

# Request for Proposal

for

## Selection of Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai



**MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY  
(MMRDA)**



# MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY

MMRDA

(A Govt. of Maharashtra Undertaking)

Plot No.C-14 & 15, Bandra-Kurla Complex, Bandra (E), Mumbai – 400 051.

Tel..26594000,26590001-04 Fax 26591264 Website : <https://www.mmrda.maharashtra.gov.in>

## e-RFP NOTICE

Mumbai Metropolitan Region Development Authority (MMRDA) hereby invites bids from eligible bidders through MMRDA e-Tendering Portal for “Selection of Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives for Bandra Kurla Complex, Mumbai”. The RFP details are as under.

Sr. No.	Parameters	Details		
1	Tender/Bid No.	MMRDA/IT/		
2	Division	Division		
3	Name of Tender/Bid	Request for Proposal for “Selection of Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives for Bandra Kurla Complex, Mumbai”		
4	Contact details	Shri. S. C. Deshpande, JPD(TP), In-Charge IT Cell, Tel: 022-26595919 Fax:022-26595943 Email: <a href="mailto:jpdp@mailmmrda.maharashtra.gov.in">jpdp@mailmmrda.maharashtra.gov.in</a>		
5	Important dates	<b>Milestone</b>	<b>From date/time</b>	<b>To date/time</b>
		Tender Release	----	11.07.2015 from 5 pm (IST)
		Bid document download	15.07.2015 from 5 pm (IST)	20.08.2015 to 5 pm (IST)
		Last date of receipt of queries/ clarification	15.07.2015 from 5 pm (IST)	25.07.2015 till 5 pm (IST)
		Pre Bid Meeting	31.07.2015 at 4 pm (IST)	Venue : 6th Floor, MMRDA Building, Bandra Kurla Complex, Mumbai – 51.
		Last date of Online submission	----	25.08.2015 till 5 pm (IST)

This e-RFP shall be available for free download on registration at [etendermmrda.maharashtra.gov.in](http://etendermmrda.maharashtra.gov.in) as per the above mentioned dates. The submission of the e-RFP response is through MMRDA e-tendering portal only. For participating in this e-RFP and avoiding last minute technical challenges if any, the guidelines mentioned in the e-RFP document on e-Tendering Portal shall be followed by all the bidders. The bidders shall go through the eTender SOP and FAQs hosted at MMRDA e-Tendering portal for detail understanding of e-tendering submission process. For any e-Tendering support, mail MMRDA e-tendering Helpdesk at [etendersupport@mailmmrda.maharashtra.gov.in](mailto:etendersupport@mailmmrda.maharashtra.gov.in) or call Helpdesk on 022-26595971.

Date : 11/07/2015  
Place: Mumbai

Sd/-  
Addl. Metropolitan Commissioner-(I) &  
PD, MUTP

Fulrani



MMRDA

# मुंबई महानगर प्रदेश विकास प्राधिकरण

(महाराष्ट्र शासन अंगिकृत)

प्लॉट क्र.सी-१४ व १५, वांद्रे-कुर्ला संकुल, वांद्रे (पूर्व), मुंबई - ४०० ०५१.

दूरध्वनी : २६५९४०००, २६५९०००१-०४ फॅक्स : २६५९१२६४

वेबसाईट : <https://www.mmrda.maharashtra.gov.in>

## ई-निविदा प्रस्ताव सुचना

मुंबई महानगर प्रदेश विकास प्राधिकरण या द्वारे पात्र व नामांकित उमेदवारांकडून वांद्रे-कुर्ला संकुलासाठीच्या “**Smart BKC 1.0 Initiatives**” ची रचना, विकास, अंमलबजावणी व देखभाल (**Design, Development, Implementation, Operation and Maintenance**) करण्यासाठी मास्टर सिस्टीम इंटीग्रेटर (**Master System Integrator**) ची निवड करण्यासाठी हा ई-निविदा प्रस्ताव मुं.म.प्र.वि.प्रा. च्या ई-निविदा संकेतस्थळांमार्फत मागवत आहे. ई-निविदा प्रस्तावाची माहिती खालीलप्रमाणे आहे.

अ. क्र	घटक	माहिती																		
१.	निविदा क्रमांक	मुं.म.प्र.वि.प्रा/मा.व तं. कक्ष/																		
२.	कक्ष	माहिती व तंत्रज्ञान कक्ष																		
३.	निविदेचे शिर्षक	वांद्रे-कुर्ला संकुलासाठीच्या “ <b>Smart BKC 1.0 Initiatives</b> ” ची रचना, विकास, अंमलबजावणी व देखभाल करण्यासाठी मास्टर सिस्टीम इंटीग्रेटरची निवड करणे.																		
४.	संपर्कासाठी माहिती	श्री.शंकर चं. देशपांडे दूरध्वनी क्र. ०२२-२६५९५९१९ फॅक्स : ०२२-२६५९५९४३ ईमेल : <a href="mailto:jpdtp@mailmmrda.maharashtra.gov.in">jpdtp@mailmmrda.maharashtra.gov.in</a>																		
५.	महत्वाचे दिनांक	<table border="1"> <thead> <tr> <th>घटक</th> <th>तारीख / वेळ पासून</th> <th>तारीख / वेळ पर्यंत</th> </tr> </thead> <tbody> <tr> <td>निविदा प्रस्ताव प्रकाशन</td> <td>—</td> <td>११.०७.२०१५ सायं. ५.०० (IST)</td> </tr> <tr> <td>निविदा प्रस्ताव डाऊनलोड</td> <td>१५.०७.२०१५ सायं. ५.०० (IST)</td> <td>२०.०८.२०१५ सायं. ५.०० (IST)</td> </tr> <tr> <td>विचारणा / स्पष्टीकरण प्राधिकरणाकडे पाठविण्याची अंतिम दिनांक</td> <td>१५.०७.२०१५ सायं. ५.०० (IST)</td> <td>२५.०७.२०१५ सायं. ५.०० (IST)</td> </tr> <tr> <td>निविदा प्रस्ताव पुर्व बैठक</td> <td>३१.०७.२०१५ रोजी दुपारी ४.०० (IST) वाजता</td> <td>स्थळ : ६वा मजला, मुं.म.प्र.वि.प्रा इमारत, वांद्रे-कुर्ला संकुल, मुंबई - ५१</td> </tr> <tr> <td>निविदा प्रस्ताव स्विकारण्याची शेवटचा दिनांक</td> <td>—</td> <td>२५.०८.२०१५ सायं. ५.०० (IST) वाजेपर्यंत</td> </tr> </tbody> </table>	घटक	तारीख / वेळ पासून	तारीख / वेळ पर्यंत	निविदा प्रस्ताव प्रकाशन	—	११.०७.२०१५ सायं. ५.०० (IST)	निविदा प्रस्ताव डाऊनलोड	१५.०७.२०१५ सायं. ५.०० (IST)	२०.०८.२०१५ सायं. ५.०० (IST)	विचारणा / स्पष्टीकरण प्राधिकरणाकडे पाठविण्याची अंतिम दिनांक	१५.०७.२०१५ सायं. ५.०० (IST)	२५.०७.२०१५ सायं. ५.०० (IST)	निविदा प्रस्ताव पुर्व बैठक	३१.०७.२०१५ रोजी दुपारी ४.०० (IST) वाजता	स्थळ : ६वा मजला, मुं.म.प्र.वि.प्रा इमारत, वांद्रे-कुर्ला संकुल, मुंबई - ५१	निविदा प्रस्ताव स्विकारण्याची शेवटचा दिनांक	—	२५.०८.२०१५ सायं. ५.०० (IST) वाजेपर्यंत
घटक	तारीख / वेळ पासून	तारीख / वेळ पर्यंत																		
निविदा प्रस्ताव प्रकाशन	—	११.०७.२०१५ सायं. ५.०० (IST)																		
निविदा प्रस्ताव डाऊनलोड	१५.०७.२०१५ सायं. ५.०० (IST)	२०.०८.२०१५ सायं. ५.०० (IST)																		
विचारणा / स्पष्टीकरण प्राधिकरणाकडे पाठविण्याची अंतिम दिनांक	१५.०७.२०१५ सायं. ५.०० (IST)	२५.०७.२०१५ सायं. ५.०० (IST)																		
निविदा प्रस्ताव पुर्व बैठक	३१.०७.२०१५ रोजी दुपारी ४.०० (IST) वाजता	स्थळ : ६वा मजला, मुं.म.प्र.वि.प्रा इमारत, वांद्रे-कुर्ला संकुल, मुंबई - ५१																		
निविदा प्रस्ताव स्विकारण्याची शेवटचा दिनांक	—	२५.०८.२०१५ सायं. ५.०० (IST) वाजेपर्यंत																		

ई-निविदा प्रस्ताव <https://etendermmrda.maharashtra.gov.in> या संकेतस्थळावरून वर उल्लेखिलेल्या दिनांकास रजिस्ट्रेशननंतर मोफत डाऊनलोड करता येतील. सदर ई-निविदा प्रस्ताव भरण्यासाठी सदर निविदेत उल्लेखिलेल्या तांत्रिक बाबी लक्षात घ्याव्यात, जेणेकरून निविदा वेळेत सादर होईल व सर्व तांत्रिक बाबींची पूर्तता वेळेत करता येणे निविदाकारास शक्य होईल. ई-निविदा संकेतस्थळावर उपलब्ध असलेल्या सुचना पुस्तिका (**Guidelines**) चे तंतोतंत पालन करावे.

इतर ई-निविदे संबंधीत बाबींबाबत <https://etendersupport@mailmmrda.maharashtra.gov.in> या ई-मेल किंवा दूरध्वनी क्र. ०२२-२६५९५९७१ द्वारे संपर्क साधावा.

दिनांक : ११.०७.२०१५  
ठिकाण : मुंबई.

अति.महानगर आयुक्त - I व  
मुं.म.प्र.वि.प्रा. प्रकल्प संचालक,  
(एमयुटीपी)

Fulrani

Size : 12 x 19

Request for Proposal for  
Selection of Master System  
Integrator for Design,  
Development, Implementation,  
Operation and Maintenance of  
Smart BKC 1.0 Initiatives

MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY  
(MMRDA)



**[THIS SPACE IS LEFT BLANK INTENTIONALLY]**





## **Table of Contents**

Section – I: Instructions to Bidders	4
Section – II: Scope of Work	68
Section – III: Draft Legal Agreements	168
Section – IV: Annexures to RFP	262

**[THIS SPACE IS LEFT BLANK INTENTIONALLY]**





# Section – I: Instructions to Bidders





**Table of Contents**

Confidentiality	7
Disclaimer	8
Glossary of Terms	10
Definitions	14
1. Invitation for Proposal	21
1.1 Key Events and Dates	22
1.2 Other Important Information Related to Bid	23
1.3 RFP Structure	23
2. Background Information	24
2.1 About the Department	24
2.2 Bandra Kurla Complex (BKC)	24
2.3 Introduction to Smart BKC	24
3. Instructions to the Bidders	27
3.1 General Information and Guidelines	27
3.2 Compliant Proposals/ Completeness of Response	28
3.3 Pre-Bid Meeting	28
3.4 Responses to Pre-Bid Queries and Issue of Corrigendum	28
3.5 Key Requirements of the Bid	28
3.5.1 Right to Terminate the Process	28
3.5.2 RFP Tender Fees	29
3.5.3 Earnest Money Deposit	29
3.5.4 Consortium	30
3.6 Engagement Model and Timeline	32
3.6.1 Engagement Model and Timeframe	33
3.6.2 Conditions	33
3.6.3 Deliverables and Payment Schedule	35
3.6.4 Inclusion of MSMEs in Project Delivery	36
3.7 Bid Submission Instructions	36
3.7.1 Bid Submission Format	36
3.7.2 Eligibility Criteria	37
3.7.3 Submission of Technical Bid	38
3.7.4 Submission of Commercial Bid	39
3.7.5 Authentication of Bids	43
3.7.6 Proposal Preparation Costs	43
3.7.7 Language	44
3.7.8 Late Bids	44
3.7.9 Suggestions	44
3.7.10 Tender Validity	44
3.7.11 Tender Opening	44
3.7.12 Rejection Criteria	45
3.7.13 Clarification of Offers	46
4. Evaluation Process	47
4.1 Bid Evaluation Committee	47
4.2 Eligibility Criteria (Envelope A)	47
4.3 Technical Evaluation	49
4.3.1 Proof of Concept (PoC) / Client Visit	49
4.3.2 Technical Scoring and Evaluation	50
4.3.3 Technical Evaluation Matrix	51
4.4 Commercial Evaluation	59
4.5 Final Composite Bid Score	59
4.6 Appointment of Master System Integrator	60
4.6.1 Award Criteria	60
4.6.2 Right to Accept Any Proposal and To Reject Any or All Proposal(s)	60
4.6.3 Term of the Contract Agreement	60
4.6.4 Notification of Award	61
4.6.5 Contract Finalization and Award	61
4.6.6 Performance Bank Guarantee	61
4.6.7 Signing of Contract	61
4.6.8 Taxes	62





4.7.	Right to vary the scope of the work at the time of Award	63
4.8.	Failure to Agree with the Terms and Conditions of the RFP	63
5.	Fraud and Corrupt Practices	64
6.	Conflict of Interest	66





## **Confidentiality**

This document has been circulated for limited circulation only, amongst the interested parties (Bidders) who have requested for the purchase of RFP for the Design, Development, Implementation, Operation & Maintenance of Smart BKC Project for the BKC region. Information shared with Bidders through this document is confidential in nature. Any further circulation of this information without prior permission of MMRDA is prohibited and shall attract punishment/penalties.





## **Disclaimer**

1. Mumbai Metropolitan Region Development Authority, Mumbai (hereinafter referred to as MMRDA or 'MMRDA') has issued this Request for Proposal (hereinafter referred to as "RFP") for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives for BKC region on such terms and conditions as set out in this RFP document, including but not limited to the Technical Specifications set out in different parts of this RFP document.
2. This RFP has been prepared with an intention to invite prospective Applicants/Bidders and to assist them in making their decision of whether or not to submit a proposal. It is hereby clarified that this RFP is not an agreement and the purpose of this RFP is to provide the bidder(s) with information to assist them in the formulation of their proposals. This RFP document does not purport to contain all the information bidders may require. This RFP document may not be appropriate for all persons, and it is not possible for MMRDA to consider the investment objectives, financial situation and particular needs of each bidder.
3. MMRDA has taken due care in preparation of information contained herein. However this information is not intended to be exhaustive. Interested parties are required to make their own inquiries and respondents will be required to confirm in writing that they have done so and they do not solely rely on the information contained in this RFP in submitting their Proposal. This RFP includes statements, which reflect various assumptions and assessments arrived at by MMRDA in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require.
4. This RFP is not an agreement by and between MMRDA and the prospective bidders or any other person. The information contained in this RFP is provided on the basis that it is non-binding on MMRDA, any of its authorities or agencies, or any of their respective officers, employees, agents, or advisors. MMRDA makes no representation or warranty and shall incur no liability under any law as to the accuracy, reliability or completeness of the information contained in the RFP document. Each Bidder is advised to consider the RFP document as per his understanding and capacity. The bidders are also advised to do appropriate examination, enquiry and scrutiny of all aspects mentioned in the RFP document before bidding. Bidders are encouraged to take professional help of experts on financial, legal, technical, taxation, and any other matters / sectors appearing in the document or specified work. Bidders are also requested to go through the RFP document in detail and bring to notice of MMRDA any kind of error, misprint, inaccuracies, or omission in the document. MMRDA reserves the right not to proceed with the project, to alter the timetable reflected in this document, or to change the process or procedure to be applied. MMRDA also reserves the right to decline to discuss the Project further with any party submitting a proposal.
5. No reimbursement of cost of any type will be paid to persons, entities, or consortiums submitting a Proposal. The Bidder shall bear all costs arising from, associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or



presentations which may be required by MMRDA or any other costs incurred in connection with or relating to its Bid.

6. This issue of this RFP does not imply that MMRDA is bound to select and pre-qualify Bids for Bid Stage or to appoint the selected Bidder or Concessionaire, as the case may be, for the project and MMRDA reserves the right to reject all or any of the Bids without assigning any reasons whatsoever.
7. MMRDA may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

MMRDA, its employees and advisors make no representation or warranty and shall have no liability (for any cost, damage, loss or expense which may arise from or is incurred or suffered on account of anything contained in this RFP or otherwise, including but not limited to the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to be part of this RFP or arising in any way with eligibility of Bidder for participation in the Bidding Process) towards any Applicant or Bidder or a third person, under any law, statute, rule, regulation or tort law, principles of restitution or unjust enrichment or otherwise.

8. MMRDA also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statement contained in this RFP.
9. Interested parties, after careful review of all the clauses of this 'Request for Proposal', are encouraged to send their suggestions in writing to MMRDA. Such suggestions, after review by MMRDA, may be incorporated into this 'Request for Proposal' as a corrigendum which shall be uploaded onto the e-tendering website and MMRDA website:

<https://etendermmrda.maharashtra.gov.in>  
<https://www.mmrda.maharashtra.gov.in>



## Glossary of Terms

Terms	Meaning
AAA	Authentication, Authorization, Accounting
ACL	Access Control List
AES	Advanced Encryption Standard
AP	Access Point
API	Application Program Interface
ARP	Address Resolution Protocol
BB	Ball Bearing
BEC	Bid Evaluation Committee
BGP	Border Gateway Protocol
BIS	Bureau of Indian Standards
BKC	Bandra-Kurla Complex
BoM	Bill of Material
BoQ	Bill of Quantity
C&C	Command and Control
C2D	Core2Duo
CAPEX	Capital Expenditure
CAT 5	Category 5 Cable
CAT 6	Category 6 Cable
CCTV	Closed Circuit Television
CDMA	Code division multiple access
CE	European Conformity
COTS	Commercial Off-The-Shelf
CPE	Customer Premise Equipment
CPU	Central Processing Unit
CRI	Color Rendering Index
CRTP	Curiously Recurring Template Pattern
CSR	Customer Service Representative
DAI	Dynamic ARP Inspection
DALI	Digital Addressable Lighting Interface
DAS	Direct Attached Storage
DBMS	Database Management System
DC	Data Centre
DDoS	Distributed Denial of Service
DDR	Double data rate
DeitY	Department of Electronics & Information Technology
DHCP	Dynamic Host Configuration Protocol
DIT	Directorate of Information Technology
DNS	Domain Name System
DNSSEC	Domain Name System Security Extensions
DOM	Document Object Model
DoT	Department Of Telecommunication
DSCP	Differentiated Services Code Point
EAL	Evaluation Assurance Level
EIA	Electronic Industries Alliance
EMD	Earnest Money Deposit
EoMPLS	Ethernet over MPLS
FCC	Federal Communications Commission (Declaration of Conformity)
FMS	Facility Management System
FPS	Frame Per Second
FRS	Functional Requirements Specifications
FTP	File Transfer Protocol
GE	Gigabit Ethernet
GIS	Geographic Information System
GOI	Government of India
GoM	Government of Maharashtra



<b>Terms</b>	<b>Meaning</b>
GPRS	General packet radio service
GPS	Global Positioning System
GRE	Generic Routing Encapsulation
GRP	Glass-reinforced plastic
GSM	Global System for Mobile
GUI	Graphical User Interface
HDD	Hard Disk Drive
HPSV	High Power Sodium Vapor
HTML	Hyper Text Markup Language
HTTP	Hyper Text Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
HVAC	Heating, Ventilation and Cooling
Hz	Hertz
I/O	Input/output
IBMS	Intelligent Building Monitoring System
ICMP	Internet Control Message Protocol
ICT	Information and Communication Technology
IEC	International Electro-technical Commission
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IGMP	Internet Group Management Protocol
IKE	Internet Key Exchange
IMAP	Internet Message Access Protocol
INR	Indian Rupees
iOS	iPhone Operating System
IoT	Internet of Things
IP	International (or Ingress) Protection
IPS	Internet Provider Security
IPSEC	Internet Protocol Security
IPv6	Internet Protocol version 6
IR	Infrared
ISI	Indian Standards Institute
ISO	International Organization for Standardization
ISO/IEC	International Organization for Standardization/International Electrotechnical Commission
ISP	Internet Service Provider
IST	Indian Standard Time
KPI	Key Performance Indicator
KPIs	Key Performance Indicators
KW	Kilowatt
LACP	Link Aggregation Control Protocol
LAN	Local Area Network
LCD	Liquid Crystal Display
LDP	Label Distribution Protocol
LED	Light-emitting diode
LLDP	Link Layer Discovery Protocol
LOI	Letter of Intent
LUN	Logical Unit Number
MAC	Media Access Control
MCB	Miniature Circuit Breaker
MCGM	Municipal Corporation for Greater Mumbai
MFZ	Motorized Focal Zoom
MIMO	Multiple Input Multiple Output
MIMO	Multiple-Input Multiple-Output
MIS	Management Information System
MITM	Man in the Middle
MLD	Multicast Listen Discovery
MMRDA	Mumbai Metropolitan Region Development Authority
MOS	Mean Opinion Score



Terms	Meaning
MP	Mega Pixel
MP-BGP	Multiprotocol BGP
MPLS	Multi-Protocol Label Switching
MPLS EXP	MPLS Experimental
MSI	Master System Integrator
NAS	Network Attached Storage
NAT	Network Address Translation
NDPP	Network Device Protection Profile
NEMA	National Electrical Manufacturers Association
NFC	Near Field Communication
NOC	Network Operating Center
NSMS	Network and Security Management Solution
NSMS	Network and Security Management System
O&M	Operation and Maintenance
ODBC	Open Database Connectivity
ODF	Open Document Format+B95
ODF	Open Document Format
OEM	Original Equipment Manufacturer
OEM	Original Equipment Manufacturer
OFC	Optical Fiber Network
ONVIF	Open Network Video Interface Forum
OPEX	Operational Expenditure
OSPF	Open Shortest Path First
OTP	One Time Password
PBG	Performance Bank Guarantee
PDF	Portable Document Format
PIC	Peripheral Interface Controllers
PMGS	Parking Management and Guidance System
PoC	Proof of Concept
PoC	Proof of Scope
PoE	Power over Ethernet
PoS	Point of Sale
PPP	Public Private Partnership
PSU	Public Sector Undertaking
PTZ	Pan Tilt Zoom
PVC	Polyvinyl chloride
QoS	Quality of Service
RADIUS	Remote Authentication Dial In User Service
REST	Representational State Transfer
RF	Radio Frequency
RFID	Radio-frequency identification
RFP	Request for Proposal
RIP	Routing Information Protocol
RPF	Reverse Path Forwarding
RR	Route Reflector
RS	Recommended Standards as per Electronics Industry Association (EIA)
RSS	Rich Site Summary
RSS	Really Simple Syndication
RSSI	Received Signal Strength Indication
RSVP	Resource Reservation Protocol
RSVP-TE	RSVP-Traffic Engineering
RTF	Rich Text Format
SAN	Storage Area Network
SD	Secure Digital
SDEE	Security Device Event Exchange
SHA	Secure Hash Algorithm
SLA	Service Level Agreement
SMD	Surface Mounted Device



<b>Terms</b>	<b>Meaning</b>
SMS	Short Message Service
SNMP	Simple Network Management Protocol
SNMP	Simple Network Management System
SOAP	Simple Object Access Protocol
SOP	Standard Operating Procedure
SoS	Save our Soul
SOS	Save our Souls
SoW	Scope of Work
SRS	Software Requirements Specifications
SSH	Secure Shell
SSID	Service Set Identifier
SSL	Secure Sockets Layer
SSM	Source Specific Multicast
STQC	Standardization Testing and Quality Certification
SVG	Scalable Vector Graphics
TACACS	Terminal Access Control System
TCP	Transmission Control Protocol
THD	Total Harmonic Distortion
TRAI	Telecom Regulatory Authority of India
UAT	User Acceptance Testing
UDDI	Universal Description, Discovery, and Integration
UDDI	Universal Description Discovery and Integration
UDP	User Datagram Protocol
URI	Uniform Resource Identifier
URI/URN	Uniform Resource Identifier/Uniform Resource Name
URN	Uniform Resource Name
USB	Universal Serial Bus
VDC	Volts of direct current
VLAN	Virtual Local Area Network
VLANs	Virtual Local Area Network
VMS	Video Monitoring Management System
VMS	Video Monitoring System
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network
W3C	World Wide Web Consortium
WAN	Wide Area Network
WCAG	Web Content Accessibility Guidelines
Wi-Fi	Wireless Fidelity
WLAN	Telecom Regulatory Authority of India
WLAN	Wireless Local Area Network
WRED	Weighted Random Early Detection
WSDL	Web Services Description Language
WSDL	Web Service Definition Language
WSRP	Web Services for Remote Portlets
WSRP	Web Services for Remote Portlets
XHTML	Extensible Hyper Text Markup Language
XML	Extensible Markup Language
XMLDSig	XML Signature
XPath	XML Path Language
XSLT	Extensible Stylesheet Language Transformations





## Definitions

Sr. No.	Term	Definition
1.	Access Point	Access Point refers to the public Wi-Fi access point that provides connectivity to the devices, sensors and to the public.
2.	Actual Parking Revenue	Total Revenue generated after implementation of smart parking, which includes Fixed Parking Revenue and any other Additional Parking Revenue generated in MMRDA parking lots in E & G Blocks of BKC.
3.	Adaptive Control	Adaptive Control – a method of controlling a system according to parameters that vary or are initially uncertain. Examples of relevant varying parameters for outdoor lighting systems include ambient light or traffic (e.g. pedestrian, bike, automobile) levels that vary periodically (predictably or unpredictably) over the course of a day, infrastructure (e.g. building, road) characteristics that vary by location, and equipment characteristics that vary (i.e. typically degrade) with the passage of time.
4.	Additional Parking Revenue	Actual Parking Revenue minus Fixed Parking Revenue generated in MMRDA parking lots in E & G Blocks of BKC.
5.	Adverse Effect	Means material adverse effect on (a) the ability of the Implementation Agency to exercise any of its rights or perform/discharge any of its duties/obligations under and in accordance with the provisions of this Agreement and/or (b) the legal validity, binding nature or enforceability of this Agreement;
6.	Affiliate	“Affiliate” means, with respect to any Party, any other entity that, directly or indirectly: (a) Controls such Party; (b) is Controlled by such Party; (c) is Controlled by the same person who, directly or indirectly, Controls such Party; and “Control” with respect to any person, shall mean: (a) the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such person whether through the ownership of voting share capital, by agreement or otherwise or the power to elect more than one-half of the directors, partners or other individuals exercising similar authority with respect to such person; (b) the possession, directly or indirectly, of a voting interest of more than 50%; and the terms “Controlling” and “Controlled by” shall be construed accordingly;
7.	Agreement	Means this Draft Master Services Agreement, Draft Service Level Agreement and Draft Non-Disclosure Agreement together with all Articles, Annexures, Schedules and the contents and specifications of the RFP;
8.	Anti-pass-back	“Anti-pass-back”: The anti-pass back feature requires that for every use of a card or ticket at the entrance, there be a corresponding use at the exit before the card can be used at the entrance again. Similarly, for every use of the card/ticket at exit, there can't be another user with the same ticket at the exit, unless there is a corresponding entry. In short, for every entry, there has to be a corresponding exit and vice-versa.
9.	Applicable Law(s)	Means any statute, law, ordinance, notification, rule, regulation, judgment, order, decree, bye-law, approval, directive, guideline, policy, requirement or other governmental restriction or any similar form of decision of, or determination by, or any interpretation or administration of the Nodal Agency as may be in effect on the date of the execution of this Agreement and during the subsistence thereof, applicable to the Project;
10.	Applicant or Vendor or Bidder	“Applicant” or “Vendor” or “Bidder” means either a sole applicant (whether incorporated in India or abroad) or a Consortium, coming together to implement the Project. The term Bidder used hereinafter would therefore apply to both a Single Entity and a Consortium who have submitted the Proposal. The Successful Bidder is the one selected by MMRDA to develop this Project. The Bidder would be liable for the execution of the Project in accordance with the terms of Volume III of this RFP
11.	Application	Means the software application developed as a part of scope of work
12.	Application Downtime	Means the time for which user/s is not able to access the application. However, in calculating downtime, scheduled downtime (for example, backup time, batch processing time, routine maintenance time) would not be considered;



Sr. No.	Term	Definition
13.	Application Response Time	Defined as time the system takes to fetch requested information (a form or a report) from the server.
14.	Assets	Shall have the same meaning ascribed to it in Clause 10.1 (a)
15.	Back out ticket	"Back out ticket" means in the case of paper tickets issued by the Entry Device but not removed by the driver, such tickets will be moved back into the Entry Device and rendered useless within the system, and dumped into a storage space within the Entry Device. The information regarding such an event must be transmitted to the other parking equipment within the system (with an audit trail), to ensure that this ticket cannot be used at any other Device.
16.	Bay finders	"Bay finders" means indicators/displays showing availability of parking slots at each bay
17.	Business Hours	Shall mean the working time for Nodal Agency users which is 9:30 AM to 6:30 PM. Again for Web Server and other components which enable successful usage of web portals of Nodal Agency the working time should be considered as 24 hours for all the days of the week. It is desired that IT maintenance, other batch processes (like backup) etc. should be planned so that such backend activities have minimum effect on the performance;
18.	Centralized Command and Control Center	This layer will monitor, manage, control, analyze, take decisions, and communicate to and fro, within and outside the network and respond to daily scheduled activities and abrupt incidents.
19.	Certificate(s) of Compliance	Shall have the same meaning ascribed to it in Section – IV, Annexure – 2, Format – 2.
20.	Citizen App	Citizen App refers to a mobile application that will also serve as a gateway to disseminating information to citizens
21.	Citizens	All working professionals (employees), ancillary staff, floating population and visitors in BKC
22.	Client or Authority or Nodal Agency	"Client" or "Authority" or "Nodal Agency" means Mumbai Metropolitan Region Development Authority (MMRDA), the Party named in the Contract, who employs the Applicant;
23.	Confidential Information	Means all information including Nodal Agency Data (whether in written, oral, electronic or other format) which relates to the technical, financial and business affairs, dealers, suppliers, products, developments, operations, processes, data, trade secrets, design rights, know-how, plans, budgets and personnel of each Party and its affiliates which is disclosed to or otherwise learned by the other Party in the course of or in connection with this Agreement (including without limitation such information received during negotiations, location visits and meetings in connection with this Agreement);
24.	Contract or Agreement	"Contract" or agreement means the Agreement entered into between the MMRDA and the MSI as recorded in the Contract form signed and the " Vendor " including all attachments and Appendix/ Annexes thereto, the Tender and all Annexures thereto and the agreed terms as set out in the proposal, all documents incorporated by reference therein and amendments and modifications to the above from time to time;
25.	Control	Means, in relation to any business entity, the power of a person to secure (i) by means of the holding of shares or the possession of voting power in or in relation to that or any other business entity, or (ii) by virtue of any powers conferred by the articles of association or other document regulating that or any other business entity, that the affairs of the first mentioned business entity are conducted in accordance with that person's wishes and in relation to a partnership, means the right to a share of more than one half of the assets, or of more than one half of the income, of the partnership;
26.	Core Computing and Data Processing Layer	This layer will be the central computing and data processing layer for all Smart BKC 1.0 initiatives
27.	Corrupt Practice	"Corrupt Practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the selection process or in contract execution.



Sr. No.	Term	Definition
28.	Data	"Data" here refers to information gathered from sensor and devices present in the Smart BKC 1.0 street infrastructure layer and also the information gathered in the Solution
29.	Deliverables	Means the products, infrastructure and services agreed to be delivered by the Implementation Agency in pursuance of the agreement as defined more elaborately in the RFP, Implementation and the Maintenance phases and includes all documents related to the user manual, technical manual, design, process and operating manuals, service mechanisms, policies and guidelines (such as security related, data migration related), inter alia payment and/or process related etc., source code and all its modifications;
30.	Duty cycle	"Duty cycle" of a component means the percentage of time for which the component receives signals during one cycle of operation. For e.g. in case of a barrier, it is the percentage of time for which the barrier received signal during the one cycle of operation. Cycle of operations will be defined as opening of barrier, holding the barrier in an open position and closing of the barrier.
31.	Effective Date	"Effective Date" means the date on which the Contract is signed and executed by the successful bidder. Contract commencement date
32.	Entry Device	"Entry Device" means devices and systems that are required at the entrance of each parking lot. The devices include but not limited to ticket dispenser machine, display system, intercom facility and NFC capability
33.	Environmental Indicators	As defined in Section – II. Pollution, noise, temperature and humidity, which are captured using environmental sensors
34.	Escrow Agreement	An agreement that pursuant to Section – III, Part- I, Clause 24 provides for the regular deposit into escrow of all source code, object code, and documentation with respect to all public material and Service Provider's proprietary material (and cumulative updates thereof), together with (a) continually updated instructions as to the compilation, installation, configuration, deployment and use of the Source Code, and (b) a list of all non-deposited third party software used in conjunction with the Source Code to provide the full functionality of the deposited materials.
35.	Event	"Event" refers to any abnormal occurrence or incident in the BKC area like an accident
36.	Final Acceptance Test	Shall be conducted on completion of the following: 1) Nodal Agency Data Center operational, 2) Deployment & operational hardware and networking at requisite locations, UAT of the overall integrated solution and portal.
37.	Final Testing and Certification Agency	Shall have the same meaning ascribed to it in Section – III, Part – I, Clause 5.
38.	Financial Year	"Financial Year" means the 12-month period commencing from the 1st day of April of any year and ending on the 31st day of March of the following calendar year.
39.	Fixed Parking Revenue	Fixed Revenue generated from existing parking management contracts for MMRDA parking lots in E & G Blocks of BKC.
40.	Fraudulent Practice	"Fraudulent Practice" means a misrepresentation of facts in order to influence a selection process or the execution of a contract to the detriment of the Client, and includes collusive practice among Master Systems Integrator (prior to or after submission of proposals) designed to establish prices at artificial non-competitive levels and to deprive the Client of the benefits of free and open competition.
41.	Go-live	"Go-live" Final Acceptance and Sign-off by MMRDA and Start of Commercial Operations.
42.	ICT Projects	Information and Communication Technologies Project
43.	Insurance Cover	<ul style="list-style-type: none"><li>- Public liability insurance for an insured amount equivalent to the value of resultant contract per occurrence and not less than the total contract value in aggregate</li><li>- Either professional indemnity or errors and omissions insurance for an insured amount equivalent to the value of resultant contract per occurrence and not less than the total contract value in aggregate</li><li>- Product liability for an insured amount equivalent to the value of resultant contract per occurrence and not less than the total contract value in aggregate</li><li>- Workers compensation as required by law</li></ul>



Sr. No.	Term	Definition
44.	Integrated Building Monitoring System	The Integrated Building Monitoring System should integrate information from BKC buildings recorded through conventional methods of facility management systems as well as advanced Building Management Systems (BMS), which records energy and building management parameters into one consolidated information dashboard.
45.	Integrated Industry Standard Open Platform Layer	This layer will be the logical umbrella layer that will virtually integrate and process information from all applications and devices for Smart BKC 1.0 initiatives and entire Smart BKC vision. This is also referred as Smart BKC Integrated Platform or Integrated Platform.
46.	Integrated Streetlight Monitoring System	Integrated Streetlight Monitoring System – a computer environment that functions as the core of the System by providing all shared System services, and consolidating and storing (or managing the storage of) all System data.
47.	Intellectual Property Rights	Means all rights in written designs and copyrights, moral rights, rights in databases and Bespoke Software / Pre-existing work including its up- gradation systems and compilation rights (whether or not any of these are registered and including application for registration);
48.	Joint Bidding Agreement	“Joint Bidding Agreement” means the shared agreement between all members of Consortium highlighting specific roles and responsibilities of each member in detail.
49.	Lead Bidder or Prime Bidder or Lead Partner of Consortium or Master System Integrator (MSI)	“Lead Bidder” or “Prime Bidder” or “Lead Partner of Consortium” or “Master System Integrator (MSI)” means the Firm/Company who buys the tender, signs and submits the tender on behalf of Consortium will be taken as the Prime Member of Consortium and shall be taken as the “MSI” for the purpose of this tender document. The Consortium is allowed only for four members including Lead Member. It also includes “Association” or any arrangement among Bidders submitting Bid jointly. The member of the consortium which has been designated so by the other members of the consortium and also authorized by them to represent each one of them and enter into contracts for and on behalf of the consortium.
50.	Light Sensor	Light Sensor – a device that measures the ambient light level and compares it with a preset threshold.
51.	Material Adverse Effect	“Material Adverse Effect” means material adverse effect on (a) the ability of the Applicant to observe and perform any of its rights and obligations under and in accordance with the provisions of this Agreement and/or (b) the legality, validity, binding nature or enforceability of this Agreement;
52.	Material Breach	Means a breach by either Party (Nodal Agency or Implementation Agency) of any of its obligations under this Agreement which has or is likely to have an Adverse Effect on the Project which such Party shall have failed to cure;
53.	Member	“Member”, in case of a consortium of more than one entity, means any of these entities, and “Members” means all of these entities; “Member in Charge” means the entity specified in the Contract to act on behalf of Each Member in exercising all the Master Systems Integrator” rights and obligations towards the Client under this Contract;
54.	MMRDA	MMRDA refers to the Mumbai Metropolitan Regional Developmental Authority, the governmental agency executing the Smart BKC 1.0 project
55.	Motion Sensor	Motion Sensor - a device that measures the movement of objects and compares it with a preset threshold.
56.	MSI	MSI refers to the Master Service Integrator, the agency responsible for handling the overall implementation and operations of the Smart BKC 1.0 project.
57.	Multi utility smart pole	“Multi utility smart pole” refers to the fixture where the smart streetlight, the video cameras and Wi-Fi access points can be mounted
58.	Net Worth	“Net Worth” means Paid-up share capital + Reserves and surpluses (Excluding Revaluation Reserves) – Preliminary and pre-operative expenditure and miscellaneous expenditure to the extent not written off, as per the annual report and as adjusted with any qualifications in the Auditors’ Report (in Indian Rupees only)
59.	Network	Network refers to the hardware and software components that connect all the Smart BKC 1.0 components together.



Sr. No.	Term	Definition
60.	Network and Security Management Solution	The NSMS should address the complete network management of Smart BKC initiatives. It should monitor and report, performance, utilization, status, vulnerabilities and failures in the network in real time, monitor and manage network security, access control and policy, security breaches, detect and prevent any attacks on the network.
61.	Network Infrastructure and Communication Layer	This layer is the physical network and communication layer consisting of the Ethernet, Wi-Fi, fiber, and RF networks
62.	Network Security Layer	This layer must be monitored from the Centralized Command and Control center using an industry leading Network and Security Management Solution
63.	Network Uptime	Uptime refers to network availability between Nodal Agency's Head Quarters to Data center. "%Uptime" means ratio of 'up time' (in minutes) in a month to Total time in the month (in minutes) multiplied by 100;
64.	Nodal Agency Data	Means all proprietary data of the department or its nominated agencies generated out of operations and transactions, documents all taxpayers data and related information including but not restricted to user data which the Implementation Agency obtains, possesses or processes in the context of providing the Services to the users pursuant to this Agreement;
65.	Online portal	Online portal refers to an e-portal that will serve as gateway for disseminating information to citizens
66.	Outage	Maintenance activities such as configuration changes, upgrade or changes to any supporting infrastructure. Prior intimation of such planned outage shall be given and approval sought from the Nodal Agency as applicable and shall be notified at least two working days;
67.	Parking Lot or Parking Space	"Parking Lot" or "Parking Space" means a zone or space demarcated by MMRDA for use of parking of vehicles.
68.	Parking Management Contractors	"Parking Management Contractors" means the contractors who at present, have been handed over the responsibility of managing, operating, and maintaining the parking lots
69.	Parking Slot or Parking Spot	"Parking Slot" or "Parking Spot" means individual area within a Parking Lot or Parking Space demarcated for vehicle parking
70.	Parties	Means Nodal Agency and Implementation Agency for the purposes of this Agreement and "Party" shall be interpreted accordingly;
71.	Pay Station	"Pay Station" means the booth installed at the exit of every parking lot for collection of payment
72.	Penalty	"Penalty" means the financial deduction imposed for breaking the law, rule, SLA or contract, timelines. At places in this document pro rata deductions may also be referred as "penalty" as the context may refer.
73.	Performance Bank Guarantee	Means the guarantee provided by a First Class Bank of international repute in favor of the Implementation Agency. The amount of Performance Bank Guarantee shall be Rs. 3 Crores or 10% of the overall cost of the project, whichever is higher. PBG shall be valid till for 180 days beyond the term of the resultant contract (Till Go-live + Seven years), including any subsequent term extension, if applicable.
74.	Personnel	"Personnel" means persons hired by the Master Systems Integrator or by any Sub-Consultant as employees and assigned to the performance of the Services or any part thereof;
75.	Planned Application Downtime	Means the unavailability of the application services due to maintenance activities such as configuration changes, upgradation or changes to any supporting infrastructure wherein prior intimation (at least two working days in advance) of such planned outage shall be given and approval sought from the Nodal Agency as applicable;
76.	Planned network	Means the unavailability of the network services due to infrastructure
77.	POC	Shall have the same meaning ascribed to it in Section - I, Clause 4.3.1 -- Demonstration of feasibility, viability, sustainability and effectiveness of the suggested solution



Sr. No.	Term	Definition
78.	Project	Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai
79.	Project Implementation	Means Project Implementation as per the testing standards and acceptance criteria prescribed by Nodal Agency or its nominated agencies;
80.	Project Implementation Committee	Shall be constituted by Nodal Agency to monitor the activities, deliverables and progress of the Project. PIU will comprise of the staff members of the Nodal Agency, other officials from concerned department and external experts (as defined in the RFP);
81.	Project Implementation Phase	shall be from the Effective Date of the Agreement to the date of final acceptance testing & certification as set out in Section - I, Clause 3.6.3 of this Agreement;
82.	Project Timelines	shall have the same meaning ascribed to in Section - I, Clause 3.6.1, 3.6.2
83.	Proprietary Information	shall have the same meaning ascribed to it in Section – III, Clause No. 17
84.	Replacement Implementation Agency	means any third party that Nodal Agency or its nominated agencies appoint to replace Implementation Agency upon expiry of the Term or termination of this Agreement to undertake the Services or part thereof;
85.	Required Consents	Means the consents, waivers, clearances and licenses to use Nodal Agency's Intellectual Property Rights, rights and other authorizations as may be required to be obtained for the software and other items that Nodal Agency or their nominated agencies are required to make available to Implementation Agency pursuant to this Agreement;
86.	Required Deliverables	shall have the same meaning ascribed to it in Annexure C of this Agreement; as per Section – I, Clause No. 3.6.2
87.	Revenue & Expenditure Management	This layer should monitor and manage, in real-time, the revenue gained and expenditure incurred for each Smart BKC 1.0 Initiative in Separate Head of Accounts per initiative
88.	Role	Role based security model refers to a model of system security wherein only authorized users have access to the system.
89.	Scalability	Scalability – the ability of a system to handle a growing amount of work, or its ability to be enlarged to accommodate that growth, which includes growth of any other specifications, new devices etc.
90.	Service Level	Means the level of service and other performance criteria which will apply to the Implementation agency for services as set out in the SLA parameters effective during the Term of this Agreement;
91.	Services	Means the services delivered to the Stakeholders of Nodal Agency or its nominated agencies, employees of Nodal Agency or its nominated agencies, and to professionals, using the tangible and intangible assets created, procured, installed, managed and operated by the Implementation Agency including the tools of information and communications technology and includes but is not limited to the list of services specified in Annexure B;
92.	SLA	Means the Performance and Maintenance SLA executed as part of the Draft Legal Agreements;
93.	SLA Change Request	shall have the same meaning ascribed to it in Section – II, Clause No. 9
94.	Slot finders	“Slot finders” means indicators that display whether a slot is vacant or occupied from
95.	Smart BKC 1.0	Smart BKC 1.0 is the foundational initiative of MMRDA's Smart BKC Project, which is envisaged to be Citizen Friendly, Accessible, Sustainable, Digitally Integrated and Intelligent Finance and Technology hub.
96.	Smart BKC 1.0 Network Architecture	This layer comprises of the Data Center layer, Aggregation layer & Access layer.
97.	Smart BKC Logical Architecture	The proposed overall architecture should support Service Oriented Architecture (SOA) and be horizontally and vertically scalable to integrate future Smart BKC initiatives on the centralized platform



Sr. No.	Term	Definition
98.	Smart BKC Street Infrastructure Layer	The physical street layer consisting of devices, sensors, and equipment for Smart BKC initiative like Wi-Fi access points, wired fiber network, parking sensors, parking cameras, etc.
99.	Software	Means the software designed, developed / customized, tested and deployed by the Implementation Agency for the purposes of the Project and includes the source code (in case of Bespoke development) along with associated documentation, which is the work product of the development efforts involved in the Project and the improvements and enhancements effected during the term of the Project, but does not include the third party software products (including the COTS products used for the product), proprietary software components and tools deployed by the Implementation Agency;
100.	Stakeholders	Means the Citizens, MMRDA or its nominated agencies, BKC employees, Other Public and Private entities and other Departments of State Government;
101.	Standard Operating Procedures (SOPs)	Standard Operating Procedures (SOPs) refer to a set of standard instructions that have to be followed to achieve a desired result.
102.	System	System refers to the hardware and software components used in the Smart BKC 1.0 project or the hardware and software components required for the individual initiatives
103.	Term or Agreement Period	Means the duration of this Agreement as set out in Clause 8 of this Agreement.
104.	The Solution	The Solution – the entire set of networked components (hardware and software, typically consisting of Field Devices, Light Management System, and one or more Management Stations) that, following purchase, installation, start-up, and commissioning, function together to adaptively control and remotely monitor Luminaires
105.	Third Party Systems	Means systems (or any part thereof) in which the Intellectual Property Rights are not owned by the Nodal Agency or Implementation Agency and to which Implementation Agency has been granted a license to use and which are used in the provision of Services;
106.	Threshold	Threshold refers to a performance standard set by the MSI or the MMRDA.
107.	Turnover	“Turnover” means the total amount of gross receipts, from activities in the normal course of business, as per the annual report and as adjusted with any qualifications in the Auditors Report for a particular financial year (in Indian Rupees only)
108.	Unplanned Application Downtime	Means the total time for all the instances where services in the software requirement specification document prepared by the Implementation Agency are not available for more than 5 consecutive minutes;
109.	Unplanned network outage	Means the total time for all the instances where services in the software requirement specification document prepared by the Implementation Agency are not available for more than 5 consecutive minutes;
110.	Motorist	“Motorist” means any person who wishes to park his/her vehicle at any of the MMRDA parking lots.
111.	Warranty / AMC Period	Shall be comprehensive onsite warranty for all the hardware, software and network components, sensors, devices, and equipment, both on field and inside the Command and Control Center for the entire duration of the project (Go-Live + Seven years)
112.	Work Order	“Work Order” means a specific directive or order to perform a defined scope for a defined duration and fee



## 1. Invitation for Proposal

MMRDA hereby invites Proposals for Selection of Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai. Bidder/ Agencies are advised to study this RFP document carefully before submitting their proposals in response to the RFP Notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

The complete bidding document has been published on <https://etendermmrda.maharashtra.gov.in> for the purpose of downloading. The downloaded bidding document shall be considered valid for participation in the electronic bidding process (e-Tendering) subject to the submission of required tender/ bidding document fee and EMD.

Bidders who wish to participate in this bidding process must register on <https://etendermmrda.maharashtra.gov.in>

To participate in online bidding process, Bidders must procure a Digital Signature Certificate (Class - II) as per Information Technology Act-2000 using which they can digitally sign and encrypt their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TCS, Safecrypt, Ncode, etc. Bidders who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC.

A three envelope selection procedure shall be adopted.

Bidder (authorized signatory) shall submit their offer online in electronic formats for preliminary qualification, technical and financial proposal. However, Tender Document Fees, and Earnest Money Deposit (EMD) should be deposited in the account details provided in the bid document.

MMRDA will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid proposal well in advance so as to avoid issues like slow speed, choking of web site due to heavy load or any other unforeseen problems.

Bidders are also advised to refer "Bidders Manual Kit" available at <https://etendermmrda.maharashtra.gov.in> for further details about the e-tendering process.





## 1.1 Key Events and Dates

Table: Key Events and Date		
S. No	Information	Details
1.	Advertising Date	11.07.2015, from 5.00 pm IST
2.	Download Date	15.07.2015 from 5.00 pm IST to 20.08.2015, till 5.00 pm IST.
3.	Last date to send in requests for clarifications	25.07.2015, 5.00 pm IST
4.	Date, Time and place of Pre- Bid conference	31.07.2015 at 4.00pm MMRDA Building, BKC, Mumbai-400051
5.	Release of response to clarifications would be available at	MMRDA e-Tendering portal: <a href="https://etendermmrda.maharashtra.gov.in">https://etendermmrda.maharashtra.gov.in</a>
6.	Last date (deadline) for online submission of bids	25.08.2015, 5.00 pm IST on MMRDA e-Tendering portal: <a href="https://etendermmrda.maharashtra.gov.in">https://etendermmrda.maharashtra.gov.in</a>
7.	Bid Transfer date	25.08.2015, 6.00 pm IST to 26.08.2015, 6.00 pm IST on MMRDA e-Tendering portal: <a href="https://etendermmrda.maharashtra.gov.in">https://etendermmrda.maharashtra.gov.in</a>
8.	Technical Bid Opening Date & Time	To be informed
9.	Date for Presentation	To be informed
10.	Date for Proof of Concept (POC)	To be informed
11.	Commercial Bid Opening Date & Time	To be informed
12.	Address for communication and hard copy submission	Shri. Shankar Deshpande Mumbai Metropolitan Region Development Authority (MMRDA) IT Cell, 2nd Floor, MMRDA Building, Bandra Kurla Complex, Bandra (East) Mumbai—400-051 <a href="mailto:itcadmin@mailmmrda.maharashtra.gov.in">itcadmin@mailmmrda.maharashtra.gov.in</a>



## 1.2 Other Important Information Related to Bid

Table: Other Information		
S. No.	Item	Description
1.	Earnest Money Deposit (EMD) – Online	Rs. 1.5 Cr (Rupees One Crore Fifty Lakhs Only)
2.	Tender Fee	Rs 5,000 (Rupees Five Thousand Only)
3.	Bid Validity Period	(180) One-hundred-and-eighty days from the date of opening of Bids
4.	Last date for furnishing Performance Bank Guarantee to MMRDA (By successful bidder)	Within fourteen (14) working days of the date of notice of award of the contract (Letter of Intent (LOI)) or prior to signing of the contract whichever is earlier or as intimated in the Lol issued by MMRDA
5.	Performance Bank Guarantee value (Performance Bank Guarantee)	Rs. 3 Cr. (Rupees Three Crores Only) or 10% of contract value/ Bid value of successful bidder, whichever is higher
6.	Performance Bank Guarantee (PBG) validity period	PBG shall be valid till for 180 days beyond the term of the resultant contract (Till Go-live + Seven years), including any subsequent term extension, if applicable.
7.	Last date for signing contract	As intimated in work order of MMRDA

## 1.3 RFP Structure

This Request for Proposal document consists of four sections viz:

### Section - I: Instruction to Bidders

Section - I of RFP provides Introduction to the project and bidding process details. It broadly covers the instructions to the bidders, bid opening and evaluation process, contract finalization and award of contract, payment terms and bid formats.

### Section - II: Scope of Work

Section - II of RFP provides broad scope of work and roles and responsibilities of MSI. This volume also gives an overview of the proposed solution and functional, non-functional and technical requirements.

### Section - III: Draft Legal Agreements

Section - III of RFP includes Draft Master Services Agreement (MSA), Draft Non-Disclosure Agreement (NDA) and Draft Service Level Agreement (SLA).

### Section - IV: Annexures to RFP

Section - IV of RFP includes all annexures, maps, formats and other information for Bidders



## **2. Background Information**

This section contains information about the department, the project region and the progress so far in the project.

### **2.1 About the Department**

Mumbai Metropolitan Region Development Authority (MMRDA) was set up on the 26th January, 1975 under the Mumbai Metropolitan Region Development Authority Act, 1974 by the Government of Maharashtra as an apex body for Planning and Co-ordination of development activities in the Mumbai Metropolitan Region comprising of Mumbai and its influence area. The Authority declared under the act is a highest policy making body, having perpetual succession and a common seal with power, subject to the provisions of the Act, to acquire, hold and dispose of property, both moveable and immovable and to contract and to sue and be sued in its corporate name. MMRDA is planning to create a Smart City Business Case for Bandra Kurla Complex (BKC), the Commercial Business District (CBD) in Mumbai.

### **2.2 Bandra Kurla Complex (BKC)**

BKC was instituted by MMRDA to create an easily accessible financial and business hub. BKC houses a number of financial & business houses including National Stock Exchange, SEBI, ICICI Bank, Citibank, Dena Bank, Bank of Baroda, State Bank of India, Jammu & Kashmir Bank National Business Centre, NABARD Head Office, IL&FS, Asian Heart Institute, Dow Chemicals, Bharat Diamond Bourse, Dhirubhai Ambani International School, American School of Bombay, Mumbai Cricket Association's cricket ground and the United States Mumbai Consulate.

Bandra-Kurla Complex (BKC) is one of the prime growth center of Mumbai for which MMRDA is the "Special Planning Authority". Today, the complex enjoys a number one status due to the proximity to airport and other banking sector. The complex is already providing more than two lakh jobs and is a magnet to absorb future growth of offices and commercial activities. The Authority has developed 19 hectares of land (E Block) with the presence of prominent institutions such as the Reserve Bank of India, Income Tax, Sales Tax, Provident Fund and many other corporate and commercial establishments. Together, these buildings offer an office space as large as 160 Hectares, potential enough to accommodate thousands of jobs. This meticulously planned complex also showcases a City Park which is regularly patronized by all cross sections of the society.

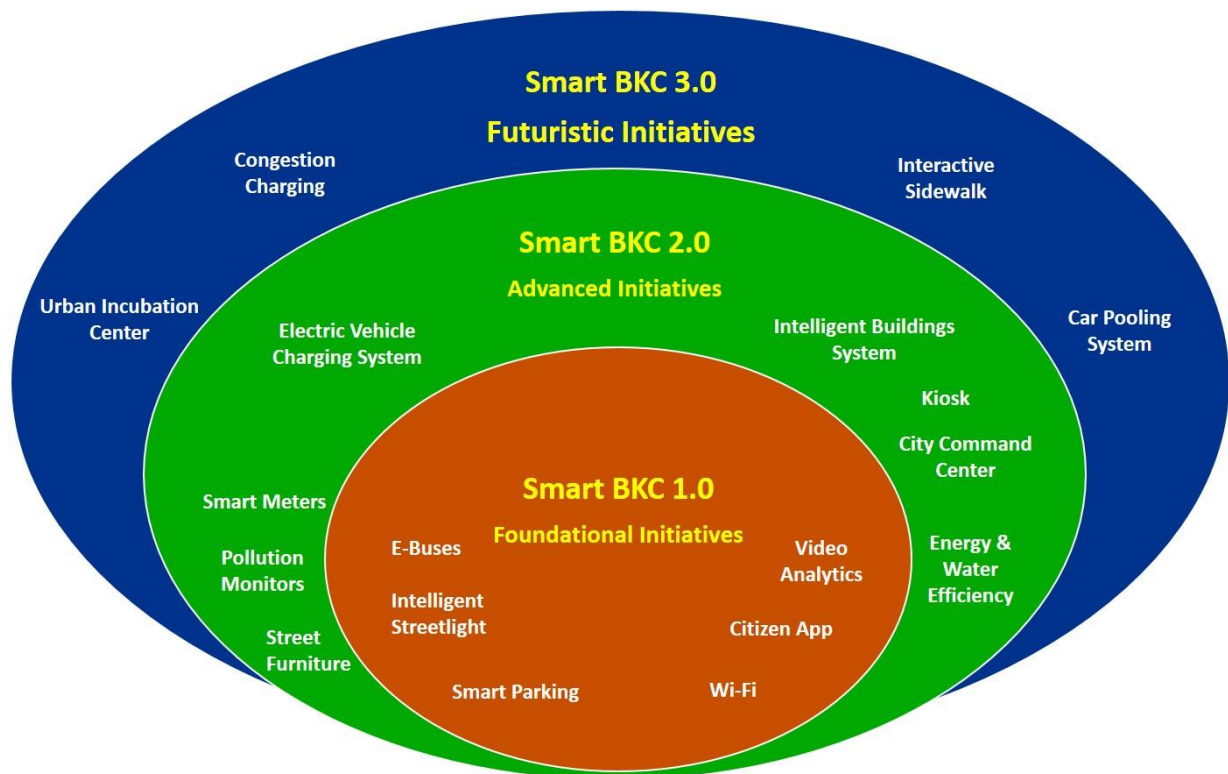
BKC goals are to become a tenant friendly CBD that is Smart, Efficient and Resilient hence BKC is envisaged to develop into a Smart CBD of Mumbai. It is also envisaged that BKC will be equipped with Strong ICT backbone for the area and seamless experience for tenants, employees, other stakeholders, reduced energy consumption and reduced environmental stress.

### **2.3 Introduction to Smart BKC**

Smart BKC aims at becoming Smart CBD harnessing the role of Information and Communications Technologies that could play in transforming BKC into a model region of the future focused on three key aspects i.e. Livability, Workability and Sustainability.

As part of its Smart BKC preparedness, MMRDA has conducted feasibility study of implementation of Smart initiatives with the following Approach & Strategy. A broad level Smart BKC strategy was defined to develop BKC as an area that focuses on service provision to its citizens through a robust public & private sector collaboration model that embeds technology to integrate multiple infrastructure services for efficient operation. The following diagram depicts MMRDA's vision for implementing smart and sustainable initiatives in BKC.

**Figure 1-1: Smart BKC Vision Snapshot**



Smart BKC envisages establishing key foundation initiatives with Strong ICT backbone for seamless experience for tenants, employees, other stakeholders with reduced energy consumption and reduced environmental stress. MMRDA has identified seven (7) primary initiatives as a part of its Vision Smart BKC 1.0 shall cater to ever evolving necessities of a metropolis to qualify as a noteworthy Smart City. Following are the features that shall be considered during the course of the projects which needs to be implemented specifically for E&G Block:

1. Public Wi-Fi and related wired network infrastructure
  - i. Free outdoor public Wi-Fi
  - ii. Paid premium outdoor public Wi-Fi
  - iii. Wi-Fi and Wired Internet access at MMRDA exhibition grounds
2. Smart Parking with 'Parking Guidance and Management System' and related street infrastructure
  - i. Smart Indoor Parking
  - ii. Smart Outdoor Parking



- iii. Smart Street Parking
3. Citizen Mobile Application and Online Citizen Portal
4. Integrated Building Monitoring System Dashboards
5. Environmental Indicators Dashboards and related Street Infrastructure
  - i. Noise Sensors
  - ii. Air Quality Sensors
  - iii. Weather Sensors
6. Centralized Command and Control center, for centralized monitoring and decision making related to:
  - i. Network and Security Management Solution
  - ii. Centralized System Security Solution
  - iii. Core Computing and Data Processing infrastructure
  - iv. Integration with Third Party Shared Services
  - v. Managed hosted Data Center (DC)
  - vi. Private Cloud based Disaster Recovery (DR)
7. Convergence Points
  - i. Video Surveillance
  - ii. Intelligent Streetlights

In view of the same, MMRDA has decided to float an RFP for Selection of Master System Integrator (Lead Bidder and its consortium member) for **Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai.**



### **3. Instructions to the Bidders**

This section includes all the important information related to RFP required to bid for this project.

#### **3.1 General Information and Guidelines**

1. MMRDA invites bids to this Request for Proposals (“RFP”) from eligible bidders as per the scope of work defined in Volume II of this RFP.
2. Any contract that may result from this bidding process will be effective from the date of Signing of Contract and shall, unless terminated earlier in accordance with its terms, continue for a period till completion of Go-live plus Seven years.
3. MMRDA reserves the right to extend the Term on mutually agreed terms at the sole discretion of MMRDA, subject to any obligations under law of MMRDA.
4. Proposals must be received not later than the time, date and venue mentioned in the section ‘Key Events and Dates’. Proposals that are received late WILL NOT be considered in this procurement process.
5. While every effort has been made to provide comprehensive and accurate background information and requirements and specifications, Bidders must perform their own research and survey, and form conclusions about the solution needed to meet the requirements.
6. All information supplied by Bidders may be treated as contractually binding on the Bidders, on successful award of the assignment by MMRDA on the basis of this RFP
7. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of MMRDA. Any notification of preferred bidder status by MMRDA shall not give rise to any enforceable rights by the Bidder. MMRDA may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of MMRDA.
8. This RFP supersedes and replaces any previous public documentation & communications, and Bidders should place no reliance on such communications.
9. All figures of costs, project values and others will shall be mentioned in Indian Rupees only, except when the bidder is a foreign entity.
  - a. All financial references (project citations etc., excluding the commercial quotes) in a foreign bidder's proposal shall be in US\$ and will be calculated using selling exchange rates of Reserve Bank of India prevailing on the date of closing of the accounts for the respective financial year of the reference.
  - b. For the purpose of submission of the commercial quotes (Commercial Bids) provided by the foreign bidder, the commercial bids shall be in Indian Rupees (INR) only. The foreign bidder shall convert to Indian Rupees (INR) as per the RBI reference rate, as on the date of release of tender, i.e. 11<sup>th</sup> Jul 2015.
10. No Bidder shall submit more than one Bid for the Project. An entity bidding (a) individually, or (b) as a member of a Consortium, shall not be entitled to submit another bid either (a) individually or (b) as a member of any Consortium.
11. An identified sub-contractor participating with more than one (1) Bidder shall furnish an Undertaking to the effect that there exists no conflict of interest and that any commercial arrangement by and between the concerned Bidders and the identified sub-contractor is purely contractual in nature and no undue influence, fraud or anti-competitive activity has taken place. MMRDA bears no responsibility whatsoever, to any such fraudulent activities. Refer Section – IV, Annexure – 1, Format 10.



### 3.2 Compliant Proposals/ Completeness of Response

1. Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
2. Failure to comply with the requirements of this RFP document may render the Proposal non-compliant and the Proposal may be rejected.

### 3.3 Pre-Bid Meeting

1. MMRDA will host a Pre-Bid Meeting for queries (if any) by the prospective bidders. The date, time and place of the meeting are Section – I, Clause No. 1.1.
2. The representatives of the bidders may attend the pre-bid meeting at their own cost. The purpose of the pre-bid meeting is to provide a forum to the bidders to clarify their doubts / seek clarification or additional information, necessary for them to submit their bid.
3. All enquiries from the bidders relating to this RFP must be submitted to IT Cell, MMRDA before the deadline mentioned in Section – I, Clause No. 1.1. These queries should also be emailed to [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in). The queries should necessarily be submitted in the format provided in Section – IV, Annexure – 2, Format – 13.

### 3.4 Responses to Pre-Bid Queries and Issue of Corrigendum

1. The Nodal Officer notified by MMRDA will endeavour to provide timely response to all queries. However, MMRDA makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does MMRDA undertake to answer all the queries that have been posed by the bidders.
2. At any time prior to the last date for receipt of bids, MMRDA may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by a corrigendum.
3. The Corrigendum (if any) & clarifications to the queries from all bidders will be posted on the <https://etendermmrda.maharashtra.gov.in> and emailed to all participants of the pre-bid conference and published on the MMRDA website <https://www.mmrda.maharashtra.gov.in>.
4. Any such corrigendum shall be deemed to be incorporated into this RFP.
5. In order to provide prospective Bidders reasonable time for taking the corrigendum into account, MMRDA may, at its discretion, extend the last date for the receipt of Proposals.

### 3.5 Key Requirements of the Bid

This section includes all the information and essential requirements with respect to submission of bids.

#### 3.5.1 Right to Terminate the Process

1. MMRDA reserves the right to terminate the RFP process at any time and without assigning any reason. MMRDA makes no commitments, express or implied, that this process will result in a business transaction with anyone.



2. This RFP does not constitute an offer by MMRDA. The bidder's participation in this process may result in MMRDA selecting the bidder to engage towards execution of the contract.
3. In the event of such termination, EMD of all bidders shall be returned, without any interest.

### 3.5.2 RFP Tender Fees

The fee for purchase of this RFP document as specified in Section – I, Clause No. 1.1, has to be made through RTGS / NEFT mode. The RFP document can be downloaded free of cost from the portal: <https://etendermmrda.maharashtra.gov.in>, on registration. The scanned copy of RFP fee paid receipt should be uploaded with bid documents. Bids that are not accompanied by the RFP fees or accompanied by inadequate RFP fees, shall be considered non-responsive and will be rejected.

