



MUMBAI METRO RAIL CORPORATION LIMITED (MMRC)
(Joint Venture of Govt. of India and Govt. of Maharashtra)
Mumbai Metro Line 3 - Transit Office, Wing "A", North Side of City Park,
E-Block, Bandra-Kurla Complex, Bandra (East) Mumbai-400051, India.
Telephone: +91-22-26575221

"Design, Manufacture, Supply, Installation, Testing and Commissioning of Tunnel Ventilation System & Environmental Control System between BKC (excluding) to Mumbai Central (including) Stations." (Package: 15)

Date: [16.01.2019]

Loan Agreement Number: [ID-P 268]

IFB Number: [MM3-CBS-TVE (P2L1)]

Addendum No: 2

Sr. No.	Description and Clause No.	Amendment
1	Part 1 - Bidding Procedure Section IV-A - Bidding Forms Bid Form 21 FIR-4: Bid Capacity	Replace : Maximum value of works executed in any one year during the last five years (Updated to 2016-17 price level) With: Maximum value of works executed in any one year during the last five years (Updated to 2017-18 price level)
2	Part 4 - Drawings Section X - Drawings	Replace : UGC04-ARP-SDA-4061-003 With: UGC04-ARP-SDA-4061-003 Attachment No. 1 The dosing room is deleted.



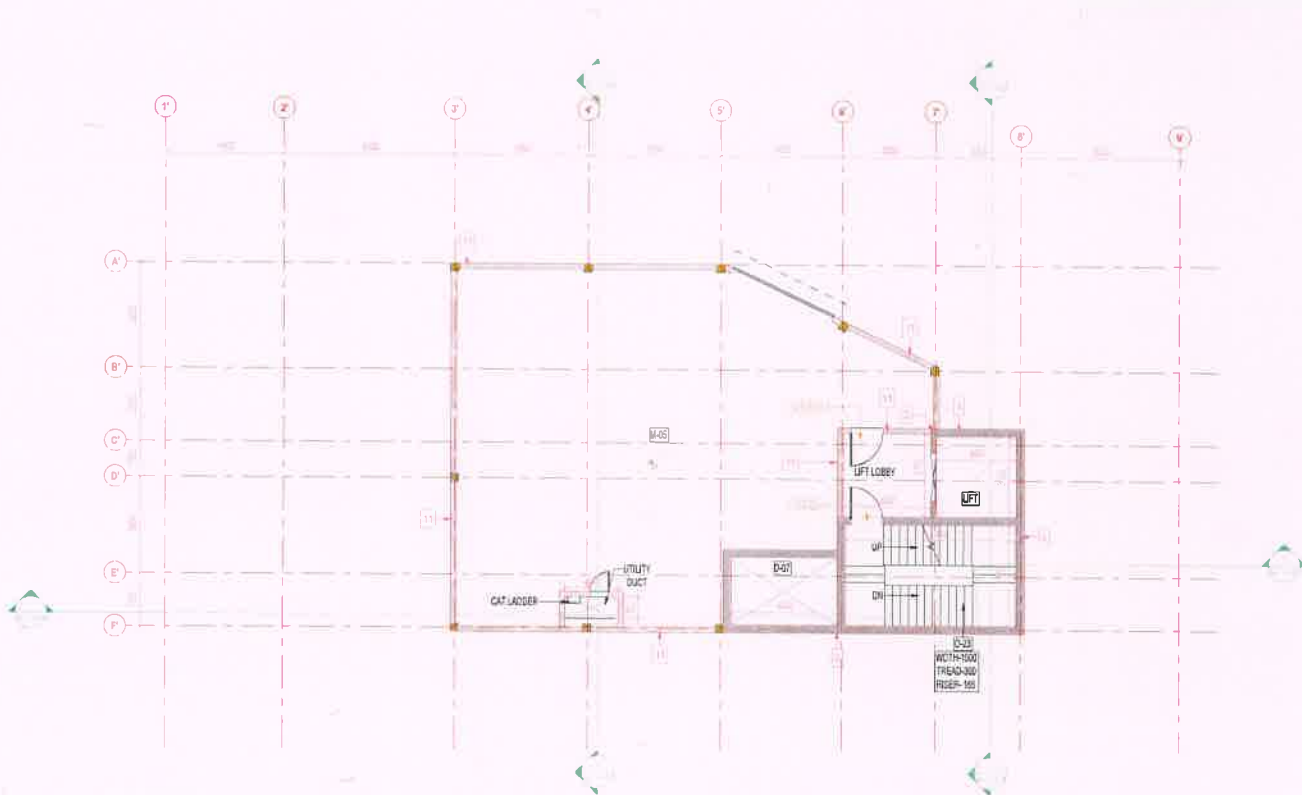
Sr. No.	Description and Clause No.	Amendment
3	PART-2 Employer's Requirement SECTION-VI - B4	<p>Replace : Clause no. 2.3.22.j Electrical endurance of the order of 10000 operation cycles.</p> <p>With: MCCBs shall have an electrical endurance of the order of 10000 operation cycles up to 250A, and 5000 operation cycles up to 630A, at rated voltage and current.</p>
4	Part 4 - Drawings Section X - Drawings	<p>Replace : SCADA Drawing No.- GCC-TVE-P00-0001-041_A0</p> <p>With: SCADA Drawing No.- GCC-TVE-P00-0001-041_A1 Attachment No. 2 The scope delineation of Phase 1 vs. Phase 2 Lot 1 and Lot 2 is shown</p>
5	Part 1 - Bidding Procedure Section IV-A - Bidding Forms	<p>Replace: Bid Form 1 : PROJECT ORGANIZATION AND KEY PERSONNEL</p> <p>With: Attachment No. 3 Bid Form 1(R): PROJECT ORGANIZATION AND KEY PERSONNEL</p>
6	Part 1 - Bidding Procedure Section IV-A - Bidding Forms	<p>Replace: Bid Form 6 : METHOD STATEMENT (Project Implementation Plan)</p> <p>With: Attachment No. 4</p>

