



MUMBAI METRO RAIL CORPORATION LIMITED

REQUEST FOR PROPOSAL (RFP)

FOR THE WORK

**‘Appointment of Consultancy for undertaking
Topography, Drone Surveys and developing GIS enabled
portal for revised alignment of Mumbai Metro Line 11’**

RFP-MMRCL/Planning/TP-05/Line 11/RFP/01/2023

November 2023

Consultant

Director (Planning)

RFP for Appointment of Consultancy for undertaking Topography,
Drone Survey and developing GIS enabled portal for revised
alignment of Mumbai Metro Line 11

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1. GENERAL SECTION

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1.1 BACKGROUND

1.1.1 Mumbai Metro Rail Corporation Limited (MMRCL) seeks the services of a competent consultancy firm for Topography and drone survey for Metro Line 11 revised alignment. It includes topography survey, drone survey and tree mapping along the revised alignment of the Metro Line 11, for the work briefed as below:

‘Appointment of Consultancy for undertaking Topography, Drone Surveys and developing GIS enabled portal for revised alignment of Mumbai Metro Line 11’

1.2 The Revised alignment of Metro line 11 is approx. 16.7 km. (Anik metro station to SPM Circle metro station), Mumbai. As a part of this consultancy, following surveys are to be conducted:

- Survey along alignment with 50m stretch on either side including station area.
- Survey of 500m radius area from station location for TOD.
- Survey of 2 proposed depot locations.
- Survey over crossover at SP Mukherjee (SPM) circle Metro Station.
- Survey of proposed stability lines integrated in Mumbai Port Authority Master Plan.

In addition, the consultant has to create MML-11 GIS based web portal consisting of aforesaid survey data. Details of survey are provided in **Terms of Reference (ToR), Section 4.**

1.3 OBJECTIVES

1.3.1 To prepare accurate data and topo maps for Planning (including design and drawings) for metro rail corridor and related works.

1.3.2 To integrate all field data and develop a Geo enabled base map and a Geo-enabled web portal comprising of GIS layers for planning, execution and monitoring of the Line 11 project. The digital portal should be developed using a secure proprietary software (not open source data) to ensure security of sensitive data while at same time capable of developing various data layers to match project growing development needs of MMRC at each stage of project from planning, execution to monitoring and O & M.

1.3.3 Bringing in new and innovative technologies in Survey, Mapping, Spatial Analysis, etc for systematic and detailed survey.

1.4 SCOPE OF ASSIGNMENT

1.4.1 To collect and carry out detailed field survey Metro Alignment, including topographic, Drone and DGPS along with preparation of GIS map sand geo portal capable of robust analysis of various data layers.

1.4.2 To develop a digital GIS map of Line 11 project with necessary features and layers to be captured as per TOR

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- 1.4.3 To help launch the digital map on secure cloud server and provide technical training and maintenance support to MMRC officials on use of the geo enabled portal and its features.
- 1.4.4 To report and make periodic presentations to MMRC on fortnightly basis till deliverables are finalized.

More details on the Scope of Assignment is mentioned in the Terms of Reference (ToR).

1.5 DURATION OF CONTRACT

1.5.1 **Period of contract – Total Contract Period of Six (6) months.** Details are as follows:

- **3 Months:** Collecting and finalizing topographic and drone data including site visits, verification of survey drawings, acquiring necessary approvals to conduct surveys etc. from the date of work order including securing permissions from concerned authority for carrying out the survey. MMRC will provide all assistance for securing such permissions.
- **3 Months:** Developing digital GIS base map and Geo enabled Portal with required data sets and layers for Line 11 project.

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1.6 DETAILS OF RFP

S. No	Name of Work	Tender Processing Fee (Excluding GST of 18%)	Contract Period
1	2	3	4
1.	<u>‘Appointment of Consultancy for undertaking Topography, Drone Surveys and developing GIS enabled portal for revised alignment of Mumbai Metro Line 11’</u>	Rs. 10,000/- (Rupees Ten Thousand Only)	Total six (6) months. Three (3) Months for collecting all filed data including Topographic drone and DGPS data. Finalizing it in AutoCAD format Three (3) months for finalizing and delivering a digital GIS Base map with all data layers and creating a geoenabled portal capable of securing the data.

For the agencies that have registered as MSMEs are requested to make the necessary payment of Rs. 10,000/- + GST on the portal. The amount will be reimbursed separately after submission of the proof of the payment.

RFP Document can be downloaded for reference purpose from the e-Tendering Portal of MMRC during the period of tender notice.

1.7 TENDER SCHEDULE

Sr. No.	Tender Schedule	Bidder Schedule	Start Date & Time	End Date & Time
1.	RFP Authorization and Publishing	-----	24/11/2023 10:00 hrs	14/12/2023 12:00 hrs
2.	-----	RFP Document Download	24/11/2023 12:00 hrs	14/12/2023 12:00 hrs
3.	-----	Bid Preparation and Submission	24/11/2023 12:00 hrs	14/12/2023 12:00 hrs
4.	Pre-Bid meeting		01/12/2023 11:30 hrs	01/12/2023 13:00 hrs
5.	RFP Closing	-----	14/12/2023 12:01 hrs	14/12/2023 12:01 hrs
6.	Opening Envelope, A – Technical Bid	-----	14/12/2023 14:00 hrs	14/12/2023 16:00 hrs
7.	Opening Envelope B – Financial Bid	-----	To be Announced (TBA)	TBA

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- Pre-bid queries must reach MMRC before 01/12/2023 in writing. Any queries received after the stipulated date shall not be entertained.

NOTE: Pre-Bid Meeting is proposed to be held on 01/12/2023 at 11:30 hrs in MMRCL, Conference Room, 801-803, 8th Floor, Hallmark Business Plaza, Sant Dnyaneshwar Nagar, Opposite Guru Nanak hospital, Kalanagar, Bandra (E), Mumbai- 51

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2. TECHNICAL PROPOSAL

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2.1 INTRODUCTION

- 2.1.1 MMRC policy requires that consultants provide professional, objective, and Impartial advice and always hold the Client's interest paramount, without any consideration for future work, and strictly avoid conflicts with other assignments or their own corporate interests. Consultants shall not be hired for any assignment that would be in conflict with their prior or current obligations.
- 2.1.2 MMRC will reject a proposal for award if it determines that the firm recommended for award has engaged in corrupt or fraudulent activities in competing for the contract in question.

2.2 DATA SHEET

The data sheet for the RFP is as follows:

S. No.	Particulars
2.3.1	Name of Employer: Mumbai Metro Rail Corporation Limited
2.3.2	Name of Assignment: <u>'Appointment of Consultancy for undertaking Topography, Drone Surveys and developing GIS enabled portal for revised alignment of Mumbai Metro Line 11'</u>
2.3.3	A pre-bid meeting will be held at <u>01/12/2023</u> at <u>11:30 hrs</u> at MMRCL, Conference Room, 801-803, 8th Floor, Hallmark Business Plaza, Sant Dnyaneshwar Nagar, Opposite Guru Nanak hospital, Kalanagar, Bandra (E), Mumbai- 51 For more details, please contact: Telephone: (+91 22) 6906 1355, (+91 22) 6906 1387 Email: swetal.kanwalu@mmrcl.com, dikshant.meshram@mmrcl.com
2.3.4	The Client will provide the inputs specified in the Data Sheet and make available relevant project data and reports. Please refer to Appendix A & B for the available data.
2.3.5	Proposal shall be submitted in English Language only.
2.3.6	Proposals must remain valid for 180 days after the submission deadline date.
2.3.7	JV/ Consortium of not more than 2 individual firms shall be allowed and one of the members should be lead Partner. i. The Lead Partner of the JV/ Consortium would be termed as following: a. The Project Co-ordinator/ Team Leader should be employed in the Lead Partner Organization b. Minimum 50% of the total staff (Key Personnel, supervisory and support staff) requirement should be employed by the Lead partner c. The Lead Partner should also take the role of Master-Coordinator and would be a single point of contact for all payment-related purposes.