### 3.5.3 Earnest Money Deposit

1. Earnest Money Deposit (EMD) for this work has been mentioned in Section – I, Clause No. 1.1
2. EMD Payment as mentioned above has to be made through RTGS / NEFT mode using the System Generated Challan. Bidders should ensure that the payment of the EMD is made **at-least 5 working days** prior to the last date of Bid Preparation and Submission of the Tender Schedule to have seamless submission keeping Central Bank's NEFT/ RTGS clearing process lead time.
3. Bidders failing to complete the payment of EMD using the above mentioned process of RTGS / NEFT after downloading the system generated Challan will not be able to submit their bids.
4. Bidders should upload scanned copy of EMD paid receipt during bid preparation.
5. Bidders should mention the beneficiary account details for EMD refund in the Earnest Money Deposit Form in the e-Tendering solution as required for Refund.
6. The beneficiary account provided for EMD refund should remain active after award of Tender for successful EMD refund.
7. MMRDA or e-Tendering Service Provider will not be liable for delays caused in EMD refund due to incorrect/inactive beneficiary account details.
8. The earnest money deposit of unsuccessful bidders will be refunded through RTGS, NEFT mode only after finalization of the tender for which the above refund details are required. Bidders should also upload scanned copy of cancelled cheque along with refund letter for refund of their EMD payment.
9. The EMD of unsuccessful bidders will be returned by MMRDA, without any interest, as promptly as possible and latest by 120<sup>th</sup> day of signing of the contract by the successful bidder or when MMRDA cancels the bidding process.
10. The EMD of the successful bidder shall be returned latest by 30<sup>th</sup> day of submission of performance bank guarantee by the bidder.
11. The EMD shall be furnished in Indian Rupees only. No interest shall be payable by MMRDA on the EMD.
12. The EMD shall be forfeited and appropriated by MMRDA without prejudice to any other right or remedy that may be available to MMRDA hereunder or otherwise, under the aforementioned conditions. In such an event, the decision of the MMRDA regarding forfeiture of the Bid Security shall be final and binding upon bidders.
  - i. If a bidder submits a non-responsive bid;





- ii. If a Bidder withdraws his bid or increases his quoted prices during the period of bid validity or its extended period, if any.
- iii. If during the bid process, a bidder indulges in any such deliberate act as would jeopardise or unnecessarily delay the process of bid evaluation and finalisation.
- iv. If during the bid process, any information is found false/fraudulent/mala fide, then MMRDA shall reject the bid and, if necessary, initiate action provided
- v. If a bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.
- vi. In the case of successful bidder, if he/she fails within the specified time limit –
  - a. to sign and return the duplicate copy of LOA in accordance with the terms thereof;
  - b. to sign the contract within the time specified by MMRDA; or
  - c. to furnish the Performance Bank Guarantee within the period prescribed in the contract;

*Note: Kindly note that transfer of funds to MMRDA's account through NEFT / RTGS mode, from the Bidders' ICICI accounts is currently not possible. In case of funds transfer through NEFT / RTGS, Bidders are requested to transfer from any other bank (excluding ICICI Bank).*

### 3.5.4 Consortium

The Bidder for participation in the Selection Process, may be (a) a single entity or (b) a Consortium, coming together to execute the project. No Member at any given point of time, may assign or delegate its rights, duties or obligations under the Agreement except with prior written consent of the Nodal Agency.

No bidder applying individually, or as a member of a Consortium, as the case may be, can be member of another consortia bidding for the project.

In the event the Bidder is a Consortium, it shall, comply with the following additional requirements:

1. Number of members in a consortium shall not exceed 4 (four) including the Lead Bidder or MSI;
2. Members of the Consortium shall nominate one member as the Lead Member (the "Lead Member");
3. The Lead Member will remain responsible for successful delivery of the project at all times during the term of the resultant contract, i.e till Go-live plus Seven years.
4. The Lead Member shall be authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to this RFP.
5. Members of the Consortium shall enter into a binding Joint Bidding Agreement, for the purposes of making the Application and submitting a Bid. Refer Section - IV, Annexure 3, Format – 3.
6. Subject to the provisions of sub-clause (5) above, the Joint Bidding Agreement should contain the information required for each member of the Consortium and shall, inter alia:
  - i. undertake that each of the members of the Consortium shall have an independent, definite and separate scope of work which was allocated as per each member's field of expertise;
  - ii. commit to the profit and loss sharing ratio of each member;



- iii. commit to the scope of work, rights, obligations and liabilities to be held by each member; specifically commit that the Lead Member shall be answerable on behalf of other members for the performance of obligations under this Agreement,
- iv. provide a brief description of the roles and responsibilities of individual members; and clearly define the proposed administrative arrangements (organization chart) for the management and execution.
- v. include a statement to the effect that all members of the Consortium shall be severally liable for all obligations in relation to the Assignment until the completion of the Assignment in accordance with the Agreement;
- vi. undertake that all Members shall comply with all lock-in requirements set forth in the RFP.
- vii. Undertake;
  - a. that notwithstanding anything contrary contained in this RFP or the Agreement, the Lead Member shall always be liable for obligations of all the Consortium Members i.e. for both its own liability as well as the liability of other Members.
  - b. that the Lead Member shall be liable for the entire scope of work and risks involved and further shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective general obligations under this Agreement.
  - c. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in the Agreement.
  - d. that the Members of the Consortium shall alone be liable for all obligations of the identified sub-contractor and clearly indemnify the Nodal Agency against any losses or third party claims arising due to the sub-contractor/consortium's default.
  - e. that the Lead Member is liable to manage the complete assignment by taking responsibility of delivery per scope and maintain transparency around monetary terms.
7. The technical and commercial capacity and Net Worth of the Members shall satisfy the conditions of eligibility as prescribed in this RFP;
8. The nomination of the Lead Member shall be supported by a Power of Attorney, as per the format in this RFP in Section – IV, Annexure – 1, Format – 2, signed by the other members of the Consortium. The duties, responsibilities and powers of such Lead Member shall be specifically included in the Consortium Agreement. It is expected that the Lead Member would be authorized to incur liabilities and to receive instructions and payments for and on behalf of the Consortium. The Nodal Agency expects that Lead Member should have maximum responsibility pertaining to execution of Assignment;
9. Any change to the composition of the consortium can be done only with the prior approval of the Nodal Agency (MMRDA). The Lead Member will be responsible for the scope of work to be delivered by the exiting member, whether he does it himself or through a new member of the consortium. In case of a new member, the Lead Member will take the prior approval of the Nodal Agency (MMRDA), before onboarding the member, who is expected to possess comparable qualifications as the exiting member. The Lead Member is also responsible for incorporating relevant changes in the Joint Bidding Agreement, as per format at Section – IV, Annexure – 3, Format 3.
10. The bidder is not permitted to sub-contract any of the core activities of the project. The core activities include hardware and software integration, Wi-Fi and wired devices



integration and management, hardware and software procurement, deployment and integration of parking management solutions, development & integration of citizen app and web portal, integration with 3rd party shared services, deployment, configuration and integration of Smart BKC 1.0 logical, technical and network architecture, network and system security integration and management, management of centralized command and control center, management of Smart BKC Project Data. The bidder shall share all the details of sub-contracting in the Technical Bid and specify the activities that the bidder plans to sub-contract as per format provided in Section – IV, Annexure – 2, Format – 12 of this RFP. Post-award of contract, in case of any change in the sub-contractors, MSI shall inform these changes to MMRDA as per the same format. For any deviation from suggestions, MMRDA reserves the right to disqualify the bidder at any stage. Both during the process of award, and post award of contract, MMRDA shall review the activities listed for sub-contracting and any suggestions by the MMRDA shall be agreed upon and binding on the bidder.

- 11. All members of the consortium are required to follow the highest level of work ethics, if any member of the consortium has a Conflict of Interest or indulges in "Prohibited Practices"; the whole Consortium is liable to be disqualified. Further, in the event any entity has been barred by the Central Government, any State Government, a statutory authority or a public sector undertaking, as the case may be, from participating in any project or bid, and the bar subsists as on the date of Last Date of Submission, it would not be eligible to submit a Proposal either by itself or as part of a Consortium.

### 3.6 Engagement Model and Timeline

The Engagement Model defines stakes of both parties (MMRDA and MSI) in respect to Capital Expenditure (CAPEX), Operational Expenditure (OPEX), and Revenue Sharing. The Engagement Model is bifurcated into three stages- **Implementation Stage, Interim Stage, Maturity Stage** as follows:

Table: Engagement Model Stages		
Stage Name	Description	Period
Implementation Stage	Commencement to Go-Live	Up to 6 months post Signing of Contract
Interim Stage	Period for Project to Mature	Up to 2 years post Go-Live of the project
Maturity Stage	Period Post Interim Stage focused on Service and Revenue Realization	From Year 3 to Year 7 of post Go-Live period



### 3.6.1 Engagement Model and Timeframe

The details of revenue sharing and payment terms across the above mentioned stages is detailed below:

Sn.	Items	Implementation Stage	Interim Stage 1 <sup>st</sup> Year Beginning – 2 <sup>nd</sup> Year End		Maturity Stage 3 <sup>rd</sup> Year Beginning – 7 <sup>th</sup> Year End				
			6 months till Go-Live	Y1	Y2	Y3	Y4	Y5	Y6
A	B	C	D	E	F	G	H	I	J
<b>MMRDA To Pay To MSI</b>									
1	Total Contract Value (CAPEX+ OPEX) Commercial Bid	40% of Total Contract Value (CAPEX+ OPEX) on Completion of Milestones	Remaining 60% of Total Contract Value (CAPEX+ OPEX) at the end of every quarter equally spread across 7 years Post Go-Live						
<b>MSI To Pay To MMRDA</b>									
2	Fixed Parking Revenue (MSI to pay to MMRDA)	Nil	The existing parking management contracts would be honored till the expiry of the contract. The existing Parking Contractors would continue to pay the Fixed Parking Revenue directly to MMRDA. After expiry of existing Parking Management Contracts, MSI would pay Fixed Parking Revenue adjusted with Annual Inflation at the start of each year as per the details in Section – IV, Annexure – 4, Bid-related Information – 2						
3	Additional Revenue from Smart Parking (Actual Parking Revenue - Fixed Parking Revenue as in Sn. 2 above)	Nil	MSI would retain Additional Revenue Generated		MSI would pay 75% of the Additional Revenue Generated to MMRDA at the end of every Quarter				
4	Actual Revenue from Public WI-FI & Wired	Nil	MSI would retain Actual Revenue Generated		MSI would pay 75% of the Actual Revenue Generated to MMRDA at the end of every Quarter				
5	Actual Revenue from Citizen App & Portal	Nil			MSI would pay 75% of the Actual Revenue Generated to MMRDA at the end of every Quarter				
6	Actual Revenue from Other Smart BKC projects sources	Nil			MSI would pay 75% of the Actual Revenue Generated to MMRDA at the end of every Quarter				

- Fixed Parking Revenue: Fixed Revenue generated from existing parking management contracts for MMRDA parking lots in E & G Blocks of BKC.
- Actual Parking Revenue: Total Revenue generated after implementation of smart parking, which includes Fixed Parking Revenue and any other Additional Parking Revenue generated in MMRDA parking lots in E & G Blocks of BKC.
- Additional Parking Revenue: Actual Parking Revenue minus Fixed Parking Revenue generated in MMRDA parking lots in E & G Blocks of BKC.

### 3.6.2 Conditions

- MSI shall collect all revenue from the Smart BKC 1.0 initiatives in an Escrow Account. Terms of disbursement of payments shall be governed by the payment conditions of the resultant Contract. Parties to the resultant contract will enter into a subsequent Escrow Agreement, as per Section – III, Part – I, Clause No. 24. The costs associated with operationalizing such escrow shall be borne by the bidder.
- The Revenue Transactions accounting for each Smart BKC initiatives should be separately maintained with proper Individual Heads of Account in the Escrow account.
- All the Actual Revenue is mandated to be maintained in the mentioned Escrow Account. Any deviations to the same would lead to cancellation of the contract with MSI and action thereof



4. MSI shall maintain proper accounting of all transactions adhering to relevant standards and submit Quarterly Report to MMRDA at the end of each quarter.
5. **Revenue Sharing Details: Public Wi-Fi & Wired, Citizen Apps & Other Smart BKC Sources**
  - a. MSI may innovate to establish Revenue streams after approval of MMRDA.
  - b. MSI shall be allowed to retain Actual Revenue generated for initial 2 years Post Go-Live
  - c. MSI would share 75% of Actual Revenue generated with MMRDA from beginning of the 3<sup>rd</sup> Year till end of 7<sup>th</sup> Year on a Quarterly basis
6. **Revenue Sharing Details: Smart Parking**
  - a. MSI will be responsible for implementation and maintenance of all elements of Smart Parking initiatives for all the existing and upcoming MMRDA parking slots for the entire duration of the project. Details of MMRDA parking slots are given in Section – IV, Annexure – 4, Bid-related Information – 2.
  - b. MMRDA has existing contracts with various Parking Management contractors for operations of MMRDA parking slots, time period of which varies per Parking Lot. MMRDA directly receives Annual “Fixed Parking Revenue” of approximately Rs. 10.5 crores at the start of each year with an annual escalation of 10% every year from these existing (In Operation) Parking Lot Contractors. MSI will not be responsible for operations and sharing of the Fixed Parking Revenue generated during the period of above existing Parking Management Contracts. Details in Section – IV, Annexure – 4, Bid-related Information – 2
  - c. After the expiry of these existing Parking Management Contracts, time period for which varies per Parking Lot, MSI can work with the existing Parking Management Contractors and determine an Engagement & Operation Model or work with a different Parking Contractor for end to end Operation, Maintenance & Management of all MMRDA Parking Lots. Thereon MSI will be responsible for paying the “Fixed Parking Revenue” to MMRDA at the start of each year throughout the MSI contract period as defined in Section – IV, Annexure – 4, Bid-related Information – 2
  - d. MSI may innovate to establish other Revenue streams within the parking lots and infrastructure established for smart parking after approval of MMRDA. Additional Actual Revenue generated over and above the Fixed Parking Revenue shall be shared by MSI after 2 years Post Go-Live as detailed in Engagement Model mentioned in Section - I, Clause 3.6.1.
7. On receipt of a written application from the MSI (in addition to submission of any other document which MMRDA requires to be provided and subject to fulfilment of any conditions prescribed by MMRDA) MMRDA shall make payment of CAPEX and OPEX (as per Clause 3.6.3 Payment Schedule) to the MSI as per actuals and as per the amount quoted by the MSI in the Commercial Bid/ Contract.
8. Amount paid towards CAPEX and OPEX by MMRDA shall not exceed the amount quoted by the MSI in the Commercial Bid, save and except, to the extent (which shall not exceed 10% of the CAPEX or OPEX quoted for the relevant component for which such additional amount is required by the MSI) duly approved by MMRDA upon receipt of a written application, original receipts and any other document as may be required by MMRDA. Such approval may be granted on a case to case basis for each component.
9. The Operations & Maintenance (O&M) period shall be for a period of seven (7) years, post Go-Live, as approved by MMRDA.



10. The MSI shall provide comprehensive warranty for all hardware, software and networking components, both on-field and inside the Command and Control Center during O&M period.
11. MMRDA reserves the right to modify the engagement model at any later point of time as deemed fit.
12. The payment of every installment in a year would be subject to calculations and adjustments of penalties (as defined in Service Level Agreements) accumulated by the MSI during the preceding period of payments. The rates quoted shall be inclusive of Work contract Tax, Sales Tax, Local Tax or any other duty of taxes levied by the Central or State Govt. Or Local Body or any bodies. The rates shall be firm and fixed shall not be subject to any change, variations, on any other condition whatsoever nature and shall hold till completion of supply of the goods. In case of any upward revision in taxes/duties that occur within the AMC period, MMRDA shall pay the Bidder to the extent of additional quantum as a result of any increase in duties/taxes. Similarly, in case of downward revision in any duty/tax within the AMC period, the actual quantum of reduction of such duty/tax shall be reimbursed to the MMRDA by the Bidder

### 3.6.3 Deliverables and Payment Schedule

The payment of during Go-Live will be strictly on milestone basis as per actuals based on the details provided in the table provided below. The payment would be released on successful completion of various deliverables to the satisfaction of MMRDA as percentage (%) of the Total Contract Value (CAPEX + OPEX).

#### Go-Live Deliverable and Payment Schedule:

Table: Deliverables, Payments and Milestones		
SI	Key Deliverables	Payment Milestones*
<b>First Month Deliverables</b>		<b>5%</b>
1	Signing of Contract	
2	Project Charter	
3	Stakeholder responsibility assignment (RACI) matrix	
4	Detailed quality assurance and quality control reporting	
5	Periodic project status and progress reports	
<b>Third Month Deliverables</b>		<b>10%</b>
6	Detailed Project Management Plan	
7	Current state (As-Is) assessment	
8	To-Be process design	
9	Requirement Traceability Matrix (RTM)	
10	Detailed design documents	
11	Comprehensive project budget management	
12	Detailed system and network architecture	
13	Detailed test management and execution plan	
14	Detailed security management plan	
15	Equipment commissioning and procurement management plan	
16	Detailed Project Report	
17	Periodic project status and progress reports	
<b>Fourth Month Deliverables</b>		<b>15%</b>
18	Equipment procurement, installation and commissioning at BKC	
19	Periodic project status and progress reports	
<b>Sixth- Go-Live Month Deliverables</b>		<b>10%</b>
20	User Acceptance Testing	
21	IT Infrastructure and Security Audit	
22	Go-live strategy and planning	
23	Training, capacity building and Standard Operating Procedures (SOPs)	



Table: Deliverables, Payments and Milestones		
24	Go-live (Final Acceptance and Sign-off by MMRDA and Start of Commercial Operations)	
25	Periodic project status and progress reports	
* Go Live Payment Milestones would be paid at the at end of Month & after approval & sign off of the Milestone by MMRDA		

**Post Implementation Payment Schedule:**

Table: Payment Schedule		
Key Deliverables	Minimum Components To Be Included In Deliverables	Payment Milestones
Detailed operation and maintenance (O&M) plan & reports	Must establish operation and maintenance procedures and guidelines	Remaining 60% of Total Contract Value (CAPEX+ OPEX) at the end of every quarter equally spread across 7 years Post Go-Live
	Must track all project assets in real-time	
	Must define all annual maintenance requirements, timelines, and schedules	
	Regular interface approach of O&M teams with client's PMO team	
	SLA conformance & compliance report	

**3.6.4 Inclusion of MSMEs in Project Delivery**

The Bidder are encouraged to include Medium and Small & Medium Enterprises (MSMEs) in the delivery of the project by Subcontracting or Outsourcing part of the scope as per RFP Terms and Conditions. The MSME partner should be registered under the Micro Small Medium Enterprise Act, 2006.

**3.7 Bid Submission Instructions**

This section includes all the necessary information related to bid submissions for the bidders.

**3.7.1 Bid Submission Format**

- The bidder shall submit the bid online through MMRDA e-Tendering portal
- To view the Tender Notice, Detailed Time Schedule, RFP Document and its supporting documents, kindly visit following e-Tendering website of MMRDA: <https://etendermmrda.maharashtra.gov.in>.
- The bids submitted by the Bidder shall comprise of the following three envelopes:
  - A three envelope/cover system shall be followed for the bid –
    - Envelope A: Tender Fees, EMD & Eligibility Criteria: Section – IV, Annexure 1
    - Envelope B: Technical bid Section – IV, Annexure - 2
    - Envelope C: Commercial bid. Section – IV, Annexure - 3
- The Bid shall include the following documents: -

Table: Documents Required				
S. No.	Documents Type	Document Format	Online Submission	Hard Copy to be Submitted
<b>Tender Fee &amp; EMD and Eligibility Details- Envelope –A</b>				
1.	Tender Fee	Scanned copy of Deposit Receipt	Yes	Yes
2.	EMD	Scanned copy of Deposit Receipt	Yes	Yes
3.	Eligibility	The Eligibility Proposal shall be prepared in accordance with the	Yes	Yes



Table: Documents Required				
S. No.	Documents Type	Document Format	Online Submission	Hard Copy to be Submitted
		requirements specified in Section – I, Annexure – 1.		
Technical Proposal Documents- Envelope –B				
4.	Technical Proposal	The Technical Proposal shall be prepared in accordance with the requirements specified in this RFP and in the formats prescribed in Section – IV, Annexure – 2. This Envelope should also mandatorily include un-priced BOM.	Yes	Yes
Commercial Bid – Envelope –C				
5.	Commercial Bid	The Commercial Proposal shall be prepared in accordance with the requirements specified in this RFP and in the formats prescribed in Section – IV, Annexure – 3.	Yes	No

- The bidder should ensure that all the required documents, as mentioned in this RFP/ bidding document, are submitted along with the bid and in the prescribed format only. MMRDA will not accept delivery of Proposal in any manner other than that specified in this RFP. Proposal delivered in any other manner shall be treated as defective, invalid and rejected. Non-submission of the required documents or submission of the documents in a different format/ contents may lead to the rejections of the bid proposal submitted by the bidder. In case of the foreign entity, it should be able to perform the SoW in India in accordance with Indian laws, in the event it is found to be the successful bidder. By submitting a proposal to this opportunity, the foreign bidder will ensure completion of all formalities associated with delivering the project within the purview of applicable Indian Laws.
- The Vendors participating first time for e-Tendering on MMRDA's e-tendering portal will have to complete the Online Registration Process for the e-Tendering portal. For any concerns or queries related to e-Tendering, kindly email at [etendersupport@mailmmrda.maharashtra.gov.in](mailto:etendersupport@mailmmrda.maharashtra.gov.in).
- All bidders interested in participating in the on-line e-Tendering process are required to obtain Class II or Class III Digital Certificates with signing and encryption/decryption facility. The bids should be prepared & submitted online using individual's digital signature certificate.
- No Deviation Bid:** It is required that all the Bids submitted in response to this RFP should be unconditional in all respects, failing which MMRDA reserves the right to reject the Bid.

### 3.7.2 Eligibility Criteria

The bidder shall submit checklist for eligibility criteria as per prescribed format at Section – IV, Annexure – 1.





### 3.7.3 Submission of Technical Bid

Bidder is expected to divide its proposal in following sections:

#### 3.7.3.1. Bidder's Competence to execute the project

Bidder should project the capability of the firm to execute this project. Some of the required documents are as follows:

1. Financial Capability of the bidder in required formats and supporting documents
2. Experience of Bidder in executing similar projects in required formats and supporting documents
3. Quality of IT Domain Manpower in the firm

#### 3.7.3.2. Proposed Team for the Project

As specified in the Technical Bid Evaluation section, MMRDA would like to give lot of importance on the right people proposed for the project. Bidder may propose different people for different skill-sets required & different responsibilities (during Project Implementation & Post-Implementation). Following documentation is expected in this section:

1. Overall Project Team (for both Project Implementation & Maintenance phases), consists of Top Management Team and Core Delivery Team (Implementation, O&M and On-Premise Teams) as per requirement mentioned in Section – II, Clause no. 1.2.1.
2. Escalation Chart for the entire Project Duration
3. Summary Table giving Qualification, Experiences, Certifications, Relevance
4. Detail CVs in the format attached at Section – IV, Annexure – 2, Format – 8. Undertaking stating that deployed manpower will be exactly same as that proposed during Technical Evaluation, Section – IV, Annexure – 2, Format – 7 (Envelope B).

#### 3.7.3.3. Technical Solution Proposed for the Project

Broad areas to be covered in the Technical Solution documentation are given below:

1. Bill of Material (i.e. un-priced commercial bid format): This document should give indication of all the proposed cost components, without specifying the costs as specified in Section – IV, Annexure – 2, Format – 3. **Please note that the bid shall get dis-qualified if bidder gives price details in the technical document.**
2. Describe the proposed Technical Solution for each of the initiative, namely Wi-Fi, Smart Parking, Citizen Apps and Command and Control Centre, in a structured manner. Following should be captured in the same:
  - a. Detailed description of the design and technical solution and various applications and components including make of equipment or sizing of infrastructure (including diagrams and calculations wherever applicable)
  - b. Reasoning for selection of the proposed technology over other options.
  - c. Extent of compliance to technical requirements specified in the scope of work



- d. Technical Design and clear articulation of benefits to MMRDA of various components of the solution vis-à-vis other options available.
  - e. Strength of the Bidder to provide services including examples or case-studies of similar solutions deployed for other clients
  - f. Any other parameter as specified in Section – I, Clause No. 4.3.3.
3. Provide detailed Approach and Methodology for Pre-Implementation, Implementation & Post-Implementation periods.
  4. Approach & Methodology for Management of SLA Requirements specified in the RFP. Bidder is required to clearly articulate how each of the SLA requirements would be adhered in a table format given in Section – II, Clause No. 10.
  5. Detailed Project Plan with timelines, resource allocation, milestones etc. in for supply, installation and commissioning of the physical and IT components for the Mumbai city Surveillance project.
  6. Insights into Best and latest Industry practices and standards.

#### **3.7.3.4. Compliance Table to the IT / Non-IT Components**

The RFP (Section - II) has specified the benchmark/minimum specifications for various components. Bidder is expected to give a comprehensive compliance sheet for the equipment/software proposed by them.

#### **3.7.3.5. Signed Copies of the RFP Documents & the Clarification, Corrigendum Issued**

It is expected that bidders have read and understood the RFP documents along with clarification / corrigendum documents (if any) before the proposal submission. As a matter of confirmation of the same, Bidders are expected to submit the scanned, signed copies of the RFP, Clarification & Corrigendum documents. These should be signed by the authorized signatory submitting the bid. Original copies of the signed documents shall be submitted by the bidder at the time of bid opening. All above mentioned documents shall have an index page with page numbers specified for all the key information/headers. (Not applicable for last document type).

### **3.7.4 Submission of Commercial Bid**

#### **3.7.4.1. General Conditions:**

1. Bidder should provide all prices as per the prescribed format under this Annexure.
2. All the prices are to be entered in Indian Rupees ONLY
3. **No Alternate Proposal:** The bidder shall mention only one quantity, Unit Of Measurement (UOM) and unit price for each line item, only from single OEM/ Type for hardware, software etc, to reach at consolidated cost as part of Commercial Bid. Any bids, which propose multiple options in terms of quantity, Unit Of Measurement (UOM), OEM/ Type and unit price for each line item shall be summarily rejected. Please refer Section – IV, Annexure – 3, Format 2. For example, in case of firewall, the bidder submitting two options of firewalls with different options for quantity, Unit Of Measurement (UOM), OEM/ Type and unit price shall be summarily rejected.
4. Prices indicated in the schedules shall be inclusive of all taxes, Levies, duties etc.
5. The prices should also specify year-wise support cost for a period of Seven (7) years, as per formats specified in Section – IV, Annexure – 3.



6. MMRDA shall take into account all Taxes, Duties & Levies for the purpose of Evaluation. It is mandatory to provide breakup of all Taxes, Duties and Levies wherever asked for.
7. MMRDA reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.
8. The Bidder needs to account for all Out of Pocket expenses due to Boarding, Lodging and other related items in the bid.
9. The Unit Rate as mentioned in the following formats may be used for the purpose of 'Change Order or Additional Order' for respective items, if any. However, based on the market trends, MMRDA, retains the right to negotiate this rate for future requirement. Dollar rate fluctuation to be considered for such incremental/ future purchases (by comparing USD to INR ratio on the day of tender release with the USD to INR ratio on incremental/ future purchase date).
10. Bidder shall be bound to give same or more % of discount on the list price of the OEMs on the future purchases (additional purchases within the contract period) by MMRDA. Bidder shall ensure that the future products supplied are of latest specifications as per the OEM roadmap.
11. For the purpose of evaluation of Commercial Bids, MMRDA shall make appropriate assumptions to arrive at a common bid price for all the Bidders. A detailed list of assumptions must be submitted in the bid. This however shall have no co-relation with the Contract value or actual payment to be made to the Bidder.
12. MMRDA also intends to utilize various rates obtained through this tender for requirements across various departments. Bidders are requested to factor this larger demand and give the best possible rate to MMRDA.
13. Bidder should refer Section – II of this RFP for details on the functional requirements of the system and the benchmark specifications for the items mentioned in the Commercial formats.
14. Line items mentioned in the Commercial Bid Formats are for representation purpose and bidder may propose as per the proposed technology/ solution submitted (with proper justification). Bidders are required to suitably add line items depending upon their proposed solution.
15. Bidder shall reduce the bandwidth rates if the prevailing rate as per TRAI, are decreased during the contract period as per the Tripartite agreement between ISP, MSI and MMRDA (reduction in bandwidth rate shall be in proportion to the TRAI rate reduction).
16. The Bidder is required to submit Commercial Bid in prescribed format at Section – IV, Annexure – 3, Format – 1. All the Commercial Bid formats shall be signed by authorized signatory.
17. The Commercial Bid would consists of :
  - i. **Summary Sheet:** The bidder shall submit the "Summary Sheet" which shall include summary of costs for all initiatives. This Summary Sheet shall be considered for evaluation purposes.
  - ii. **Other Commercial Detail Sheet:** The bidders shall submit the elaborate item-wise commercial details as prescribed in formats below on company letter head. The commercial details of the project would include details of capital expenditure, operational expenditure. The pdf formats of such commercial details shall be attached while submitting the Commercial Bids in order to access how the bidder arrived at the costs.



18. Any bid which does not conform to the formats prescribed will be disqualified.
19. All figures of costs, project values and others will shall be mentioned in Indian Rupees only, except when the bidder is a foreign entity.
  - a. All financial references (project citations etc., excluding the commercial quotes) in a foreign bidder's proposal shall be in US\$ and will be calculated using selling exchange rates of Reserve Bank of India prevailing on the date of closing of the accounts for the respective financial year of the reference.
  - b. For the purpose of submission of the commercial quotes (Commercial Bids) provided by the foreign bidder, the commercial bids shall be in Indian Rupees (INR) only. The foreign bidder shall convert to Indian Rupees (INR) as per the RBI reference rate, as on the release of tender, i.e. 11<sup>th</sup> Jul 2015.
20. Operational Expenditure should include per unit cost for the operation and maintenance (yearly) period for Seven (7) years of operation.
21. Any conditional bid is liable for rejection.
22. If competition is amongst Indian and foreign bidders, the CIP/CIF cost quoted by the foreign bidders would be the basis for comparison with the basic cost (FOR) offered by Indian bidders, after offloading the Excise Duty, Custom Duty, Central Sales Tax (CST) / Value Added Tax (VAT) and other local taxes and levies.
23. Bidders are required to spell out the rates of Customs duty, Excise duty, VAT, Service Tax, etc. in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices.
24. Errors & Rectification: Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail.

#### 3.7.4.2. Instructions for Completion of Other Commercial Detail Sheet

The Bidder is required to fill CAPEX and OPEX of all initiatives mentioned in the Sample Format

1. Capital Expenditure Information includes:
  - i. **Street Layer Devices, Equipment & Sensors:** The Bidder has to fill costs of all other devices and sensors apart from hardware components required for respective initiative. For e.g. Wi-Fi costs would include access points, Parking costs would comprise of Sensors, Cameras, Booths, Entry Devices, Indicators, Displays, Barriers, NFC Equipment etc. and other related costs to these have to be mentioned.
  - ii. **Networking Equipment:** The Bidder is required to fill costs of each and every network components and auxiliary requirements. For e.g. for Wi-Fi and Wired network, network costs would include costs of components such as Wi-Fi controllers, Ethernet cable, switches, etc.
  - iii. **Command and Control Centre:** The Bidder has to fill costs related to set up of Command and Control Centre/ NOC such as costs for LED based redundant video panel, Operator Terminals, IP based Surveillance Cameras, Workstations, etc.
  - iv. **Software Components:** The Bidder is required to fill costs of all the software components and auxiliary requirements for deployment of software. For e.g. for Smart Parking, software costs would include deployment of Parking



- Management and Guidance System, costs of all licenses related to it, all security related costs, and any other requirements as per scope.
- v. **Security Components:** The Bidder has to fill costs of security component such as Network Security Solution, System Security Solution, Firewall etc.
  - vi. **Data Centre Components:** The Bidder has to fill costs related to managed hosting services for Smart BKC 1.0 project application, data, and storage.
  - vii. **Disaster Recovery Components:** The Bidder has to fill costs related to private cloud-based redundancy services for Smart BKC 1.0 Project application, data, and storage
  - viii. **Implementation Costs:** The Bidder is required to mention all the costs related to implementation of hardware, software, network, project management etc.
  - ix. **Miscellaneous Costs:** The Bidder has to fill in any additional costs which the bidder wishes to include.
2. Operation Expenditure Information includes:
- i. **Bandwidth Component:** The Bidder is required to fill costs for all components required to supply sufficient bandwidth for all relevant initiatives.
  - ii. **Operation, Maintenance and AMC Costs:** The Bidder is required to fill Operation, Maintenance and AMC costs related to Smart Parking, Wi-Fi, Citizen App, Data Centre, Disaster Recovery etc., including Power and Utility costs for operation and maintenance of all Smart BKC 1.0 Initiatives.
  - iii. **Manpower Costs (During Implementation):** The Bidder is required to include all manpower costs during implementation and before Operations and maintenance period starts.
  - iv. **Miscellaneous Costs:** The Bidder has to fill in any additional costs which the bidder wishes to include.
3. The bidder may add any number of items under each cost component. The bidder shall submit commercial details in as much detail as possible.
4. Miscellaneous expenses in CAPEX shall not exceed 5% of the total CAPEX quoted by the bidder.
5. Miscellaneous expenses in OPEX shall not exceed 5% of the total OPEX quoted by the bidder.
6. The MSI shall provide comprehensive warranty for all hardware, software and networking components, both on-field and inside the Command and Control Center for entire period of the project (Go-live + Seven years)..

#### **3.7.4.3. Transferability & Confidentiality of the RFP document**

This RFP document is non-transferable. This document is intended for limited circulation only and shall be given upon payment of the RFP price. Information shared to the bidders through this document is confidential in nature. Any further circulation of this document by prospective bidders who have purchased this document to those not concerned with their bid preparation is prohibited. The receiving party herewith agrees to exercise appropriate care to protect the confidential nature of this document from unauthorized disclosure, which includes, at a minimum, using reasonable care to limit disclosure of this document solely to select Authorized Personnel. (Bidder may share only relevant portion of RFP with partner/ vendors / OEMs/ ISPs for specific component with respect to the solutions).



#### **3.7.4.4. Bid Prices**

The Bidder shall indicate in the proforma prescribed, the unit rates and total Bid Prices for the equipment/services, it proposes to provide under the Contract. Prices should be shown separately for each item as detailed in this document.

The Bidder shall prepare the bid based on details provided in the tender documents. It must be clearly understood that the Scope of Work is intended to give the Bidder an idea about the order and magnitude of the work and is not in any way exhaustive and guaranteed by the bidder. The Bidder shall carry out all the tasks in accordance with the requirement of the tender documents & with due diligence. It shall be the responsibility of the Bidder to fully meet all the requirements of the tender documents and to meet objectives of the project. If during the course of execution of the project any minor revisions to the work requirements like technical specifications, equipment sizing, etc. are to be made to meet the goals of the project, such changes shall be carried out within the proposed price. If any deviation has a major impact on the commercials, MMRDA's Project Implementation Committee shall take appropriate decision and such decisions would be binding on the MSI.

#### **3.7.4.5. Firm Prices**

Prices quoted in the bid must be firm and final and shall not be subject to any upward modifications, on any account whatsoever. MMRDA reserves the right to negotiate the bid, as per CVC guidelines, effective at the time of negotiations. The Bid Prices shall be indicated in Indian Rupees (INR) only.

The Commercial bid should clearly indicate the price quoted without any ambiguity/qualifications whatsoever and should include all applicable taxes, duties, fees, levies, and other charges as may be applicable in relation to the activities proposed to be carried out. It is mandatory that such charges wherever applicable / payable should be indicated separately. Should there be a change in applicable taxes, the actual taxes on the date of billing would prevail.

Prices in any form or by any reason before opening the Commercial Bid should not be revealed, failing which the offer shall be liable for rejection. If price change is inevitable due to any factor external to the bidder, bidders may be given chance to submit revised Bids in a separate sealed cover. Decisions of the MMRDA shall be final in this regards.

#### **3.7.5 Authentication of Bids**

A Proposal should be accompanied by a power-of-attorney in the name of the signatory of the Proposal.

#### **3.7.6 Proposal Preparation Costs**

The bidder shall be responsible for all costs incurred in connection with participation in the RFP process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by MMRDA to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process.

MMRDA will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.



### 3.7.7 Language

The Proposal should be filled by the Bidder in English language only. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the Bidders. For purposes of interpretation of the Proposal, the English translation shall govern.

### 3.7.8 Late Bids

1. Bids received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained and shall remain unopened.
2. MMRDA will not accept the proposal in case the bidder fails to submit online through e-Tendering solution and hard copies of Envelope A and Envelope B ONLY as specified in Section – IV, Annexure – 1 & 2.
3. The bids submitted by telex/telegram/fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.
4. MMRDA shall not be responsible for any non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained.

### 3.7.9 Suggestions

The bidder may provide suggestions to the contents of the RFP document. MMRDA may, in its discretion, ask the bidder for explanations on the suggestions and decide incorporating the in the RFP. The suggestions, if any, shall be provide latest by the time of Pre-Bid conference, and MMRDA will convey the resultant decision as response to Pre-Bid queries. The decision taken by MMRDA will be final and binding on all the bidders. Any resultant modifications resulting from incorporation of these suggestions, in full or partially, shall be considered for all subsequent evaluation processes of this bid. The suggestions to the RFP shall be mentioned as per Format provided in Section – IV, Annexure – 2, Format 17 and shall be submitted prior to Pre-Bid conference.

### 3.7.10 Tender Validity

The offer/proposals submitted by the Bidders should be valid for minimum period of 180 days from the date of opening of Bids. In the event of expiry of bids, before the award of contract,

- (a) MMRDA will request
- (b) bidder at his discretion will accept or reject and
- (c) if the bidder accepts, then EMD will continue for such extension period
- (d) in case bidder rejects, MMRDA will return EMD as early as practically possible.

### 3.7.11 Tender Opening

1. All the envelopes of the bids received within the prescribed closing date and time will be opened in presence of bidder representatives (who choose to attend the opening of tender), on the date, time & at the address communicated separately to all the bidders who have purchased the RFP documents.
2. The representatives of the bidders should be advised to carry the identity card or a letter of authority from the tendering firms to identify their bonafides for attending the opening of the proposal.



3. Envelope A shall be opened initially in the presence of bidders, if the EMD, Tender Fee, Eligibility Criteria is as per the RFP Terms and Conditions then Envelope B of the qualified bidders only shall be opened.
4. Envelope B containing the Technical Proposal shall be opened in the presence of the bidder/ representatives of bidder who choose to attend, at the address, date and time specified in the RFP.
5. Envelope C containing the Financial Proposal will remain unopened and will be held in custody of MMRDA until the time of opening of the Financial Proposals.
6. At the end of the evaluation of the Technical Proposals, MMRDA shall invite bidders who have qualified for the opening of the Financial Proposals. The date, time, and location of the opening of Financial Proposals will be informed by MMRDA separately and individually to qualified bidders

### **3.7.12 Rejection Criteria**

#### **3.7.12.1. General Rejection Criteria**

1. If the information provided by the Bidder is found to be incorrect / misleading / fraudulent at any stage / time during the RFP Process
2. Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or contract award decisions
3. Bids received after the prescribed time & date for receipt of bids
4. Bids without signature of person (s) duly authorized on required pages of the bid
5. Bids without power of attorney/ board resolution
6. Conditional Bids

#### **3.7.12.2. Eligibility Stage Rejection Criteria**

1. Eligibility Criteria envelop containing any kind of commercial details;
2. Bidders not complying with the Eligibility Criteria given in this RFP
3. Revelation of Prices in any form or by any reason before opening the Commercial Bid;
4. Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect;

#### **3.7.12.3. Technical Rejection Criteria**

1. Technical Bid containing commercial details;
2. Revelation of Prices in any form or by any reason before opening the Commercial Bid;
3. If bid is non-responsive, with respect to providing required information in every aspect;
4. Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidder;
5. Bidders not complying with the Technical and General Terms and conditions as stated in the Tender Documents;
6. The Bidder not confirming unconditional acceptance of full responsibility of providing services in accordance with the Scope of work and Service Level Agreements of this tender

#### **3.7.12.4. Commercial Rejection Criteria**

1. Incomplete Price Bid;
2. Price Bids that do not conform to the Tender's price bid format;





3. Total price quoted by the Bidder does not include all statutory taxes and levies applicable;
4. If there is an arithmetic discrepancy in the commercial bid calculations the Evaluation Committee shall rectify the same. If the Bidder does not accept the correction of the errors, its bid may be rejected.
5. If bids not submitted as per formats provided at Section – IV

### 3.7.13 Clarification of Offers

To assist in the scrutiny, evaluation and comparison of offers, MMRDA may, at its discretion, ask some or all vendors for clarifications with regards to their offer. The request for such clarifications and the response will necessarily be in writing (by letter / fax / email). Failure of a Bidder to submit additional information or clarification as sought by MMRDA within the prescribed period will be considered as a non-responsive bid, and shall be treated as per provision mentioned above at **“Technical Rejection Criteria”**.





## 4. Evaluation Process

### 4.1 Bid Evaluation Committee

1. MMRDA will constitute a Bid Evaluation Committee (BEC) to evaluate the responses of the bidders
2. The BEC constituted by the MMRDA shall evaluate the responses to the RFP (Envelope A, Envelope B and Envelope C) and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection.
3. The decision of the Bid Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation/ discussion with the Committee.
4. The Bid Evaluation Committee may ask for meetings with the Bidders to seek clarifications on their proposals and may visit Bidder's client site to validate the credentials/ citations claimed by the bidder.
5. The Bid Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations.
6. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.
7. The BEC would submit its decision to the competent authority whose decision would be final and binding upon the bidders.

### 4.2 Eligibility Criteria (Envelope A)

The bidder shall be evaluated based on the Eligibility Criteria mentioned below. The bidder shall submit all the documents as mentioned below as per the formats mentioned in Section – IV, Annexure – I. Only eligible bidders would be qualified for Technical Evaluation (Envelope B).

Table: Eligibility Criteria		
S No	Eligibility Criteria	Document Proof
	<b>Registered legal entity</b>	
1	The Lead Bidder and consortium partners (if any) must be a registered company.	<ul style="list-style-type: none"> <li>• For Companies incorporated in India, Certificate of Incorporation/ Registration under Companies Act, 1956 or partnership firm registered under the Partnership Act.</li> <li>• Memorandum and Articles of Association</li> <li>• For global players, equivalent certificate in the country of incorporation</li> </ul>



Table: Eligibility Criteria		
S No	Eligibility Criteria	Document Proof
	<b>Duration of operations</b>	
2	The Lead Bidder and consortium partners (if any) should have been in operation for a period of at least 3 years in India or globally, prior to the last date of submission of bid.	<ul style="list-style-type: none"><li>• For Companies incorporated in India, Certificate of Incorporation/ Registration under Companies Act, 1956 or partnership firm registered under the Partnership Act.</li><li>• Memorandum and Articles of Association</li><li>• For global players, Certificate of Incorporation in the country of incorporation</li></ul>
	<b>Financial Stability</b>	
3	The bidder (Lead Bidder in case of a consortium) should have average annual turnover of INR 200 crore from last three financial years (Financial years 2011-12, 2012-13 and 2013-14); and In case of a consortium, each consortium member individually (apart from the prime bidder) should have average annual turnover of INR 25 crore from last three financial years (Financial years 2011-12, 2012-13 and 2013-14)	<ul style="list-style-type: none"><li>• Audited Financial Statement for Financial years 2011-12, 2012-13 and 2013-14; and</li><li>• Statutory auditor's certificate OR certificate from Company Secretary of the bidder clearly specifying the annual turnover for the specified years.</li></ul>
4	The Lead Bidder or any member in case of a consortium should have annual average turnover of INR 100 crore from IT/ ITES/ Telecom Projects (not including sales of system software or hardware) from last three financial years (Financial years 2011-12, 2012-13 and 2013-14)	<ul style="list-style-type: none"><li>• Statutory auditor's certificate OR certificate from Company Secretary of the bidder clearly specifying the turnover from IT/ ITES/ Telecom projects for the specified years.</li></ul>
5	The Lead Bidder and each consortium member (in case of a consortium) individually should have a positive Net Worth, from last three financial years (Financial years 2011-12, 2012-13 and 2013-14)	<ul style="list-style-type: none"><li>• Statutory auditor certificate/certificate from Company Secretary of Bidder specifying the net worth for the specified year.</li></ul>
6	As on date of submission of the proposal, the bidder and the consortium members should not be blacklisted by Central/State Government/PSU entity in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices, in past three (3) years.	<ul style="list-style-type: none"><li>• Undertaking by the authorized signatory as per the Form in Section – IV, Annexure – 1, Format 9.</li></ul>



Table: Eligibility Criteria		
S No	Eligibility Criteria	Document Proof
7	The Bidder/ any member (in case of Consortium) shall have an ISO 9001:2008 or CMMI Level 3 and above or any global equivalent certification	<ul style="list-style-type: none"><li>Details shall be furnished as per Bidder Information Format at Section – IV, Annexure – 1, Format – 1.</li></ul>

1. Any bid failing to meet the above eligibility criteria shall be disqualified and will not be considered for Technical Evaluation.
2. Change in Eligibility Criteria: If there is a change in the status of the bidder with reference to any of the eligibility criterion specified above, during the bid process till the award of the project, the bidder should immediately bring the same to the notice of MMRDA.
3. For the purpose of the criterion, turnover of only the bidding entity will be considered. Turnover of any parent, subsidiary, associated or other related entity will not be considered. Moreover, the Bidder should provide the experience details of Projects undertaken by it only. Project experience of the Individual Bidder's parent company or its subsidiary or Consortium Members parent company or its subsidiary (who are not Members of the Consortium) will not be considered. Implementation or operation and maintenance experience of parent/subsidiary/associate company(ies) of the Bidder would not be considered for evaluation.

### 4.3 Technical Evaluation

Bidders who qualify in Envelope A would be considered as qualified to move to the next stage of Technical evaluations. The Technical Evaluation of Bidders' proposals (Envelope B) shall be based on:

1. Technical Proposal Evaluation
2. Technical Presentation
3. Proof of Concept Demonstration

#### 4.3.1. Proof of Concept (PoC) / Client Visit

The Proof of Concept (PoC) will be evaluated along with presentation to be given by bidders:

1. Each shortlisted bidder for Technical Evaluation (Envelope B) shall demonstrate the PoC.
2. The Bidder is expected to demonstrate for all the Smart BKC initiatives as per RFP
  - i. are integrated and can function simultaneously
  - ii. Interface with each other on a common communication platform
  - iii. can communicate back and forth with the centralized Command and Control Centre
  - iv. and comply to all the Scope, Requirements, Standards etc. mentioned in the RFP



3. The demonstration should provide a representative solution to integrate various aspects of the Smart BKC initiatives as per the scope
4. The Bidder is expected to bear the cost of demonstrating the PoC and would also be responsible for making the demonstration in Mumbai region.
5. PoC shall be demonstrated in English.
6. MMRDA may visit various client sites (national or global) to validate the project citations and implementation experience quoted by the bidder. The bidder is expected to bear all the expenses and facilitate for the same.

#### 4.3.2. Technical Scoring and Evaluation

1. This is a Quality & Cost Based Selection (QCBS)
2. The Relative Technical Score (RTs) carries 70% of the weightage, while Relative Financial Score (RFs), to be calculated as per Section – I, Clause No. 4.4, is given 30% weightage.
3. For the purpose of arriving at Technical Score (Ts), the bid shall be evaluated against the Technical Parameters, with respective weightages, as given in Section – I, Clause No. 4.3.3.
4. The Total Technical Score (Ts) will be calculated out of 100 Marks, and shall be evaluated as below:

**The Bidder has to score Minimum Qualifying Marks as below:**

- Overall Technical Evaluation: minimum 80 Marks, and
  - Individual Marks for respective TE criteria as mentioned in Technical Evaluation Matrix at Section – I, Clause No. 4.3.3.
  - Marks for Presentation and Proof of Concept (TE-11): Minimum 75% of the maximum marks for the criteria (i.e. Total Marks for TE-11 = 20 marks. Minimum Qualifying = 75% of 20 marks = 15 marks)
5. **The Bidders scoring marks less than the minimum qualifying marks as mentioned above shall be disqualified for Commercial Bid Opening (Envelope C).**
  6. Based on the Technical Score (Ts), calculated as above, the Relative Technical Score (RTs) will be calculate as below, only for the qualifying bidders.

$$\text{RTs of the qualifying bidder} = \frac{\text{Ts of the qualifying Bidder}}{\text{Ts of the highest qualifying Bidder}} \times 100$$

*[This Space is left blank intentionally]*



### 4.3.3. Technical Evaluation Matrix

The table below describes the Technical Evaluation criteria along with the weightages for each parameter. Technical Evaluation criteria to be defined below:

Table: Technical Evaluation Matrix															
Sr. No.	Criteria	Technical Evaluation Parameters	Weightage	Tech Marks [Marks*Weightage] Max. Marks	Supporting for Compliance and Deviation										
<b>Financial Capability</b>															
TE-1	Company Profile – Turnover from IT/ ITES/ Telecom Projects (not including sales of system software or hardware) Services	<p>Average Annual Turnover of Lead Bidder from IT/ ITES/ Telecom Projects from last three financial years (FY 2011-12, 2012-13, 2013-14). The evaluation will be done as mentioned below:</p> <table border="1"> <thead> <tr> <th>Turnover (in INR)</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>&gt; = INR 800 Cr.</td> <td>100</td> </tr> <tr> <td>&gt; = INR 600 Cr. and &lt; INR 800 Cr.</td> <td>75</td> </tr> <tr> <td>&gt; = INR 400 Cr. and &lt; INR 600 Cr.</td> <td>50</td> </tr> <tr> <td>&gt; = INR 200 Cr. and &lt; INR 400 Cr.</td> <td>25</td> </tr> </tbody> </table> <p>Max Marks: 100 Marks</p>	Turnover (in INR)	Marks	> = INR 800 Cr.	100	> = INR 600 Cr. and < INR 800 Cr.	75	> = INR 400 Cr. and < INR 600 Cr.	50	> = INR 200 Cr. and < INR 400 Cr.	25	5%	Max Marks: 5	<ul style="list-style-type: none"> <li>Audited Balance sheet and Profit &amp; Loss; OR</li> <li>Certificate from the statutory auditor</li> <li>Format as per Section – IV, Annexure – 1.</li> </ul>
Turnover (in INR)	Marks														
> = INR 800 Cr.	100														
> = INR 600 Cr. and < INR 800 Cr.	75														
> = INR 400 Cr. and < INR 600 Cr.	50														
> = INR 200 Cr. and < INR 400 Cr.	25														
<b>Project Capabilities</b>															
TE-2	Large ICT Project Experience	<p>The bidder (Lead Bidder in case of a consortium) should have completed / substantially completed* <b>at least one project in implementation of ICT Projects*</b>. Functional Evaluation Parameters for ICT projects:</p> <ul style="list-style-type: none"> <li>Projects should be Central Government/ any State Government/ PSU/ Urban Local Bodies/ Autonomous Bodies in India or Globally</li> <li>Contract value of each of the projects should be at least INR 30 crores</li> <li>The Project must be completed in the last three financial years (FY 2011-12, FY 2012-13, FY 2013-14)</li> </ul> <p>The evaluation will be done as mentioned below:</p>	5%	Max Marks: 5	<ul style="list-style-type: none"> <li>Work order</li> <li>Contract Copy</li> <li>Project Completion/ Substantially Completed* Certificate on client letter head</li> <li>Format as per Section – IV, Annexure – 2.</li> </ul>										



		<table border="1"> <thead> <tr> <th>Number of Projects</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>&gt; 5</td> <td>100</td> </tr> <tr> <td>&gt; = 3 and &lt; 5</td> <td>75</td> </tr> <tr> <td>&gt; = 1 and &lt; 3</td> <td>25</td> </tr> </tbody> </table> <p>Max Marks: 100 Marks *- ICT: Information and Communications Technology Projects, includes IT systems integration project</p>	Number of Projects	Marks	> 5	100	> = 3 and < 5	75	> = 1 and < 3	25			
Number of Projects	Marks												
> 5	100												
> = 3 and < 5	75												
> = 1 and < 3	25												
TE-3	Initiative Experience: Public Wi-Fi including Related Network Infrastructure	<p>The bidder or its consortium members (if any) should have completed / substantially completed* <b>at least two Public Wi-Fi and related network infrastructure projects</b> in the last 3 years.</p> <p>Functional Evaluation Parameters for Wi-Fi projects:</p> <ul style="list-style-type: none"> <li>• Deployed at least 100 access points for each Wi-Fi Project</li> <li>• Implementation should be Outdoor/ Public Area for each Wi-Fi Project</li> <li>• Implementation should be in a city like set up that has concrete buildings as well as open outdoor areas</li> </ul> <p>The evaluation will be done as mentioned below:</p> <table border="1"> <thead> <tr> <th>Number of Projects</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>&gt; 5</td> <td>100</td> </tr> <tr> <td>&gt; = 3 and &lt; 5</td> <td>75</td> </tr> <tr> <td>&gt; = 1 and &lt; 3</td> <td>25</td> </tr> </tbody> </table> <p>Max Marks: 100 Marks</p>	Number of Projects	Marks	> 5	100	> = 3 and < 5	75	> = 1 and < 3	25	10%	Max Marks: 10	<ul style="list-style-type: none"> <li>• Work order</li> <li>• Contract Copy</li> <li>• Project Completion/ Substantially Completed* Certificate on client letter head</li> <li>• Format as per Section – IV, Annexure – 2.</li> </ul>
Number of Projects	Marks												
> 5	100												
> = 3 and < 5	75												
> = 1 and < 3	25												
TE-4	Initiative Experience: Smart Parking	<p>The bidder or its consortium members (if any) should have completed / substantially completed* <b>at least one Smart Parking Project.</b></p> <p>Functional Evaluation Parameters for Smart Parking projects:</p> <ul style="list-style-type: none"> <li>• At least 250 parking spots in each project managed using integrated smart sensors, video cameras, RFID readers, etc.</li> <li>• Integrated Parking Management and Parking Guidance System</li> </ul> <p>The evaluation will be done as mentioned below: Marks Obtained by Bidder = summation of (P1 x P2); where P1 is Functional Experience and P2 is Project Experience.</p>	10%	Max Marks: 10	<ul style="list-style-type: none"> <li>• Work order</li> <li>• Contract Copy</li> <li>• Project Completion/ Substantially Completed* Certificate on client letter head</li> <li>• Format as per Section – IV, Annexure – 2.</li> </ul>								



Marking Scheme					
Experience	Functional Marks (P1)	Marks for Number of Projects (P2)			Max. Marks
		$\leq 2$	$> 2$ $\leq 5$	$> 5$	
Indoor Parking (For at least 250 parking spots)	10	1	3	5	50
Outdoor & Street Parking (For at least 250 parking spots)	10	1	3	5	50
Total Max. Marks					100

For e.g. If a bidder submits experience of three Indoor Smart Street Parking and two Outdoor Smart Parking Projects, then the bidder gets  $10 \times 3 + 10 \times 1 = 40$  marks  
Max Marks: 100 Marks

TE-5	Initiative Experience: Citizen (Mobile) Application or citizen portal project Citizen App	The bidder or its consortium members (if any) should have completed / substantially completed* <b>at least one Citizen (Mobile) Application or citizen portal project</b> that have components such as: Parking Guidance, Monitoring and dashboarding, Point of interest information, etc. The evaluation will be done as mentioned below: Marks Obtained by Bidder = P1 x P2; where P1 is Functional Experience and P2 is Project Experience.	10%	Max Marks: 10	<ul style="list-style-type: none"> <li>• Work order</li> <li>• Contract Copy</li> <li>• Project Completion/ Substantially Completed* Certificate on client letter head</li> <li>• Format as per Section – IV, Annexure – 2</li> </ul>
------	---	--	-----	---------------	---





Marking Scheme					
Experience	Functional Marks (P1)	Marks for Number of Projects (P2)			Max. Marks
		<= 2	> 2 <= 5	> 5	
Citizen Centric Services	5	1	3	5	25
Integration with other shared services and gateways (Govt. & Private)	5	1	3	5	25
Public Wi-Fi user management	2	1	3	5	10
Location based services and Point of interest (POI) information	2	1	3	5	10
Parking Availability and Guidance	2	1	3	5	10
SOS	2	1	3	5	10
Integrated Building Management System and Environmental Parameters Dashboards	2	1	3	5	10
<b>Total Max. Marks</b>					<b>100</b>
<p>For e.g. If a bidder submits experience of six Citizen App Projects for citizen centric services and three POI experience Projects, then the bidder gets <math>5 \times 5 + 2 \times 3 = 31</math> marks                      Max Marks: 100 Marks</p>					



TE-6	Initiative Experience: Command and Control Centre	<p>The bidder or its consortium members (if any) should have completed / substantially completed* <b>at least one Command and Control Centre/ Network Operations Centre (NOC) project.</b> Projects shall qualify only if it covers capability of centralized communication, integrated management and monitoring of outdoor sensors, devices, and smart equipment including Collection of Data for MIS reporting. The evaluation will be done as mentioned below:                  Marks Obtained by Bidder = P1 x P2;                  where P1 is Functional Parameter and P2 is Project Parameter.</p> <table border="1"> <thead> <tr> <th colspan="6">Marking Scheme</th> </tr> <tr> <th rowspan="2">Parameter</th> <th rowspan="2">Functional Marks (P1)</th> <th colspan="3">Marks for Number of Projects (P2)</th> <th rowspan="2">Max. Marks</th> </tr> <tr> <th>&lt;= 2</th> <th>&lt;= 3</th> <th>&gt; 3</th> </tr> </thead> <tbody> <tr> <td>Video Wall for centralized view for overall project management and execution</td> <td>5</td> <td>1</td> <td>3</td> <td>5</td> <td>25</td> </tr> <tr> <td>Implementation of centralized integrated platform for monitoring and managing outdoor/public resources, devices, equipment, and assets</td> <td>5</td> <td>1</td> <td>3</td> <td>5</td> <td>25</td> </tr> <tr> <td>Implementation of Network Operation Centre (NOC)</td> <td>5</td> <td>1</td> <td>3</td> <td>5</td> <td>25</td> </tr> <tr> <td>Ability to send and receive data to external agencies (enforcement</td> <td>5</td> <td>1</td> <td>3</td> <td>5</td> <td>25</td> </tr> </tbody> </table>	Marking Scheme						Parameter	Functional Marks (P1)	Marks for Number of Projects (P2)			Max. Marks	<= 2	<= 3	> 3	Video Wall for centralized view for overall project management and execution	5	1	3	5	25	Implementation of centralized integrated platform for monitoring and managing outdoor/public resources, devices, equipment, and assets	5	1	3	5	25	Implementation of Network Operation Centre (NOC)	5	1	3	5	25	Ability to send and receive data to external agencies (enforcement	5	1	3	5	25	10%	Max Marks: 10	<ul style="list-style-type: none"> <li>• Work order</li> <li>• Contract Copy</li> <li>• Project Completion/ Substantially Completed* Certificate on client letter head</li> <li>• Format as per Section – IV, Annexure – 2</li> </ul>
Marking Scheme																																												
Parameter	Functional Marks (P1)	Marks for Number of Projects (P2)			Max. Marks																																							
		<= 2	<= 3	> 3																																								
Video Wall for centralized view for overall project management and execution	5	1	3	5	25																																							
Implementation of centralized integrated platform for monitoring and managing outdoor/public resources, devices, equipment, and assets	5	1	3	5	25																																							
Implementation of Network Operation Centre (NOC)	5	1	3	5	25																																							
Ability to send and receive data to external agencies (enforcement	5	1	3	5	25																																							



	<p>agencies, government agencies, first respondents, etc.)</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">Total Max. Marks</td> <td>100</td> </tr> </table> <p>For e.g. If a bidder submits experience of one Command and Control Centre with Video Wall, then the bidder gets 5 x 1 = 5 marks Max Marks: 100 Marks</p>							Total Max. Marks					100			
Total Max. Marks					100											

Technical and Resource Capabilities																													
TE-7	Functional and Technical Requirements	<p>Meeting the functional requirements of Smart BKC Initiatives proposed in Section – II. Marks Obtained by Bidder = P1 + P2; where P1 is Functional Requirement and P2 is Technical Requirement.</p> <table border="1"> <tr> <th colspan="2">Parameter-1 (P1) for Conformance to Functional Requirements</th> </tr> <tr> <th>Initiative</th> <th>Marks</th> </tr> <tr> <td>Wi-Fi</td> <td>20</td> </tr> <tr> <td>Smart Parking</td> <td>10</td> </tr> <tr> <td>Command and Control Centre</td> <td>10</td> </tr> <tr> <td>Citizen App &amp; Online Portal</td> <td>10</td> </tr> </table> <table border="1"> <tr> <th colspan="2">Parameter-1 (P1) for Conformance to Technical Requirements</th> </tr> <tr> <th>Initiative</th> <th>Marks</th> </tr> <tr> <td>Wi-Fi</td> <td>20</td> </tr> <tr> <td>Smart Parking</td> <td>10</td> </tr> <tr> <td>Command and Control Centre</td> <td>10</td> </tr> <tr> <td>Citizen App &amp; Online Portal</td> <td>10</td> </tr> </table> <p>Max. Marks (P1 + P2) : 100 Marks</p>	Parameter-1 (P1) for Conformance to Functional Requirements		Initiative	Marks	Wi-Fi	20	Smart Parking	10	Command and Control Centre	10	Citizen App & Online Portal	10	Parameter-1 (P1) for Conformance to Technical Requirements		Initiative	Marks	Wi-Fi	20	Smart Parking	10	Command and Control Centre	10	Citizen App & Online Portal	10	10%	<p>Max Marks: 10 Qualifying Marks: 7</p>	<ul style="list-style-type: none"> <li>Compliance Note</li> <li>Format as per Section – IV, Annexure – 2, Format – 2.</li> </ul>
Parameter-1 (P1) for Conformance to Functional Requirements																													
Initiative	Marks																												
Wi-Fi	20																												
Smart Parking	10																												
Command and Control Centre	10																												
Citizen App & Online Portal	10																												
Parameter-1 (P1) for Conformance to Technical Requirements																													
Initiative	Marks																												
Wi-Fi	20																												
Smart Parking	10																												
Command and Control Centre	10																												
Citizen App & Online Portal	10																												



		<p>The proposed solution of the bidders for the requirements mentioned in the RFP for Edge Devices, Network Connectivity, Other IT Infrastructure and Application, shall be evaluated based on following parameters, but not limited to:</p> <ul style="list-style-type: none"> <li>➤ Experience in large projects</li> <li>➤ Standing in various industry reports, for which adequate weightage shall be given</li> <li>➤ Compliance to RFP specifications</li> <li>➤ Compliance level Network architecture proposed, its scalability, robustness</li> <li>➤ Strategy proposed to maintain Uptime of overall service delivery</li> </ul>															
TE-8	Profile of proposed team members	<ul style="list-style-type: none"> <li>• Team Composition to be deployed on the project</li> <li>• Qualified Project Manager with experience of managing Projects of each more than INR 25 Crores covering: <ul style="list-style-type: none"> <li>➤ Large and complex ICT projects</li> <li>➤ Smart Cities' Project</li> </ul> </li> <li>• <b>Experience of key members of proposed core team</b> for Implementation and Operation, Maintenance and Support, with experience in managing large complex ICT and Infrastructure projects</li> </ul> <p>Max Marks: 100 Marks</p>	5%	Max Marks: 5 Qualifying Marks: 3.5	<ul style="list-style-type: none"> <li>• CVs and Team Deployment Undertaking in prescribed format as per Section – IV, Annexure – 2, Format – 7 &amp; 8.</li> </ul>												
TE-9	Aesthetics, Design, Ruggedness, Vandalism proof design	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>• Innovative Design</td> <td>25</td> </tr> <tr> <td>• Aesthetics</td> <td>25</td> </tr> <tr> <td>• Vandalism Proof</td> <td>25</td> </tr> <tr> <td>• State of the Art Technology</td> <td>25</td> </tr> <tr> <td>• <b>Max Marks</b></td> <td><b>100</b></td> </tr> </tbody> </table>	Parameter	Marks	• Innovative Design	25	• Aesthetics	25	• Vandalism Proof	25	• State of the Art Technology	25	• <b>Max Marks</b>	<b>100</b>	5%	Max Marks: 5 Qualifying Marks: 3.5	<ul style="list-style-type: none"> <li>• Technical Proposal and design proof</li> </ul>
Parameter	Marks																
• Innovative Design	25																
• Aesthetics	25																
• Vandalism Proof	25																
• State of the Art Technology	25																
• <b>Max Marks</b>	<b>100</b>																
TE-10	Approach, Methodology, Project Management, Execution Methodology, Training & Capacity	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>• Completeness of Technical Solution, Scalability, Robustness and ability to customize</td> <td>10</td> </tr> <tr> <td>• Extent of Compliance to RFP requirements</td> <td>10</td> </tr> <tr> <td>• Completeness of project plan and ease of implementation, provision of real-time project dashboard for overall Smart BKC Initiative</td> <td>5</td> </tr> <tr> <td>• Clarity &amp; details shown in un-priced BoM</td> <td>3</td> </tr> </tbody> </table>	Parameter	Marks	• Completeness of Technical Solution, Scalability, Robustness and ability to customize	10	• Extent of Compliance to RFP requirements	10	• Completeness of project plan and ease of implementation, provision of real-time project dashboard for overall Smart BKC Initiative	5	• Clarity & details shown in un-priced BoM	3	10%	Max Marks: 10 Qualifying Marks: 7	<ul style="list-style-type: none"> <li>• Note</li> </ul>		
Parameter	Marks																
• Completeness of Technical Solution, Scalability, Robustness and ability to customize	10																
• Extent of Compliance to RFP requirements	10																
• Completeness of project plan and ease of implementation, provision of real-time project dashboard for overall Smart BKC Initiative	5																
• Clarity & details shown in un-priced BoM	3																



	Building & Business Plan	<ul style="list-style-type: none"> <li>• Conformance to latest industry standards and global best practices. 5</li> <li>• Abiding to all security requirements 5</li> <li>• Strategy to maintain all the SLAs &amp; Handling Change Requests 5</li> <li>• Help Desk Approach 2</li> <li>• User manuals, administrator manuals, Training Manual 3</li> <li>• Other System manuals – Architectures, Entity-Relationship diagrams, Source code etc. 2</li> <li>• Quality and plan of training and Knowledge Transfer 2</li> <li>• Layers of functional and technical training proposed based on types of users: Top Management, Core Team and End User Group; 5</li> <li>• Pre Implementation Training and Post Go-Live Training &amp; Support 3</li> <li>• Detailed Business Plan highlighting Revenue Streams, Revenue Projections for Entire Period of Project and related details 40</li> </ul> <p><b>Max Marks 100</b></p>			
TE-11	Presentation, Client Visit and Proof of Concept	<ul style="list-style-type: none"> <li>• MSI's understanding of MMRDA's requirements (functional and technical) and completeness of proposed solution</li> <li>• Demonstration of Proof of Concept - All devices, equipment, software, hardware should integrate seamlessly with each other</li> <li>• Clarifications/Answers given during Presentation/ PoC</li> </ul> <p>Max Marks: 100 Marks</p>	20%	Max Marks: 20 Qualifying Marks: 15	<ul style="list-style-type: none"> <li>• Note/ presentation and other relevant documents</li> </ul>
<b>Total Technical Score ( Ts)**</b>				Max. Marks = 100 Qualifying Marks = 80	

\*The phrase “substantially completed” used in this section shall mean where the employer has certified that:

- i. The financial progress of the work is more than 80%. of the contract value of the software or hardware / equipment or both (as the case may be as per the requirement of the particular clause) portion of the work,
- ii. The payments so received is equal to or more than the minimum value stated above, and the work is progressing satisfactorily



### 4.4 Commercial Evaluation

1. This is a Quality & Cost Based Selection (QCBS),
2. The Relative Financial Score (RFs) carries 30% of the weightage, while the Relative Technical Score (RTs), calculated as per Section – I, Clause No. 4.3.3, is given 70% weightage.
3. The Commercial Bids of Technically Qualified bidders will be opened on the prescribed date in the presence of bidder representatives.
4. **The Relative Financial Score (RFs)** of the bidder for the Commercial Bid Component as calculated below
  - a) *The bidder with Lowest Qualifying Commercial Bid (C<sub>L</sub>) will be awarded 100 marks*
  - b) *The Relative Financial Score of other qualifying bidder shall be computed as below*  

$$\text{Relative Financial Score of the Bidder (RFs)} = (C_L / \text{Commercial Bid of the respective Bidder}) \times 100 \text{ (Adjusted to two decimal places)}$$
5. The bid price will include all taxes and levies and shall be in Indian Rupees and mentioned separately.