Sr. No.	Description and Clause No.	Amendment
		Bid Form 6(R): METHOD STATEMENT (Project Implementation Plan), A
7	Part 1 - Bidding Procedure Section IV-A - Bidding Forms Bid Form 21 FIR-4: Bid Capacity	<p>Replace : * Value of works executed shall be updated to price level of March 2017 where Financial Year ending on 31st March & to price level of December 2016 where Financial Year ending on 31st December by assuming 5% inflation per annum (Non-cumulative) for Indian Rupees and 2% escalation per annum (Non-cumulative) for Foreign Currency.</p> <p>With: * Value of works executed shall be updated to price level of March 2018 where Financial Year ending on 31st March & to price level of December 2017 where Financial Year ending on 31st December by assuming 5% inflation per annum (Non-cumulative) for Indian Rupees and 2% escalation per annum (Non-cumulative) for Foreign Currency.</p>

Place: Mumbai,
Date: 16.01.2019

Sd/-
(Smt. Ashwini Bhide, IAS)
Managing Director, MMRC





AB SECOND FLOOR

- REVISION LOG
- 1 ANCILLARY BUILDING DRAWINGS INCLUDED WITH THIS SUBMISSION.
 - 2 LOBBY FOR EQUIPMENT ACCESS PROVIDED AT TOP OF BOX LEVEL.
 - 3 REVISED PLUMBING ELECTRICAL S&T CUTOFF SIZE AND LOCATION AS PER GC D&R COMMENTS.
 - 4 REVISED LAYOUT OF CONCOURSE - RHC TO PROVIDE ADEQUATE SIZE FOR P-02.
 - 5 REVISED LAYOUT FOR EMERGENCY WALKWAY AT THE END OF STATIONS.
 - 6 ADDITION OF PHCS AS PER MEP & GC - DSR INPUTS
 - 7 OTE DUCT SHOWN AS PER GC - DSR COMMENTS
 - 8 UP&S DUCT ACCESS S-DOWN IN THE DRAWINGS
 - 9 SPACE BETWEEN TVM PROVIDED AS PER GC - DSR COMMENTS
 - 10 DAMPER LOCATION SHOWN AS PER GC - TVS INPUTS
 - 11 SLIDING DOORS PROVIDED FOR PFM WASH-ROOMS
 - 12 THE SEWAGE AND SEEPAGE PANELS ARE SHOWN WITH THE SUMP PUMP ROOMS.