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	<p>In case of JV/ consortium, the Technical eligibility criteria of Lead Member and Minor Partner would be considered. Financial Eligibility criteria would be applicable only for the Lead member.</p> <p>Both the members shall be jointly responsible to the provisions of the agreement.</p>
2.3.8.	A firm shall submit only one proposal, either individually or as a JV/ Consortium partner in another proposal. If a firm, including a JV/ Consortium partner, submits or participates in more than one proposal, all such proposals shall be disqualified.
2.3.9	<p>a) Replacements of Key Personnel is not desirable and consultants shall refrain from doing so in any circumstances except death and medical incapacitation. If Key Personnel or replacements of equal or better qualifications are not deployed, it will be considered as non-deployment of key personnel and no payment shall be admissible.</p> <p>b) The consultant shall not change the Key Personnel proposed for the work without any valid reasons acceptable to the Client. A penalty of Rs. 25,000/- will also be levied if the consultant changes the Key Personnel proposed without valid reasons or without prior information to the client.</p> <p>c) For the single bidder or JV/ consortium of firms, combined annual average turnover for at least 3 Financial Years (FY) in the last 5 FY (FY 2018-19, 2019-20, 2020-21, 21-22, 22-23) should not be less than Rs. 40 lacs.</p>
2.3.10	All the payments shall be made only in Indian National Rupees (INR).
2.3.11	<p>Time and date of the Proposal submission deadline: Time: 12:00 hrs & Date: 14/12/2023</p>
2.3.12	<p>Following Self-Certified Documentary Evidence to be submitted in support of Eligibility with Technical Proposal</p> <ol style="list-style-type: none"> i. Copy of Contract/work orders indicating the details of previous assignment, client certificate etc. The Competent authority of the Consulting firm shall self-certify if the firm has done assignments on non-disclosure agreements. In such cases, broad details of the assignment must be provided to ascertain relevance (Annexure II & Annexure III). Completion certificates of the previous completed assignments should also be provided. ii. CVs of key personnel (clearly stating tenure of the key personnel working with the current firm) and details of associate/s likely to be involved in executing this assignment, must be submitted (Refer Annexure IV and Annexure V) iii. An undertaking stating that firm/organization is not blacklisted by Government or its agencies including Central/State Level Public Enterprises. iv. A Certificate regarding non-disclosure/sharing of confidential information with third parties. v. Annual Turnover Certificates certified by CA & audited balance sheet for any of the last 3 financial years (FY 2018-19, 2019-20, 2020-21, 21-22, 22-23) (as per Annexure VI) vi. Certificate of incorporation, PAN Number & GSTIN details.

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	vii. Covering letter declaring the offer to be unconditional, confirming its validity for 180 days and a list of all the documents submitting along with the Bid.
2.3.13	The firm should provide litigation history along with the technical proposal, (Annexure VII)
2.3.14	Copy of valid Partnership deed / JV/ Consortium /MoU should be attached along with the technical proposal.
2.3.15	Authority letter clearly mentioning details of authorized representative of the Consultant to execute the contract formalities should be attached along with technical proposal.
2.3.16	Expected date (month/year) for public opening of Financial Proposals: December 2023 at: MMRCL, Conference Room, 801-803, 8 th Floor, Hallmark Business Plaza, Sant Dnyaneshwar Nagar, Opposite Guru Nanak hospital, Kalanagar, Bandra (E), Mumbai-51
2.3.17	Quality cost Ratio: 80:20 (Technical Eligibility: Financial Eligibility)
2.3.18	<u>Expected date and address for contract negotiations:</u> Date: 10 days after opening of Financial proposal Address: MMRCL, Conference Room, 801-803, 8 th Floor, Hallmark Business Plaza, Sant Dnyaneshwar Nagar, Opposite Guru Nanak Hospital, Kalanagar, Bandra (E), Mumbai- 51
2.3.19	Expected month for commencement of services: December 2023

Team Composition and Task Assignments- CVs of the Professional staff as mentioned below signed by the staff themselves or by the authorized representative of the Professional Staff (Annexure V), to be submitted along with the technical proposal.

2.3 TECHNICAL ELIGIBILITY CRITERIA:

2.3.1. BIDDERS EXPERIENCE

Following are the mandatory requirements for Bidders Eligibility:

- The firm should be registered for at least 5 years before the last date of bid submission and have minimum 3 years of experience in 'similar works'.
- Consultant should have demonstrated experience in creating digital GIS base map and GIS/Geo-enabled portal for Urban project in India.
- Consultant should have certified/ Licensed GIS, CAD, etc software with Copy Right/patent of software in name of Consultants. An undertaking along with the Copy right from the consultants should be provided as necessary support as part of Bid submission. The proposed GIS software capable of securing critical data of MMRC, provide follow up support and not be an open source software.
- Consultant shall provide undertaking from Indian Original Equipment Manufacturer (OEM) GIS tool in case the consultant is not holding the copyright/patent of the software in their name.

Please refer Section 2.11 for Marking of Bidders Experience.

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2.3.2. KEY PERSONNEL

A. TECHNICAL / MANAGERIAL STAFF

Sr. No.	Minimum No. of Personnel Required	Position	Task	Minimum Education Qualification	Minimum Experience
1	1	Project Coordinator/ Team Leader	Overall project Co-ordination	M.Tech Civil/ Project Management/ Urban Planning/Geo-informatics or equivalent	10yrs
2	1	GIS analyst	GIS analysis	Postgraduate in Geography/ Geo-informatics or equivalent	10yrs
3	1	Sr. Transportation Expert	Planning, Implementation and Supervision	Masters degree in Transportation Engineering or equivalent	10 yrs
4	1	Head Surveyor	For on site survey	Diploma in Civil Engineering or B.Tech Civil	10 yrs
5	1	Drone Pilot	For Drone survey	Drone Pilot License is compulsory	3 yrs

B. SUPERVISORY AND SUPPORT STAFF

Sr. No.	Position	Task
1	Surveyor (In adequate numbers to meet timelines)	For onsite survey and Assist Head Surveyor
2	GIS Draughtsman (2 Nos)	For all drafting of survey drawing, etc.
3	Full stack developer for Digital GIS Base Map and geo portal development	For developing digital GIS base Map and integrating all survey and field data in digital geo-enabled format. Creation of web portal for multiple users at MMRC

C. OTHER SUPPORT STAFF

Sr. No.	Position	Task
1	Other supporting staff- Steno- typist, Typist, Driver. Office as per requirement	Administrative/ Document Control/ Clerical works

Note: Annexure IV to be attached with Technical Proposal for Key/ Managerial Staff.

2.3.3. TECHNICAL APPROACH AND METHODOLOGY:

Technical approach, methodology and work plan are key components of the Technical Proposal. Consultants are suggested to submit brief write up on their Technical Proposal divided into the following three chapters:

- a) Technical Approach and Methodology,
- b) Work Plan, and

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c) Organization and Staffing

A. TECHNICAL APPROACH AND METHODOLOGY:

Consultant should explain their methodology for carrying out the survey/ portal activities and obtaining the expected output, and the degree of detail of such output. Consultant should highlight the problems being addressed and their importance and explain the technical approach to address them. Consultant should also explain the methodologies they propose to adopt and highlight the compatibility of those methodologies with the planned approach.

B. WORK PLAN:

The consultant should propose and justify the main activities of the Assignment/job, their content and duration, phasing and interrelations, milestones (including interim approvals by the MMRCL), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology showing understanding and ability to translate them into a feasible working plan. A list of the final documents, including reports and tables to be delivered as final output, should be included here. The consultant should also explain their understanding of the site, the challenges it possessed and the proposed solutions.

C. ORGANIZATION AND STAFFING:

The consultant should propose and justify the structure and composition of their team. The consultant should also provide a brief on the organization, its history since inception, project experience. Consultant should list the main disciplines of the Assignment/job, the key expert responsible, and proposed technical and support staff. The consultant should also explain the staffing timelines based on the workplan prepared.

