions Prevail.	No
61		Bid form 22A-23K Clause 45	9 of 9	"The DB shall consist of one sole member. Parties shall appoint the Dispute Board (DB). It shall be appointed within 28 days after the Effective Date.	Please confirm in case of arbitration the Arbitration & Conciliation Act 1996 should be applicable.	Bid Conditions Prevail.	No
62	GENERAL	ITB 24.1	Page 5 of 5	Date: 10-01-2019 Time: 3:00PM	We to extend bid submission by 8 weeks from 10-01-2019	Bid Conditions Prevail.	No
63	Part-3 & Section IX - Contract Forms	Appendix 1 Terms and Procedures of Payment	Pg 6 of 28	Schedule No. 3. Design Services	Kindly clarify ABG reduction mechanism for the subject Schedule. We propose proportionate reduction based upon design works completion.	Bid Conditions Prevail. Full amount of Advance Bank Guarantee against Schedule 3 shall be reduced after completion of the all design activities as per schedule 3.	No
64	Part-3 & Section IX - Contract Forms	Appendix 1 Terms and Procedures of Payment	Pg 6 of 28	Schedule No. 4. Installation, Testing and Commissioning and other services Eighty percent (80%) of the measured value of work performed by the Contractor, as Identified in the said Program of Performance, during the preceding month.	Kindly Clarify what is Program of Performance as per the subject Clause.	Bid Conditions Prevail. Refer Appendix 4 - Time Schedule. The bidder shall submit in the bid a detailed program of performance.	No
65	Part-3 & Section IX - Contract Forms	Appendix 1 Terms and Procedures of Payment		Schedule No. 7: Recommended Spare Parts and Special Tools	Payment Terms for Works & Supplies executed against the subject Price schedule have not been provided in the Bidding Document. Kindly Clarify.	Bid Conditions Prevail. The question of payment for items in schedule 7 will arise only if and when any of these items are ordered to be supplied within the validity of the Contract. Such an order for supply shall be treated as a supply under schedules 1 or 2 depending upon whether it is an imported or local item. Payment for such supply shall be governed by the terms and conditions applicable to the relevant schedule.	No
66	Part-3 & Section IX - Contract Forms	Appendix 3 Insurance Requirements	Pg 17 of 28	Cargo Insurance	We understand that cargo Insurance shall be provided till the delivery of major equipment. Kindly Confirm.	Bid Conditions Prevail.	No
67	Part-3 & Section IX - Contract Forms	Appendix 3 Insurance Requirements	Pg 17 of 28	Installation All Risks Insurance	We propose that the Installation All Risk Insurance shall be provided till issuance of Handover Certificate or ROD, whichever is earlier. For Defect Liability Period we shall provide Fire & Burglary Insurance. Kindly Confirm.	Bid Conditions Prevail.	No
68	Part-3 & Section IX - Contract Forms	Appendix 3 Insurance Requirements	Pg 18 of 28	Third Party Liability Insurance	The Insurance shall cover for Rs 0.8 million for any one incident, however the number of incidents can not be unlimited. Kindly Confirm the Total Insurance Amount.	Bid Conditions Prevail.	No
69	Part-3 & Section VII, General Condition of Contract	Clause 4.1	GC-9	Communication	In this regard, it is proposed to include the electronic mode in addition to the written mode.	Bid Conditions Prevail.	No
70	Part-3 & Section VII, General Condition of Contract	Clause 9.3	GC-11	Contractor's Responsibilities	With regards to payments for acquiring permits, approvals & license. It is proposed that, the Employer shall be responsible to making payments towards permits, approvals & license wherever required, and the Contractor shall provide due assistance in this regard. Kindly Confirm.	Bid Conditions Prevail.	No
71	Part 3 & Section VII, General Condition of Contract	Clause 13	GC-14	Securities	In case, if execution time of the Contract gets extended, for the reasons not attributable to Contractor and EOT approval letter issued by the Employer to the Contractor to extend the actual completion date, in that case all expenses / charges with respect to extension of Bank Guarantee, shall be borne by the Employer only. Also the escalation and overrun cost incurred due to above reason shall be borne by Employer only. Please confirm.	Bid Conditions Prevail.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
72	Part-3 & Section- VII , General Condition of Contract	Clause 21.4	GC-27	Customs Clearance	In addition to it, the Employer may provide all the facilities and assistances to the Contractor, which may be required to get the material cleared from customs. Further any cost on account of delay so incurred by the Contractor, which are not due to it's own fault shall be paid by the Employer.	Bid Conditions Prevail. Bidder advised to note that GC 14.2 and 14.3 has been deleted in PC.	No
73	Part-3 & Section- VII , General Condition of Contract	Clause 26	GC-42	Completion Time Guarantee	In any case before levying any LD charges, the Employer shall give proper opportunity to the Contractor for submitting clarification regarding delay in works, and only after considering the same shall the Employer proceed for levy LD charges.	Bid Conditions Prevail.	No
74	Part-3 & Section- VII , General Condition of Contract	Clause 34	GC-50	Insurance	All kind of Insurance Policies mentioned, shall be required till issuance of Taking over Certificate, except for Cargo Insurance during Transport which shall be required till delivery of material. Kindly confirm.	Any Insurance policy shall have to remain valid till such time within the validity of the Contract including period of maintenance, if any, as the risk(s) covered by the policy may actually materialize	No
75	Part-3 & Section- VII , General Condition of Contract	Clause 40	GC-62	Extension Of Time Of Completion	In the event of project gets delayed due to reasons attributable to Employer, the Contractor shall be eligible for extended time and cost	Bid Conditions Prevail.	No
76	Part-3 & Section- VII , General Condition of Contract	Clause 41	GC-63	Suspension	Before the Employer issues any notice for suspension of the project, a reasonable opportunity of being heard, shall be given to the Contractor to clarify their part. Also, when Employer issues any such notice other than the reason of the Contractor' default, in that event the Contractor shall be eligible to claim damages or cost incurred due to the same.	Bid Conditions Prevail.	No
77	Part-3 & Section- VII , General Condition of Contract	Clause 42.1.3	GC-66	Termination	It is proposed that, before terminating or taking any action in this clause, the Employer shall give to the Contractor a reasonable opportunity of being heard. Also, apart from the payments mentioned in clause 42.1.3, if there is/are any other claim(s) which the Contractor deems fit to make, shall be allowed to the Contractor.	Bid Conditions Prevail.	No
78	Bank Guarantee			Bank Guarantee	The Gurantee will expire latest by 180+28 days i.e. 208 days from due date of submission of the Bid, i.e on DDMMYY (the "Expiry Date") unless and otherwise it is extended.	Bid Conditions Prevail. The given format does not prevent the mention of the Bid expiry as well as claims Expiry dates in the Guarantee. The guarantee is governed by the URDG. No further amendment to the given format is considered necessary"	No
79	Part 1 - Bidding Procedure Section II - Bid Data Sheet	ITB 24.1		The deadline for Bid submission is: Date: 10-01-2019 Time: 3:00PM	As the architectural layouts of almost all the stations have changed & some critical inputs regarding the areas is pending from your end, we require time for carrying out heat loads and equipment selections. Thus we request you to grant an extension of 8 weeks from the date of query replies for the final submission of Bid.	Bid Conditions Prevail.	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
R0	UGC 04ARP-SST 3012-001			In Siddhivinayak station top of the box, 3 entrances are shown -LHS top,RHS top& bottom.	Since these entrances are connected to Retail areas, and no ECS provision is to be provided to Siddhivinayak intermediate level retail, Bidder assumes that no ECS provision are to be provided to these entrances in this contract. Kindly confirm.	Bid Conditions Preval. Entrance area to Intermediate level shall have ECS provision.	No
R1	UGC-04ARP-SST 30b1.002,P2 S.VI-B1 ECS -Phase 2	39 of 145		In Siddhivinayak station Ancillary building first floor Retail area is shown.	Kindly confirm any ECS provisions to be provided to retail areas in Ancillary buildings.	Bid Conditions Preval. Please refer clause no 5.3.5 of Part-2, Section VI-B1. (The PD area at intermediate level will not have ECS provision from TVE contract)	No
R2	ECC-TVE-P00-0001-020_A1 UGC-04ARP-SST-30S1-003 UGC-02-ARP-SCS-06001-001-A UGC04-ARP-SDA-4061-004	01 of 02		Two Nos. Air cooled chillers are shown in ancillary building plans of Siddhivinayak, Dadar & CST station.	As per the ECS water flow schematics provided in the tender document, 1 No. Air cooled chiller is to be used for Critical rooms AC during power failure. Where as Ancillary building plans of the listed stations show 2 Nos. of Air-cooled chillers. Bidder requests clarity on whether 1 No. Air-cooled chiller has to be considered as per the tender documents or 2 Nos. as per Ancillary building drawings of tender.	Bid Conditions Preval. The air cooled chiller envisaged is one and not two.	No
R3	UGC-03-ARP-SMC-8051-001 UGC-03-ARP-SWO-8051-001 UGC-03-ARP-SSM-8051-001 UGC 03 ARP SMI 8003-001			Equipment rooms shown in Ancillary building plan in Worli, Acharya atreya, Science museum, Mahalaxmi & Mumbai central stations.	Kindly clarify if any ECS provisions to be provided in these equipment rooms.	Bid Conditions Preval. (Please refer clause no 6.2.1.4.1 of Part 2, section VI-B1).	No
R4	UGC05-ARP-SDH-1100-001			2 Nos. Retail area shown in cover level plan	Kindly clarify if any ECS provisions to be provided in these retail areas.	Bid Conditions Preval. (Please refer clause no 5.3.5 of part 2 section VI-B1)	No
R5	UGC05-ARP-SDH-1100-001 UGC-04ARP-SDA-4011-001 UGC-03-ARP-SSM-8011-001 UGC-03-ARP-SMC-8011-001 UGC 07-ARP-SCS-07001-002-A UGC 01-ARP-SV0-2023-001			Lift lobbies and corridors shown in top of the box level plan of Dharavi, Dadar, Science museum, Mumbai central, CST, Vidhan bhavan stations.	Kindly clarify if any ECS provisions to be provided in these areas.	Bid Conditions Preval. (ECS and corridor smoke control provision shall be provided)	No
R6	UGC04-ARP-SDA-4061-002 UGC04-ARP-SDA-4061-003			Two Nos. of M05 rooms (Chiller plant rooms) shown in Ancillary building plans -First floor & second floor of Dadar station.	Kindly clarify why 2 Nos of Chiller plant rooms are provided? Also, kindly clarify whether any ECS provision is to be provided to both the chiller rooms?	Bid Conditions Preval. Area may not be sufficient at one floor, therefore pumps can be installed at other floors. Refer Part 2-B1 regarding ECS provisions for underground plant rooms. Please refer typical ancillary building layout drawing no. MM3-GC-AR-ANC-1081301-RD.	No
R7	UGC04-ARP-SDA-4061-003			Chemical dosing room on second floor of Ancillary building of Dadar station.	Kindly clarify any ECS provision to be provided to chemical dosing room.	Room is not necessary for chemical dosing system. Refer Addendum No. 2, Attachment No. 1.	Yes
R8	UGC-04ARP-SST-3015-001 UGC04-ARP-SD-5014-001			ECS provision for TBD areas.	Kindly clarify if any ECS provisions to be provided in these rooms.	Bid Conditions Preval. (Please refer clause no 6.2.1.3.1.1iv of Part 2, section VI-B1)	No
R9	UGC05-ARP-SDH-1400-001			ECS provision for CCR room	Kindly clarify if any ECS provisions to be provided in CCR room P09.1.	Bid Conditions Preval. (Please refer Table 6.1 s no. 19 of Part 2 Section VI-B1)	No
R90	UGC 04ARP-SST-3013-001			ECS provision for unnamed room.	Kindly clarify if any ECS provisions to be provided to the unnamed room adjacent to O-04.1 between grid 6 & 7, A1 & B	Please refer response of query at Sr. No. 9.	No
R91	UGC 04ARP-SST-3015-001			ECS provision for unnamed room	Kindly clarify if any ECS provisions to be provided to the unnamed room above to P11.2 between grid 21 & 22, C & D.	Please refer response of query at Sr. No. 9.	No
R92	UGC-04ARP-SST-3012-001			ECS provision for Lift maintenance room.	Kindly clarify if any ECS provisions to be provided for Lift maintenance room -M07.	Bid Conditions Preval. (Please refer Sr. no 9 of Table 6.1 of Part 2 Section VI-B1)	No
R93	UGC 04ARP-SST-3012-001			ECS provision for unnamed room.	Kindly clarify if any ECS provisions to be provided to the unnamed room, adjacent to M07, above to M16 between grid 23 & 24, C & D.	Please refer response of query at Sr. No. 9.	No
R94	UGC-04ARP-SST-3012-001			ECS provision for rooms at intermediate level of Siddhivinayak station.	Kindly clarify whether to provide any ECS provision for passenger toilets for retail, DB room, AHU room for retail, Entrances for retail & BOH for retail equipment rooms.	Bid Conditions Preval. For intermediate PD level, tenant shall be responsible for toilet ventilation, DB room provisions, along with ECS provision for retail AHU room and retail BOH rooms.	No

S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