### 4.5 Final Composite Bid Score

1. The Relative Technical Score (RTs), as per Section – I, Clause No. 4.3.3, and Relative Financial Score (RFs), as per Section – I, Clause No. 4.4, secured by each bidder will be considered for computing the Final Composite Bid Score.
2. The bidder securing the highest Composite Bid Score will be adjudicated as the most responsive Bidder for award of the Project.
3. The overall score will be calculated as follows:-

$$CB_s = 0.70 * RT_s + 0.30 * RF_s$$

Where,

CB<sub>s</sub> = Final Composite Bid Score

RT<sub>s</sub> = Total Relative Technical score of the qualifying bidder

RF<sub>s</sub> = Total Relative Financial Score of the qualifying bidder

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

Table: Composite Bid Score			
Bidder	Relative Technical Score	Relative Financial Score	Composite Score
	RT <sub>s</sub>	RF <sub>s</sub>	CB <sub>s</sub> = 0.70 * RT <sub>s</sub> + 0.30* RF <sub>s</sub>
A			
B			
C			
D			



4. The preferred bidder shall be the agency securing the highest Final Composite Score.
5. In the event of two or more Bidders securing exactly the same composite score, then MMRDA reserves the right to:
  - i. Declare the bidder whose technical score is highest, among the bidders who have secured exactly the same composite score as preferred bidder, Or
  - ii. Adopt any other method as decided by MMRDA.
6. MMRDA reserves the right to confirm the preferred bidder as successful bidder subject to negotiations and approval of competent authority

## 4.6 Appointment of Master System Integrator

This section includes rights and responsibilities of both parties with respect to award of contract.

### 4.6.1. Award Criteria

MMRDA will award the Contract to the successful bidder whose proposal has been determined to be substantially responsive and has been determined as the most responsive bids as per the process outlined above.

In case of foreign company declared a successful bidder, they will have to form an Indian subsidiary & register under the law prevalent in India within 3 months from the date of award.

### 4.6.2. Right to Accept Any Proposal and To Reject Any or All Proposal(s)

MMRDA reserves the right to accept or reject any proposal, and to annul the tendering process/ public procurement process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for MMRDA action.

### 4.6.3. Term of the Contract Agreement

The term of this Contract shall be a period of 90 months from the date of signing of this Agreement. The term includes 6 months of implementation phase until go-live and 84 months of Operation and Maintenance of the Project. In the event that implementation period gets extended beyond 6 months, MMRDA reserves the right to extend the term of the Agreement by corresponding period to allow validity of contract for 84 months from the date of successful go live. In the event of such an extension, MMRDA shall not reimburse the bidder for the expenses incurred, if the delay is attributable to the bidder alone.

Post the term defined above, MMRDA reserves the right to extend the contract to the existing MSI based on mutual agreement between MMRDA and MSI. At the end of seventh year from Final Go Live, the Master System Integrator may submit a proposal expressing his interest in continuing this Contract for a further period of at least 3 years up to five (5) years. MMRDA shall consider this proposal after satisfying itself about the technological and commercial soundness of the proposal. Based on the satisfaction of MMRDA, it shall enter into negotiations with the MSI for renewal of this Contract. Upon successful conclusion of negotiations, the MSI shall upgrade the systems / technology, as



required, and operate the same for a further period of at least 3 years up to five (5) years. The extension term should have substantially the same terms and conditions as the original contract.

#### **4.6.4. Notification of Award**

Prior to the expiration of the validity period, MMRDA will notify the successful bidder in writing or by fax or email, that its proposal has been accepted. In case the tendering process / public procurement process has not been completed within the stipulated period, MMRDA, may like to request the bidders to extend the validity period of the bid.

The notification of award will constitute the formation of the contract. Upon the successful bidder's furnishing of Performance Bank Guarantee, MMRDA will notify each unsuccessful bidder and return their EMD.

#### **4.6.5. Contract Finalization and Award**

MMRDA shall reserve the right to negotiate with the bidder(s) whose proposal has been ranked best value bid on the basis of Technical and Commercial Evaluation to the proposed Project, as per the CVC guidelines, effective at that time.

On this basis the draft contract agreement would be finalized for award & signing.

#### **4.6.6. Performance Bank Guarantee**

MMRDA will require the selected bidder to provide a Performance Bank Guarantee, within 15 (fifteen) days from the Notification of award, for a value equivalent to Rs. 3 Crores or 10% of the total cost of ownership or bid amount or Contract Value, whichever is higher. In case of a Consortium, the Lead Bidder of Consortium shall be liable to pay Performance Bank Guarantee. PBG shall be valid till for 180 days beyond the term of the resultant contract (Till Go-live + Seven years), including any subsequent term extension, if applicable. The Performance Guarantee shall be kept valid till completion of the project and Warranty period. The Performance Guarantee shall contain a claim period of three months from the last date of validity. The MSI shall be responsible for extending the validity date and claim period of the Performance Guarantee as and when it is due on account of non-completion of the project and Warranty period. In case the selected bidder fails to submit performance guarantee within the time stipulated, the MMRDA at its discretion may cancel the order placed on the selected bidder without giving any notice. MMRDA shall invoke the performance guarantee in case the selected MSI fails to discharge their contractual obligations during the period or MMRDA incurs any loss due to MSI's negligence in carrying out the project implementation as per the agreed terms & conditions. In case a foreign bidder is selected, Performance Bank Guarantee to be submitted in the form of an appropriate Bank Guarantee from a first class bank of international repute.

#### **4.6.7. Signing of Contract**

Subsequent to MMRDA's notification to the successful Bidder by way of Lol, the acceptance of the Lol, in writing, and submission of the Performance Guarantee shall be





done within 15 days of Lol, and the successful Bidder shall execute the Agreement with the MMRDA, within 1 week of giving written acceptance and submission of PBG. Failure of the successful Bidder to furnish the Performance Guarantee or execute the Agreement within the prescribed time shall cause the EMD of the successful Bidder to be liquidated. The successful Bidder will be liable to indemnify MMRDA for any additional cost or expense, incurred on account of failure of the successful Bidder to execute the Agreement.

Notwithstanding anything to the contrary mentioned above, MMRDA at its sole discretion shall have the right to extend the timelines for execution of Agreement on the request of the successful Bidder, provided the same is bona fide.

The Draft Master Service Agreement between MMRDA and the Successful Bidder has been given Section – III.

#### 4.6.8. Taxes

- 1 The Nodal Agency or its nominated agencies shall be responsible for withholding taxes from the amounts due and payable to the Implementation Agency wherever applicable. The Implementation Agency shall pay for all other taxes in connection with this Agreement, SLA, scope of work and any other engagement required to be undertaken as a part of this Agreement, including, but not limited to, property, sales, use, excise, value-added, goods and services, consumption and other similar taxes or duties.
- 2 The Nodal Agency or its nominated agencies shall provide Implementation Agency with the original tax receipt of any withholding taxes paid by Nodal Agency or its nominated agencies on payments under this Agreement. The Implementation Agency agrees to reimburse and hold the Nodal Agency or its nominated agencies harmless from any deficiency including penalties and interest relating to taxes that are its responsibility under this paragraph. For purposes of this Agreement, taxes shall include taxes incurred on transactions between and among the Nodal Agency or its nominated agencies, the Implementation Agency and third party subcontractors.
- 3 If, after the date of this Agreement, there is any change of rate of levy under the existing applicable laws of India with respect to taxes and duties, which are directly payable by the Nodal Agency for providing the services i.e. service tax or any such other applicable tax from time to time, which increase or decreases the cost incurred by the MSI in performing the Services, then the remuneration and reimbursable expense otherwise payable to the Nodal Agency under this Agreement shall be increased or decreased accordingly by correspondence between the Parties hereto, and corresponding adjustments shall be made to the ceiling amounts specified in Schedule VI. However, in case of any new or fresh tax or levy imposed after submission of the proposal the Implementation Agency shall be entitled to reimbursement on submission of proof of payment of such tax or levy. [any impact of upward/ downward revision of the taxation needs to be reimbursed only on submission of tax receipt and the MSI shall revert with the certified copy within 7 days of payment of the tax)
- 4 The Parties shall cooperate to enable each Party to accurately determine its own tax



liability and to minimize such liability to the extent legally permissible. In connection therewith, the Parties shall provide each other with the following:

- (i) any resale certificates;
- (ii) any relevant information regarding out-of-state or use of materials, equipment or services; and
- (iii) any direct pay permits, exemption certificates or information reasonably requested by the other Party.

#### **4.7. Right to vary the scope of the work at the time of Award**

MMRDA reserves its right to make changes to the scope of the work at the time of execution of the resultant Agreement. If any such change causes an increase or decrease in the total value of contract, or the time required for the MSI's performance of any part of the work under the resultant Agreement, whether changed or not changed by the order, it shall be based on the unit prices quoted by the bidder. The decision of the MMRDA shall be final and binding upon MSI.

#### **4.8. Failure to Agree with the Terms and Conditions of the RFP**

The performance of bidder will be continuously reviewed by MMRDA to maintain the terms & conditions as specified in this RFP. Based on the review, if the MSI fails to satisfy / maintain their commitment with respect to Uptime, Performance, Timely implementation of the project etc. the contract may be terminated by giving 3 months' notice period. MMRDA's decision in this regard will be final. In case of termination of this contract, MMRDA shall have the right to avail services of any other bidder / agency to continue the project without any let or hindrance from bidder and the bidder has to provide necessary help for smooth switch over. MMRDA will not pay any charges to the MSI. Failure of the successful bidder to agree with the Draft Legal Agreement and Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event MMRDA may award the contract to the next best value bidder or call for new proposals from the interested bidders. In such a case, MMRDA shall invoke the PBG of the most responsive bidder.

In addition, MMRDA reserves the right to appropriate the Bid Security / Performance Bank guarantee given by the vendor.



## 5. Fraud and Corrupt Practices

1. The Bidders their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, the MMRDA shall reject a Proposal without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the “Prohibited Practices”) in the Selection Process. In such an event, the MMRDA shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Bank Guarantee, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, in regard to the RFP, including consideration and evaluation of such Bidder s Proposal.
2. Without prejudice to the rights of the MMRDA under Clause above and the rights and remedies which the MMRDA may have under the LOI or the Agreement, if an Bidder or Systems Implementation Agency, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOI or the execution of the Agreement, such Bidder or Master Systems Implementation shall not be eligible to participate in any tender or RFP issued by the MMRDA during a period of 2 (two) years from the date such Bidder or Master Systems Implementation, as the case may be, is found by the MMRDA to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
3. For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:
  - a) “corrupt practice” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the MMRDA who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOI or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the MMRDA, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal,



financial or technical consultant/ adviser of the MMRDA in relation to any matter concerning the Project;

- b) “fraudulent practice” means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
- c) “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person s participation or action in the Selection Process;
- d) “undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by MMRDA with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and
- e) “Restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.





## 6. Conflict of Interest

1. A Lead Bidder, its consortium members, OEMs and ISPs shall not have a conflict of interest that may affect the Selection Process or the Solution delivery (the "Conflict of Interest"). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, MMRDA shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to the MMRDA for, *inter alia*, the time, cost and effort of the MMRDA including consideration of such Bidder's Proposal, without prejudice to any other right or remedy that may be available to the MMRDA hereunder or otherwise.
2. MMRDA requires that the MSI/Successful Bidder provides solutions which at all times hold MMRDA's interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Service Provider shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of MMRDA.
3. Without limiting the generality of the above, an Bidder shall be deemed to have a Conflict of Interest affecting the Selection Process, if:
  - a) the Bidder, its consortium member (the "Member") or Associates (or any constituent thereof) and any other Bidder, its consortium member or Associate (or any constituent thereof) have common controlling shareholders or other ownership interest; *provided that this disqualification shall not apply in cases where the direct or indirect shareholding or ownership interest of a Bidder, its Member or Associate (or any shareholder thereof having a shareholding of more than 5 per cent of the paid up and subscribed share capital of such Bidder, Member or Associate, as the case may be) in the other Bidder, its consortium member or Associate is less than 5% (five per cent) of the subscribed and paid up equity share capital thereof. For the purposes of this Clause, indirect shareholding held through one or more intermediate persons shall be computed as follows:*
    - where any intermediary controlled by a person through management control or otherwise, the entire shareholding held by such controlled intermediary in any other person (the "Subject Person") shall be taken into account for computing the shareholding of such controlling person in the Subject Person;
    - where a person does not exercise control over an intermediary, which has shareholding in the Subject Person, the computation of indirect shareholding of such person in the Subject Person shall be undertaken on a proportionate basis; provided, however, that no such shareholding shall be reckoned under this Sub-clause if the shareholding of such person in the intermediary is less than 26% (twenty six per cent) of the subscribed and paid up equity shareholding of such intermediary; or
  - b) constituent of such Bidder is also a constituent of another Bidder; or



- c) such Bidder or its Associate receives or has received any direct or indirect subsidy or grant from any other Bidder or its Associate; or
  - d) such Bidder has the same legal representative for purposes of this Application as any other Bidder; or
  - e) such Bidder has a relationship with another Bidder, directly or through common third parties, that puts them in a position to have access to each other's information about, or to influence the Application of either or each of the other Bidder; or
  - f) there is a conflict among this and other Software solution and services assignments of the Bidder (including its personnel and other members, if any) and any subsidiaries or entities controlled by such Bidder or having common controlling shareholders. The duties of the Service Provider/ Successful Bidder will depend on the circumstances of each case. While providing software implementation and related solutions to the MMRDA for this particular assignment, the Systems Implementation Agency shall not take up any assignment that by its nature will result in conflict with the present assignment; or
  - g) A firm hired to provide Software solution and services for the implementation of a project, and its Members or Associates, will be disqualified from subsequently providing goods or works or services related to the same project;
4. A Bidder eventually appointed to implement software solutions for this Project, its Associates, affiliates and the Financial Expert, shall be disqualified from subsequently providing goods or works or services related to the construction and operation of the same Project and any breach of this obligation shall be construed as Conflict of Interest; provided that the restriction herein shall not apply after a period of 12 months from the completion of this assignment; provided further that this restriction shall not apply to software solutions delivered to MMRDA in continuation of this systems implementation or to any subsequent systems implementation executed for the MMRDA in accordance with the rules of the MMRDA.



# Section – II: Scope of Work





**Table of Contents**

1.	Scope For Smart BKC 1.0 Project	71
1.1	Overall Smart BKC Key Objectives/Outcomes	72
1.2	Key Stakeholder Roles and Responsibilities	73
1.2.1	Manpower Requirement	75
1.2.2	Training and Capacity Building	81
1.2.3	Change Requests	81
1.3	Overall Smart BKC Project Life cycle	82
1.4	Overall Smart BKC 1.0 Project Guidelines	83
1.5	Overall Smart BKC Scope – Functional Requirements	85
1.6	Overall Smart BKC 1.0 Scope – Technical Requirements	86
1.7	Security & IT Infrastructure Audit	87
1.8	Convergence With Other Smart Initiatives	88
1.8.1	Convergence Points For Intelligent Streetlight and Video Analytics	88
1.9	Smart BKC 1.0 Scope Snapshot	90
2.	Overview Smart BKC Logical Architecture	91
2.1	Overview of Smart BKC 1.0 Logical Architecture	92
2.1.1	Smart BKC 1.0 Street Infrastructure Layer	92
2.1.2	Network Infrastructure and Communication Layer	92
2.1.3	Network Security Layer	92
2.1.4	Core Computing and Data Processing Layer	93
2.1.5	Integrated Industry Standard Open Platform Layer	96
2.1.6	Comprehensive Project Management Solution	98
2.1.7	Network and Security Management Solution (NSMS)	101
2.1.8	Data Center/ Disaster Recovery (DC/DR) Services	102
2.1.9	Centralized System Security Layer	104
2.1.10	Presentation Layer	105
2.1.11	Third Party Shared Services	106
3.	Overview of Smart BKC 1.0 Network Architecture	109
3.1.	Smart BKC 1.0 Network Architecture	111
4.	Centralized Command and Control Center	112
4.1	Overview of Existing Environment Related to Command and Control Center	112
4.2	Command and Control Center Key Objectives/Outcome	112
4.3	Command and Control Center components	112
4.3.1	Video Wall and Operator Terminals Setup	113
4.3.2	Helpdesk Monitoring Tool	114
4.3.3	Integrated Centralized Dashboard	114
5.	Smart BKC Initiative 1 – Public Wi-Fi and Related Network Infrastructure	115
5.1	Overview of Existing Environment Related to Public Wi-Fi	115
5.2	Public Wi-Fi and Related Network Infrastructure Key Objectives/Outcomes	115
5.3	Public Wi-Fi and Related Network Infrastructure Scope – Functional Requirements	115
5.4	Public Wi-Fi Scope – Technical Requirements	120
6	Smart BKC Initiative 2- Smart Parking	124
6.1	Overview of Existing Environment Related to Smart Parking	124
6.2	Smart Parking Key Objectives	125
6.3	Smart Parking – MSI/Vendor Guidelines	125
6.3.1	Smart Parking Guidelines	125
6.3.2	Existing Parking Contracts In BKC	125
6.4	Smart Parking Scope – Functional Requirements	126
6.4.1	Overall Functional Requirements	126
6.4.2	Parking Management and Guidance System (PMGS)	128
6.4.3	Parking Management Subsystem	128
6.4.4	Parking Guidance subsystem for motorists	132
6.4.5	Citizen Application for Smart Parking	132
6.5	Smart Parking Scope – Technical Requirements	133
7	Smart BKC Initiative 3 – Integrated Building Monitoring System (IBMS)	138





7.1	Overview of Existing Environment Related to Integrated Building Monitoring System (IBMS)	138
7.2	Integrated Building Monitoring System Key Objectives/Outcomes	138
7.3	Integrated Building Monitoring System Scope – Functional Requirements	138
7.4	Integrated Building Monitoring System Scope – Technical Requirements	140
8.	Smart BKC Initiative 4 – Citizen Web Portal and Citizen App	141
8.1	Overview of Existing Environment Related to Citizen App and outreach	141
8.2	Citizens App and Web Portal Key Objectives/Outcomes	141
8.3	Citizen App Scope – Functional Requirements	141
8.4	Citizen Web Portal Scope – Functional Requirements	142
8.4.1	Citizen App and Web Portal – Required Features and Functionalities	142
8.5	Citizen App Scope – Technical Requirements	146
8.6	Online Portal Scope - Technical Requirements	147
8.7	Citizen App and Portal – Security Requirements	148
9.	Administrative Guidelines	149
9.1	Operation and Maintenance (O&M) Guidelines	150
9.2	Non-IT Related Operational Guidelines	151
9.2.1	Civil and Architectural Guidelines:	151
9.2.2	Public Works Guidelines	151
9.2.3	PVC Conduits & Wiring Guidelines	151
9.2.4	Earthing Guidelines	152
9.2.5	Passive Cabling Guidelines	152
9.2.6	Rodent Repellent	152
9.2.7	Fire/Smoke Detection and Control Mechanism	152
9.2.8	Power Back-up	152
9.3	Advertisement and Marketing Guidelines	152
9.4	Revenue Opportunities and Guidelines	153
10.	Service Level Agreement	155
10.1	Service Level Agreements (SLAs)	155
10.2	Responsibility Mapping for SLAs	158
10.3	Service Level Conditions	158
11.	Annexure A	165
11.1	Technical Specifications for Public Wi-Fi	165
11.2	Technical Specifications for Smart Parking	166



## 1. Scope For Smart BKC 1.0 Project

The Master System Integrator (MSI) will be responsible to design, develop, implement, operate and maintain all "Smart BKC 1.0 Initiatives" for a period of seven years. The MSI should be cognizant of MMRDA's objective for all Smart BKC 1.0 initiatives to be Citizen centric, encouraging participative Governance from all BKC Citizens, Public and Private Establishments in BKC, and BKC visitors. Following points highlight MSI's scope to be delivered to MMRDA for "Smart BKC 1.0 Project":

1. Smart BKC Street Infrastructure setup
2. Public Wi-Fi and related wired network infrastructure
  - i. Free outdoor public Wi-Fi
  - ii. Paid premium outdoor public Wi-Fi
  - iii. Wi-Fi and Wired Internet access at MMRDA exhibition grounds
3. Smart Parking with 'Parking Management and Guidance System' and related street infrastructure
  - i. Smart Indoor Parking
  - ii. Smart Outdoor Parking
  - iii. Smart Street Parking
4. Citizen Mobile Application and Online Citizen Portal
5. Integrated Building Monitoring System Dashboards
6. Environmental Indicators Dashboards and related Street Infrastructure
  - i. Noise Sensors
  - ii. Air Quality Sensors
  - iii. Weather Sensors
7. Integrated Industry Standard Open Platform
8. Centralized Command and Control center, for centralized monitoring and decision making related to:
  - i. Network and Security Management Solution
  - ii. Centralized System Security Solution
  - iii. Core Computing and Data Processing infrastructure
  - iv. Integration with Third Party Shared Services
  - v. Managed hosted Data Center (DC)
  - vi. Private Cloud based Disaster Recovery (DR)



9. Comprehensive Project Management Solution (web-based)
10. Convergence Points
  - i. Video Surveillance
  - ii. Intelligent Streetlights

### 1.1 Overall Smart BKC Key Objectives/Outcomes

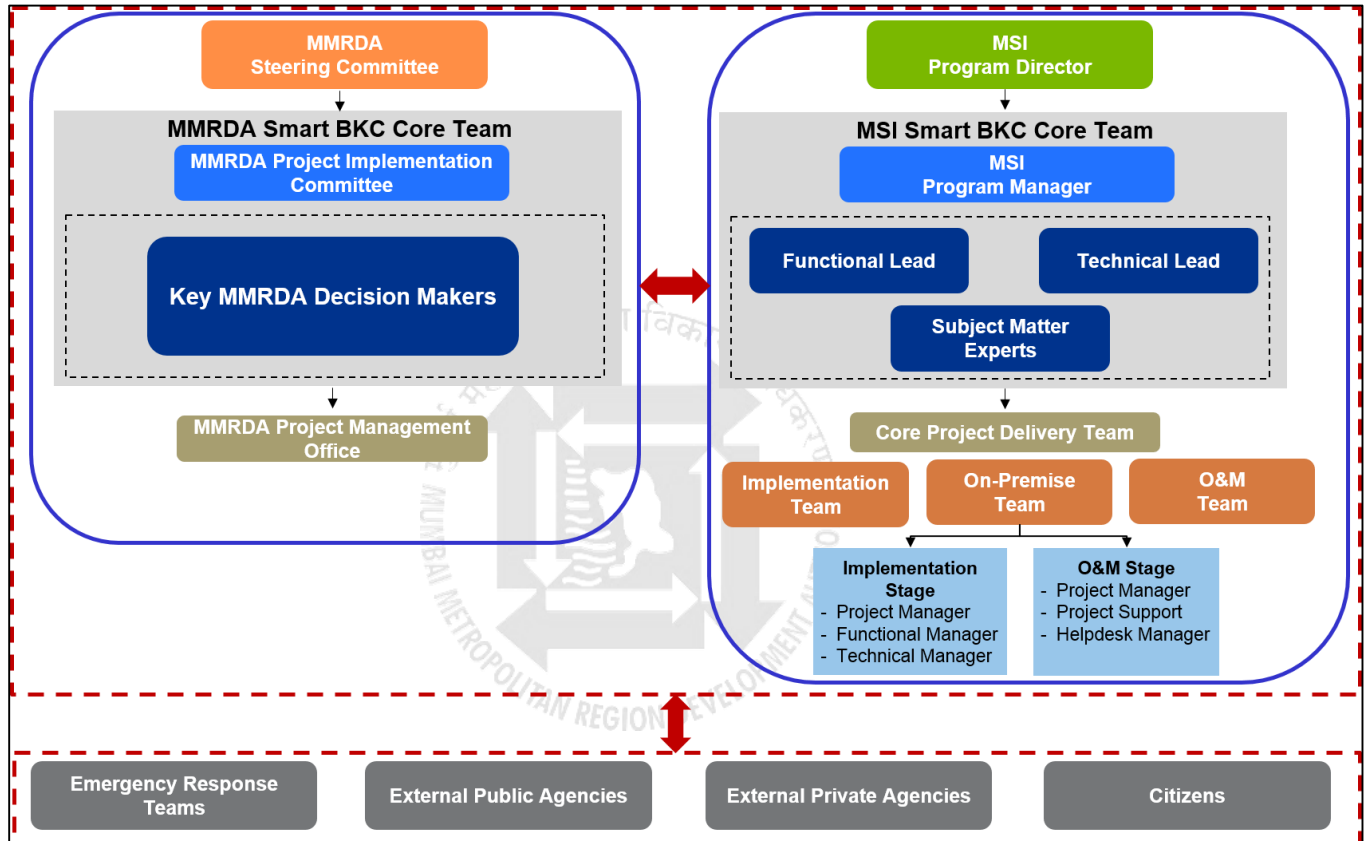
1. The entire Smart BKC 1.0 ICT infrastructure will reside on an optical fiber network and communicate with all Smart BKC 1.0 IoTs, initiatives, and Citizens via a dedicated Wired and Wi-Fi network backbone
2. A Centralized Command and Control Center will host the Integrated Industry Standard Open Platform layer, centralized Network and Security Management System, and Comprehensive Project Management Solution for monitoring, managing, and controlling all the smart components and initiatives
3. The Citizen Wi-Fi and related network infrastructure initiative will provide a common network platform to create an IoT network where the other Smart BKC 1.0 initiatives will integrate
4. The Video Monitoring Initiative will enable to make BKC safe and secure, prevent vandalism and proactively manage any untoward incident in E and G Blocks of BKC. This would be integrated as and when applicable.
5. The Smart Parking Initiative will be implemented to identify and manage available parking spots in the E and G block, provide parking guidance to Citizens and help in capacity building of parking spaces in BKC. This will also reduce time to park and hence road congestion arising from it.
6. The Smart Streetlight Monitoring Initiative will monitor the multi Utility Smart Poles, Smart LED Lights, and Sensors (motion, light, environmental, etc.) to help in energy optimization and ensure that there are no dark spots on the streets of E & G blocks. This would be integrated as and when applicable.
7. The Integrated Building Monitoring Initiative will enable MMRDA to standardize, collect and monitor information related to overall energy performance of buildings in BKC.
8. The “Smart BKC 1.0 Initiative” also aims at capturing basic Environmental Indicators like pollution, noise, temperature, and humidity, using environmental sensors mounted on multi-utility Smart Street Light Poles. This information will be available for Citizens on the Smart BKC 1.0 web portal and Mobile Application.
9. The Centralized Command and Control Center hosted at MMRDA in BKC will act as the centralized monitoring and decision making hub for managing Smart BKC 1.0 Initiatives and related Smart BKC 1.0 project activities.
10. The Smart BKC 1.0 Initiative should be flexible to integrate with current and futuristic convergence points from projects either executed by MMRDA or by other Government



agencies. The Intelligent Streetlight and Video Analytics Smart BKC 1.0 initiatives will be implemented in collaboration with upcoming initiatives from Government of India (GoI) and Government of Maharashtra (GoM).

## 1.2 Key Stakeholder Roles and Responsibilities

Following are the proposed stakeholder roles and responsibilities for Smart BKC 1.0 project. A detailed responsibility matrix (RACI) shall be prepared by the MSI in accordance with MMRDA after project initiation.



The table below provides an overview of the proposed Stakeholder roles and responsibilities. This is a representative list, only highlighting the key project stakeholders.

Key Stakeholder Entity	Key Stakeholders	Stakeholder responsibilities
MMRDA	Steering Committee	Apex Committee to oversee and review overall Smart BKC 1.0 Project Activities
		Delegates authority and directives to Smart BKC 1.0 Project Implementation Committee
		Strategic and Policy level decision taking authority
		Provides regulatory approvals
		Interface with external, public, enforcement and other strategic bodies



Key Stakeholder Entity	Key Stakeholders	Stakeholder responsibilities
	Smart City Project Implementation Committee	Apex committee for dispute resolution, governance and risk related issues of the Smart BKC 1.0 project
		Approves project plan and deliverables
		Responsible for end-to-end project monitoring, management and decision making
		Overall project governance and health
		Review and approve quality assurance mechanisms and procedures
		Risk monitoring and management (time-cost overruns, project issue redressal and resolution, scope changes, contract deviations etc.)
		Tactical decisions related to Smart BKC 1.0 project
		Review and approve SLAs and related decisions
	Project Management Office	Handles second highest level escalations of the project before referring to Steering Committee
		Responsible for Project Management activities of Smart BKC 1.0 Project Implementation
		Vendor evaluation and tracking of vendor performance
		Responsible for day-to-day project monitoring and reporting
		Ensure project scope compliance and quality control
		Coordinates activities and facilitates communication between the Smart BKC Core Teams steering committee, and MSI
MSI	Program Management Team	SLA Monitoring and related activities
		Monitor quality, risk and security procedures and report to higher committees for informed decision making
		Handles first level escalations of the project before referring to Smart BKC 1.0 Project Monitoring Committee
		Responsible for overall Project Strategy and Implementation
		Responsible for Program Management activities
	Project Functional Lead	Periodic reporting of Project status, quality, SLA, risks
		Ensure adherence to operational procedures
		Managing consortium partners and multiple touch points in the project
	Project Technical Lead	Overall functional lead responsible for project planning, functional design and deployment
		Ensure compliance to all project level procedures
		Ensure compliance to Govt. Standards & Security
		Overall technical lead responsible for technical planning, design and deployment
	Subject Matter Experts	Lead integration of initiatives and related services
		Ensure compliance to all project level procedures
Ensure compliance to Govt. Standards & Security		
Smart City Subject Matter Experts responsible for providing expert advice		
	Subject Matter Experts	Help identify next set of initiatives and create blueprint for the same
		Assist Program Management on implementation roadmap and strategy



Key Stakeholder Entity	Key Stakeholders	Stakeholder responsibilities
	Core Project Delivery Team	Responsible for overall Project Management and Delivery
		Responsible for all Operational level coordination and related activities
		Comprises of Implementation Team, On-premise Team, O&M Team
		Conduct day-to-day level activities concerning Smart BKC 1.0 project
External Stakeholders	Emergency Response Teams	Coordinate with Hospitals and Ambulance for providing medical assistance in emergency situations
		Coordinate with Police and other law enforcement agencies in providing security assistance and reporting of incidents in incidents of security and enforcement
		Coordinate with Incident Management team to resolve any infrastructure and services related issues
	External Public Agencies	Police department – for assistance with any security and enforcement incidents
		Fire department – for assistance during fire, hazard and other emergencies
		Regional Transportation Office (RTO) – for enforcing smart parking and towing parking violators
		Government hospitals and ambulance services – for providing medical assistance during emergency
	External Private Agencies	Existing parking contractors for managing parking lots of Smart BKC 1.0 project
		Restaurant owners, food courts, banks, commercial outlets – point of interest advertisements on Citizen App
	Citizens	Citizens
Utilize free Wi-Fi access responsibly		
Responsible usage of SMART BKC 1.0 services		
Participative governance, by being the eyes and ears of Smart BKC 1.0 Initiative		

### 1.2.1 Manpower Requirement

- The MSI shall be required to deploy a dedicated Project Team for Smart BKC 1.0 initiative.
- The Project Team would consist of Top Management and a Core Delivery Team.
- The Project Director would head the Project Team for the MSI. MSI would be required to deploy a Program Manager, Functional Lead, Technical Lead and Subject Matter Expert to assist the Project Director.
- The MSI is required to deploy a Core Delivery Team with adequate manpower for Implementation and Operations & Management of the project.



- The Core Delivery Team for Implementation Stage shall be responsible for the entire design, development and commissioning of the project till 6 months post Go-Live.
- The Core Delivery Team for Operations & Management Stage shall be responsible for all the activities related to O&M and shall comprise of Team Lead, On-Field and Off- Field Support team, FMS Helpdesk, Senior Management and any other resource for operation and maintenance of the project from Go-Live till the end of the project
- Apart from the team mentioned above, MSI shall mandatorily have a **Dedicated On-Premise Team** which would be stationed at MMRDA premises and will be responsible for smooth implementation and operation of the project. The On-Premise Team for Implementation Stage would comprise of a Project Manager, Functional Manager and a Technical Manager. On-Premise Team for Operation and Maintenance Stage would comprise of a Project Manager, Project Support and Helpdesk Manager.
- The **Dedicated On-Premise** Project Manager would be a single point contact for MMRDA during the period of the contract and should be present for discussions, important meetings and should act as one point contact for MMRDA.
- A centralized helpdesk for the implemented solution shall be constituted with the following resources who would be deployed as desired by MSI.
- The qualifications of key resources is detailed below

Table: Manpower Qualifications		
Manpower	Responsibility	Minimum Qualifications
Project Director	<ul style="list-style-type: none"> <li>• Manages the strategic aspects of large engagements and mitigates any risk.</li> <li>• Oversees senior managers and managers working on client engagements within practice.</li> <li>• Reviews high-level deliverables across practice.</li> <li>• Ensures engagement reviews and quality assurance procedures take place for all practice engagements.</li> <li>• Provides leadership to practice within a geographic area.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum Education: MCA/ MBA &amp; B.Tech / B.E. from a reputed institute</li> <li>• Total Exp: At least 20 yrs.</li> <li>• Languages known (Read, Write and Speak): Hindi, English, Marathi</li> <li>• Should have operating knowledge of computers and networking</li> <li>• Prior project management experience of at least 15 years of handling large and complex projects, with at least one large scale project with Project Cost of minimum INR 50 crores.</li> </ul>



**Table: Manpower Qualifications**

Manpower	Responsibility	Minimum Qualifications
	<ul style="list-style-type: none"><li>• Develops, implements, and maintains sound business practices.</li><li>• Develops and implements strategic objectives for practice that are aligned with the region's strategic initiatives</li></ul>	<ul style="list-style-type: none"><li>• Excellent writing, communication, time management and multi-tasking skills</li><li>• Project Experience of managing components of Smart City Projects covering at least the initiatives mentioned in this RFP.</li></ul>
Program Manager	<ul style="list-style-type: none"><li>• Manages the strategic aspects of the project</li><li>• Understand all business and functional requirements</li></ul>	<ul style="list-style-type: none"><li>• Minimum Education: MCA/ MBA &amp; B.Tech / B.E. from a reputed institute</li><li>• Total Exp: At least 15 yrs.</li><li>• Languages known (Read, Write and Speak): Hindi, English, Marathi</li><li>• Should have operating knowledge of computers and networking</li><li>• Prior project management experience of at least 10 years of handling large and complex projects, with at least one large scale project with Project Cost of minimum INR 25 crores.</li><li>• Excellent writing, communication, time management and multi-tasking skills</li><li>• Project Experience of managing components of Smart City Projects covering at least the initiatives mentioned in this RFP.</li></ul>
Functional Lead	<ul style="list-style-type: none"><li>• Responsible for overall functional requirements, functional design and deployment of the project</li></ul>	<ul style="list-style-type: none"><li>• Minimum Education: MCA/ MBA &amp; B.Tech / B.E. from a reputed institute</li><li>• Total Exp: At least 12 yrs.</li><li>• Languages known (Read, Write and Speak): Hindi, English, Marathi</li><li>• Should have operating knowledge of computers and networking</li><li>• Prior project management experience of at least 8 years of handling large and complex projects, with at least one large scale project with Project Cost of minimum INR 15 crores.</li><li>• Excellent writing, communication, time management and multi-tasking skills</li><li>• Project Experience of managing components of Smart City Projects</li></ul>





**Table: Manpower Qualifications**

Manpower	Responsibility	Minimum Qualifications
		covering at least the initiatives mentioned in this RFP.
Technical Lead	<ul style="list-style-type: none"><li>Responsible for overall ownership of the complete solution</li><li>Overall technical lead responsible for technical planning, design and deployment</li><li>Lead integration of initiatives and related services</li></ul>	<ul style="list-style-type: none"><li>Minimum Education: MCA/ MBA &amp; B.Tech / B.E. from a reputed institute</li><li>Total Exp: At least 12 yrs.</li><li>Languages known (Read, Write and Speak): Hindi, English, Marathi</li><li>Should have operating knowledge of computers and networking</li><li>Prior project management experience of at least 8 years of handling large and complex projects, with at least one large scale project with Project Cost of minimum INR 15 crores.</li><li>Excellent writing, communication, time management and multi-tasking skills</li><li>Project Experience of managing components of Smart City Projects covering at least the initiatives mentioned in this RFP.</li></ul>
Subject Matter Experts	<ul style="list-style-type: none"><li>Subject Matter Expert responsible for providing expert advice.</li><li>Help identify next set of initiatives and create blueprint for the same</li><li>Assist Program Management on implementation roadmap and strategy</li></ul>	<ul style="list-style-type: none"><li>Minimum Education: MCA/ MBA &amp; B.Tech / B.E. from a reputed institute</li><li>Total Exp: At least 12 yrs.</li><li>Languages known (Read, Write and Speak): Hindi, English, Marathi</li><li>Should have expert subject matter knowledge of Smart City related components</li><li>Prior project management experience of at least 8 years of handling large and complex projects, with at least one large scale project with Project Cost of minimum INR 15 crores.</li><li>Excellent writing, communication, time management and multi-tasking skills</li><li>Project Experience of managing components of Smart City Projects covering at least the initiatives mentioned in this RFP.</li></ul>
Project Manager	<ul style="list-style-type: none"><li>Manage all aspects of project including planning, execution and</li></ul>	<ul style="list-style-type: none"><li>Minimum Education: MCA/ MBA &amp; B.Tech / B.E. from a reputed institute</li></ul>



**Table: Manpower Qualifications**

Manpower	Responsibility	Minimum Qualifications
	<p>financial management.</p> <ul style="list-style-type: none"><li>• Monitor performance &amp; efficiency of various Teams and Resources</li><li>• Understand all business and functional requirements, and be a bridge between the client and the project execution team.</li><li>• Develop and manage detailed project plan in discussion with the department, and ensure completion of all milestones as per timelines.</li><li>• Secure acceptance and approval of deliverables from the Stakeholders.</li><li>• Responsible for communication, including status reporting, risk management, escalation of issues that cannot be resolved in the team, and, in general, making sure the project is delivered in budget, on schedule, and within scope.</li></ul>	<ul style="list-style-type: none"><li>• Total Exp: At least 10 yrs.</li><li>• Languages known (Read, Write and Speak): Hindi, English, Marathi</li><li>• Should have operating knowledge of computers and networking</li><li>• Prior project management experience of at least 7 years of handling large and complex projects, with at least one large scale project with Project Cost of minimum INR 15 crores.</li><li>• Excellent writing, communication, time management and multi-tasking skills</li><li>• Project Experience of managing components of Smart City Projects covering at least the initiatives mentioned in this RFP.</li></ul>
Technical Manager	<ul style="list-style-type: none"><li>▪ Responsible for overall success of design in terms of achieving the business objectives, technical requirements, performance and usability.</li><li>▪ Ensure compliance to all project level procedures</li><li>▪ Ensure compliance to Govt. Standards &amp; Security</li></ul>	<ul style="list-style-type: none"><li>▪ Should be BE / B. Tech or higher from a premier institute with more than 8 years of work experience</li><li>▪ Should have fundamental comprehension across areas such as Integrated Industry Standard Open Platform, Database management Systems, Wi-Fi, and related wired network infrastructure implementation and management, network management, security management, design and deployment of Citizen App and Citizen Portal, integration of Third Party Shared Services, Help-desk Services Management, Smart Parking, Command and Control Centre.</li><li>▪ Should have experience of at least three projects in the area of Public Wi-Fi, Smart Streetlights, Smart Parking, Command and Control Centre, CCTV Surveillance and Citizen Apps.</li></ul>



**Table: Manpower Qualifications**

Manpower	Responsibility	Minimum Qualifications
Functional Manager	<ul style="list-style-type: none"><li>Responsible for integration across functions</li><li>Ensure compliance to all project level procedures</li><li>Ensure compliance to Govt. Standards &amp; Security</li></ul>	<ul style="list-style-type: none"><li>Should be BE / B. Tech or higher from a premier institute with more than 8 years of work experience</li><li>Should have fundamental comprehension across areas such as Integrated Industry Standard Open Platform, Database management Systems, Wi-Fi, and related wired network infrastructure implementation and management, network management, security management, design and deployment of Citizen App and Citizen Portal, integration of Third Party Shared Services, Help-desk Services Management, Smart Parking, Command and Control Centre.</li><li>Should have experience of at least three projects in the area of Public Wi-Fi, Smart Streetlights, Smart Parking, Command and Control Centre, CCTV Surveillance and Citizen Apps.</li></ul>
Project Support	<ul style="list-style-type: none"><li>System Analysis, Report writing, Preparing Specifications, User Testing, Product Evaluation, Documentation etc.</li></ul>	<ul style="list-style-type: none"><li>Should be BE / B. Tech or higher from a premier institute with more than 5 years of work experience</li><li>Proficient in MS office and MS Project.</li><li>Should have experience in government projects.</li><li>Should have worked in similar roles and at large scale IT Setup.</li><li>Should have experience in government projects.</li><li>Effective verbal communication skills (English, Marathi and Hindi).</li></ul>
Helpdesk Manager	<ul style="list-style-type: none"><li>Helpdesk Support Role,</li><li>Working Knowledge of IT service desk model and softwares</li><li>Should have experience in government projects</li><li>Experience in working large scale IT organization</li><li>Effective verbal communication skills( English, Marathi and Hindi)</li></ul>	<ul style="list-style-type: none"><li>System Analysis, Report writing, Preparing Specifications, User Testing, Product Evaluation, Documentation etc.</li><li>Proficient in MS office and MS Project</li><li>Should have experience in government projects</li><li>Should have worked in similar roles and at large scale IT Setup.</li></ul>



Table: Manpower Qualifications		
Manpower	Responsibility	Minimum Qualifications
		<ul style="list-style-type: none"><li>▪ Should have experience in government projects</li><li>▪ Effective verbal communication skills (English, Marathi and Hindi)</li></ul>

### 1.2.2 Training and Capacity Building

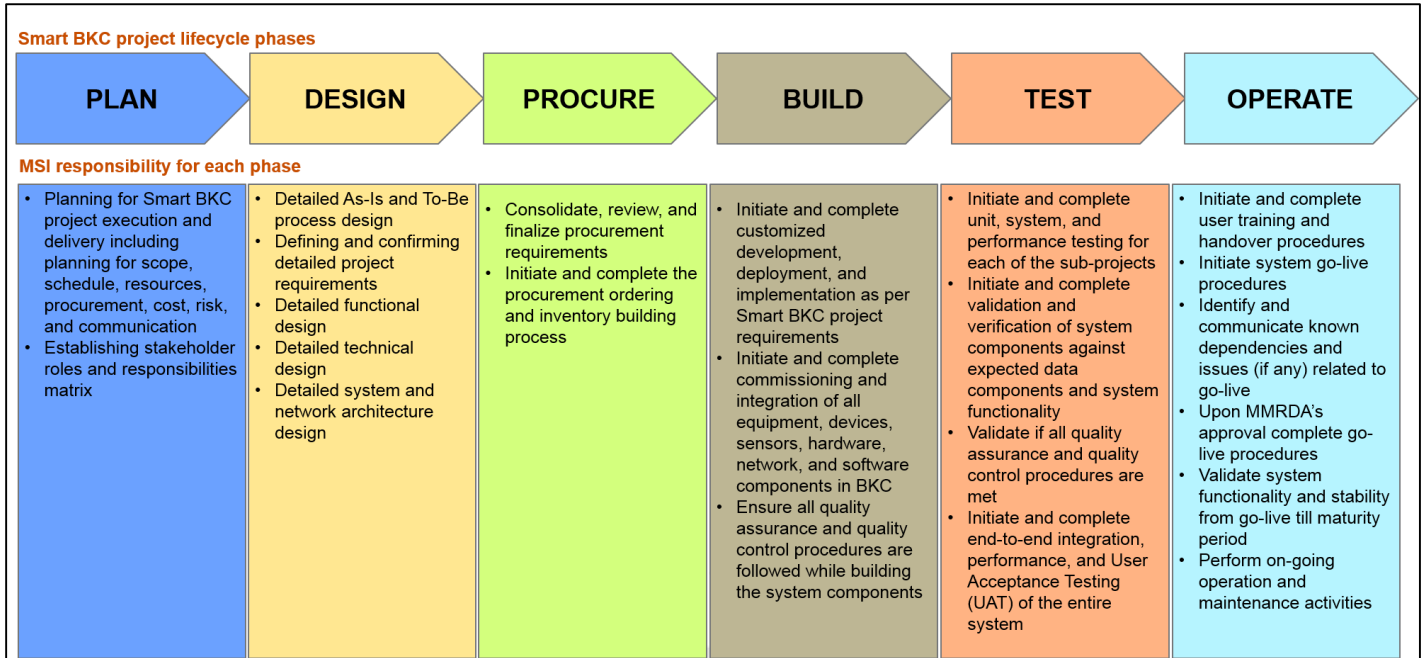
- The MSI is required to conduct training sessions for all relevant stakeholders before UAT and Go-Live of the Smart BKC 1.0 Project
- The MSI should ensure that trainings are conducted before all major UATs
- The MSI is required to submit a detailed schedule for training for MMRDA's approval
- The MSI is required to follow Train the Trainer model for all training and capacity building activities
- The MSI is required to conduct all training and capacity building activities in BKC, Mumbai
- The MSI is required to conduct all training and capacity building activities in both English and Hindi
- The MSI may use virtual training methods for repetitive training modules
- The MSI is required to provide all training manuals and materials in English

### 1.2.3 Change Requests

- The MSI would provide manpower requirement for Change Request during Implementation and Operation and Maintenance Stage.
- For any change request provided to MSI by MMRDA, MMRDA would evaluate the man-hour requirement for the same and validate manpower costs provided by the MSI in the bid with existing Government Rates. MMRDA shall approve the deployment of Change Request after mutual discussion with the MSI. The decision of MMRDA shall be final and binding on the MSI.
- The MSI is required to provide the man-month rate for various resources as per format provided in Section – IV, Annexure – 4, Format – 6. However, the costs for the same would not be considered for Commercial Bid Evaluation.



### 1.3 Overall Smart BKC Project Life cycle



The Smart BKC project lifecycle is proposed to be executed broadly in six phases viz Plan, Design, Procure, Build, Test, and Operate. The MSI will be responsible to adhere to all policies, procedures, and governance requirements during the entire project lifecycle.

MMRDA would prefer that the MSI propose an iterative build-deploy-test model where the MSI can concurrently work on multiple Smart initiatives, by dividing them into sub-projects per initiative. The core wired and Wi-Fi backbone network should be set up first, before deploying the sub-projects dependent on the backbone network.

MMRDA shall perform testing (unit, system, and performance testing) of each of the sub-projects as and when they are deployed and ready for testing. Once all the sub-projects and supporting functionalities are successfully deployed and tested, MMRDA would perform end-to-end integration testing of the entire system and its supporting functionalities. Finally several Business, Functional, and Technical users from MMRDA will perform end-to-end User Acceptance Testing (UAT) of the entire system functionality and its performance.

The MSI will also be responsible to perform relevant security audits on the entire Smart BKC 1.0 project initiatives, before MMRDA can approve final go-live. These security audits should be performed for all critical project components like information, software, hardware, network, infrastructure, integration, portal, and app. MSI should engage an independent third party auditor that is Cert-In empanelled or STQC security auditor to carry out this audit. MSI is required to share the complete details of the audit logs along with copies of all communication, written or otherwise, issues list, bug report, etc. Upon successful completion of the security audit, MSI is required to submit Audit Completion Certificate to MMRDA along with the validity period of this security audit. MMRDA will review this certificate and make final decisions around go-live.



The MSI should also engage third party auditor during O&M post go-live to annually ascertain appropriateness of system functionality, revenue recognized, expenditure incurred, and service level agreements being met.

#### 1.4 Overall Smart BKC 1.0 Project Guidelines

1. The physical boundaries defined for the Smart BKC 1.0 scope are limited to E and G blocks within BKC.
2. The project duration is for seven (7) years post go-live
3. Basic volume information related to different Smart BKC initiatives is available in the Section - IV, Annexure 4, Bid-related Information-1
4. The MSI must carry out an independent and detailed survey to prepare the overall solution for all initiatives. All maps, graphs, information, any other documents should be submitted along with the bid for MMRDA to validate the solution proposed.
5. The Survey should be conducted on prior approval from the Project Implementation Committee of MMRDA for Smart BKC 1.0.
6. The solutions proposed in this RFP are only for suggestive understanding. The MSI should respond with a better, optimized and effective solution from their end. The final solution however, will be agreed upon and approved by MMRDA.
7. The design of all smart components that will be implemented during this project, should be approved by MMRDA in accordance to the aesthetics of BKC
8. The MSI must submit to MMRDA a detailed report on implementation of each initiative under Smart BKC 1.0.
9. The MSI may suggest better or more innovative revenue streams than those suggested in this RFP without compromising any present and future, tangible and intangible assets in BKC.
10. The MSI must suggest any additional sources/avenues for revenue and may implement them after approval from MMRDA.
11. MSI should declare all payment streams from various revenue opportunities to MMRDA.
12. All solutions and architecture proposed by the MSI should be highly scalable to accommodate future Smart Cities requirements.
13. The overall and individual solutions proposed by the MSI shall have open data standards for interoperability and third party integrations. The solution should not get limited owing to proprietary issues.
14. The implementation plan for each type of solution must be discussed in detail with MMRDA and subsequently executed as per final approval by MMRDA.



15. The MSI should define and provide Standard Operating Procedures (SOPs) for each initiative.
16. Hardware, software and licenses
  - i. Shall be procured in the name of MMRDA. The responsibility of procurement, however, shall lie with the MSI.
  - ii. Procurement by the MSI shall be as per the latest industry standards.
  - iii. Should come with warranty, replacement, and software assurance options.
  - iv. The MSI will be responsible for warranty and replacement for entire O&M period of Seven years.
  - v. Procurement of any software licenses and hardware required for implementation of the solution is the sole responsibility of the MSI. MMRDA bears no responsibility towards the same or towards any consequence resulting from non-conformance or non-compliance thereof.
17. The ownership of all the hardware assets and software solutions shall lie with MMRDA.
18. The MSI would be responsible for any copyright infringement.
19. Since the data generated and being dealt with is sensitive in nature, the MSI shall provide robust network and system security features.
20. The MSI is required to safeguard the interests of MMRDA at all times.
21. The MSI is required to take utmost care of the aesthetics of BKC at all times and acquire appropriate approvals from MMRDA before conducting any public work, use of public infrastructure, advertising, revenue generation mechanism etc.
22. The MSI should ensure that all manual and digital advertisements, if any placed within the infrastructure created by the MSI as part of the project, should be in accordance with the aesthetics and regulatory norms of BKC. The size, location, content and design of any manual and digital advertisement must be reviewed and approved by MMRDA before installation.
23. All hardware devices should be secured based on the latest current industry standards and should be compatible with all weather conditions relevant to the project site.
24. MSI is responsible to provide a detailed 'Spare Strategy' for all hardware, software, and network components, and adhere to it while project execution
25. MMRDA reserves the right to increase or decrease the number of parking lots to implement smart parking solution. For any additional or newly proposed parking lots, the solution, in entirety or partly, should be provided by MSI as per instructions from MMRDA.
26. The MSI shall integrate the solution with AADHAR enabled authentication system and AADHAR enabled payment system.



27. The MSI must ensure that the overall “Smart BKC 1.0” Project Solution should:
- i. Provide, maintain, and support all required certifications and compliance.
  - ii. Provide warranty for the entire contract duration and options for repair contracts (including costs, if any) of their system.
  - iii. Provide customer service support as required by MMRDA.
  - iv. Provide capability to audit revenues received under each initiative.
  - v. Provide an updated inventory of assets, spare parts etc.

## 1.5 Overall Smart BKC Scope – Functional Requirements

1. All the decisions, approvals, and status updates related to the Smart BKC project should be routed through MMRDA’s ‘Project Implementation Committee’ (PIC), which will be MMRDA’s central body overseeing the entire Smart BKC project.
2. The overall solution should be highly customizable per MMRDA’s requirements across all Smart BKC initiatives.
3. All the proposed functional (business processes, integrated platform, etc.) and technical (infrastructure, hardware, software, communication, network, equipment, etc.) components for Smart BKC 1.0 initiatives should be configured to operate in an integrated environment so that they can coordinate with each other for daily activities as well as for incident management.
4. A Centralized Dashboard should be designed for real time monitoring and management of functionality and performance of each of the Smart BKC initiatives from the Centralized Command and Control Center.
5. Standard Operating Procedures and Escalation Procedures should be designed by MSI and approved by MMRDA for workflow management, event management, incident management, customer services and helpdesk management, and security breach management
6. MSI should implement a reputed and robust web-based Comprehensive Project Management Solution or tool, approved by latest industry reports like Gartner Magic Quadrant, Forrester wave, IDC, etc. The proposed Project Management Solution must centrally track, in real time, all Smart BKC project activities and dependencies across all initiatives. The Comprehensive Project Management tool will also be leveraged for effectively managing SLAs, Revenue and Expenditure, Change Management, and all other transactions of the Smart BKC 1.0 project.
7. The project management solution should capture end-to-end project details and track the overall status of the Smart BKC project in real time, including scope, deliverables, resources, timelines, milestones, project assets (tangible and nontangible), delays, issues, risks and cost components





8. The MSI must provide weekly and monthly status reports highlighting parameters like project status, activities performed, deliverables, potential risks, next steps, etc. The exact timelines, parameters, and audience for reporting will be validated and approved by MMRDA.

## 1.6 Overall Smart BKC 1.0 Scope – Technical Requirements

1. The proposed overall solution for Smart BKC 1.0 project (infrastructure, hardware, software, communication, network, equipment, integrated enterprise platform, etc.) should:
  - i. be state of the art, energy efficient, yet cost effective and sustainable
  - ii. be implemented using proven, tested, and commercially established hardware and software components
  - iii. be scalable and modular
  - iv. reside on an Integrated Industry Standard Open Platform
  - v. support leading industry open data standards
  - vi. be compatible with important technology enhancements
  - vii. not be exposed due to any single point of failure
  - viii. in case of any failure have redundancy built in to the system to bring the overall system back up in the minimum amount of time
  - ix. be highly secured as per the latest industry standard
  - x. generate alerts and notifications when physical damage or unexpected removal of sensors, devices, or equipment occurs
  - xi. provide dashboards for dynamically monitoring and reporting updates related to all the BKC smart initiatives
  - xii. provide open APIs for interfacing with all internal and external applications, devices, modules, gateways, shared services, etc.
  - xiii. provide warranty of at least five years for each of the hardware components, sensors, devices, and equipment
  - xiv. adhere to regulatory standards, norms and guidelines approved by Government Of India agencies like Department of Telecommunications (DoT), Department of Electronics and Information Technology (DeitY), Bureau of Indian Standards (BIS), Ministry of urban Development (MoUD), Ministry of Environment, Forest and Climate Change, International Organization for Standardization (ISO), Institute of Electrical and Electronics Engineers (IEEE), International Electrotechnical Commission (IEC).



- xv. strictly follow the standard operating procedures and escalation procedures approved by MMRDA
  - xvi. provide accurate and up to date inputs to the overall project management solution
  - xvii. adhere to latest industry standards related to data privacy and maintain confidentiality of MMRDA data as well as BKC Citizen data
2. All the devices, sensors and equipment to be installed outdoor for smart initiatives should be of commercial grade, comply to leading best practices, and be weather proof so that they are sustainable for up to seven years and work normally in extreme BKC weather conditions
  3. The overall solution should constantly monitor the initiatives with respect to performance, load, security, utilization etc. to suggest new benchmark configurations.
  4. All the devices, sensors and equipment to be installed outdoor for smart initiatives should have built-in provision for remote firmware upgrade
  5. The proposed software, solutions, and applications should not be proprietary, support open data standards, be secure, bug free, crash resistant, modular, and provide interfaces for various shared services related to Smart BKC 1.0 initiatives
  6. The proposed overall architecture should support Service Oriented Architecture (SOA) and be flexible to be scaled horizontally and vertically to seamlessly integrate future Smart BKC 1.0 initiatives
  7. The proposed network infrastructure should be highly secure, provide automated alerts in all scenarios of attacks, loop hole detection, bugs, crashes, etc. on the network,
  8. The physical infrastructure should be robust, scalable, secure, virtually traceable, and should automatically provide feedback on failure

## 1.7 Security & IT Infrastructure Audit

The MSI will also be responsible to perform comprehensive Application Security & IT Infrastructure Audit for the complete Smart BKC 1.0 project from a Cert-In empanelled Third Party Auditor. The Audit should be performed for all critical project components but not limited to Integrated Platform, Security Platform, Software, Hardware, Infrastructure, Citizen Apps and Portal. Upon successful completion of the Audit, MSI is required to share the Audit Completion Certificate with adequate validity along with copies of all communication, written or otherwise, issues list, bug report, etc. and corrective/compliance measures taken by MSI taken thereof on the Audit observations.

The Audit would should be done in following Phases

- Implementation Phase: Prior to Go-Live
- O&M Phase: At the End of every O&M Year (7 years Post Go-Live)



### 1.8 Convergence With Other Smart Initiatives

MMRDA envisions to integrate Smart BKC 1.0 Project with multiple current and future Smart initiatives undertaken by other Government agencies or by MMRDA itself. Hence, the MSI is responsible to propose an overall system/solution that is flexible and scalable to seamlessly interoperate and integrate with futuristic Smart and Sustainable City initiatives such as Solid Waste Management System, Smart Metering system, Mumbai CCTV Surveillance System, etc. Currently MMRDA is planning to converge with the following two Smart initiatives which would be undertaken by other Government agencies or by MMRDA separately.

#### 1.8.1 Convergence Points For Intelligent Streetlight and Video Analytics

To meet the larger objective for uniform systems, the Intelligent Streetlight and Video Analytics Smart BKC 1.0 initiatives will be implemented in collaboration with upcoming initiatives from Government of India (GoI) and Government of Maharashtra (GoM). MMRDA is keen towards leveraging resources from these umbrella initiatives, thereby finding possibilities to implement a collaborative and comprehensive Smart BKC solution. The Master System Integrator (MSI) selected for implementing the Smart BKC 1.0 project will have to cooperate with the Government agencies and their implementation partners for working out the details (functional and technical) of the integration points for Smart BKC 1.0 project. Overview of convergence points for these envisaged collaborative initiatives is highlighted in the table below:

Smart BKC Initiatives	Convergence Points	Responsibilities
Video Analytics and Surveillance	Mumbai CCTV Project – GoM initiative	As part of the Mumbai CCTV Surveillance project, cameras will be installed in BKC area. Video and data feeds from these cameras will be provided to MMRDA for integration with Smart BKC 1.0 initiatives for proactive IoT integration.
	Smart BKC Project MSI	MSI may be responsible to utilize video from Mumbai CCTV project and integrate with Smart BKC 1.0 project's Integrated platform, so that a viewing dashboard can be extended for MMRDA and appropriate commands can be utilized for communicating with other Smart BKC 1.0 initiatives.
Intelligent Streetlights	Energy Efficiency Services Limited (EESL) – JV of PSUs, GoI	As part of EESL's initiative of implementing Smart LED Streetlights in Mumbai, EESL will install Smart LED Lights in the BKC area. All the monitoring data and control parameters for these LED lamps will be provided to MMRDA by EESL.
	Reliance Energy	It is envisaged that as a part of tri-party agreement between MMRDA, EESL and Reliance Energy (existing streetlight and power provider of MMRDA in BKC), smart multi-utility streetlight poles may be installed in BKC by Reliance Energy. All the monitoring data and control parameters for these smart multi-utility poles will be provided to MMRDA by Reliance Energy.
	Smart BKC Project MSI	MSI may be responsible to utilize street light related data feeds from EESL and Reliance Energy for communicating with other Smart BKC 1.0 initiatives. Data will be captured for various voltage and power indicators and can be utilized for dimming analysis, energy analysis, remote monitoring and controlling of Smart LED lamps.



For both these envisioned initiatives, the MSI is not expected to build or deploy any sophisticated applications. However, the MSI may have to leverage the data shared by external implementation agencies and normalize it so that this data can be leveraged for communicating with other Smart BKC 1.0 initiatives.





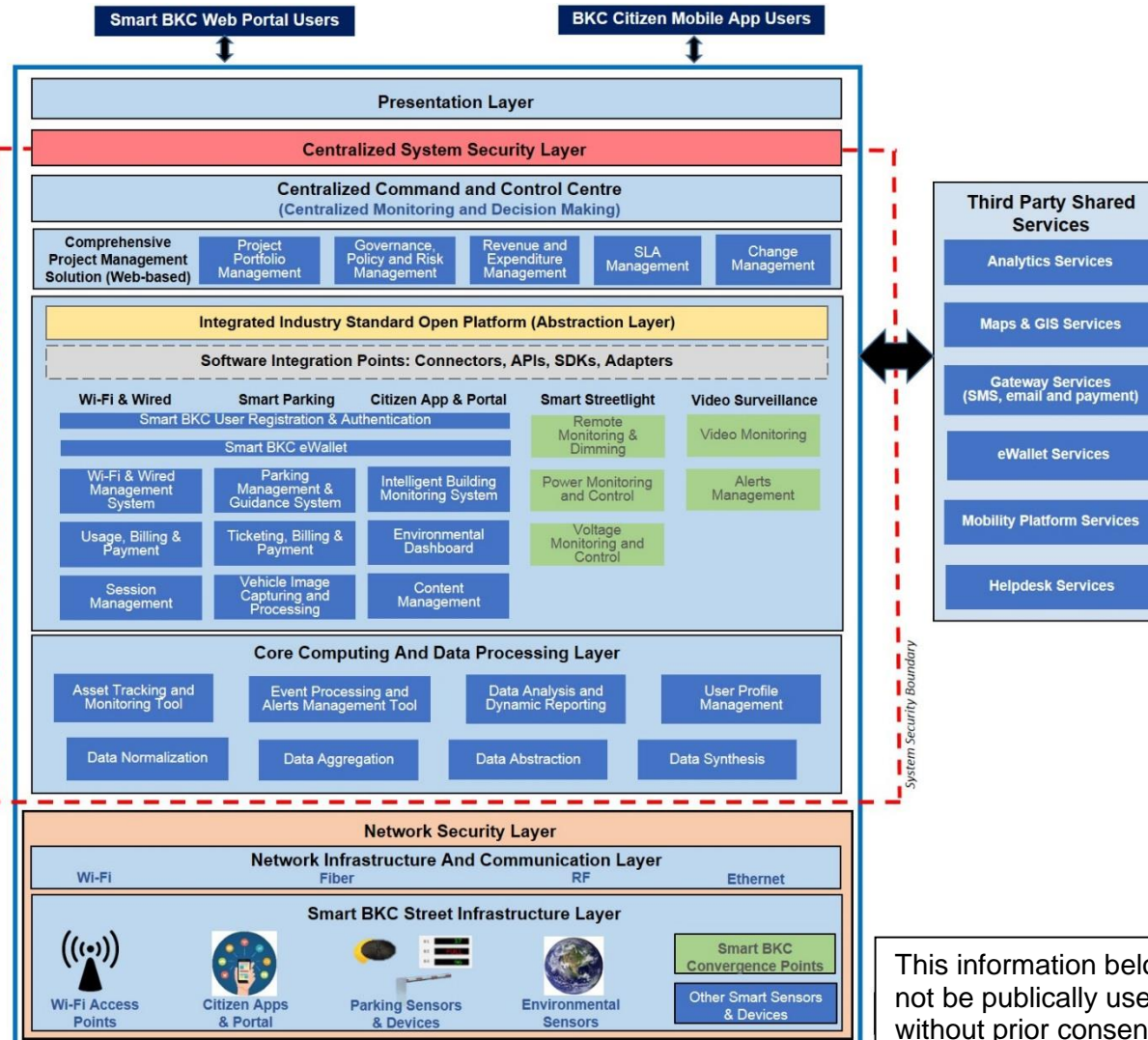
## 1.9 Smart BKC 1.0 Scope Snapshot

The table below provides a high level snapshot of the MSI responsibilities with respect to the overall Scope of work for Smart BKC 1.0 Project. The MSI should refer to Section – II: Scope of Work for the detailed description of the project scope.