The Bidder should prepare a brief write-up, maximum of 6 A4 size pages, in order to explain the Technical Approach, Methodology, Work Plan and Organisation & Staffing as mentioned above.

2.4 CRITERIA & POINT SYSTEM FOR QUALITY & COST BASED SYSTEM:

Technical Evaluation Criteria		
SN	Criteria & sub-criteria	Marks
A. BIDDERS EXPERIENCE		
	Establishment of Firm, Specific experience in conducting survey and integrating data in GIS platform relevant to the assignment, Relevant Experience	
	a) Consultant should have completed at least one drone and topographic surveys for at least one Metro Rail project of more than 14 Km length	15

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Technical Evaluation Criteria		
SN	Criteria & sub-criteria	Marks
	b) Company experience of atleast 1 similar urban infra project (Roads/ Rail/ Bridges/ Institutes/ Building etc. including collection of data and creating a Geo enabled Map and Portal	15
	c) Use of Indian make GIS Software (Make-in-India)	5
	d) OEM having GIS Product development centre in India	5
Marks (Total of A)		40
B. KEY PERSONNEL		
Key professional staff qualifications and competence for the assignment:		
i.	Project Coordinator/Team Leader	15
ii.	GIS Analyst	15
iii.	Sr Transportation Expert	10
iv.	Head Surveyor	10
Marks (Total of B)		50
C. APPROACH AND METHODOLOGY		
Adequacy of the proposed methodology and work plan		
	Approach / Methodology and work plan in maximum 6 pages	10
Marks (Total of C)		10
TOTAL MARKS		100

2.5 FINANCIAL CAPACITY

1. Minimum average annual turnover as mentioned at clause 2.3.9 to be furnished.
2. Bidder is required to submit Audited financial statements and Annual Turnover Certificates as mentioned at clause 2.3.12 (v)

The above financial criteria are mandatory to be fulfilled by the bidder.

2.6 EVALUATION OF PROPOSAL: TECHNICAL AND FINANCIAL

i. Evaluation of proposal: Technical and Financial scores:

Technical Score (X):

Only those Bidders who have secured Technical Score(X) of 70 or above shall be declared as qualified for evaluation of their 'Financial Bid'. Bidders who have secured less than 70 for Technical Score shall be rejected.

Financial Score: (Y)

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The Financial proposals shall be evaluated on the basis of total lump sum charges offered by the bidder. Any monetary figure in decimal shall be rounded off to the nearest INR. For any other calculation/ summation error etc. the bid may be rejected.

The financial scores of other bidders for the project shall be computed as follows:

[The 'financial score' of Bidder for the project(Y)]	$= 100 \times \frac{[\text{Lowest offer quoted by the qualified bidder Rs.}]}{[\text{Offer quoted by the respective Bidder (Rs.)}]}$
--	--

The marks secured as above shall be the Financial Score of the bidder for the project (Y).

Composite score of the Bidders for the bid shall be worked out as under:

Bidder	Technical Score (X)	Financial Score (Y)	Weighted Technical Score (80% of X)	Weighted Financial Score (20% of Y)	Composite Score (F=D+E)
A	B	C	D	E	F

The bidder with highest composite score will be qualified as L1 etc.

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3. FINANCIAL PROPOSAL STANDARD FORMS SECTION

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3.1 FINANCIAL PROPOSAL SUBMISSION FORM

(To be submitted only with Financial Proposal)

FROM: _____

M/s. Consultancy services

To,
The Director (Planning),
Mumbai Metro Rail Corporation
NaMTTRI Bldg., Plot No. R-13, E Block,
Bandra Kurla Complex,
Bandra (E),
Mumbai – 400 051.

SUB: Appointment of Consultancy for undertaking Topography, Drone Surveys and developing GIS enabled portal for revised alignment of Mumbai Metro Line 11

Dear Sir/ Madam,

We, the undersigned, offer to provide the services for the above subject work in accordance with Tender provisions at and our financial offer and fees inclusive of all taxes and **applicable rate of GST** for this work shall be as follows:

S. No	Name of Work	Time limit for Consultancy	Lumpsum Fees (Rs)
1	Securing permission, collecting Topographic, Drone and DGPS data of the revised and proposed alignment of Mumbai Metro Line 11 as per requirements of TOR and delivering it in CAD and GIS format	3 Months	
2.	Providing 2 nos of GIS software license and development of digital Base Map and creating web based Geo-enabled portal by making use of appropriate software of Line 11 project incorporating all distinct layers of data collected through field surveys including utility details/land use-land cover, tree etc. mapping as per TOR. The web hosting services on cloud for should be for 2 years.	3 months	
	TOTAL In figures: - In Words: -	GST (@ _____%)	

(Consultant to mention the applicable GST % separately)

(Total fees will include services such as Preparation of survey drawings as mentioned in ToR and obtaining all necessary approvals required for survey. Our Financial proposal shall be binding upon us.)

(Details of the above fee to be furnished as per Annexure-I)

We remain,
Yours sincerely,
M/s. Consultancy services

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3.2 SCHEDULE OF PAYMENT

Sr. No	Action	% Fees	Cumulative Time limit from Appointment days
1	On submission of inception Report, mobilization & project timeline	10%	10
2	On submission of Draft topographic survey (TOPO survey) of the alignment	20%	50
3	On submission of Draft Drone survey data	15%	60
4	On submission of Final topographic survey and drone survey.	20%	85
5	Compilation of all survey data and Submission of Final Survey Report	10%	90
6	Submission and approval of draft GIS Base Map (using make in India software) indicating various data layers GIS/Geo-enabled Portal with survey data sets.	10%	100
7	Complete Integration of all survey data and creation and Development of GIS/Geo enabled digital base map and a geo enabled web portal on a cloud server for use of multiple MMRC staff.	15%	180 days

3.2.1 Consultant payment is as per the milestones in the schedule of payment.

3.3 ADEQUATE DEPLOYMENT OF STAFF AND RESOURCES

It is expected that Consultant shall make available necessary staff to deliver the project in a timely manner. Payments will be made based on the timeliness of the Deliverable. In case any task is delayed unreasonably, MMRC has the right to ask Consultant to deploy additional staff as necessary.

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4. TERMS OF REFERENCE SECTION

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4.1 TOPOGRAPHICAL SURVEY, DRONE SURVEY AND DGPS/GPS SURVEY

The assignment will be carried out in two parts

Part I: Collecting necessary Topographic, Drone and DGPS/ GPS survey of Project area and conducting field surveys

- A. Topographic, DGPS/ GPS and Drone mapping**
- B. DGPS and Total Station Survey**

Part II: Integrating survey and developing a digital GIS/ Geo enabled Base map and launching it on cloud server for use of MMRC for planning and monitoring of project.

The purpose and objective is to create a comprehensive digital and geo-enabled base map identifying various site features including land use, open land parcels, utilities and various site features of the proposed Metro Line 11 corridor its station areas and Depot sites. The base map should be in a GIS format using Make-in-India software with ability to add additional layers and data sets that can be used for effective planning, execution and monitoring of the Line 11 metro project at various stages of project development. The digital base map should be launched on a geo portal and cloud server for utilization of multiple MMRC users and have security features embedded that safeguard sensitive project data

4.2 PART I: CONDUCTING DETAILED TOPOGRAPHIC, DRONE AND DGPS/ GPS SURVEY OF PROJECT AREA

This will comprise of three sub parts A, B and C as described below:

A. Topographic, DGPS/ GPS and Drone mapping

Carrying out survey of the proposed alignment from Anik metro station to SPM Circle metro station for 50m on either side including station areas, Depot area, Cross over at SPM Circle metro station and site proposed for stabling lines near Hay Bunder metro station with below mentioned condition:

- Develop a plan for drone surveys
- Adequate number of Ground control points should be taken with dual frequency DGPS (Differential Global Positioning System). Control points should be established on defined and identifiable points such as permanent structures, junctions etc.
- Capture data in the form of multiple overlapped images. images should be clear and free from fog, haze or dust
- Drone should be taken using a high-resolution camera; resolution should be 5cm – 7cm GSD or better; flight height should not exceed 120 ft.
- Coordinate with agencies and departments to obtain all necessary clearances and permissions for the aerial drone photography.
- Image overlapping shall be 60% forward and 30% sideward.