95	UGC-01-ARP-SCP-1031-001			Load for Advertisement panels.	Kindly advise if any additional load to consider for stations having Advertisement panels in paid area.	Bid Conditions Prevail. (Please refer Clause no 6.2.1.3 sub clause d of Part 2 Section- VI-B1).	No
96	UGC-01-ARP-SHC-4031-001			Area for room C39	Bidder requests you to provide the area of the room C39 as it has no boundary and the required ECS provision is different from that of the corridor.	Bid Conditions Prevail. Please measure the areas from the CAD drawings.	No
97	UGC04-ARP-SDA-4013-001			ECS provision for unnamed room.	Kindly clarify if any ECS provisions to be provided to the unnamed room Adjacent to M10, between grid D4 & D6, A & D.	Please refer response of query at Sr. No. 9.	No
98	UGC04-ARP-SJA-4013-001			Pressurized area D20 2	Bidder request more clarity on pressurized area-D20.2-S&T shaft. Since no Shaft pressurization is mentioned in Table 6.2 of P2.S.VI-B1.ECS - Phase 2. Bidder requests clarity on scope and technical details regarding the same.	Bid Conditions Prevail. Query is not clear, however please note S&T shaft does not have pressurization.	No
99	UGC-01-ARP-SCP-1031-001			ECS provision for unnamed room.	Kindly clarify if any ECS provisions to be provided to the unnamed room adjacent to C44 between grid C7 & C8.	Please refer response of query at Sr. No. 9.	No
100	P2.S.VI-B1.ECS - Phase 2			Air curtain	Air curtain shown at the end of every escalator. Kindly clarify if air curtains are to be used at station box entrances i.e. 3-4 per station or to be used after every escalator/staircase at concourse level.	Bid Conditions Prevail.	No
101	Part 4 - Section X			Auto CAD Drawings	The drawings provided in the tender for some stations are not clear. Bidder requests to provide Auto CAD drawings for all stations.	Bid Conditions Prevail. Bidder may collect CAD version of bid arch drawings from MMRC	No
102	P2.S.VI-B1.ECS - Phase 2 P2.S.VI-B3.SCADA - Phase 2	33 of 151 & 14 of 59		The TVE SCADA system shall enable control and monitoring the UG Station ECS in the Station via TVE SCADA workstation in SCADA Room.  The Contractor will provide the workstations in the SCADA Room in each Station that will be shared between ECS and TVS systems. Each TVE workstation will only be able to monitor the ECS & Tunnel Ventilation equipment in its own station.	Bidder understands that in there will be only one workstation i.e. in SCR to be shared between ECS and TVS. Kindly confirm. There will only be 2 servers (and no workstation) in SCADA rooms connected to same network. Kindly confirm.	Bid Conditions Prevail. (There shall be one workstation in TVE SCADA room at each station. Please refer tender drawing no. GCC-TVE-PO0-0001-041_AD)	No
103	P2.S.VI-B3.SCADA - Phase 2				bidder understands that VCP's shall be hardwired to the TVS panels. Kindly confirm.	Bid Conditions Prevail.	No
104	P2.S.VI-B3.SCADA - Phase 2			§ 12.2	IBP, Historical Database software, Maintenance management station or any other equipment at OCC/BCC not in Phase 2 scope. Kindly confirm.	Bid Conditions Prevail. (Please refer clause no 1.1.3, 1.1.4 and tender drawing no. GCC-TVE-PO0-0001-041_AD)	No
105	P2.S.VI-B3.SCADA - Phase 2	3.6.4		The TVE SCADA allows carrying out the following functions: a. Acquire data b. Data monitoring c. Control equipment d. Data analysis, Data Trending, Charting, etc. e. Help operating staff and maintenance staff to operate and maintain the TVS/ECS system properly	Please clarify the type of data analysis required	Bid Conditions Prevail. Full analysis of plant running / fault conditions and also to provide adequate indication in the OCC/BCC that all operational and safety related equipment are operating in desired manner. It also includes analysis of the data to provide long term planning of maintenance.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
106	P2 S VI-B3 SCADA Phase 2	3.6.6		SIL 2 is required for TVE SCADA including PLCs and VCP. This includes also IBP.	Does the SIL-2 configuration for the TVS SCADA includes complete PLC loop including PLC processor, IO card, PLC power supply. Kindly clarify.	Bid Conditions Prevail. The whole TVE SCADA system shall be SIL-2.	No
107	P2 S VI-B3 SCADA Phase 2	4.1.3		An electrical communications interface between the bearer transmission equipment and the RTUs shall be provided as part of each station SCADA equipment.	Bidder understand the requirement here is the isolation of Data Cables and Power Cables. Kindly clarify.	Bid Conditions Prevail. Please refer Drawing No GCC-TVE-P00-0001-041_A0.	No
108	P2 S VI-B3 SCADA Phase 2	4.5.1.k		Provide control of Tunnel Ventilation System modes for individual and groups of stations.	We understand that this requirement is from the OCC. Kindly confirm.	Bid Conditions Prevail. Station modes shall be operated from stations in case of communication failure from OCC/BCC. Master/station modes shall be operated from OCC/BCC.	No
109	P2 S VI-B3 SCADA Phase 2	4.5.viii		Time-tag all events detected by the TVE SCADA system, to 20 milliseconds resolution for selected high speed inputs, and to present this information in logs as a true system wide sequence of events.	We request you to amend the same to 1 sec. In actual scenario it will not be possible to measure response time in milliseconds. Kindly accept.	Bid Conditions Prevail.	No
110	P2 S VI-B3 SCADA - Phase 2	5.3.4		Redundant design.	We understand that redundancy requirement is at controller level, power supply level and communication level. IO redundancy is not required here. Kindly confirm.	Bid Conditions Prevail.	No
111	P2 S VI-B3 SCADA Phase 2	5.5.4		Electrical Noise	Kindly quantify/advise the high level noise.	Bid Conditions Prevail. Contractor shall interface with other systems and obtain necessary input for design as required.	No
112	P2 S VI-B3 SCADA Phase 2	5.8.1		RTU Functions	We understand that RTU shall be SIL-2 certified and certification shall be from TUV. Kindly confirm.	Bid Conditions Prevail.	No
113	P2 S VI-B3 SCADA - Phase 2	5.8.1.3		The RTUs shall be suitable for either wall or floor mounting and shall be suitably robust for operation in plant room areas, to IEC529 IP65 enclosure standard.	We recommend IP-54 type cabinet considering that heat circulation is key. Kindly advise.	Bid Conditions Prevail. Contractor shall submit material data for approval.	No
114	P2 S VI-B3 SCADA - Phase 2	5.8.1.10		The individual internal RTU memory shall be sized to hold, in addition to all the necessary programs, the logged input data and controls output for a period of normal operation covering a minimum of 24 hours in the event of communication failure. Operation of RTUs or any other aspect of the TVE SCADA system shall not be adversely affected as memory utilisation increases to the maximum, the design value of which shall be stated in the Design Specification (DS), prepared by the Contractor and approved by the Project Manager.	In event of communication failure we understand that RTU will continue to work with last value passed on from TVE SCADA System. Also it will have feature to store 1/2 parameter data. Same shall be part of SIL-2 processor. Kindly confirm.	Bid Conditions Prevail.	No
115	P2 S VI-B3 SCADA Phase 2	5.8.2.3		RTUs shall be capable of accommodating the following input/output signal types:	The isolation voltage would be AC or DC. Kindly confirm.	Bid Conditions Prevail. Read specification carefully.	No
116	Section VI-B3 Technical Specification SCADA	1.1.3		Chemical dosing room on second floor of Ancillary building of Dadar station.	We have assumed OCC/BCC is in the scope of Phase-01 Contractor, Phase-02 Contractor will not provide any hardware and software in OCC/BCC. The Works is limited to station level.	Bid Conditions Prevail. Confirmed.	No
117	Section VI-B3 Technical Specification SCADA	3.6.6		Integrated Backup Panels (IBP) shall be provided at: - OCC/BCC in case of failure of OCC/BCC workstations. This IBP shall enable the activation of all ventilation scenarios required for the whole network. - At SCRs to enable local control of the TVS & ECS system by station operators as a secondary priority control in case of failure of TVE SCADA system at OCC/BCC. Moreover, Ventilation Control Panel (VCP) shall be able to operate the ventilation plant monitoring and control the closer as possible from the PLC which manage ventilation plant. The VCP shall be installed on the PLC's cabinets or at a distance less than 2 meters from PLC. - Redundant PLC shall be provided for IBP. - Traditional push button with mimic panel is recommended instead of LCD to achieve the required safety level for VCP and IBP. SIL 2 is required for TVE SCADA including PLCs and VCP. This includes also IBP. - The Contractor shall provide TCP/IP protocol for communication.	As per Architecture 1 VCP is considered in South end room, To control & monitor the plants for both the ends we need to consider 1 Nos. VCP in both the ends instead of station, instead of only one.	Bid Conditions Prevail. Contractor can provide additional equipment if required by his design.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
118	Section VI- B4: Specification for Electrical works of ECS & TVS	3.3.2.19		Screened Signal and Control Cables. The control cable shall be heavy-duty type, 1100 V grade FRLS (complying with the standards BS 6724 and BS 7846, as specified above for Power and Auxiliary cables and fire performance requirements specified in this Specification), nil halogen with stranded copper conductor of size not less than 2.5 sq. mm. The outer sheath shall also be mixed with chemicals for protection against rodent and termite attack. Wherever specified, fire resistant type cable shall be provided.	2.5 sq. mm conductor is not required for ELV controls, 1 Sq. mm is sufficient for operations, 2.5 sqmm will create problem for terminations in lv panels, HVAC equipment's and third party interface panels.	Bid Conditions Prevail.	No
119	GCC TVE-P00 0001 041_A0			Architecture shows 2 PLC's at each end of station.	Kindly confirm if 3 Nos. PLC's to be used i.e. at 1. 1 No. in south end plant room. 2. 1 No. in north end plant room. 3. 1 No. in Chiller Plant Room. Or only 2 Nos. PLC's as specified in the tender.	Please refer to response at serial no.38	No
120	MM3-GC-AR-ANC-10R1301-RO UGCD>ARP-SDH-1200-001			As per Ancillary building drawings Pump room is shown in Ancillary building. Also as per Cover level plan only ground + first +Terrace level is shown and Pump room is shown in cover level.	Kindly confirm if Pump room & DB room is in cover level or in Ancillary building.	Pump room in cover level is for MEP, ECS pump room and chiller plant room are shown at first floor.	No
121	PART-2 Employer's Requirement & SECTION-VI B1	ECS-2.3 & 6.2.1.2	12& 33 OF 145	Design parameters-table	We understand that the heat load calculations shall be based on outside ambient air condition referred in table under clause 6.2.1.2. Accordingly the equipment shall be selected for achieving desired inside conditions based on referred outside condition. Kindly confirm the requirement.	Bid Conditions Prevail.	No
122	PART 2 Employer's Requirement & SECTION VI B1	Clause - 4.6.1	20 OF 145	Smoke Extraction Control -Staircase Pressurization	As per this clause only Fireman Staircase will be pressurized. Please confirm if passenger exit staircase is provided at any station, same shall also be pressurized.	Bid Conditions Prevail. Refer architectural drawings. Exit routes of the station including fireman's staircase shall be pressurized.	No
123	PART 2 Employer's Requirement & SECTION-VI B1	Clause - 4.6.1	19 OF 145	Smoke Extraction Control- Smoke extraction from platform and mezzanine level public area shall be done through the fire rated supply air which is connected to OTEF.	We understand from the referred clause, that during the scenario of fire at platform & mezzanine level, OTE fan will work as a smoke extraction fan for platform level. However, under normal operations this OTE fan will work as exhaust for Rolling Stock Air Conditioning Outdoor units & Breaking system of train. In view of the above, please confirm the operation philosophy of OTE fans under combined requirements & elaborate the mode of operations.	Bid Conditions Prevail. Philosophy for OTE fan operation is well defined.	No
124	PART-2 Employer's Requirement & SECTION-VI B1	Clause - 5.2.2	22 OF 145	Functional Requirement- Normal mode part of the public area air shall be taken as return air which shall be picked through the return air grilles/ diffusers. The return air reaches the AHU room.	We understand from the referred clause that return air shall be non-ducted. Please confirm.	Bid Conditions Prevail. Confirmed.	No
125	PART-2 Employer's Requirement & SECTION-VI B1	ECS-5.2.2	21 OF 145		If return air is through false ceiling, then all commons walls between public area & AHU room shall be upto false ceiling level. In this way, fire compartmentation shall not be possible. Wherever as per NFPA-130 chapter 5 (5.2.3.2.5) all public area shall have a fire separation from non-public area. So return air duct will be required for fire separation between Public & Non public area. Please Confirm.	Bid Conditions Prevail. To ensure fire compartmentation, return air openings shall be provided with fire dampers. To be evaluated during detailed design stage.	No