MSI responsibilities with respect to Scope of work for Smart BKC 1.0 Project	Public Wi-Fi and related wired network infrastructure	Smart Parking with Parking Guidance & Management System	Citizen Mobile Application & Online Citizen Portal	Centralized Command and Control center	Shared Services	Data Center and Disaster Recovery	Smart BKC Integrated Platform (Hardware & Software)	Smart BKC Convergence Points
Design and Develop	✓	✓	✓	✓		✓	✓	
Build, Deploy and Commission	✓	✓	✓	✓		✓	✓	
Integration	✓	✓	✓	✓	✓	✓	✓	✓
Testing (System, Integration, Performance, UAT)	✓	✓	✓	✓	✓	✓	✓	✓
Operation and Maintenance	✓	✓	✓	✓	✓	✓	✓	✓
Advertisement and Marketing	✓	✓	✓		✓			
Revenue Generation & Sharing with MMRDA	✓	✓	✓					
Civil work/ Physical Infrastructure setup	✓	✓		✓				
Power and Utility Procurement, Management and Maintenance	✓	✓						
Permissions (Public and Private Agencies)	✓	✓	✓	✓	✓	✓	✓	✓
Training and Capacity Building	✓	✓	✓	✓	✓	✓	✓	✓
Compliance with regulations, Govt guidelines, industry standards	✓	✓	✓	✓	✓	✓	✓	✓
Security and IT Infrastructure Audit	✓	✓	✓	✓	✓	✓	✓	✓
Reporting and Analytics	✓	✓	✓	✓	✓	✓	✓	✓



## 2. Overview Smart BKC Logical Architecture



This information belongs to MMRDA and should not be publically used, reproduced in any form without prior consent of MMRDA



## 2.1 Overview of Smart BKC 1.0 Logical Architecture

The above logical representation of the architecture is proposed for Smart BKC 1.0 project. The MSI would have to propose their architecture in line to the requirements mentioned below. The proposed architecture should adhere to the latest industry standards in implementation, security, and data privacy. The proposed overall architecture should support Service Oriented Architecture (SOA) and be horizontally and vertically scalable to integrate future Smart BKC initiatives on the centralized platform.

### 2.1.1 Smart BKC 1.0 Street Infrastructure Layer

1. This physical street layer will consist of devices, sensors, and equipment for Smart BKC initiative like Wi-Fi access points, wired fiber network, parking sensors, parking cameras, etc.
2. The smart devices and sensors will be primarily connected via wired and wireless channels to the network infrastructure
3. Data from these smart devices and sensors should be collected on the street level reliably and relayed back to the centralized Smart BKC Integrated Platform
4. Each device should have an inbuilt feedback mechanism to indicate if it (the device itself) is functional or not to the Smart BKC Integrated Platform
5. Each device should intelligently recognize external conditions like unusual activities, theft, environmental factors, and immediately generate alerts to notify the Smart BKC Integrated Platform
6. Embedded security and encryption should be given for each device, sensor, etc.

### 2.1.2 Network Infrastructure and Communication Layer

1. This layer is the physical network and communication layer consisting of the Ethernet, Wi-Fi, fiber, and RF networks
2. This layer should provide secure, fast, and reliable connectivity between northbound applications “Core Computing and Data Processing Layer” and southbound devices “Smart BKC Street Infrastructure Layer”
3. The network should be configured to support industry leading communication and open data standards
4. Should conform to latest industry standards for design, implementation, and connectivity
5. The network configuration platform should be modular and scalable to allow multiple types of networks and topologies to be implemented on the same platform
6. Should be scalable to accommodate future/advanced technological integration
7. Should have self-healing and self-diagnostic capabilities
8. Should have separate SSIDs for the Public Wi-Fi and for all Smart BKC IoT devices

### 2.1.3 Network Security Layer

1. Should provide strong and reliable security for the entire network and street infrastructure



2. This layer must be monitored from the Centralized Command and Control center using an industry leading Network and Security Management Solution
3. Should isolate itself from the system components and not have access to the system security layer
4. Should conform to latest security standards
5. Should seamlessly integrate with, and be able to monitor and manage, networking devices, equipment, components provided by the OEM
6. Should be capable of rouge SSID detection and lockdown
7. Should not allow the free or premium paid users (Wi-Fi and wired) to create local network hotspots
8. Should not allow any Wi-Fi users to create hotspots with the same SSIDs as MMRDA's Wi-Fi SSIDs
9. Should be capable of detecting denial of service (DDoS) and remediation
10. Should have sophisticated firewall, antivirus, content filtering, tracking, lockdown, and malware detection and prevention capabilities
11. Should provide additional security for Smart BKC's IoT in form of advanced security mechanisms like encrypted communication channels, virtual tunneling, etc.
12. Should provide additional security for premium users (Wi-Fi) in form of advanced security mechanisms like Virtual Private Networks (VPN), Secure Shell (SSH), forced https, DNSSEC, etc.
13. Should have self-healing and self-diagnostic capabilities
14. Should be capable of recognizing network vulnerabilities and immediately send alerts to the Centralized Command and Control center or dynamically fix them and send intimations to the Centralized Command and Control center
15. Should detect an attempt to gain unauthorized access to the network, lockdown the infected areas, and immediately send alerts to the Centralized Command and Control center

#### **2.1.4 Core Computing and Data Processing Layer**

1. This layer will be the central computing and data processing layer for all Smart BKC 1.0 initiatives
2. The hardware and software components configured for the computing and data processing systems must support latest computing standards for security, multicore architecture, parallel processing, distributed computing, and fast real-time processing
3. It should intelligently make quick decisions and take appropriate action in a time bound manner

##### **2.1.4.1 Core Computing System**

The Core Computing System should:

1. Virtually track all IP based and protocol based active assets on the field for monitoring and management of the assets





2. Automatically process incidents and events, execute the operating procedure defined, and take necessary action
3. Automatically process alerts and generate notifications depending on data received, either from the network or platform layers
4. Process data gathered from the various smart devices and frontend applications, analyze patterns, and generate dynamic MIS reports
5. Replicate all the critical data and information as determined during the detailed design session
6. Monitor all images collected from video cameras installed in the parking lots and perform required processing for Parking Management Solution.
7. Manage all the digital content that flows in and out of the system through front end applications like Smart BKC 1.0 Citizen App, Citizen Portal, and interfaces to external Third Party Shared Services

#### **2.1.4.2 Data Management and Processing System**

The Data Management and Processing System should:

1. Serve as a central platform for all data related activities including data management, aggregation, normalization, and abstraction
2. Ensure high availability of all databases
3. Auto-detect database problems and auto fine tune them to ensure high performance
4. Optimize performance by identifying resource intensive procedures, generate alerts and take necessary action
5. Monitor key operational activities to identify and report any anomalous behavior
6. Monitor and frequently generate reports for industry standard KPIs (throughput, CPU utilization, availability of database, daily workload, service fulfillment time)
7. Aggregate and store data from all the Smart devices, network components, and front end applications
8. Normalize data that is collected from various sources so that it can be utilized for computation
9. Abstract the data in a way that it can be leveraged simultaneously by multiple software integration components and also by the Smart BKC Integrated Platform
10. Be able handle large volumes of data without resulting in undue delay
11. Be able to perform fact based and detailed analysis of various data elements based on historical trends
12. Be able to generate dynamic reports based on preset queries and also be able to generate dynamic reports based on various user defined query parameters. MMRDA project team must have the capability to pick and choose reporting parameters, and get dynamic dashboard views based on the selected parameters
13. Should have a highly customizable, powerful reporting engine to create batches for large reports



14. Adhere to latest industry standards related to data privacy and maintain confidentiality of MMRDA data as well as BKC Citizen data

#### **2.1.4.3 Storage Management Solution**

1. The preferred approach for centralized storage for Smart BKC 1.0 project is to have a managed hosted solution for hosting of all applications, data, and related storage. The managed hosted solution will reside in a Tier III Data Center, and Data Recovery which will be on a secure private Cloud within India.
2. The proposed Storage Management Solution should enable the MSI and MMRDA to manage all storage related activities, updates, alterations, dynamic allocations, backup, etc. virtually from the Centralized Command and Control Center.
3. Should provide centralized monitoring and management of storage resources, storage status, configuration management, and performance reporting on a single centralized interface
4. Should be available on industry recognized operating systems
5. Should support industry recognized open data standards
6. Should be a highly scalable to dynamically accommodate storage requirements
7. Should have the ability to auto configure storage based on industry best practices
8. Should provide storage consumption reports and patterns, by various users, devices and subsystems, for capacity planning
9. Should provide the ability to put constraints on storage limits for users and user groups
10. Should provide Logical Unit Number (LUN) management
11. Should detect and automatically report configuration changes and threshold violations
12. Should have auto archiving facility
13. Should have provision for auto recovery of data in case there is a system failure

#### **2.1.4.4 Asset Lifecycle Tracking and Monitoring**

1. MSI should implement a tool which will detect, track, monitor, manage, and control all IT (IP based), active non-IP based, protocol based, and critical non-IT assets as described in scope of Smart BKC 1.0 project
2. Should enable the management of IT assets in terms of their physical, financial and contractual aspects (commissioning, lifetime, etc.), thereby ensuring optimum utilization of assets and reducing compliance risks
3. Should automatically detect and manage inventory of all IP based assets like Wi-Fi Access Points, Sensors, etc. in a centralized asset repository
4. Should have provision to add non-IP based devices and sensors to the centralized asset repository



5. Should have the ability to create and store asset information including, ID, serial number, version, status, license, user or user group etc.
6. Should perform periodic checking of inventory and generate reports/alerts comparing current status and original inventory stock
7. Should manage inventory for individual or bulk items, set priority based reordering levels, price of each asset, transaction history, etc.
8. Should keep details of components internal to the asset like RAM, CPU, disk, chassis, switch types, warranty etc.
9. Should generate real time automated notifications whenever any asset goes faulty, is tampered with, or is missing
10. Should help in planning IT needs and notify changes
11. Should have a contracts module to track contract term of each asset, manage purchase orders, invoices, etc.
12. Should integrate with the Revenue and Expenditure Management module
13. Should manage license for all hardware and software assets. Should report license recovery when a hardware is removed or discarded or a software is uninstalled
14. Should provide information on all software packages with respect to version changes and upgrade
15. Should be able to track user rights towards using hardware or software licenses

#### **2.1.4.5 User Profile Management**

The MSI is responsible of managing a centralized repository of all Smart BKC 1.0 users (Citizens, visitors, customers, guests, etc.) and their profiles. The MSI will also be responsible for tracking profiles of each user availing Smart BKC 1.0 services, including managing each user's registration details, privileges, access and authentication information, preferences, and usability trends.

Since this information is extremely sensitive, MSI has to ensure proper data security and maintain each user's data privacy. Any personal information related to Smart BKC 1.0 users cannot be disseminated, sold, or utilized unlawfully by the MSI, outside Smart BKC 1.0 project requirements.

#### **2.1.5 Integrated Industry Standard Open Platform Layer**

1. The Integrated Platform Layer will be the logical umbrella layer that will virtually integrate and process information from all applications and devices for Smart BKC 1.0 initiatives and entire Smart BKC vision
2. Hence this logical layer needs to be the integrated standardized open platform to enable plug and play of software integration components like connectors, APIs, SDKs and adapters for communicating with various Smart City solutions, applications, Smart devices, and external interfaces (gateways, plug-ins, APIs) like third party shared services
3. The integrated open platform must be the overall management layer that logically facilitates communication between the physical networking layer, core computing layer, applications,



external shared services, and the Client Presentation layer (via external interfaces like Smart BKC 1.0 Citizen App and Citizen Portal)

4. Data from the various applications, devices, sub-systems, and external interfaces for each of the Smart BKC initiatives will be normalized and abstracted in a way that it can be utilized by the Smart BKC Integrated Platform to enable real-time communication across all the Smart BKC 1.0 initiatives.
5. This layer will also integrate the centralized communication, tracking, monitoring, and management systems for each smart initiatives like Wi-Fi network and user management, parking management system, streetlight monitoring system, video monitoring system, and citizen app/portal management.
6. This layer will also integrate data form project wide functions like Governance, Policy and Risk management, Project Management, Revenue & Expenditure Management, Change Management, and SLA Management
7. This layer should also support interface with physical IP based security devices, including video cameras, based on ONVIF 2.0 standards
8. This layer should be scalable to allow integration of future Smart BKC initiatives to be undertaken by MMRDA, like integration with Mumbai CCTV Camera Project and Smart LED Streetlight Project by EESL, e-buses, sustainability initiatives etc.
9. This Integrated Platform should:
  - i. Be a vendor agnostic and open platform based on leading industry standards
  - ii. Be modular, flexible, and adhere to the latest industry standards, open communication standards, and data abstraction standards
  - iii. Be scalable to empanel software components from both the north and southbound layers for integration of all Smart BKC 1.0 applications and devices and future Smart BKC initiatives
10. The Integrated Platform should consist of a Centralized Application Manager, which
  - i. Should integrate and manage all Smart BKC 1.0 related software applications and device related applications to integrate and operate collectively and make informed decisions
  - ii. Should be built on highly scalable distributed architecture
  - iii. Should have simple installation, configuration, updation, and maintenance capabilities
  - iv. Should be able to monitor and manage single or multiple user or device groups with all groups mutually exclusive to each other in terms of access and view
  - v. Should be able to correlate two or more events from multiple Smart BKC initiatives and take appropriate actions
  - vi. Should be able to set customizable thresholds (lower and upper) for all system parameters, compare performance with threshold, and send notifications if the system parameters either exceed the upper limit or fall below the lower limit of the threshold
  - vii. Should integrate third party applications and external shared services without source code changes using software connectors like gateways, APIs, connectors, and Adapters



- viii. Should be able to integrate with communication gateways i.e. mobile, email or SMS, to provide information or updates to intended audience
  - ix. Should have the ability to perform root cause analysis and deep diagnostics in case of application failures and non-response from application
  - x. Should provide real-time Incident management services to facilitate management of responses received and coordinate it better with Field Response Teams.
11. The Integrated Platform should consist of a Centralized Application Performance Manager, which
- i. Should monitor, control, manage and analyze all applications related to Smart BKC initiatives.
  - ii. Should have ability to set customizable application performance thresholds
  - iii. Should monitor applications and processes for detecting issues, bugs, abnormal trends, threshold breaches and respond as per user defined SOPs and provide early warning to reduce or mitigate the impact
  - iv. Should monitor integrated application performance and capacity management
  - v. Should monitor end-to-end transaction and performance of resource heavy applications, failed transactions, application locks, database un-availability etc., and automatically generate corresponding reports
  - vi. Should have customizable dashboards to monitor and manage application performance parameters across Smart BKC Initiatives
  - vii. Should have an inbuilt customizable reporting capability to dynamically generate application performance reports based on user defined parameters

### 2.1.6 Comprehensive Project Management Solution

MSI will be responsible to implement an industry leading web-based Comprehensive Project Management Solution (or tool) for centralized monitoring, tracking, and management of all Smart BKC project activities in real-time. Both MMRDA and MSI Project Management teams will use this tool as the central repository of all Smart BKC project activities and documents. MMRDA's Project Implementation Committee (PIC) members will be the highest level super users of this tool, followed by MMRDA and MSI Project Management teams. All the information and data residing in this tool should be securely hosted in the Smart BKC project Data Center, and should not be exposed to anyone outside the Smart BKC project team. Designated MMRDA officials and MMRDA PMO team should have access to this web-based tool to access project status in real-time, including, all issues and risks, all its reports, and dashboards at any time. The dashboard views and management of Comprehensive Project Management solution will be monitored and controlled from the Centralized Command and Control center as well as from individual personal computers of MMRDA officials. MMRDA's functional requirements from the Comprehensive Project Management tool are including but not limited to the following:

#### 2.1.6.1 Project Portfolio Management

This module should enable MMRDA and MSI Program Managers to collaborate in real-time and work on key decisions across Smart BKC project initiatives, Key Performance Indicators (KPIs),



Revenue & Expenditure decisions, and critical project risks. The project portfolio of the Smart BKC project will consist of individual sub-projects for each of the Smart BKC initiatives. The MSI is responsible to implement the following Project Management modules as part of the Centralized Comprehensive Project Management solution:

#### 2.1.6.2 Governance, Policy and Risk management

##### 1. Governance and Policy Management

The proposed Project Management solution should have inbuilt Governance and Policy monitoring and management capabilities

- i. Should be the central repository where all the governance and policy aspects for executing the Smart BKC 1.0 project can be captured, monitored, updated, tracked and managed.
- ii. Should describe the overall management approach through which the MSI and MMRDA Project Management teams direct and control the entire project's governance, using a combination of management information, management control, and escalation structures.
- iii. Should ensure that critical Policy management information be accessible to the MSI and MMRDA, is complete, accurate and timely to enable appropriate management decision making, and provide the control mechanisms to ensure that strategies, directions and instructions from management are carried out systematically and effectively.
- iv. Should be capable of defining, managing and monitoring control structures to define tasks and execution rules to achieve specific goals.
- v. The task execution rules should include a structured work-flow based approach for encompassing task dependencies and execution side effects.

##### 2. Internal Control and Risk Management

- i. The proposed centralized Comprehensive Project Management solution should have ability to capture, monitor, update and track Internal Control and Risk Management procedures.
- ii. Should be capable of defining customizable Internal Control and Risk Management and mitigation plans based on project data points.
- iii. Should be capable of defining, managing, monitoring, and mitigating risks specific to the Smart BKC project.
- iv. Should proactively identify and characterize issues and mitigation mechanisms
- v. Should assess the vulnerability of critical assets i.e. the expected likelihood and consequences of specific types of attacks on specific assets.
- vi. Should prioritize mitigation mechanism based on predetermined SOPs.

#### 2.1.6.3 Revenue and Expenditure Management

1. Should monitor and manage, in real-time, the revenue gained and expenditure incurred for each Smart BKC initiative in separate Head of Accounts per initiative. Example,



- revenue and expenditure related to Wi-Fi, Parking, digital advertisements, etc. will each be managed and tracked individually in separate Head of Accounts.
2. Should track all project expenditures during implementation phase, and all revenue and expenditures post go-live during the entire Operation and Maintenance phase
  3. Should provide real-time dashboard views of overall project financials of the Smart BKC project including CAPEX and OPEX.
  4. Should account for and provide dashboards for Smart BKC project assets and liabilities
  5. Should maintain a complete and accurate audit trail of all revenue and expenditure transactions.
  6. Should provide customizable revenue and expenditure reports to authorized users, based on user preferred parameters
  7. Should use the role based security model for authenticating users and granting access to the Revenue and Expenditure Management system

#### 2.1.6.4 SLA Management

1. Should capture, monitor and track all the system based SLAs from all Smart BKC 1.0 project activities and calculate penalties accordingly
2. Should have an integrated dashboard for assets with issues and non-performing assets
3. Should follow all compliances and validation metrics as mentioned in the RFP to maintain standardization of Service Level Agreement
4. In case of multiple SLAs being triggered, the event that triggered the delay would drive the penalty calculations
5. Should show real-time status of all events, incidents, tickets lodged for Smart BKC 1.0 Initiatives
6. Should be auto-configured with SLAs to ensure timely report generation
7. Should support lifecycle management of events and incidents including version control, status control and audit trail to ensure accountability
8. Should support technical audit of the complete IT system
9. Should have an integrated, highly customizable single-view dashboard listing and co-relating all contract parties, service type, SLA performance, violations, penalties incurred etc.,
10. Should support root cause analysis to clearly define the type and severity of SLA failure
11. Should be capable of monitoring functional SLAs as well as technical SLAs
12. Should have role based security model to provide access to only authenticated users
13. Should be able to generate web based SLP reports highlighting violations, penalty, action taken, frequency of occurrence etc.

#### 2.1.6.5 Change Management

1. The proposed Project Management solution should capture, track and monitor change management procedures based on pre-defined workflows



2. MSI should be able to define structured workflows for different types of user profiles, processes, activities, events, and incidents to execute the Smart BKC 1.0 project.
3. Change management system should allow MSI to define structured change management procedures to be followed based on different types of user profiles, processes, activities, events, and incidents to execute the Smart BKC 1.0 project.
4. The Change Management system should be completely integrated to work hand in hand with SLA Management module to track end-to-end status and completion of events/incidents/tickets.
5. Automated escalation procedures and escalation alerts should be built into the Change Management and should have the ability to send automatic or manual notifications to concerned entities
6. At each stage in the Change management system, an individual or group of individuals should be responsible for a specific task. Once the task is complete, the workflow should ensure that the individuals responsible for the next task are notified and receive the information they need to execute their stage of the process.
7. Workflows can move back and forth between resources.
8. Change Management module should ensure that automatic alerts are generated for uncompleted tasks.
9. A consolidated dashboard view, based on the role, should be generated for all the Change Management events.

#### **2.1.6.6 Project-wide Status Reporting & Dashboards**

The proposed Project Management solution should have provision to generate dynamic and consolidated status reports in real-time across different Project Management modules. The web-based tool should provide MMRDA the flexibility to dynamically pick and drop elements to be displayed in the reports and dashboards. Automatic email and SMS alerts should be sent to MMRDA Project Implementation Committee members in case there are critical deviations, issues, or risks. These dashboards and reports should be browser independent, with ability to be viewed from any web-enabled device.

#### **2.1.7 Network and Security Management Solution (NSMS)**

The NSMS should address the complete network management of Smart BKC 1.0 initiatives. It should monitor and report, performance, utilization, status, vulnerabilities and failures in the network in real time. It should also monitor and manage network security, access control and policy, security breaches, detect and prevent any attacks on the network. The NSMS seamlessly integrate with & monitor network devices and equipment deployed by OEM.

The NSMS comprise of network hardware and the network software components. Henceforth, for NSMS section, “solution” refers to NSMS and “software” refers to network software components.

Detailed requirements for NSMS are given below:

1. Should run continuously at a low overhead, to monitor all the network components and discover any new devices or components





2. Should provide topology in a single view
3. Should be able to work in a distributed environment
4. Should support application based failover over the network infrastructure by rerouting network traffic
5. Should have support for SNMPv3 & IPv6, including dual stack IPv4 and IPv6
6. Should have capacity for upward and downward compatibility
7. Should be able to provide performance monitoring of physical network and assets (devices, sensors and equipment of Street Layer) per upper and lower threshold values
8. Should detect and report changes/failures arising from network hardware/software configuration changes
9. Should monitor and report network latency, packet drop, jitters and related issues
10. Should monitor all network device bandwidth, data transfer volume, etc.
11. Should monitor trace route of AP node, Wi-Fi, wired network and external network. Should have provision to take snapshots of trace route at set interval(s)
12. Should perform frequent quality checks at set intervals for monitoring of Wi-Fi based air interfaces
13. Should support rollback of software upgrade and point patches
14. Communication between NSMS and Street level network infrastructure must be controlled, secure, based on standard communication protocols, and support acknowledgement from Street level network infrastructure
15. Should support industry standard discovery and communication protocols.
16. Should immediately discover and determine the impact of any node, port, and device failure
17. Should provide highly customizable and dynamic reporting module for capturing and analyzing data collected from the entire network. Reports should be generated to be viewed and mailed directly in .txt, .csv, or .pdf formats from the solution
18. Should be able to detect and prevent intrusions, security failures, rogue local hot-spot creation by device, unauthorized access
19. Should perform self-diagnostic to identify any malware or Trojans injected in the network
20. The solution should support dynamic provisioning of devices through virtualization.
21. The solution should constantly monitor and report Quality of Service (QoS) (throughput, error rates, bandwidth, jitter, availability, etc.)

#### **2.1.8 Data Center/ Disaster Recovery (DC/DR) Services**

1. The preferred approach for centralized storage for Smart BKC 1.0 projects is to have a managed hosted solution for hosting of all applications, data, and related storage. The managed hosted solution will reside in a Tier III Data Center, and the Data Recovery will reside on a secure private cloud based environment.



2. Data Center (DC) should be Tier III as per Uptime Institute Standards, in MMR and Navi Mumbai region, near shore, highly secure, have high availability, and should have dedicated space for racks and dedicated racks for servers hosting Smart BKC 1.0 applications, data, and storage
3. Data Recovery (DR) should be hosted on a highly secure and highly available private Cloud environment hosted in different Seismic Zone than that of Data Center, with an established Cloud Service Provider
4. The proposed DC/DR solution must adhere to all regulatory and security standards for hosting Government services as directed in the guidelines by Government of India (GoI) and Government of Maharashtra (GoM)
5. MMRDA shall approve DC/DR sites and services based on detailed assessment report submitted by the MSI. Any non-conformity of the site or services, including the location of sites and security procedures, would lead to rectifications and alterations to be made by the MSI
6. DC/DR should be in Active-Active Mode in different seismic zones with near zero time latency
7. DC/DR should be dynamically scalable to deploy virtual servers, push configuration and monitoring policies, with no impact on existing data, applications, and storage
8. Should have dynamic load balancing capability
9. DC/DR should meet Uptime institute Tier III standards
10. DC/DR should adhere to latest industry standards for security like ISO 27001, EAL (Evaluation Assurance Level).
11. DC/DR should not have any single point of failure
12. DC/DR should have built-in redundancy mechanisms for high availability
13. MMRDA should have secured and seamless access to its data, applications, services, and storage
14. DR Centre should cater to minimum 10% load for replicating critical components, with dynamic provisioning capability to handle 100% load in case of failures at DC
15. The DR capabilities should be sporadically and periodically validated during project implementation and post Go-live to ensure apt interoperability between DC and DR
16. There should be adequate backup mechanism (power, bandwidth, application, data) in DC and DR

#### **2.1.8.1 DC/DR Monitoring Dashboard**

MSI should provide a dashboard view of their DC/DR solution for MMRDA for virtually monitoring and managing all Smart BKC 1.0 project related DC and DR activities inclusive of hardware, application, data, bandwidth, manage hosting services, storage from the Centralized Command and Control Center.

1. Should provide ability to monitor, manage, control, and report performance of all Smart BKC project servers



2. Should have virtual server dashboard to monitor and manage capacity of server, utilization, devices and services running on server
3. Should allow for easy deployment of servers, operating systems, application and services for integrating and managing such components collectively
4. Should provide rack-view monitoring for power consumption, capacity, services deployed, servers up, down and in critical state
5. Should provide browser and OS independent console and web interface
6. Should automatically act on policy deployments, pre-configurations, and pre-defined SOPs
7. Should provide root cause analysis in case of failures
8. Should automatically log incidents and generate real-time alerts
9. Should provide stringent role based security model to allow only authorized users to access and administer the system
10. Should be able to generate automatic and manual notifications, alerts and reports based on performance to the concerned operators/ individuals

#### 2.1.9 Centralized System Security Layer

1. The Centralized System Security Layer will manage the security of all the software components, applications, and overall Smart BKC system architecture
2. The Centralized System Security Layer should consist of Next Generation Firewall (NGFW) to prevent threats related to Cross-Site Scripting (XSS) and (Structured Query Language) SQL injection.
3. This layer should consist of the Centralized Identity and Access management (IAM) system and the centralized Authentication system
4. MSI should implement the latest, industry approved, strong, reliable, state of the art, security software(s) that will monitor and manage the security of the entire system
5. The Centralized System Security Layer should:
  - i. Provide overall umbrella security for the entire Smart BKC 1.0 related system architecture, from any internal or external security threats
  - ii. Conform to latest industry standards approved by the Government of India (GOI) agencies like DoT, DeitY, BIS, ISO/ICE, and IEEE.
  - iii. Have capability to configure inbuilt Standard Operating Procedures (SOP) and escalation procedures for incident and event management
  - iv. Have self-healing and self-diagnostic capabilities
  - v. Isolate the security breaches, if any, and not let the threat spread in the system (Lockdown capabilities)
  - vi. Be able to detect anomalies in functioning of the system and immediately generate alerts



- vii. Automatically route and escalate appropriate alerts (automatic, manual, bulk, or customized) based on the SOP and workflow, via SMS and emails
- viii. Have strong firewalls, rouge code detection, intrusion detection and prevention, and antivirus capabilities
- ix. Isolate attacks and independently handle resolution, in case there is an security threats or attacks on the network security layer

#### 2.1.9.1 System Security Management Solution

The System Security Management solution should ensure that security prevails in the overall system architecture and all the software components of the Smart BKC 1.0 project. This System Security Management solution:

1. Should provide overall umbrella security for the entire system, including all the software, database, hardware components and virtually isolate the system from physical network security layer
2. Should provide the latest and strongest security provisions based on industry best practices for the entire Smart BKC 1.0 architecture components, including NSMS
3. Should monitor, manage and authenticate every incoming and outgoing communication to and from the Smart BKC 1.0 system architecture
4. Should be able to detect, withstand, and prevent any strong attacks and threats to the Smart BKC 1.0 architecture
5. Shall provide some kind of individual security “wraparound” across key modules of Smart BKC 1.0 initiatives to control and “lockdown” any security breach at modular level
6. Should have strong firewalls, rouge code detection, intrusion detection and prevention, and antivirus capabilities
7. Shall bind the entire system security together
8. Should be able to detect anomalies in system security functioning and generate automatic alerts
9. Shall self-learn and update benchmarking configurations for security based upon historic reports on various parameters of attacks, health, performance, security
10. Shall provide all critical metrics of security in a single consolidated dashboard view
11. Should confirm to latest IEEE, EAL, DIT, and DeitY standards related to security

#### 2.1.10 Presentation Layer

1. This will be the top most abstraction layer in the system architecture, interacting with the external interfaces like Smart BKC 1.0 Citizen Portal Users, Smart BKC 1.0 Citizen App Users, and interfaces for external gateways and external shared services as well as Internal MMRDA and other stakeholders
2. All the data transfer and information exchange with the external interfaces for the Smart BKC 1.0 initiatives, that flow through this layer, will be protected by the System Security layer



### 2.1.11 Third Party Shared Services

MSI will be responsible to leverage industry leading Third Party Shared Services, their applications and functionalities, which are readily available in the market, to be integrated with and utilized for multiple components of Smart BKC 1.0 project. MSI will be responsible to determine the Shared services they would need to leverage, deal with the Third Party provider to negotiate and engage required Services, and manage all the transactions related to these services. During deployment of these Shared services, MSI will get approval from MMRDA for the authenticity and quality of the Shared service. Some of the Shared Services that MMRDA proposes to leverage are mentioned below:

#### 2.1.11.1 Analytics Services

To effectively analyze various streams of information related to Smart BKC 1.0 initiatives, and its Citizens, customers, users, MSI should utilize web-based Analytics services and provide dashboard views in the Centralized Command and Control Center. These Analytics Services will help perform various types of predictive analysis and assessments like user trend analysis, user preference analysis, demand analysis, utilization analysis, price point analysis, peak and off-peak load analysis, revenue projections, seasonal escalations and downfalls, etc. This Analytics services can utilize Citizen and Smart BKC 1.0 initiative information related to history of interactions, audit trail of activities, customer segmentation, likes and dislikes, other preferences and satisfaction surveys. MSI and MMRDA can leverage results from such analysis, compare it with the fact based analysis performed in the Core Computing and Data Processing Layer, and generate benchmarking and projection reports. Such information can also be valuable to:

- i. Perform real-time analytics on diverse data points utilizing a web based user-friendly interface
- ii. Classify customers for adding value to the customer requirements and hence enhance relationship
- iii. Manage customer preferences
- iv. Derive revenue streams by integrating data from all customer touch points, provides a holistic view of data, trends and preferences

#### 2.1.11.2 Maps and GIS plug-ins for GIS based location services

MSI should leverage industry leading Maps and GIS related Shared Services for integration with Smart BKC initiatives like,

- i. For Smart Parking users for locating nearest vacant parking spots
- ii. For Integrated Platform layer for locating site of incidents, site of faulty nodes and devices, etc.
- iii. For Citizen Apps for locating and directing towards points of interest



### 2.1.11.3 External Gateways (SMS, Emails, and Payment)

MSI should leverage industry leading External Gateways related Shared Services for integration with Smart BKC initiatives like,

- i. To send bulk or customized SMSs and emails automatically or manually for system notifications, incident notifications, failure notifications, transaction notifications, etc. to system admin, system operators, Citizens using Smart BKC applications and services
- ii. To enable BKC Citizens to pay for or recharge Smart BKC initiative related services by sending SMS. This SMS will be sent in a pre-defined format and authenticated against user credentials, before deducting money from the Citizen's eWallet and accepting their payment
- iii. To provide convenient, online, and secure modes of payment to Citizens and users of Smart BKC initiatives

### 2.1.11.4 eWallet Services

MSI should leverage industry leading, reliable eWallet services approved by Reserve bank of India (RBI). The eWallet services should provide all financial transaction based services to Smart BKC Citizens within BKC as well as outside of BKC, within India. MMRDA would prefer that the MSI should customize existing third party eWallet services and create an eWallet for Smart BKC initiatives, called "Smart BKC eWallet". MSI should track, maintain, and manage all financial transaction details and logs related to eWallet payments for Smart BKC services. The eWallet service should allow the following for Smart BKC Citizens:

- i. Should allow flexibility for Citizens to avail all proposed and future Smart BKC services using this industry leading eWallet service
- ii. Should ensure secure and committed transactions for Smart BKC Citizens
- iii. Should have an option to top up the "Smart BKC eWallet" using all Government of India (GoI) approved mediums such as net banking, credit cards, debit cards
- iv. Integrate securely with third party payment gateways
- v. Allow Citizens to reserve parking spots, pay for Premium Wi-Fi services, or other such Smart BKC Citizen services
- vi. Allow MSI to set a limit for minimum or maximum amount to be stored in the eWallet based on user trend analysis
- vii. Allow BKC Citizens to leverage "Smart BKC eWallet" for other web based utilities within India

### 2.1.11.5 Mobility Platform Services

MSI should leverage industry leading Mobility Platform services which will enable integration of heterogeneous mobile devices, networks and user groups for the design, implementation, and future enhancements of the Smart BKC Citizen Mobile Application. This Mobility Platform will help with,



- i. Deployment of multiple applications for different use cases on a single BKC Citizen App in online/offline mode
- ii. Deployment of OS (Operating System) independent applications for Smart BKC initiatives on the Citizen App that will run seamlessly on mobile devices supporting leading OS like iOS, Android, Windows
- iii. Publish Smart BKC's Citizen App on leading app stores like iOS, Android, Windows
- iv. Help monitor and manage integration, communication, scalability, security of all external utilities within Citizen App
- v. Manage integration of Citizen App with external gateways and third party shared services
- vi. Support interoperability and integration of Smart BKC Citizen App with other public and private mobile applications

#### **2.1.11.6 Helpdesk Services**

MSI will be responsible for utilizing Helpdesk services for supporting the customers (like BKC Citizens, visitors, etc.) of Smart BKC initiatives as well as for supporting MSI's on-field staff. Since, this Helpdesk service will act as the face of (first interface) MMRDA and MSI's services to the external World, the Helpdesk service should be based on leading industry practices and the Helpdesk representatives should be able to communicate calmly and clearly with all Citizens in English and Hindi.

This Helpdesk service should have the capability of capturing feedback from various sources like calls (helpline), SMS services, email services, Citizen Web Portal, and Citizen App. BKC Citizens should also have the option to send their feedback by taking pictures and sharing them via the Citizen App or Citizen Portal.

All the Helpdesk queries will be managed remotely (leveraging a cost effective outsourced model) by the MSI by assigning Helpdesk resources who understand the Smart BKC 1.0 project and can address FAQs (Frequently Asked Questions) related to Smart BKC 1.0 initiatives. This Helpdesk should be scalable to support excess customer service load in the initial stages post go-live, or to address spike in number of customers after the Smart BKC services mature. Only the highest level of escalations for critical customer issues will be handled by the Helpdesk Lead situated at MMRDA's Centralized Command and Control Center

#### **2.1.11.7 AADHAR enabled eco-system:**

The MSI shall evaluate and make provisions for AADHAR enabled authentication system and AADHAR enabled payment gateway, to be integrated with the Smart BKC architecture.



### **3. Overview of Smart BKC 1.0 Network Architecture**

The proposed network architecture comprises of the following layers namely Data Center, Aggregation and Distribution Layer, and Smart BKC Street Infrastructure layer. MSI may suggest a more innovative and optimized solution based on the requirements of Smart BKC 1.0 project components, industry best practices and established standards by Department of Information Technology, Government of Maharashtra and Department of Electronics, Information and Technology, Government of India. As proposed in the network architecture diagram below, all the proposed network components should be designed with built in redundancy to avoid any single point of failure. MSI has to maintain minimum latency levels across the network architecture based on leading industry standards. Following are the proposed layers in the network infrastructure for Smart BKC 1.0 Project:

#### **1. Data Center**

The flow from the top depicts two different ISPs, for network redundancy, terminating at the data center that will host Smart BKC 1.0 project. A similar redundancy pattern, by having two different ISP providers, shall be provided till the last mile for seamless connectivity and operations of Smart BKC 1.0 Public Wi-Fi and Related Network Infrastructure. MSI shall also ensure availability of ISP independent IPs to MMRDA for the Smart BKC project. The proposed Data Center should host the following components, but not limited to:

- i. Core routers - Will be connected to core switches via Link load balancers and NGFW with Intrusion prevention system.
- ii. Core Switches - Core switches will be connected to
  - a. Application, database and storage servers
  - b. Virtualized Infrastructure servers (DHCP, AAA, NM, etc.)
  - c. Wireless LAN Controllers in High Availability mode
- iii. Link load balancers - For ISP aggregation and ISP link(s) load balancing
- iv. Firewall with Intrusion Prevention System - The data center shall be equipped with Next Generation Firewall (NGFW) to prevent threats related to Cross-Site Scripting (XSS) and Structured Query Language (SQL) injection, and Intrusion prevention systems.

The Data Center must be in synchronization with the Disaster Recovery center at all times, with minimum latency.

#### **2. Aggregation and Distribution Layer**

The Aggregation and Distribution Layer will consist of, but not limited to:

- a. Aggregation Switches: These aggregation switches will be placed in a nearby co-location (MMRDA old building and MMRDA new building) to prevent any single point of failure due to building failure or building mishaps. The aggregation switches will be connected to the Public Wi-Fi and Internet services cloud to render Wi-Fi service for Smart BKC 1.0 Public Wi-Fi users.
- b. MMRDA would prefer for the MSI to have a logical distribution layer to facilitate logical forwarding of aggregated data from aggregation layer to Core switches.

#### **3. Smart BKC Street Infrastructure Layer**

Smart BKC Street Infrastructure Layer will consist of but not limited to:





- a. Junction Switches: The aggregation layer switches, stationed at co-locations will be connected to junction switches spread across BKC. The junction switches will be in a fiber ring topology to mitigate any single point of failure.
- b. Street sensors and Mobile devices: The junction switches will take un-interrupted input from mobile devices and Smart BKC street infrastructure via the wireless access points.

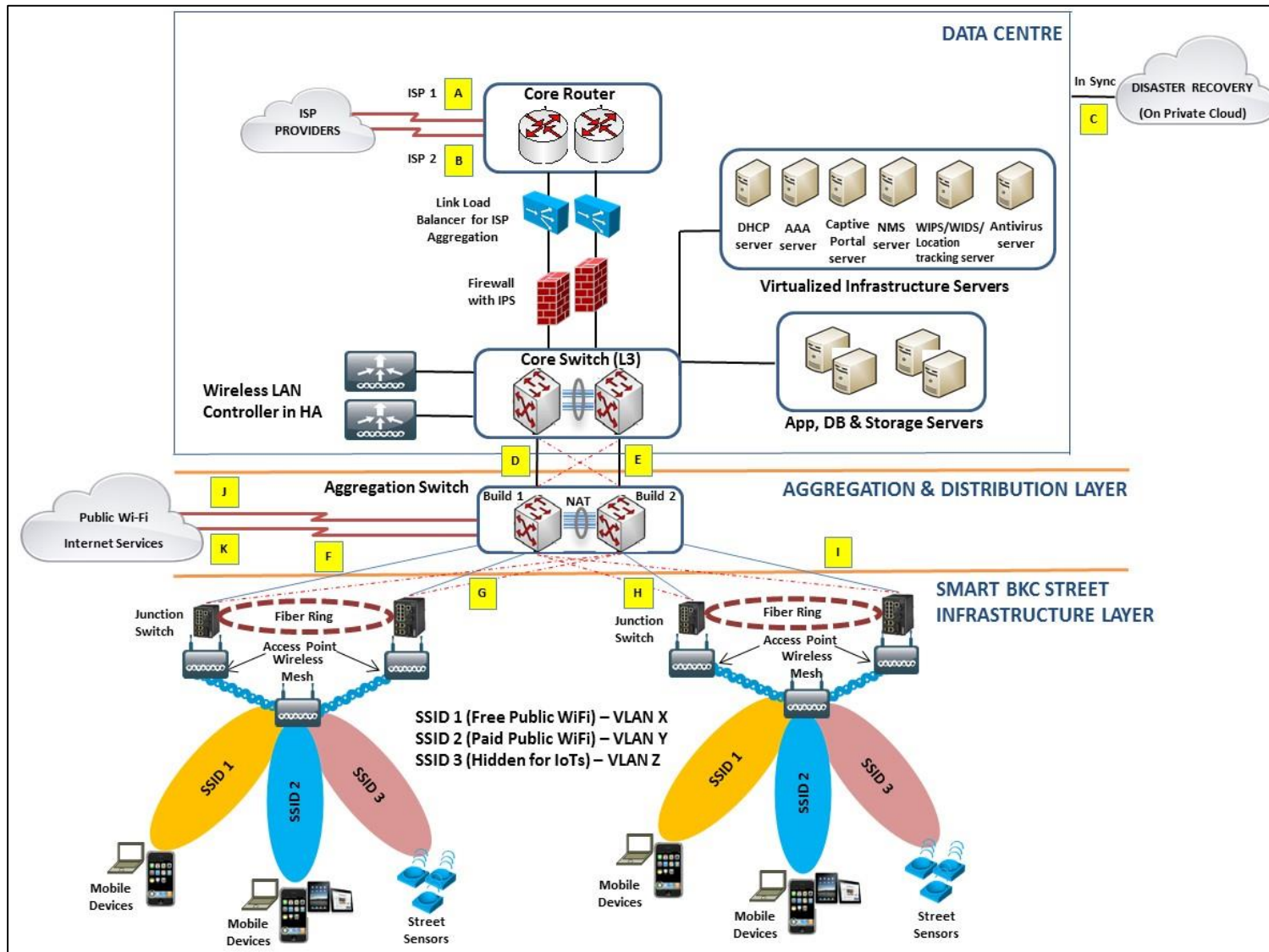
**Network Link Description Table**

S. No.	Link	Description
1.	A	Primary connectivity between ISP and Data Center
2.	B	Redundant connectivity, from a different ISP other than A, between ISP and Data Center
3.	C	Connectivity between Data Center and Disaster Recovery Center
4.	D & E	Connecting links between Core Switches and Aggregation Switches in high availability mode to offer redundancy between them
5.	F, G, H & I	Connecting links between Aggregation Switches and Junction Switches in high availability MMRDA
6.	J & H	Connectivity link to Public Wi-Fi Internet Services with minimum two different ISPs for link redundancy





### 3.1. Smart BKC 1.0 Network Architecture





## 4. Centralized Command and Control Center

### 4.1 Overview of Existing Environment Related to Command and Control Center

In accordance to MMRDA's vision to implement Smart BKC initiatives, a centralized Command and Control system will be required to monitor, manage, control, analyze, communicate to and fro, within and outside the network and respond to daily scheduled activities and abrupt incidents. Currently, MMRDA does not have any Command and Control Center for any aforementioned initiatives.

### 4.2 Command and Control Center Key Objectives/Outcome

1. To serve as centralized monitoring and decision making hub for managing project status, resources, devices, equipment, and assets for the Smart BKC project
2. To serve as centralized Network Operating Center (NOC) for monitoring Smart BKC initiatives
3. To serve as central information, communication, incident management, and decision making hub for MMRDA, including interface with other Government and external agencies like fire, police, hospitals, and other security agencies
4. The Centralized Command and Control Centre would act as the nodal decision analysis hub which would facilitate MMRDA PMO for adequate project management and decision making

### 4.3 Command and Control Center components

The Command and Control Centre will comprise of the following solutions:

1. A Video wall and operator terminals for centralized monitoring, controlling, and managing all Smart BKC 1.0 project related activities and the entire architecture in real time and taking various decisions during project execution.
2. A centralized dashboard for Comprehensive Project Management Solution
3. A centralized dashboard of the Network and Security Management Solution (NSMS) that will centrally monitor and manage all the network components and network security for each of the Smart BKC 1.0 initiatives.
4. A centralized dashboard of System Security Management Solution for monitoring and managing security of all the software solutions. However, it will only monitor, but not manage the Network Security Management System.
5. A centralized dashboard of the DC/DR Monitoring and Management Solution for virtually monitoring and managing all Data Center and Disaster Recovery center related activities.
6. A centralized dashboard of the Database Storage Management Solution
7. A centralized dashboard for monitoring Integrated Platform and all applications and services for Smart BKC project.



8. A centralized dashboard for all project metric, trend analysis etc.

#### 4.3.1 Video Wall and Operator Terminals Setup

The Video Wall and Operator Terminals will be installed at MMRDA premises in BKC and will be used for viewing, reporting, monitoring, controlling and management of all events, incidents, alerts, and updates for Smart BKC project. Following are the setup requirements:

1. MMRDA will provide a designated area for setting up the centralized Command and Control center within its office building in BKC where;
  - a) A Video Wall will be used as the centralized display wall for monitoring all Command and Control center operations
  - b) Multiple Operator Terminals (personal computers) will be used for centralized management of all Command and Control center operations
2. MSI will be responsible for planning, procuring, commissioning, and setting up the Command and Control center area, Video Wall, and Operator Terminals, upon appropriate approvals from MMRDA
3. Detailed plan of the Command and Control setup should be prepared by MSI only after project initiation
4. MSI should set up state of the art, well connected, secure, yet cost effective centralized Command and Control center
5. There will be Biometric authorized secure access of the restricted Command and Control Center area. These devices will be e-Aadhaar based Biometric devices.
6. The Video Wall will have 3x2 (width x height) 40 inch LED displays with independent feeds and display for each screen. Each of these displays should be configurable to display rotating dashboard views.
7. A minimum of four Operator Terminals, each with two 23 inch monitors, CPU (Central Processing Unit), keyboard, and mouse; for managing, controlling, monitoring, reporting the Command and Control center operations and taking appropriate actions.
8. All these display screens and operator terminals will be of latest configurations, have internet connectivity, and should have capability to be connected on MMRDA's network
9. Two IP based fixed dome cameras will be installed for security and monitoring of Command and Control Center area related to personnel safety, tampering, un-authorized access, etc.
10. Other LAN components as required to integrate and connect the complete video wall and operator terminals
11. MSI should ensure Command and Control center area has rodent repellent provision, fire proofing provisions, and smoke detection system
12. All the infrastructural requirements, i.e. air conditioning requirement, seating arrangement, flooring, false ceiling, painting, aesthetics, partitioning etc., needed to build the Command and Control area shall be carried out by MSI as per the layout provided by the MSI based on approval by MMRDA.



### 4.3.2 Helpdesk Monitoring Tool

The MSI will be responsible to implement Helpdesk support for Smart BKC field management staff, MSI's on-field IT teams, and for BKC Citizens and Customers. The MSI should set-up outsourced Helpdesk services supporting Smart BKC project and all the Smart BKC 1.0 initiatives. Initial inquiries or informational inquiries should be routed to the call center and last level of escalation should be routed to a helpdesk lead stationed at MMRDA's Command and Control Center. The Helpdesk lead stationed at MMRDA's Command and Control Center will have a monitoring dashboard to view/manage all the inquiries, and have the ability to handle last level escalation of critical inquiry or complaint at any time.

The proposed outsourced Helpdesk solution should:

1. Support all 14 ITIL IT Infrastructure Library v3 processes like request management, problem management, configuration management and change order management with out of-the-box templates for various ITIL service support processes. The MSI should provide ITIL v3 certification letter on all 14 process.
2. Support tracking of SLA (Service Level Agreements) for call requests within the help desk through service types.
3. Should integrate tightly with the Knowledge tools and CMDB (Common Management Database) and should be accessible from the same login window.
4. Should have a built-in workflow engine to track events and incidents, and follow through till they are resolved. It must also support custom (non-linear) workflows with decision based branching and the ability to perform parallel processing.
5. Should allow IT team to create solution and make them available on the end-user login window for the most common requests
6. Should provide details about the incident/event logs so that they can be integrated with the Comprehensive Project Management Solution
7. MSI should provide all necessary hardware, software component, to helpdesk lead stationed at MMRDA.

### 4.3.3 Integrated Centralized Dashboard

1. Should provide a centralized view of the health, performance, and utilization of all IT and non-IT assets on the single dashboard
2. Should have the ability to customize and pre-define events and activity workflows, based on the SOPs
3. Should depict critical event based correlations
4. Should be able to highlight priority of an event based on severity and business impact
5. Should be able to manually relate events and create new correlation workflows



## **5. Smart BKC Initiative 1 – Public Wi-Fi and Related Network Infrastructure**

### **5.1 Overview of Existing Environment Related to Public Wi-Fi**

1. Daily average of existing BKC stakeholders is around 2 lakhs which includes corporate employees, ancillary staff, visitors, and residents. This average does not include the people visiting MMRDA exhibition grounds.
2. On average there are 70 exhibitions held annually at MMRDA grounds which is of average 5-6 days each, and get approximately 1 lakh visitors a day.

### **5.2 Public Wi-Fi and Related Network Infrastructure Key Objectives/Outcomes**

1. Provide a strong, dedicated, seamless, and highly available Wi-Fi and wired network for seamless interoperability of Smart BKC initiatives and BKC Citizens and visitors
2. Provide reliable, secure, and seamless outdoor public W-Fi access for BKC citizens to collaborate and perform business activities on the go, in the E and G blocks

### **5.3 Public Wi-Fi and Related Network Infrastructure Scope – Functional Requirements**

The key functional requirements are broadly classified into 2 categories:

1. A highly available and reliable outdoor Wi-Fi and dedicated wired network for providing seamless Public Wi-Fi services to BKC citizens
2. A separate, highly available and reliable outdoor premium Wi-Fi and dedicated wired network for exhibition organizers at the two MMRDA grounds in BKC

The key functional requirements are described in further details below:

1. Provide a strong, seamless, and highly available Wi-Fi and wired network for seamless outdoor public Wi-Fi connectivity in the E and G blocks. The network must have the following characteristics:
  - i. High availability of bandwidth – MSI must ensure appropriate bandwidth allocation for free Public Wi-Fi users, Premium Public Wi-Fi users, and wired and Wi-Fi services in MMRDA grounds
  - ii. High security – The entire Wired and Wi-Fi network should be highly secure and should be monitored and managed from the centralized Network and Security Management System (NSMS).
  - iii. High quality of service for user – MSI must ensure high quality of Wi-Fi service for all Citizens in the E and G block with proper interference mitigation mechanism.



- iv. Multiple authentications – MSI must ensure multiple authentication mechanism for all Wi-Fi users (free and paid). For example each user utilizing Smart BKC Wi-Fi services will register via the Citizen Mobile App or Citizen Web Portal, and then a One Time Password (OTP) will sent to their registered mobile device
  - v. Limitation on number of registered devices – The network authentication system should restrict registration of maximum one device for free Public Wi-Fi user and maximum of two devices per paid Premium Wi-Fi user
  - vi. Authentication, authorization, and accounting – The NSMS will control each registered user’s access to Wi-Fi network, enforce policies, track audit usage, and collect relevant information required to account for user’s Wi-Fi sessions and services.
2. Provide seamless and secure free public W-Fi access to BKC citizens in all outdoor public areas in the E and G blocks
- i. Public Wi-Fi access will be free at the speed of up to 2 Mbps (megabits per second) with a maximum download limit of 50 MB (megabyte) per day, to collaborate and perform business activities on the go.
  - ii. Each session cycle for free Public Wi-Fi user will expire in either 1 hour or after the user exceeds the download limit of 50 MB per day, whichever is earlier.
  - iii. If the session for a user expires in 1 hour and the download limit is not exceeded, the user will be allowed for another free Public Wi-Fi Session of 1 hour after a cooling period of 30 minutes. The user will be allowed to access multiple such sessions in a day till his/her download limit of 50 MB per day is not exhausted.
  - iv. Each free Public Wi-Fi user will have a limit of 1 GB (gigabyte) download limit per calendar month from their access start date, after which their session will expire for that particular month.
  - v. When the user’s monthly download limit is about to expire, an informative message should be sent to the user informing that only 5 MB data is left for the month, after which his/her monthly access limit will expire.
  - vi. There will be restrictions on access and download from malicious sites for free Public Wi-Fi users, details for which will be decided during detailed design sessions.
  - vii. A denied URL list should be applied on this free Public Wi-Fi SSID and should be updated on a run time basis, to self-learn and automatically update the list.
  - viii. Any malicious user on the free public Wi-Fi should be immediately dropped
3. Provide seamless and secure paid Premium Public W-Fi access to citizens in all outdoor public areas in the E and G blocks
- i. Paid Premium Wi-Fi access will be provided at the speed of 5 Mbps (megabits per second) with a minimum download limit of 1 GB (gigabyte), to collaborate and perform business activities on the go.
  - ii. Users will also be able to purchase paid Premium Wi-Fi vouchers from designated outlets within BKC, upon producing a valid Government approved photo id. The MSI should provide online voucher options with online authentication and payment mechanism



- iii. The MSI should design and integrate usage of Aadhaar PoG and Aadhaar authentication for payment gateway and for individuals having Aadhaar card.
  - iv. The MSI can come up with attractive plans for paid Premium Wi-Fi users providing 5 Mbps speed, with varying download limits like 2 GB limit, 3 GB limit, 4 GB limit, and 5 GB limit. To encourage users for buying such premium plans with increasing download limit, the MSI should ensure additional incentives for users on plan rates with higher download limits.
  - v. Each session cycle for paid Premium Wi-Fi user will expire only when the user exceeds the purchased download limit.
  - vi. When the Premium user's session download limit is about to expire, an informative message should be sent to the user informing that only 5 MB data is left for that particular session, after which his/her would need to recharge.
  - vii. If the session expires for paid Premium Wi-Fi users, they can still access free Public Wi-Fi via the SSID mapped for free Public Wi-Fi, to access Smart BKC services.
  - viii. Any malicious user on the paid Premium Wi-Fi should be immediately dropped
  - ix. A denied URL list, containing malicious websites, should be applied on this Premium Wi-Fi SSID and should be updated on a run time basis, to self-learn and automatically update the list.
  - x. Additional security provisions must be built in to the network architecture for each premium paid user session to protect their data and privacy
4. Provide 5 Mbps highly available premium paid internet connection (Wi-Fi and wired) connection at the two MMRDA grounds for the exhibition hosts and participants throughout the exhibition period.
- i. This service is focused on the exhibition organizers that require additional dedicated internet connection (wired) for their exhibitor booths, conferences and meeting areas, seminars, etc.
  - ii. This service is also focused on the exhibition organizers that require paid Premium Wi-Fi services for their exhibition guests.
  - iii. Since MMRDA hosts around 70 exhibitions each year, for a maximum of 10 days per exhibition, the MSI would have to formulate some innovative methods to utilize burstable bandwidth (bandwidth on demand) during these exhibitions.
  - iv. The MSI may provision a temporary internal Wi-Fi setup during the peak exhibition season, which may include extra indoor APs within the MMRDA grounds, in addition to the existing outdoor APs
  - v. The exhibition organizer should have provision to create multiple child accounts to purchase paid Premium Wi-Fi as well as for the dedicated wired connections for their exhibitors. Upon making an agreed lump sum payment, the organizer will be provided with a unique code and password per exhibition that all its users will use to register and use the Wi-Fi and wired internet network. Based on the large volume of the number of users per exhibition, the organizers will be offered discounted rates for paid Wi-Fi compared to the individual pay per use.





- vi. The MSI can come up with attractive plans per user for paid Premium users at MMRDA grounds, providing 5 Mbps speed, with varying download limits like 2 GB limit, 3 GB limit, 4 GB limit, and 5 GB limit. To encourage users for buying such premium plans with increasing download limit, they should get additional incentives on plan rates with higher download limits.
  - vii. Additional security provisions must be built in to the network architecture for each premium paid user session to protect their data and privacy
5. Provision for citizen and guest registration should be made through the Citizen Mobile App or captive Citizen Web Portal for accessing free and/or premium Wi-Fi. All free Public Wi-Fi users must register using the Citizens App or captive Citizen Web portal and enroll as secured registered users for Wi-Fi. Following procedures will be followed for Citizen registration but not limited to Free Public Wi-Fi user registration:
- i. User registration page should register each user by capturing these required fields viz. first name, last name, mobile number, email address, and company name.
  - ii. Once the user registers online, a One Time Password (OTP) is send to the user either as an SMS or email, based on the user preference.
  - iii. If the user has a mobile number and chooses to get the OTP on SMS, the SMS is sent and if the user chooses email, the OTP is sent over email.
  - iv. User has to enter this OTP code online, upon authentication of which the user can avail free Wi-Fi service
  - v. The users session time will start as and when the user has been authenticated and is latched on to the free Public Wi-Fi network
  - vi. For each free Public Wi-Fi user, backend policy procedures should be implemented for capturing and authenticating MAC address information for their registered device
  - vii. Once the session expires for the free Wi-Fi user, a new OTP needs to be pushed to the user and the user needs to be authenticated based on the new OTP
  - viii. Paid Premium Wi-Fi user registration:
    - a. User registration page should register each user by capturing these required fields viz. first name, last name, mobile number, email address, preferred user name, and company name.
    - b. Once the user registers online, a One Time Password (OTP) is send to the user either as an SMS or email, based on the user preference.
    - c. If the user has a mobile number and chooses to get the OTP on SMS, the SMS is sent and if the user chooses email, the OTP is sent over email.
    - d. User would enter this OTP code online, upon authentication of which the user will be sent an unique password over SMS or email
    - e. The user should then enter his/her preferred user name (as entered by user before) and the password sent on the authentication screen
    - f. Upon validation of the correct user name and password, Premium Wi-Fi access will be granted to the user.



- g. The users session time will start as and when the user has been authenticated and is latched on to the Premium Wi-Fi network
    - h. Each Premium user will have to enter their preferred user name and given password every time to access their paid Premium Wi-Fi service
    - i. For each Premium Wi-Fi user, backend policy procedures should be implemented for capturing and authenticating MAC address information for both their registered devices
    - j. Once registered, Premium Wi-Fi users will be connected over 802.1X authentication to their Premium Wi-Fi network when they are in the E and G blocks in BKC
  - ix. For any users that do not use Wi-Fi frequently, their registration will expire in 3 months. But their registration information should be stored at least for 1 year as per TRAI guidelines for lawful validation.
  - x. Visitors attending the events in BKC will have access to the free public Wi-Fi as per the same session rules as BKC Citizens
6. All DoT/TRAI guidelines must be followed for Wi-Fi security, including registration of users for accessing BKC's public Wi-Fi which states that,
- i. Users with Indian mobile numbers – SMS with authentication code sent from server
  - ii. Users without mobile numbers – user to register on Citizen Mobile App or Citizen Portal to register and get authentication information via email.
  - iii. In case users have issue with online registration, there will also be provision for users to collect paid Wi-Fi coupons from various buildings and outlets in BKC upon presenting their valid Government issued photo ID. Both Indian and international photo IDs (like passport in case of international users) will be allowed.
  - iv. All DoT guidelines must be followed for authenticating and monitoring internet access once the users are logged onto the Wi-Fi network. Content filtering should be in place to restrict access to sites that are authorized by DoT
7. The Wi-Fi solution must be implemented with cost effective and state-of-the-art, yet proven technology
8. The free and premium public Wi-Fi should each be on separate SSIDs for security purposes
9. The SSID for free Public Wi-Fi should be like "BKC Public Wi-Fi" and SSID for paid Premium Wi-Fi should be like "BKC Premium Wi-Fi"
10. Network should be capable of virtually segregating access to each SSID separately
11. The SSID mapped for paid Premium Wi-Fi services should adhere to 802.1X standards
12. The SSID created for IoTs should be hidden, and not visible to public
13. All citizens utilizing BKC Public Wi-Fi services should have access to key Government of India (Central and State) websites at any time, irrespective of their session based limitations. If the session for free or Premium Wi-Fi user has expired, they can only browse



the key Government website, but not download (file transfer) any files till their session is available.

14. The rates for paid Premium Wi-Fi and wired internet services should be competitive to the market rates of the leading cell phone carriers and Wi-Fi service providers in Mumbai. MSI must obtain MMRDA's approval for establishing these rates and any proposed significant changes in the rates.
15. The complete outdoor Wi-Fi networks must be managed and monitored from the centralized Command and Control center
16. If there are any issues in terms of connectivity for premium paid users, an alert must be automatically sent to the Command and Control center so that appropriate action can be taken to rectify the issue
17. The MSI can create innovative and incremental revenue streams through premium Wi-Fi subscriptions and advertisements, without impacting privacy of the users
18. The implemented network technology must be flexible and scalable to accommodate evolution of business applications without a major overhaul or upgrade
19. The Smart BKC project requires that the proposed WLAN architecture be flexible and scalable to accommodate technical upgrades without major performance impact on the existing system
20. For mounting Wi-Fi related devices like APs, junction box, etc., the MSI will not be responsible to erect poles in BKC. Upon MMRDA's approval, the MSI can leverage existing utility poles for mounting Wi-Fi related devices.
21. MSI will be responsible for all civil and installation work related to last mile connectivity, power supply extensions to devices, installing devices on poles, and any other networking, communication, and infrastructure requirements related to Wi-Fi. Any civil work within BKC should only be carried out after due approval from MMRDA.

## 5.4 Public Wi-Fi Scope – Technical Requirements

The Smart BKC 1.0 initiative requires the following coverage features:

1. Dual-band coverage (2.4 & 5 GHz), with automatic band steering capabilities to support all types of Wi-Fi enabled devices.
2. Ability to support separate SSIDs for Public Wi-Fi and Private Wi-Fi
3. Strong RSSI for demanding WLAN applications.

The Smart BKC initiative requires that the proposed Wired and WLAN network be capable of adhering to strong security measures, with minimal manual intervention, for the following:

1. "Rogue Access Point" detection and remediation
2. "Denial Of Service" detection and remediation
3. "Offline Brute force attack" detection and remediation
4. Interference detection and remediation, from RF, Bluetooth, etc.
5. Strong Intrusion detection and prevention capabilities



6. Security against MITM (Man In The Middle) attacks
7. Security/prevention against user's ability to create a local hotspot on the device to latch on to the public Wi-Fi network
8. Client location tracking

The Smart BKC 1.0 project requires that Wi-Fi Access Points (AP) installed be:

1. The network and access points should support creation of robust and reliable mesh network topology based on the field surveys in BKC.
2. Should be installed in outdoor public areas in the E and G block and provide last mile connectivity with fiber backbone to ensure high bandwidth availability
3. Conform with key International and Indian standards for safety, including RF radiation
4. Protect internally stored configuration information
5. Should have provisions for anti-theft protection, with a case covering the AP but leaving the antenna out
6. APs should support at least 802.11n with dual band 3x3:3 MIMO providing 1.2Gbps speeds and support factors like RF optimization, network security, identify and discard unauthorized access, and traffic or throughput management
7. MSI should perform a detailed survey in BKC to determine the number of APs required and accordingly configure the number of concurrent users per access point, in a way that there is a fair balance between the hardware cost per AP versus bandwidth cost
8. The proposed network architecture should adhere to industry recommended design standards and policies to ensure high quality of services
9. To maintain consistent quality of service for users, network traffic should be prioritized according to applications/users and handled in the AP/Controllers or upstream devices so that critical traffic is processed immediately and network congestions are avoided
10. Overlapping coverage from multiple APs should be considered for redundancy in critical areas leveraging self-form and self-heal characteristics of the mesh Wi-Fi network
11. To avoid network starving, AP should be able to restrict per user bandwidth per SSID

#### Wi-Fi and Wired Management System

The Smart BKC 1.0 project requires that the Wi-Fi and wired management system be capable of performing the following functions, at a minimum:

1. Configuration, enabling & disabling of Access Points
2. Upgrading firmware on Access Points
3. Creating and enforcing system-wide access policies
4. Capping bandwidth by policy or client
5. Blacklisting clients by MAC
6. Real-time reporting:
  - i. Give summary of wireless system status
  - ii. Inventory of Access Points and their current status
  - iii. Clients connected to the system;
    - a. Access Points they are currently associated with
    - b. logical network they are connected to
    - c. physical location using GIS
    - d. authentication method used
7. Historical reports:



- i. Usage statistics by Access Point
  - ii. Usage statistics by client
  - iii. Interference statistics
8. Security statistics
  9. Security events, forensic auditing

The Smart BKC 1.0 project requires that Wi-Fi Controllers installed should have the following features:

1. The WLAN controllers could be either hardware cum appliance based controller or software based controllers in which APs would act as virtual controllers.
2. Given the high volumes in Public Wi-Fi networks, MMRDA would prefer that the MSI propose a hardware based controller solution so that they are easy to monitor, manage, control, and upgrade in real time from the centralized Command and Control Center
3. The controllers should ensure high throughput without sacrificing any security policies, high availability, resiliency, build in redundancy within the WLAN network, dynamic user load balancing, seamless roaming experience for users, and flexible architecture to accommodate technology enhancements
4. The controllers should communication back and forth with the centralized Network and Security Management System (NSMS) in real time.
5. The external casing for the junction box consisting of the AC adaptor and controllers should be IP66 compliant and weather proof.