Following features but not limited to what mentioned to be included in the drone mapping:

- Buildings and properties within 50 m corridor either side of the alignment

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- Existing roads and streets
- All spatial features visible in drone image.

The results to be presented in digital format with the coordinate system of UTM zone 43 projection so that they can be used on GIS and CAD systems. The alignment will be marked on survey plans so that it can be further used for assessing land reservation requirement for the proposed project.

B. DGPS and Total Station Survey

Physical features which cannot be captured with precision within 50m corridor either side of the alignment through drone mapping will be covered by carrying out DGPS and Total Station Survey. The survey plans will be presented on an appropriate scale in GIS and CAD format. All major and minor spatial features falling with 50m corridor either side are to be surveyed with their details. The final data to be provided in UTM zone 43 in GIS and CAD format.

Carrying out electronic survey (Total Station Survey), Land Measurements (km) with Georeferencing Super imposing Tikka Sheet plan on topographic plans (No.s)

i. High Resolution 3D model

Drone mapping output to be presented in geo referenced, high resolution 3D model with precise geometry showing drone image with spatial features digitised using drone image in 3D. A licensed version of the software for future processing of data to be delivered along with the 3D model.

ii. Tree mapping:

Carrying out tree mapping within the 50m corridor either side of proposed alignment including station areas, depot area near Wadala, cross over at SPM Circle and site proposed for stabling lines near Hay Bunder metro station. Details of trees such as location, type, height, and diameter to be provided in GIS and CAD format.

iii. Utilities mapping:

To conduct utility surveys by digging test pits at appropriate locations to avoid conflicts with existing utilities.

Underground and at-grade utilities mapping such as drain covers, underground drainage/sewage line, electrical cables, optical fibre cable line, etc using latest technology such as DGPS/GPR. Obtain necessary underground utilities data along the alignment from Planning Authority(ies) and various govt. departments with support from MMRC. Underground utilities shall be mapped and digitised to the extent possible using available data from authorities and supplemented with primary data collection.

4.3 Part II: Integrating Data Into A Proper (Make In India) GIS Software And Creating A Base Map On Web Portal With Necessary Data Layers And Data Sets.

This Part of the consultancy assignment shall comprise of the following:

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- i. Integration of various data sets collected during Part I of the assignment using RDBMS (Relational Data base management system) using an appropriate make -in India GIS software
- ii. Finalization of a GIS based solution (Platform) for creation, storage and a maintenance of surveyed utility and land use data for the Line 11 corridor and study area.
- iii. To develop a customized GIS application for MMRC that can be checked with data surveyed during the assignment. The customized system as per the suitability of data type shall display spatial layers on web and/or desktop.
- iv. Supply installation and maintenance of proposed system servers and requisite software to develop a cloud based system and set up cloud-server account for MMRC for web based GIS system. Consultant to provide webhosting for the portal for at least 2 years.
- v. Publish digital map on customized web based portal using secure file format.
- vi. Consultant shall provide 2 licenses of GIS tool (preferably Make in India). The GIS system shall be loaded with all the geospatial layers prepared during the execution of the assignment. The GIS tool shall be provided with perpetual license.

4.4 DELIVERABLES

- 4.4.1 The Consultant shall deliver the following deliverables (the “Deliverables”) during the course of this Consultancy.
- 4.4.2 Each Deliverable shall include drawing, report, photographs and such other documents that generally comprise Deliverable for similar consultancy work by way of best practices.
- 4.4.3 Consultant shall also provide drawing deliverable schedule for all type of Drawings. The size of drawings shall be A-1, A-2 or on larger sized sheets as required by MMRCL.

Sr. No	Action	Number of Copies	Duration from Appointment days
PART I : TOPOGRAPHIC, DGPS DRONE SURVEYS			
1	On submission of inception Report, mobilization & project timeline	Two	10
2	On submission of Draft topographic survey (TOPO survey)	Two	50
3	On submission of Draft Drone survey data	Two	60
4	On submission of Final topographic survey and drone survey.	Two	85
5	Submission of Final Survey Report	Two	90
PART II CREATING GIS BASE MAP AND GEO PORTAL			
6	Submission and approval of draft GIS Base Map (using make in India software) indicating various data layers GIS/Geo-enabled Portal with survey data sets.	Two	100
7	Complete Integration of all survey data and creation and Development of GIS/Geo enabled digital base map and a geo enabled web portal on a cloud server for use of multiple MMRC staff along with 2 licenses of desktop GIS tool	Two	180

Softcopy in original editable format (e.g. GIS, CAD, etc)

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Additional copies of above reports if required shall be furnished by the consultants without any extra cost to MMRC.

4.5 CONSULTANT INPUT

- 4.5.1 The Consultant is required to make their own requirement/ assessment of the manpower required in terms of man – month for the different categories of personnel proposed to be deployed for carrying out the technical audit of the work as envisaged in this TOR.
- 4.5.2 Consultants shall submit the details of manpower deployment required for each month in advance.
- 4.5.3 Throughout the contract period, the consultant should deploy the personnel as necessary to complete the tasks on time **Section 3-Technical Proposal**, according to progress of work.
- 4.5.4 Consultant payment is as per the milestone in the schedule of payment and upon successful submission of deliverables.

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5. STANDARD FORMS OF CONTRACT SECTION

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5.1 FORM OF CONTRACT

Name of work: ‘Appointment of Consultancy for undertaking Topography, Drone Surveys and developing GIS enabled portal for revised alignment of Mumbai Metro Line 11

Agreement

This Agreement is made on the _____ day of the month of _____ and executed at _____ between on the one hand, Mumbai Metro Rail Corporation Limited (MMRC) a company incorporated under the provisions of the Companies Act, 1956/2013, having its registered office at _____, Bandra East, Mumbai 400051, hereinafter referred to as the ‘Client’ on the one part, represented by _____ (name and designation of representing officer), which term shall, unless excluded by or repugnant to the context, be deemed to include its representatives, successors and assignees.

AND

_____ Consultants having its registered/corporate office at _____ represented by _____ (name and designation of representing officer) on the other part (Hereinafter called Consultants/Consultant”) which term shall, unless excluded by or repugnant to the context, be deemed to include its representatives, successors and assignees.

WHEREAS

- a. The Client is a SPV, Joint Venture Company of Government of India and Government of Maharashtra and implementing underground Colaba-Bandra-Andheri (SEEPZ) Metro Line-3 in Mumbai. The Client desires to appoint a Consultant to provide certain consulting services as defined in the General Conditions and elsewhere of Contract attached to this Agreement (herein called the “Services”)
- b. The Client had invited proposals (via Request for Proposal (RFP) No. ----- Dated -----" from the interested parties for the “Appointment of Technical Consultant for undertaking of Topography and Drone Survey for revised alignment of Mumbai Metro line 11. After evaluation of bids, the Client has selected the Consultant on open tendering basis as they have the required professional skills, personnel and technical resources. The Consultant has agreed to provide the Services specified in Annexure 1 on such terms and conditions as set forth in this Agreement.