126	PART 2 Employer's Requirement & SECTION-VI B1	Clause-5.2.2	22 OF 145	Functional Requirement- Emergency mode. The overtrack exhaust fan shall be used. In case of fire extraction of smoke in the platform and mezzanine levels.	Under Emergency Mode, we understand from the referred clause, that during fire scenario at platform & mezzanine level, OTE fan will work as a smoke extraction fan for platform level. However, under normal operations this OTE fan will work as exhaust for Rolling Stock Air Conditioning Outdoor units & Breaking system of train. In view of the above, please confirm the operation philosophy of OTE fans under combined requirements & elaborate the mode of operations.	Bid Conditions Prevail. Please refer response of query at Serial No. 44	No
127	PART 2 Employer's Requirement & SECTION-VI B1	Clause -5.3.2	23 OF 145	Volume control damper shall be provided to control the amount of supply air to various zones.	In this contract the supply air duct is used as a smoke extraction duct in case of fire at concourse level, platform level & mezzanine level. Whereas requirement of volume control damper is mentioned in the referred clause and the same is non-fire rated. Therefore, it is not possible to install the non-fire rated accessories in fire rated ducts. Please confirm.	Bid Conditions Prevail. All accessories in the fire rated duct shall be fire rated.	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
128	PART-2 Employer's Requirement & SECTION-VI B1	Clause -5.5.3	23 OF 169	The air cooled chiller (1 no. working) shall be located on the roof of ancillary building.	We understand from the referred clause, no standby air cooled chiller are required. Please clarify.	Bid Conditions Prevail. Only one air cooled chiller is envisaged.	No
129	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.2	33 OF 145	Design parameters	Is there any specific criteria for grilles/diffusers required outlet velocity. Please confirm.	Bid Conditions Prevail. (Being D&B contract - Contractor to submit details for approval)	No
130	PART 2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.3-I(ii)	36 OF 145	Station public area	Please clarify return air path from platform area to AHU room.	Bid Conditions Prevail. Return air path is through large openings of Staircase & escalators.	No
131	PART 2 Employer's Requirement & SECTION-VI B1	Clause-6.2.1.3-I(iii)	34 OF 145	Station back of house corridor:The station back of house shall be normally air conditioned from the public area AHU.	As per this clause the back of house corridor also air conditioned from public area AHU. The back of house corridor is non-paid area so it will be air conditioned or ventilation. If it will be air conditioned, the energy consumption will be high. Please confirm.	Bid Conditions Prevail. (Please refer Table 6.1 of Part 2, Section - VI B1).	No
132	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.3-II(iii)	36 OF 145	In case of fire the smoke shall be extracted through the plant room smoke extract duct which is connected to OTEF.	As per this clause, during fire scenario in back of house corridor, the OTE fan will be act as a smoke extraction fan. If at the same time the train is standing at the track, then which philosophy will be activated. Please clarify.	Bid Conditions Prevail. Please refer response of query at Serial No 44. Sufficient capacity in OTE fans. Contractor to substantiate by calculations.	No
133	PART 2 Employer's Requirement & SECTION-VI B1	Clause -6.2 table 6.1	36 -38 OF 145		The no of persons, equipment heat load & number of rooms given in this table are final or it will be changed at the time of detail design. Any change in design criteria shall form basis for price variations.	Bid Conditions Prevail.	No
134	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.4.1 b	36 OF 169	Ventilation fans	Please confirm independent ventilation fans are required for each area or ventilation requirement can be merged with common fan units.	Bid Conditions Prevail. (Contractor to submit details for approval)	No
135	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.5	38 OF 145	Volume control dampers for Supply ducts	As AHU ducts are fire rated so volume control damper which is to be used for proper air distribution shall be fire rated or non fire rated. Please confirm.	Bid Conditions Prevail. Please refer response of query at Serial No 48.	No
136	PART 2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.5	40 OF 145	For long subways, separate smoke extraction shall be provided. The smoke extraction system can also be connected to the concourse smoke exhaust system via a separate branch with smoke fire rated damper which allows smoke extraction in the subway. For short subway, it shall be considered as part of the concourse and the smoke exhaust will be provided by the concourse smoke exhaust systems.	Please confirm whether separate smoke extraction fans(1W + 1S) needs to be considered for long subway (more than 25M).	Bid Conditions Prevail. (Please refer clause no 6.2.1.5 of Part 2-VI-B1).	No
137	PART 2 Employer's Requirement & SECTION-VI B1	Clause -6.2.15	116 OF 145	Noise criteria-Sound attenuator for emergency fans like SEF & SPF.	Please confirm if the sound attenuators are required for SEF & SPF.	Bid Conditions Prevail. (Please refer Table of Clause 6.2.15.1.h of Part 2 Section VI - B1). Sound attenuation is required.	No
138	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.15.3.11	122 OF 145	Acoustic lining/Treatment of equipment rooms	As per the referred clause, acoustic treatment of the respective rooms is required. However there is no BOQ head wherein cost of acoustic lining could be quoted. Please confirm the requirement and incorporate cost head for acoustic lining in BOQ since the same is substantial amount.	Bid Conditions Prevail. (Being D&B contract - Contractor shall provide appropriate sound mitigation measures. Also refer clause no 6.2.15.3.11 of Part 2-VI-B1).	No
139	PART 2 Employer's Requirement & SECTION-VI B1	Clause -6.2.15.3.11	122 OF 145	Acoustic lining/Treatment of equipment rooms	Please confirm the requirements for rooms acoustic lining treatment, provide the room list for which we have to consider the acoustic lining.	Bid Conditions Prevail. (Being D&B Contract - Contractor to develop acoustic calculations and provide appropriate sound mitigation measures).	No

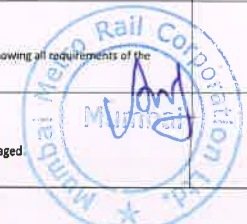
S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
140	PART-2 Employer's Requirement & SECTION-VI B2	Clause -3.3.1.1	13 of 104		The scope of CSD/SEM drawing to be clarified.	Bid Conditions Prevail. (Please refer VI-A Including its Appendix 19).	No
141	PART-2 Employer's Requirement & SECTION-VI B2	Clause -3.3.1.2	14 of 104		The lifting hook for equipment are to be provided by TVS Contractor or by civil Contractor. Please confirm.	Bid Conditions Prevail. (Refer Appendix 19 of Part 2, Section VI-A).	No
142	PART-2 Employer's Requirement & SECTION-VI B2	Clause -3.4.1.3	16 of 104	The latest version of SES or IDA Tunnel software of simulation	The simulation will be done with SES or IDA tunnel software or any other equivalent simulation software of updated version. These are the updated software so no accreditation is required for this. Please confirm.	Bid Conditions Prevail. Simulation (SES or IDA) is in Phase 1 Contractor scope.	No
143	PART-2 Employer's Requirement & SECTION-VI B2	Clause -3.4.1.5	16 of 104	The Infiltration & ex-filtration airflow rates from PSD shall be analysed.	For the Infiltration & ex-filtration airflow rates, the PSD data to be provided by the Client.	Bid Conditions Prevail. PSD data will be provided during design stages.	No
144	PART-2 Employer's Requirement & SECTION-VI B7	Clause -3.4.2.2	17 of 104	Preliminary Design	For working of drawing & calculation, the whole civil data to be provided to system Contractor by civil or Client. Please confirm.	Bid Conditions Prevail. (civil data will be provided as and when required).	No
145	PART-2 Employer's Requirement & SECTION-VI B2	Clause -4.2.6	24 of 104	a)The total heat release rate for a train shall be minimum 15 MW. the actual value shall be considered from Rolling stock Contractor.	Please confirm the actual value of heat release rate.	Bid Conditions Prevail. Train HRR shall be provided by rolling stock Contractor during detailed design. It is relevant for Phase 1 Contractor's simulation study.	No
146	PART-2 Employer's Requirement & SECTION-VI B2	Clause -4.2.7	25 of 104	a) According to the last data provided by the Rolling stock Contractor, the maximum heat load from the train air conditioning (A/C) system (including power consumption of A/C auxiliaries) is expected to be 820 KW for an 8 car train. However actual data shall be confirmed from rolling stock Contractor.	Please confirm the actual data for the same.	Bid Conditions Prevail. Train HRR shall be provided by rolling stock Contractor during detailed design. It is relevant for Phase 1 Contractor's simulation study.	No
147	PART-2 Employer's Requirement & SECTION-VI B7	Clause -4.2.12	25 of 104	Emergency noise: Diurnal period + 5DBA (7AM TO 11PM) Nocturnal period +3DBA	Please confirm the value of emergent noise during diurnal & nocturnal period.	Bid Conditions Prevail. Emergent noise to be measured by Contractor.	No
148	PART-2 Employer's Requirement & SECTION-VI B3	Clause -4.2.13	26 of 104	Emergency noise: Diurnal period + 5DBA (7AM TO 11PM) Nocturnal period +3DBA	Please confirm the value of emergent noise during diurnal & nocturnal period.	Bid Conditions Prevail. Emergent noise to be measured by Contractor.	No
149	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.1.2	34 of 104	The piston-action of moving trains will create a natural flow of air in the tunnel in the direction of train movement. When trains accelerate out of the stations, they will also drive air into the tunnel network via the open tunnel ventilation shafts or the opposite bound tunnel. The pressure relief of the tunnels will share a common TV shaft.	As per schematic layout the DRD plenum is a common chamber for both tunnel where the piston pressure of air will be diverted from one tunnel to other tunnel. It may be possible that temperature of this air will be more than the outdoor air because as per specification, the average tunnel temperature of 38 degree Celsius inside the tunnel & outdoor temperature as per specification is 33.9 degree Celsius. Please confirm the draught relief air will be exhausted to atmosphere or it will be diverted to other tunnel.	Bid Conditions Prevail. If the temperature is higher than ambient, it shall be exhausted to atmosphere.	No
150	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.1.5	34 of 104	The OTE system shall be able to operate at flow rates lower than its maximum capacity to suit the operational requirements.	Please clarify the operational requirement of the OTE system. In which condition it will operate in lower cap. Than its maximum capacity.	Please refer response of query at Serial No. 44.	No
151	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.2.7	35 of 104	The expected number of tunnel booster fan is around 4 set from per bore & per ramp with a nominal thrust of 1000N perform.	It means 4 jet fans to be provided on one side of ramp. That means two nos. in up tunnel & 2 nos. in down tunnel at the ramp. Please confirm.	Bid Conditions Prevail. (Design and selection of TVS equipment is dependent on simulation studies).	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
152	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.3	35 of 104	Congestion operation mode	Please specify the congestion operation mode will be considered for one train or two train in the same tunnel.	Bid Conditions Prevail. One train per ventilation zone.	No
153	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.4	36 of 104	Emergency condition	Please specify that the emergency operation mode will be considered for one train or two train in the same tunnel.	Bid Conditions Prevail. One train in one ventilation zone.	No
154	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.4.6	37 of 104	Emergency condition	UPSAP fan will be fire rated or non-fire rated. Please clarify.	Bid Conditions Prevail. Non Fire Rated.	No
155	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.4.6	37 of 104	Emergency condition	Please clarify the total heat release rate for a train fire at track way.	Please refer response of query at Serial No. 67.	No
156	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.4.6	37 of 104	Emergency condition	Please clarify the train outdoor condenser airflow.	Bid Conditions Prevail. Train details shall be provided by rolling stock manufacturer during detailed design.	No
157	PART-4 & SECTION-X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Type of starter	Please confirm the type of starter for Toilet ventilation fan.	Bid Conditions Prevail. (Being D & B contract - Contractor shall propose starter following the specifications).	No