#### Wi-Fi and Wire Backbone Network

The Wi-Fi and wired backbone network must at the minimum perform the following functions:

1. The network should support aggregation of multi-vendor ISP bandwidth to build a strong and reliable backbone for Wi-Fi architecture. It is proposed that the MSI will utilize at least a minimum of two different ISP (Internet Service Provider) sources to build Smart BKC's Wi-Fi and wired backbone.
2. The Wired and Wi-Fi network should support mesh (or any leading network topology) technology and a strong fiber backbone to have seamless and high available connectivity with the controllers and backhaul network
3. For effective RF management, the network topology should be designed optimally to mitigate RF interference.
4. The network should have the ability to control the coverage area of each access point to ensure that frequency bands are effectively reused
5. The network should have built-in features to load balance the users between multiple access points as well as different bands in an access point so that there is a fair allocation of airtime to each user
6. The network should support multitenant architecture with multiple SSIDs and logically separated VLANs
7. The network should have built-in encryption mechanism to encrypt all communications and data transfer over the Wi-Fi network for paid Premium Wi-Fi users
8. The latest BIS, DeitY, IEEE guidelines, and WPC standards for APs should be followed while designing the public Wi-Fi network architecture
9. The NSMS should provide multiple access levels and privileges based on user roles for accessing the core network and related infrastructure. Details of the users roles and their



corresponding access management will be determined during design phase a pictorial layer for ISP backbone in BKC and approximate Wi-Fi access point layout is attached in Annexure





## 6 Smart BKC Initiative 2- Smart Parking

The Smart Parking initiative in BKC is aimed at providing parking management and guidance system. This shall be achieved via a sensor based smart parking solution to identify each parking slot and enable availability of accurate parking information. Details related to the Smart Parking initiative requirements are mentioned in the following sections.

### 6.1 Overview of Existing Environment Related to Smart Parking

1. There are currently 1619 four-wheeler parking spots, 350 two-wheeler spots and 166 bus spots spread over seven parking lots. Another 700 additional parking spots spread over five more parking lots has been envisaged by MMRDA
2. Parking Lots in BKC under consideration for Smart parking Solution can be categorized into three types:
  - i. **Indoor (Covered) Parking Lots:** This type of parking consists of all covered parking areas considered under this project. The parking lot usually has an enclosed or sheltered area segregated for parking generally inside a building or commercial complex. MMRDA is looking for a long term smart parking solution for this type of parking. It shall include but not limited to entry and exit barriers, single space recognition, loop sensors, slot availability information, advanced slot booking facility and map based guidance system up to individual slots.
  - ii. **Open (Outdoor) Parking Lots (Permanent):** This type of parking consists of demarcated area for parking near a street or road. MMRDA is looking for a long term smart solution for this type of parking. It shall include but not limited to entry and exit barriers, single space recognition, loop sensors, slot availability information, advanced slot booking facility and map based guidance system up to individual slots.
  - iii. **Open (Outdoor) Parking Lots (Temporary):** This type of parking consists of all areas which are temporarily being used for parking and are open uncovered spaces. However, open parking lots have fenced area or zone demarcated for parking. MMRDA is looking for a temporary smart solution for this type of parking lot. It shall be equipped with basic smart parking solution including but not limited to entry and exit barriers, map based guidance and overall parking availability information.
  - iv. **Street Parking:** This include street parking which are individual marked parking slots on street. MMRDA is looking for a long term smart solution for this type of parking. It should include but not limited to single space recognition using sensors or edge based video analytics, slot availability information and map based guidance system up to individual slots.
3. A brief description of all the parking lots has been mentioned in Section – IV, Annexure – 4, Bid-related Information – 2: Summary of Parking Lots.
4. A pictorial layout of all parking lots in E&G Block have been provided in Annexure 5



## 6.2 Smart Parking Key Objectives

Following are MMRDA's key objectives from the smart parking initiative

1. To uniquely identify all parking spots through sensor and/or video based and other smart parking technology solutions
2. To enable accurate information on availability of parking slots in real time through monitoring entry and exit of each vehicle in each parking lot
3. To enable parking guidance system to direct drivers to available parking spot
4. To enable users to pay on the spot or reserve parking spots via citizen mobile app or SMART BKC online portal

## 6.3 Smart Parking – MSI/Vendor Guidelines

### 6.3.1 Smart Parking Guidelines

1. This document mentions proposed smart parking solution for each parking lot.
2. MSI is required to conduct a detailed survey to study, validate and submit all updated documents, survey reports and maps as part of the proposed solution to MMRDA.
3. The MSI may propose any other innovative solution to increase occupancy of parking lots. However, the MSI will be required to take approval from MMRDA before implementation of any solution, whether proposed or otherwise.
4. The MSI should ensure at all times that the parking lots are utilized by cars, cabs, two wheelers, school buses and other small vehicles, but no heavy or medium commercial vehicles. For instance no trucks, trailers or tempos are allowed in BKC.
5. The MSI should provide a smart handicap friendly parking system.
6. The solution provided by MSI shall include end devices for parking management and revenue collection and alternate fallback mechanism for ensuring smooth working of Smart Parking initiative.
7. All revenues generated from Parking should be accounted for and tracked. It should be collected online to the maximum extent. Any leakages in the same will not be acceptable.
8. MSI will be responsible for all civil and installation work related to last mile connectivity, power supply extensions to devices, installing devices and equipment, and any other networking, communication, and infrastructure requirements related to Smart Parking.
9. Any civil work should be carried out only after due approval from MMRDA.

### 6.3.2 Existing Parking Contracts In BKC

1. MSI will be responsible for implementation and maintenance of all elements of Smart Parking initiatives for all the existing and upcoming MMRDA parking slots for the entire duration of the project.
2. MMRDA has existing contracts with various Parking Management Contractors for operations of MMRDA parking slots, time period of which varies per Parking Lot. MMRDA





directly receives approximate Annual “Fixed Parking Revenue” of approximately Rs. 10.5 crores with an annual escalation of 10% every year from these existing (In Operation) Parking Lot Contractors. MSI will not be responsible for operations and sharing of the Fixed Parking Revenue generated during the period of above existing Parking Management Contracts. Details in Section – IV, Annexure – 4, Bid-related Information – 2.

- 3 After the expiry of these existing Parking Management Contracts, MSI can work with the existing Parking Management Contractors and determine an Engagement & Operation Model, or work with a different Parking Contractor for end to end Operation, Maintenance & Management of all MMRDA Parking Lots. Thereon MSI will be responsible for paying the “Fixed Parking Revenue” to MMRDA throughout the MSI contract period as defined in Section – IV, Annexure – 4, Bid-related Information – 2
- 4 MSI may innovate to establish other Revenue streams within the parking lots and infrastructure established for smart parking after approval of MMRDA. Additional Actual Revenue generated over and above the Fixed Parking Revenue shall be shared by MSI after 2 years Post Go-Live as detailed in Engagement Model mentioned in Section - I, Clause 3.6.1
- 5 The modalities of the same can be finalized with the selected bidder after mutual discussion with MMRDA during the Project Contracting Stage

## 6.4 Smart Parking Scope – Functional Requirements

### 6.4.1 Overall Functional Requirements

The overall functional requirements for the Smart Parking Solution are mentioned below:

1. Should be equipped to track, monitor and manage indoor (covered) parking, open (outdoor) parking and open street parking.
2. Should ensure that all parking slots are individually and clearly marked. Such individual markings should have a one-to-one mapping with the parking sensors, and also help with the appropriate placement of cameras.
3. Should include an Parking Management and Parking Guidance System to direct drivers to available parking slots
4. Should have the capability to uniquely identify each motorist entering any of the parking lots. MSI may propose barcoded tickets, magnetic strip cards, RFID cards, Smart Cards, QR Coded entry or any other technology as deemed fit by the MSI.
5. Integrating information related to all Smart Parking components, including hardware components like entry/exit devices, barriers, wireless handheld devices, sensors; and software applications to perform parking related functions like payment, reporting, tracking, providing guidance, etc. This information will be monitored and managed in the Centralized Command and Control Centre.
6. Should ensure that all sensors, devices and equipment for parking have the capability to communicate back and forth with the Command and Control Centre with respect to data and feedback



7. Should ensure availability of real time parking information by monitoring sensors, entry and exit points in each parking lot
8. Should allow BKC Citizens and visitors to access the Parking Guidance System via Citizen App and Smart BKC web portal
9. The solution should have the capability to include any additional parking lots in the existing citizen app for booking of slots. Moreover, the solution should have capability to integrate with other similar parking apps in order to work hand in hand with other parking lots in BKC.
10. Should provide an application for greater visibility into parking related details through analytics, such as usage and vacancy periods, premium parking demand, etc. for making informed decisions.
11. The solution should be automated, reliable, cost effective, scalable, secure, environment friendly, energy efficient and must entail minimum human intervention for day-to-day parking management.
12. Should include provisions for the following types of parking reservations:
  - i. **Category A - Walk-in Parking:** This category includes motorists who enter a parking lot without any prior booking. This category of motorists may be provided a QR Coded ticket, or any other advanced technology as deemed fit by MSI.
  - ii. **Category B - On-Spot Online Booking:** This includes the motorist reserving a parking spot on reaching the parking lot (if available). This category of motorists may be identified through a Unique Booking Number (UBN) or a Quick Response (QR) Code, or any other advanced technology as deemed fit by MSI.
  - iii. **Category C - Online reservation for Pre-booking a Spot:** Any motorist will be allowed to book a parking spot in any of the parking lots in E and G blocks through Citizen App or Smart BKC web portal. The user should be charged for pre-booking a spot. If the motorist does not show up for 15 minutes after the pre-booked time slot, the reservation can be reassigned. This category of motorists may be identified through a Unique Booking Number or a Quick Response (QR) Code, or any other technology as deemed fit by MSI.
  - iv. **Category D - Pass-based Parking (Monthly, quarterly, yearly, etc.):** There will be a provision for users to buy monthly, quarterly or yearly passes for hassle-free experience. This category of motorists may be identified through a Unique Booking Number, or an NFC enabled Smart Card, or any other advanced technology as deemed fit by MSI.
  - v. **Category E - Premium Paid Parking:** Premium should be charged for users who wish to book a slot located at a convenient position in the parking lot, for e.g., by the entrance of a parking lot or next to a corporate office entrance. Additionally, premium should be charged for corporate offices that wish to book slots in advance for their employees. This category of motorists may be identified through a Unique Booking Number, QR Code, NFC enabled Smart Card, or any other advanced technology as deemed fit by MSI.



- vi. **Category F - Night Parking:** Motorists should be allowed to avail night parking services for their vehicles at designated parking lots. No commercial heavy vehicles will be permitted for night parking.

#### 6.4.2 Parking Management and Guidance System (PMGS)

The PMGS internally comprises of two subsystems, namely Parking Management System and Parking Guidance System.

The Parking Management System consists of the access control system for tracking vehicles in and out of the parking lot, billing information, and real time information about availability of parking slots. The Parking Management System comprises of components like entry devices, barriers, exit devices, payment device, payment mechanism, wireless handheld device, etc. The Parking Management System components should communicate back and forth with the centralised Command and Control Centre.

The Parking Guidance System will guide the motorist to appropriate parking spots using a combination of digital signs and indicators within the parking lot. The Parking Guidance System comprises of the components like geomagnetic, ultrasonic and magnetic loop sensors for vehicle detection, level/zone display, bay finders, light indicators, electronic directional displays, map based guidance system, etc.

The Parking Management and Guidance System should cater to all types of parking lots in BKC – indoor, open and street.

#### 6.4.3 Parking Management Subsystem

Functional requirements for the parking management components are described below:

1. Entry Requirement
  - i. Entry to any parking space should have outdoor displays/screens showing overall availability of parking slots in that particular parking space.
  - ii. Each entry lane should be equipped with one Entry Device with the following capabilities:
    - a. The Entry Device should act as an Automatic Ticket Dispenser
    - b. It should have touchscreen for motorist to enter Unique Booking Number
    - c. The Entry Device should have Near Field Communication (NFC) capability
    - d. The Entry Device should have capability to connect with Intercom, microphone, speaker and other subsystems
  - iii. The ticket, QR Code and Smart Parking Card or any other technology used by MSI should be capable of capturing data that is easily retrievable at the exit.
  - iv. Every vehicle entering the parking space should be stopped by barrier. The barrier is raised when the motorist is issued a ticket or has been identified as a legitimate user.
  - v. In case the parking lot is already occupied to its capacity, the ticket issuing should automatically be blocked and therefore, the barrier should not open. A message should also be displayed on the outdoor screen stating the same.



- vi. The Entry Device should be able to detect and report :
  - a. Anti-pass back
  - b. Back-out ticket
  - c. Low ticket stock
- vii. The display on Entry Device should have capability to display messages in English, Marathi and Hindi.
- viii. The solution should also include provision to capture the image of vehicle and license plate number of every vehicle entering any of the MMRDA parking spaces using dedicated cameras.

2. Exit Requirements

- i. Any vehicle, before leaving the parking area, should be stopped by a barrier system at the point of exit from the parking.
- ii. The solution should have clearly instructed easy to use interface
- iii. The solution should also include provision to capture the image of the vehicle including license plate number exiting any of the MMRDA parking spaces and the all the information related to the same should be stored at a central server.

iv. Manual Pay Station:

- a. Exit of every parking should be equipped with a manned Pay station (booth).
- b. The exit booth should have appropriate space for keeping devices such as a computer with internet connectivity, QR code reader, credit card reader, printer etc.
- c. For motorists who enter the parking lot using Smart Parking Card, Monthly pass or any other NFC capable card provided by MSI, the exit booth should also have NFC facility for motorist to tap his/her Smart Parking Card for express exit. The payment can also be linked to the e-Wallet of the motorist with auto-debit option and corresponding limits and alerts to the same.
- d. The personnel monitoring the exit Pay Station is also required to manually enter the License number details in the system so that the license number, along with date and time of exit, is stored in the database.
- e. The payment for parking should be collected based on entry time stamp by any personnel stationed at the Pay Station.
- f. The system will calculate the fee automatically and indicate this on the screen clearly visible to the motorist. No manual intervention should be necessary to compute the fee.
- v. Once the vehicle exits a parking slot, the total parking slots available in that parking space should automatically get updated.
- vi. Only after completing the full cycle correctly the transaction will be considered as valid within the car park. However, audit trail of each complete, incomplete and cancelled transaction should be available in the system.
- vii. The solution should be equipped with Anti-pass back technology and be able to detect and report any instance pass back.



- viii. The solution should allow full integration of third party devices with the Parking Management and Guidance System, and capture all transactions to generate customized reports.
  - ix. The solution should track each and every revenue source and should ensure no leakages due to manual intervention.
  - x. The Pay Station should be capable of charging devices.
3. Entry and Exit Barrier
- i. The entrance and exit of each parking lot should have a barrier gate system using technologies such as boom barriers, bollards etc.
  - ii. The barrier should remain in open position for optimal period of time for the vehicle to pass at entrance and exit.
  - iii. The solution should also include provision to capture image of vehicle including license plate number of every vehicle entering and leaving any of the MMRDA parking spaces and the all the information related to the same should be stored at a central server.
  - iv. Barrier should have capability of in built glowing direction signage
  - v. Barrier Arms should have the following options:
    - a. In closed position the full arm should be illuminated red.
    - b. During movement the full arm should be illuminated yellow.
    - c. Once reached open position the full arm should be illuminated Green.
  - vi. Upon horizontal impact by a vehicle, the barrier arm should get detached from the barrier unit with minimal damage to the vehicle and the barrier motor mechanism. An alarm should also be raised and sent to the server and monitoring console, when the barrier is detached.
  - vii. An alert should be sent to the console and server to ensure that the administrator is informed that the barrier is not attached or barrier breakage.
  - viii. All vehicular passages during the time that the barrier is not attached should be recorded and displayed in the reports separately in order to audit the necessary revenue transactions during that time.
  - ix. Upon impact during closure, the arm will stop and stay in the same position. Under no circumstances should the arm re-open upon impact. This is to prevent keeping the arm open for illegal entries or exits.
  - x. The barrier arm should be easy to refit with barrier unit in a short duration (within one minute).
  - xi. If for any reason and external override (fire system) needs to be connected, then this should only be possible over the Entry/exit Device and the switch should be permanently monitored by the Parking Management System.
4. Wireless Handheld Device: The solution should include the use of wireless handheld device for on-street and off-street parking. This device shall be used in case of street



parking or indoor parking or open parking during peak hours or as a fallback mechanism. However, this device must track every transaction limiting any manual transaction to zero.

- i. Street Parking Mode:
    - a. It should be possible to use wireless handheld devices in street parking model.
    - b. On arrival of motorist, it should be able to dispense a ticket
    - c. The same device should also be able to function as cash register
    - d. The transactions should get uploaded instantly and automatically to the central parking management system using on-line connectivity.
  - ii. Indoor or Open Parking Mode: In case of high traffic at any of the parking lots or during peak hours, it should be possible for the wireless handheld device to be used as central cashiering device (i.e. it should be possible to scan the QR Code on tickets issued by the entry device and issue receipts post payment, so that the motorists could pay for the parking and then drive out quickly), without any time consumed for payment transactions at the exit.
  - iii. The device should have capability to print parking receipts and barcoded tickets in real time.
  - iv. Both the functionality of ticket dispensing & cash register should be possible to be combined in one device.
  - v. This wireless handheld device should be an online unit, connected in real-time with Command and Control Centre using either Wi-Fi or GPRS. However, in case of network failure, the device should have capability to transact offline and sync with the server as and when connection is restored.
  - vi. The wireless device to have batteries and power supply along with cradle for charging.
5. Management and Optimization of Parking Slots
- i. Though the solution should be automated with minimal requirement for personnel, each parking lot should be managed by on-ground staff and managers for better functioning and management:
    - a. Indoor Parking: Each indoor parking lot should have sufficient number of personnel at floor level, bay level etc. for managing parking. In addition, the exit Pay Station should have sufficient manpower to handle peak and non-peak hour activities.
    - b. Open Parking and Street Parking: Each open and street parking should have sufficient number of personnel to manage entries, parking, payment and ensuring no illegal/obstructive parking.
  - ii. The number of parking slots have been mentioned in Section – IV, Annexure – 4, Bid-related Information – 2. Maps of all the parking lots have been provided in Annexure - 5. However, the MSI, with prior approval from MMRDA, may optimize the number of slots by reworking the existing parking slots in order to maximize the revenue. It is the responsibility of the Vendor to follow all norms, rules and regulations laid down by Municipal Corporation for Greater Mumbai (MCGM).
  - iii. The MSI may design and mark parking slots with solar based light indicators or any other innovative design.
6. Payment options
- i. The primary mode of payment for parking will be by cash at the Pay Station



- ii. For bookings through Citizen App or Smart BKC web portal application, payment will be made using eWallet, net banking, credit card, debit card etc.
- iii. Additionally, the MSI can implement innovative and cost effective payment methods (such as e-vouchers) upon approval from MMRDA.

#### 6.4.4 Parking Guidance subsystem for motorists

1. Sensors for vehicle detection
  - i. The sensor should be intelligent and accurately detect if the car space is vacant or occupied.
  - ii. Appropriate sensors should be chosen based on the type of the parking spot and its external conditions. The preferred sensors would be geo-magnetic sensors, but the MSI can propose innovative, advanced but reliable implementation approaches using other sensors.
  - iii. The sensor should be able to detect a vehicle irrespective of the depth or height of sensor installation.
  - iv. Each sensor should have its own unique identification in order to be accurately tracked by the Parking Guidance System.
  - v. Each sensor should have an accurate and real time feedback mechanism to be detected automatically by the system in case of faults.
  - vi. It should be placed appropriately per parking spot.
2. Parking aisle light indicators
  - i. Light indicators should be installed for all indoor parking lots for motorist to see the available and occupied spaces from the parking lane easily
  - ii. Once a parking spot is occupied the total parking slots should automatically get updated.
  - iii. The fixation of the light indicators to the ceiling should be easy and fast, and should use a quick fastening clips to easy the installation.
  - iv. The MSI may suggest any similar innovative solution for Open Parking and Street Parking.
3. Informative Display Panels
  - i. The display panels units should indicate available spaces for each parking aisle, bay/zone/level, total parking and should be able to be customized by software.
  - ii. The display panel should be easy to understand and must have graphical directional and zone status indication (as red crosses for zone full or green directional arrows to guide drivers to zones with available spaces).

#### 6.4.5 Citizen Application for Smart Parking

The Citizen App and Web Portal are required as a part of Smart Parking Solution. The requirements of Citizen Application for Smart Parking are mentioned in Section - II, Clause 8.

##### 6.4.5.1 Vehicle and License Plate Image Capture

1. The solution should have capability to automatically capture details of the license plates of the vehicles at every entry and exit of each parking lot.
2. The image should be clicked at the entry point when the ticket is issued and at the exit point during payment.



3. The image of the license plate should be linked to the details of the corresponding ticket issued in real-time and stored in the database for one month. This information will be stored in the centralized Command and Control Center
4. The system checks daily whether the vehicles that have entered the premises but are yet to leave. Thereby PMGS can generate alert if any vehicle is overstaying in the parking lot over 24 hrs.
5. The MSI shall install appropriate cameras at entry and exit of each Parking Lot.

#### 6.4.5.2 Provision for Smart Card

1. Along with the paper ticket, the MSI can propose a cost effective smart parking solution to include NFC enabled Prepaid Smart Card system for premium customers and customers opting for monthly reserved parking passes.
2. The NFC enabled smart card reader would be available at Pay Station and would automatically deduct the required payment towards parking.
3. NFC enabled smart card solution is implemented, its devices should be able to communicate to the centralized Command and Control Center, to transmit all parking related information back and forth.
4. Details of the NFC enabled Smart Card approach will be reviewed and approved by MMRDA

#### 6.4.5.3 Real-time Monitoring and Dynamic MIS Reporting

1. The PMGS should include central reporting system establishing the connection between the devices and sensors, and the centralized Command and Control Center
2. The solution should reporting dashboards with location specific thresholds to be set for generating customized reports
3. The solution should be capable of monitoring the number of vehicles that entered or exited the parking premises during any given time
4. The solution should generate reports for each parking spot, in each of the BKC parking lots capturing utilization, cost, and revenue details, and details of assets, people and etc.
5. These reports should be available in all standard acceptable formats like .csv, .pdf, .txt, etc.

### 6.5 Smart Parking Scope – Technical Requirements

Integrated Industry Standard Open Platform should have API based access to the Parking Management and Guidance System as well as the devices utilized for parking. This section gives an overview of the technical requirements, specifications, standards and certifications required for this project.

1. Entry Requirement





- i. The Entry of parking lot should have a color LCD display and should be integrated to display to the customer real time parking slots available for parking in English language
- ii. The display should have capability to project dynamic digital advertisements. This sponsored advertisement will be relayed from centralized Command and Control Center
- iii. Entry Device with the following capabilities:
  - a. The Entry Device should be capable of dispensing tickets with printed QR Code. The Entry Device should also be capable of scanning QR Code from mobile phones and other devices for Category B to Category F types of reservations. Upon pressing the 'Ticket' button, a ticket will be issued with the following details:
    - Entry time & date
    - Unique ticket transaction number
    - Entry Device identification
    - Site identification
  - b. The Entry Device should have touchscreen to allow motorist to enter the Unique Booking Code (alpha-numeric code) received by the motorist in case of Category B to Category F types of reservations. In cases where the motorist enters Unique Booking Code, the Entry Device should dispense a QR Coded ticket with the following details:
    - Pre booking authentication code
    - Entry time & date
    - Unique ticket transaction number
    - Entry Device identification
  - a. The Entry Device should be NFC Ready and should have the capability to read Smart Parking Card, monthly passes, Corporate Cards or any other device.
  - b. An inbuilt integrated intercom capability should be available in the Entry Device, as an option. The intercom should allow VoIP communication with the centralized Command and Control Center. Intercom will be a digitally integrated industrial intercom system, with background noise cancellation technology
- iv. Tickets should be fan-folded in stack of about 2 x 7,000 pieces in each device, with advertising capability.
- v. Entry Device should be able to switch automatically from one box to the other to ensure continuous feed of tickets from both boxes.
- vi. Alarm should be raised when ticket box is about to get empty. And this alarm to be reflected at the monitoring console and server on a real time basis.
- vii. All device activity must be logged in the system activity database.
- viii. The Entry Device should be able to operate in Offline mode. It will retain maximum functionality even if the communication with the server is not available due to network failure or server crash.
- ix. Every Entry Device should have a local memory of a few thousand transactions, in case of no connectivity. Upon reconnecting to the server the unit will update and restore all data.
- x. Under all circumstances the system should be fully auditable for every single transaction.



2. Exit Requirement

- i. Under all circumstances the system should be fully auditable for every single transaction.
- ii. Manual Pay Station
  - a. The Pay Station solution should be foolproof and tamper proof with users not allowed to install applications and change any settings of the operating system.
  - b. It should have all basic operability functions. It should be connected to the Integrated Industry Standard Open Platform via the network and be capable of remote monitoring from the same.
  - c. The transactions should get uploaded instantly and automatically to the central server using on-line connectivity via Wi-Fi. This should be in a real time mode, rather than at intermitted intervals.
  - d. It should be possible to have a view of the health check/ status of the entire parking system from a Manual Pay station using a high level administration password or service technician password.
  - e. Handheld QR Code Scanning Device or any other device used should be connected using a USB Interface
  - f. Automatic receipt issuing is a must.
  - g. Operators should log in and out of their shift using a unique authentication password.
  - h. The system should be capable of accepting all supported means of payment like cash, credit cards, and debit cards.
  - i. At the end of the shift a shift-report should be printed.
  - j. It should be possible to accept the validations and issue free or discounted parking for the short term parkers.
  - k. It should be able to send a report to the validation provider with the amount billed to them automatically at a defined time.

3. Entry and Exit Barrier

- i. The barrier at entrance should receive open and close commands from the Entry Device over the communication interface once ticket issue button is pressed.
- ii. The barrier at exit should receive open and close commands from the Pay Station.
- iii. Barrier should be allowed to be open and close remotely through the server and console with detailed logs associated with this to ensure no unauthorized opening and closing of the barrier is done.
- iv. The entry and exit barrier should communicate with the Entry Device and Exit POS over an intelligent communication protocol to ensure that the system cannot be bypassed.
- v. Open and closing time for the barrier should be within limits as per latest industry standards.
- vi. Barriers should be monitored for collision or forced entry and provide indication to the Integrated Industry Standard Open Platform via its associated Entry Device or Manual Pay station.
- vii. The barrier should have 100% Duty Cycle.
- viii. It should be a non –hydraulic mechanism for low maintenance.
- ix. It should have Self-locking gear system to ensure that the Barrier arm cannot be lifted manually.



- x. It should be free of any front line maintenance requirements – no need to grease application etc.
  - xi. The Barrier should have an integrated two-channel induction loop detector
4. Wireless Handheld Device
- i. On arrival of motorist, the wireless handheld device should be able to dispense a ticket (with printed QR Code)
  - ii. The same device should be able to scan the same QR Code ticket while leaving and generate and print receipt after receiving payment
  - iii. The Handheld device should have the capability to allow personnel to enter the Unique Booking Code of the motorist
  - iv. The Handheld device should also have NFC capability to be able to read NFC enabled Smart Card, Monthly Passes and similar other data carriers.
  - v. The handheld device should be IP based and Wi-Fi enabled, to be included on the secure Wi-Fi network of Smart BKC devices and monitored from the centralized Command and Control Center
  - vi. This handheld device will have the basic parking metering and management application, which will be synced with the overall Parking Management System, and its data will be communicated back and forth from the centralized Command and Control center
  - vii. A wireless handheld device should be provided to the parking managers and operators to manage the parking related operations on the ground.
5. Parking Management and Guidance Solution
- i. The solution will be implemented in the Integrated Industry Standard Open Platform to manage, monitor and control the Smart BKC parking initiative.
  - ii. The solution should be able to monitor and configure all devices with respect to parking (sensors, displays, and signal converters).
  - iii. It should control the system functionality and monitoring should be done from other computers and remotely.
  - iv. It should provide capability to create full report of exact location with respect to floors, areas, levels, etc. It should be customizable and update about occupation and movements of vehicles in real time.
  - v. It should provide real time monitoring of all system status.
  - vi. It should report alarms when devices are not connected or when any equipment failure so it displays on screen alarm.
  - vii. The software should notify alarms after a period of time if a car is abandoned.
  - viii. The software should provide full graphical plan information of the car park with exact locations.
  - ix. The software should allow downloading the information and configuration of fields for maintenance purpose.
  - x. The software application should have built in tools for third party integration to obtain real time information
  - xi. Should provide access at user levels with passwords.
  - xii. The software should have historic log for available spaces, period of time.
  - xiii. The software should be able to handle manual overriding of available spaces, special parking requirements for reserved spaces and handicapped lots.



- xiv. The software should be able to manage energy saving of the car parks according to car park occupation.
  - xv. The software should be able to reduce brightness of light indicators manually or automatically according to occupation.
  - xvi. Software should be able to monitor any CCTV camera with IP connection.
  - xvii. Software should be able to monitor electricity consumption, voltage, energy, and harmonics.
6. Sensors:
- i. Sensor should be used for detecting the real-time status of the parking space.
  - ii. It should be able to upgrade its firmware functionality remotely from the centralized Command and Control Center.
  - iii. It should be able to permit an optimal angle between the sensor output and the target.
  - iv. Sensors should be able to work in all weather conditions relevant to the project site.
  - v. Sensors should preferably have magnetic and optic technology
7. Parking aisle light indicators
- i. This feature should be available for indoor parking lots
  - ii. The light indicators for external view should be high intensity LED which helps the motorist to see the available spaces from the parking lane easily
  - iii. The preferred parking aisle indicator should be visible from all directions for traffic, and have high intensity LEDs.
  - iv. Once a parking spot is occupied and the indicator must turn red, the total parking slots available in that parking space should automatically get updated.
8. Indoor LED Display
- i. The display panels should have high intensity LED.
  - ii. The display panels units should receive information directly from same communication line and its update time should be less than 5 seconds to increase/decrease any car availability value.
  - iii. The display panel should have optional numerical length, i.e., according to each parking, it should be possible to display up to 4 digits
9. Corner protectors: Rubber matting with Black and yellow stripes with Installation
10. Bumper: Stripped Teflon coated Bumpers at entry, exit and aisles of parking lots



## **7 Smart BKC Initiative 3 – Integrated Building Monitoring System (IBMS)**

MMRDA envisages an Integrated Building Monitoring System (IBMS) that will enable MMRDA to collect and monitor information related to overall performance of buildings in BKC. Based on the current scenario in BKC buildings, the current scope of this RFP is to collect information available related to energy parameters and facility management parameters. Going forward, MMRDA's eventual objective is to ensure energy efficient performance for all BKC buildings, resulting in reduction of administrative and operational expenses, which is currently not in scope of this RFP.

### **7.1 Overview of Existing Environment Related to Integrated Building Monitoring System (IBMS)**

- Currently, barring a few instances, the buildings in E and G Block of BKC do not have an integrated building management system. The existing arrangement is for independent, contract based Facility Management Services which includes manual recording of energy related data at an individual building level.
- The Facility Management is responsible for building maintenance and repair, update of electrical, water and other service outages and scheduled shutdowns, emergency response through fire alarm management, manual collection of meter readings at individual building floor level and generating performance status report based on the data captured for all the parameters.
- The parameters measured currently include electrical consumption breakdown in KWH, water system, fire system, ventilation system, lift and emergency system along with Water Consumption breakdown in KL for fire, domestic use, flushing, irrigation and HVAC. The tanker and bore well water consumption data and total consumption reading is also recorded.
- A table listing some representative parameters, tracked in most BKC buildings, is referenced in Section - IV, Annexure 4, Bid-related Information-5.

### **7.2 Integrated Building Monitoring System Key Objectives/Outcomes**

Following are MMRDA's overall objectives for the Integrated Building Monitoring System initiative:

- 1 Standardize monitoring parameters for efficient building management across BKC
- 2 Synthesize building information for real time diagnostics, by collecting and analyzing energy related data
- 3 Enable improvement of building performance lifecycle, energy efficiency, and facility management
- 4 Help optimize energy and operation costs for building management in BKC

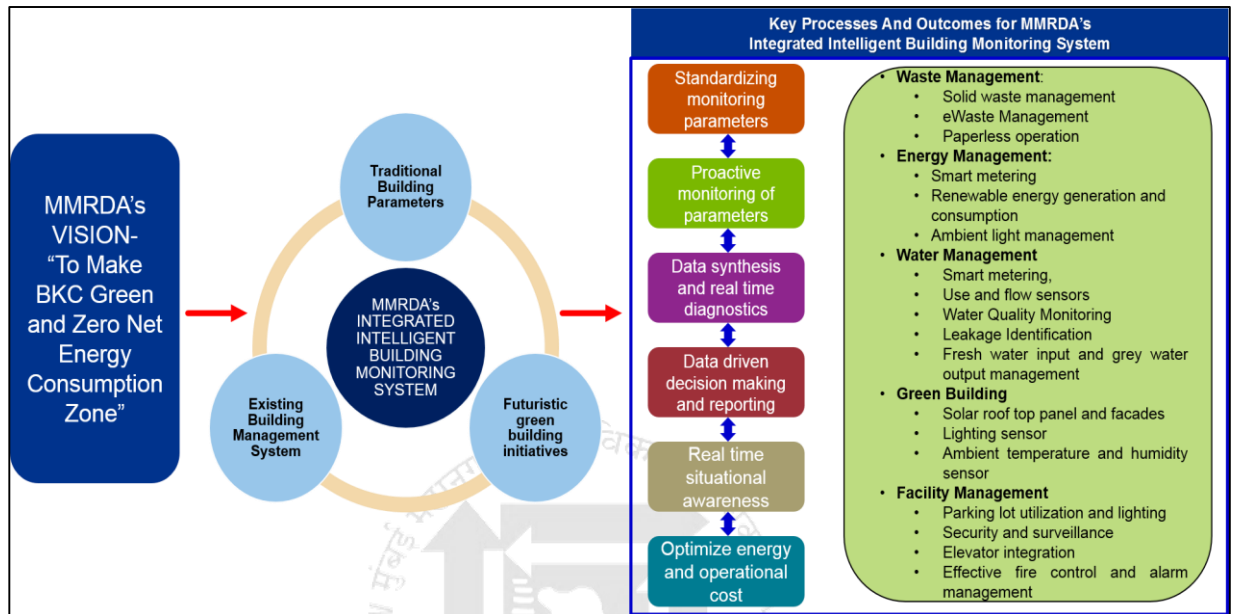
### **7.3 Integrated Building Monitoring System Scope – Functional Requirements**

The proposed Building Monitoring System should integrate information from BKC buildings recorded through conventional methods of facility management systems as well as advanced



Building Management Systems (BMS), to record energy and building management parameters into one consolidated information dashboard.

A high level framework depicting MMRDA’s envisioned Integrated Building Monitoring System in the Smart BKC 1.0 project is outlined below. As part of this RFP, MSI will be responsible for deploying a utility for collecting available information from BKC buildings, and creating information dashboards capturing standardized Building Management related parameters.



Functional requirements for Integrated Building Monitoring System includes:

1. Survey, Data collection and standardization of parameters:
  - i. Based on preliminary survey carried out by MMRDA, it was found that there would be multiple data sources and heterogonous data formats available across buildings in BKC. The MSI will carry out detailed surveys to capture available information related to building management parameters and gather data from multiple sources implemented across commercial buildings within BKC.
  - ii. The MSI will also be responsible for data collation, sanitization and standardization of parameters to be measured across all buildings in Smart BKC 1.0 project.
  - iii. MSI should coordinate with representatives from E & G block building association and MMRDA for data collection and for determining parameters to be monitored.
  - iv. Once the parameters are standardized, the MSI should collect relevant building management information in some automated manner through API's, excel files, FTP, etc.
2. Monitoring, data synthesis and real-time diagnostics:
  - i. The focus is Monitoring of traditional building parameters and integration with additional parameters based on data availability and MMRDA’s plans for future integration.
  - ii. The MSI is responsible for studying the existing data sources and design a basic utility dashboard based on select building parameters.
  - iii. The dashboard should pick resource consumption parameters from commercial buildings of BKC to correlate them on a single platform.
  - iv. The dashboard should capture time-series data from meters, sensors, and external data streams to perform analyses such as base lining, load profiling, benchmarking and building level anomaly detections.
3. Dynamic Dashboards:



- i. The dashboard should dynamically perform situational reporting based on the data available.
  - ii. The dashboard should not be static, and should allow MMRDA to dynamically add, update, or amend data points captured based on the required situational analysis.
  - iii. The dashboard should have graphical reporting capabilities.
  - iv. Detailed aspects of the dashboard and parameters will be finalized during detailed design phase.
4. Initially information will be collected and dashboard will be prepared for the following information parameters:
- i. Energy Dashboard: The MSI is responsible for preparing a customizable energy utility dashboard to provide a snapshot of energy consumption and efficiency capabilities of buildings in BKC. The energy dashboard will store, analyze, and display building energy data which will be based on existing data sets. The current scope is for data collection and monitoring of building parameters only. Design and deployment of any comprehensive Integrated Building Management System is not part of the current scope of work.
  - ii. Facility Management Dashboard: The MSI is responsible for preparing a customizable Facility Management Dashboard, where the data feeds from all building facility management systems such as lighting, HVAC, fire control, security, access control, and video surveillance will be collated and displayed based on MMRDA's requirements.

#### **7.4 Integrated Building Monitoring System Scope – Technical Requirements**

- 1 The MSI is responsible to design and build a basic utility for collecting building management data, synthesizing that data, and representing the data in dynamic dashboards
- 2 The building management information will be collected from buildings in BKC in some automated manner through APIs sharing information with MMRDA or via excel files, FTP, etc. from each building to MMRDA
- 3 The dashboard data format should be compatible to be viewed on multiple devices running on different operating systems, e.g. on MMRDA web portal, tablets, etc.
- 4 The MSI should collect and retrieve information from each of the building management systems on a real time basis, where possible, or daily, so that the information on MMRDA's dashboard is always up to date.



## **8. Smart BKC Initiative 4 – Citizen Web Portal and Citizen App**

1. The Online Web-based Citizen Portal and Citizen App are aimed at providing on-the-go access to various services and facilities available in BKC. Both will serve as windows of information about BKC and as a platform to deliver services online while providing an avenue to disseminate information to citizens
2. The modalities of establishment of citizen apps and the online portal for BKC are listed below:
3. The portal and app will be developed in an open platform

### **8.1 Overview of Existing Environment Related to Citizen App and outreach**

1. No single mobile app or online portal exists to disseminate information about initiatives in the BKC.
2. However the proposed citizen app and online portal will widely disseminate information regarding government initiatives, parking solutions, navigation within BKC etc. to make life simpler to all those who visit the BKC.

### **8.2 Citizens App and Web Portal Key Objectives/Outcomes**

1. To improve the lives of BKC Citizens and visitors by ease of access to information related to eGovernance services, 'how-to' use/leverage Smart BKC 1.0 services, Citizen alerts, points of interest, navigation services, feedback services, etc.
2. To improve emergency alert and response for Citizens by enabling SOS services
3. To act as an enabler and payment gateway for services related to Smart BKC 1.0 initiatives

### **8.3 Citizen App Scope – Functional Requirements**

The following are the broad functional requirements for the Smart BKC Citizen App

1. The MSI will be responsible for creating, maintaining, updating, and managing up-to-date information and content, including information related to all Smart BKC initiatives, on the Citizen App throughout the project duration of seven years
2. All the applications, content, data, and information related to the Smart BKC App as well as its users should be securely hosted and saved in the Smart BKC 1.0 Project Data Center
3. The app must be free to all BKC citizens, guests, and visitors
4. The app should be light, intuitive, easy to use, responsive, secure, and easy to maintain
5. App should be compatible with and responsive to all leading smartphones on both GSM and CDMA networks
6. App should be Operating System (OS) independent and available on all major OS platforms including iOS, Android, Windows, and Blackberry etc.
7. Appropriate tags should be built-in the introduction text and content of the Smart BKC App and Portal so that they are displayed in the top search results





## 8.4 Citizen Web Portal Scope – Functional Requirements

1. The MSI will be responsible for creating, maintaining, updating, and managing up-to-date information and content, including information related to all Smart BKC initiatives, on the Citizen Web Portal throughout the project duration of seven years
2. All the applications, content, data, and information related to the Smart BKC Web Portal as well as its users should be securely hosted and saved in the Smart BKC 1.0 Project Data Center
3. The Citizen Portal should be light, intuitive, easy to use, responsive, modular, secure, and easy to maintain
4. Portal should support customization of Look and feel to MMRDA's requirements
5. The Portal should be built on industry leading framework and support seamless integration with the backend systems, to easily retrieve and save data
6. The Portal must be omni channel i.e. its design should be such that it can be viewed easily on laptops, tablets and mobiles.
7. The portal must be browser independent, and work seamlessly on all leading browsers
8. Should have workflow capabilities with regard to the content approval and publishing process
9. There should be provisions to track and generate web traffic reports for Portal administrators

### 8.4.1 Citizen App and Web Portal – Required Features and Functionalities

All the requirements, features, and functionalities listed below, but not limited to, should be available by MSI on both the Citizen Web Portal as well as the Citizen App

1. Citizen registration
  - i. One time registration will be done with details imported from previous Wi-Fi registration or if user has not registered for Wi-Fi, details from the app will be imported when Wi-Fi registration is done
  - ii. Terms of service needs to be accepted by the user for the first time when the user logs on
2. Wi-Fi registration
  - i. With Mobile number
    - a. Web Authentication can be done
    - b. OTP authentication can be done
  - ii. Without Mobile numbers
    - a. Captive Portal based authentication
  - iii. Instructions should be provided on how the user can register and how they can register their devices
3. Premium Wi-Fi Services



- i. To pay for premium Wi-Fi, a eWallet system will be set up or payment via Net banking or credit/debit cards can be set up.
- ii. The user should connect securely with the premium network only via the app.
- iii. The premium Wi-Fi connection must be made secure to the latest available industry standards

#### 4. Parking Guidance System

- i. Current GPS location determined
- ii. User enters final destination
- iii. Nearest available parking spaces are shown using maps in decreasing order of distance and if user decides to reserve it, reservation is done with payment done from e wallet or after physically going there in which case the parking lot might or might not be available.
- iv. User can request live feed at a parking location which is then sent to him/her.
- v. Number of vacant parking lots should also be shown to user which along with the feed can enable the user to make the call.
- vi. User should be able to locate alternate route and parking lot after seeing the traffic congestion feed.
- vii. Limit set on the advance time to reserve (24 hrs.) except premium and periodic paid parking.
- viii. User can also rent a spot on a monthly, half yearly or a yearly basis.
- ix. Cancellation for the spot should also be provided in case of reservation

#### 5. SOS capability

- i. An SOS button by default will alert the nearest police station and to the command center
- ii. Options are to be provided to alert the nearest police stations, hospital, fire station, etc.
- iii. The concerned agency will then call the user and enquire about the emergency
- iv. If the user does not pick up or cuts the call, the nearest police station is alerted that it might be an emergency incident where user is not in the position to
- v. Else the user can specify the nature of the alert and the required action can be taken
- vi. A physical button in the device can be selected by the user along with the time required to press the button in order to send the SOS
- vii. Local security at buildings can also be alerted if they are connected centrally.
- viii. Button to be pressed for a certain time to send alert to guard against accidental activation
- ix. A single phone number can be nominated by user to be notified every time an SOS is issued
- x. Follow up can also be given to the phone number after the situation is resolved.



- xi. Feed from local surveillance cameras identified via tracking can be analyzed to identify SOS and signal can be sent to the police on what caused the emergency.
6. BKC Information and Community Outreach
    - i. A comprehensive BKC guide, map, and details of the Smart BKC services should be provided
    - ii. Smart BKC Citizens should be allowed to create communities or messaging boards and exchange information using this App or Portal as a medium. There will be restrictions on what kind of information the Citizen can share and restrictions on the number of characters per post per user.
    - iii. Automatic or manual, bulk or individual notifications from the BKC Centralized Command and Control Center should be sent here. Also the notifications can be sent to the home screen.
    - iv. Alerts from other government agencies should be automatically relayed here
  7. Environmental Parameters Dashboard
    - i. Weather, Air pollution, temperature, and Noise pollution statistics to be displayed on a dynamic dashboard for Citizens and MMRDA
    - ii. Statistics should be given on extent of flooding, waterlogging, air quality, etc.
    - iii. The dashboard should provide weekly trends and predictions of the environmental parameters
    - iv. The dashboard should also highlight violations of any parameters exceeding limits based on comparisons with India Meteorological Department (GoI body), and generate alerts
  8. Dashboard for Integrated Building Monitoring System
    - i. A dashboard view covering certain parameters of the Integrated Building Monitoring System can be made available to the Citizens, based on approval from MMRDA.
  9. eGovernance links
    - i. Links can be provided to the online portal and Apps of MMRDA, as well as other key eGovernance links, as approved by MMRDA
  10. Office locator – private and public institutions
    - i. The user should be able to search, filter, and locate building, establishments, and corporate offices within BKC and get basic information about the office
    - ii. The user should be provided available information about the office or institution like link to its website, office timings, holiday schedule, etc.
    - iii. Directions using maps provided from current user location to required location based on unique code
    - iv. If user wants to park, parking guidance system is automatically activated with the locations already filled in.



- v. If user does not use a private vehicle, nearest public transport routes and timing can be shown.

#### 11. Healthcare information

- i. All registered hospitals and pharmacies should be shown on maps
- ii. Even details of hospitals outside BKC but within reasonable distance from BKC should be shown

#### 12. BKC eBus Services

- i. Should provide estimated time of arrival of buses to the user based on their location in real time, along with bus number, fare estimate, and route number.
- ii. Dropdown options should be provided for start and stop points, for user to fetch relevant bus details
- iii. Should provide alternate route and bus options to the commuter if destination is provided.
- iv. Delay in bus arrival due to traffic and bus frequency information.
- v. The App should be in sync with all digital signage or LCD screen installed at the bus-stop that would display bus numbers with routes and estimated arrival time.
- vi. Should provide e-ticketing facility to the passenger, on providing boarding and destination information.
- vii. Should provide an option to link to “Smart BKC eWallet” for payment

#### 13. BKC public transport information

- i. Future mono/metro timings need to be provided
- ii. User should be able to select the direction in which he/she is travelling and the app should find the next available transport.
- iii. Should provide a comprehensive map of the routes and locations of the public transport system

#### 14. Events in BKC

- i. All upcoming events in the BKC should be displayed
- ii. If applicable, the information related to upcoming events should also be given along with the link to the event site.

#### 15. Points of interest

- i. Covers ATMs, Restaurants, Banks, Utility Centers, Malls.
- ii. Option to provide direction can be given

#### 16. CSR and Community service info

- i. Displays news of all the initiatives planned.
- ii. User can request to be part of or collaborate on the selected initiative
- iii. The news can then be updated on the app



#### 17. Carpooling

- i. User should post data about destination and time of travel.
- ii. All other users with the same destination can be alerted.
- iii. Women only carpooling options must be given
- iv. Then option should be given for the users to communicate a mutual pickup point.

#### 18. Integration with Third Party Services and Apps

- i. The MSI has to ensure that the App can integrate and interface with popular and established third party services and applications (private or public) that would like to integrate with Smart BKC Citizen App, upon approval from MMRDA.
- ii. The App should integrate with and allow payments through the selected third part shared services for Payment Gateway and eWallet
- iii. The App should have provisions to integrate with Emergency Response services in BKC

#### 19. Frequently Asked Questions (FAQs) and MMRDA Contact

- i. The App should have a section detailing frequently Asked Questions (FAQs) related to Smart BKC initiatives and their related responses
- ii. The section should also provide contact information of Helpdesk Customer Service for Smart BKC initiatives
- iii. The section should also provide address of MMRDA office in BKC and link to the MMRDA website

#### 20. Settings

- i. User should view version and details of the App
- ii. User should have the option to toggle between sending current GPS data to server or not
- iii. User should have the option to select a specific button on their cell phone to set as SOS short-cut, when pressed and help continuously for a certain amount of time
- iv. User should be able to toggle whether or not to send anonymous user data that can be helpful in fixing bugs or solving crashes.
- v. User should be able to select notification settings
- vi. User can select which Notifications of the App will be displayed on the home/locked screen
- vii. User should have ability to enable/disable Sound alerts

### 8.5 Citizen App Scope – Technical Requirements

1. The app will be developed in an open platform
2. App should be scalable and technically adaptable to future enhancements



3. The application should be SSL (Secured Socket Layer) compliant and the MSI has to provide appropriate SSL certificate before the portal is made available on public domain
4. App should be published and released in all the major platforms including iOS, Android, Blackberry and Windows.
5. App should support Unicode.
6. App should be multilingual in at least English, Marathi and Hindi
7. App should be easy to update as some data will be updated daily
8. App should be able to track GPS location of the user device
9. App should also be able to provide accurate mapping and navigation services.
10. Collect data categorically without impacting citizen's privacy issues
11. Ability to collect data with high volume, velocity, and variety
12. Following are the technical requirements required in the command center in order to implement the app initiative
  - i. Should register the user for the app, Wi-Fi and premium Wi-Fi and store their profiles
  - ii. Once the user has created any of the above, the existing profile must be imported for the creation of the other three
  - iii. Should monitor SOS situations and provide live feed from surveillance to the authorities, warn them of what to expect from the situation after analyzing the feed and alert the local security systems if they are centrally connected to the system
  - iv. Should send alert to the nominated phone number in case of SOS emergency and provide follow up after the situation is resolved
  - v. Should provide live feed from parking lots and number of free spaces to app
  - vi. Should confirm acceptance of payment and reserve/cancel the parking lots accordingly
  - vii. Should assign codes for all buildings and offices and provide them to the app on request
13. Should moderate the forums for Events in BKC, CSR and outreach and the Carpooling options in the app
14. Should monitor GPS in an emergency and user data sent from the app if the user accepts sending of data
15. Should provide information for the built in navigation system in the app

## 8.6 Online Portal Scope - Technical Requirements

1. The portal should be based on Open Standards
2. Portal should integrate with any other portal products through open standards such as HTML, XML, RSS, web services, and WSRP
3. Should support encryption and compression features



4. The portal must be OS independent. It must run on Windows, Unix, Apple and Linux operating systems
5. The portal must be browser independent and responsive to run in the same manner on leading browsers like Google Chrome, Mozilla Firefox, Safari, Internet Explorer, etc.
6. The portal support Unicode and be multilingual in at least English, Marathi and Hindi.
7. The MSI must provide patches, hotfixes and bug fixing solutions.
8. The portal must adhere to the highest possible security standards in the industry.
9. Should support broad range of standards for example DOM 1.0, HTML 5, HTTP, HTTPS, MathML, ODBC , ODF (IS26300) , Open XML (IS29500), OpenSearch, OpenType, PDF 1.7, PDF/A, RTF, RSS, ATOM, SOAP, SVG, REST, UDDI, Unicode, URI/URN, W3C XML Schema, WCAG 2.0, WebDAV, WSDL, WSRP, XHTML, XML, XML Web Services, XMLDsig, XPATH, XPS, XSLT
10. Portal should support Web 2.0 capabilities
11. The portal should be SSL (Secured Socket Layer) compliant and the MSI has to provide appropriate SSL certificate before the portal is made available on public domain
12. MSI should ensure that the Portal is adhering to W3CAG, GIGW, and Gol guidelines

## 8.7 Citizen App and Portal – Security Requirements

1. User identity and data should be secured
2. Should provide Kerberos support for security
3. Should use sophisticated encryption systems like forced https, SSH, VPN, DNSSEC etc.
4. App and portal should be secure, should strike a balance between speed and security
5. App and portal should not be vulnerable to MITM (man in the middle) attacks
6. GPS tracking should be done only if the user has specified in the settings menu
7. Bug and crash reports must be made by sending anonymous user data



## 9. Administrative Guidelines

The MSI is responsible for adhering to the following administrative guidelines. This section describes the administrative guidelines, policies and procedures to be followed by the MSI while undertaking operational activities. MMRDA is particular about safeguarding the aesthetics and regulatory norms of BKC and expects the MSI to strictly abide to the same. This includes, but is not limited to, approach related to operational activities, marketing and advertisements, use of common BKC infrastructure, use of public infrastructure in BKC, safety and security aspects, repair and maintenance, vandalism, damage to public property, misuse of public amenities, misuse of public space and other key MMRDA requirements.

1. MMRDA reserves the right to intervene at any point during the Smart BKC Project, for all administrative, operation and maintenance activities.
2. Any civil and architectural work or structural changes required while implementation should go through proper approvals from MMRDA. Every plan that is submitted would be reviewed and approved with necessary amendments (if any) by the Project Implementation Committee of MMRDA based on the project plan. MSI is responsible for incorporating the amendments proposed by the Project Implementation Committee, and submit the revised plan for approval to MMRDA. All civil and architectural changes are to be implemented by MSI only after the plans are approved by MMRDA.
3. The MSI will be responsible for overall procurement and maintenance cost for Power and Utility Infrastructure setup to be carried out as part of Smart BKC 1.0 Initiatives. The MSI will also be responsible for coordination with Private and Public agencies for approvals and clearances for Power and Utility Infrastructure.
4. All regulatory approvals required for executing Smart BKC project, acquired from concerned parties (Public and Private) should be planned and arranged by the MSI with the help of MMRDA.
5. MMRDA will hold ownership of all hardware equipment and software components, including but not limited to all active and passive devices, sensors, servers, computer systems, solutions, applications, reports, software and licenses etc.
6. The MSI shall be responsible to keep all the tangible and intangible assets under Smart BKC in good, operational and serviceable conditions at all times.
7. The MSI shall not cause any damage to Government buildings / other premises / property / public places etc., if any damage occurs, the MSI will perform necessary restoration at its own cost.
8. The work of MSI shall be subject to inspection at various stages. The MSI shall abide and follow all Safety and Security Regulations and practices at all times. The MSI should not use any sub-standard products at any point of time.
9. The MSI should acquaint themselves with all sites, weather and other conditions affecting cost and performance of various Smart BKC initiatives during the bidding process. MSI is responsible to provide the accurate cost and effort figures in the bid, based on the detailed surveys in E and G blocks performed by MSI. No changes to the cost and efforts will be accepted after MSI's bid proposal is accepted by MMRDA.





10. The MSI would also be required to maintain a centralized Helpdesk monitoring system at the Centralized Command and Control Center, which will track new installations, complaints, issues logged by the FMS team.
11. All the hardware and software supplied and replaced should be new and from reputed OEMs as per the RFP. The MSI shall ensure that the products procured are of the OEM proposed in the bid. The material shall be checked/validated/audited through agency identified by MMRDA, along with Quality tests before dispatching to site. The MSI is responsible to check and validate all material including hardware, software and peripherals and provide the list of the same to MMRDA before installation.

## 9.1 Operation and Maintenance (O&M) Guidelines

The MSI has to adhere to the operating policies and procedures, as directed by Government of Maharashtra (GoM) and MMRDA, for managing and operating the Smart BKC 1.0 Project. This includes (but not limited to) approach related to manpower, resources, vendor management, security, customer service, repair and maintenance and other primary functions, training programs to staff, user manuals, technical manuals, financial management, risk management, life/safety management, employee management and administrative policies and procedures. It also includes the key elements of a management plan for Smart BKC to include considerations for cost containment/expense reduction, revenue enhancement (including non-operating revenue sources), customer service improvement, enhanced economic impact generation to the Mumbai Metropolitan Region and other key Smart BKC operational characteristics.

1. MSI will be responsible to deploy on-field and off-field (but on-site at MMRDA) resources for appropriate up-keeping, maintenance, and operation of all network, hardware, and software components, and ensure smooth functioning of the Smart BKC project during the entire O&M period of seven years.
2. The command and control center will be hosted and operated at MMRDA premises in BKC.
3. The Operations and Maintenance (O&M) period shall be for 7 years from the date of Go-Live approved by MMRDA.
4. The MSI shall provide comprehensive onsite warranty for all the hardware items and peripherals, both on field and inside the Command and Control Center during O&M period.
5. The MSI shall provide comprehensive Facility Management Service (FMS) for all devices, sensors, equipment and its related hardware, software, electrical and network infrastructure components supplied for the Smart BKC project. This involves comprehensive maintenance of all component covered under the contract, including configuration of servers, desktops, routers, switches and various other active and passive components along with repair, replacement of parts, sensors, providing spare parts, updating, security alerts and patch updating, regular backup of the data etc.
6. The MSI shall depute adequate manpower as full time dedicated onsite FMS team. The FMS team shall be deputed to identify, acknowledge, troubleshoot, manage, replace and repair the hardware/ system software. The FMS shall undertake day-to-day troubleshooting and maintenance requirements for Smart BKC.



7. The FMS shall be also be responsible for regular monitoring of all the equipment, proactively perform warranty checks, and generate SLA reports from the SLA monitoring tool.
8. The FMS shall be required to take regular backup of the application data as per the frequency defined by MMRDA. Security and safety arrangements for safe custody of the backup data shall also be the responsibility of MSI.
9. The MSI shall ensure that the FMS team has data center, networking, hardware and application software level skillsets.
10. The MSI shall ensure that the instruction manuals, technical manuals and user manuals supplied by the manufacturer/OEMs/MSI are referred, referenced, reviewed and maintained up-to-date at all times.
11. All patches and updates to any software and hardware devices shall be provided by the MSI without any additional costs during the tenure of the contract.
12. MMRDA reserves the right to ask for replacement of any hardware, software and network components if it is not from a reputed brand and does not conform to all the requirements specified in the tender document.

## 9.2 Non-IT Related Operational Guidelines

Given that the MSI is responsible for successfully setting up the entire non-technical infrastructure related to the Smart BKC project, the MSI must adhere to the below mentioned non Information Technology (IT) guidelines. The MSI is required to fulfil all of the following specifications (but not limited to) in order to set-up, commission, install, implement, operate and maintain the centralized Command and Control center and all Smart BKC initiatives. The MSI is required to provide itemized cost estimate along with maintenance cost for the contract period for each of the following activity as per requirement. The MSI shall ensure that all materials used are BIS compliant and carry ISI mark.

### 9.2.1 Civil and Architectural Guidelines:

#### **False Ceiling, False Flooring, Fixtures and Furniture, Partitioning and Painting**

1. The MSI should provide appropriate floor plan for the command center with specifications for false ceiling and false flooring.
2. MSI shall use appropriate Fire retardant paint as per manufacturers' recommendations/specifications.

### 9.2.2 Public Works Guidelines

The MSI is required to abide to the norms of BKC for any public work to be carried out under the scope of Smart BKC. The activities under public works include (but not limited to) Digging, Pole Erection, Wirings, Laying of Cables, Erection of roofs, Fencing, Barricading, Markings, Displays, Billboards etc.

### 9.2.3 PVC Conduits & Wiring Guidelines

The MSI is required to follow the industry standards for any PVC Conduits and Wiring work to be carried out under the scope of setting up the command center. The PVC conduits shall



comply with I.E.E regulations and all materials used shall conform to relevant standard as per BIS and shall carry ISI mark.

#### **9.2.4 Earthing Guidelines**

The MSI is required to follow the industry standards for any Earthing work to be carried out under the scope of setting up the command center. The entire IT and non-IT Infrastructure in the Command Center is required to be earthed. All metallic objects in the command center that are likely to be energized by electric currents should be effectively earthed. All the specifications should comply with provisions as per IS 3043:1987 Code of Practice for Earthing under BIS standards and shall carry ISI mark.

#### **9.2.5 Passive Cabling Guidelines**

The MSI is required to carry out all work related to passive cabling under the scope of setting up the command center. All work under passive cabling should be governed by a set of standards that specify wiring data centers, offices, and apartment buildings for data or voice communications, using category 5 (CAT 5E) category 6 cable (CAT 6), category 6A (CAT 6A) & category 7 (CAT 7) and modular sockets. All material used shall be conforming to relevant standard as per ISO.

The MSI should ensure appropriate communication channels are setup for data, voice along with wireless compatibility. The MSI should ensure that the cable layouts are neat and distinguishable. The termination of cables needs to be planned for future expansion of scope.

#### **9.2.6 Rodent Repellent**

The MSI is required to take necessary precautions to avoid entry of rodents and unwanted pests in the command center. It is expected from the MSI to conduct periodic pest control activity for the upkeep of the command center.

#### **9.2.7 Fire/Smoke Detection and Control Mechanism**

The MSI is required to take adequate measures to avoid and handle situations like fire and smoke in and around the Command and Control center and to ensure early-detection of fire for effective functioning and safety. Installation of sufficient Smoke Alarms, Heat Detectors, Fire Alarms etc. covering the entire command center and its vicinity to be provisioned by the MSI. All the specifications and materials should comply with respective BIS standards and shall carry ISI mark. It is essential that Fire Proof material be used as far as possible. Appropriate Fire and Safety Audit are to be conducted as specified by MMRDA and Certifications to be obtained before respective sign-offs.

#### **9.2.8 Power Back-up**

The MSI is required to provision for adequate battery bank to ensure uninterrupted power supply to critical components of Smart BKC. The MSI needs to identify appropriate space for the battery bank and ensure all fire and safety standards are followed.

### **9.3 Advertisement and Marketing Guidelines**

There would be opportunities for the MSI to generate revenue from advertisement and marketing strategies from the Smart BKC initiatives. However the MSI must obtain MMRDA's approval before undertaking any advertisement and marketing opportunities related to Smart



BKC initiatives. The MSI is also responsible for safeguarding the aesthetics of BKC at all times and shall not compromise any tangible or intangible assets of BKC or Smart BKC project while undertaking advertising or marketing campaigns. The MSI needs to abide to the following guidelines:

1. MSI will be responsible for advertisement and marketing of Smart BKC initiatives, carried with due consent and approval from MMRDA.
2. MMRDA will approve MSI's advertisement strategy and execution plan, to ensure that users are not inundated with advertisements to an extent that it impacts user experience.
3. MSI needs to take approval from MMRDA before publishing any advertisement in any form and on any physical or virtual space within BKC. MMRDA would supervise the advertisement content, with respect to violations of regulations or DoT guidelines.
4. No advertisements to be published without prior approval from the Project Implementation Committee of MMRDA.
5. MSI will not self-proclaim ownership for carrying out activities under the Smart BKC initiatives in the form of advertisements or marketing activities, without the permission of MMRDA.
6. The MSI will not be permitted to use any tangible or intangible assets of BKC for advertisement or marketing purposes, without the approval of MMRDA. MSI needs to take appropriate approvals with respect to the content, location/web-space, size, duration of the advertisement.
7. MSI may be able to advertise on the infrastructure and web-content created for the Smart BKC 1.0 Projects, upon prior approval from MMRDA
8. The MSI needs to ensure that the advertisements do not cause any hindrance to the visitors/users of BKC and does not impact the aesthetics of BKC.
9. Any damages caused by the advertisements should be borne by the MSI.
10. The revenue generated from the advertising and marketing activities need to be reported to MMRDA on a periodic basis as decided by the Project Implementation Committee.
11. Appropriate revenue sharing model is defined in subsequent clauses of this RFP.

#### **9.4 Revenue Opportunities and Guidelines**

The primary source of revenue to the MSI will be from these sources of the Smart BKC project, including:

1. Parking revenue (regular and premium parking)
2. Paid premium Wi-Fi Services
3. Dedicated internet connectivity in MMRDA grounds
4. Sale of advertisements leveraging Citizen Apps and Wi-Fi customers

The MSI is encouraged to come up with innovative revenue streams subject to MMRDA's approval and conditions specified below:

1. MSI will follow competitive market rates in the BKC area to determine parking charges.



2. MSI will follow competitive market rates in the Mumbai region to determine premium Wi-Fi service charges.
3. MSI will follow competitive market rates in the BKC area to determine dedicated internet connection charges for MMRDA exhibition ground.
4. MSI should get MMRDA's approval in case there is a need for major revisions or adjustments to any of the charges and fees decided during initial detailed design.
5. All revenue generated from Smart BKC 1.0 Project should be tracked in the Revenue and Expenditure Management Tool in real-time, and should be shared with MMRDA.
6. All transactions related to the Smart BKC Project will be done through escrow account as defined in the contract.
7. MSI should declare all transactions from various revenue opportunities to MMRDA
8. The MSI will discuss any new revenue opportunities emerging from the project with MMRDA before its initiation and implementation.
9. In case on discrepancies or inconsistencies in rates or revenue figures, MMRDA shall intervene to take appropriate action.





## 10. Service Level Agreement

### 10.1 Service Level Agreements (SLAs)

The purpose of this section is to define the levels of service which shall be provided by the MSI to MMRDA for the duration of the contract. Service Level Agreement (SLA) shall become the part of contract between MMRDA and the MSI. The MSI has to comply with Service Levels requirements to ensure adherence to project timelines, quality and availability of services, throughout the period of this contract i.e. during implementation phase and for a period of seven (7) years, post Go-Live. The MSI has to supply appropriate software/ automated tools to monitor all the SLAs mentioned in this section.

#### Definition of Terms

For the purpose of this contract,

- the word “services” includes application, network, Infrastructure, equipment, and services, unless specifically mentioned.
- the word “components”/“Devices” includes all IT/ Non-IT hardware, parking equipment/ devices/ components, network components, Wi-Fi related components/ devices, server/ storage related components/ devices, software and other application components, unless specifically mentioned.
- Service Levels have been defined for the following:
  - a. Network
  - b. Software
  - c. Power Back-up
  - d. Hardware
  - e. Storage (SAN)
  - f. Wi-Fi
  - g. Project Management
  - h. Smart Parking
  - i. Citizen Application
  - j. Web Portal

2. For purposes of the SLA, the definitions and terms as specified in the document along with the following terms shall have the meanings set forth below

- (a) “**Total Time**” - It is the total number of hours available in the quarter being considered for evaluation of SLA performance.