- GENERAL NOTES
- 1 ALL DRAWINGS ARE IN MILLIMETERS
 - 2 ALL LEVELS ARE IN METERS, INDICATING FLOOR FINISH LEVEL (FFL) WHEREVER APPLICABLE.
 - 3 DRAINAGE & WATER CONNECTIONS ARE SHOWN AS INDICATIVE & DETAIL SHOULD BE AS PER MEP DRAWING.
 - 4 ALL MINIMUM INTERVAL CLEARANCES ARE MANDATORY.
 - 5 ABSOLUTE RAIL LEVEL SHALL BE DERIVED FROM ALIGNMENT DRAWING.
 - 6 STRUCTURAL WALL TO SUIT THE FINAL TRACK ALIGNMENT.
 - 7 INFORMATION ON ACTUAL SIZE OF CUTOFF & OPENINGS TO BE AS PER E&M DRAWING.
 - 8 COLUMNS ARE INDICATED BY SPACES
 - 9 FLOOR FINISH AT PLATFORM LEVEL AND CONCOURSE LEVEL PUBLIC AREA IS 150MM
 - 10 THE FINISH LEVEL OF ABOVE GRADING STRUCTURES IS TAKEN 300MM ABOVE THE NEAREST FOOTPATH LEVEL.
 - 11 THE TRACK CENTRE IS SHOWN AS PER THE LATEST TRACK ALIGNMENT DRAWING
 - 12 THE CAVITY WALL SHALL BE PROVIDED AS PER CONTRACT PROVISION.
 - 13 INCLUDING CONSTRUCTION TOLERANCE
 - 14 INCLUDING CONSTRUCTION TOLERANCE
 - 15 ANY TEMPORARY OPENING DURING CONSTRUCTION FOR INSTALLATION OF EQUIPMENTS (E&M, TRACK, ETC.) SHALL BE AS PER STRUCTURAL DRAWING
 - 16 SYSTEM WIDE INPUTS WILL BE INCORPORATED AS PER SMC REQUIREMENTS WHEN ON BOARD.
 - 17 ALL SYSTEM INPUTS SHOWN IN THE DRAWINGS ARE SHOWN AS PER INPUTS PROVIDED FROM GC.