158	PART-4 & SECTION-X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Capacitor Panel	Capacitor Panel for ECS 1& 2 not shown in the schematic. Kindly provide details for the same.	Bid Conditions Prevail. (Being D & B contract - Contractor shall develop details of panels).	No
159	PART-4 & SECTION-X	GCC-TVE-P00-0001-012_A0	Electrical Schematic for TVS	TVS Damper	Feeder for TVS Damper not shown in schematic. Kindly provide details for the same	Bid Conditions Prevail. (Being D&B contract - Contractor shall provide all required feeders based on detailed design).	No
160	PART 4 & SECTION X	GCC-TVE-P00-0001-012_A0	Electrical Schematic for TVS	Type of starter	VSD has been shown for TVF fans in TVS Schematic, Kindly confirm can we use soft starter instead of VSD.	Bid Conditions Prevail.	No
161	PART-4 & SECTION X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Air cooled and Water cooled chiller, cooling tower	As per Schematic for Air cooled and Water Cooled chiller and cooling tower type of starter not provided, Kindly provide the details for the same.	Bid Conditions Prevail. Starter is not part of schematic. (Being D & B contract -Contractor to provide starter following the specifications).	No
162	PART-4 & SECTION X	GCC-TVE-P00-0001-012_A0	Electrical Schematic for TVS	TVS Panel	Please clarify whether single Panel are required for TVS Panel -1 & 2, and TVS Panel 3& 4 with bus coupler or Two different Panels are required with tie cable arrangement for TVS -1&2 and TVS-3&4.	Bid Conditions Prevail. (Two TVF panels on each end of the station, as per schematic dwg).	No
163	PART 4 & SECTION X	GCC-TVE-P00-0001-012_A0	Electrical Schematic for TVS	Dual Supply	As per schematic drawing dual feed is shown from ASS-1& 2 for TVS-1 & 2 Panel. As per our knowledge, provision for dual power supply are not kept in Underground station & Tunnel. Contractor scope of work as per their contract. Please clarify who will provide cable and feeder for the second supply. Please clarify	Bid Conditions Prevail. Scope delineation is clearly shown in the referred drawing.	No
164	PART-4 & SECTION-X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Dual Supply	As per schematic drawing dual feed is shown from ASS-1& 2 for ECS-1 & 2 Panel. As per our knowledge, provision for dual power supply are not kept in Underground station & Tunnel. Contractor scope of work as per their contract. Please clarify who will provide cable and feeder for the second supply. Please clarify	Bid Conditions Prevail. Scope delineation is clearly shown in the referred drawing.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
165	PART-4 & SECTION-X			Drawing no:GCC-TVE-P00-0001-020_A0 water flow schematic (sheet 01 of 02)	As per schematic drawing the CHW pipe header for water cooled chiller & air cooled chiller are same. Air cooled chiller will be used only for 24X7 technical room at the non revenue hours & air cooled capacity will be very less than the water cooled chiller. When only air cooled system will run the water will flow in same piping then velocity of water will be very low. May be below 1FPS also. It may be possible system will not get proper flow at the endpoint. Please confirm whether common pipe will run for both system or piping system will be separate for both system (Water cooled & Air cooled).	Bid Conditions Prevail. Both systems are acceptable subject to functional performance as per bid, being proven during detailed design.	No
166	PART-4 & SECTION-X			Drawing no:GCC-TVE-P00-0001-021_A0 water flow schematic (sheet 02 of 02)	As per drawing all Individual FCUs tapping taken from main header, No sub header provided for FCU to make up the grouping of FCUs for easy maintenance. If we will take the FCU tapping from main header & any leakage or any other maintenance required in the FCU tapping then whole system will shutdown. Please confirm.	Bid Conditions Prevail. (Final piping reticulation to be prepared during design by Contractor and subject to approval).	No
167	PART 4 & SECTION X			Drawing no:GCC-TVE-P00-0001-022_A0 typical air flow schematic for ECS (sheet 01 of 02) & Drawing no. GCC-TVE-P00-0001-023 (sheet 2 of 2)	As per schematic diagram only supply air ducting shown for supply air from AHU to areas at concourse & platform. No return air duct shown in the schematic diagram. What will be the path of return air from public areas to AHU room. By return air ducting or through false ceiling, please clarify.	Bid Conditions Prevail. Please refer response of query at Serial No. 46.	No
168	PART-4 & SECTION X			Drawing no:GCC-TVE-P00-0001-022_A0 typical air flow schematic for ECS (sheet 01 of 02) & Drawing no. GCC-TVE-P00-0001-023 (sheet 2 of 2)	As per schematic diagram the fire damper is shown in fire rated duct. It shall be motorized fire & smoke damper, please confirm.	Bid Conditions Prevail. (Being D&B contract - to be designed according to NFPA codes and requirements during design stage).	No
169	PART 4 & SECTION X			Drawing no:GCC-TVE-P00-0001-023_A0 typical air flow schematic for ECS (sheet 02 of 02)	As per schematic diagram the fire rated duct connected to the OTEF to remove the smoke from rooms in case of fire & same OTEF connected with OTE also to remove the train A/C outdoor units heat & breaking system heat. If the same time the train is at the station track then which philosophy will be activated. Please clarify.	Bid Conditions Prevail. Please refer response of query at Serial No.44.	No
170	PART 4 & SECTION X			Drawing no:GCC-TVE-P00-0001-023_A0 typical air flow schematic for ECS (sheet 02 of 02)	As per schematic diagram the platform supply air duct connected to the OTEF to extract the smoke from platform level in case of fire at platform level and same OTEF connected to the OTE also. If at the same time the train is at the station track then which philosophy will be activated, please clarify.	Bid Conditions Prevail. Please refer response of query at Serial No.53.	No
171	PART-4 & SECTION X			Drawing no:GCC-TVE-P00-0001-024_A0 typical ECS equipment details.	As per drawing the vibration isolators are shown in the ceiling suspended pipes. As per normal practice, the vibration isolators are not required in the ceiling suspended pipes because the flexible bellows are installed in suction & discharge of the pumps for absorbing the vibrations, please confirm.	Bid Conditions Prevail. (Being D&B contract - submit calculations during detailed design stage).	No
172	PART-4 & SECTION-X			Drawing no:GCC-TVE-P00-0001-024_A0 typical ECS equipment details.	As per drawing the two way control valve are shown in Ahu & Fcu coll. please confirm the two way valve will be considered or PICV will be considered.	Bid Conditions Prevail. (Either can be considered based on meeting the functional & performance requirements).	No
173	PART 4 & SECTION X			Drawing no:GCC-TVE-P00-0001-020_A0 water flow schematic (sheet 01 of 02)	As per schematic diagram provision of air separator or air & dirt separator for removing the air from system is not provided. Whether it is required or not, please confirm.	Bid Conditions Prevail. (Schematic diagram is indicative, apparatus for air separation to be proposed by Contractor).	No
174	PART-4 & SECTION X				As per schematic diagram, no return air duct shown. It means the AHU rooms are open return system in open return air system the AHU room & Back off house heat will also added in heat load, which will be increased the energy consumption. Please confirm return air duct required or open system will be ok.	Bid Conditions Prevail. Please refer response of query at Serial No. 46.	No
175	PART-4 & SECTION-X	GCC-TVE-P000-0001-20_A0		Water Flow Schematic-ECS(sheet 1 of 2)	Bleed off system for condenser water system not shown in drawing schematic, please clarify the requirements.	Bid Conditions Prevail. (Contractor shall develop the detailed schematic showing all requirements of the system).	No
176	PART 4 & SECTION X	GCC-TVE-P000-0001-20_A0		Water Flow Schematic-ECS(sheet 1 of 2)	As per schematic diagram only one no. ACC shown, no standby arrangement provided. Please confirm the requirement.	Bid Conditions Prevail. Only one air cooled chiller is envisaged.	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
177	PART-4 & SECTION-X	GCC-TVE-P000-0001-21_A0		Water Flow Schematic-ECS(sheet 1 of 2 & 2 of 2)	In piping schematic of low side shown that there are false ceiling in all rooms but as per general procedure like TVF plant room, ASS room and other plant room are without false ceiling , please confirm.	Bid Conditions Prevail. Refer final architectural drawings during design stage.	No
178	PART 4 & SECTION X	GCC-TVE-P000-0001-22_A0		Drawing no. GCC-TVE-P00-0001-022-A0 & 023-A0-Typical Air Flow Schematic-ECS(sheet 1 of 2 & 2 of 2)	Inline fan for individual rooms-please clarify the requirement of this fan, this is for make up air in case of fire in rooms or for fresh air in ac rooms. If it is for make up air in case of fire then the fan capacity to be calculated for all rooms or single largest rooms. If it is only for ac room fresh air then how make up air will be fulfill in rooms for smoke extraction. please clarify.	Bid Conditions Prevail. (Inline FAF is for providing fresh for air conditioning.)	No
179	PART-4 & SECTION X	GCC-TVE-P000-0001-22_A0		Drawing no. GCC-TVE-P00-0001-022-A0 & 023-A0-Typical Air Flow Schematic-ECS(sheet 1 of 2 & 2 of 2)	As per schematic diagram 2 nos. FAF fans for AHU are shown, please clarify 2 Nos. FAF are required or 1 No. FAF can be used of total capacity.	Bid Conditions Prevail. (Two fresh air fans are required for each AHU room).	No
180	PART-4 & SECTION-X	GCC-TVE-P000-0001-22_A0		Drawing no. GCC-TVE-P00-0001-022-A0 & 023-A0-Typical Air Flow Schematic-ECS(sheet 1 of 2 & 2 of 2)	As per schematic diagram - Smoke cleansing duct shown for smoke extraction from rooms, for duct sizes calculation for the same shall be considered all the rooms smoke extraction cap or considered for one largest room cap. please confirm.	Bid Conditions Prevail. (Being D&B contract - Smoke cleansing ducts shall be sized during detailed design stage).	No
181	PART 4 & SECTION X	GCC-TVE-P000-0001-22_A0		Drawing no. GCC-TVE-P00-0001-022-A0 & 023-A0-Typical Air Flow Schematic-ECS(sheet 1 of 2 & 2 of 2)	Smoke extraction scheme for over ground plant room not provided, please clarify the same.	Bid Conditions Prevail. (Being D&B contract - to be designed according to meet NBC and NFPA and requirements during design stage).	No
182	PART-4 & SECTION X	GCC-TVE-P000-0001-22_A0		Drawing no. GCC-TVE-P00-0001-022-A0 & 023-A0-Typical Air Flow Schematic-ECS(sheet 1 of 2 & 2 of 2)	SPF will be Fire rated or Non-Fire rated, please confirm.	Bid Conditions Prevail. Staircase pressurization fan shall be fire rated.	No
183	PART-4 & SECTION X	Generals		Space for equipment in rooms	Space required for installation of separate SEF fan for concourse smoke extraction, fresh air fan. As per layout there is no space available for installation of these fans. Please provide the space.	Bid Conditions Prevail. Contractor shall coordinate with architect for installation of equipment.	No
184	PART-4 & SECTION X	Generals		Fire extraction for AHU, OTE & UPSF rooms	AHU rooms, OTEF rooms & UPSF room required fire extraction or not, Please clarify.	Bid Conditions Prevail.	No
185	PART 4 & SECTION X			Lifting eyes	Provisions of hooks: To be provided by civil Contractor. Please confirm.	Bid Conditions Prevail. (Part refer Appendix 19 of Part 2, Section VI-A).	No
186	PART-4 & SECTION-X	GCC-TVE-P00-0001-004_A0		As per drawing no.: GCC-TVE-P00-0001-004_A0-Ventilation strategy in congestion mode.	As per schematic diagram, in the congestion mode, the tunnel ventilation fan is pushing the air in both tunnel and from other side of tunnel, the tunnel ventilation fan pulling the air also from both tunnel. Please clarify. The TVS will be designed for double tunnel congestion system or single tunnel congestion system because it will effect on TVS capacity.	Bid Conditions Prevail. As already given in the referred drg, the TVS shall be designed for double tunnel congestion.	No
187	PART-4 & SECTION X	GCC-TVF-P00-0001-004_A0		As per drawing no.: GCC-TVF-P00-0001-004_A0-Ventilation strategy in congestion mode	As per note marked on drawing all OTEF'S will be running at reduced speed. It means in congestion mode the UPSAF's will run at full speed or only OTEF'S will run at reduced speed. Please clarify.	Bid Conditions Prevail. Operational speeds and mode of operation of all TVS system fans shall be determined based on results of tunnel ventilation simulation studies (which is in scope of Phase 1 Contractor).	No
188	PART-4 & SECTION X	GCC-TVF-P00-0001-006_A0 & 007-A0		As per drawing no.:GCC-TVF-P00-0001-006_A0 & 007-A0-Ventilation strategy in crossover fire case-1 & case 2:	As per schematic layout no booster fan is located at crossover for boosting the air into the tunnel. As per our understanding no booster fan required in crossover area, the critical velocity will be achieved with nozzles only. please confirm.	Bid Conditions Prevail. The achievement of critical velocity shall be determined based on simulation study.	No