Total Time = No. of Days of that quarter X 24 Hrs

Eg: No. of days in Qtr 2 (Apr-Jun) = 91 days

Total Time = 91 X 24 = 2184

- (b) “**Uptime**” – It is the time period for which the specified services/ components are **available** for use at specified technical and service standards. It is calculated for every quarter, which is being considered for evaluation of SLA performance. Uptime can be calculated for any component/service (Non IT & IT) as follows;

Uptime (%) = {1- [(Downtime)/ (Total Time – Scheduled Maintenance Time)]} \* 100

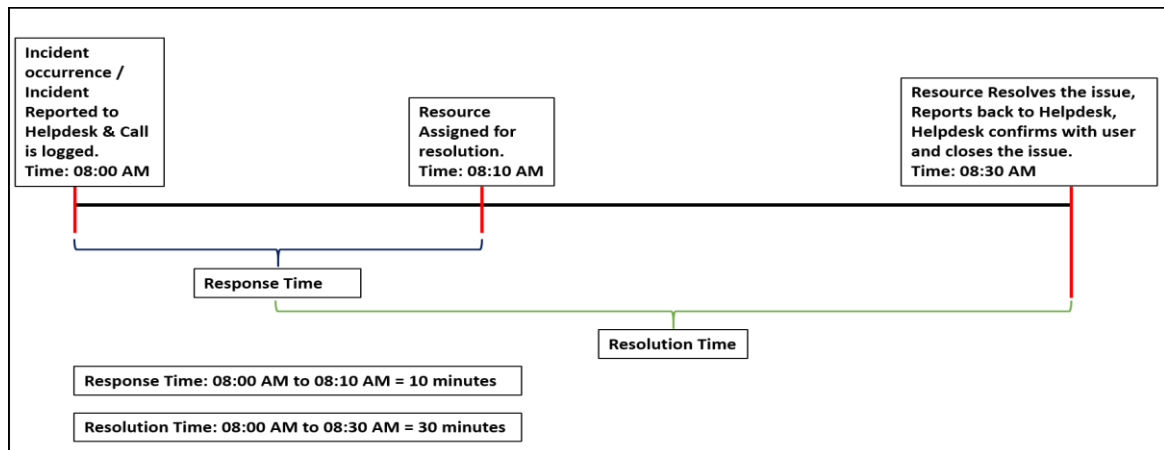
For eg. In a quarter cycle, there are a total of 91 days x 24 hours = 2184 hours. The downtime clocked is 48 hours. Hence the calculation would be {1- [(48) / (2184 – 0)]} \* 100 = 97.80%



- (c) **“Downtime”**- It is the time period for which the specified services/ components are **not available** for use at specified technical and service standards. It is calculated for every quarter, which is being considered for evaluation of SLA performance.
- (d) **“Scheduled Maintenance Time”**: It is the time period for which the specified services/ components with specified technical and service standards are not available due to scheduled maintenance activity. The MSI is required to take at least 10 days prior approval from MMRDA for any such activity. The scheduled maintenance should be carried out only during non-peak hours. Non-peak hours are defined as hours after 12:00 midnight to 06:00 AM on weekdays and after 09:00 PM to 06:00 AM for weekends. The MSI shall mention the period during which the maintenance is planned. Any planned application/server downtime would not be included in the calculation of application / server availability. MMRDA has liberty to decide the duration of such outage, on case to case basis. The number of outages shall be limited to 4 outages in a year. In case of planned outages at Command and Control Centre level, services of other Data Centre services to be used to service the users. Scheduled Maintenance Time is calculated for every quarter, which is being considered for evaluation of SLA performance.
- (e) **“Percentage of Failure”**: It is the percentage of total number of components that fail during the quarter being considered for evaluation of SLA performance.  
Percentage Failure (%) = (Failed Components / Total Components) \* 100  
For eg. In a quarter cycle, the number of components available are 1000. Failure has happened to 10 components in that quarter. Hence the calculation would be (10 / 1000) \* 100 = 1.00%
- (f) **“Incident”**: It refers to any event / abnormalities in the service being rendered, that may lead to disruption in normal operations.
- (g) **“Helpdesk”**: It comprises of the services required to coordinate and respond to Incidents and IT Service Requests under Smart BKC 1.0 initiatives. The helpdesk would render its services to end users and relevant stakeholders for the project. The support window is required to be 24x7. The helpdesk would operate from the premises as defined by the MSI. The final escalation of helpdesk should be stationed at MMRDA. Helpdesk Support team is required to immediately log a ticket (incident/request) for any customer call that is received at the helpdesk or in event of occurrence of any incident getting automatically raised from Integrated Industry Standard Open Platform (IISOP). Eg. “Poor quality Wi-Fi” means slow speed. This issue resolution time is the time taken to improve the speed to satisfactory levels after it has been detected & logged by the users / administrative officials. Logging of such calls would be through helpdesk system.
- (h) **“Response Time”**: It is the time elapsed from the moment an incident is reported in the Helpdesk over phone or by any applicable mode of communication, to the time when a resource is assigned for the resolution of the same. The assignment of resource is considered complete only when it is communicated to the person who reported the incident.
- (i) **“Resolution Time”**: It is the time elapsed from the moment incident is reported to Helpdesk either in person or automatically through system, to the time by which the incident is resolved completely.



Response and Resolution Times are explained in the following Sequence Diagram



(j) “Severity Matrix”: The resolution time shall vary based on the severity of the incident reported, which is categorized as below:

- i. **Critical:** Incidents which, have severe impact on service delivery resulting in complete halt of one or more business operations and/or impact on one or more locations. These incidents may include, but are not limited to, network outage, unavailability of critical hardware like video display at Command and Control Center, Wi-Fi access points, Servers, routers etc., software crash, virus attack, issues in DC/DR etc.
- ii. **High:** Incidents which have significant impact of one or more business functions and/or impact on one or more locations. These incidents may include, but are not limited to, to network fluctuations, hardware operations degradation, and software glitches etc.
- iii. **Medium:** Incidents which have considerable impact of one or more business functions. These incidents may include, but are not limited to, to improper functioning of the boom barrier impacting one parking location, failure of major street layer devices etc.
- iv. **Low:** Incidents which have an impact on business operations, that is acceptable temporarily, and need to be addressed within the time-frame defined in SLA. These incidents may include, but are not limited to, parking sensors not working, access point down etc.

Response time for incidents reported for above mentioned severity levels is as below:

Type of Incident	Response Time	Resolution Time
<b>Critical</b>	<=15 minutes from the time incident is reported	<=4 hours from the time incident is reported
<b>High</b>	<=30 minutes from the time incident is reported	<=8 hours from the time incident is reported
<b>Medium</b>	<=1 hour from the time incident is reported	<=12 hours from the time incident is reported
<b>Low</b>	<=2 hours from the time incident is reported	<=24 hours from the time incident is reported





Note: The incident logging would not be limited to raising the incident ticket by the helpdesk. If the incident is reported over the Integrated Industry Standard Open Platform (IISOP) or any other tool, the time of occurrence would be taken as the base time of incident logging and should be used for calculations of SLAs.

10.2 Responsibility Mapping for SLAs

The MSI is responsible for tracking and reporting of all incidents and capturing the same in the SLA monitoring tool. The following are the roles and responsibilities of each stakeholder in SLA monitoring activity;

- The MSI is expected to submit detailed report around each SLA to the Project Monitoring Committee of MMRDA on a periodic basis as defined by MMRDA. The reports should be clearly defined in terms of capturing relevant details.
• The Project Monitoring Committee of MMRDA would decide on the parameters of each report for SLA tracking and the MSI is required to incorporate the changes.
• MMRDA shall have the right to evaluate, measure and suggest changes to the SLAs MMRDA would follow a specific governance model for taking various kinds of decision through the duration of the project. Following table explains the authority for different levels of decision making

Table with 3 columns: Level of Decision, MMRDA, MSI. Rows include Strategic (MMRDA Steering Committee, MSI Project Director), Tactical (MMRDA Project Implementation Committee, MSI Program Management), and Operational (Project Management Office, Core Project Delivery Team).

10.3 Service Level Conditions

1. General Terms of Service Level Conditions

- a. Pre-Implementation SLAs: These SLAs will be used to evaluate the timelines for completion of deliverables that are listed in the deliverable and payment schedule of Section - I, Clause 3.6.3.
b. Post-Implementation SLAs: These SLAs will be used to evaluate the performance of the services on quarterly basis.
c. Payment to the successful bidder will be impacted by the penalty levied for non-performance as per SLA requirements.
d. The MSI will get 100% of the Invoice value if the all Required Performance metrics are complied.
e. The MSI will be imposed a penalty on the payment due in that quarter/delivery milestone for every deviation of the desired levels non-compliance as defined in the SLA matrix.
f. The aforementioned SLA parameters shall be measured per the individual SLA parameter requirements and measurement methods, through appropriate SLA Measurement tools to be provided by the MSI and audited by MMRDA for accuracy and reliability. The MSI would need to configure the SLA Measurement Tools such that all the parameters as defined under SLA matrix given below. Post-implementation SLAs, should be measured and appropriate reports be generated for monitoring the compliance.

2. Pre-Implementation SLAs



- a. **Parameters:** The SLA parameters for the pre-implementation stage would be directly related to the delivery timelines of the deliverables as mentioned in the Section – I, Clause No. 3.6.3, Deliverables, Timelines and Payment Milestones. This would consist of the entire Bill of Materials and the applications system with successful UAT of the same.
- b. **Period:** These SLAs would be applicable until GO-LIVE. The deliverables would be measured at every payment milestone as mentioned in the matrix (Refer Section – I, Clause No. 3.6.3)
- c. **Penalty Value:** For delay of every week in completion & submission of the deliverable, the MSI would be charged with a penalty as follows;

Delay (Weeks)	Penalty % on the respective Payment milestone value
1	5%
2	10%
3	15%

- d. **Capping:** The upper limit of penalty would be capped at 15% of the respective Payment Milestone value. In case the MSI reaches 15% of the respective Payment Milestone value in the form of penalty at any point of time during the duration of pre-implementation phase, MMRDA reserves the right to invoke the termination clause.
- e. In case the MSI reaches / breaches the capped value and MMRDA decides to invoke the termination clause, the amount payable to the MSI would be as under; Invoice Raised or Payment Due minus (–) (Applicable Penalties plus (+) Liquidated Damages plus (+) depreciated value of the assets as per the Income Tax Rules)

**3. Post-Implementation SLAs**

- a. **Parameters:** The SLA parameters for the post-implementation stage would be related to the ongoing operations and management of the initiatives of the project. The SLA matrix specifies performance parameters as ‘Required’, ‘Acceptable’ and ‘Threshold’. The measurements of individual SLAs would differ as mentioned in the table.
- b. ‘Required’ parameter has the value that is desired by MMRDA at all times.
- c. All SLA calculations will be done on quarterly basis.
- d. **Period:** These SLAs would be applicable after GO-LIVE till the end of 7 years. The performance parameters would be measured on a quarterly basis and would be linked to the quarterly invoice payments.
- e. **Penalty Value:** For performance levels not up to the desired (Required level), provision of penalty is made as per the table below. The MSI would be penalized by 1 point each for every instance of ‘Acceptable’ and 2 points each for every instance of ‘Threshold’ level of performance respectively.

#	Required	Acceptable	Threshold
Penalty points earned by MSI	0	1 on each instance of violation	2 on each instance of violation
Cumulative Points in a quarter	-	‘X’ Sum of all instances of Acceptable violation	‘Y’ Sum of all instances of Threshold violation
Penalty to be levied in a quarter	( X + Y ) % of the quarterly invoice value		



Eg. If the MSI has 4 instances in 'Acceptable' category and 3 instances in 'Threshold' category then the total penalty levied would be (4x1)+(3x2)= 10% of the quarterly invoice value.

- f. **Capping:** The upper limit of penalty would be capped at 15% of the total Invoice value for each quarter.
  - i. In case the MSI crosses 10% penalty of the total Invoice value in 2 quarters within a project year, MMRDA reserves the right to invoke the termination clause and introduce Performance Improvement Period. In this process a Performance Improvement Period would be given to the MSI of 1 quarter and the total penalty in this quarter should be less than 5% for MMRDA to reconsider the termination clause.
  - ii. In case the MSI reaches / breaches 15% penalty of the total Invoice value in any quarter within a project year, MMRDA reserves the right to invoke the termination clause. In this process a Performance Improvement Period would be given to the MSI of 1 quarter and the total penalty in this quarter should be less than 5% for MMRDA to reconsider the termination clause.
- g. **Performance Improvement Period (PIP):** Performance Improvement period would be the grace period that would be given to the MSI for improving its performance. This period would be for 1 quarter and the quarterly penalty for this quarter should be less than 5% of the quarterly invoice value for MMRDA to reconsider the termination clause. In case the MSI breaches the cap of 5% penalty of the quarterly invoice value in PIP quarter, the MSI would be liable for termination. This period will be inclusive of the project year as defined. (Project Year: includes 4 quarters from the Go-Live of the project and so on till the end of 7 years).
- h. **SLA Waiver:** For the period of 3 months (90 days) from the day of Go-Live, Penalty Waiver period would be applicable and any penalties would not be levied on the MSI, however the SLA performance levels would be monitored and reported. After this period, all the applicable SLA performance levels, with penalties, will apply.
- i. In the event of non-compliance to this condition, MMRDA reserves the right to invoke the termination clause. All the activities and obligations pursuant to the termination, will be as per Termination Clause explained in Section - III. This clause w.r.t. SLAs will be applicable after the SLA waiver period.

Sl. No	Description	Measured in	Required	Acceptable	Threshold
<b>Network (Connectivity between ISP, DC, Command Center, DR)</b>					
1	Uptime for WAN	Percentage	>=99.9%	<99.9% to >=99.5%	<99.5%
2	Uptime for all network devices	Number Percentage	>=99.9%	<99.9% to >=99.5%	<99.5%
3	Network Latency	Time	<=40ms	<=60 ms to >40ms	>=60 ms
4	Packet Drop	Percentage	<=1%	>1% to <=2%	>2%
5	Percentage Failure of Components	Percentage	<=1%	>1% to <=5%	>5%
6	Bandwidth	Percentage	>=99.9%	<99.9% to >=99.5%	<99.5%
Resolution of issue based on severity level of impact					
7	> Critical	Hours	<=4	>4 to <=8	>8
8	> High		<=8	>8 to <=12	>12



Sl. No	Description	Measured in	Required	Acceptable	Threshold
9	➤ Medium		<=12	>12 to <=24	>24
10	➤ Low		<=24	>24 to <=36	>36
<b>Data Center &amp; Security Components</b>					
11	Availability of the services of Data Center	Percentage	>=99.9%	<99.9% to >=99.5%	<99.5%
12	Uptime for all devices of the Data Center	Percentage	>=99.5%	<99.5% to >=99%	<99%
13	Percentage Failure of Components	Percentage	<=1%	>1% to <=5%	>5%
14	Availability of power back-up when main source fails	Percentage	100%	<100% to >=99.99%	<99.99%
15	Uptime for Storage Area Network	Percentage	>=99.5%	<99.5% to <=99%	>99%
Resolution of issue based on severity level of impact					
16	➤ Critical	Hours	<=4	>4 to <=8	>8
17	➤ High		<=8	>8 to <=12	>12
18	➤ Medium		<=12	>12 to <=24	>24
19	➤ Low		<=24	>24 to <=36	>36
20	Antivirus Updates	Hours	<=24	>24 to <=48	>48
21	Virus Attack Resolution (Detection & Quarantine)	Hours	<=1	>1 to <=2	>2
22	Virus Attack Resolution (Removal)	Hours	<=8	>8 to <=24	>24
<b>Application Softwares</b>					
23	Uptime of softwares and other applications/tools	Percentage	>=99.9%	<99.9% to >=99.5%	<99.5%
24	Updates to the software and tools	Hours	<=24	>24 to 48	>48
Software Bug resolution based on severity level of impact					
25	➤ Critical	Hours	<=4	>4 to <=8	>8
26	➤ High		<=8	>8 to <=12	>12
27	➤ Medium		<=12	>12 to <=24	>24
28	➤ Low		<=24	>24 to <=36	>36
<b>Wi-Fi</b>					
29	Uptime for Public Wi-Fi (Premium & Free)	Percentage	>=99.5%	<99.5% to >=99%	<99%
30	Uptime for Wi-Fi services between street layer devices	Percentage	>=99.5%	<99.5% to >=99%	<99%
31	Wi-Fi signal strength of at least -60dBm (or -85dBm) in the coverage areas of E and G blocks	Percentage	>=95%	<95% to >=90%	<90%
32	Percentage Failure of Components	Number Percentage	<=1%	>1% to <=5%	>5%
Resolution of issue based on severity level of impact					
33	➤ Critical	Hours	<=4	>4 to <=8	>8
34	➤ High		<=8	>8 to <=12	>12
35	➤ Medium		<=12	>12 to <=24	>24
36	➤ Low		<=24	>24 to <=36	>36
<b>Smart Parking</b>					
37	Uptime for Hardware	Percentage	>99.9%	<99.9% to <=99.5%	<99.5%
38	Uptime for network services between street layer devices	Percentage	>=99.5%	<99.5% to >=99%	<99%
39	Percentage Failure of Components	Number Percentage	<=1%	>1% to <=5%	>5%
Resolution of issue based on severity level of impact					
40	➤ Critical	Hours	<=4	>4 to <=8	>8
41	➤ High		<=8	>8 to <=12	>12
42	➤ Medium		<=12	>12 to <=24	>24
43	➤ Low		<=24	>24 to <=36	>36



Sl. No	Description	Measured in	Required	Acceptable	Threshold
<b>Citizen Application</b>					
44	Availability of overall application	Percentage	>=99.9%	<99.9% to 99.5%	<=99.5%
45	Maximum time for Application response to user	Time	<=5 sec.	>5 to <=10 sec.	>=10 sec.
<b>Web Portal</b>					
46	Availability of overall application	Percentage	>=99.9%	<99.9% to 99.5%	<=99.5%
47	Maximum time for Application response to user	Time	<=5 sec.	>5 to <=10 sec.	>10 sec.
<b>Helpdesk</b>					
48	Average time taken to answer the call	Time	<=10 sec.	>10 to <=15 sec.	>15 sec.
49	Average time taken to log a ticket	Time	<=3 min.	>3 to <=5 min.	>5 min.

- j. In case, the downtime of any service or component is not resolved at the time of invoicing (end of quarter), the downtime for the same needs to be highlighted and carried forward to the next quarter from the time of call logging.
- k. To ensure Continual Service Improvement, MMRDA may choose to revisit SLA at the end of first quarter post Go-Live for the first time; and thereafter evaluate it after every 12 months, to analyze if any changes are required in certain parameters to make it more transparent, quantitative & robust.
- l. The MSI bidder shall monitor and measure the actual bandwidth allocated by the Internet Service Provider against the agreed Committed Interface Rate (CIR) and issues identified shall be reported to MMRDA and shall be escalated to the Bandwidth Service provider for resolution on immediate basis.
- m. In the event that a single event triggers multiple service level failures, only specific set of penalties would be imposed. This SLA dependencies would be considered as mutually agreed between MSI & MMRDA. Eg. If the network from Data Center to Command Center is down, the other network related SLAs for other applications would not be applicable.
- n. Any changes to the SLA are to be processed through a proper change management process.

#### 4. Other Penalties

- a. It is expected that the MSI should comply with all the Policy / Procedural / Regulatory Guidelines enforced by Government of India, Government of Maharashtra, Department of Information Technology, MMRDA, TRAI and other related bodies and as amended from time to time.
- b. The MSI should also safeguard the Application Security and Application Integrity.
- c. Penalty would be applicable for non-compliance of relevant security certifications.
- d. There would be Zero Tolerance policy against such breaches.
- e. The penalties across various breaches could be categorized as follows; (this includes but not limited to the following)
  - i. Information Security Breach: Any data leakage, information sharing, reports sharing without the consent of MMRDA.
  - ii. Network & System Security Breach: Any instance of hacking, information/data compromise, unauthorized access to public Wi-Fi, unauthorized access to Smart Parking etc.



- iii. Guidelines Breach: Non-compliance to guidelines shared by various government agencies such as complying with standards for website/mobile app development etc.
- f. For any of the breach for above mentioned category, a penalty would be levied on the bidder for every instance of occurrence if not responded as per the timelines mentioned in the table below. The response of the same is desired to be provided in the timelines as specified in the table below. The details of the same are given below;

Type	Measurement (Unit)	Response Time (in unit)	Penalty on response w.r.t. delay/Unit
Information Security Breach	Hours	1	Rs. 1,00,000/-
Network & System Security Breach	Hours	1	Rs. 2,00,000/-
Guidelines Breach	Days	7	Rs. 1,00,000/-

- g. The response time refers to immediate remedial action taken and preventive measures updated by the MSI on occurrence of the event.
- h. In case the breaches are not responded to in the time frame as specified, penalties would be levied as per the table above and failing to address the breach in desired timeline, recurring penalties would be levied w.r.t. to delay in units as mentioned. Eg. In case of an Information Security Breach, the MSI has to respond within 1 hour of the event occurrence. If the MSI responds in 2:15 hours, a penalty equivalent to 2 hours i.e. Rs. 2,00,000/- would be imposed on the MSI.
- i. In case of more than 3 instances of breach within the project year, MMRDA reserves the right to invoke the termination clause along with legal action would be initiated for serious offence as decided by MMRDA.
- j. Eg. Guidelines Breach includes non-compliance to certain guidelines as set by various agencies like DIT, DeitY, GoM, MMRDA etc. In such cases, resolution of the issue is also mandatory. The MSI would be required to respond with the action plan / change request, as applicable, in order to resolve the guidelines breach with the specified response time.

#### **5. SLAs for Change Management Process:**

- a. In case of any further modifications are required in the setup of devices and equipment across the project in the entire span of the contract, the same would be rendered through the change request process.
- b. Any change request shall be processed through a Change Management Process, explained in Section - II of the RFP.
- c. This change request can originate from the MSI or MMRDA. The complete ownership of documentation and change management process would be of the MSI.
- d. The change management process includes all IMACD (Install, Modify, Add, Change, Delete) requests.
- e. For instance, if a Wi-Fi access point is installed initially as per the plan and is able to provide the Wi-Fi signal strength of -60dBm (or -85dBm), however over a period of time, there happens to be some construction around that area which is now affecting the signal strength. In such cases, the MSI can approach MMRDA with a proper plan of action for Add or Move the Access point to a more suitable location.



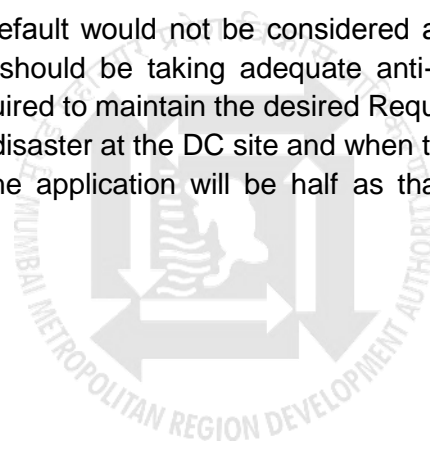
- f. The change request could take place on events which are out of the control of MSI and/or any change desired by MMRDA in improving the services to its users.
- g. The performance levels, and corresponding penalties for change request/ order processing shall be as below:

Sl. No	Change Request/ Order Description	Timeline (Days/ Weeks/ Months)	Penalty (% of delay per day/ week)

- h. Penalty will be levied per day of delay in cases where the timeline is in days. In all other cases, the penalty will be levied on per week basis.

**6. Penalties shall not be levied on the MSI in the following cases:**

- a. There is a force majeure event effecting the SLA which is beyond the control of the MSI. Force Majeure events will be considered in line with the clause mentioned in Section - III (Draft Master Service Agreement).
- b. The non-compliance to the SLA has been due to reasons beyond the control of the bidder.
- c. Theft cases by default would not be considered as “beyond the control of bidder”. Hence, the MSI should be taking adequate anti-theft measures, spares strategy, Insurance as required to maintain the desired Required SLA.
- d. In the event of a disaster at the DC site and when the DR site is operational, the SLA parameters for the application will be half as that of the SLA defined for normal operation.





## 11. Annexure A

### 11.1 Technical Specifications for Public Wi-Fi

1. All equipment must support the following standards/capabilities:
  - i. 802.11n
  - ii. 802.11ac
  - iii. 802.11e Quality of Service (QoS)
  - iv. WMM Wireless Multimedia Extensions
  - v. WMM Powersave
  - vi. 802.11h Dynamic Frequency Selection and Transmit Power Control
  - vii. 802.11i Security, including AES
  - viii. 802.1X with dynamic VLAN policies
  - ix. WPA2-Enterprise certification
  - x. 802.11r Roaming
  - xi. preferred: 3X3 MIMO
  - xii. preferred: Polycom/SpectraLink VIEW Certification, SpectraLink Voice Priority
  - xiii. preferred: Wi-Fi Certified Voice-Enterprise
2. Wireless Access points specs
  - i. Shall be IEEE 802.11ac compliant concurrent dual radio access point.
  - ii. Shall feature a three spatial-stream 802.11ac (3x3 MIMO) integrated or external dual band (2.4GHz & 5GHz) antenna.
  - iii. Shall have 802.3af or 802.3at compliant Gigabit PoE UTP port and a console port.
  - iv. Shall be IEEE 802.3af PoE compliant and both the radios shall operate at full power and full performance on 802.3af PoE/Gigabit Ethernet.
  - v. Shall be Wi-Fi Alliance certified for interoperability with all IEEE 802.11a/b/g/n/ac client devices.
  - vi. Shall support up to 16 SSID/VSC profiles.
  - vii. Shall support simultaneous detection & prevention of wireless threats on 2.4GHz & 5GHz frequency bands.
  - viii. Shall support both centrally managed mode (configured and updated via a controller) and autonomous mode (standalone in the absence of a controller).
  - ix. Shall support auto-selection of RF channel and transmit power.
  - x. Shall support enforcement of client authorization based on user credentials (802.1X/EAP), and hardware identifiers (MAC address, WEP key).





- xi. Shall support ACS or similar feature to reduce co-channel interference (CCI) by automatically selecting an unoccupied radio channel.
- xii. Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.
- xiii. AP model proposed must be able to be both a client-serving AP and a monitor-only AP for Intrusion Prevention services
- xiv. Must support up to 23dbm of transmit power in both 2.4 GHz and 5 GHz radios.
- xv. The Wireless AP should have the technology to improve downlink performance to all mobile devices including one-, two-, and three spatial stream devices on 802.11n. The technology should use advanced signal processing techniques and multiple transmit paths to optimize the signal received by 802.11 clients in the downlink direction without requiring feedback and should work with all existing 802.11 clients.

## 11.2 Technical Specifications for Smart Parking

The following standards and certifications need to be followed:

1. Entry Device
  - i. Communication protocol should be TCP/IP
  - ii. Conform ISO 9001 Quality Assurance Standard
  - iii. CE, FCC, IC, CNRTLUS certified
  - iv. Degree of protection based on IEC 60529: IP43
2. Exit Device
  - i. Conform ISO 9001 Quality Assurance Standard
3. Entry/Exit Barrier
  - i. The Barrier unit must conform to ISO 9001 Quality Assurance standards
  - ii. CE, Ukr - Sepro certified
  - iii. Degree of protection: IP34D
4. Sensors
  - i. Conform ISO 9001 Quality Assurance Standard
  - ii. Protection Level: IP67
5. Parking light aisle indicators
  - i. Conform ISO 9001 Quality Assurance Standard
  - ii. Protection Level: IP55
6. Indoor LED indicators
  - i. Conform ISO 9001 Quality Assurance Standard



- ii. Protection Level: IP33
- iii. Communications: Bus RS-485

7. Other Technical Specifications:

Parameter/Device	Specifications
Single Line display with dynamic single arrow	Red and Green Color, 24*24 matrix, Total 4 digits LED size: 471mm*171mm
Single Line display with dynamic double arrow	Red and Green Color, 24*24 matrix, Total 12 digits LED size: 1083 mm*171mm
Single Line display with dynamic triple arrow	Red and Green Color, 24*24 matrix, Total 16 digits LED size: 1439 mm*171mm





# Section – III: Draft Legal Agreements



**Table of Contents**

PART – I: DRAFT MASTER SERVICES AGREEMENT	172
1. DEFINITIONS AND INTERPRETATION	174
1.1. Definitions	174
1.2. Interpretation	174
1.3. Measurements and Arithmetic Conventions:	174
1.4. Ambiguities within Agreement	175
1.5. Priority of documents	175
2. SCOPE OF THE PROJECT	176
3. TERM AND DURATION OF THE AGREEMENT	177
4. CONDITIONS PRECEDENT & EFFECTIVE DATE	178
4.1. Provisions to take effect upon fulfillment of Conditions Precedent	178
4.2. Conditions Precedent of the Implementing Partner	178
4.3. Conditions Precedent of the Nodal Agency	178
4.4. Extension of time for fulfillment of Conditions Precedent	178
4.5. Non-fulfillment of the Implementation Agency's Conditions Precedent	178
5. OBLIGATIONS UNDER THE SLA	180
6. INCREASE IN SCOPE	182
6.1. Tolerance Clause	182
6.2. Increase/Decrease in Scope	182
7. REPRESENTATIONS AND WARRANTIES	183
7.1. Representations and warranties of the Implementation Agency	183
7.2. Representations and warranties of the Nodal Agency or its nominated agencies	184
8. OBLIGATIONS OF THE NODAL AGENCY OR ITS NOMINATED AGENCIES	186
9. OBLIGATIONS OF THE IMPLEMENTATION AGENCY	187
10. ROLES AND RESPONSIBILITIES OF THE PARTIES	188
11. APPROVALS AND REQUIRED CONSENTS	190
12. USE OF ASSETS BY THE IMPLEMENTATION AGENCY	191
13. ACCESS TO THE NODAL AGENCY OR ITS NOMINATED AGENCIES LOCATIONS	192
14. MANAGEMENT PHASE	193
15. FINANCIAL MATTERS	195
15.1. Terms of Payment and Service Credits and Debits	195
15.2. Invoicing and Settlement	195
15.3. Tax	196
16. TERMINATION	198
16.1. Material Breach	198
16.2. Effects of termination	198
16.3. Termination of this Agreement due to bankruptcy of Implementation Agency	199
17. INDEMNIFICATION & LIMITATION OF LIABILITY	200
18. FORCE MAJEURE	202
18.1. Definition of Force Majeure	202
18.2. Force Majeure events	202
18.3. Notification procedure for Force Majeure	203
18.4. Allocation of costs arising out of Force Majeure	204
18.5. Consultation and duty to mitigate	204
19. CONFIDENTIALITY	205
20. AUDIT, ACCESS AND REPORTING	206
21. INTELLECTUAL PROPERTY RIGHTS (IPR)	207
21.1. Products and fixes	207
21.2. Bespoke development	207
21.3. Pre-existing work	207
21.4. Residuals	207
22. WARRANTY	208
22.1. Standard	208
22.2. Implied Warranty	208
23. LIQUIDATED DAMAGES	209
24. ESCROW AGREEMENT FOR REVENUE	210
25. ESCROW AGREEMENT FOR SOFTWARE	211
26. INSURANCE COVER	213
26.1. Obligation to maintain insurance	213



26.2.	Certificates of currency	213
26.3.	Non-compliance	213
27.	LIABILITY AND INSURANCE	214
28.	GOVERNING LAW AND DISPUTE RESOLUTION	215
29.	MISCELLANEOUS	217
29.1.	PERSONNEL	217
29.2.	INDEPENDENT CONTRACTOR	218
29.3.	SUB-CONTRACTORS	218
29.4.	ASSIGNMENT	218
29.5.	TRADEMARKS, PUBLICITY	218
29.6.	NOTICES	219
29.7.	VARIATIONS AND FURTHER ASSURANCE	219
29.8.	SEVERABILITY AND WAIVER	220
29.9.	COMPLIANCE WITH APPLICABLE LAW	220
29.10.	PROFESSIONAL FEES	220
29.11.	ETHICS	220
29.12.	ENTIRE AGREEMENT	220
29.13.	AMENDMENT	221
29.14.	FALL CLAUSE	221
30.	SCHEDULES	223
30.1.	SCHEDULE – I – DEFINITIONS	223
30.2.	SCHEDULE – II – CHANGE CONTROL SCHEDULE	224
30.3.	SCHEDULE – III - EXIT MANAGEMENT SCHEDULE	226
30.4.	SCHEDULE – IV - AUDIT, ACCESS AND REPORTING	230
30.5.	SCHEDULE – V - GOVERNANCE SCHEDULE	233
30.6.	SCHEDULE – VI - TERMS OF PAYMENT SCHEDULE	235
31.	ANNEXURE	236
PART – II: DRAFT NON-DISCLOSURE AGREEMENT		237
1.	DEFINITIONS	239
2.	INTERPRETATION	239
3.	MEASUREMENTS AND ARITHMETIC CONVENTIONS	239
4.	AMBIGUITIES WITHIN AGREEMENT	239
5.	PRIORITY OF AGREEMENTS	240
6.	TERM	240
7.	SCOPE OF THE AGREEMENT	240
8.	OBLIGATIONS OF THE RECEIVING PARTY	240
9.	EXCEPTIONS TO CONFIDENTIAL INFORMATION	241
10.	OWNERSHIP OF THE CONFIDENTIAL INFORMATION	242
11.	DISPUTE RESOLUTION	242
12.	VARIATION	243
13.	WAIVER	243
14.	EXCLUSION OF IMPLIED WARRANTIES	243
15.	ENTIRE AGREEMENT	243
16.	SEVERABILITY	244
17.	NO PARTNERSHIP	244
18.	THIRD PARTIES	244
19.	SUCCESSORS AND ASSIGNS	244
20.	NOTICES	244
21.	LANGUAGE	245
22.	COUNTERPARTS	245
23.	MITIGATION	245
24.	REMOVAL OF DIFFICULTIES	245
PART – III: DRAFT SERVICE LEVEL AGREEMENT		247
1.	DEFINITIONS AND INTERPRETATION	248
2.	STRUCTURE	249
3.	OBJECTIVES OF THIS SLA	250
4.	SCOPE OF SLA	250
5.	AGREEMENT OWNERS	251
6.	CONTACT LIST	251
7.	PRINCIPAL CONTACTS	251



8.	COMMENCEMENT AND DURATION OF THIS AGREEMENT	251
9.	EXCLUSIONS TO THE AGREEMENT	252
10.	TERMS OF PAYMENT AND PENALTIES	252
11.	UPDATING OF THIS AGREEMENT	252
12.	DOCUMENT HISTORY	253
13.	SCOPE OF SERVICES	253
14.	PERFORMANCE REVIEW	253
15.	REPRESENTATIONS AND WARRANTIES OF BUYER	253
16.	REPRESENTATIONS AND WARRANTIES OF THE IMPLEMENTATION AGENCY	254
17.	INDEMNITIES	255
18.	DISPUTE RESOLUTION	255
19.	MISCELLANEOUS	256
20.	ANNEXURES	260





# **PART – I: DRAFT MASTER SERVICES AGREEMENT**





**THIS MASTER SERVICE AGREEMENT (“Agreement”)** is made on the <\*\*\*> day of <\*\*\*> 20... at <\*\*\*>, India.

**BETWEEN**

----- having its office at -----  
----- India hereinafter referred to as ‘Nodal Agency’ / ‘**Nodal Agency**’ or ‘---  
----- ---’, which expression shall, unless the context otherwise requires, include its permitted successors and assigns);

**AND**

<\*\*\*>, a Company registered as per relevant laws (in case of a Consortium/ SPV, every member) having its registered office at <\*\*\*> (hereinafter referred to as ‘Master System Integrator/MSI’ which expression shall, unless the context otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the ‘**Parties**’ and individually as a ‘**Party**’.

**WHEREAS**

1. Nodal Agency is desirous to implement the project of Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai for a period of 7 years.
2. In furtherance of the same, Nodal Agency undertook the selection of a suitable Implementation Agency through a competitive bidding process for implementing the Project and in this behalf issued Request for Proposal (RFP) dated <\*\*\*>.
3. The successful bidder has been selected as the Implementation Agency on the basis of the bid response set out as Annexure D of this Agreement, to undertake the Project of the development and implementation of the solution, its roll out and sustained operations.

**NOW THEREFORE**, in consideration of the mutual covenants, promises, assurances, representations and provisions set forth herein, the Parties hereto agree as follows:





## **1. DEFINITIONS AND INTERPRETATION**

### **1.1. Definitions**

Terms and expressions used in this Agreement (including the Introduction) shall have the meanings set out in Section – I, Definitions.

### **1.2. Interpretation**

In this Agreement, unless otherwise specified:

- 1 references to Clauses, Sub-Clauses, Paragraphs, Schedules and Annexures are to clauses, sub-clauses, paragraphs, schedules and annexures to this Agreement;
- 2 use of any gender includes the other genders;
- 3 references to a 'company' shall be construed so as to include any company, corporation or other body corporate, wherever and however incorporated or established;
- 4 references to a 'person' shall be construed so as to include any individual, firm, company, government, state or agency of a state, local or municipal authority or government body or any joint venture, association or partnership (whether or not having separate legal personality);
- 5 a reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted;
- 6 any reference to a 'day' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight;
- 7 references to a 'business day' shall be construed as a reference to a day (other than a Sunday) on which banks in the state of MAHARASHTRA are generally open for business;
- 8 references to times are to Indian Standard Time;
- 9 a reference to any other document referred to in this Agreement is a reference to that other document as amended, varied, innovated or supplemented at any time; and
- 10 all headings and titles are inserted for convenience only. They are to be ignored in the interpretation of this Agreement.
- 11 Master System Integrator (SI) or Implementation Agency (IA) or System Integrator (SI) has been used for the same entity i.e. bidder selected for the project.

### **1.3. Measurements and Arithmetic Conventions:**

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being



rounded down except in money calculations where such amounts shall be rounded off to the nearest INR (upper).

#### **1.4. Ambiguities within Agreement**

In case of ambiguities or discrepancies within this Agreement, the following principles shall apply:

1. as between two Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in a general Clause;
2. as between the provisions of this Agreement and the Schedules/Annexures, the Agreement shall prevail, save and except as expressly provided otherwise in the Agreement or the Schedules/Annexures; and
3. as between any value written in numerals and that in words, the value in words shall prevail.

#### **1.5. Priority of documents**

This Agreement, including its Schedules and Annexures, represents the entire agreement between the Parties as noted in this Clause. If in the event of a dispute as to the interpretation or meaning of this Agreement it should be necessary for the Parties to refer to documents forming part of the bidding process leading to this Agreement, then such documents shall be relied upon and interpreted in the following descending order of priority:

- 1 This Agreement along with the SLA agreement, NDA agreement, Schedules and Annexures;
- 2 Request for Proposal and Addendum / Corrigendum to the Request for Proposal (if any).
- 3 For the avoidance of doubt, it is expressly clarified that in the event of a conflict between this Agreement, Annexures / Schedules or the contents of the RFP, the terms of this Agreement shall prevail over the Annexures / Schedules and Annexures / Schedules shall prevail over the contents and specifications of the RFP.



## 2. SCOPE OF THE PROJECT

The Implementation Agency shall be required to:

1. develop / customize and implement <Insert the details of solution>;
2. manage and provide technical support to the solution for the period of \_\_\_\_ years from the date of Go-Live (as mentioned in RFP ).

The roles and responsibilities of the Parties under this Agreement have been set out in detail at Section – III, Clause No 10.

For the avoidance of doubt, it is expressly clarified that this Agreement shall govern the provision of the contracted professional services under the SLA to the Nodal Agency and its nominated agencies. It is anticipated that new or renewal agreements may be undertaken by creating a separate SLA, with schedules and annexures as required, under this Agreement for each additional engagement.





### 3. TERM AND DURATION OF THE AGREEMENT

This Agreement shall come into effect on <\*\*\*\*\*> 20--- (hereinafter the 'Effective Date') and shall continue till operation and maintenance completion date which shall be the date of the completion of the operation and maintenance to the Nodal Agency or its nominated agencies.





## **4. CONDITIONS PRECEDENT & EFFECTIVE DATE**

### **4.1. Provisions to take effect upon fulfillment of Conditions Precedent**

Subject to express terms to the contrary, the rights and obligations under this Agreement shall take effect only upon fulfillment of all the Conditions Precedent set out below. However, Nodal Agency or its nominated agencies may at any time at its sole discretion waive fully or partially any of the Conditions Precedent for the Implementation Agency.

### **4.2. Conditions Precedent of the Implementing Partner**

The Implementation Agency shall be required to fulfill the Conditions Precedent in which is as follows:

1. to provide a Performance Bank Guarantee and other guarantees/ payments as and when required to the Nodal Agency or its nominated agencies; and
2. to provide the Nodal Agency or its nominated agencies, as and when required, certified true copies of its constitutional documents, Financial Documents and board resolutions authorizing the execution, delivery and performance of this Agreement by the Implementation Agency.
3. to open / designate a separate / designated bank account for the purpose of receiving the Amount provided for under this Agreement and communicate such Bank details to Nodal Agency in writing.
4. To submit a declaration-cum-undertaking that no amount or any other charges whatsoever on any account shall be levied on the Nodal Agency for any services provided under the Project unless approved by the Nodal Agency.

### **4.3. Conditions Precedent of the Nodal Agency**

The Nodal Agency shall be required to fulfill the Conditions Precedent in which is as follows:

1. handing over of site
2. Necessary clearances
3. Approval of the Project by a Competent Authority, etc.

For the avoidance of doubt, it is expressly clarified that the obligations of the Parties except the financial obligations of Nodal Agency or its nominated agencies under this Agreement shall commence from the fulfillment of the Conditions Precedent as set forth above.

### **4.4. Extension of time for fulfillment of Conditions Precedent**

The Parties may, by mutual agreement extend the time for fulfilling the Conditions Precedent and the Term of this Agreement.

### **4.5. Non-fulfillment of the Implementation Agency's Conditions Precedent**

1. In the event that any of the Conditions Precedent of the Implementation Agency have not been fulfilled within 15 days of signing of this Agreement and the same have not been waived fully or partially by Nodal Agency or its nominated agencies, this Agreement shall cease to exist;
2. In the event that the Agreement fails to come into effect on account of non-fulfillment of the Implementation Agency's Conditions Precedent, the Nodal Agency or its nominated



- agencies shall not be liable in any manner whatsoever to the Implementation Agency and the Nodal Agency shall forthwith forfeit the Performance Guarantee.
3. In the event that possession of any of the Nodal Agency or its nominated agencies facilities or resources have been delivered to the Implementation Agency prior to the fulfillment of the Conditions Precedent, upon the termination of this Agreement such shall immediately revert to Nodal Agency or its nominated agencies, free and clear from any encumbrances or claims.





## **5. OBLIGATIONS UNDER THE SLA**

- 5.1 The SLA shall be a separate contract in respect of this Agreement and shall be entered into concurrently with this Agreement between Nodal Agency and Implementation Agency;
- 5.2 In relation to any future SLA entered into between the Parties; each of the Parties shall observe and perform the obligations set out herein.
- 5.3 Change of Control: In the event of a change of control of the Implementation Agency during the Term, the Implementation Agency shall promptly notify Nodal Agency and/or its nominated agencies of the same in the format set out as per format at Section – IV, Annexure – 3, Format – 4.
- 5.4 In the event that the net worth of the surviving entity is less than that of Implementation Agency prior to the change of control, the Nodal Agency or its nominated agencies may, within 30 days of becoming aware of such change in control, require a replacement of existing Performance Guarantee furnished by the Implementation Agency from a guarantor acceptable to the Nodal Agency or its nominated agencies (which shall not be Implementation Agency or any of its associated entities).
- 5.5 If such a guarantee is not furnished within 30 days of the Nodal Agency or its nominated agencies requiring the replacement, the Nodal Agency may exercise its right to terminate the SLA and/ or this Agreement within a further 30 days by written notice, to become effective as specified in such notice.
- 5.6 Pursuant to termination, the effects of termination as set out in Clause 16.2 of this Agreement shall follow.
- 5.7 For the avoidance of doubt, it is expressly clarified that the internal reorganization of the Implementation Agency shall not be deemed an event of a change of control for purposes of this Clause unless the surviving entity is of less net worth than the predecessor entity.
- 5.8 Final testing and certification
- 5.9 The Project shall be governed by the mechanism of final acceptance testing and certification to be put into place by the Nodal Agency and Implementation Agency as under:
- 5.10 Final testing and certification criteria will lay down a set of guidelines following internationally accepted norms and standards for testing and certification for all aspects of project development and implementation covering software, hardware and networking including the processes relating to the design of solution architecture, design of systems and sub- systems, coding, testing, business process description, documentation, version control, change management, security, service oriented architecture, performance in relation to compliance with SLA metrics, interoperability, scalability, availability and compliance with all the technical and functional requirements of the RFP and this Agreement;
- 5.11 Final testing and certification criteria will be finalized from the development stage to ensure that the guidelines are being followed and to avoid large scale modifications pursuant to testing done after the application is fully developed;
- 5.12 Final testing and certification criteria will consider conducting specific tests on the



- software, hardware, networking, security and all other aspects;
- 5.13 Final testing and certification criteria will establish appropriate processes for notifying the Implementation Agency of any deviations from the norms, standards or guidelines at the earliest instance after taking cognizance of the same to enable the Implementation Agency to take corrective action; etc.
- 5.14 The Parties shall each ensure that the range of the Services under the SLA shall not be varied, reduced or increased except with the prior written agreement between the Nodal Agency and Implementation Agency in accordance with the Change Control Schedule set out in Schedule II of this Agreement. Save for the express terms of the Terms of Payment Schedule set out as Schedule VI of this Agreement, Nodal Agency or its nominated agencies and its users may purchase any particular category of Services that may become necessary as per the Change Control Schedule set out in Schedule II of this Agreement, without the need to go for a separate procurement process.







## 6. INCREASE IN SCOPE

### 6.1. Tolerance Clause

To take care of any change in the requirement during the period starting from issue of RFP till subsistence of the contract, the Client reserves the right to make a 10% plus/minus, increase or decrease in the scope of work up to that limit without any change in the terms & conditions and prices quoted by the Bidder. During the subsistence of the contract, the scope of work can be increased or decreased by the BUYER within this tolerance limit.

### 6.2. Increase/Decrease in Scope

The Client reserves the right to propose an increase/decrease in scope of work beyond 10% plus/minus. Save and except the abovementioned limit, the Bidder will not be bound to comply with any increase/decrease in scope of work subject to Force Majeure conditions or Change in Law. The Client shall be entitled and without any reservations whatsoever, to co-assign or sub-contract to other Implementing Partners simultaneously, the provision of services for the scope of services as described in the Schedule under this Agreement or as required, in case of such Increase in scope of work.





## **7. REPRESENTATIONS AND WARRANTIES**

### **7.1. Representations and warranties of the Implementation Agency**

The Implementation Agency represents and warrants to the Nodal Agency or its nominated agencies that:

- 1 it is duly organized and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and other agreements and to carry out the transactions contemplated hereby;
- 2 it has the financial standing and capacity to perform its obligations under the Agreement;
- 3 it is a competent provider of a variety of information technology and business process management services;
- 4 it has taken all necessary corporate and other actions under laws applicable to its business to authorize the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
  - i. from the Effective Date, it will have the financial standing and capacity to undertake the Project in accordance with the terms of this Agreement;
  - ii. in providing the Services, it shall use reasonable endeavors not to cause any unnecessary disruption to Nodal Agency's normal business operations
- 5 this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement shall be legally valid, binding and enforceable against it in accordance with the terms hereof;
- 6 the information furnished in the tender documents and as updated on or before the date of this Agreement is to the best of its knowledge and belief true and accurate in all material respects as at the date of this Agreement;
- 7 the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default by any of the terms of its Memorandum and Articles of Association or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- 8 there are no material actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its material obligations under this Agreement;
- 9 it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Instrumentality which may result in any Adverse Effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
- 10 it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have an Adverse Effect on its ability to perform its obligations under this Agreement;
- 11 no representation or warranty by it contained herein or in any other document furnished



- by it to Nodal Agency or its nominated agencies in relation to the Required Consents contains or shall contain any untrue or misleading statement of material fact or omits or shall omit to state a material fact necessary to make such representation or warranty not misleading; and
- 12 no sums, in cash or kind, have been paid or shall be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for entering into this Agreement or for influencing or attempting to influence any officer or employee of Nodal Agency or its nominated agencies in connection therewith.
- 13 The Implementing Agency fully indemnifies the Nodal Agency or its nominated agencies, from any damages arising out of breach of the aforesaid conditions.

## 7.2. Representations and warranties of the Nodal Agency or its nominated agencies

Nodal Agency or its nominated agencies represent and warrant to the Implementation Agency that:

- 1 it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement and carry out the transactions contemplated hereby;
- 2 it has taken all necessary actions under Applicable Laws to authorize the execution, delivery and performance of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- 3 it has the financial standing and capacity to perform its obligations under the Agreement;
- 4 it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising thereunder including any obligation, liability or responsibility hereunder;
- 5 this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof and its obligations under this Agreement shall be legally valid, binding and enforceable against it in accordance with the terms thereof;
- 6 the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- 7 there are no actions, suits or proceedings pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the default or breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform its material (including any payment) obligations under this Agreement;
- 8 it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any Adverse Effect on the Nodal Agency or its nominated agencies ability to perform its obligations under this Agreement and no fact or circumstance exists



- which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
- 9 it has complied with Applicable Laws in all material respects;
  - 10 all information provided by it in the RFP in connection with the Project is, to the best of its knowledge and belief, true and accurate in all material respects; and
  - 11 upon the Implementation Agency performing the covenants herein, it shall not at any time during the term hereof, interfere with peaceful exercise of the rights and discharge of the obligations by the Implementation Agency, in accordance with this Agreement.





## 8. OBLIGATIONS OF THE NODAL AGENCY OR ITS NOMINATED AGENCIES

Without prejudice to any other undertakings or obligations of the Nodal Agency or its nominated agencies under this Agreement, the Nodal Agency or its nominated agencies shall perform the following:

- 1 To provide any support through personnel to test the system during the Term;
- 2 To provide any support through personnel and/or test data during development, rollout, steady state operation, as well as, for any changes/enhancements in the system whenever required due to scope change that may arise due to business, delivery or statutory/regulatory reasons;
- 3 Nodal Agency shall provide the data (including in electronic form wherever available) to be migrated.
- 4 To authorize the Implementation Agency to interact for implementation of the Project with external entities such as the state treasury, authorized banks, trademark database etc.





## **9. OBLIGATIONS OF THE IMPLEMENTATION AGENCY**

- 9.1. It shall provide to the Nodal Agency or its nominated agencies, the Deliverables as set out in Section – IV, Annexure – 4, Bid-related Information – 3
- 9.2. It shall perform the Services as set out in Section - II of this Agreement and in a good and workmanlike manner commensurate with industry and technical standards which are generally in effect for international projects and innovations pursuant thereon similar to those contemplated by this Agreement, and so as to comply with the applicable Service Levels set out with this Agreement.
- 9.3. It shall ensure that the Services are being provided as per the Project Timelines set out as per Section – IV, Annexure – 4, Bid-related Information – 3. It shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with accepted accounting principles and in such form and detail as will clearly identify all relevant changes in time and costs, and the bases thereof; and it shall periodically permit the Client or its designated representative when applicable, and up to two (2) years from the expiration or termination of this Agreement, to inspect the same and make copies as well as to have them audited by auditors appointed by the Client, if so required by the as the case may be.
- 9.4. The Implementing Agency hereby acknowledges that the Client has the discretion to conduct checks and audits depending on the situation of the case.
- 9.5. It shall comply with such reasonable Instructions as may be notified to the Client from time to time;
- 9.6. It shall deliver to the Client project monitoring/ implementation/ progress/ compliance/ utilization reports demonstrating performance of the Services in the prescribed formats and at the frequency, specified by the Client.
- 9.7. It shall comply with all statutory/ legal requirements of the country, state or jurisdiction in which it operates and in which the Services are carried out as may arise from time to time whilst acting on the Instructions;
- 9.8. It shall seek the Client's prior approval for any hardware or software proposed to be installed and also for the proposed manner of such installation and the Client's decision in this regard shall be final;
- 9.9. It shall provide alternate options not later than seven (7) days from the date on which the Client rejects the said hardware/software or the proposed manner of installation.



## 10. ROLES AND RESPONSIBILITIES OF THE PARTIES

### **Roles and Responsibilities of Implementation Agency**

1. Preparation of Detailed Project Plan in line with the overall plan provided in the RFP. The same should be prepared in consultation with Nodal Agency.
2. Procure, install, commission, operate and maintain:
  - a. Requisite hardware & system software at Nodal Agency's HQ, Data Center and other locations as per the requirements mentioned in this RFP
  - b. Networking equipment, connectivity and LAN as per the requirements mentioned in this RFP,
  - c. Meet the defined SLAs for the performance of the system.
3. Addressing technology obsolescence by appropriate upgradation, replacement and / or replenishment of systems deployed at various locations (data center, HQ and other locations).
4. Insure the entire hardware against the infrastructure deployed at various locations for the entire duration of the contract against vandalism, theft, fire and lightning.
5. Keep all system software i.e. OS, antivirus, office applications etc., for Servers, PCs etc. at Data Centre and various locations, up to date by installing regular upgrades / patches.
6. Rectification of system software problems due to crashing or malfunctioning of the OS, RDBMS or front end within the time limits to meet the SLAs as defined in RFP.
7. Develop / customize, deploy and maintain the requisite Software Solution as per the requirements of the Corporation at appropriate locations.
8. Provide necessary support for the resolution of bugs, patches & upgrades of the software solution.
9. Provide necessary manpower for managing the Change Requests.
10. Design various manuals like User manual, Trouble Shooting manual etc. for the system.
11. Provide computer basic skills training and advanced training on application modules to the staff members and stakeholders of the Corporation.
12. Maintain the business continuity.
13. Deploy requisite manpower and infrastructure for the digitization of the existing data.
14. Deploy the required manpower to manage the operations.
15. Ensuring the SLAs for downtime of system, software development / customization, procurement and delivery of hardware & networking equipments, errors in data entry as defined in RFP Volume 1 are met.
16. Management and quality control of all services and infrastructure.
17. Any other services which is required for the successful execution of the project.
18. Regular Backup as per the schedule and Disaster Recovery.
19. Generation of MIS reports as per the requirements of Nodal Agency.
20. Generation of the report for the monitoring of SLAs.
21. Meet the defined Technical Specifications for the IT Infrastructure including Hardware and networking equipments keeping in mind the application and future requirements of the Corporation.



## Roles and Responsibilities of Nodal Agency

1. Provide adequate space at the Nodal Agency's HQ for setting up of infrastructure, software development and other activities to be carried out by the Bidder.
2. Coordination between all the divisions for providing necessary information for the study and development / customization of the necessary solution.
3. Wherever necessary, co-ordination with DIT, PAWAN operator and other state agencies to assist the selected bidder in execution of the project.
4. Coordinate with Bidder for conducting workshops for the Stakeholder departments.
5. Provide the data available in the form of physical files or existing databases to the selected bidder for digitization purposes.
6. Deployment of staff members of the Corporation for verification of the digitized data within the defined timelines.
7. Ensure that Data Backups are being taken regularly by bidder as per the schedule agreed upon.
8. Ensure that the hardware and other infrastructure deployed at HQ, DC etc. meets the specifications as mentioned in RFP and is maintained properly to meet the SLAs as defined in RFP.
9. Monitoring of overall timelines, SLAs and calculation of penalties accordingly.
10. Conducting UAT for the application solution deployed.
11. Issuing the Acceptance Certificate on successful deployment of the software application, hardware deployed, digitized data and for other components of the Scope of Work (wherever required).
12. Any other requirements that could arise during operations for effective governance and to meet any administrative requirement.
13. To create internal capacity now for execution of the project after takeover from the bidder.
14. Ensuring the staff members and other stakeholders attend the training programs as per the schedule defined by the bidder and agreed upon by Nodal Agency.
15. Provide sign off on the deliverables of the project including SRS, design documents etc.





## 11. APPROVALS AND REQUIRED CONSENTS

- 11.1. The Parties shall cooperate to procure, maintain and observe all relevant and regulatory and governmental licenses, clearances and applicable approvals (hereinafter the "Required Consents") necessary for the Implementation Agency to provide the Services. The costs of such Approvals shall be borne by the Party normally responsible for such costs according to local custom and practice in the locations where the Services are to be provided.
- 11.2. The Nodal Agency or its nominated agencies shall use reasonable endeavors to assist Implementation Agency to obtain the Required Consents. In the event that any Required Consent is not obtained, the Implementation Agency and the Nodal Agency or its nominated agencies will co-operate with each other in achieving a reasonable alternative arrangement as soon as reasonably practicable for the Nodal Agency or its nominated agencies to continue to process its work with as minimal interruption to its business operations as is commercially reasonable until such Required Consent is obtained, provided that the Implementation Agency shall not be relieved of its obligations to provide the Services and to achieve the Service Levels until the Required Consents are obtained if and to the extent that the Implementation Agency's obligations are not dependent upon such Required Consents.





## **12. USE OF ASSETS BY THE IMPLEMENTATION AGENCY**

During the Term the Implementation Agency shall:

- 12.1. take all reasonable and proper care of the entire hardware and software, network or any other information technology infrastructure components used for the Project and other facilities leased / owned / operated by the Implementation Agency exclusively in terms of ensuring their usability for the delivery of the Services as per this Agreement (hereinafter the "Assets") in proportion to their use and control of such Assets; and
- 12.2. keep all the tangible Assets in as good and serviceable condition (reasonable wear and tear excepted) as at the date the Implementation Agency takes control of and/or first uses the Assets and during the entire Term of the Agreement.
- 12.3. ensure that any instructions or manuals supplied by the manufacturer of the Assets for use of the Assets and which are provided to the Implementation Agency will be followed by the Implementation Agency and any person who will be responsible for the use of the Assets;
- 12.4. take such steps as may be properly recommended by the manufacturer of the Assets and notified to the Implementation Agency or as may, in the reasonable opinion of the Implementation Agency, be necessary to use the Assets in a safe manner;
- 12.5. ensure that the Assets that are under the control of the Implementation Agency, are kept suitably housed and in conformity with Applicable Law;
- 12.6. procure permission from the Nodal Agency or its nominated agencies and any persons duly authorized by them to enter any land or premises on which the Assets are for the time being sited so as to inspect the same, subject to any reasonable third party requirements;
- 12.7. not, knowingly or negligently use or permit any of the Assets to be used in contravention of any statutory provisions or regulation or in any way contrary to Applicable Law.



### **13. ACCESS TO THE NODAL AGENCY OR ITS NOMINATED AGENCIES LOCATIONS**

- 13.1. For so long as the Implementation Agency provides services to the Nodal Agency or its nominated agencies location, as the case may be, on a non-permanent basis and to the extent necessary, the Nodal Agency as the case may be or its nominated agencies shall, subject to compliance by the Implementation Agency with any safety and security guidelines which may be provided by the Nodal Agency as the case may be or its nominated agencies and notified to the Implementation Agency in writing, provide the Implementation Agency with:
- (i) reasonable access, in the same manner granted to the Nodal Agency or its nominated agencies employees, to the Nodal Agency as the case may be location twenty-four hours a day, seven days a week;
  - (ii) reasonable work space, access to office equipment as mutually agreed and other related support services in such location and at such other the Nodal Agency as the case may be location, if any, as may be reasonably necessary for the Implementation Agency to perform its obligations hereunder and under the SLA.
- 13.2. Access to locations, office equipment and services shall be made available to the Implementation Agency on an “as is, where is” basis by the Nodal Agency as the case may be or its nominated agencies. The Implementation Agency agrees to ensure that its employees, agents and contractors shall not use the location, services and equipment referred to in RFP for the following purposes:
- (i) for the transmission of any material which is defamatory, offensive or abusive or of an obscene or menacing character; or
  - (ii) in a manner which constitutes a violation or infringement of the rights of any person, firm or company (including but not limited to rights of copyright or confidentiality).



## 14. MANAGEMENT PHASE

### 14.1. Governance:

The review and management process of this Agreement shall be carried out in accordance with the Governance Schedule set out in Schedule V of this Agreement and shall cover all the management aspects of the Project.

### 14.2. Use of Services

The Nodal Agency as the case may be or its nominated agencies, will undertake and use the Services in accordance with any instructions or procedures as per the acceptance criteria as set out in the SLA or this Agreement or any agreement that may be entered into between the Parties from time to time; The Nodal Agency as the case may be or its nominated agencies shall be responsible for the operation and use of the Deliverables resulting from the Services.

### 14.3. Changes

Unless expressly dealt with elsewhere in this Agreement, any changes under or to this Agreement or under or to the SLA shall be dealt with in accordance with the Change Control Schedule set out in Schedule II of this Agreement.

### 14.4. Security and Safety

The Implementation Agency shall comply with the technical requirements of the relevant security, safety and other requirements specified in the Information Technology Act or Telegraph Act including the regulations issued by dept. of telecom (wherever applicable), IT Security Manual of the Nodal Agency as specifically stated in the RFP and follow the industry standards related to safety and security (including those as stated in the RFP), insofar as it applies to the provision of the Services.

Each Party to the SLA/Agreement shall also comply with Nodal Agency or the Government of India, and the respective State's security standards and policies in force from time to time at each location of which Nodal Agency or its nominated agencies make the Implementation Agency aware in writing insofar as the same apply to the provision of the Services.

The Parties to the SLA/Agreement shall use reasonable endeavors to report forthwith in writing to each other all identified attempts (whether successful or not) by unauthorized persons (including unauthorized persons who are employees of any Party) either to gain access to or interfere with the Nodal Agency as the case may be or any of their nominees data, facilities or Confidential Information.

The Implementation Agency shall upon reasonable request by the Nodal Agency as the case may be or their nominee(s) participate in regular meetings when safety and information technology security matters are reviewed. As per the provisions of the SLA or this Agreement, the Implementation Agency shall promptly report in writing to the Nodal Agency or its nominated agencies, any act or omission which they are aware that could have an adverse effect on the proper conduct of safety and information technology security at the facilities of Nodal Agency as the case may be.



#### 14.5. Cooperation

Except as otherwise provided elsewhere in this Agreement or the SLA, each Party ("Providing Party") to this Agreement or to the SLA undertakes promptly to provide the other Party ("Receiving Party") with all such information and co-operation which the Receiving Party reasonably requests, provided that such information and co-operation:

- i. does not require material expenditure by the Providing Party to provide the same;
- ii. is reasonably required by the Receiving Party in order for it to comply with its obligations under this Agreement or the SLA;
- iii. cannot be construed to be Confidential Information; and
- iv. is capable of being provided by the Providing Party.

Further, each Party agrees to co-operate with the contractors and subcontractors of the other Party as reasonably requested in order to accomplish the purposes of this Agreement.

#### 14.6. Project Monitoring Committee

The Client shall constitute a Project Monitoring Committee comprising at least three members at appropriate level, after the selection procedure is over for monitoring the progress of the assignment. The Client may also include in the Committee, individual experts from Government/ private sector / educational / research institute or individual consultants. Cost of such members, if any, shall be borne by the Client.

The Committee shall be responsible to monitor the progress of the assignment, to oversee that the assignment is carried out as per agreed TOR and contractual conditions, to assess the quality of the deliverables, to accept / reject any part of assignment, to levy appropriate liquidated damages or penalty if the assignment is not carried out as per the contract and if the quality of services is found inferior and for any such deficiency related to the completion of the assignment.

For the abovementioned purposes, the Project Monitoring Committee may convene at a time and location of its choosing and the Implementing Partner shall deliver all documents sought by the Committee to aid and assist in any evaluation.

The Project Monitoring Committee shall have the sole powers to evaluate the performance of obligations of the Implementing Partner under Clause 9 and recommend levy of liquidated damages, penalty in accordance with Clause 23.

The Project Management Committee, shall have the power to assess the books of accounts of the Implementing Partner furnished in accordance with Clause 20 and recommend changes to the Engagement Model if found appropriate after the passage of 5 years from the date of the award. The decision of the Client in this regard will be deemed to be final.



## **15. FINANCIAL MATTERS**

### **15.1. Terms of Payment and Service Credits and Debits**

- 1 In consideration of the Services and subject to the provisions of this Agreement and of the SLA, the Nodal Agency shall pay the Implementation Agency for the Services rendered in pursuance of this agreement, in accordance with the Terms of Payment Schedule set out as Schedule VI of this Agreement.
- 2 All payments are subject to the adherence to defined Service levels as may be provided for in the SLA. For the avoidance of doubt, it is expressly clarified that the Nodal Agency will pay for the service provided in accordance with the Schedule VI of this Agreement and the Nodal Agency may also calculate a financial sum and debit the same against the terms of payment as set out in Schedule VI of this Agreement as a result of the failure of the Implementation Agency to meet the Service Level as defined in SLA
- 3 Save and except as otherwise provided for herein or as agreed between the Parties in writing, the Nodal Agency shall not be required to make any payments in respect of the Services (or, without limitation to the foregoing, in respect of the Implementation Agency performance of any obligations under this Agreement or the SLA) other than those covered in Schedule VI of this Agreement. For the avoidance of doubt, it is expressly clarified that the payments shall be deemed to include all ancillary and incidental costs and charges arising in the course of delivery of the Services including consultancy charges, infrastructure costs, project costs, implementation and management charges and all other related costs including taxes which are addressed in this Clause.
- 4 Payments against Services rendered by the Implementing Agency shall be subject to fulfillment of pre-disbursement conditions or instructions by the Implementing Partner and subject to the Implementing Partner complying with the provisions of this Agreement and Instructions, as stipulated by the Client;
- 5 if the Implementing Partner fails, omits or neglects to observe or commits or allows to be committed a breach of any of the terms, conditions, provisions or stipulations of the RFP, this Agreement or in connection with any other Instructions or in case of occurrence of any material breach, then the Client shall be entitled to initiate appropriate legal proceedings, in addition to withholding/suspension of payment and/or recovering payments and/or termination along with damages, interests and expenses without prejudice to any other right or remedy which the Client has under this Agreement or otherwise in law.