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NOW THIS AGREEMENT WITNESSETH AND THE PARTIES HEREBY AGREE AS FOLLOW:

- 1) The Agreement shall come into effect on the date of issue of Work Order (Effective Date).
- 2) This Agreement shall remain in force for a period of 3 months and shall continue until all of the Services are completed; unless terminated earlier subject to the provisions of this Agreement.
- 3) The Consultant shall ensure deployment of key personnel and support staff/ engineers for period as quoted in their proposal. However, any shortfall in deployment would entail proportionate reduction in contract value.’
- 4) The following documents attached hereto shall be deemed to form an integral Part of this contract.
 - i. The work order issued by Client
 - ii. The Letter of Acceptance (LOA) issued by the Client
 - iii. All the submission Proposals and documents made by the Consultant as part of the RFP submission;
 - iv. Terms of Reference to the RFP
 - v. The General conditions of contract (herein after called GCC)
 - vi. The Special conditions of contract (herein after called SCC)
 - vii. Response to pre-bid queries
 - viii. Corrigendum to the RFP if issued by the Client;
 - ix. Addendum(s) to the RFP
 - x. The following Appendices & Annexures
 - Appendix A : Details of Corridor.
 - Annexure I : Proforma for Justifying quoted lumpsum fees
 - Annexure II : List of Similar works completed in last 5 years
 - Annexure III : List of similar works in hand
 - Annexure IV : Key Personnel and Sub-Consultants
 - Annexure V : Format for CV of proposed Key Staff
 - Annexure VI : Financial Statement
 - Annexure VII : Litigation History
- 5) The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Agreement; in particular:
 - a) The Consultants shall carry out the Services in accordance with the Provisions of the Contract; and
 - b) The Client shall make milestone payments to the Consultant in such manner as

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specified in Schedule of payments viz. Annexure ____.

- c) The financial offer including GST submitted by the Consultant while responding to the Request for Proposal and accepted by the client is Rs. _____ (Rupees _____ only)

IN WITNESS, WHEREOF, the Parties hereto have caused this Agreement to be signed in their respective names as of the day and year above written.

For and on behalf of Mumbai Metro Rail Corporation Limited (50:50 Joint Venture between Government of India and Government of Maharashtra)

Authorized Representative of the Client

Witness 1

Witness 2

For and on behalf of Consultant _____

Authorized Representative of the Consultant

Witness 1

Witness 2

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5.2 GENERAL CONDITIONS OF CONTRACT

5.2.1 Definitions:

Unless the context otherwise requires, the following terms whenever used in this contract have the following meanings:

- a. **“Applicable Law”** means the laws and any other instruments having the force of law in India.
- b. **“Contract”** means the Contract signed by the Parties, to which these General Conditions of Contract are attached, together with all the documents listed in agreement of such signed Contract:
- c. **“Effective Date”** means the date on which this Contract comes into force
- d. **“Employer/Client”** means MMRC represented by Managing Director/ Director (Planning)
- e. **“Engineer in charge”** means any officer designated by the Employer for the project.
- f. **“GC”** means these General Conditions of Contract
- g. **“Government”** means the Government of India / Government of Maharashtra.
- h. **“Local Currency”** means the Currency of the Government of India
- i. **“Party”** means the Client or the Consultants, as the case may be, and Parties means both of them
- j. **“Personnel”** means persons hired by the Consultants or by any Sub- consultant as employees and assigned to the performance of the Services or any part thereof
- k. **“SCC”** means the special Conditions of Contract by which these General Conditions of Contract may be amended or supplemented.
- l. **“Services”** means the work to be performed by the Consultants pursuant to this Contract may be amended or supplemented.
- m. **“Similar Works”** means providing Consultancy of Topography and Drone Survey or developing GIS Enabled portal for Metro Rail/ Road/ Utilities/ Linear Infrastructure projects of approx. 14 km minimum length or cumulatively approx. 7.0 sq.km. area
- n. **“Sub Consultant”** means any entity to which the Consultants, sub-contract any part of the Services in accordance with the Provisions of Clauses elsewhere in the contract and
- o. **“Third-Party”** means any person or entity other than the Government, the Client the Consultants or a Sub-consultant.

5.2.2 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of Master and servant or of principal and agent as between the Client and the Consultants. The Consultants, subject to this Contract, have complete charge of Personnel and sub – consultants, if any, performing the services and shall be fully responsible for the Services performed by them or on their behalf hereunder:

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5.2.3 Law Governing Contract

This Contract, its meaning and interpretation and the relation between the Parties shall be governed by the Applicable Law.

5.2.4 A Party may change its address for notice hereunder by giving the other Party notice of such change pursuant to the provisions listed in the SCC.

5.2.5 Location

The services shall be performed at such locations as are specified in Appendix 'A' hereto, where the locations of a particular task is not so specified at such locations as the Client may approve.

5.2.6 Authorized Representative

Any action required or permitted to be taken, and any document required or permitted to be executed, under the contract by the Client or the Consultants may be taken or executed by the officials specified in the SCC.

5.2.7 Taxes, Duties and Currency of Proposal & Payment

5.2.7.1 Taxes and Duties

The Financial proposal shall take into account all the tax liabilities. Further, all payments shall be subject deduction of taxes at source as per Applicable Laws . Unless otherwise specified in the SCC, the Consultants, Sub-consultants and Personnel shall pay any such additional taxes (other than GST), duties, fees and other impositions as may be levied Under the Applicable Law.

5.2.7.2 Currency of Proposal and Payments

The consultant shall express the price for its Services in the Indian Rupees (INR) only. No foreign currency fluctuation will be paid. Payment under the Contract shall be made in the INR only.

5.2.8 Negotiations and Award

Negotiations will be held at the address indicated in the Data Sheet with regard to the weakness if any in the selected proposal. The invited Consultant will, as a pre-requisite for attendance at the negotiations, confirm availability of all Professional Staff. Failure in satisfying such requirements may result in MMRC proceeding to negotiate the next-ranked Consultant. Representatives conducting negotiations on behalf of the Consultant must have written authority to negotiate and conclude a contract.

5.2.8.1 Technical Negotiations

Negotiations will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan, organisation and staffing, knowledge transfer and training and any suggestions made by the Consultant to improve the Terms of Reference. MMRC and the Consultant will finalise the Terms of Reference, staffing Schedule, Work

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Schedule, logistics and reporting. These documents will then be incorporated in the Contract as “Description of Services”. Special attention will be paid to clearly defining the inputs and facilities required from MMRC to ensure satisfactory implementation of the assignment. MMRC shall prepare minutes of negotiations which will be signed by MMRC and the Consultant.

5.2.8.2 Availability of Key Personnel Staff/ Experts

Having selected the Consultant on the basis of, among other things, an evaluation of the proposed Key Personnel, MMRC expects to negotiate a Contract on the basis of the Professional staff named in the Proposal. Before contract negotiations MMRC will require assurances that the Professional staff will be actually available. MMRC will not consider substitutions during the contract negotiations. If this is not the case and if it is established that Professional staff were offered in the proposal without confirming their availability, this results in rejection of the Consultant’s preproposal and the Client proceeding to negotiate the Contract with the next-ranked Consultant.

5.2.8.3 Financial Negotiations

The negotiations include the clarification of the Consultant’s tax liability in the Client’s country and how it should be reflected in the contract.

Staff month rate negotiation shall not take place, except when the offered Key Personnel and support staff’s remuneration rates are much higher than the typically charged rates by consultants in similar contracts. In such cases, the Client may ask for clarifications and, if the fees are very high, ask to change the rates.

5.2.8.4 Conclusion of negotiations

Negotiations will conclude with a review of the draft contract. To complete negotiations, MMRC and the Consultant will initial the agreed Contract. If negotiations fail, MMRC will invite the Consultant whose proposal received the second highest score to negotiate a Contract.

5.2.9 Commencement, Completion, Modification and Termination of Contract

5.2.9.1. Effectives of Contract

This Contract shall come into force and effect on the date (the “Effective Date”) of the Client’s notice to the Consultants instructing the Consultants to begin carrying out the Services and shall confirm that the effectiveness conditions, if any listed in the SCC have been met.

5.2.9.2 Commencement of Services

The Consultants shall begin carrying out the Services at the end of such time period after the effective date as shall be specified in the SCC.

5.2.9.3 Expiration of Contract

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Unless terminated earlier pursuant to Clause GC 6.2.9.10 hereof, this Contract shall expire when services have been completed and all payments have been made at the end of such time period, after the effective date as shall be specified in the SCC.

5.2.9.4 Entire Agreement

This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

5.2.9.5 Modification

Modification of the term and conditions of this Contract, including any modification of the scope of the Services, may only be made by written agreement between the Parties.