189	PART-4 & SECTION-X	GCC-TVE-P00-0001-011-A0		As per drawing GCC-TVE-P00-0001-011-A0 congestion ventilation strategy for typical tunnel, Crossover tunnels, Portal tunnels,BKC siding CASE-I, BKC siding CASE-II	As per schematic drawing the train congestion is showing in both up & down tunnel, please clarify. In congestion system, the double tunnel congestion system will be considered or single tunnel congestion system will be considered.	Bid Conditions Prevail. Consider double tunnel congestion.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
190	PART-4 & SECTION X	GCC-TVE-P00-0001-013_AO		As per GCC-TVE-P00-0001-013_AO	As per the layout sectional details, the nozzle is coming unto the track level. It may come at slab level & as per layout it will be obstructed at DRD for Draught Relief. Please clarify.	Bid Conditions Prevail. (Being D&B contract - Contractor shall design and install the nozzles appropriately).	No
191	PART 4 & SECTION X	GCC-TVE-P00-0001-003_AO-		As per drawing no : GCC-TVE-P00-0001-003_AO-Ventilation strategy In normal mode	As per note at the drawing the all OTEF's & UPSAF'S will be running at reduced speed. It means that in normal mode the OTEF's & UPSAF'S are running at reduced speed. Please clarify which mode these fans will run at its full capacity.	Please refer response of query at Serial No. 108.	No
192	PART 4 & SECTION X	GCC-TVF-P00-0001-006_AO & GCC-TVF-P00-0001-007_AO		As per drawing no. :GCC-TVF-P00-0001-006_AO & GCC-TVF-P00-0001-007_AO-Ventilation strategy in crossover fire case-1 & case-2:	As per schematic diagram, The OTEF(s) & UPASF(S) are in switched off in fire emergency at crossover. Please clarify, How many stations OTEF'S & UPASF'S fans will be switched off.	Please refer response of query at Serial No. 108.	No
193	PART-4 & SECTION-X	GCC-TVF-P00-0001-010_AO		As per drawing no:GCC-TVF-P00-0001-010_AO-Ventilation strategy for track way fire with station smoke exhaust on	As per schematic layout when the fire occurred in a train at track way-both strategy shown in schematic diagram -one is TVF on & OTEF on and 2nd is TVF on & OTEF off. Wherever as per technical specification CLAUSE 5.4.6. , the OTEF and UPASF fan is shown in off mode, only TVF fan is running in on mode. Please clarify the ventilation strategy for track way fire mode.	Bid Conditions Prevail. OTEF fan on indicates that infiltrated smoke will be exhausted also.	No
194	PART 4 & SECTION X	GCC-TVE-P00-0001-003_AO-		As per GCC-TVE-P00-0001-003_AO-Ventilation strategy in normal mode	As per schematic layout the draught relief damper is joined with TVF plenum to out door opening. Wherever as per typical station layout the draught relief damper is very difficult to connect with outdoor opening or it will be separate opening to atmosphere. Please clarify.	Bid Conditions Prevail. Opening will be as shown in bid documents. Difficulty, if any may be substantiated and solution to be evolved.	No
195	PART-4 & SECTION-X	Mid vent shaft		TVF equipment and associated dampers	Any Mid Vent Shaft to be considered in this section or not, if Mid vent shaft coming in this section, please confirm the TVF equipment and associated dampers needs to be considered in MID vent shaft, please provide the TVS schematic for MID-vent shaft.	Bid Conditions Prevail	No
196	PART-4 & SECTION X				All types of civil work related to ECS,TVS system like foundation of equipment, drain sumps, drain channel, structural supports of equipment, floor & wall opening & their finishing to be provided by civil Contractor. Please confirm.	Bid Conditions Prevail. (Please refer to bid documents and especially Appendix 19 of Part- 2, Section VI-A).	No
197	PART-4 & SECTION X				As per layout, the nozzle cut out size seems to be on smaller side. It may be increased as per fan capacity. Actual size will be worked after award of contract.	Bid Conditions Prevail	No
198	PART 4 & SECTION X	GCC-TVE-P00-0001-003-AO		Drwg. No. GCC-TVE-P00-0001-003-AO-Ventilation strategy In normal mode	As per schematic drawing the plenum chamber of both TVF is common so the double tunnel congestion system cannot achieve. Please confirm.	Bid Conditions Prevail. In order to achieve double congestion mode, both TVFs shall run in the same direction. Fully achievable.	No
199	PART-4 & SECTION X				As per architectural layout drawing, the draught relief shaft size seem to be on smaller side, It may be of bigger size. Actual working will be done after award of contract.	Please refer response no 118	No
200	PART-4 & SECTION-X				Purpose of OTE opening showing in the TVF plenum is not clarified. Please clarify the philosophy of the same.	Bid Conditions Prevail. Opening is to extract trackway smoke during trackway fire.	No
201	PART 4 & SECTION X				OTEF room design of open plenum-with the requirement of 24x7 operation of the system under consideration, frequent maintenance as per manufacturer recommendation may be necessary for trouble free operation and the same may not be viable under proposed system configuration.	Bid Conditions Prevail. Fans requiring minimum maintenance shall be selected.	No
202	PART-4 & SECTION-X				No standby to under platform supply fan considered-with the requirement of 24x7 operation of the system under consideration, frequent maintenance as per manufacturer recommendation may be necessary for trouble free operation and the same may not be viable under proposed system configuration.	Bid Conditions Prevail. Fans requiring minimum maintenance shall be selected. UPAS Fan to be provided on each end of station, each fan supplies both UPAS ducts.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
203	PART-4 & SECTION-X			Drawings	ECS and TVS External louvers to be provided by others, please confirm.	Bid Conditions Prevail. Confirmed.	No
204	GENERAL				For water tap in equipment rooms for cleaning the filter & other a/c system & drain point for termination the FCU/AHU/Chiller Plant room /TVS rooms to be provided by others Please confirm.	Bid Conditions Prevail. Contractor shall interface with UGC Contractor to obtain water tap and drains where ever required.	No
205	GENERAL				If any changes in area of station/tunnel & rooms then its considered as a variation. Please confirm.	Bid Conditions Prevail.	No
206	GENERAL				Power socket for single Phase equipment to be provided by E&M or others. Please confirm.	Bid Conditions Prevail. Interface with UGC Contractor. (Please refer Appendix 19 of Part 2, Section VI-A).	No
207	GENERAL				Main incomer cables for ECS & TVS equipment panels to be provided by E&M. Please confirm.	Same response as Serial no.127.	No
208	GENERAL				If scheme will be changed from the contract tender document at the time of detailed design then it will be considered variation. Please confirm.	Bid Conditions Prevail.	No
209	GENERAL				DTE & UPS duct to be provided by others. Please confirm.	Bid Conditions Prevail. DTE and UPAS duct by civil Contractor.	No
210	GENERAL				Mounting bracket for LHD & Booster fan power cable in tunnel to be provided by others. Please confirm.	Bid Conditions Prevail. (Please refer VI-A including its Appendix 19).	No
211	GENERAL			Interface drawing	Means Contractor will prepare the drawing only for there scope of contract. Please confirm.	Bid Conditions Prevail. (Please refer VI-A including its Appendix 19).	No
212	GENERAL			TRAIN DATA	Kindly provide following Train data		No




S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
213					<p>GENERAL DATA</p> <ol style="list-style-type: none"> <li>Design maximum outside air temperature (Dry bulb)</li> <li>Design maximum outside air temperature (Wet bulb)</li> <li>Amplitude of annual temperature fluctuation</li> <li>Maximum average tunnel temperature</li> <li>Design hour</li> <li>Design temperature for cooling at night</li> <li>Train operating speed</li> <li>Design peak hour operating headway</li> <li>Train dwell time at station</li> <li>Congested scenario (trains stopped for more than 3 minutes in tunnel)</li> <li>Fire emergency scenario (tunnel and station)                             <ul style="list-style-type: none"> <li>-Number of trains stopped inside tunnel during congested operation.</li> <li>-Number of trains stopped inside tunnel during fire emergency operation</li> <li>- design heat release of train fire</li> <li>- Design criteria of fire emergency operation.</li> </ul> </li> </ol> <p>TRAIN DATA</p> <ol style="list-style-type: none"> <li>Total length of train</li> <li>Train frontal cross-section area</li> <li>Train frontal cross-section perimeter</li> <li>No. of cars per train</li> <li>No. of powered car per train</li> <li>Operating acceleration time</li> <li>Operating deceleration time</li> <li>Regenerative braking effectiveness</li> <li>Train air-conditioning (A/C) arrangement</li> <li>Number of passengers inside the train</li> <li>Overall skin friction coefficient</li> <li>Average sensible heat rejection from auxiliary systems for an empty car</li> <li>Average passenger weight</li> <li>Average empty train weight</li> <li>Average total train weight</li> <li>No. of motors per powered car</li> <li>Wheel diameter</li> <li>Gear ratio</li> <li>Supply voltage</li> <li>Motor terminal voltage at base speed</li> <li>Traction motor efficiency</li> <li>Chopper/Inverter efficiency</li> <li>Traction motor curves</li> <li>Train operating speed</li> <li>Train dwell time at station</li> <li>Design heat release of train fire</li> <li>Radiation</li> <li>OTE</li> <li>UPE</li> <li>Internal car design condition</li> <li>No. of A/C unit per car</li> <li>No. of fan per condenser unit</li> <li>Condenser fan volume flow rate</li> <li>Condenser air flow exit velocity</li> <li>Heat output per condenser unit</li> <li>Heat transmission through train walls</li> <li>A/C unit unload temperature and cut-off temperature</li> </ol> <p>CIVIL ENGINEERING DATA (ACCORDING TO ENGINEERING DRAWINGS)</p> <ol style="list-style-type: none"> <li>Underground tunnel section</li> <li>Tunnel cross sections</li> <li>Steady state heat source along the tunnel</li> <li>Deep sink temperature of soil</li> </ol>	<p>The train data is for simulation purpose, not required by Phase 2 TVE Contractor.</p>	<p>No</p> <p>No</p>
214	GENERAL				Headway & dwell time to be confirmed in peak hours and non-peak hours.	Bid Conditions Prevail. (Please refer Chapter 5, Appendix 12 of Part 2, Section VI-A).	No
215	GENERAL				Train will be formed of either 6 car (extendable to 8 cars at a later date) or 8 cars, 140m or 180m length and 3.2m wide. It means the system will be design as per 8 cars data. Please confirm.	Bid Conditions Prevail. Confirmed. (System will be designed as per 8 cars train)	No
216	GENERAL				As per general specification the maximum operator speed through station platform shall be limited to 70kmph & at all other location 85kmph, subject to speed restriction, the design speed is set with 95kmph. It means the TVS design will be as per 95kmph. Please confirm.	Bid Conditions Prevail. TVS simulation is in scope of Phase 1 Contractor.	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
217	GENERAL				Please provide the permissible velocity in vent shafts.	Bid Conditions Prevail. (Please refer Part 2, Section VI B).	No
218	GENERAL				Please share DBR data.	Bid Conditions Prevail.	No
219	GENERAL				Architectural layouts with sections, tunnel alignment drawings, tunnel sections, niche locations drawings for booster fans & other drawings pertaining to ECS& TVS work, please provide with AutoCAD soft copy.	Bid Conditions Prevail. Bidder may collect CAD version of bid arch drawings from MMRC.	No
220	GENERAL				Please confirm whether Cooling dumping air required in tunnel.	Bid Conditions Prevail. (Cooling dumping air is not envisaged).	No
221	GENERAL			AutoCAD drawing	Please provide all drawings in AUTOCAD format, Also please share 3D models if available.	Bid Conditions Prevail. Bidder may collect CAD version of bid arch drawings from MMRC.	No
222	Part 2			Scope of Work	We assume that given design population in Employer requirement is final irrespective of any station. Any variation in occupancy will change the equipment capacity and it shall be considered as extra.	Bid Conditions Prevail.	No
223	Part 2 Section V1-B1	6.2.1.3.1 - Description of Air Conditioning System	37 of 145	iv miscellaneous Areas : For Future subways or linkways	Kindly advise additional area to be considered for future and other areas under Miscellaneous area.	Bid Conditions Prevail. Miscellaneous areas are to be considered as provided in drawings.	No
224	Part 2 Section V1-B1	6.2.4.3.1 - Water Cooled Variable Speed Screw Chillers	53 of 145	KW/TR of chilled water system shall be less than 0.65 at 100% load condition.	Kindly advise kW/TR / COP / NPLV of Water Cooled Variable Speed Screw Chiller to be considered for selection.	Bid Conditions Prevail. (Being D&B contract - Contractor shall design the system to meet COP of plant).	No
225	Part 2 Section V1-B1	6.2.5.4.2 - Condenser for Air Cooled Chillers	63 of 145	Condensers shall be air-cooled type of copper tube and copper fin construction.	Air Cooled Chiller manufacturers have been offering Chillers with Condensers in Copper Tube and Al fin construction as standard practice and request you to accept Al fins for Air Cooled Chillers	Bid Conditions Prevail.	No