ROOM LEGEND	
A-01 STATION CONTROL ROOM	D-11 UPS DUCT PENETRATOR
A-02 EXCESS FARE OFFICE	D-12 OTE DUCT PENETRATOR
A-03 TICKET ISSUING WINDOW	D-13 STATION EXHAUST
A-04 TICKET VENDING MACHINE TVM	D-14 PLUMBING SHAFT
A-05 AUDIT & CASH STORE ROOM	D-14a PLUMBING & FIRE FIGHTING SHAFT
A-06 STATION MANAGER ROOM	D-15 ELECTRICAL SHAFT
A-07 SCADA	D-17 ECS SHAFT
A-08 COMMUNICATION CARRIER ROOM	D-18 NOZZLE SHAFT
C-01 SIGNALING EQUIPMENT ROOM	D-19 PLATFORM EXHAUST/VENTILATION
C-08 TELECOM EQUIPMENT ROOM	D-20 6 & T SHAFT
C-09 CONTROL PANEL	F-01 WATER TANK
C-10 PLATFORM SCREEN DOOR	F-02 FIREMEN CORRIDOR
C-11 PFD PANEL ROOM	F-03 FIRE ESCAPE PUBLIC STAIRCASE
D-02 FIRE HOSE CABINET	F-04 FIREMENS STAIRCASE
D-03 HIGH TENSION CABLE DUCT	M-01 LES SUMP ROOM
D-04 LOW TENSION CABLE DUCT	M-02 PUMP ROOM
D-05 CABLE DUCT	M-03 SEWAGE WATER PUMP/SUMP ROOM
D-06 CROSS CABLE DUCT	M-04 SEWAGE WATER PUMP/SUMP ROOM
D-07 TUNNEL VENTILATION SHAFT	M-06 CHILLER PLANT ROOM
D-08a VENTILATION EXHAUST SHAFT	M-06 COOLING TOWER
D-08b VENTILATION SUPPLY SHAFT	M-07 LIFT MAINTENANCE ROOM
D-09 DRAUGHT RELIEF	M-08 GAS FLOODING ROOM
M-09 MECHANICAL EQUIPMENT ROOM	M-10 TUNNEL VENTILATION FAN ROOM
M-11 ECS PLANT ROOM	M-12 ALTERNARY SUBSTATION (ASS) ROOM
M-13 OTE FAN ROOM	M-14 UPS FAN ROOM
M-15 STATION AHJ ROOM	M-16 STPT MAINTENANCE ROOM
M-17 FILTER CLEANING ROOM	M-18 AIR COMPRESSOR ROOM
M-19 STATION ENTRANCE & PASSAGE WAYS	O-01 PAID CONCOURSE / MAZZANINE AREA
M-20 UNPAID CONCOURSE AREA	O-02 SECURITY / POLICE ROOM
O-04 STORE ROOM	O-05 LIFT
O-06 LIFT	O-07 LIFT LOBBY
O-08 TOILET (MALE)	O-09a TOILET (FEMALE)
O-08b ACCESSIBLE TOILET	O-10 LOCKER ROOM
O-11 JANITORS ROOM	O-12 CLEANER'S ROOM
O-13 LUNCH ROOM	O-14 REFUSE ROOM
O-15 CORRIDOR / PASSAGE WAY	O-16 PLATFORM
O-18 REFUGE AREA	O-19 FIRST AID ROOM
O-20 WALL OPENING FOR ASS ROOM	O-22 EMERGENCY WALKWAY
O-23 MAINTENANCE STAIRCASE	O-24M STAFF CHANGE ROOM (MALE)
O-24F STAFF CHANGE ROOM (FEMALE)	O-25 UNDERCROFT
O-26M SECURITY CHANGE ROOM (MALE)	O-26F SECURITY CHANGE ROOM (FEMALE)
P-02 TVS ROOM SWITCH GEAR	P-03 SAT UPS ROOM
P-04 DIESEL GENERATOR ROOM (DGR)	P-05 TRANSFORMER ROOM (TRF)
P-06 FUEL TANK	P-07 MAN CONTROL PANEL ROOM
P-08 TRACTION ROOM	P-09 DB ROOM
P-10 ELECTRICAL ROOM	P-11 UPS ROOM
PD PROPERTY DEVELOPMENT	TBD TO BE DECIDED
ST STAIR / PASSENGER CIRCULATION	ESC ESCALATOR / PASSENGER CIRCULATION

KEY PLAN

LEGEND:

- 200mm THICK RCC WALL
- 300mm THICK RCC WALL
- 400mm THICK RCC WALL
- 500mm THICK RCC WALL
- 600mm THICK RCC WALL
- 800mm THICK RCC WALL
- 100mm THICK CURTAIN WALL
- 150mm THICK RCC WALL
- 250mm THICK RCC WALL
- 100mm THICK BLOCKWORK
- 200mm THICK BLOCKWORK
- DRY CLADDING WITH SCUPPER DRAIN
- 450mm HIGH BLOCKWORK WITH SCUPPER WITH SUITABLE WATERPROOFING
- 150mm THICK RCC WALL



REFERENCE DRA - INGS

- 1 FOR ALIGNMENT DRAWING REFER 'ALIGNMENT_PACK_MM3-CO-AL-GC-402001' - (SHEET 1 OF 8) - R4 TO 402006 - (SHEET 8 OF 8) - R4
- 2 FOR MEP CSD DRAWINGS REFER DRAWING NO UGCD-MEP-SDA-4035-001

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NOTIFICATION

14-06-2018 AS DEFINITIVE DESIGN SUBMISSION - FIRST ISSUE SM SV NG

20-12-2017 DC REVISED PRELIMINARY DESIGN SUBMISSION SM SV NG

05-10-2017 DC REVISED AS PER DSR NO. 'GCC-CIT-ARP-P04-17-01' (S-1A1) SM SV NG

18-0-2017 PK PRELIMINARY DESIGN SUBMISSION SM SV NG

GEOCONSULT-TPL JV

MUMBAI METRO LINE 3 COLABA-BANDRA-SEEPZ CONTRACT UGC-

DESIGN AND CONSTRUCTION OF UNDERGROUND SECTION INCLUDING T-REE UNDERGROUND STATIONS AT SIDD 1 VINAYA DADAR AND S-1TLADEVJI TEMPLE AND ASSOCIATED TUNNELS

DESIGNED BY: SM C O M SV A SV SV NG

CHECKED BY: SM SV NG

DATE: 14-06-2018

TATA PROJECTS

Simplify, Create

CEC-ITD Ce -TPL JV

CONTRACT ADDRESS

MUMBAI METRO RAIL CORPORATION LTD.