### **15.2. Invoicing and Settlement**

- 1 Subject to the specific terms of the SLA, the Implementation Agency shall submit its invoices in accordance with the following principles:
- 2 The Nodal Agency shall be invoiced by the Implementation Agency for the Services. Generally and unless otherwise agreed in writing between the Parties or expressly set out in the SLA, the Implementation Agency shall raise an invoice as per Schedule VI of this Agreement; and
- 3 Any invoice presented in accordance with this Clause shall be self-sufficient in explaining the deliverables against which the payment is being claimed, along with the taxes.
- 4 The Implementation Agency alone shall invoice all payments after receiving due approval



from the competent authority. Such invoices shall be accurate and all adjustments to or changes in the terms of payment as stated in Schedule VI of this Agreement. The Implementation Agency shall waive any charge for a Service that is not invoiced within six months after the end of the month in which the change relating to such Service is (i) authorized or (ii) incurred, whichever is later.

- 5 Payment shall be made within 30 working days of the receipt of invoice along with supporting documents by the Nodal Agency subject to penalties. The penalties are imposed on the vendor as per the SLA criteria specified in the SLA.
- 6 The Nodal Agency shall be entitled to delay or withhold payment of any invoice or part of it delivered by the Implementation Agency under Schedule VI of this Agreement where the Nodal Agency disputes/withholds such invoice or part of it provided that such dispute is bona fide. The withheld amount shall be limited to that which is in dispute. The disputed / withheld amount shall be settled in accordance with the escalation procedure as set out in Schedule V of this Agreement. Any exercise by the Nodal Agency under this Clause shall not entitle the Implementation Agency to delay or withhold provision of the Services.
- 7 The Nodal Agency shall be entitled to delay or withhold part of the payment of any invoice which is under a dispute. The withheld amount shall be limited to that which is the disputed amount. The disputed amount shall be referred to the escalation procedure as set out in Schedule V of this Agreement. Any exercise by the Nodal Agency under this Clause shall not entitle the Implementation Agency to delay or withhold provision of the Services.
- 8 The Implementation Agency shall be solely responsible to make payment its sub-contractors.

### 15.3. Tax

- 5 The Nodal Agency or its nominated agencies shall be responsible for withholding taxes from the amounts due and payable to the Implementation Agency wherever applicable. The Implementation Agency shall pay for all other taxes in connection with this Agreement, SLA, scope of work and any other engagement required to be undertaken as a part of this Agreement, including, but not limited to, property, sales, use, excise, value-added, goods and services, consumption and other similar taxes or duties.
- 6 The Nodal Agency or its nominated agencies shall provide Implementation Agency with the original tax receipt of any withholding taxes paid by Nodal Agency or its nominated agencies on payments under this Agreement. The Implementation Agency agrees to reimburse and hold the Nodal Agency or its nominated agencies harmless from any deficiency including penalties and interest relating to taxes that are its responsibility under this paragraph. For purposes of this Agreement, taxes shall include taxes incurred on transactions between and among the Nodal Agency or its nominated agencies, the Implementation Agency and third party subcontractors.
- 7 If, after the date of this Agreement, there is any change of rate of levy under the existing applicable laws of India with respect to taxes and duties, which are directly payable by the Nodal Agency for providing the services i.e. service tax or any such other applicable tax from time to time, which increase or decreases the cost incurred by the MSI in performing the Services, then the remuneration and reimbursable expense otherwise payable to the Nodal Agency under this Agreement shall be increased or decreased accordingly by correspondence between the Parties hereto, and corresponding



adjustments shall be made to the ceiling amounts specified in Schedule VI. However, in case of any new or fresh tax or levy imposed after submission of the proposal the Implementation Agency shall be entitled to reimbursement on submission of proof of payment of such tax or levy. [any impact of upward/ downward revision of the taxation needs to be reimbursed only on submission of tax receipt and the MSI shall revert with the certified copy within 7 days of payment of the tax)

- 8 The Parties shall cooperate to enable each Party to accurately determine its own tax liability and to minimize such liability to the extent legally permissible. In connection therewith, the Parties shall provide each other with the following:
- (i) any resale certificates;
  - (ii) any relevant information regarding out-of-state or use of materials, equipment or services; and
  - (iii) any direct pay permits, exemption certificates or information reasonably requested by the other Party.







## **16. TERMINATION**

### **16.1. Material Breach**

- 1 In the event that either Party believes that the other Party is in Material Breach of its obligations under this Agreement, such aggrieved Party may terminate this Agreement upon giving a one month's notice for curing the Material Breach to the other Party. In case the Material Breach continues, after the notice period, the Nodal Agency or Implementation Agency, as the case may be will have the option to terminate the Agreement. Any notice served pursuant to this Clause shall give reasonable details of the Material Breach, which could include, but not limited to, the following events and the termination will become effective:
  - i. If the Implementation Agency is not able to deliver the services as per the SLAs defined in RFP which translates into Material Breach, then the Nodal Agency may serve a 30 days written notice for curing this Material Breach. In case the Material Breach continues, after the expiry of such notice period, the Nodal Agency will have the option to terminate this Agreement. Further, the Nodal Agency shall after affording a reasonable opportunity to the Implementation Agency to explain the circumstances leading to such a breach.
  - ii. If there is a Material Breach by the Nodal Agency or its nominated agencies which results in not providing support for effecting data migration or not providing the certification of User Acceptance, and / or failing to make payment of undisputed amount within 30 days from date of submission of invoice, then the Implementation Agency will give a one month's notice for curing the Material Breach to the Nodal Agency. After the expiry of such notice period, the Implementation Agency will have the option to terminate the Agreement.
- 2 The Nodal Agency may by giving a one month's written notice, terminate this Agreement if a change of control of the Implementation Agency has taken place. For the purposes of this Clause, in the case of Implementation Agency, change of control shall mean the events stated in Clause 5.3, and such notice shall become effective at the end of the notice period as set out in Clause 5.3.
- 3 In the event that Implementation Agency undergoes such a change of control, Nodal Agency may, as an alternative to termination, require a full Performance Guarantee for the obligations of Implementation Agency by a guarantor acceptable to Nodal Agency or its nominated agencies. If such a guarantee is not furnished within 30 days of Nodal Agency's demand, the Nodal Agency may exercise its right to terminate this Agreement in accordance with this Clause by giving 15 days further written notice to the Implementation Agency.
- 4 The termination provisions set out in this Clause shall apply mutatis mutandis to the SLA.

### **16.2. Effects of termination**

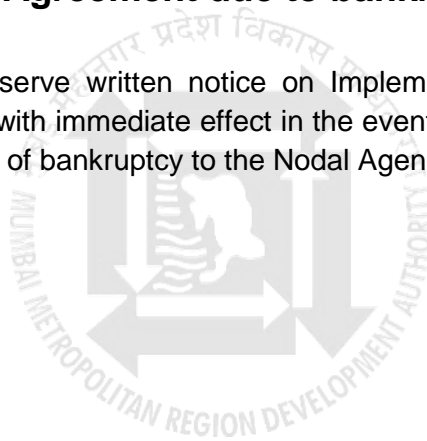
- 1 In the event that Nodal Agency terminates this Agreement pursuant to failure on the part of the Implementation Agency to comply with the conditions as contained in this Clause and depending on the event of default, Performance Guarantee furnished by Implementation Agency may be forfeited.



- 2 Upon termination of this Agreement, the Parties will comply with the Exit Management Schedule set out as Schedule III of this Agreement.
- 3 In the event that Nodal Agency or the Implementation Agency terminates this Agreement, the compensation will be decided in accordance with the Terms of Payment Schedule set out as Schedule VI of this Agreement.
- 4 Nodal Agency, on receipt of a written application for reimbursement, on approval if deemed appropriate, agrees to pay Implementation Agency for i) all charges for Services Implementation Agency provides and any Deliverables and/or system (or part thereof) Implementation Agency delivers through termination, and ii) reimbursable expenses Implementation Agency incurs through termination. If Nodal Agency terminates without cause, Nodal Agency also agrees to pay any applicable adjustment expenses Implementation Agency incurs as a result of such termination (which Implementation Agency will take reasonable steps to mitigate). The reimbursement will be made for only those expenses for which original bill is produced, and only for the expense incurred by vendor. MMRDA will not pay any kind of interest.

### **16.3. Termination of this Agreement due to bankruptcy of Implementation Agency**

The Nodal Agency may serve written notice on Implementation Agency at any time to terminate this Agreement with immediate effect in the event that the Implementation Agency reporting an apprehension of bankruptcy to the Nodal Agency or its nominated agencies





## **17. INDEMNIFICATION & LIMITATION OF LIABILITY**

- 17.1. Subject to Clause 17.2 below, Implementation Agency (the "Indemnifying Party") undertakes to indemnify Nodal Agency (the "Indemnified Party") from and against all Losses on account of bodily injury, death or damage to tangible personal property arising in favor of any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party's negligence or willful default in performance or non-performance under this Agreement. If the Indemnified Party promptly notifies Indemnifying Party in writing of a third party claim against Indemnified Party that any Service provided by the Indemnifying Party infringes a copyright, trade secret or patents incorporated in India of any third party, Indemnifying Party will defend such claim at its expense and will pay any costs or damages that may be finally awarded against Indemnified Party.
- 17.2. The indemnities set out in Clause 17.1 shall be subject to the following conditions:
1. the Indemnified Party as promptly as practicable informs the Indemnifying Party in writing of the claim or proceedings and provides all relevant evidence, documentary or otherwise;
  2. the Indemnified Party shall, at the cost of the Indemnifying Party, give the Indemnifying Party all reasonable assistance in the Defense of such claim including reasonable access to all relevant information, documentation and personnel provided that the Indemnified Party may, at its sole cost and expense, reasonably participate, through its attorneys or otherwise, in such Defense;
  3. if the Indemnifying Party does not assume full control over the Defense of a claim as provided in this Article, the Indemnifying Party may participate in such Defense at its sole cost and expense, and the Indemnified Party will have the right to defend the claim in such manner as it may deem appropriate, and the cost and expense of the Indemnified Party will be included in Losses;
  4. the Indemnified Party shall not prejudice, pay or accept any proceedings or claim, or compromise any proceedings or claim, without the written consent of the Indemnifying Party;
  5. all settlements of claims subject to indemnification under this Clause will:
    - (i) be entered into only with the consent of the Indemnified Party, which consent will not be unreasonably withheld and include an unconditional release to the Indemnified Party from the claimant or plaintiff for all liability in respect of such claim; and
    - (ii) include any appropriate confidentiality agreement prohibiting disclosure of the terms of such settlement;
  6. the Indemnified Party shall account to the Indemnifying Party for all awards, settlements, damages and costs (if any) finally awarded in favour of the Indemnified Party which are to be paid to it in connection with any such claim or proceedings;
  7. the Indemnified Party shall take steps that the Indemnifying Party may reasonably require to mitigate or reduce its loss as a result of such a claim or proceedings;
  8. in the event that the Indemnifying Party is obligated to indemnify an Indemnified Party pursuant to this Article, the Indemnifying Party will, upon payment of such



indemnity in full, be subrogated to all rights and defenses of the Indemnified Party with respect to the claims to which such indemnification relates; and

9. if a Party makes a claim under the indemnity set out under Clause 15.1 above in respect of any particular Loss or Losses, then that Party shall not be entitled to make any further claim in respect of that Loss or Losses (including any claim for damages).
- 17.3. The liability of Implementation Agency (whether in contract, tort, negligence, strict liability in tort, by statute or otherwise) for any claim in any manner related to this Agreement, including the work, deliverables or Services covered by this Agreement, shall be the payment of direct damages only which shall in no event in the aggregate exceed two (2) times average annual fees payable under this Agreement calculated over a reasonable period of months before the cause of action arose with respect to the work involved under the applicable Schedule/Annexure. The liability cap given under this Clause 17.3 shall not be applicable to the indemnification obligations set out in Clause 17.1 and breach of any other clauses of this agreement.
  - 17.4. In no event shall either party be liable for any consequential, incidental, indirect, special or punitive damage, loss or expenses (including but not limited to business interruption, lost business, lost profits, or lost savings) nor for any third party claims (other than those set-forth in Clause 17.1) even if it has been advised of their possible existence.
  - 17.5. The allocations of liability in this Section 17 represent the agreed and bargained-for understanding of the parties and compensation for the Services reflects such allocations. Each Party has a duty to mitigate the damages and any amounts payable under an indemnity that would otherwise be recoverable from the other Party pursuant to this Agreement by taking appropriate and commercially reasonable actions to reduce or limit the amount of such damages or amounts.



## 18. FORCE MAJEURE

### 18.1. Definition of Force Majeure

The Implementation Agency or the Nodal Agency as the case may be, shall be entitled to suspend or excuse performance of its respective obligations under this Agreement to the extent that such performance is impeded by an event of force majeure ('Force Majeure').

### 18.2. Force Majeure events

A Force Majeure event means any event or circumstance or a combination of events and circumstances referred to in this Clause, which:

1. is beyond the reasonable control of the affected Party;
2. such Party could not have prevented or reasonably overcome with the exercise of reasonable skill and care;
3. does not result from the negligence of such Party or the failure of such Party to perform its obligations under this Agreement;
4. is of an incapacitating nature and prevents or causes a delay or impediment in performance; and
5. may be classified as all or any of the following events:

#### Non-Political Events

- (a) act of God, including earthquake, flood, inundation, landslide, exceptionally adverse weather conditions, storm, tempest, hurricane, cyclone, lightning, thunder, volcanic eruption, fire or other extreme atmospheric conditions;
- (b) radioactive contamination or ionizing radiation or biological contamination except as may be attributable to the Implementation Agency's use of radiation or radio- activity or biologically contaminating material;
- (c) a strike or strikes or other industrial action or blockade or embargo or any other form of civil disturbance (whether lawful or not), in each case affecting on a general basis the industry related to the affected Services and which is not attributable to any unreasonable action or inaction on the part of the Implementation Agency or any of its Subcontractors or suppliers and the settlement of which is beyond the reasonable control of all such persons.
- (d) general strikes, lockouts, boycotts, labor disruptions or any other industrial disturbances as the case may be not arising on account of the acts or omissions of the Implementation Agency and which affect the timely implementation and continued operation of the Project; or
- (e) any event or circumstances of a nature analogous to any of the foregoing.

#### Political Events

- (f) Change in Law, other than any Change in Law for which relief is provided under this Agreement;
- (g) expropriation or compulsory acquisition by the Nodal Agency or any of their nominated agencies of any material assets or rights of the Implementing Partner;
- (h) unlawful or unauthorized revocation of, or refusal by Nodal Agency or any of their nominated agencies, Gol or any of its agencies to renew or grant any clearance or



Required Consents required by the Implementation Agency to perform its obligations without valid cause, provided that such delay, modification, denial, refusal or revocation did not result from the Implementation Agency's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Required Consents applied on a non-discriminatory basis;

- (i) any judgment or order of any court of competent jurisdiction or statutory authority in India made against the Implementation Agency in any proceedings for reasons other than failure of the Implementation Agency to comply with Applicable Laws or Required Consents or on account of breach thereof, or of any contract, or enforcement of this Agreement or exercise of any of its rights under this Agreement;
- (j) expropriation or compulsory acquisition by the Nodal Agency or any of their nominated agencies of any material assets or rights of the Implementation Agency;
- (k) unlawful or unauthorized revocation of, or refusal by any authority other than the Nodal Agency or any of their nominated agencies to renew or grant any Required Consents required by the Implementation Agency to perform its obligations without valid cause, provided that such delay, modification, denial, refusal or revocation did not result from the Implementation Agency's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Required Consents applied on a non-discriminatory basis;
  - any requisition of the Project by any other authority; or
  - any requisition of the Project by the Nodal Agency or any of their nominated agencies.
- (l) For the avoidance of doubt, suspension of the Project in accordance with the provisions of this Agreement shall not be considered a requisition for the purposes of Force Majeure event.

Other Events: An act of war (whether declared or undeclared), hostilities, invasion, armed conflict or act of foreign enemy, blockade, embargo, prolonged riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage, for a continuous period exceeding seven (7) days.

For the avoidance of doubt, it is expressly clarified that the failure on the part of the Implementation Agency under this Agreement or the SLA to implement any disaster contingency planning and back-up and other data safeguards in accordance with the terms of this Agreement or the SLA against natural disaster, fire, sabotage or other similar occurrence shall not be deemed to be a Force Majeure event. For the avoidance of doubt, it is further clarified that any negligence in performance of Services which directly causes any breach of security like hacking aren't the forces of nature and hence wouldn't be qualified under the definition of "Force Majeure". In so far as applicable to the performance of Services, Service Provider will be solely responsible to complete the risk assessment and ensure implementation of adequate security hygiene, best practices, processes and technology to prevent any breach of security and any resulting liability therefrom (wherever applicable).

### 18.3. Notification procedure for Force Majeure

1. The affected Party shall notify the other Party of a Force Majeure event within seven (7)



days of occurrence of such event. If the other Party disputes the claim for relief under Force Majeure it shall give the claiming Party written notice of such dispute within thirty (30) days of such notice. Such dispute shall be dealt with in accordance with the dispute resolution mechanism in accordance with Clause

2. Upon cessation of the situation which led the Party claiming Force Majeure, the claiming Party shall within seven (7) days hereof notify the other Party in writing of the cessation and the Parties shall as soon as practicable thereafter continue performance of all obligations under this Agreement.

#### **18.4. Allocation of costs arising out of Force Majeure**

1. Upon the occurrence of any Force Majeure Event prior to the Effective Date, the Parties shall bear their respective costs and no Party shall be required to pay to the other Party any costs thereof.
2. Upon occurrence of a Force Majeure Event after the Effective Date, the costs incurred and attributable to such event and directly relating to the Project ('Force Majeure Costs') shall be allocated and paid as follows:
3. upon occurrence of a Non-Political Event, the Parties shall bear their respective Force Majeure Costs and neither Party shall be required to pay to the other Party any costs thereof.
4. upon occurrence of an Other Event of Force Majeure, all Force Majeure Costs attributable to such Other Event, and not exceeding the Insurance Cover for such Other Event, shall be borne by the Implementing Partner and to the extent Force Majeure costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by Nodal Agency to the Implementing Partner (optional clause – to be used, if relevant).
5. For the avoidance of doubt, Force Majeure Costs may include interest payments on debt, operation and maintenance expenses, any increase in the cost of the Services on account of inflation and all other costs directly attributable to the Force Majeure Event.
6. Save and except as expressly provided in this Clause, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, costs, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereof.

#### **18.5. Consultation and duty to mitigate**

Except as otherwise provided in this Clause, the affected Party shall, at its own cost, take all steps reasonably required to remedy and mitigate the effects of the Force Majeure event and restore its ability to perform its obligations under this Agreement as soon as reasonably practicable. The Parties shall consult with each other to determine the reasonable measures to be implemented to minimize the losses of each Party resulting from the Force Majeure event. The affected Party shall keep the other Parties informed of its efforts to remedy the effect of the Force Majeure event and shall make reasonable efforts to mitigate such event on a continuous basis and shall provide written notice of the resumption of performance hereunder.



## 19. CONFIDENTIALITY

- 19.1. The Nodal Agency or its nominated agencies shall allow the Implementation Agency to review and utilize highly confidential public records and the Implementation Agency shall maintain the highest level of secrecy, confidentiality and privacy with regard thereto.
- 19.2. Additionally, the Implementation Agency shall keep confidential all the details and information with regard to the Project, including systems, facilities, operations, management and maintenance of the systems/facilities. The Implementing Agency shall execute a non-disclosure agreement (NDA), duly approved by Nodal Agency or its nominated agencies. This NDA shall be applicable to all the employees, agents and sub-contractors who are directly or indirectly associated with the project.
- 19.3. The Nodal Agency or its nominated agencies shall retain all rights to prevent, stop and if required take the necessary punitive action against the Implementation Agency regarding any forbidden disclosure.

For the avoidance of doubt, it is expressly clarified that the aforesaid provisions shall not apply to the following information:

1. information already available in the public domain;
2. information which has been developed independently by the Implementation Agency;
3. information which has been received from a third party who had the right to disclose the aforesaid information;
4. information which has been disclosed to the public pursuant to a court order.

To the extent the Implementation Agency shares its confidential or proprietary information with the Nodal Agency for effective performance of the Services, the provisions of the Clause 19.1 to 19.3 shall apply mutatis mutandis on the Nodal Agency or its nominated agencies.





## 20. AUDIT, ACCESS AND REPORTING

The Implementation Agency shall allow access to the Nodal Agency or its nominated agencies to all information, including but not limited to books of accounts, which is in the possession or control of the Implementation Agency and which relates to the provision of the Services as set out in the Audit, Access and Reporting Schedule and which is reasonably required by the Nodal Agency to comply with the terms of the Audit, Access and Reporting Schedule set out as Schedule IV of this Agreement.





## **21. INTELLECTUAL PROPERTY RIGHTS (IPR)**

### **21.1. Products and fixes**

All products and related solutions and fixes provided pursuant to this work order shall be licensed according to the terms of the license agreement packaged with or otherwise applicable to such product. Implementation Agency would be responsible for arranging any licenses associated with products. “**Product**” means any computer code, web-based services, or materials comprising commercially released, pre-release or beta products (whether licensed for a fee or no charge) and any derivatives of the foregoing which are made available to Nodal Agency for license which is published by product owner or its affiliates, or a third party. “**Fixes**” means product fixes that are either released generally (such as commercial product service packs) or that are provided to you when performing services (such as workarounds, patches, bug fixes, beta fixes and beta builds) and any derivatives of the foregoing.

### **21.2. Bespoke development**

Subject to the provisions of this contract, upon payment, the IPR rights for any bespoke development done during the implementation of the project will lie with Nodal Agency. Implementation Agency shall be entitled to a broad license back in the bespoke development for its internal usage and other e-governance projects.

### **21.3. Pre-existing work**

All IPR including the source code and materials developed or otherwise obtained independently of the efforts of a party under this Agreement (“pre-existing work”) including any enhancement or modification thereto shall remain the sole property of that party. During the performance of the services for this agreement, each party grants to the other party (and their sub-contractors as necessary) a non-exclusive license to use, reproduce and modify any of its pre-existing work provided to the other party solely for the performance of such services for duration of the Term of this Agreement. Except as may be otherwise explicitly agreed to in a statement of services, upon payment in full, the Implementation Agency should grant Nodal Agency a non-exclusive, perpetual, fully paid-up license to use the pre-existing work in the form delivered to Nodal Agency as part of the service or deliverables only for its internal business operations. Under such license, either of parties will have no right to sell the pre-existing work of the other party to a Third Party. Nodal Agency’s license to pre-existing work is conditioned upon its compliance with the terms of this Agreement and the perpetual license applies solely to the pre-existing work that bidder leaves with Nodal Agency at the conclusion of performance of the services.

### **21.4. Residuals**

In no event shall Implementation Agency be precluded from independently developing for itself, or for others, anything, whether in tangible or non-tangible form, which is competitive with, or similar to, the deliverables set-out in this Agreement or Annexure. In addition, subject to the confidentiality obligations, Implementation Agency shall be free to use its general knowledge, skills and experience, and any ideas, concepts, know-how, and techniques that are acquired or used in the course of providing the Services.



## **22. WARRANTY**

### **22.1. Standard**

The Implementation Agency warrants that the Project, including all the system(s) and other Services provided, shall be free from any defect or deficiency in the material, design, engineering, and performance/workmanship that prevent the Project and/or any of its systems(s) from fulfilling the technical requirements or that limit in a material fashion the performance, reliability, or extensibility of the Project and/or any of its system(s) as per the performance guarantee / warranty period defined in the Schedule. If during the warranty period any defect or deficiency is found in the material, design and performance/workmanship of the Project and other Services provided by the Implementation Agency, the Implementation Agency shall promptly, in consultation and agreement with Nodal Agency, and at the Implementation Agency's sole cost repair, replace, or otherwise make good (as the Implementation Agency shall, at its discretion, determine) such default, defect or deficiency as well as any damage to the Project caused by such default, defect or deficiency. Any defective system that has been replaced by the Implementation Agency shall remain the property of the Implementation Agency. If the Project or any of its System cannot be used by reason of such default, defect or deficiency and/or making good of such default, defect or deficiency, the warranty period for the Project shall be extended by a period equal to the period during which the Project or any of its system could not be used by the Nodal Agency because of such defect and/or making good of such default, defect or deficiency.

### **22.2. Implied Warranty**

The warranties provided herein are in lieu of all other warranties, both express and implied, and all other warranties, including without limitation that of merchantability or fitness for intended purpose is specifically disclaimed. The Implementing Agency shall have no liability in the case of breach of this warranty due to:

- (i) use of the deliverables on any environment (hardware or software) other than the environment recommended or approved by the Implementing Agency
- (ii) the combination, operation, or use of some or all of the deliverables with information, software, specifications, instructions, data, or materials not approved by the Implementing Agency;
- (iii) the deliverables having been tampered with, altered or modified by Nodal Agency without the written permission of the Implementing Agency, or
- (iv) use of the deliverables otherwise than in terms of the relevant documentation



## 23. LIQUIDATED DAMAGES

Time is the essence of the Agreement and the delivery dates are binding on the Implementation Agency. In the event of delay or any gross negligence, for causes attributable to the Implementation Agency, in meeting the deliverables, the Nodal Agency shall be entitled at its option to recover from the Implementation Agency as agreed, liquidated damages, as per the rates mentioned in “Pre-implementation & Post Implementation Performance Requirements” of Service Level Agreement as mentioned in Section - II, Clause No. 9.3. The Liquidated damages shall be capped, 15% of the Total Contract Value and in the event of LD exceeding this cap, the Nodal Agency (MMRDA) has a right to invoke “Termination Clause” as per Section – III, Clause No. 17. The activities pursuant to the termination of the contract shall be in-line with Section – III, Clause No. 17.





## **24. ESCROW AGREEMENT FOR REVENUE**

- 24.1. Within 6 months of execution of this Agreement, the Parties shall enter into a escrow agreement ("Escrow Agreement") with a reputable, independent, third party that provides financial escrow services among its principal business offerings ("Escrow Agent"). The Escrow Agreement shall provide for the regular deposit into such escrow account all moneys earned by provision of Services under this Agreement. In the event of the termination or expiration of the initial Escrow Agreement or any successor agreement, with minimal delay the Parties shall enter into a substantially equivalent agreement with a successor provider of escrow services (who shall then be known as the "Escrow Agent").
- 24.2. Implementation Agency will deposit on a weekly basis all earnings from provision of Services under this. The terms and conditions governing the operations of the Escrow shall be decided at the time of entering the Agreement.
- 24.3. The release of financials from the escrow will at all times be governed by the Terms of Payment specified in Schedule VI.
- 24.4. The Escrow Agreement shall provide for its automatic termination upon the expiration or termination of this Contract. Implementation Agency shall pay the escrow costs, as well as all costs associated with causing its subcontractors and other third parties to abide by the Escrow Agreement."





## **25. ESCROW AGREEMENT FOR SOFTWARE**

- 27.1. Implementation Agency shall comply with the escrow provisions below for all Public Material and Proprietary Vendor Material (including subcontractor-owned materials and other Third Party Material incorporated in Implementation Agency's Proprietary Material), except to the extent Implementation Agency demonstrates to the satisfaction of the Nodal Agency that compliance is not permitted by the nature of Implementation Agency's limited rights in such material.
- 27.2. Within ninety (90) days after the Nodal Agency's acceptance of the Solution, the Parties shall enter into a software escrow agreement ("Escrow Agreement") with a reputable, independent, third party that provides software escrow services among its principal business offerings ("Escrow Agent"). The Escrow Agreement shall provide for the regular deposit into escrow of all source code (including without limitation all make files, configurational files, data tables upon which execution is dependent, and the like, collectively the "Source Code"), object code, and documentation with respect to all Public Material and Implementation Agency's Proprietary Material (and cumulative updates thereof), together with (a) continually updated instructions as to the compilation, installation, configuration, deployment, and use of the Source Code, and (b) a list of all non-deposited third party software used in conjunction with the Source Code to provide the full functionality of the deposited materials. In the event of the termination or expiration of the initial Escrow Agreement or any successor agreement, with minimal delay the Parties shall enter into a substantially equivalent agreement with a successor provider of software escrow services (who shall then be known as the "Escrow Agent").
- 27.3. Implementation Agency will make its initial deposit of Source Code within fifteen (15) days after the effective date of the Escrow Agreement.
- 27.4. Implementation Agency shall periodically update the escrow deposit as the Parties shall agree in the Escrow Agreement. In addition to other usual and customary terms, the Escrow Agreement shall provide that the Nodal Agency shall be entitled to obtain the deposited materials from escrow upon the Nodal Agency's making a proper claim for release from escrow in the event that
- (i) proper written notice is given to the Escrow Agent that release of the copy of the deposited materials is pursuant to applicable Central or Nodal Agency bankruptcy, insolvency, reorganization, or liquidation statute;
  - (ii) Implementation Agency files articles of dissolution (but not if Implementation Agency is consolidated or merged into another entity);
  - (iii) the Contract expires or terminates for Material Breach of Implementation Agency.
- 27.5. The release of deposited materials from escrow shall not confer upon the Nodal Agency any right of ownership in the deposited materials or the underlying intellectual property embodied therein. In the event of the release of deposited materials to the Nodal Agency from escrow, the Nodal Agency shall use the deposited materials solely for the benefit of the Nodal Agency and its constituents, consistently with the grants of license set forth in the provisions of this Agreement.
- 27.6. The release of materials from escrow, without more, shall not cause any further amounts to accrue as payable to Implementation Agency by the Nodal Agency, and the term of the Nodal Agency's possessory and usage rights with respect to the released materials shall



be perpetual.

- 27.7. The Escrow Agreement shall provide for its automatic termination upon the earlier of five (5) years after the expiration or termination of this Contract, or, release of all Source Code to the Nodal Agency and the Nodal Agency's subsequent confirmation of compliance with the terms of the Escrow Agreement. Implementation Agency shall pay the escrow costs, as well as all costs associated with causing its subcontractors and other third parties to abide by the Escrow Agreement.





## **26. INSURANCE COVER**

### **26.1. Obligation to maintain insurance**

In connection with the provision of the Services, the Service Provider must have and maintain, for the Agreement Period, valid and enforceable insurance coverage for:

- (i) public liability;
- (ii) either professional indemnity or errors and omissions;
- (iii) product liability;
- (iv) workers' compensation as required by law; and
- (v) any additional types specified in Schedule I; and
- (vi) for Five years following the expiry or termination of the Agreement, valid and enforceable insurance policies (if relevant), in the amount not less than the Insurance Cover specified in Schedule I.

### **26.2. Certificates of currency**

The Implementation Agency must, on request by the Nodal Agency, provide current relevant confirmation of insurance documentation from its insurance brokers certifying that it has insurance as required by this Clause 26. The Service Provider agrees to replace any coverage prior to the date of expiry/cancellation.

### **26.3. Non-compliance**

Nodal Agency or its nominated agencies may, at its election, terminate this Agreement upon the failure of Implementation Agency, or notification of such failure, to maintain the required insurance coverage. Inadequate insurance coverage for any reason shall not relieve Implementation Agency of its obligations under this Agreement.





## 27. LIABILITY AND INSURANCE

The MSI will be liable for, and shall indemnify, defend and hold the Nodal Agency, its officers, agents, and employees harmless from, any and all claims or damages to persons or property by reason of the installation, operation or maintenance of the devices, sensors, equipment including other hardware, electronic and electrical equipment's for Smart BKC initiative and pre-existing components, devices and equipment (providing that indemnification with respect to pre-existing components shall only be applicable with respect to the period beginning with the effectiveness of this Contract). The MSI is required to ensure use of Fire & Water Proof material and deploy vandal proof solutions in all possible areas of the scope to the Nodal Agency's satisfaction. The MSI will be required to procure and maintain, at its sole cost and expense, the following types of insurance from an insurance company acceptable to MMRDA (or meeting alternative insurance specifications as MMRDA may from time to time reasonably require):

1. Commercial General Liability (CGL) Insurance covering the MSI as a named insured in the amount equivalent to the total value of the contract in aggregate and per occurrence, and naming MMRDA, its officers, agents and employees also as additional insured thereunder, and endorsed to cover liabilities for financial loss resulting or arising from acts, errors, or omissions in connection with the services provided under this Agreement.
2. Comprehensive Insurance of Property/Devices wherever possible/applicable, Insurance of MSI's property used in the performance of Services, documents/data/codes developed in performance of obligations under the Agreement.
3. Professional Liability Insurance, with a minimum coverage equivalent to the total value of this contract
4. Employer's liability and Worker's Compensation insurance in respect of the Personnel of the MSI as well as with respect to such personnel, health, life, accident, travel or other insurance as may be deemed appropriate by the relevant laws in effect or Nodal Agency;
5. and all other insurance as required by law.

MSI shall have all CGL insurance policies endorsed to name MMRDA as an additional insured. All insurance as listed above shall be primary with respect to MSI's activities and MMRDA's insurance policies will be non-contributing. Such policies shall contain a provision waiving the insurer's right of subrogation against MMRDA.

Prior to the commencement of any services, MSI will furnish MMRDA with certificates of insurance which evidence the minimum levels of insurance set forth above. MMRDA shall be notified in writing at least thirty (30) days prior to cancellation of or any change in the policy.



## **28. GOVERNING LAW AND DISPUTE RESOLUTION**

- 27.1. This Agreement shall be governed by and construed in accordance with the laws of India, without giving effect to conflict of law rules. The parties expressly agree to exclude the application of the U.N. Convention on Contracts for the International Sale of Goods (1980) to this Agreement and the performance of the parties contemplated under this Agreement, to the extent that such convention might otherwise be applicable.
- 27.2. Any dispute arising out of or in connection with this Agreement or the SLA shall in the first instance be dealt with in accordance with the escalation procedure as set out in the Governance Schedule set out as Schedule V of this Agreement.
- 27.3. In case the escalations do not help in resolution of the problem within 3 weeks of escalation, both the parties should agree on a mediator for communication between the two parties. The process of the mediation would be as follows:
- (i) Aggrieved party should refer the dispute to the identified mediator in writing, with a copy to the other party. Such a reference should contain a description of the nature of the dispute, the quantum in dispute (if any) and the relief or remedy sought suitable.
  - (ii) The mediator shall use his best endeavors to conclude the mediation within a certain number of days of his appointment.
  - (iii) If no resolution can be reached through mutual discussion or mediation within 30 days then the matter should be referred to Experts for advising on the issue.
- 27.4. In case the mediation does not help in resolution and it requires expertise to understand an issue, a neutral panel of 3 experts, agreeable to both parties should be constituted. The process of the expert advisory would be as follows:
- (i) Aggrieved party should write to the other party on the failure of previous alternate dispute resolution processes within the timeframe and requesting for expert advisory. This is to be sent with a copy to the mediator.
  - (ii) Both parties should thereafter agree on the panel of experts who are well conversant with the issue under dispute
  - (iii) The expert panel shall use his best endeavors to provide a neutral position on the issue.
  - (iv) If no resolution can be reached through the above means within 30 days then the matter should be referred to Arbitration.
- 27.5. Any dispute or difference whatsoever arising between the parties to this Contract out of or relating to the construction, meaning, scope, operation or effect of this Contract or the validity of the breach thereof shall be referred to a sole Arbitrator to be appointed by mutual consent of both the parties herein. If the parties cannot agree on the appointment of the Arbitrator within a period of one month from the notification by one party to the other of existence of such dispute, then the Arbitrator shall be appointed by the High Court of MAHARASHTRA, India. The provisions of the Arbitration and Conciliation Act, 1996 will be applicable and the award made there under shall be final and binding upon the parties hereto, subject to legal remedies available under the law. Such differences shall be deemed to be a submission to arbitration under the Indian Arbitration and Conciliation Act, 1996, or of any modifications, Rules or re-enactments



thereof. The Arbitration proceedings will be held at Mumbai, Maharashtra, India. Any legal dispute will come under the sole jurisdiction of – Mumbai, Maharashtra, India/ state jurisdiction of Maharashtra, India.

- 27.6. Compliance with laws: Each party will comply with all applicable export and import laws and regulations.
- 27.7. Risk of Loss for first 5 years: For each hardware item, Implementation Agency bears the risk of loss or damage up to the time it is delivered to the Implementation/Nodal Agency-designated carrier for shipment to Nodal Agency or Nodal Agency's designated location.
- 27.8. Third party components: Implementation Agency will provide all third party components solely on a pass-through basis in accordance with the relevant third party terms and conditions.





## 29. MISCELLANEOUS

### 29.1. PERSONNEL

1. The personnel assigned by Implementation Agency to perform the Services shall be employees of Implementation Agency or its subcontractor(s), and under no circumstances shall such personnel be considered employees of Nodal Agency or its nominated agencies. The Implementation Agency shall have the sole responsibility for the supervision and control of the personnel deployed in the Project and for payment of such personnel's compensation, including salary, withholding of income taxes and social security taxes, worker's compensation, employee and disability benefits and the like and shall be responsible for all obligations of an employer subject to Applicable Law.
2. The Implementation Agency shall use its best efforts to ensure that sufficient Implementation Agency personnel are assigned to perform the Services and that such personnel have appropriate qualifications to perform the Services. After discussion with Implementation Agency, Nodal Agency or its nominated agencies shall have the right to require the removal or replacement of any Implementation Agency personnel performing work under this Agreement based on bonafide reasons. In the event that Nodal Agency or its nominated agencies requests that any Implementation Agency personnel be replaced, the substitution of such personnel shall be accomplished pursuant to a mutually agreed upon schedule.
3. In the event that the Nodal Agency and Implementation Agency identify any personnel of Implementation Agency as "Key Personnel", then the Implementation Agency shall not remove such personnel from the Project without the prior written consent of Nodal Agency or its nominated agencies.
4. Except as stated in this Clause, nothing in this Agreement or the SLA will limit the ability of Implementation Agency to freely assign or reassign its employees; provided that Implementation Agency shall be responsible, at its expense, for transferring all appropriate knowledge from personnel being replaced to their replacements. Nodal Agency or its nominated agencies shall have the right to review and approve Implementation Agency's plan for any such knowledge transfer. Implementation Agency shall maintain the same or higher standards for skills and professionalism among replacement personnel as in personnel being replaced.
5. Each Party shall be responsible for the performance of all its obligations under this Agreement or the SLA as the case may be and shall be liable for the acts and omissions of its employees and agents in connection therewith.
6. All responsibilities towards personnel working on the project from the side of Implementing Agency shall in no way be borne by MMRDA. This includes, but not limited to, compensation, medical reimbursement, any medical emergency, etc. However, in case of any exigencies, the Nodal Agency shall provide reasonable support, to the extent deemed appropriate by the Nodal Agency.
7. Neither Party will solicit for employment or knowingly hire an employee of the other Party with whom such Party has contact pursuant to project engagements under this Agreement. This restriction shall not apply to employees of either Party responding to advertisements in job fairs or news media circulated to the general public.



## 29.2. INDEPENDENT CONTRACTOR

Nothing in this Agreement or the SLA shall be construed as establishing or implying any partnership or joint venture between the Parties to this Agreement or the SLA and, except as expressly stated in this Agreement or the SLA, nothing in this Agreement or the SLA shall be deemed to constitute any Parties as the agent of any other Party or authorizes either Party to:

- (i) incur any expenses on behalf of the other Party;
- (ii) enter into any engagement or make any representation or warranty on behalf of the other Party;
- (iii) pledge the credit of or otherwise bind or oblige the other Party; or
- (iv) commit the other Party in any way whatsoever without in each case obtaining the other Party's prior written consent.

## 29.3. SUB-CONTRACTORS

Implementation Agency shall not subcontract any work related to core activities, which include, but are not limited to, implementation of Wi-Fi, Command and Control Centre, Network Operations Centre, Integrated platform, without Nodal Agency's prior written consent. However the Implementation Agency shall provide the list of all the other services planned to be sub contracted, within 15 days of signing the Agreement. It is clarified that the Implementation Agency shall be the principal employer for all claims arising from the liabilities statutory or otherwise, concerning the sub-contractors. The Implementation Agency undertakes to indemnify the Nodal Agency or its nominated agencies from any claims on the grounds stated hereinabove.

## 29.4. ASSIGNMENT

1. All terms and provisions of this Agreement shall be binding on and shall inure to the benefit of the Nodal Agency and their respective successors and permitted assigns.
2. Subject to the provisions of this Agreement, the Implementation Agency shall not be permitted to assign its rights and obligations under this Agreement to any third party.
3. The Nodal Agency may assign or novate all or any part of this Agreement and Schedules/Annexures, and the Implementation Agency shall be a party to such novation, to any third party contracted to provide outsourced services to Nodal Agency or any of its nominees.

## 29.5. TRADEMARKS, PUBLICITY

Neither Party may use the trademarks/ Copyrights/ Patents/ any other intellectual property, of the other Party without the prior written consent of the other Party except that Implementation Agency may, upon completion, use the Project as a reference for credential purpose. Except as required by law or the rules and regulations of each stock exchange upon which the securities of one of the Parties is listed, neither Party shall publish or permit to be published either along or in conjunction with any other person any press release, information, article, photograph, illustration or any other material of whatever kind relating to this Agreement, the SLA or the business of the Parties without prior reference to and approval in writing from the other Party, such approval not to be unreasonably withheld or delayed provided however that Implementation Agency may include Nodal Agency or its client lists for reference to third parties subject to the prior written consent of Nodal Agency not to



be unreasonably withheld or delayed. Such approval shall apply to each specific case and relate only to that case.

## 29.6. NOTICES

1. Any notice or other document which may be given by either Party under this Agreement or under the SLA shall be given in writing in person or by pre-paid recorded delivery post, email or by facsimile transmission.
2. In relation to a notice given under this Agreement, any such notice or other document shall be addressed to the other Party's principal or registered office address as set out below:

<Insert Address>

Tel:

Fax:

Email:

Contact:

With a copy to:

Master System Integrator (MSI)

Tel: Fax: Email: Contact:

3. In relation to a notice given under the MSA / SLA, a Party shall specify the Parties' address for service of notices, any such notice to be copied to the Parties at the addresses set out in this Clause.
4. Any such notice or other document shall be deemed to have been given to the other Party (or, if relevant, its relevant associated company) when delivered (if delivered in person) if delivered between the hours of 9.00 am and 5.00 pm at the address of the other Party set forth above or if sent by fax, provided the copy fax is accompanied by a confirmation of transmission, or on the next working day thereafter if delivered outside such hours, and 7 days from the date of posting (if by letter).
5. Either Party to this Agreement or to the SLA may change its address, telephone number, facsimile number and nominated contact for notification purposes by giving the other reasonable prior written notice of the new information and its effective date.

## 29.7. VARIATIONS AND FURTHER ASSURANCE

1. No amendment, variation or other change to this Agreement or the SLA shall be valid unless authorized in accordance with the change control procedure as set out in the Change Control Schedule set out in Schedule II of this Agreement. Such amendment shall be made in writing and signed by the duly authorized representatives of the Parties to this Agreement or the SLA.
2. Each Party to this Agreement or the SLA agrees to enter into or execute, without limitation, whatever other agreement, document, consent and waiver and to do all other things which shall or may be reasonably required to complete and deliver the obligations set out in this Agreement or the SLA.



## 29.8. SEVERABILITY AND WAIVER

1. If any provision of this Agreement or the SLA, or any part thereof, shall be found by any court or administrative body of competent jurisdiction to be illegal, invalid or unenforceable the illegality, invalidity or unenforceability of such provision or part provision shall not affect the other provisions of this Agreement or the SLA or the remainder of the provisions in question which shall remain in full force and effect. The relevant Parties shall negotiate in good faith in order to agree to substitute for any illegal, invalid or unenforceable provision a valid and enforceable provision which achieves to the greatest extent possible the economic, legal and commercial objectives of the illegal, invalid or unenforceable provision or part provision.
2. No failure to exercise or enforce and no delay in exercising or enforcing on the part of either Party to this Agreement or the SLA of any right, remedy or provision of this Agreement or the SLA shall operate as a waiver of such right, remedy or provision in any future application nor shall any single or partial exercise or enforcement of any right, remedy or provision preclude any other or further exercise or enforcement of such right, remedy or provision or the exercise or enforcement of any other right, remedy or provision.

## 29.9. COMPLIANCE WITH APPLICABLE LAW

Each Party to this Agreement accepts that its individual conduct shall (to the extent applicable to its business like the Implementation Agency as an information technology service provider) at all times comply with all laws, rules and regulations of government and other bodies having jurisdiction over the area in which the Services are undertaken provided that changes in such laws, rules and regulations which result in a change to the Services shall be dealt with in accordance with the Change Control Schedule set out in Schedule II of this Agreement.

## 29.10. PROFESSIONAL FEES

All expenses incurred by or on behalf of each Party to this Agreement and the SLA, including all fees of agents, legal advisors, accountants and actuaries employed by either of the Parties in connection with the negotiation, preparation and execution of this Agreement or the SLA shall be borne solely by the Party which incurred them.

## 29.11. ETHICS

The Implementation Agency represents, warrants and covenants that it has given no commitments, payments, gifts, kickbacks, lavish or expensive entertainment, or other things of value to any employee or agent of Nodal Agency or its nominated agencies in connection with this agreement and acknowledges that the giving of any such payment, gifts, entertainment, or other things of value is strictly in violation of Nodal Agency standard policies and may result in cancellation of this Agreement, or the SLA.

## 29.12. ENTIRE AGREEMENT

This Agreement and the SLA with all schedules & annexures appended thereto and the contents and specifications of the RFP constitute the entire agreement between the Parties with respect to their subject matter, and as to all other representations, understandings or agreements which are not fully expressed herein, provided that nothing in this Clause shall be interpreted so as to exclude any liability in respect of fraudulent misrepresentation.



### 29.13. AMENDMENT

Any amendment to this Agreement shall be made in accordance with the Change Control Schedule set out in Schedule II of this Agreement by mutual written consent of all the Parties.

### 29.14. FALL CLAUSE

- (i) The prices charged for the services/equipment supplied to the Nodal Agency shall in no way exceed the lowest price at which the Implementation Agency sells/provides the services/equipment of identical description on similar terms and conditions to any person/Organization including any Department ('Dept.') of the Central Govt. or any Dept. of the State Govt. or any statutory undertaking of the Central or State Govt. as the case may be during the subsistence of this Agreement..
- (ii) If any change causes decrease in the cost of, or the time required for the Implementation Agency's performance of any provisions under this Agreement, an equitable adjustment shall be made in the Agreement Value/Price or the time stipulated for delivery, installation of equipment, or both, and the Agreement shall accordingly be amended. Any change as mentioned in this Clause shall be reported by the Implementation Agency to Nodal Agency within fifteen (15) days of such change becoming effective.
- (iii) Implementation Agency shall furnish a certificate along with each bill or payment for services/ supplies made under this Agreement that, there has been no reduction in sale price of the services/supplies of description identical to the services/ equipment supplied to the Nodal Agency under this Agreement herein and such services/equipment have not been offered and sold by Implementation Agency on similar terms and conditions to any person/Organization including the purchaser of any Dept. of the Central Govt. or any Dept. of the State Govt. or any statutory undertaking of the Central or State Govt. as the case may be up to the date of the invoicing/date of completion of services/supplies during the subsistence of this Agreement at a price lower than the price charged to the Nodal Agency

**IN WITNESS WHEREOF the Parties have by duly authorized** Representatives set their respective hands and seal on the date first above Written in the presence of:

WITNESSES:

Signed by:

(Name and designation)

**For and on behalf of Nodal Agency**

(FIRST PARTY)

Signed by:

(Name and designation)





**IMPLEMENTATION**

**AGENCY (SECOND PARTY)**

(Name and designation) For and on behalf of Implementation Agency

Signed by:





## 30. SCHEDULES

### 30.1. SCHEDULE – I – DEFINITIONS

Please refer Section – I, Definitions.





## 30.2. SCHEDULE – II – CHANGE CONTROL SCHEDULE

This Schedule describes the procedure to be followed in the event of any proposed change to the Master Service Agreement (“MSA”), Project Implementation Phase, SLA and Scope of Work and Functional Requirement Specifications. Such change shall include, but shall not be limited to, changes in the scope of services provided by the Implementation Agency and changes to the terms of payment as stated in the Terms of Payment Schedule.

The Nodal Agency and IA recognize that frequent change is an inevitable part of delivering services and that a significant element of this change can be accomplished by re-organizing processes and responsibilities without a material effect on the cost. The IA will endeavor, wherever reasonably practicable, to effect change without an increase in the terms of payment as stated in the Terms of Payment Schedule and Nodal Agency or its nominated agencies will work with the Implementation Agency to ensure that all changes are discussed and managed in a constructive manner. This Change Control Schedule sets out the provisions which will apply to all the changes to this agreement and other documents except for the changes in SLAs for which a separate process has been laid out in Clause 11 of the SLA.

This Change Control Schedule sets out the provisions which will apply to changes to the MSA.

### CHANGE MANAGEMENT PROCESS

#### (1) CHANGE CONTROL NOTE ("CCN")

- i. Change requests in respect of the MSA, the Project Implementation, the operation, the SLA or Scope of work and Functional Requirement specifications will emanate from the Parties' respective Project Manager who will be responsible for obtaining approval for the change and who will act as its sponsor throughout the Change Control Process and will complete Part A of the CCN attached as Annexure A hereto. CCNs will be presented to the other Party's Project Manager who will acknowledge receipt by signature of the CCN.
- ii. The IA and the Nodal Agency or its nominated agencies, during the Project Implementation Phase and the Nodal Agency or its nominated agencies during the Operations and Management Phase and while preparing the CCN, shall consider the change in the context of the following parameter, namely whether the change is beyond the scope of Services including ancillary and concomitant services required and as detailed in the RFP and is suggested and applicable only after the testing, commissioning and certification of the Pilot Phase and the Project Implementation Phase as set out in this Agreement.
- iii. It is hereby also clarified here that any change of control suggested beyond 25 % of the value of this Project will be beyond the scope of the change control process and will be considered as the subject matter for a separate bid process and a separate contract. It is hereby clarified that the 25% of the value of the Project as stated in herein above is calculated on the basis of bid value submitted by the Implementation Agency and accepted by the Nodal Agency or its nominated agencies or as decided and approved by Nodal Agency or it



Nominated Agencies. For arriving at the cost / rate for change up to 25% of the project value, the payment terms and relevant rates as specified in Annexure D shall apply.

## (2) QUOTATION

- i. The IA shall assess the CCN and complete Part B of the CCN, in completing the Part B of the CCN the IA shall provide as a minimum:
  - a. description of the change
  - b. list of deliverables required for implementing the change;
  - c. time table for implementation;
  - d. an estimate of any proposed change
  - e. any relevant acceptance criteria
  - f. an assessment of the value of the proposed change;
  - g. material evidence to prove that the proposed change is not already covered within the Agreement and the scope of work
- ii. Prior to submission of the completed CCN to the Nodal Agency, or its nominated agencies, the Service Provider will undertake its own internal review of the proposal and obtain all necessary internal approvals. As a part of this internal review process, the IA shall consider the materiality of the proposed change in the context of the MSA and the Project Implementation affected by the change and the total effect that may arise from implementation of the change.

## (3) COSTS

Each Party shall be responsible for its own costs incurred in the quotation, preparation of CCNs and in the completion of its obligations described in this process provided the IA meets the obligations as set in the CCN. In the event the IA is unable to meet the obligations as defined in the CCN then the cost of getting it done by third party will be borne by the IA.

## (4) OBLIGATIONS

The IA shall be obliged to implement any proposed changes once approval in accordance with above provisions has been given, with effect from the date agreed for implementation and within an agreed timeframe. IA will not be obligated to work on a change until the parties agree in writing upon its scope, price and/or schedule impact.



### 30.3. SCHEDULE – III - EXIT MANAGEMENT SCHEDULE

#### (1) PURPOSE

- i. This Schedule sets out the provisions, which will apply on expiry or termination of the MSA, the Project Implementation, Operation and Management SLA.
- ii. In the case of termination of the Project Implementation and/or Operation and Management, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.
- iii. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

#### (2) TRANSFER OF ASSETS

- i. Nodal Agency shall be entitled to serve notice in writing on the IA at any time during the exit management period as detailed hereinabove requiring the IA and/or its sub-contractors to provide the Nodal Agency with a complete and up to date list of the Assets within 30 days of such notice. Nodal Agency shall then be entitled to serve notice in writing on the IA at any time prior to the date that is 30 days prior to the end of the exit management period requiring the IA to sell the Assets, if any, to be transferred to Nodal Agency or its nominated agencies at book value as determined as of the date of such notice in accordance with the provisions of relevant laws.
- ii. In case of contract being terminated by Nodal Agency, Nodal Agency reserves the right to ask IA to continue running the project operations for a period of 6 months after termination orders are issued.
- iii. Upon service of a notice under this Article the following provisions shall apply:
  - (a) in the event, if the Assets to be transferred are mortgaged to any financial institutions by the IA, the IA shall ensure that all such liens and liabilities have been cleared beyond doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to the Nodal Agency.
  - (b) All risk in and title to the Assets to be transferred / to be purchased by the Nodal Agency pursuant to this Article shall be transferred to Nodal Agency, on the last day of the exit management period.
  - (c) Nodal Agency shall pay to the IA on the last day of the exit management period such sum representing the Net Block (procurement price less depreciation as per provisions of Companies Act) of the Assets to be transferred as stated in the Terms of Payment Schedule.
- iv. Payment to the outgoing IA shall be made to the tune of last set of completed services/ deliverables, subject to SLA requirements.
- v. The outgoing IA will pass on to Nodal Agency and/or to the Replacement IA, the subsisting rights in any leased properties/ licensed products on terms not less favorable to Nodal Agency/ Replacement IA, than that enjoyed by the outgoing IA.

#### (3) COOPERATION AND PROVISION OF INFORMATION

During the exit management period:



- (i) The Implementation Agency will allow the Nodal Agency or its nominated agency access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable the Nodal Agency to assess the existing services being delivered;
- (ii) promptly on reasonable request by the Nodal Agency, the IA shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with this agreement relating to any material aspect of the services (whether provided by the Implementation Agency or sub-contractors appointed by the Implementation Agency). The Nodal Agency shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The Implementation Agency shall permit the Nodal Agency or its nominated agencies to have reasonable access to its employees and facilities as reasonably required by the Chairman, PIU to understand the methods of delivery of the services employed by the Implementation Agency and to assist appropriate knowledge transfer.

#### **(4) CONFIDENTIAL INFORMATION, SECURITY AND DATA**

The Implementation Agency will promptly on the commencement of the exit management period supply to the Nodal Agency or its nominated agency the following:

- (i) information relating to the current services rendered and customer and performance data relating to the performance of sub-contractors in relation to the services;
- (ii) documentation relating to Computerization Project's Intellectual Property Rights;
- (iii) documentation relating to sub-contractors;
- (iv) all current and updated data as is reasonably required for purposes of Nodal Agency or its nominated agencies transitioning the services to its Replacement Implementation Agency in a readily available format nominated by the Nodal Agency, its nominated agency;
- (v) all other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable Nodal Agency or its nominated agencies, or its Replacement Implementation Agency to carry out due diligence in order to transition the provision of the Services to Nodal Agency or its nominated agencies, or its Replacement Implementation Agency (as the case may be)

Before the expiry of the exit management period, the Implementation Agency shall deliver to the Nodal Agency or its nominated agency all new or up-dated materials from the categories set out in Schedule above and shall not retain any copies thereof, except that the Implementation Agency shall be permitted to retain one copy of such materials for archival purposes only.

Before the expiry of the exit management period, unless otherwise provided under the MSA, the Nodal Agency or its nominated agency shall deliver to the Implementation Agency all forms of Implementation Agency confidential information, which is in the possession or control of Chairperson, PIU or its users.

#### **(5) EMPLOYEES**

Promptly on reasonable request at any time during the exit management period, the Implementation Agency shall, subject to applicable laws, restraints and regulations



(including in particular those relating to privacy) provide to the Nodal Agency or its nominated agency a list of all employees (with job titles) of the Implementation Agency dedicated to providing the services at the commencement of the exit management period.

Where any national, regional law or regulation relating to the mandatory or automatic transfer of the contracts of employment from the Implementation Agency to the Nodal Agency or its nominated agency, or a Replacement Implementation Agency ("Transfer Regulation") applies to any or all of the employees of the Implementation Agency, then the Parties shall comply with their respective obligations under such Transfer Regulations.

To the extent that any Transfer Regulation does not apply to any employee of the Implementation Agency, department, or its Replacement Implementation Agency may make an offer of employment or contract for services to such employee of the Implementation Agency and the Implementation Agency shall not enforce or impose any contractual provision that would prevent any such employee from being hired by the Chairperson, PIU or any Replacement Implementation Agency.

#### **(6) TRANSFER OF CERTAIN AGREEMENTS**

On request by the Nodal Agency or its nominated agency the Implementation Agency shall effect such assignments, transfers, licenses and sub-licenses as the Chairperson, PIU may require in favor of the Chairperson, PIU, or its Replacement Implementation Agency in relation to any equipment lease, maintenance or service provision agreement between Implementation Agency and third party lessors, vendors, and which are related to the services and reasonably necessary for the carrying out of replacement services by the Nodal Agency or its nominated agency or its Replacement Implementation Agency.

#### **(7) RIGHTS OF ACCESS TO PREMISES**

At any time during the exit management period, where Assets are located at the Implementation Agency's premises, the Implementation Agency will be obliged to give reasonable rights of access to (or, in the case of Assets located on a third party's premises, procure reasonable rights of access to) the Nodal Agency or its nominated agency and/or any Replacement Implementation Agency in order to make an inventory of the Assets.

The Implementation Agency shall also give the Nodal Agency or its nominated agency or its nominated agencies, or any Replacement Implementation Agency right of reasonable access to the Implementation Partner's premises and shall procure the Nodal Agency or its nominated agency or its nominated agencies and any Replacement Implementation Agency rights of access to relevant third party premises during the exit management period and for such period of time following termination or expiry of the MSA as is reasonably necessary to migrate the services to the Nodal Agency or its nominated agency, or a Replacement Implementation Agency.

#### **(8) GENERAL OBLIGATIONS OF THE IMPLEMENTATION AGENCY**

The Implementation Agency shall provide all such information as may reasonably be necessary to effect as seamless a handover as practicable in the circumstances to the Nodal Agency or its nominated agency or its Replacement Implementation Agency and



which the Implementation Agency has in its possession or control at any time during the exit management period.

For the purposes of this Schedule, anything in the possession or control of any Implementation Agency, associated entity, or sub-contractor is deemed to be in the possession or control of the Implementation Agency.

The Implementation Agency shall commit adequate resources to comply with its obligations under this Exit Management Schedule.

#### **(9) EXIT MANAGEMENT PLAN**

1. The Implementation Agency shall provide the Nodal Agency or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.
2. A detailed program of the transfer process that could be used in conjunction with a Replacement Implementation Agency including details of the means to be used to;
  - i. ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;
  - ii. plans for the communication with such of the Implementation Agency's sub-contractors, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on the Nodal Agency's operations as a result of undertaking the transfer;
  - iii. (if applicable) proposed arrangements for the segregation of the Implementation Agency's networks from the networks employed by Nodal Agency and identification of specific security tasks necessary at termination;
3. Plans for provision of contingent support to Nodal Agency, and Replacement Implementation Agency for a reasonable period after transfer.
4. The Implementation Agency shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.
5. Each Exit Management Plan shall be presented by the Implementation Agency to and approved by the Nodal Agency or its nominated agencies.
6. The terms of payment as stated in the Terms of Payment Schedule include the costs of the Implementation Agency complying with its obligations under this Schedule.
7. In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan. During the exit management period, the Implementation Agency shall use its best efforts to deliver the services.
8. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.
9. This Exit Management plan shall be furnished in writing to the Nodal Agency or its nominated agencies within 90 days from the Effective Date of this Agreement.





## **30.4. SCHEDULE – IV - AUDIT, ACCESS AND REPORTING**

### **(1) PURPOSE**

This Schedule details the audit, access and reporting rights and obligations of the Nodal Agency or its nominated agency and the Implementation Agency.

### **(2) AUDIT NOTICE AND TIMING**

As soon as reasonably practicable after the Effective Date, the Parties shall use their best endeavors to agree to a timetable for routine audits during the Project Implementation Phase and the Operation and Management Phase. Such timetable during the Implementation Phase, the Nodal Agency or its nominated agency and thereafter during the operation Phase, the Nodal Agency or its nominated agency shall conduct routine audits in accordance with such agreed timetable and shall not be required to give the Implementation Agency any further notice of carrying out such audits.

The Nodal Agency or its nominated agency may conduct non-timetabled audits at his/ her own discretion if it reasonably believes that such non-timetabled audits are necessary as a result of an act of fraud by the Implementation Agency, a security violation, or breach of confidentiality obligations by the Implementation Agency, provided that the requirement for such an audit is notified in writing to the Implementation Agency a reasonable period time prior to the audit (taking into account the circumstances giving rise to the reasonable belief) stating in a reasonable level of detail the reasons for the requirement and the alleged facts on which the requirement is based. If the Implementation Agency considers that the non-timetabled audit was not appropriate, the matter shall be referred to the escalation procedure as set out in the Governance Schedule.

The frequency of audits shall be a (maximum) half yearly, provided always that the Nodal Agency or its nominated agency shall endeavor to conduct such audits with the lowest levels of inconvenience and disturbance practicable being caused to the Implementation Agency. Any such audit shall be conducted by with adequate notice of 2 weeks to the Implementation Agency. Nodal Agency will ensure that any 3rd party agencies (except CAG) appointed to conduct the audit will not be the competitor of Implementation Agency and will be bound by confidentiality obligations.

### **(3) ACCESS**

The Implementation Agency shall provide to the Nodal Agency or its nominated agency access to employees, subcontractors, suppliers, agents and third party facilities as detailed in the RFP, documents, records and systems reasonably required for audit and shall provide all such persons with routine assistance in connection with the audits and inspections. The Chairperson, PIU / Steering Committee shall have the right to copy and retain copies of any relevant records. The Implementation Agency shall make every reasonable effort to co-operate with them.

### **(4) AUDIT RIGHTS**

The Nodal Agency or its nominated agency shall have the right to audit and inspect suppliers, agents and third party facilities (as detailed in the RFP), data centers, documents, records, procedures and systems relating to the provision of the services, but only to the



extent that they relate to the provision of the services, as shall be reasonably necessary to verify:

- i. The security, integrity and availability of all data processed, held or conveyed by the Partner on behalf of Nodal Agency and documentation related thereto;
- ii. That the actual level of performance of the services is the same as specified in the SLA;
- iii. That the Implementation Agency has complied with the relevant technical standards, and has adequate internal controls in place; and
- iv. The compliance of the Implementation Agency with any other obligation under the MSA and SLA.
- v. Security audit and implementation audit of the system shall be done once each year, the cost of which shall be borne by the Implementation Agency.
- vi. For the avoidance of doubt the audit rights under this Schedule shall not include access to the Implementation Agency's profit margins or overheads, any confidential information relating to the Implementation Agency' employees, or (iii) minutes of its internal Board or Board committee meetings including internal audit, or (iv) such other information of commercial-in-confidence nature which are not relevant to the Services associated with any obligation under the MSA.

#### **(5) AUDIT RIGHTS OF SUB-CONTRACTORS, SUPPLIERS AND AGENTS**

The Implementation Agency shall use reasonable endeavors to achieve the same audit and access provisions as defined in this Schedule with sub-contractors, suppliers and agents who supply labor, services, equipment or materials in respect of the services. The Implementation Agency shall inform the Nodal Agency or its nominated agency prior to concluding any sub- contract or supply agreement of any failure to achieve the same rights of audit or access.

**REPORTING:** The Implementation Agency will provide quarterly reports to the Chairperson, PIU / Steering committee regarding any specific aspects of the Project and in context of the audit and access information as required by the Nodal Agency or its nominated agency.

#### **(6) ACTION AND REVIEW**

Any change or amendment to the systems and procedures of the Implementation Agency, or sub-contractors, where applicable arising from the audit report shall be agreed within thirty (30) calendar days from the submission of the said report.

Any discrepancies identified by any audit pursuant to this Schedule shall be immediately notified to the Nodal Agency or its nominated agency and the Implementation Agency Project Manager who shall determine what action should be taken in respect of such discrepancies in accordance with the terms of the MSA.

#### **(7) TERMS OF PAYMENT**

The Nodal Agency shall bear the cost of any audits and inspections. The terms of payment are exclusive of any costs of the Implementation Agency and the sub-contractor, for all



reasonable assistance and information provided under the MSA, the Project Implementation, Operation and Management SLA by the Implementation Agency pursuant to this Schedule.

**(8) RECORDS AND INFORMATION**

For the purposes of audit in accordance with this Schedule, the Implementation Agency shall maintain true and accurate records in connection with the provision of the services and the Implementation Agency shall handover all the relevant records and documents upon the termination or expiry of the MSA.





## 30.5. SCHEDULE – V - GOVERNANCE SCHEDULE

### (1) PURPOSE

The purpose of this Schedule is to:

- (i) establish and maintain the formal and informal processes for managing the relationship between the Nodal Agency and the Implementation Agency (including the outputs from other Schedules to this Agreement;
- (ii) define the principles that both Parties wish to follow to ensure the delivery of the Services;
- (iii) ensure the continued alignment of the interests of the Parties;
- (iv) ensure that the relationship is maintained at the correct level within each Party;
- (v) create the flexibility to revise and maintain the relationship and this Agreement during the Term;
- (vi) set out the procedure for escalating disagreements; and
- (vii) enable contract administration and performance management.