226	Part 2 Section V1-B4	2.3.30 Other provisions	24 of 69	Each LVSB shall be provided with two rubber mats of ribbed surface, complying with BS 921 or equivalent Indian standards, laid in front of and at the rear of the switchboard. The rubber mats shall be continuous sheets of minimum thickness of 10 mm, each of same length as the switchboard and minimum width of not less than 1000 mm or the width of the space between the fronts or back of the switchboard to the adjacent wall.	As per IS 15652 mat thickness shall be 2 mm. Kindly confirm	Bid Condition Prevail	No
227	DRAWINGS			Drawings provided in PDF format	Request you to provide all the drawings in AutoCAD format, this being design & build requirement	Bid Conditions Prevail. Bidder may collect CAD version of bid arch drawings from MMRC.	No
228	Part 2 Section VI H1 - Technical Specifications ECS	Description of Air-conditioning system Offices, plantrooms and subway.	Page 35 of 145	The short subways (up to approx. 25M) shall be air-conditioned by extension of Concourse AHU systems or by FCUs as the case may be. Longer subways (more than 25M) shall be air conditioned by floor mounted AHUs or FCUs located within the subways. Contractor shall submit the design for acceptance of Engineer.	Please confirm whether separate AHU needs to be considered for longer subway (more than 25M)	Bid Condition Prevails (Please refer clause no 6.2.1.3 (I) of Part 2-VI-B1).	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
229	Part 2 Section VI-B1 – Technical Specifications - ECS	6.2.1.5 Station Smoke Extraction System	Page 40 of 145	For long subways, separate smoke extraction shall be provided. The smoke extraction system can also be connected to the concourse smoke exhaust system via a separate branch with smoke fire rated damper which allows smoke extraction in the subway. For short subways, it shall be considered as part of the concourse and the smoke exhaust will be provided by the concourse smoke exhaust systems. The Contractor shall prove the efficiency/adequacy of smoke management system (Both long and short subways) with the help of CFD analysis/modelling	Please confirm whether separate Smoke extraction fans (1W+1S) needs to be considered for long subway (more than 25M)	Bid Conditions Prevail. (Please refer clause no 6.2.1.5 of Part 2-VI-B1).	No
230	Part 2 Section VI B1 – Technical Specifications - ECS	6.2.2.3 Technical and installation requirements	Page 44 of 145	f Heat pipe heat exchanger (Deleted)	Please confirm Heat Pipe or Heat recovery unit needs to be considered to maintain the RH in station public area.	Bid Conditions Prevail. (Being D&B contract - Contractor to design the system to provide performance as per Employer's requirement)	No
231	Part 2 Section VI-B1 – Technical Specifications - ECS	6.2.4 Water cooled Chillers	Page 51 of 145	b. Magnetic Levitation Chillers shall be provided for the following stations of Phase 2: Vidhan Bhawan, Sidhivinayak & Shitladevi stations.	Please clarify what is the criteria for selection of magnetic levitation chillers for these stations. We request you to go with normal screw chillers with VFD for all stations to optimize on the cost.	Bid Condition Prevails.	No
232	Part 2 Section VI-B1 – Technical Specifications - ECS	6.2.5.4.4 Compressor Motor	Page 64 of 145	Temperature sensor shall be provided in motor winding to protect the motor for high temperature rise.	Thermistor shall be provided for protection against high winding temperature. Please confirm	Bid Condition Prevails.	No
233	Part 2 Section VI B1 – Technical Specifications - ECS	6.2.5.4.4 Compressor Motor	Page 65 of 145	The starter for the motor shall be automatic Soft type with tapings to limit starting current, within 2 times the full load current.	For Scroll Chillers, as a standard OEMs are providing DOL starter, request you to accept this also.	Bid Conditions Prevail. This is to be finalised during detailed design stage being DB contract.	No
234	Part-4 Drawings	1. Water flow schematic - Environmental Control System (Sheet 1of 2)	GCC-TVE-P00-0001-020_A1		Please confirm Water treatment plant needs to be considered in this contract. If yes, Please include the Technical specification for the Water Treatment plant.	Bid Conditions Prevail. Technical Specifications already provided, please refer Clause 6.2.16 of Section B1 Part-2.	No
235	Part-4 Drawings	1. Water flow schematic - Environmental Control System (Sheet 1of 2)	GCC-TVE-P00-0001-020_A1	Air cooled chiller and associated pumps with VFD	Please confirm VFDs needs to be considered for Air cooled chiller and associate pumps.	Confirmed for associated pumps and for chiller refer reply of query no.154.	No
236	Part-4 Drawings	1. Water flow schematic - Environmental Control System (Sheet 1of 2)	GCC-TVE-P00-0001-020_A1	Condenser water pumps with VFD	Please confirm VFDs needs to be considered for Condenser water pumps.	Bid Conditions Prevail. Confirmed.	No
237	Part-4 Drawings	1. Water flow schematic - Environmental Control System (Sheet 1of 2)	GCC-TVE-P00-0001-020_A1	Pressurization Unit with Closed type expansion tank for AC plant room	Please confirm Pressurization Unit with Closed type expansion tank to be considered for all stations irrespective of chiller plant room location.	Bid Conditions Prevail. Being D&B contract - Contractor shall design the expansion tank system.	No
238	Part-2 VI-B2	General		2.P2.5.VI-B2.TVS Phase 2	Please confirm the provision of OTE and UPE duct not a part of this contract.	Confirmed Bid Conditions Prevail. OTE and UPAS duct will be provided by civil Contractor.	No
239	Part-4 Drawings	General		AutoCAD drawings	Please provide all drawings in AUTOCAD format	Bid Conditions Prevail. Bidder may collect CAD version of bid arch drawings from MMRC.	No
240	Part 2 – Employer's Requirement Section VI-A - General Specification & Appendices VIII Page	1.10.15		Apart from Rolling Stock Contractor, the system Contractor shall prepare a Station Installation Coordination Plan (ICP) for each station (including station subways) on a room by room basis covering the period of interfacing Contractors' access.	ECS & TVS Contractor responsibility would be only to prepare Installation Coordination Plan (ICP) of only AHU room, Fan room & chiller plant room. Kindly confirm.	Bid Conditions Prevail. The Contractor shall be responsible for coordinating with all other concerned agencies in all aspects of TVE design and installation in all rooms where TVE services are to be provided.	No

S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
241	Part 2 – Employer's Requirement Section VI-A - General Specification & Appendices VIII Page	1.10.16		The Contractor shall be responsible for co-ordinating all aspects of the design and Installation including the production of Combined Services Drawings, SEM Drawings and Consolidated Design Drawings, where needed.	ECS & TVS Contractor responsibility would be only to co-ordinate with other works Contractor for CSD. The responsibility of production of Combined Services Drawings, SEM Drawings and Consolidated Design Drawings would lie with the civil Contractor. Kindly confirm.	Bid Conditions Preval. Please refer to response at serial no.161. In addition please note the preparation of CSD, SEM etc. is a joint responsibility and TVE Contractor shall provide his inputs in relevant drawings and documents as per planning for coordination.	No
242	PART-2 Employer's Requirement & SECTION VI A	Clause 17.11.1	149 of 194	Contractor's Own Rolling Stock	We understand that The Work Train is referred to Manually Operated Train Trolley required during lifting, shifting and installation of project. However, if any Rolling Stock is required during testing & commissioning of ventilation system, same shall be arranged by the Employer. Kindly Confirm.	Bid Conditions Preval. Confirmed.	No
243	PART-2 Employer's Requirement & Section VI-B1	Clause 3.1.4	14 OF 145	General - Scope of work	Room sizes can be verified after actual selection of equipment, during Detail Engineering post award of work.	Bid Conditions Preval. (Refer Clause no. 3.1.5 of Section VI-B1, part-2).	No
244	PART-2 Employer's Requirement & SECTION-VI B1	Clause 1.5	11 OF 145	Relevant Documents- Priority of documents	With respect to precedence of documents in case of discrepancies, the replies to pre-bid queries shall be inserted prior to technical specification including addendum. Kindly Confirm.	Bid Conditions Preval. Bidder shall ensure to ask all relevant queries in order to avoid discrepancy between queries and bid documents. Also refer Article 1 under Part 3, Section IX for precedence of contract documents.	No
245	PART-2 Employer's Requirement & SECTION-VI B1	Clause - 4.6.1	20 OF 145	Smoke Extraction Control - Smoke detector shall be provided in supply air duct which will detect the presence of smoke in supply air duct and trip the AHU.	Clarify the Scope of Smoke detectors.	Bid Conditions Preval.	No
246	PART-2 Employer's Requirement & SECTION-VI B1	Clause - 5.3.1	22 OF 145	The make up water tank for the cooling tower shall be provided by civil Contractor.	We understand that the make up water tank including piping & ancillaries works up to cooling tower shall be provided by civil Contractor. Please confirm.	Bid Conditions Preval. Make up tank for cooling tower is in civil scope. (Please refer dwg no. - GCC-TVE-P00-0001-020_A1 of Part 4 Section X).	No
247	PART-2 Employer's Requirement & SECTION-VI B1	Clause - 5.3.1	22 OF 145	The make up water pumps shall be located in the pump room.	The make up water pump will be used only for expansion tank make up. It is not applicable for cooling tower. Please confirm.	Bid Conditions Preval. (Please refer dwg no. - GCC-TVE-P00-0001-020_A1 of Part 4 Section X).	No
248	PART-2 Employer's Requirement & SECTION VI B1	Clause -5.5.2	24 OF 145	Filter cleaning room	As per our understanding the filter cleaning room will be provided by civil Contractor & provision for water connection and drain connection to be provided by other system wide Contractor. Please confirm.	Bid Conditions Preval. Filter cleaning room, and water supply and drain provision is in civil Contractor scope.	No
249	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.1.11	32 OF 145	a) Fire stopping Unused slots, sleeves and other general construction shall be closed and sealed with a fire stopping material.	We understand wall opening, sleeves in floor and slab including finishing to be done by civil Contractor. Please confirm.	Bid Conditions Preval. (All openings in wall, floor or slab shall be provided by Civil Contractor as per TVE Contractor's requirement as given under Appendix 19 of Part 2 Section- VIA. However, finishing work as required shall be done by the TVE Contractor as per Clause 6.1.11 of Part 2 Section VI B1).	No
250	PART-2 Employer's Requirement & SECTION-VI B1	Clause - 6.1.11	31 OF 169	Future slots	As per our understanding this work to be done by civil Contractor. Please confirm.	Bid Conditions Preval.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
251	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.2	32 OF 169	Design parameters	Kindly provide details such as Wall thickness , Slab thickness, Concrete Grading, Slab Weight, Glass details & type for heat load calculations. This requirement is mandatory for correct evaluation. Kindly provide.	Bid Conditions Prevail. a. External walls are concrete walls. Density of concrete is 25KN/m2. Please refer to Architectural Auto CAD drawings for wall thickness. b. Slab is of reinforced concrete. Other civil construction details such as concrete grading etc. will be provided by Civil Contractor. c. Glazing shall comply with requirements of BS 6262. d. Toughened glass shall be float type conforming to BS 952, clear or body tinted as required, flat and parallel surfaces, provide a clear and undistorted vision and shall have a minimum thickness of 12mm.	No
252	PART-2 Employer's Requirement & SECTION-VI B1	Clause -6.2.1.3	33 OF 145		Given design inputs are final or it will be changed at the time of detail design. Any change in design criteria shall form basis for price variations.	Bid Conditions Prevail.	No
253	PART-2 Employer's Requirement & SECTION-VI B2	Clause -3.2.2	13 of 104	Fire rated enclosure for control cables	Please clarify the area where fire rated enclosure required for control cables and types of enclosure.	Bid Conditions Prevail. (Being D&B contract - Contractor shall prepare layout and determine location of cable passages)	No
254	PART-2 Employer's Requirement & SECTION VI B2	Clause -3.6.1	22 of 104	Scope of Work of Supply	Minor civil works like grouting of equipment, cutting & finishing of opening in brick walls-upto which sizes. Please confirm.	Bid Conditions Prevail. (Refer Appendix 19 of Part 2, Section VI-A).	No
255	PART-2 Employer's Requirement & SECTION-VI B2	Clause -5.1.3	34 of 104	Normal Operating Conditions	The OTE duct & UPE duct to be RCC or metallic and It will be provided by civil Contractor. Please confirm.	These ducts shall be RCC and to be provided by civil Contractor.	No