NaMTRRIB Jang P a Nu R-3 E-B a

Bandra - Ra Co - S - Bandra East - M - at -

DADAR STATION

GENERAL ARRANGEMENT DRAWING

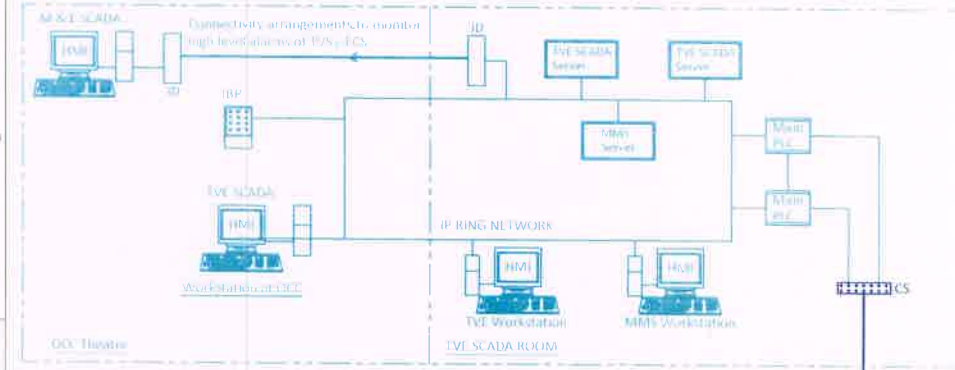
ANCILLARY BUILDING PLAN (SHEET 3 OF 4)

UGC - ARP-SDA - 3

D D

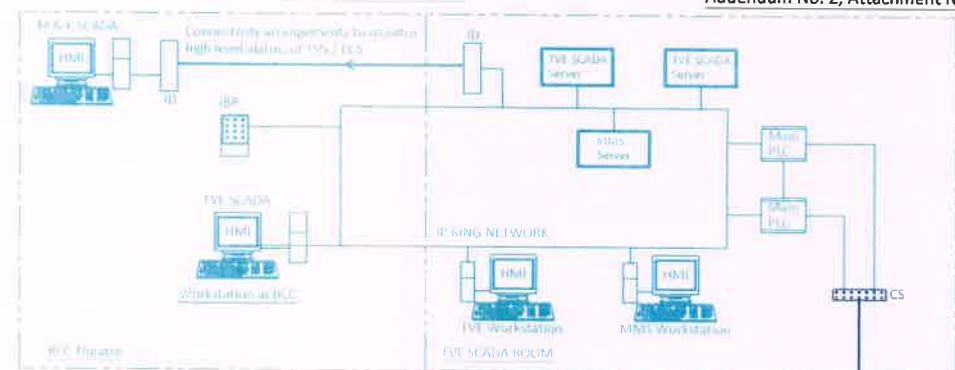
MM3-CBS-TVE (P2L1)

OCC - Operation Control Centre

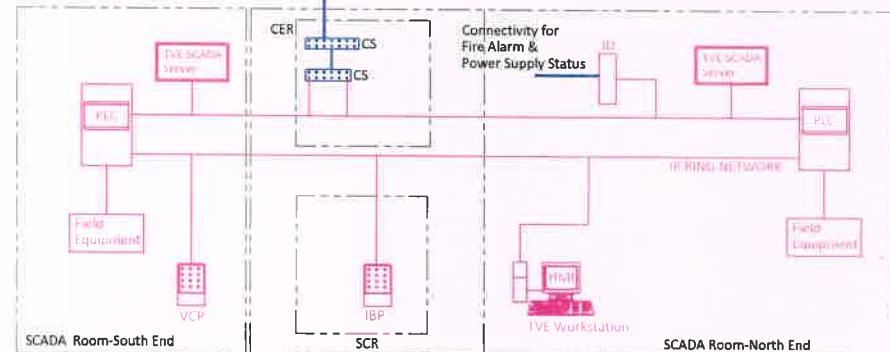
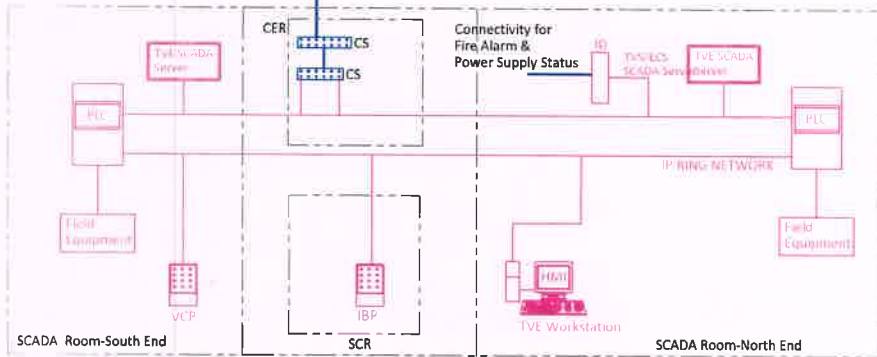