5.2.9.6 No Breach of Contract

The failure of a party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under this Contract so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions due care and reasonable alternative measures, all with the objective of carrying out terms and conditions of this Contract.

5.2.9.7 Measures to be taken

- a. A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- b. A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible and in any event not later than fourteen (14) days following the occurrence of such event providing evidence of the nature and causes of such event and shall similarly give notice of the restoration of normal conditions as soon as possible.
- c. The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

5.2.9.8 Extension of Time

Any period, within which a party shall pursuant to this Contract complete any action or task shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

5.2.9.9 Suspension

The Client may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform their obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension.

- i. Shall specify the nature of the failure and

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- ii. Shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

5.2.9.10 Termination

The Client may by not less than thirty (30) days shall give the written notice of termination to the Consultants after the occurrence of any of the following events (except in the event listed in the paragraph (f) below, for which there shall be a written notice of not less than sixty days). Such notices to be given after the occurrences of any of the events specified in the paragraphs (a) through (g).

- a) If the Consultants fail to remedy a failure in the performance of their obligations hereunder, as specified in a notice of suspension pursuant to clause GC 6.2.9.9 herein above, within thirty (30) days of receipt of such notice of suspension or within such further period as the Client may have subsequently approved in writing;
- b) If the Consultants become (or, if the Consultants consist of more than one entity, if any of their Members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- c) If the Consultants fails to comply with any final decision reached as a result of arbitration proceedings.
- d) If the Consultants submit to the Client, a statement which has a material effect on the rights, obligations and interests of the Client and which the Consultants know to be false.
- e) If, as a result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- f) If the Consultant, in the judgment of the Client has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- g) If the Client in its sole discretion for any reason whatsoever, decides to terminate this contract.

5.2.10 Cessation of Rights and Obligations

Upon termination of this Contract pursuant to Clauses GC 6.2.9.10 hereof, or upon expiration of this contract, pursuant to Clause GC 6.2.9.3 all rights and obligations of the Parties hereunder shall cease, except:

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- i) Such rights and obligations as may have accrued on the date of termination or expiration;
- ii) The obligation of confidentiality.
- iii) The Consultants obligation to permit inspection copying and auditing of their accounts and records set forth.
- iv) Any right which a Party may have under the applicable law.

5.2.11 Disputes about Events of Termination

- a. Except where otherwise specified in the contract and subject to the powers delegated to him by MMRC then in force the decision of the Director (Planning) for the time being shall be final, conclusive and binding on all parties to the Contract upon all question relating to the meaning of the contract conditions or as to any other question, claim, right, matter or things, whatsoever if any way arising out of or relating to the contracts.
- b. If the consultants is not satisfied with the order passed by the Director (Planning) as aforesaid, the consultant may within thirty days of receipt by him of any such order appeal against it to the Managing Director who, if convinced that prima – facie the consultants claim rejected by Director (Planning) is not frivolous and that there is some substance in the claim of the consultant as would merit a detailed examination through a suitable committee appointed for the purpose by the Managing Director if necessary and in that case decision taken by the committee shall be finalized by the competent authority and same shall be binding to the Consultant

5.2.12 Obligations of the Consultants

5.2.12.1 General

a) Standards of Performance

The Consultants shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy in accordance with Generally accepted professional techniques and practices and shall observe sound management practices and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the services, as faithful advisor to the Client, and shall at all times support and safeguard the Client's Legitimate interests in any dealings with Sub- consultants or Third Parties.

b) Law Governing Services

The Consultants shall perform the services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub- consultants, as well as the Personnel of the Consultants and any Sub – consultant, comply with the Applicable Law.

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5.2.12.2 Conflict of Interest

a) Consultants Not to Benefit from Commissions, Discounts, etc. The remuneration of the Consultants, shall constitute the Consultant's sole remuneration in connection with this Contract or the Services and, the Consultants shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the services or in the discharge of their obligations hereunder, and or to the Consultants shall use their best efforts to ensure that any sub – consultants, as well as the Personnel and agents of them, similarly shall not receive any such additional remuneration.

b) Consultants and Affiliates Not to engage in Certain Activities

The Consultants agree that during the term of this Contract, the Consultants and any entity affiliated with the Consultants as well as any Sub-Consultant and any entity affiliated with such Sub- Consultant, shall be disqualified from providing goods, works or services (other than the Services any continuation thereof) for any project resulting from or closely related to the Services.

c) Prohibition of Conflicting Activities

The Consultants shall not engage, and shall cause their Personnel not to engage, either directly or indirectly, in any of the following activities:

i. During the term of this Contract, any business or professional activities which would conflict with the activities assigned to them under this Contract; and

ii. After the termination of this contract, such other activities as may be specified in the SCC.

5.2.12.3 Confidentiality

The Consultants, their sub consultants and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract or the Client's business or operations without the prior written consent of the Client.

5.2.12.4 Liability of the Consultants

Subject to additional provisions, if any set forth in the SCC, the Consultants liability under this Contract shall be as provided by the Applicable Law.

5.2.12.5 Insurance to be Taken Out by the Consultants**The Consultants**

i) shall take out and maintain, and shall cause any Sub – consultants to take out and maintain, at their (or the Sub – Consultants, as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks , and for the coverage, as shall be specified in the SCC , and

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- ii) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid.

5.2.12.6 Consultants Actions Requiring Client's Prior Approval

The Consultant shall obtain the Client's prior approval in writing before taking any of the following actions:

- a) Appointing such members of the Personnel ("Consultants sub – consultants' Key Personnel") merely by title but not by name. The consultant shall not change the Key Personnel proposed for the work without any valid reasons acceptable to the Client.
- b) Entering into subcontract for the performance of any part of the Services, and note
 - i) that the selection of the Sub – Contractor and the terms and conditions of the subcontract shall have been approved in writing by the Client prior to the execution of the sub contract, and
 - ii) that the Consultants shall remain fully liable for the performance of the Services by the sub-consultant and its Personnel pursuant to this Contract; and
- c) Any other action that may be specified in the SCC.

5.2.12.7 Reporting Obligations

The Consultants shall submit to the Client the reports and documents as may be specified hereto, in the form, in the numbers and within the time periods set forth.

5.2.12.8 Documents prepared by the Consultants to be the Property of the Client

All plans, drawings, specifications, designs, reports, other documents and software prepared by the Consultants for the Client under this Contract shall become and remain the property of the Client, and the Consultants shall not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software, Restrictions about the future use of these documents and software, if any shall be specified in the SCC.

5.2.12.9 Equipment and Material Furnished by the Client Securing approvals and permission

All the required material, equipment required for the job shall be arranged by the Consultant. All permissions required for carrying out the survey shall be the responsibility of the Consultants. MMRC will provide necessary and timely support to consultants for securing such permission. Coordination with traffic police and securing of such permissions shall be responsibility of the consultants

5.2.13 Consultants Personnel and Sub –Consultants

5.2.13.1 General

The Consultants shall employ and provide such qualified and experienced Personnel and Sub-consultants as are required to carry out the Services.

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5.2.13.2 Description of Personnel

- a) Name of the key persons shall be given.

5.2.14 If additional work is required beyond the scope of the Services specified, the estimated periods of engagement of Key Personnel may be increased by agreement in writing between the Client and the Consultants.

5.2.15 Approval of Personnel

The Key Personnel and Sub –consultants listed by title as well as by name are required to be approved by the Client. In respect of other Key Personnel which the Consultants propose to use in the carrying out of the Services, the Consultants shall submit to the client for review and approval a copy of their biographical data.