256	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.6 (H)	6 of 65	Busbar Phase identification	Busbars shall be coloured with fire retardant LSZH paint for Phase identification. That means there is no requirement of fire retardant sleeves in that case. Please confirm.	Bid Conditions Prevail. This clause is for Phase identification.	No
257	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.8 (A)	7 of 65	Terminal Blocks	For maintenance and service point of view terminal block made melamine material was not reliable. Shall we propose polyamide instead of that. Please confirm.	Bid Conditions Prevail.	No
258	PART-2 Employer's Requirement & SECTION-VI B4	Clause A 2.3.9 (D)	8 of 65	Size of Control Cabling	Shall we use 1.5 sq mm core wire instead of 2.5 sq mm in control cabling. Please confirm	Bid Conditions Prevail.	No
259	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.9 (E)	8 of 65	Material for ferrule	Shall we use ferrule made of PVC material in place of LSZH material. LSZH ferrule is not easily available in the market. Please confirm.	Bid Conditions Prevail	No
260	PART-2 Employer's Requirement & SECTION-VI B4	Clause A.3.3.2.17	31 of 65	Cable Joints	Please confirm allowable number of joints for long cables above 300 mtr. Also please confirm the number of joints allowable for cables which shall be stolen at site during execution.	Bid Conditions Prevail.	No
261	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 4.3.3	34 of 65	Cable Trays and Ladders; point a	Full wrap around cable tray has been mentioned in the specification. However, full wrap around cable tray may damage the insulation of cables during installation / laying. Please clarify.	Bid Conditions Prevail.	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
262	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 4.3.3 (D-V)	36 of 65	Cable Ladders-Additional General Requirement	Hot dipped galvanized clamps, bolts shall not easy to install. Shall we use Electro tinned clamps, bolts. Please confirm.	Bid Conditions Prevail.	No
263	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 4.3.6 (A)	39 of 65	Conduit and Accessories- General point(K)	Pulling of wire shall be easy in inspection type conduit bends, elbows and tees. Shall we use the same. Please confirm.	Bid Conditions Prevail. Use as specified.	No
264	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 4.3.6 (B)	41 of 65	Cast in Conduits/Concealed conduits point(a)	Shall we use M 5 type of conduit as a concealed conduit. Please confirm.	Bid Conditions Prevail.	No
265	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.3 (O)	5 of 65	Low voltage Switchboards Cubicle Construction	can we consider 3.0 mm thick non-magnetic gland plates rather than 3.2 mm thick at the top and bottom. Please clarify.	Bid Conditions Prevail.	No
266	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.3 (P)	5 of 65	Low voltage Switchboards Cubicle Construction	Upto 250A Copper flexible wire shall be used for linking and above 250A Insulated copper busbar shall be used. Size of busbar/wire shall be as per our standard and current rating of switchgear.	Bid Conditions Prevail.	No
267	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.6 (K)	7 of 65	Busbars	As per Specification, the maximum temperature of the bus-bars and the bus connections shall not exceed 90°C. But the Temperature rise will be as per IEC Standards. Please confirm.	Bid Conditions Prevail.	No
268	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.8 (B)	7 of 65	Plain and spring washers, nuts and lockouts shall be electro-tinned	As per Standard Design, can we use 8.8G HT,MS Fasteners which are Zn Coated and Hexavalent yellow passivated, these bolts & nuts are capable of withstanding 30Nm torque required on the busbar joints. Please confirm.	Bid Conditions Prevail. Submit details during design in case of superior material proposed.	No
269	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.10 (N)	9 of 65	Display of Single meter.	Available range for ammeter and voltmeter is 3.5 Digit. We shall propose to use 3.5 digit meters. Please confirm.	Bid Conditions Prevail.	No
270	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.22 (IX)	15 of 65	Category for MCCB shall be A or B.	Utility category for MCCB shall be A. Please confirm.	Bid Conditions Prevail. (Part of detail design)	No
271	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.3 (M)	5 of 65	Shrouds at the busbar joints and cable terminations. All insulation materials shall be low smoke halogen free.	As per already Type Tested Assemblies of Switchboard, all busbar in Switchboard shall be Bare Copper and no shrouding on the busbar joints and cable termination. Switchboards with Insulated Sleeves on Busbars has not Pre Type Tested. Hence the cost attributed for New Type test of Switchboards with this arrangement shall be charged extra at actual. Please confirm.	Bid Conditions Prevail.	No
272	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 3.3.24 (B)	17 of 65	CTs shall have a short-time current rating of not less than 56 kA for 3 seconds on primary side.	As per IS-2705, CT's short-time current rating shall be 25 times of primary side current, that comes around 62.5kA for 1 sec for incomer breaker. Please confirm.	Bid Conditions Prevail. Minimum short-time current rating is given. Submit STF during detailed design for approval.	No
273	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 3.3.22 (B -J)	17 of 65	Electrical Endurance of 10000 operations cycle	Electrical Endurance of 10000 operations is not possible for rating upto 630A for any vendor, kindly reduce it to 5000 operation upto 630A & 8000 operation upto 250A MCCB's. Please confirm.	Refer Addendum no.2.	Yes
274	PART-2 Employer's Requirement & SECTION-VI B4	Clause B 2.3.3 (E)	5 of 65	Low voltage Switchboards Cubicle Construction	Panels required are welded type only, kindly approve Bolted design also, as it gives lot of modularity or ease of future expansions as against of welded design.	Bid Conditions Prevail.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
275	PART-4 & SECTION-X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Type of starter	Starter not shown for Ejector room EAF, kindly confirm the type of starter.	Bid Conditions Prevail. (Being D & B contract - Contractor shall propose starter following the specifications)	No
276	PART 4 & SECTION-X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Type of starter	Please confirm the type of starter for Fire damper Panel and FCU Panel.	Bid Conditions Prevail. (Please Refer Clause 5.3.2 of Part - 2 Sec VI- B4)	No
277	PART 4 & SECTION X	GCC-TVE-P00-0001-026_A1	Electrical Schematic for ECS	Air Compressor	Air compressor to be provided in TVS Panel 1& 2 but not shown in Schematic. Kindly provide details for the same	Bid Conditions Prevail. (Detail Design Consultant shall submit the detail drawings).	No
278	GENERAL			Equipment foundation	All RCC & masonry foundation and structural steel supports for equipment to be provided by civil Contractor. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
279	GENERAL				All opening & cutout in wall, floor & slabs & their finishes to be done by civil Contractor. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
280	GENERAL				Water for flushing of the system to be provided by the other system Contractor. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
281	GENERAL				Treated water & power for system testing & commissioning to be provided by other system Contractor. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
282	GENERAL				Scope of CSD, SEM & WOD drawing to be clarified.	Bid Conditions Prevail. (Refer Appendix 19 of Part 2, Section VI-A).	No
283	GENERAL			Cladding	Fire sealing of opening in wall, floor, slab, sleeves & unused slots & other general construction to be done by civil Contractor, after installation. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
284	GENERAL				In this contract, the supply air duct using as a smoke extraction duct in case of fire at concourse, platform & mezzanine level & all ducts are fire rated, what fire rating required in grilles & diffusers. Please confirm.	Bid Conditions Prevail. (Fire rating shall be as per Clause 6.2.10.3.4 of Part 2, Section VI-B1)	No
285	GENERAL				At some station separate chiller plant room is provided for retail area, standby chiller required for retail area. Eg. Siddhi Vinayak station, please clarify.	Bid Condition Prevails (Please refer clause no 5.3.5 of Part 2, Section VI-B1) Intermediate level PD area ECS is not in scope of this Bid.	No
286	GENERAL				MET in each plant room near the equipment to be provided by E & M. Please confirm.	Bid Conditions Prevail. (Refer Appendix 19 of Part 2, Section VI-A).	No
287	GENERAL				Support of TVF, OTEF & UPSF and any type of foundation or support of equipment will be provided by others. Please confirm.	Bid Conditions Prevail. (Please refer all bid documents including Appendix 19 of Part 2, Section VI-A).	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
288	GENERAL				All minor & major civil works like equipment's related plinths, pockets, insertion plates, floor, slabs opening supports, RCC foundation, opening & their finishing, structure support, hooks, drain jump, drain channel & other related to civil work in civil Contractor scope, please confirm.	Bid Conditions Prevail. (Please refer VI-A Including its Appendix 19)	No
289	GENERAL			TRAIN DATA	1. Kindly provide following Train data. 2. Tunnel cross sections	Bid Conditions Prevail. Please refer Part 2 Section VI-A Appendix 12. Train data shall be provided by rolling stock Contractor.	No
290	GENERAL				MET for earthing of equipment of ECS/TVS to be provided by others in each plant room. Please confirm.	Bid Conditions Prevail. (Refer Appendix 19 of Part 2, Section VI-A).	No
291	GENERAL				Clean earth to be provided by others near the equipment. Please confirm.	Bid Conditions Prevail. ( Please refer Appendix 19 of Part 2, Section VI-A).	No
292	GENERAL				Earthing of the booster fan in tunnel to be provided by other upto booster fan. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
293	GENERAL				Manual damper at suction of ventilation fan required or not.	Bid Conditions Prevail. Being D&B contract - Contractor shall propose the ventilation fan detail during Design.	No
294	GENERAL				Please clarify the requirement of pipe cladding.	Bid Conditions Prevail. (Please refer Part 2, Section VI-B)	No
295	GENERAL				Since the design in scope of Contractor, final requirements of TVS fans capacities shall be calculated during detailed design stage of the project. However, can you please confirm if there is any minimum requirement of fan capacity. Please confirm.	Bid Conditions Prevail. This is D&B contract, capacities shall be estimated during design.	No
296	GENERAL				TVS Nozzle (SCADA) nozzle shall be provided as per requirement worked out during detailed design and the provision of TVS Nozzle (Saccardo) shall not be considered mandatory. Please confirm.	Bid Conditions Prevail.	No
297	GENERAL				Please confirm if OTE fan is 1 working + 1 standby or 2 working. Please confirm.	Bid Conditions Prevail. Both OTE fans working at reduced speed	No
298	GENERAL				Contractor shall be free to choose the supplier which meets the project technical requirements. Supplier can be of any country. Indian makes to be promoted in view of "Make in India" drive. Please confirm.	Bid Conditions Prevail.	No
299	GENERAL				Incomer of ECS & TVS panel to be provided by others. Please confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part 2, Section VI-A).	No
300	GENERAL				Please provide the outline design criteria.	Bid Conditions Prevail. Please specify if data is further required for bidding.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
301	GENERAL				If any area or design will be revised from tender drawing then it will be considered as a variation. Please confirm	Bid Conditions Prevail.	No
302	GENERAL			TVS Panel	TVS Panel location is not clear as per the drawings as no switchgear room provided for the same. Please clarify	Bid Conditions Prevail. It is clearly mentioned in Architect drawings.	No
303	GENERAL			TVS Panel	Room sizes provided for equipment rooms are not of appropriate size to accommodate large panels as per the manufacturer. Kindly clarify	Bid Conditions Prevail. Being D&B contract - Contractor shall submit details based on estimation, post award of work	No
304	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices	General	General	PCC/RCC/Masonry Foundations/Structural-Steel Foundations for ECS/TVS Equipment	We understand that the PCC/RCC/Masonry Foundations/Structural-Steel Foundations for all the ECS/TVS Equipment shall be in scope of Civil Contractor. Kindly Confirm.	Bid Conditions Prevail. (Please refer Appendix 19 of Part-2, Section VI-A).	No
305	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices	Clause 9.1.3 e	Pg 101 of 194	Factory Acceptance Test	We understand that the cost of their own boarding, lodging, travel & miscellaneous etc. shall be borne by the Employer.	Bid Conditions Prevail. Refer Part 3, Section VII, Clause GC 23.2	No