BCC - Backup Control Centre

Addendum No. 2, Attachment No. 2



CBN - Communication Backbone Network



NOTE:

- Hardwire
- Serial LAN

ABBREVIATIONS:

- OCC - Operation Control Center
- SCR - Station Control Room
- CER - Communication Equipment Room
- HMI - Human Machine Interface
- PLC - Programmable Logic Controller
- CS - Communication Switch
- MMS - Maintenance Management System
- CBN - Communication Backbone Network
- TVE - Tunnel Ventilation & Environmental Control
- IBP - Integrated Backup Panel
- SCADA - Supervisory Control And Data Acquisition
- M & E - Mechanical and Electrical
- ID - Interface Device
- VCP - Ventilation Control Panel
- BCC - Backup Control Centre

LEGEND:

- Work under TVE-PH-1 Contractor's scope
- TVE SCADA SCOPE IN P2L1
- Signaling & Telecommunication System

Note- OCC/BCC scope of work is under TVE-PH-1 contractor



TVE-PHASE-2-Lot-1



GENERAL CONSULTANCY SERVICES FOR MUMBAI METRO RAIL PROJECT, LINE No. 3 COLABA- BANDRA-SEEPZ

REV.	DATE	PREP.	APPROVED	DESCRIPTION	NAME	SKN
1	10.12.18	AKS	INC	Scope of OCC/ BCC work updated		
					DRAWN BY	
					CHECKED BY	
					APPROVED BY	

PROJECT	MUMBAI METRO LINE 3 COLABA-BANDRA-SEEPZ	STATION	-	DATE	14-03-2018
TITLE	INTERFACE DRAWINGS	DRAWING TITLE	TUNNEL VENTILATION AND ENVIRONMENTAL CONTROL SYSTEM SCADA DRAWING	SCALE	NTS (A1)
DRAWING NO	GCC-TVE-PH-0001-041_A1				

Tender Drawings
Not to be used for construction



BID FORM 1(R): PROJECT ORGANIZATION AND KEY PERSONNEL

[The Bidder shall provide Technical Proposal for Site Organization.]

Project Organization and Key Personnel	Bid Ref
<p>The Bidder will provide an Organization Chart detailing the proposed teams and identifying key personnel as per following:</p> <ul style="list-style-type: none"> • Project Organization Chart (for Station Level & Office Level) - Organization chart for each stage i.e. Design stage, Construction stage, Testing & commissioning stage - Indicating the experienced engineering staff in each team (i.e. Design team, Construction team, Coordination team, Interface team, Quality team, etc) - Role of each team member - Scope & Duties of each team member - Level of experience for each role 	



BID FORM 6 (R): METHOD STATEMENT (Project Implementation Plan)

[The Bidder shall provide Project Implementation plan including following details]

Execution Plan for the project	Bid Ref
<ul style="list-style-type: none"> • Detailed deliverable list – drawings, reports, calculations for each station • Proposed project schedule • Histogram depicting the quantum of staff proposed (excluding workers) to be deployed during different stages of the project i.e. Design Stage, Construction Stage, Testing & Commissioning stage. The histogram should match the details of the Project Organization chart (Bid Form 1) and project schedule • Interface Plan: Bidder shall submit an Interface Plan with the Methodology of Interface with respective UGC Contractors. 	