5.2.16 Removal and / or Replacement of Personnel

- a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the Personnel, the Consultants shall forthwith provide as a replacement a person of equivalent or better qualifications.
- b) If the Client
- (i) finds that any of the Personnel has committed serious misconduct or has been charged with having committed a criminal action, or
 - (ii) has reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultants shall, at the Client's written request specifying the grounds therefore, forthwith provide as a replacement a person with qualification and experience acceptable to the Client.
- c) Any of the Personnel provided as a replacement under Clauses (a) and (b) above, the rate of remuneration applicable to such person as well as any reimbursable expenditures (including expenditures due to the number of eligible dependents) the Consultants may wish to claim as a result of such replacement, shall be subject to the prior written approval by the Client. Except as the Client may otherwise agree,
- (i) the Consultants shall bear all additional travel and other costs arising out of or incidental to any removal and/or replacement, and
 - ii) the remuneration to be paid for any of the Personnel provided as a replacement shall not exceed the remuneration which would have been payable to the Personnel replaced. In case, the personnel of consultant remains absent from work for more than 15 days, proportionate payment will be deducted from consultant's payments.

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5.2.17 Fairness and Good Faith

5.2.17.1 Good Faith

The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objective of this Contract.

5.2.17.2 Operation of the Contract

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract, shall operate fairly as between them, and without detriments to the interest of either of them, and that, if during the term of this Contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but no failure to agree on any action pursuant to this Clause shall give rise to a dispute subject to arbitration.

5.2.18 Settlement of Disputes

5.2.18.1 Dispute Resolution:

If the dispute cannot be settled amicably within sixty (60) days after serving notice of dispute, the Parties may endeavour to settle the dispute by way of an arbitration under the provisions of the Arbitration & Conciliation Act, 1996 including its amendments thereof. The sole arbitrator shall be appointed by mutual consent of both the parties within 30 days from the date of first written intimation of the intent to resolve the dispute by arbitration. If the parties fail to appoint the sole arbitrator by mutual consent, as above, the same shall be appointed as per the provision of the Arbitration and Conciliation Act, 1996, including its amendments thereof. The Seat of arbitration shall be Mumbai and the language of arbitration shall be English. The decision of the arbitrator shall be final and binding upon the Parties. Both the parties shall bear the cost of the arbitration in equal proportion unless otherwise decided by the sole arbitrator. The parties agree that the existence and content of the arbitration and the terms of the order or award made in the arbitration shall, except as may be required by law, be kept confidential.

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5.3 SPECIAL CONDITIONS OF CONTRACT

Number of GCC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
5.2.4	<p>The addresses are:</p> <p>Employer: Mumbai Metro Rail Corporation Limited Attention: R. Ramana, Director (Planning)</p> <p>Consultant: (Registered address of awardee tenderer)</p> <hr/> <hr/> <hr/>
5.2.6	<p>The authorized Representatives are:</p> <p>For the Employer: R. Ramana, Director (Planning)</p> <p>For the Consultant: The Authorized Representative, mentioned in Authority letter.</p>
5.2.7	<p>The consultants, Sub- consultants and the Personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the client shall perform such duties regarding the deduction of such tax as per prevalent laws inforce.</p>
5.2.9.1	<p>The effective date shall come into effect on the date contract is signed by both parties</p>
5.2.9.2	<p>The date of commencement of services is 15 days from the effective date.</p>
5.2.9.3	<p>The time period shall be 3 months from the effective date of contract</p>
5.2.12.4	<p>Limitation of the Consultants liability towards the Client</p> <p>a) Except in case of gross negligence or willful misconduct on the part of the Consultants or on the part of any person or firm acting on behalf of the Consultants in carrying out the services, the Consultants, with respect to damage caused by the Consultants to the Client's property, shall not be liable to the Client:</p> <p>i) For any indirect or consequential loss or damage, and</p> <p>ii) For any direct loss or damage that exceeds</p>

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	<p>(A) the total payments for Professional Fees and Reimbursable Expenditures made or expected to be made to the Consultants</p> <p>Or</p> <p>(B) entitled to receive from any insurance maintained by the Consultants to cover such a liability,</p> <p>whichever of (A) or (B) is higher.</p> <p>b) This limitation of liability shall not affect the Consultants liability, if any, for damage to third Parties caused by the Consultants or any person or firm acting on behalf of the Consultants in carrying out the Services.</p>
5.2.12.5	<p>The risks and the coverages shall be as follows: The insurance shall be Taken from: Directorate of Insurance Maharashtra State, Mumbai - 400051.</p> <p>a) Third Party motor vehicle liability insurance as required under Motor Vehicles Act, 1988 in respect of motor vehicles operated in India by Consultants or their Personnel or any Sub- consultants or their Personnel for the Period of consultancy.</p> <p>b) Third Party liability insurance with a minimum coverage of Rs.5.0 Lakh for the period of consultancy.</p> <p>c) Professional liability insurance, with a minimum coverage equal to Estimated remuneration and reimbursable as per 6.2.12.4 (a) (ii) of GCC of the consultancy.</p> <p>d) Client's liability and worker's compensation insurance in respect of the Personnel of the Consultants and of any Sub- consultant, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health accident, travel or other insurance as may be appropriate; and</p> <p>e) Insurance against loss of or damage to i) equipment purchased in whole or in part with funds provided under this Contract, ii) the Consultants property used in the performance of the Services, and iii) any documents prepared by the Consultants in the Performance of the Services.</p>
5.2.12.8	<p>The Consultants shall not use these documents for purposes unrelated to this Contract without the Prior written approval of the Client.</p>

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5.2.12.9	The Special Conditions of Contract (SCC) shall prevail over General Conditions of Contract (GCC) in case of any contradiction between SCC and GCC.

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Annexure-I

Following pro forma justifying quoted Lumpsum fees				
A- Remuneration for Key Professional Staff:				
S. No.	Position	Salary per month	Requirement as per contract	Total salary
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
B- Remuneration for Supporting, Supervisory Staff:				
S. No.	Position	Salary per month	Requirement as per contract	Total salary
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

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17				
18				
19				
20				
21				
22				
23				
24				
25				
C- GIS Software Perpetual Licenses (2 nos) for creating GIS Base Map with Web hosting service on Cloud service for 2 years				
D- All other Miscellaneous expenses:				
	All other local Services rentals, transportation, utilities, survey, preparation of printing drawings (any size & number)/reports, office furniture & equipment, communication etc. complete including overheads.			
	Total Cost (D)			
Total Cost of Consultancy work i.e. (A+B+C+D) = E				Rs.

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Annexure-II
LIST OF SIMILAR / GIS / DIGITAL WORKS COMPLETED IN LAST FIVE YEARS

S. No.	Name of Work and Location	Owner or Sponsoring Organization	Cost of Work (In Lakhs)	Date of commencement as per work order	Stipulated completion date	Actual completion date

Seal and signature of bidder

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Annexure-III
LIST OF SIMILAR WORKS IN HAND

S. No.	Name of Work and Location	Owner or Sponsoring Organization	Cost of Work (In Lakhs)	Date of commencement as per work order	Stipulated completion date (as per Contract)	Proposed completion date

Seal and signature of bidder

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Annexure IV
KEY PERSONNEL AND SUB CONSULTANTS

Sr. No.	Name	Qualification	Position	Task
1				
2				
3				
4				
5				
6				

NOTE: Consultant is required to submit the resume of each of the above personnel.

Deployment schedule of Key Expert, Support staff during 3+3 month contract period shall be submitted along with technical proposal.

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Annexure- V
FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED KEY STAFF

1. **Proposed Position:** _____
2. **Name of Staff:** _____
3. **Date of Birth:** _____ (Please furnish proof of age)
4. **Nationality:** _____
5. **Educational Qualification:** (Summarize college/university and other specialized education of staff member, giving names of schools, dates attended and degrees obtained). (Please furnish proof of qualification)
6. **Membership of professional societies:** _____
7. **Publications:** (List of details of major technical reports/papers published in recognized national and international journals)
8. **Employment Record:** (Starting with present position, list in reversed order, every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held and location of assignments along with task performed in detail. For experience period of specific assignment must be clearly mentioned, also give client reference, where appropriate).
9. **A) Education:**
 - i. Graduation and Year
 - ii. Post-graduation and year
 - iii. Any other specific qualification
- B) Experience**
 - i. Total experience in Buildings: _____ Yrs
 - ii. Responsibilities held: _____ Yrs
 - iii. Relevant Experience: _____ Yrs
- C) Permanent Employment with the Firm (Yes/No):**

If yes, how many years:
If no, what is the employment:
Arrangement with the firm?