306	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices	Appendix - 1	Pg-1 of 2	Schedule of Key Dates	In the event of project gets delayed due to reasons attributable to Employer, the Contractor shall be eligible for extended time and cost.	Bid Conditions Prevail.	No
307	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices-18-A	Clause 37.1	Pg 60 of 64	Schedule 4-Penalty Clause Charges To Be Recovered From Contractor For Unsafe Act Or Condition SI. No. 1 - She Policy & Plan I) She Plan C) Not Updated As Per Employers Requirement's Clause 18.33.5	There is no such clause 18.33.5 in this document.	Bid Condition Prevails (Clause no. 18.33.5 is in Part 2,Section VI-A)	No
308	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices-18-A	Clause 37.1	Pg 60 of 64	Schedule 4-Penalty Clause Charges To Be Recovered From Contractor For Unsafe Act Or Condition SI. No. 2 - She Organization I) Not Complying To The Minimum Manpower Requirements As Mentioned In Chapter 18 Of Employer's Requirement	There is no mention of number of required manpower w.r.t SHE Organization in the document.	Bid Conditions Prevail. Refer Part 2, section VI-A on planning for manpower requirements for all disciplines including OHS&E.	No
309	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices-18-A	Clause 37.1	Pg 61 of 64	Schedule 4-Penalty Clause Charges To Be Recovered From Contractor For Unsafe Act Or Condition SI. No. 3, She Audit Internal Audit: Mars And Electrical Safety	There is no mention of MARS in the document and no prescribed format is given for Monthly Audit Rating Score (MARS) - Pl clarify.	Monthly Audit Report format shall be provided post award of work.	No
310	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices 18 A	Clause 37.1	Pg 61 of 64	Schedule 4-Penalty Clause Charges To Be Recovered From Contractor For Unsafe Act Or Condition SI. No. 4, Injury And Incident Reporting I)ii) Abnormal Delay In Reporting Accidents Or Willful Suppression Of Information About Any Accident/ Occurrence As Per Clause No. 18.40.4 In Chapter 18.	The clause 18.40.4 is not there in the document however the imposed condition is partly mentioned under clause 8.1.4 in of the document.	Bid Conditions Prevail. Refer Part 2, section VI-A, chapter 18, Clause no 18.40.4.	No
311	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices	Clause 15.4	Pg 139 of 194	The Contractor's Site Facilities	We request Employer to kindly provide 500 Sq. mtr. space for site office & site store at each station free of Cost	Bid Conditions Prevail. (Please refer Section VI-A, Appendix 15 and Clause 3.2 of Appendix 19, Part 2, Section VI-A).	No
312	Part 2 - Employer Requirements Section VI-A- General Specification And Appendices	Clause 15.4	Pg 139 of 194	The Contractor's Site Facilities	We request Employer to kindly provide 10,000 sq. mtr. space for central store & yard at location in vicinity to the stations free of cost.	Bid Conditions Prevail. (Please refer Section VI-A, Appendix 15 and Clause 3.2 of Appendix 19, Part 2, Section VI-A).	No





S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
313	Part 2 - Employer Requirements Section VI-A General Specification And Appendices	Clause 15.10.	Pg 141 of 194	Security	Overall Security of the site shall be In scope of Civil Contractor. Kindly Confirm.	Bid Conditions Prevail.	No
314	Part 2 - Employer Requirements Section VI-A General Specification And Appendices	Chapter - 17	Pg 144 of 194	Work Site	If access to site is such that, non-standard and other special arrangements are to be made in order to carry out works like lifting, shifting, installation etc., the Employer shall compensate for cost and time incurred by Contractor.	Bid Conditions Prevail. (No extra cost shall be compensated by the Employer).	No
315	Part 2 - Employer Requirements Section VI-A General Specification And Appendices	Clause 17.3	Pg 144 of 194	Site Services	Facility like water & electricity shall be provided by Civil Contractor. Unit rates for water and Electricity to be provided at pre-bid stage or else standard govt. rates shall be considered. Please confirm.	Bid Conditions Prevail. (Please refer Clause 17.8.9 of Part 2, Section VI-A and Appendix 19 of Part 2, Section VI-A).	No
316	Part 2 - Employer Requirements Section VI-A General Specification And Appendices	Clause 17.3	Pg 145/146 of 194	Site Services /Site Cleanliness	Facility like temporary drainage and sewage disposal, shall be provided by Civil Contractor free of cost. Please confirm.	Bid Conditions Prevail.	No
317	Part 2 - Employer Requirements Section VI-A General Specification And Appendices-18-A	Clause 17.5	Pg 146 of 194	Prevention Of Mosquito Breeding	Facilities required for Prevention of Mosquito Breeding shall be provided by Civil Contractor. Please Confirm.	Bid Conditions Prevail. (Prevention of mosquitoes breeding shall be done as mentioned under Clause 17.5 of Part 2, Section VI-A)	No
318	PART 2 & SECTION VI B4	Clause B 3.3.2.7	Page 25 of 65	Voltage drop	As per specification no voltage drop has been specified, therefore for cable calculation as per standard practice we have considered 5% voltage drop till end equipment. In 5% we suppose the voltage drop is of cable only and VFD voltage drop is not supposed to be considered in this 5%. Kindly clarify.	Bid Conditions Prevail As per bid documents, the allowable voltage drop from TVE Switchgear till the end equipment shall be maximum 2%.	No
319	Interface Drawings	GCC-TVE-P00-0001-041_A0 TVE SCADA-Model	Page 1 of 1	Tunnel Ventilation and Environmental Control System SCADA Drawing	At station level, TVE SCADA Server & 1 TVE SCADA Workstation is required at SCR to monitor & control the equipment's under this contract. Please confirm.	Bid Conditions Prevail. Detail already mention in Drawing No.GCC-TVE-P00-0001-041_A0 TVE SCADA-Model	No
320	Interface Drawings	GCC-TVE-P00-0001-041_A0 TVE SCADA-Model	Page 1 of 1	Tunnel Ventilation and Environmental Control System SCADA Drawing	At OCC/BCC Only 2 SCADA Server, 2 Scada Workstation, 1 Maintenance Management Server with 1 workstation and 1 IBP is to be considered as per referred drawing. Please confirm.	Refer Addendum 2, Attachment No. 2	Yes
321	Interface Drawings	GCC-TVE-P00-0001-041_A0 TVE SCADA-Model	Page 1 of 1	Tunnel Ventilation and Environmental Control System SCADA Drawing	We understand that M&E SCADA is not part of TVE SCADA works of this contract. Please confirm.	Bid Conditions Prevail. Confirmed.	No
322	Interface Drawings	GCC-TVE-P00-0001-041_A0 TVE SCADA-Model	Page 1 of 1	Tunnel Ventilation and Environmental Control System SCADA Drawing	RTUs are not shown in the drawing. We understand that these are not required as station level SCADA equipment can easily communicate directly with OCC SCADA equipment through FOTS backbone. Please confirm.	Bid Conditions Prevail. (Please refer Part-2, Section VI-B3)	No
323	PART-4 & SECTION-X	Drawings	Drawings	Drawing	Large Property Development area to be considered as a Air-conditioned area or Non-Air-conditioned area, like Sidhivinayak temple station whole Intermediate level is property development area, it will be considered as a Air-conditioned area or Non-Air-conditioned area, please confirm.	Bid Condition Prevails (Please refer clause no 5.3.5 of Part 2,Section VI-B1) Sidhivinayak PD area at Intermediate level may be air-conditioned but it is in tenant's scope.	No
324	PART-4 & SECTION-X	Drawings	Drawings	Drawing no:GCC-TVE-P00-0001-022_A0 & 023 typical airflow schematic for ECS	Change room to be considered as a Air-conditioned area or ventilated area, please confirm.	Bid Conditions Prevail. Please Refer Drawing no:GCC-TVE-P00-0001-022_A0 & 023 typical airflow schematic for ECS	No
325	PART-4 & SECTION-X	Drawings	Drawings	Drawing no:GCC-TVE-P00-0001-022_A0 & 023 typical airflow schematic for ECS	Incase of fire in rooms for smoke cleansing the make up air damper required or not, please confirm.	Bid Conditions Prevail Smoke cleansing system shall be used after incident of fire to cleanse the smoke from rooms. Every room shall be provided with normally closed fire dampers. Fresh air is required in the rooms for air-conditioning purpose, not for make up in case of fire.	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
326	PART-4 & SECTION-X	Drawings	Drawings	Drawing	Grant Road Station - The Mezzanine level drawings to be provided , It is not provided in tender documents.	Refer Addendum 2, Attachment No. 3	Yes
327	GENERAL	GENERAL	AutoCAD Drawings	AutoCAD Drawings	AutoCAD drawings required for all stations.	Bid Conditions Prevail. Bidders may collect CAD version of arch drawings from MMRC office.	No
328	Part 4 Section X			Staircase legend not provided for all stations.	Bidder requests to provide staircase legend for all stations which is required for staircase pressurisation calculation.	Bid Conditions Prevail. (All enclosed staircases to be pressurized.)	No
329	UGC04- ARP-SSD-5015-001	Platform level key plan		BOH area at Platform LHS	Kindly confirm any ECS provision required for BOH area at platform LHS , between grid 4 & 5.	Bid Conditions Prevail. (Please refer table no 6.1 of Part 2, section VI-B1).	No
330	UGC04- ARP-SSD-5014-001	Mezzanine level key plan		SCADA rooms for the station.	As per the SCADA architecture there should be 2 Nos. SCADA rooms in every station, whereas, Shitaladevi station has only one SCADA room i.e at mezzanine level.	Bid Conditions Prevail. There shall be two SCADA rooms.	No
331	UGC04- ARP-SDA-4013-001	Concourse level key plan		Unnamed room at LHS	Kindly confirm any ECS provision required for unnamed room at concourse LHS between TVF room and SCADA room, Grid No. 4 & 6.	Bid Conditions Prevail. This is station AHU room.	No
332	UGC04- ARP-SDA-4015-001	Platform level key plan		Unnamed room at RHS	Kindly confirm any ECS provision required for unnamed room at platform RHS between Grid No. 17 & 18.	Bid Conditions Prevail. This is communication carrier room, to be air conditioned.	No
333	UGC04- ARP-SDA-4013-001	Concourse level key plan		S&T UPS room	Kindly confirm there is no S&T UPS room in Dadar station.	Bid Conditions prevail Please consider S&T UPS room and all other rooms as per RFP.	No
334	UGC03- ARP-SWO-8012-001	Concourse level key plan		REFUSE room (C31)7m2 & REFUGE room (C40)N 15m2 in mentioned in concourse room area (schedule work) station, but is missing from the station architectural drawing.	Kindly confirm there is no REFUSE room (C31)7m2 & REFUGE room (C40)N 15m2 in work station	Bid Conditions prevail Please consider refuse room and all other rooms as per RFP.	No
335	UGC03- ARP-SML-8012-001	Concourse level key plan		Concourse level key plan missing	Bidder requests to provide CAD drawing for Mahalaxmi station concourse level.	Bidder can collect the CAD drawing from MMRC	No
336	UGC03- ARP-SSM-8012-001	Concourse level key plan		UNA room at concourse RHS	Kindly confirm any ECS provision required for UNA (C36) room at concourse RHS at grid No.15A.	Bid Conditions Prevail. (Please refer clause no 6.2.1.3 (i) (iv) of Part 2, section VI-B1 - miscellaneous areas).	No
337	UGC03- ARP-SSM-8013-001	Platform level key plan		UNA room at platform LHS	Kindly confirm any ECS provision required for UNA room at platform LHS at grid No.6A.	Bid Conditions Prevail. (Please refer clause no 6.2.1.3 (i) (iv) of Part 2, section VI-B1 - miscellaneous areas).	No
338	UGC03- ARP-SSM-8012-001	Concourse level key plan		CUPD passage	Kindly confirm any ECS provision required for CUPD passage at concourse .	Bid Conditions Prevail. (ECS provision required).	No



S. No.	PART & SECTION REFERENCE	CLAUSE REFERENCE	PAGE NO	CLAUSE DESCRIPTION	BIDDERS QUERY	MMRC RESPONSE/CLARIFICATION	ADDENDUM (Y/N)
339	UGC03- ARP-SSM-8012-001	Concourse level key plan		Difference between CAD drawing and PDF drawings.	As there is difference between the PDF drawings provided in the tender and the CAD drawings provided later, kindly confirm which drawings to consider for designing.	Bid Conditions Prevail. Bidder can collect the CAD (PDF) version of Science Museum bid drawings.	No
340	UGC03- ARP-SMC 8012-001	Concourse level key plan		UNA room at concourse LHS.	Kindly confirm any ECS provision required for UNA room at concourse LHS between grid No.6A & 7A.	Bid Conditions Prevail (Please refer clause no 6 2.1.3 (i) (iv) of Part 2, section VI-B1 - miscellaneous areas).	No
341	UGC03- ARP-SSM-8051-001 MM3-GC-AR-ANC-1081301-R0	Ancillary building for Science museum station		Ancillary modules for Science museum station.	As per drawing No. MM3-GC-AR-ANC-1081301-R0, only Module 5 is shown for science museum station, where as as per UGC03- ARP-SSM-8051-001 all 5 modules are shown for the station. Kindly confirm which drawing to consider.	Refer Station Ancillary Building Drawing - UGC03- ARP-SSM-8051-001	No
342	UGC02- ARP-SG II-0800-002-A	Cross section of Grant road		Mezzanine level shown in drawings.	As per the mentioned drawing no. Mezzanine level is shown in the section but no mezzanine level drawing is provided. Bidder requests to provide the same urgently as it is important in designing the station Air-conditioning system.	Refer Mezzanine level drawing provided in Addendum No.2	Yes