10. Detailed Tasks Assigned: (List all tasks to be performed under this Assignment/Job)

Certification:

1. I am willing to work on the project and I will be available for entire duration of the project assignment and I will not engage myself in any other assignment during the currency of his assignment on the project.
2. I, the undersigned, certify that to the best of my knowledge and belief, this biodata correctly describes myself, my qualification and my experience.

Signature of the Candidate _____

Place _____

Date _____

Signature of the Authorized Representative of the firm _____

Place _____

Date _____

Note: Each page of the CV shall be signed in ink by both the staff member and the Authorized Representative of the firm only scan copy from original document is to be submitted, photocopies will not be considered for evaluation. Experience certificate from the previous employers should be enclosed wherever necessary.

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Annexure-VI**Financial Statement**

Particulars	Financial Year				
	2018-19	2019-20	2020-21	2021-22	2022-23
a) Gross Annual Turnover (In Lakhs)					
b) Profit / Loss Rupees (In Lakhs)					
c) Certified By					

Annual turnover certificates & audited balance sheets for last 3 financial years to be attached duly signed and verified by Chartered Accountant.

Name and Address of Chartered Accountant:

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Annexure-VII**Litigation History**

Sr. No	Case Particulars	Date of Filing	Case Outcome / Present Status

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APPENDIX A
Details of Corridor

Sr. No.	Particulars	Details	Units
1	Location or Corridor	Anik depot to Shyama Prasad Mukherjee chowk via CGS colony-Sewri-Byculla-Nagpada-CSMT	
2	Length of Corridor	16.7	Km
3	Stabling lines	4 lines (1 stabling depot)	-
4	No. of Depot	2	No.s
5	No. of Stations	16 stations (15 Underground and 1 at-grade)	No.s

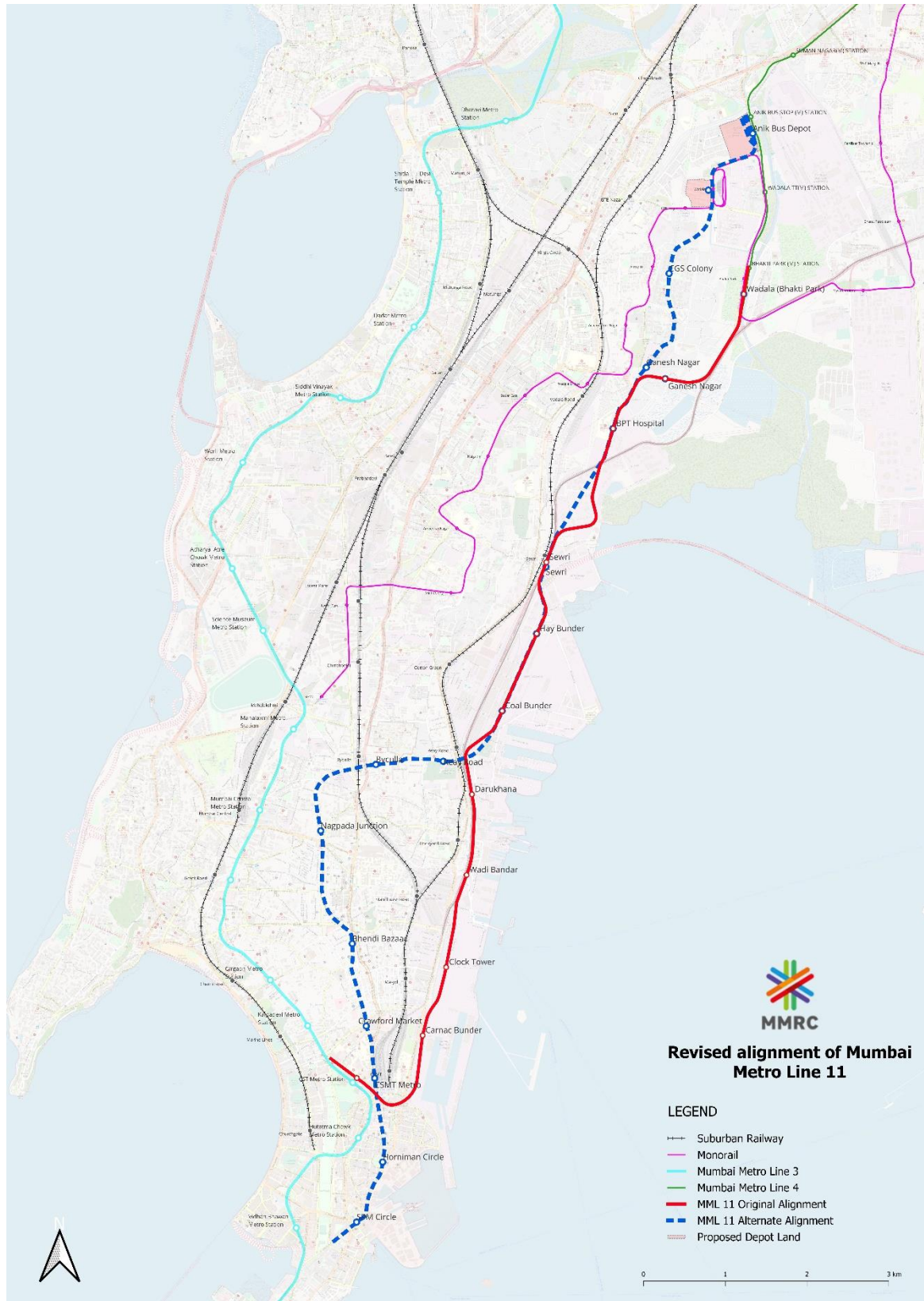
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APPENDIX B

Metro Line 3 Alignment Map



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Check list of Documents

The bids shall be accompanied with the followings:

	1) Document Fee (Rs 10,000/- + GST)	Yes/ No
TECHNICAL PROPOSAL	i) Copy of Work Orders/ Self-certification	Yes/ No
	ii) List of similar works completed in last five years (Annexure II)	Yes/ No
	iii) List of similar works in Hand (Annexure III)	Yes/ No
	iv) Key personnel and Sub Consultants-Resume of Team members with supporting documents – (Annexure IV and Annexure V)	Yes/ No
	v) Undertaking that the firm/Institution is not blacklisted by any Government or its agencies including Central/ state level Public Enterprises	Yes/ No
	vi) Undertaking regarding Non-Disclosure/sharing of confidential information with third parties.	Yes/ No
	vii) Annual Turnover Certificates & audited balance sheet for last 3 financial years (Yr. 2018-19, Yr. 2019-20, Yr. 2020-21) –(Annexure VI)	Yes/ No
	viii) Certificate of incorporation, PAN Number, GSTIN details & MSME Registration details (if any)	Yes/ No
	ix) Letter declaring offer to be unconditional, confirming its validity for 180 days.	Yes/ No
	x) Litigation history (Annexure VII)	Yes/ No
	xi) Copy of valid Partnership deed / JV/ Consortium / MOU, if any	Yes/ No
	xii) Authority letter clearly mentioning details of authorized representative	Yes/ No
	xiii) Description in brief about Organisation, Organisational structure, Understanding of Scope of Services, Approach, Methodology and Work Plan/ Activity Schedule for Performing the Assignment (max 10 pages)	Yes/ No
FINANCIAL PROPOSAL <i>(Only to be uploaded as Financial Proposal)</i>	1) Financial Proposal- Standard form (refer 4.1) (Only to be uploaded with Financial proposal)	Yes/ No
	2) Annexure I- Proforma of Lumpsum Fees (Only to be uploaded with Financial proposal)	Yes/ No

Note: Submission of Financial Proposal documents in the Technical proposal would lead to disqualification of the bidder.

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