### (2) GOVERNANCE STRUCTURE:

**Project Managers:** The relationship under this Agreement will be managed by the Project Managers appointed by each Party, who will provide the interface between the executive management of the respective Parties.

**Project Implementation Unit (PIU):** Within 7 days following the Effective Date, Nodal Agency or its nominated agencies and the Implementation Agency shall each appoint a Project Manager. In the event that either Party wishes to substitute its Project Manager it will do so in manner in which the original appointment is made and notify the other Party of such substitution as soon as reasonably practicable but at the latest within 7 days of the substitution.

The Project Managers shall have responsibility for maintaining the interface and communication between the Parties.

The PIU will meet formally on a fortnightly / monthly / quarterly, as required, basis at a time and location to be agreed between them. These meetings will cover, as a minimum, the following agenda items: (i) consideration of Quarterly Performance Reports; (ii) consideration of matters arising out of the Change Control Schedule; (iii) issues escalated in accordance with the escalation procedure as set out in the Governance Schedule; (iv) matters to be brought before the PIU in accordance with the MSA and the Schedules; (v) any matter brought before the PIU by the Implementation Agency under this Article; and (vi) any other issue which either Party wishes to add to the agenda.

In the event that there is any material factor which affects the delivery of the Services or the terms of payment as stated in the Terms of Payment Schedule, the Parties agree to discuss in the PIU any appropriate amendment to the Agreement or any Service Level Agreements or Statement of Works including any variation to the terms of payment as stated in the Terms of Payment Schedule. Any variation so agreed shall be implemented through the change control procedure as set out in the Change Control Schedule.

### (3) GOVERNANCE PROCEDURES



The Implementation Agency shall document the agreed structures in a procedures manual. The agenda for each meeting of the PIU shall be set to reflect the discussion items referred to above and extraordinary items may be added either with the agreement of the Parties or at the request of either Party. Copies of the agenda for meetings of the PIU, along with relevant pre- reading material, shall be distributed at least one week in advance of the relevant meeting.

All meetings and proceedings will be documented such documents to be distributed to the Parties and copies shall be kept as a record. All actions, responsibilities and accountabilities arising out of any meeting shall be tracked and managed.

The Parties shall ensure as far as reasonably practicable that the PIU shall resolve the issues and resolve the objectives placed before them and that members representing that Party are empowered to make relevant decisions or have easy access to empowered individuals for decisions to be made to achieve this.

In order formally to submit a Disputed Matter to the aforesaid for a, one Party ("Claimant") shall give a written notice ("Dispute Notice") to the other Party. The Dispute Notice shall be accompanied by (a) a statement by the Claimant describing the Disputed Matter in reasonable detail and (b) documentation, if any, supporting the Claimant's position on the Disputed Matter.

The other Party ("Respondent") shall have the right to respond to the Dispute Notice within 7 days after receipt of the Dispute Notice. In the event that the parties are unable to resolve the Disputed Matter within a further period of 7 days, it shall refer the Disputed Matter to next level of the dispute resolution for action as per the process mentioned in article 9.1

All negotiations, statements and / or documentation pursuant to these Articles shall be without prejudice and confidential (unless mutually agreed otherwise).

If the Disputed Matter is having a material effect on the operation of the Services (or any of them or part of them) the Parties will use all their respective reasonable endeavors to reduce the elapsed time in reaching a resolution of the Disputed Matter.



### 30.6. SCHEDULE – VI - TERMS OF PAYMENT SCHEDULE

Payment and Delivery Schedule is as per Section – IV, Annexure – 4, Bid-related Information – 3.





## 31. ANNEXURE

**All following annexures are included in “Section – IV: Annexures to RFP”**

ANNEXURE – 1 - FORMAT 4: CHANGE CONTROL NOTICE

ANNEXURE – 1 - FORMAT 5: LIST OF SERVICES PROVIDED BY MSI





# **PART – II: DRAFT NON-DISCLOSURE AGREEMENT**







**THIS AGREEMENT** is made on this the <\*\*\*> day of <\*\*\*> 20--- at <\*\*\*>, India.

**BETWEEN**

----- having its office at -----  
----- India hereinafter referred to as ‘**Nodal Agency**’ or ‘-----’, which expression shall, unless the context otherwise requires, include its permitted successors and assigns);

**AND**

<\*\*\*>, a Company incorporated under the Companies Act, 1956, having its registered office at <\*\*\*> (hereinafter referred to as ‘**the Implementation Agency/IA**’ which expression shall, unless the context otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the ‘**Parties**’ and individually as a ‘**Party**’.

**WHEREAS:**

1. Nodal Agency is desirous to implement the project of Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai for a period of 7 years
2. The Nodal Agency and Implementation Agency have entered into a Master Services Agreement dated <\*\*\*> (the “**MSA**”) as well as a Service Level Agreement dated <\*\*\*> (the “**SLA**”) in furtherance of the Project.
3. Whereas in pursuing the Project (the “**Business Purpose**”), a Party (“Disclosing Party”) recognizes that they will disclose certain Confidential Information (as defined hereinafter) to the other Party (“Receiving Party”).
4. Whereas such Confidential Information (as defined hereinafter) belongs to Receiving Party as the case may be and is being transferred to the Disclosing Party to be used only for the Business Purpose and hence there is a need to protect such information from unauthorized use and disclosure.

**NOW THEREFORE**, in consideration of the mutual covenants, promises, assurances, representations and provisions set forth herein, the Parties hereto agree as follows:



## 1. **DEFINITIONS**

Terms and expressions used in this Agreement (including the Introduction) shall have the same meanings set out in Schedule I of MSA.

## 2. **INTERPRETATION**

In this Agreement, unless otherwise specified:

- (a) references to Clauses, Sub-Clauses, Paragraphs and Schedules are to clauses, sub-clauses, paragraphs of and schedules to this Agreement;
- (b) use of any gender includes the other genders;
- (c) references to a '**company**' shall be construed so as to include any company, corporation or other body corporate, wherever and however incorporated or established;
- (d) references to a '**person**' shall be construed so as to include any individual, firm, company, government, state or agency of a state, local or municipal authority or government body or any joint venture, association or partnership (whether or not having separate legal personality);
- (e) a reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted;
- (f) any reference to a '**day**' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight;
- (g) references to a '**business day**' shall be construed as a reference to a day (other than a Sunday) on which banks in the state of <\*\*\*> are generally open for business;
- (h) references to times are to Indian standard time;
- (i) a reference to any other document referred to in this Agreement is a reference to that other document as amended, varied, novated or supplemented at any time; and
- (j) all headings and titles are inserted for convenience only. They are to be ignored in the interpretation of this Agreement.

## 3. **MEASUREMENTS AND ARITHMETIC CONVENTIONS**

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down except in money calculations where such amounts shall be rounded off to the nearest INR.

## 4. **AMBIGUITIES WITHIN AGREEMENT**

In case of ambiguities or discrepancies within this Agreement, the following principles shall apply:

- (a) as between two Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in a general Clause;
- (b) as between the provisions of this Agreement and the Schedules, the Agreement shall prevail, save and except as expressly provided otherwise in the Agreement or the Schedules; and



- (c) as between any value written in numerals and that in words, the value in words shall prevail.

## **5. PRIORITY OF AGREEMENTS**

The Parties hereby expressly agree that for the purpose of giving full and proper effect to this Agreement, the MSA and this Agreement shall be read together and construed harmoniously. In the event of any conflict between the MSA and this Agreement, the provisions contained in the MSA shall prevail over this Agreement.

## **6. TERM**

This Agreement will remain in effect for five years from the date of the last disclosure of Confidential Information ("Term"), at which time it will terminate, unless extended by the disclosing party in writing.

## **7. SCOPE OF THE AGREEMENT**

- (a) This Agreement shall apply to all confidential and proprietary information disclosed by Disclosing Party to the Receiving Party and other information which the disclosing party identifies in writing or otherwise as confidential before or within (30) thirty days after disclosure to the Receiving Party ("Confidential Information"). Such Confidential Information consists of certain specifications, documents, software, prototypes and/or technical information, and all copies and derivatives containing such Information that may be disclosed to the Disclosing Party for and during the Business Purpose, which a party considers proprietary or confidential.
- (b) Such Confidential Information may be in any form or medium, tangible or intangible,
- (c) and may be communicated/disclosed in writing, orally, or through visual observation or by any other means to the Receiving Party.

## **8. OBLIGATIONS OF THE RECEIVING PARTY**

The Receiving Party shall:

- (a) use the Confidential Information only for the Business Purpose and shall hold the Confidential Information in confidence using the same degree of care as it normally exercises to protect its own proprietary information, taking into account the nature of the Confidential Information, and
- (b) grant access to Confidential Information only to its employees on a 'need to know basis' and restrict such access as and when not necessary to carry out the Business Purpose.
- (c) cause its employees to comply with the provisions of this Agreement;
- (d) reproduce Confidential Information only to the extent essential to fulfilling the Business Purpose, and



- (e) prevent disclosure of Confidential Information to third parties;
- (f) disclose the Confidential Information to its consultants/contractors on a need to know basis; provided that by doing so, the Receiving Party agrees to bind such consultants/contractors to terms at least as restrictive as those stated herein. The Receiving Party upon making a disclosure under this Clause shall:
  - (i) advise the consultants/contractors of the confidentiality obligations imposed on them by this Clause.
  - (g) upon the Disclosing Party's request, the Receiving Party shall either return to the disclosing party all Confidential Information or shall certify to the disclosing party that all media containing Confidential Information have been destroyed. Provided, however, that an archival copy of the Confidential Information may be retained in the files of the Receiving Party's counsel, solely for the purpose of proving the contents of the Confidential Information.
  - (h) not to remove any of the other Party's Confidential Information from the premises of the Disclosing Party without prior written approval.
  - (i) exercise extreme care in protecting the confidentiality of any Confidential Information which is removed, only with the Disclosing Party's prior written approval, from the Disclosing Party's premises. Each Party agrees to comply with any and all terms and conditions the disclosing party may impose upon any such approved removal, such as conditions that the removed Confidential Information and all copies must be returned by a certain date, and that no copies are to be made off of the premises.
  - (j) Upon the Disclosing Party's request, the Receiving Party shall promptly return to the Disclosing Party all tangible items containing or consisting of the disclosing party's Confidential Information all copies thereof

## **9. EXCEPTIONS TO CONFIDENTIAL INFORMATION**

The foregoing restrictions on each party's use or disclosure of Confidential Information shall not apply to the Confidential Information that the Receiving Party can demonstrate that such Confidential Information:

- (a) was independently developed by or for the Receiving Party without reference to the Information, or was received without restrictions; or
- (b) has become generally available to the public without breach of confidentiality obligations of the Receiving Party; or
- (c) was in the Receiving Party's possession without restriction or was known by the Receiving Party without restriction at the time of disclosure; or
- (d) is the subject of a subpoena or other legal or administrative demand for disclosure; provided, however, that the Receiving Party has given the disclosing party prompt notice of such demand for disclosure and the Receiving Party reasonably cooperates with the disclosing party's efforts to secure an appropriate protective order; or
- (e) is disclosed with the prior consent of the disclosing party; o0072
- (f) was in its possession or known to it by being in its use or being recorded in its files or computers or other recording media prior to receipt from the disclosing party and was not previously acquired by the Receiving Party from the disclosing party under an



obligation of confidence; or

- (g) the Receiving Party obtains or has available from a source other than the disclosing party without breach by the Receiving Party or such source of any obligation of confidentiality or non-use towards the disclosing party.

## **10. OWNERSHIP OF THE CONFIDENTIAL INFORMATION**

- (a) Each Party recognizes and agrees that all of the disclosing Party's Confidential Information is owned solely by the Disclosing Party (or its licensors) and that the unauthorized disclosure or use of such Confidential Information would cause irreparable harm and significant injury, the degree of which may be difficult to ascertain.
- (b) By disclosing the Confidential Information or executing this Agreement, Disclosing Party does not grant any license, explicitly or implicitly, under any trademark, patent, copyright, mask work protection right, trade secret or any other intellectual property right. The Disclosing Party disclaims all warranties regarding the information, including all warranties with respect to infringement of intellectual property rights and all warranties as to the accuracy or utility of such information.
- (c) Access to Confidential Information hereunder shall not preclude an individual who has seen such Confidential Information for the purposes of this Agreement from working on future projects for the Disclosing Party which relate to similar subject matters, provided that such individual does not make reference to the Confidential Information and does not copy the substance of the Confidential Information during the Term. Furthermore, nothing contained herein shall be construed as imposing any restriction on the Receiving Party's disclosure or use of any general learning, skills or know-how developed by the Receiving Party's personnel under this Agreement.
- (d) Execution of this Agreement and the disclosure of Confidential Information pursuant to this Agreement do not constitute or imply any commitment, promise, or inducement by either

## **11. DISPUTE RESOLUTION**

- (a) If a dispute arises in relation to the conduct of this Contract (Dispute), a party must comply with this clause 7 before starting arbitration or court proceedings (except proceedings for urgent interlocutory relief). After a party has sought or obtained any urgent interlocutory relief that party must follow this clause 7.
- (b) A party claiming a Dispute has arisen must give the other parties to the Dispute notice setting out details of the Dispute.
- (c) During the 14 days after a notice is given under clause 7(b) (or longer period if the parties to the Dispute agree in writing), each party to the Dispute must use its reasonable efforts through a meeting of Senior Executive (or their nominees) to resolve the Dispute. If the parties cannot resolve the Dispute within that period than any such dispute or difference whatsoever arising between the parties to this Contract out of or relating to the construction, meaning, scope, operation or effect of this Contract or the validity



of the breach thereof shall be referred to a sole arbitrator to be appointed by mutual consent of both the parties herein. If the parties cannot agree on the appointment of the arbitrator within a period of one month from the notification by one party to the other of existence of such dispute, then the Arbitrator shall be appointed by the High Court of the jurisdiction specified in this agreement. The provisions of the Arbitration and Conciliation Act, 1996 will be applicable and the award made there under shall be final and binding upon the parties hereto, subject to legal remedies available under the law. Such differences shall be deemed to be a submission to arbitration under the Indian Arbitration and Conciliation Act, 1996, or of any modifications, Rules or re-enactments thereof. The Arbitration proceedings will be held at the jurisdiction specified in Item 27. Any legal dispute will come under the sole jurisdiction specified in Item 27.

- (b) The Receiving Party agrees that the Disclosing Party shall have the right to obtain an immediate injunction enjoining any breach of this Agreement, as well as the right to pursue any and all other rights and remedies available at law or in equity for such a breach.

## 12. VARIATION

This Agreement may only be varied in writing and signed by both Parties.

## 13. WAIVER

Waiver including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:-

- (a) shall be in writing
- (b) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- (c) shall be executed by a duly authorized representative of the Party; and
- (d) shall not affect the validity or enforceability of this Agreement in any manner.

## 14. EXCLUSION OF IMPLIED WARRANTIES

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

## 15. ENTIRE AGREEMENT

This Agreement and the Annexure together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in



this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn.

**16. SEVERABILITY**

If for any reason whatever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the dispute resolution procedure set forth under this Agreement or otherwise.

**17. NO PARTNERSHIP**

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party except as expressly provided under the terms of this Agreement.

**18. THIRD PARTIES**

This Agreement is intended solely for the benefit of the Parties and their respective successors and permitted assigns, and nothing in this Agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Agreement.

**19. SUCCESSORS AND ASSIGNS**

The Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

**20. NOTICES**

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall be given by hand delivery, recognized courier, registered post, email or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

If to Nodal  
Agency:

Attn: <\*\*\*>



Tel: Fax:

Email:

Contact:

With a copy to:

If to the Implementation Agency:

Attn. <\*\*\*>

Phone: <\*\*\*>

Fax No. <\*\*\*>

## 21. LANGUAGE

All notices required to be given by one Party to the other Party and all other communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in the English language.

## 22. COUNTERPARTS

This Agreement may be executed in counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

## 23. MITIGATION

Without prejudice to any express provisions of this Agreement on any mitigation obligations of the Parties, each of the Nodal Agency and the Implementation Agency shall at all times take all reasonable steps to minimize and mitigate any loss for which the relevant Party is entitled to bring a claim against the other Party pursuant to this Agreement.

## 24. REMOVAL OF DIFFICULTIES

The Parties acknowledge that it is conceivable that the Parties may encounter difficulties or problems in the course of implementation of the Project and the transactions envisaged under this Agreement. The Parties agree and covenant that they shall mutually discuss such difficulties and problems in good faith and take all reasonable steps necessary for removal or resolution of such difficulties or problems.

**IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.**

SIGNED, SEALED AND DELIVERED

For and on behalf of the Implementation Agency by:

SIGNED, SEALED AND DELIVERED

For and on behalf of the Nodal Agency by:





(Signature)  
(Name)  
(Designation)  
(Address)  
(Fax No.)

(Signature)  
(Name)  
(Designation)  
(Address)  
(Fax No.)

In the presence of:

- 1.
- 2.





# PART – III: DRAFT SERVICE LEVEL AGREEMENT



**THIS AGREEMENT** is made on this the <\*\*\*> day of <\*\*\*> 20---- at <\*\*\*>, India.

**BETWEEN**

----- having its office at -----

----- India hereinafter referred to as ‘**Nodal Agency**’ or ‘**Buyer**’, which expression shall, unless the context otherwise requires, include its permitted successors and assigns);

**AND**

<\*\*\*>, a Company incorporated under the Companies Act, 1956, having its registered office at <\*\*\*> (hereinafter referred to as ‘**the Implementation Agency/IA**’ which expression shall, unless the context otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the ‘**Parties**’ and individually as a ‘**Party**’.

**WHEREAS:**

1. Nodal Agency is desirous to implement the project of Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai for a period of 7 years.
2. The Buyer and Implementation Agency have entered into a Master Services Agreement dated

<\*\*\*> (the “**MSA**”).

**NOW THEREFORE**, in consideration of the mutual covenants, promises, assurances, representations and provisions set forth herein, the Parties hereto agree as follows:

**1. DEFINITIONS AND INTERPRETATION**

**1.1. Definitions**

Terms and expressions used in this Agreement (including the Introduction) shall have the meanings set out in Annexure A.

**1.2. Interpretation**

In this Agreement, unless otherwise specified:

- (a) references to Clauses, Sub-Clauses, Paragraphs and Schedules are to clauses, sub-clauses, paragraphs of and schedules to this Agreement;
- (b) use of any gender includes the other genders;
- (c) references to a ‘company’ shall be construed so as to include any company, corporation



- or other body corporate, wherever and however incorporated or established;
- (d) references to a 'person' shall be construed so as to include any individual, firm, company, government, state or agency of a state, local or municipal authority or government body or any joint venture, association or partnership (whether or not having separate legal personality);
  - (e) a reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted;
  - (f) any reference to a 'day' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight;
  - (g) references to a 'business day' shall be construed as a reference to a day (other than a Sunday) on which banks in the state of ----- are generally open for business;
  - (h) references to times are to Indian Standard Time;
  - (i) a reference to any other document referred to in this Agreement is a reference to that other document as amended, varied, novated or supplemented at any time; and
  - (j) all headings and titles are inserted for convenience only. They are to be ignored in the interpretation of this Agreement.

### 1.3. **Measurements and Arithmetic Conventions**

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down except in money calculations where such amounts shall be rounded off to the nearest INR.

### 1.4. **Ambiguities within Agreement**

In case of ambiguities or discrepancies within this Agreement, the following principles shall apply:

- (a) as between two Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in a general Clause;
- (b) as between the provisions of this Agreement and the Schedules, the Agreement shall prevail, save and except as expressly provided otherwise in the Agreement or the Schedules; and
- (c) as between any value written in numerals and that in words, the value in words shall prevail.

### 1.5. **Priority of agreements**

The Parties hereby expressly agree that for the purpose of giving full and proper effect to this Agreement, the MSA and this Agreement shall be read together and construed harmoniously. In the event of any conflict between the MSA and this Agreement, the provisions contained in the MSA shall prevail over this Agreement.

## 2. **STRUCTURE**



This SLA shall operate as a legally binding services agreement specifying terms which apply to the Parties in relation to the provision of the Services by the Implementation Agency to the Buyer and its nominated agencies under this Agreement and the MSA.

### **3. OBJECTIVES OF THIS SLA**

The Implementation Agency shall be required to ensure that the Service Levels which shall ensure the following:

- (a) Improving the efficiency of operations for the taxation departments.
- (b) Leveraging the benefits in new system in order to:
  - (i) Reduce of manual records and replace with computerized standardized documents.
  - (ii) Infuse transparency in operations by enabling the stakeholders to have easy access to the records and provision of login ids and biometrics to infuse accountability in operations
  - (iii) Enable faster request processing in delivery of services with better turna round time.
  - (iv) Facilitate automated data transfer with state-wide connectivity to prevent unnecessary duplication & simplify preparation of registers and reports.
  - (v) Generate meaningful MIS from the system.
  - (vi) Provide inbuilt mechanism of security and quality control for crucial dealer data.

To meet the aforementioned objectives the Implementation Agency will provide the Service Levels in accordance with the performance metrics as set out in detail in this Agreement. Further this Agreement shall govern the provision of the contracted professional services of the Implementation Agency to the Nodal Agency and its nominated agencies after the Effective Date.

### **4. SCOPE OF SLA**

This Agreement has been executed in relation to the outsourcing portion of the Project between the Parties. The detailed Service Levels have been set out in Annexure B to this Agreement. This Agreement shall ensure the following:

- (a) Establishment of mutual responsibilities and accountability of the Parties;
- (b) Definition each Party's expectations in terms of services provided;
- (c) Establishment of the relevant performance measurement criteria;
- (d) Definition of the availability expectations;
- (e) Definition of the escalation process;



- (f) Establishment of trouble reporting single point of contact; and
- (g) Establishment of the framework for SLA change management

The following parties are obligated to follow the procedures as specified by this Agreement:

- (a) Buyer
- (b) Implementation Agency

### 5. AGREEMENT OWNERS

The following personnel shall be notified to discuss the Agreement and take into consideration any proposed SLA change requests:

	Title	Telephone	Email
Buyer	Authorized Representative, Nodal Agency	<***>	<***>
Implementation Agency	<***>	<***>	<***>

### 6. CONTACT LIST

In the event that there is any change in the listed contacts, the same shall be communicated and updated prior to such change occurring. The Single Point of Contact (“POC”) for the Implementation Agency shall be <\*\*\*> and will be available 24X7.

Name	Title	Location	Telephone
Buyer	Authorised Representative, Nodal Agency	<***>	<***>
Implementation Agency	<***>	<***>	<***>

### 7. PRINCIPAL CONTACTS

The Buyer and the Implementation Agency will nominate a senior staff member to be the principal contact regarding operation of this Agreement. At the date of signing of this Agreement, the nominated principal contacts are:

Buyer principal contact: \_\_\_\_\_

Implementation Agency principal contact: \_\_\_\_\_

### 8. COMMENCEMENT AND DURATION OF THIS AGREEMENT



Agreement shall commence on the date on which it is executed by the Buyer and the Implementation Agency (hereinafter the “Effective Date”) and shall, unless terminated earlier in accordance with its terms or unless otherwise agreed by the Parties, expire on the date on which this Agreement expires or terminates, which shall be a period of five years starting from the date of the Final Acceptance Test.

## 9. EXCLUSIONS TO THE AGREEMENT

This Agreement shall not govern the following services:

- (k) Consulting services; and
- (l) Implementation Agency’s business processes not related to the Project.

## 10. TERMS OF PAYMENT AND PENALTIES

- (m) In consideration of the Services and subject to the provisions of the MSA and this Agreement, the Buyer shall pay the amounts in accordance with the Terms of Payment Schedule of the MSA.
- (n) For the avoidance of doubt, it is expressly clarified that the Buyer and/or its nominated agencies may also calculate a financial sum and debit the same against the terms of payment as defined in the Terms of Payment Schedule of the MSA as a result of the failure of the Implementation Agency to meet the Service Levels set out as Annexure B of this Agreement, such sum being determined in accordance with the terms of the set out as Annexure B of this Agreement.

## 11. UPDATING OF THIS AGREEMENT

- (o) The Parties anticipate that this Agreement shall need to be re-evaluated and modified to account for changes in work environment and technology from time to time. Hence they hereby agree to revise the terms of the Agreement on an annual basis.
- (p) The Parties hereby agree upon the following procedure for revising this Agreement:
  - (i) Any and all changes to this Agreement will be initiated in writing between the Buyer and the Implementation Agency, The service levels in this Agreement shall be considered to be standard for the Buyer and shall only be modified if both Parties agree to an appended set of terms and conditions;
  - (ii) Only the Buyer or the Implementation Agency may initiate a revision to this Agreement;
  - (iii) A notice of the proposed revision (“**SLA Change Request**”) shall be served to the Buyer or the Implementation Agency as the case may be;
  - (iv) The SLA Change request would be deemed to be denied in case it is not approved within a period of <\*\*\*> days;
  - (v) In the event that Buyer/Implementation Agency approves of the suggested



change the change shall be communicated to all the Parties and the SLA Change request would be appended to the Agreement;

- (vi) The Buyer shall update and republish the text of Agreement annually to include all the SLA Change Requests that have been appended to the Agreement during the course of the year. Such republished Agreement shall be circulated to all the Parties within <\*\*\*> days of such change taking place.

## 12. DOCUMENT HISTORY

All revisions made to this Agreement shall be listed in chronological order as per the format set out below and a copy of the same shall be provided to the Parties:

Version	Date	Description of changes	Reviewed/ Approved by
<***>	<***>	<***>	

## 13. SCOPE OF SERVICES

- (a) The Implementation Agency shall ensure that Services are available at various locations as per the requirements of the project;
- (b) The Implementation Agency shall provide support services for addressing problems related to the provision of services of the selected bidder through the POC. Such POC shall be available over telephone on <\*\*\*> number 24 hours a day, 7 days a week
- (c) The Implementation Agency guarantees that he shall achieve the Service Levels for the Project;
- (d) The Implementation Agency shall be liable to penalties in case of failure to comply with the Service Levels. However any delay not attributable to the Implementation Agency shall not be taken into account while computing adherence to the Service Levels.

## 14. PERFORMANCE REVIEW

The POC's of both the Buyer and the Implementation Agency shall meet on a quarterly basis to discuss priorities, service levels and system performance. Additional meetings may be held at the request of either the Implementation Agency or the Buyer. The agenda for these meetings shall be as follows:

- (a) Service performance;
- (b) Review of specific problems/exceptions and priorities; and
- (c) Review of the operation of this Agreement and determine corrective action to overcome deficiencies.

## 15. REPRESENTATIONS AND WARRANTIES OF BUYER

The Buyer hereby represents and warrants to the Implementation Agency as follows:





- (a) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement and carry out the transactions contemplated hereby;
- (b) it has taken all necessary actions under Applicable Law to authorize the execution, delivery and performance of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- (c) it has the financial standing and capacity to perform its obligations under the Agreement;
- (d) this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof and its obligations under this Agreement shall be legally valid, binding and enforceable obligations against it in accordance with the terms thereof;
- (e) the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- (f) there are no actions, suits or proceedings pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the default or breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform its material (including any payment) obligations under this Agreement;
- (g) it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any material adverse effect on the Implementation Agency's ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement.

## **16. REPRESENTATIONS AND WARRANTIES OF THE IMPLEMENTATION AGENCY**

The Implementation Agency hereby represents and warrants to the Buyer as follows:

- (i) it is duly organized and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;
- (ii) it has taken all necessary corporate and other actions under Applicable Laws to authorize the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- (iii) this Agreement has been duly executed by it and constitutes its legal, valid and binding



- obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement shall be legally valid, binding and enforceable obligations against it in accordance with the terms hereof;
- (iv) the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its Memorandum and Articles of Association or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
  - (v) there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its material obligations under this Agreement;
  - (vi) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any government instrumentality which may result in any material adverse effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
  - (vii) it has complied with Applicable Law in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have a material adverse effect on its ability to perform its obligations under this Agreement;
  - (viii) no representation or warranty by it contained herein or in any other document furnished by it to the Buyer or to any government instrumentality in relation to the Required Consents contains or shall contain any untrue or misleading statement of material fact or omits or shall omit to state a material fact necessary to make such representation or warranty not misleading; and
  - (ix) no sums, in cash or kind, have been paid or shall be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for entering into this Agreement or for influencing or attempting to influence any officer or employee of the Buyer in connection therewith.

## **17. INDEMNITIES**

The Parties agree to indemnify each other under this Agreement in accordance with the terms and principles set out in the MSA.

## **18. DISPUTE RESOLUTION**



Any dispute, difference or claim arising out of or in connection with the Agreement which is not resolved amicably shall be decided in accordance with the dispute resolution procedure as set out in the MSA.

## 19. MISCELLANEOUS

### (a) **Assignment and charges**

This Agreement shall be binding on and ensure for the benefit of each Party's successors in title. No Party shall assign, or declare any trust in favour of a third party over, all or any part of the benefit of, or its rights or benefits under, this Agreement.

### (b) **Governing law and jurisdiction**

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at the State of ----- shall have jurisdiction over matters arising out of or relating to this Agreement.

### (c) **Waiver of sovereign immunity**

The Parties unconditionally and irrevocably:

- (i) agree that the execution, delivery and performance by them of the Agreement constitute commercial acts done and performed for commercial purpose;
- (ii) agree that, should any proceedings be brought against a Party or its assets, property or revenues in any jurisdiction in relation to the Agreement or any transaction contemplated by the Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of such Party with respect to its assets;
- (iii) waive any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- (iv) consent generally to the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

### (d) **Variation**

This Agreement may only be varied in writing and signed by both Parties.

### (e) **Waiver**

Waiver including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:-

- (i) shall be in writing
- (ii) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;



- (iii) shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- (iv) shall not affect the validity or enforceability of this Agreement in any manner.

**(f) Exclusion of implied warranties**

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

**(g) Survival**

Termination or expiration of the Term shall:

- (i) not relieve the Implementation Agency or the Buyer, as the case may be, of any obligations hereunder which expressly or by implication survive hereof; and
- (ii) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such termination or expiration or arising out of such termination or expiration.

All obligations surviving termination or expiration of the Term shall cease on termination or expiration of the Term.

**(h) Entire Agreement**

This Agreement and the Annexure together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn.

**(i) Severability**

If for any reason whatever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the dispute resolution procedure set forth under this Agreement or otherwise.

**(j) No partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party except as expressly provided under the terms of this Agreement.



**(k) Third parties**

This Agreement is intended solely for the benefit of the Parties and their respective successors and permitted assigns, and nothing in this Agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Agreement.

**(l) Notices**

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall be given by hand delivery, recognized courier, registered post, email or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

If to Nodal

Agency: Attn:

<\*\*\*>

Tel: Fax:

Email:

Contact:

With a copy to:

If to the Implementation

Agency: Attn. <\*\*\*>

Phone: <\*\*\*>

Fax No. <\*\*\*>

**(m) Language**

All notices required to be given by one Party to the other Party and all other communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in the English language.

**(n) Counterparts**

This Agreement may be executed in two counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

**(o) Mitigation**

Without prejudice to any express provisions of this Agreement on any mitigation obligations of the Parties, each of the Buyer and the Implementation Agency shall at all times take all reasonable steps to minimize and mitigate any loss for which the relevant Party is entitled to bring a claim against the other Party pursuant to this Agreement.

**(p) Removal of Difficulties**



The Parties acknowledge that it is conceivable that the Parties may encounter difficulties or problems in the course of implementation of the Project and the transactions envisaged under this Agreement. The Parties agree and covenant that they shall mutually discuss such difficulties and problems in good faith and take all reasonable steps necessary for removal or resolution of such difficulties or problems.

IN WITNESS WHEREOF THE PARTIES HAVE EXUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED

For and on behalf of the Implementation Agency by:

SIGNED, SEALED AND DELIVERED

For and on behalf of the Buyer by:

(Signature)  
(Name)  
(Designation)  
(Address)  
(Fax No.)



(Signature)  
(Name)  
(Designation)  
(Address)  
(Fax No.)

In the presence of:

- 1.
- 2.



## 20. ANNEXURES

### (1) ANNEXURE A – DEFINITIONS

As per Section – I, Definitions





## (2) ANNEXURE B – SERVICE LEVELS

The MSI shall perform as per the Service Levels defined in Section - II: Service Level Agreement.







# Section – IV: Annexures to RFP



**Table of Contents**

Annexure-1: Eligibility Criteria Formats	264
Format 1: Bidder Information Format	265
Format 2: Letter of Authorization to signatories	266
Format 3: Bid Submission Covering Letter	267
Format 4: Pre-requisites Checklist	269
Format 5: Eligibility Criteria Checklist	270
Format 6: Turnover details of Bidders and Consortium Members	272
Format 7: Turnover details from IT/ ITES/ Telecom projects	273
Format 8: Net-worth details of Bidders and Consortium Members	274
Format 9: Undertaking of “No Blacklisting”	275
Format 10: Undertaking of “No Conflict of interest”	276
Annexure-2: Technical Evaluation Formats	277
Format 1: Technical Proposal Covering Letter	278
Format 2: Technical Compliance Matrix	280
Format 3: Un-priced Bill of Material Format	284
Format 4: Turnover from IT/ ITES/ Telecom projects	285
Format 5: Details of ICT Projects Executed	286
Format 6: Details of Industry Specific Capabilities – For all initiatives	287
Format 7: Team Deployment Undertaking	288
Format 8: Profile of Proposed Project Team	289
Format 9: Details of MSME Involvement in the project	291
Format 10: Authorization from OEM	292
Format 11: Undertaking - Technical Support Arrangement with OEM	293
Format 12: Sub-contractor Scope	294
Format 13: Pre-Bid queries	295
Format 14: Completion Certificate/ Substantial Completion Certificate	296
Format 15: Performance Bank Guarantee	297
Format 16: Work orders and Client Citations	299
Format 17: Proposed Suggestions to RFP	300
Format 18: SLA Measurement Strategy	301
Annexure-3: Legal and Financial Formats	302
List of services provided by the MSI	302
Format 1: Commercial Bid Covering Letter	303
Format 2: Commercial Bid Formats	305
Format 3: Joint Bidding Agreement	322
Format 4: Change Control Notice	328
Format 5: List of services provided by the MSI	329
Annexure-4: Other Bid related Information	330
Bid-related Information – 1: High level estimate for business volume	331
Bid-related Information – 2: Summary of Parking Lots	332
Bid-related Information – 3: Technical Specifications	336
Bid-related Information – 4: Payment and Delivery Schedule	353
Bid-related Information – 5: Representative Data points for Integrated Building Monitoring System	357
Annexure-5: Maps and Overview for Smart BKC 1.0	358



## **Annexure-1: Eligibility Criteria Formats**

This section contains the formats to be submitted by Bidders as part of Eligibility Criteria. These formats shall be on the letter head of the Lead Bidder's company and shall be signed by authorized signatory. These formats are in addition to the mandatory documentary evidence to be submitted as per RFP requirements.

Following is the list of formats:

- Format 1 : Bidder Information Format
- Format 2 : Letter of Authorization to signatories
- Format 3 : Bid Submission Covering Letter
- Format 4 : Pre-requisites Checklist
- Format 5 : Eligibility Criteria Checklist
- Format 6 : Turnover details of Bidders and Consortium Members
- Format 7 : Turnover details from IT/ ITES/ Telecom projects
- Format 8 : Net-worth details of Bidders and Consortium Members
- Format 9 : Undertaking of "No Blacklisting"
- Format 10 : Undertaking of "No Conflict of interest"





**Format 1: Bidder Information Format**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorised Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Bidder Information Format**

Please find below the details of Lead Bidder and Consortium Members for participating in Smart BKC 1.0 Project

Particulars	Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
Name of the Organization				
Type of Organization (Pvt. Ltd/ Public Ltd/ Proprietary etc.)				
Country of Registered Office				
Address of Registered Office				
Company Registration Details				
Date of Registration				
Details of ISO 9001:2008/ CMMI Level 3 and above/ any global equivalent certification				
PAN/ Equivalent				
TIN/ Equivalent				
Address of Registered office in India				
No. of years of Operation in India				
Authorized Signatory Name				
Authorized Signatory Designation				
Authorized Signatory Contact Details				

Thanking you,  
Yours faithfully

(Signature of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 2: Letter of Authorization to signatories**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Chief Executive Officer/ CMD/  
Head of Marketing>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051

Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Letter of Authorization to signatories**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

We, having read and examined in detail all the bidding documents for Master System Integrator for Smart BKC 1.0 Project of MMRDA, do hereby propose to provide our services as specified in the RFP. In order to submit the bids, we authorize following officials to act on behalf of our company/ corporation/ firm/ organization and also on behalf of our other consortium members.

We confirm that these officials are empowered to sign this document as well as such other documents, which may be required in this connection. Enclosed is the **Power of Attorney** in the name of these officials, duly approved by the Board.

Sl No	Name	Designation	Organization	Contact Details	Signature

We understand that any kind of breach by these officials, in respect of this tender and any contract thereof, shall be considered as breach by the organization itself.

Thanking you,

(Signature)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 3: Bid Submission Covering Letter**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorised Signatory>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Bid Submission Covering Letter**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

We, the undersigned bidders, having read and examined in detail all the bidding documents for Master System Integrator for Smart BKC 1.0 Project of MMRDA, do hereby propose to provide our services as specified in the RFP.

We attach hereto our responses to the requirements and technical & commercial proposals as required by the RFP. We confirm that the information contained in these responses or any part thereof, including the exhibits, and other documents and instruments delivered or to be delivered to MMRDA, Govt. of Maharashtra is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its shortlisting process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response for a period of 180 days from the date fixed for bid opening. We hereby declare that in case the contract is awarded to us, we shall submit the contract performance guarantee bond in the form prescribed the RFP. We also herewith express our willingness to subject to MMRDA's conditionality regarding manpower recruitments (required for the project), change of hands of management and declaring upfront the source of funding for the project.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this \_\_\_\_\_ Day of \_\_\_\_\_ 2015

Thanking you,  
Yours faithfully

(Signature of the Authorized signatory of the Bidder)  
(In the capacity of)



(Name)

Duly authorized to sign the Tender Response for and on behalf of:

(Name and Address of Company) Seal/Stamp of bidder

Witness Signature:

Witness Name:

Witness Address:

Witness Signature:

Witness Name:

Witness Address:





**Format 4: Pre-requisites Checklist**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Pre-requisites Checklist**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below duly filled Pre-requisite checklist for subject RFP

S No	Pre-requisite	Document Proof	Compliance (Yes/No)	Page No. of Proof
1	Tender Fees	Receipt		
2	Power of Attorney	Copy of Power of Attorney in the name of the Authorized signatory		
3	Bidder Particulars	As per Format 1		
4	Earnest Money Deposit	Receipt		
5	Company registered under Companies Act, 1956 or partnership firm registered under the Partnership Act or Company registered outside India as per relevant laws of that country	Certificate of Incorporation / Registration; and Memorandum and Articles of Association Or any other relevant documents as per law prevailing in the country of registration		
6	Letter of Authorization	Letter of authorization of Lead Bidder company as per Format 2		

Thanking you,

(Signature)

Name:

Designation:

Seal:

Date:

Place:

Business Address:





**Format 5: Eligibility Criteria Checklist**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Eligibility Criteria Checklist**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below duly filled Eligibility Criteria checklist for subject RFP

S No	Eligibility Criteria	Document Proof	Compliance (Yes/No)	Page No. of Proof	Deviations, if any
1	The Lead Bidder and consortium partners (if any) should have been in operation for a period of at least 3 years in India or globally, prior to the last date of submission of bid.	<ul style="list-style-type: none"><li>For Companies incorporated in India, Certificate of Incorporation/ Registration under Companies Act, 1956 or partnership firm registered under the Partnership Act.</li><li>Memorandum and Articles of Association</li><li>For global players, Certificate of Incorporation in the country of incorporation</li></ul>			
2	The bidder (Lead Bidder in case of a consortium) should have average annual turnover of INR 200 crore from last three financial years (Financial years 2011-12, 2012-13 and 2013-14); and In case of a consortium, each consortium member individually (apart from the prime bidder) should have average annual turnover of INR 25 crore from last three financial years (Financial years 2011-12, 2012-13 and 2013-14)	<ul style="list-style-type: none"><li>Audited Financial Statement for Financial years 2011-12, 2012-13 and 2013-14; and</li><li>Statutory auditor's certificate OR certificate from Company Secretary of the bidder clearly specifying the annual turnover for the specified years.</li></ul>			
3	The Lead Bidder or any member in case of a consortium should have average annual turnover of INR 100 crore from IT/ ITES/ Telecom Projects (not including sales of system software or hardware) from last three financial years (Financial years 2011-12, 2012-13 and 2013-14)	Statutory auditor's certificate OR certificate from Company Secretary of the bidder clearly specifying the turnover from IT/ ITES/ Telecom Projects for the specified years.			
4	The Lead Bidder and each consortium member (in	Statutory auditor certificate/certificate from			



	case of a consortium) individually should have a positive Net Worth, as on the last day of financial year 2013-14.	Company Secretary of Bidder specifying the net worth for the specified year.			
5	The Bidder/ any member (in case of Consortium) shall have an ISO 9001:2008/ CMMI Level 3 and above/ any global equivalent certification	Details shall be furnished as per Bidder Information Format at Section – IV, Annexure – 1, Format – 1.			
6	Undertaking of Non-Blacklisting	Format 9 & 10 to be filled and submitted			
7	Undertaking for Non-Conflict of Interest				
8	Proof of PAN	Certified copies of valid PAN documents			
9	Certifications	Proof of ISO / SEI CMM certification or any other relevant certification			
10	Tax Documents	Copy of Sales Tax / VAT registration			

Thanking you,

(Signature)  
Name:  
Designation:  
Seal:  
Date:  
Place:  
Business Address:





**Format 6: Turnover details of Bidders and Consortium Members**

<< To be printed on Lead Bidder Company's Letter Head, Signed by Authorized Signatory and Certified Auditor>>

**TO WHOMSOEVER IT MAY CONCERN**

**Turnover details of Bidders and Consortium Members**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below details of turnover for last three years.

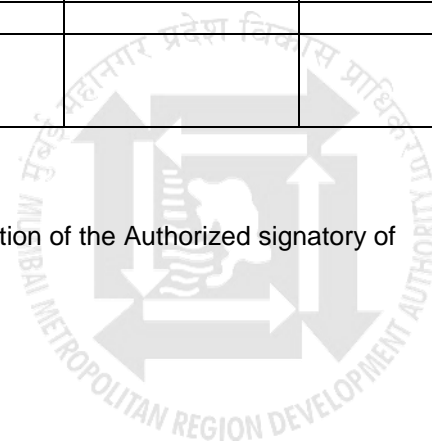
**In. Rs Crs**

Sl No	Year	Turn-over			
		Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
1	2011-12				
2	2012-13				
3	2013-14				
<b>Average Turnover [(1+2+3)/3]</b>					

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

(Signature and Name of the Certified Auditor)





**Format 7: Turnover details from IT/ ITES/ Telecom projects**

<< To be printed on Lead Bidder Company's Letter Head, Signed by Authorized Signatory and Certified Auditor>>

**TO WHOMSOEVER IT MAY CONCERN**

**Turnover details from IT/ITES/Telecom projects**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below details of turnover from various IT/ ITES/ Telecom projects executed by us in last three years.

**In. Rs Crs**

Sl No	Year	Turn-over from IT/ ITES/ Telecom Projects			
		Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
1	2011-12				
2	2012-13				
3	2013-14				
<b>Average Turnover [(1+2+3)/3]</b>					

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

(Signature and Name of the Certified Auditor)



**Format 8: Net-worth details of Bidders and Consortium Members**

<< To be printed on Lead Bidder Company's Letter Head, Signed by Authorized Signatory and Certified Auditor>>

**TO WHOMSOEVER IT MAY CONCERN**

**Net-worth details of Bidders and Consortium Members**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below details of net-worth for last three years.

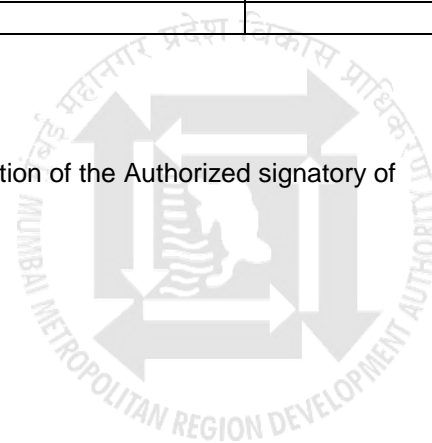
**In. Rs Crs**

Sl No	Year	Net Worth			
		Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
1	2011-12				
2	2012-13				
3	2013-14				

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

(Signature and Name of the Certified Auditor)





**Format 9: Undertaking of “No Blacklisting”**

<< To be printed on Lead Bidder Company’s Letter Head and Signed by Authorized Signatory>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai – Non-Blacklisting Undertaking.**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

We confirm that our Company < > as on date of submission of the proposal for Selection of Master System Integrator (MSI) to Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai, has not been blacklisted by the Central Government / any State Government/ any Government agency/ any PSU entity in India, in last three (3) years.

Sincerely,

(Signature of the Authorized signatory of the Bidder)

Name:

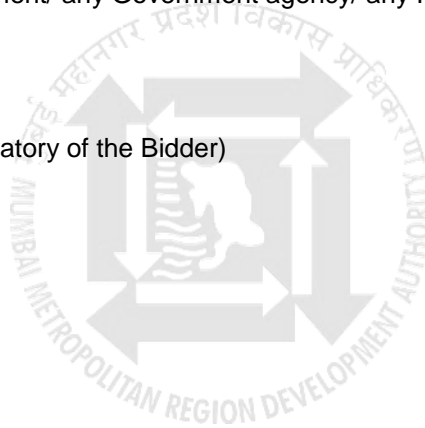
Designation:

Seal:

Date:

Place:

Business Address:





**Format 10: Undertaking of “No Conflict of interest”**

<< To be printed on Lead Bidder Company’s Letter Head and Signed by Authorized Signatory>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai – Non-Conflict of Interest Undertaking.**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

We, the undersigned bidders, do hereby confirm that we, our consortium partners, our OEMs, ISPs are not involved in any conflict of interest situation with one or more parties in this bidding process, including but not limited to:

- 1 receive or have received any direct or indirect subsidy from any of them; or
- 2 have common controlling shareholders; or
- 3 have the same legal representative for purposes of this Bid; or
- 4 have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or
- 5 influence the decisions of MMRDA regarding this bidding process; or

Bidder participates in more than one bid in this bidding process. Participation in more than one Bid will result in the disqualification of all Bids in which it is involved. However, this does not limit the inclusion of the same product (commercially available hardware, software or network product manufactured or produced by the firm), as well as purely incidental services such as installation, configuration, routine training and ongoing maintenance/support, in more than one bid; or

Bidder participated as a consultant in the preparation of the design or technical specifications of the goods and services that are the subject of the bid.

Bidder gets associated as Consultant / Advisor / Third party independent evaluating agency with any of the agencies taking part in the bid process.

Sincerely,

(Signature of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



## **Annexure-2: Technical Evaluation Formats**

This section contains the formats to be submitted by Bidders as part of Technical Proposal. MMRDA will refer to the information contained in these formats at the time of Technical Evaluation. These formats shall be on the letter head of the Lead Bidder's company and shall be signed by authorized signatory. These formats are in addition to the mandatory documentary evidence to be submitted as per RFP requirements.

Following is the list of formats:

- Format 1 : Technical Proposal Covering Letter
- Format 2 : Technical Compliance Matrix
- Format 3 : Un-priced Bill of Material Format
- Format 4 : Turnover from IT/ ITES/ Telecom projects
- Format 5 : Details of ICT Projects Executed
- Format 6 : Details of Industry Specific Capabilities – For all initiatives
- Format 7 : Team Deployment Undertaking
- Format 8 : Profile of Proposed Project Team
- Format 9 : Details of MSME Involvement in the project
- Format 10 : Authorization from OEM
- Format 11 : Undertaking - Technical Support Arrangement with OEM
- Format 12 : Sub-contractor Scope
- Format 13 : Pre-Bid queries
- Format 14 : Completion Certificate/ Substantial Completion Certificate
- Format 15 : Performance Bank Guarantee
- Format 16 : Work Orders & Client Citation
- Format 17 : Proposed Suggestions to RFP
- Format 18 : SLA Measurement Strategy







**Format 1: Technical Proposal Covering Letter**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Technical Proposal Covering Letter**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for the aforementioned Project.

We attach hereto our response Technical Proposal as required by the RFP.

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to MMRDA is true, accurate, verifiable and complete. This Proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead MMRDA in its evaluation and selection process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the evaluation and selection process, we are liable to be dismissed from the selection process or be terminated during the Contract, if selected to sign and execute the Contract.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document but for the suggestions provided by us along with our Proposal as per of Section - I of RFP and also agree to abide by this Bid for a period of six months from the date of opening of Bids at MMRDA.

We understand that, the suggestions provided by us are subject to review by MMRDA during the proposal review stage and MMRDA reserves the right to reject the suggestions made.

We hereby declare that in case the Contract is awarded to us, we shall submit the Performance Bank Guarantee (PBG) in the format prescribed in the Annexure-2 (Format 13) of this RFP within 15 Business Days of issuance of the Letter of Intent to us.

We agree that you are not bound to accept any Bid you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the Bid.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Technical Proposal, as per format provided in the RFP, is enclosed.

Dated this \_\_\_\_\_ Day of \_\_\_\_\_ <Month and Year>

(Signature) \_\_\_\_\_ (In the capacity of) (Name)

Duly authorized to sign the Bid for and on behalf of:

(Name and Address of Company) \_\_\_\_\_ Seal/Stamp of Bidder



<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TECHNICAL PROPOSAL**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Technical Proposal**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

1. Introduction:
2. Company Background:
3. Technical Details of the Proposal:
4. Technical Compliance Matrix:
5. Un-priced Bill of Material:
6. Proposed Project Plan
7. Proposed Approach and Methodology
8. Project Plan & Timelines
9. Business Plan- Detailed Revenue Streams, Assumptions, Projections & Detailed Cash flow projections etc.
10. <<All formats for Technical Evaluation>>

*NOTE: This is a generic format for Technical Proposal. The Bidders shall, in addition to these minimum details, shall mention all the technical details of their proposal. This proposal will be evaluated during Technical Evaluation and carry specific weightage for the Realistic & Appropriate Business Plan*

Dated this \_\_\_\_\_ Day of \_\_\_\_\_ <Month and Year>

(Signature) \_\_\_\_\_ (In the capacity of) (Name)

Duly authorized to sign the Bid for and on behalf of:

(Name and Address of Company) \_\_\_\_\_ Seal/Stamp of Bidder



**Format 2: Technical Compliance Matrix**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Technical Compliance Matrix**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find below, duly filled Technical Compliance Matrix.

Sl. No	RFP Clause No.	RFP Clause	Noted/ Complied/ Partially Complied/ Not Complied	Remarks
1	1	Scope For Smart BKC 1.0 Project		
2	1.1	Overall Smart BKC Key Objectives/ Outcomes		
3	1.2	Key Stakeholder Roles and Responsibilities		
4	1.2.1	Manpower Requirement		
5	1.2.2	Training and Capacity Building		
6	1.2.3	Change Requests		
7	1.3	Overall Smart BKC Project Life cycle		
8	1.4	Overall Smart BKC 1.0 Project Guidelines		
9	1.5	Overall Smart BKC Scope – Functional Requirements		
10	1.6	Overall Smart BKC 1.0 Scope – Technical Requirements		
11	1.7	Convergence With Other Smart Initiatives		
12	1.7.1	Convergence Points For Intelligent Streetlight and Video Analytics		
13	2	Overview Smart BKC Logical Architecture		
14	2.1	Overview of Smart BKC 1.0 Logical Architecture		
15	2.1.1	Smart BKC 1.0 Street Infrastructure Layer		
16	2.1.2	Network Infrastructure and Communication Layer		
17	2.1.3	Network Security Layer		
18	2.1.4	Core Computing and Data Processing Layer		
19	2.1.4.1	Core Computing System		
20	2.1.4.2	Data Management and Processing System		
21	2.1.4.3	Storage Management Solution		
22	2.1.4.4	Asset Lifecycle Tracking and Monitoring		
23	2.1.4.5	User Profile Management		
24	2.1.5	Integrated Industry Standard Open Platform Layer		
25	2.1.6	Comprehensive Project Management Solution		
26	2.1.6.1	Project Portfolio Management		



Sl. No	RFP Clause No.	RFP Clause	Noted/ Complied/ Partially Complied/ Not Complied	Remarks
27	2.1.6.2	Governance, Policy and Risk management		
28	2.1.6.3	Revenue and Expenditure Management		
29	2.1.6.4	SLA Management		
30	2.1.6.5	Change Management		
31	2.1.6.6	Project-wide Status Reporting & Dashboards		
32	2.1.7	Network and Security Management Solution (NSMS)		
33	2.1.8	Data Center/ Disaster Recovery (DC/DR) Services		
34	2.1.8.1	DC/DR Monitoring Dashboard		
35	2.1.9	Centralized System Security Layer		
36	2.1.9.1	System Security Management Solution		
37	2.1.10	Presentation Layer		
38	2.1.11	Third Party Shared Services		
39	2.1.11.1	Analytics Services		
40	2.1.11.2	Maps and GIS plug-ins for GIS based location services		
41	2.1.11.3	External Gateways (SMS, Emails, and Payment)		
42	2.1.11.4	eWallet Services		
43	2.1.11.5	Mobility Platform Services		
44	2.1.11.6	Helpdesk Services		
45	2.1.11.7	AADHAR enabled eco-system		
46	3	Overview of Smart BKC 1.0 Network Architecture		
47	3.1.	Smart BKC 1.0 Network Architecture		
48	4	Centralized Command and Control Center		
49	4.1	Overview of Existing Environment Related to Command and Control Center		
50	4.2	Command and Control Center Key Objectives/Outcome		
51	4.3	Command and Control Center components		
52	4.3.1	Video Wall and Operator Terminals Setup		
53	4.3.2	Helpdesk Monitoring Tool		
54	4.3.3	Integrated Centralized Dashboard		
55	5	Smart BKC Initiative 1 – Public Wi-Fi and Related Network Infrastructure		
56	5.1	Overview of Existing Environment Related to Public Wi-Fi		
57	5.2	Public Wi-Fi and Related Network Infrastructure Key Objectives/Outcomes		
58	5.3	Public Wi-Fi and Related Network Infrastructure Scope – Functional Requirements		
59	5.4	Public Wi-Fi Scope – Technical Requirements		
60	6	Smart BKC Initiative 2- Smart Parking		
61	6.1	Overview of Existing Environment Related to Smart Parking		
62	6.2	Smart Parking Key Objectives		



Sl. No	RFP Clause No.	RFP Clause	Noted/ Complied/ Partially Complied/ Not Complied	Remarks
63	6.3	Smart Parking – MSI/Vendor Guidelines		
64	6.3.1	Smart Parking Guidelines		
65	6.3.2	Existing Parking Contracts In BKC		
66	6.4	Smart Parking Scope – Functional Requirements		
67	6.4.1	Overall Functional Requirements		
68	6.4.2	Parking Management and Guidance System (PMGS)		
69	6.4.3	Parking Management Subsystem		
70	6.4.4	Parking Guidance subsystem for motorists		
71	6.4.5	Citizen Application for Smart Parking		
72	6.4.5.1	Vehicle and License Plate Image Capture		
73	6.4.5.2	Provision for Smart Card		
74	6.4.5.3	Real-time Monitoring and Dynamic MIS Reporting		
75	6.5	Smart Parking Scope – Technical Requirements		
76	7	Smart BKC Initiative 3 – Integrated Building Monitoring System (IBMS)		
77	7.1	Overview of Existing Environment Related to Integrated Building Monitoring System (IBMS)		
78	7.2	Integrated Building Monitoring System Key Objectives/Outcomes		
79	7.3	Integrated Building Monitoring System Scope – Functional Requirements		
80	7.4	Integrated Building Monitoring System Scope – Technical Requirements		
81	8	Smart BKC Initiative 4 – Citizen Web Portal and Citizen App		
82	8.1	Overview of Existing Environment Related to Citizen App and outreach		
83	8.2	Citizens App and Web Portal Key Objectives/Outcomes		
84	8.3	Citizen App Scope – Functional Requirements		
85	8.4	Citizen Web Portal Scope – Functional Requirements		
86	8.4.1	Citizen App and Web Portal – Required Features and Functionalities		
87	8.5	Citizen App Scope – Technical Requirements		
88	8.6	Online Portal Scope - Technical Requirements		
89	8.7	Citizen App and Portal – Security Requirements		
90	9	Administrative Guidelines		
91	9.1	Operation and Maintenance (O&M) Guidelines		
92	9.2	Non-IT Related Operational Guidelines		
93	9.2.1	Civil and Architectural Guidelines:		
94	9.2.2	Public Works Guidelines		
95	9.2.3	PVC Conduits & Wiring Guidelines		
96	9.2.4	Earthing Guidelines		



Sl. No	RFP Clause No.	RFP Clause	Noted/ Complied/ Partially Complied/ Not Complied	Remarks
97	9.2.5	Passive Cabling Guidelines		
98	9.2.6	Rodent Repellent		
99	9.2.7	Fire/Smoke Detection and Control Mechanism		
100	9.2.8	Power Back-up		
101	9.3	Advertisement and Marketing Guidelines		
102	9.4	Revenue Opportunities and Guidelines		
103	10	Service Level Agreement		
104	10.1	Service Level Agreements (SLAs)		
105	10.2	Responsibility Mapping for SLAs		
106	10.3	Service Level Conditions		
107	11	Annexure A		
108	11.1	Technical Specifications for Public Wi-Fi		
109	11.2	Technical Specifications for Smart Parking		

Thanking you,  
Yours faithfully

(Signature of the Authorized signatory of the Bidder)

Name:

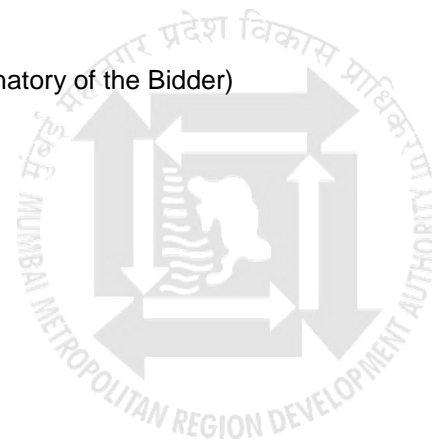
Designation:

Seal:

Date:

Place:

Business Address:





**Format 3: Un-priced Bill of Material Format**

<< To be printed on the Lead Bidder's Letter Head and shall be signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Un-priced Bill of Material**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find attached detailed Un-priced Bill of Material for the project.

<<<<<Please provide Bill of Material with quantity, and **WITHOUT PRICE**. Please replicate Schedules provided in Annexure – 3, Format – 2, Schedule – A1 to A9, without price information.

**No Alternate Proposal:** The bidder shall mention only one quantity and Unit Of Measurement (UOM) for each line item, only from single OEM/ Type for hardware, software etc, as part of this un-priced bill of material. Any bids, which propose multiple options in terms of quantity, UOM and OEM/ Type for each line item shall be summarily rejected. For example, in case of firewall, the bidder submitting two options of firewalls with different options for quantity, UOM and OEM/ Type shall be summarily rejected.

**In case of failure to submit the Unpriced BOM and in case the prices are mentioned along with BoM, the bidder is liable for rejection>>>>>**

Thanking you,  
Yours faithfully

(Signature of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 4: Turnover from IT/ ITES/ Telecom projects**

<< To be printed on Lead Bidder Company's Letter Head, Signed by Authorized Signatory and Certified Auditor>>

**TO WHOMSOEVER IT MAY CONCERN**

**Turnover from IT/ ITES/ Telecom projects**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below details of turnover from various IT/ ITES/ Telecom projects executed by us in last three years.

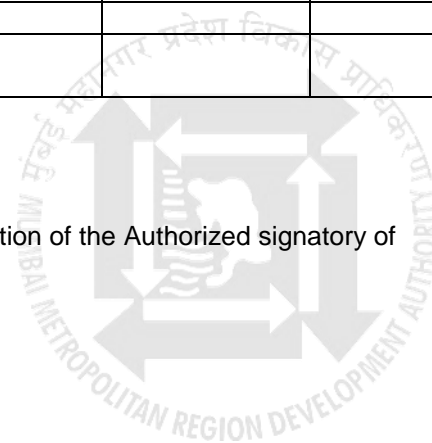
**In. Rs Crs**

Sl No	Year	Turn-over from IT/ ITES/ Telecom Projects			
		Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
1	2011-12				
2	2012-13				
3	2013-14				
<b>Average Turnover [(1+2+3)/3]</b>					

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

(Signature and Name of the Certified Auditor)







**Format 5: Details of ICT Projects Executed**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Details of ICT Projects Executed**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find below, details of ICT Projects executed by us in last three years.

SI No	Year	Details of ICT Projects			
		Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
1	2011-12	1..	1..	1..	1..
		2..	2..	2..	2..
		3..	3..	3..	3..
		.	.	.	.
		.	.	.	.
		n	n	N	n
2	2012-13				
3	2013-14				

Please find attached with this letter, the following documents, each of the mentioned projects:

- 1 Copy of Work Order
- 2 Copy of Contract
- 3 Project Completion Certificate/ Substantial Completion Certificate on Client Letter head
- 4 Interim Delivery Report

Thanking you,

(Signature)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 6: Details of Industry Specific Capabilities – For all initiatives**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Details of Industry Specific Capabilities**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find below, details of industry specific capabilities possessed by our company/ consortium.

Sl. No	Industry/ Initiative	Lead Bidder	Consortium Member 1	Consortium Member 2	Consortium Member 3
1	Parking Initiative				
2	Wi-Fi Initiative				
3	Citizen Application				
4	Command and Control Center				

Please find attached with this letter, the following documents:

- 1 Copy of Work Order
- 2 Copy of Contract
- 3 Project Completion Certificate/ Substantial Completion Certificate on Client Letter head
- 4 Interim Delivery Report

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)





**Format 7: Team Deployment Undertaking**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Chief Executive Officer/ CMD/  
Head of Marketing>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Team Deployment Undertaking**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

We, having read and examined in detail all the bidding documents for Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai, do hereby propose to provide our services as specified in the RFP.

In order to submit the bids and execute the project, it is understood that we are required to give details of the team being deployed as part of this initiative. Accordingly, we are providing the details of the team, and also the CVs, as per the format prescribed at Annexure- 2, Format - 8.

In this regard, we understand and comply with the following:

- i) Officials belong to our company or to our sub-contractors.
- ii) We are solely responsible for the supervision and control of the personnel deployed in the Project and for payment of such personnel's compensation, including salary, withholding of income taxes and social security taxes, worker's compensation, employee and disability benefits and the like and shall be responsible for all obligations of an employer subject to Applicable Law
- iii) The same team will be deployed, in the event of signing of the contract, and the members of the team shall not be replaced, without prior approval of MMRDA.

Thanking you,

Signature:

Name:

Designation:

Seal:

Date:

Place:

Business Address:

**Format 8: Profile of Proposed Project Team**

&lt;&lt; To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory&gt;&gt;

**TO WHOMSOEVER IT MAY CONCERN****Profile of Proposed Project Team****Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find below, details of Project Team proposed to be deployed for executing of this project.

**List of Key Personnel**

S. No	Name of Key Personnel	Area of Expertise	Position/Task assigned for this job

**NOTE:**

- Names of only the Key Personnel (Refer Annexure – 2, Format – 7) should be mentioned in the table above. If more than one Key Personnel is provided for a particular role, all the names should be mentioned in separate rows.
- The marks for Key Personnel will be computed on the basis of evaluation of Key Personnel only whose CVs are enclosed. If more than one Key Personnel is proposed, the evaluation for the role will be computed based on the proportionate share of the Key Personnel for that role.
- One Key Personnel can be assigned more than one role.
- The bidder may propose the services of a sub-contractor

**Curriculum Vitae (CV) of Key Personnel**

	Proposed Position					
	Name of Staff					
	Current Job Title/ Designation					
	Date of Birth					
	Nationality					
	Education	S. No	Degree Obtained	University/ Institute	Dates	
	Certifications					
	Employment Record					
	Membership of Professional Associations					
	Other Training					
	Countries of Work Experience					
	Languages	S. No	Language	Read	Write	Speak
	Detailed Tasks Assigned					
	Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned					



Name of the Assignment/Job or project	
Year	
Location	
Employer	
Main Project Features	
Position Held	
Activities Performed	

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

Date:

Place:

**NOTE: For Key Personnel, it is mandatory to provide name of proposed resource along with details desired as per format given above. Also, CV for every resource is to be submitted in this format.**

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:





**Format 9: Details of MSME Involvement in the project**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Details of MSME Involvement in the project**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find below, details of MSMEs proposed to be involved in the project execution.

<b>Initiative/s</b>	
<b>Name of MSMEs involved</b>	
<b>Details of MSMEs viz., Registration No., Location, Contact Details</b>	
<b>Capabilities of MSMEs</b>	
<b>Portion of Scope being Sub-Contracted</b>	
<b>Citation of Involvement in Similar Projects</b>	
<b>Projects Performed</b>	
<b>Details of the Resources deployed on these projects</b>	
<b>Proven and innovative solutions and methodologies implemented</b>	

*NOTE: The bidders shall ensure that the MSME to which a portion of scope is being sub-contracted to, is having sufficient experience in handling such assignments. **The details shall be shared for every initiative.***

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 10: Authorization from OEM**

<< To be printed on OEM's Letter Head and Signed by Authorized Signatory of the OEM>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Authorization Letter**

We who are established and reputed manufacturers / producers of \_\_\_\_\_ having factories / development facilities at (address of factory / facility) do hereby authorize M/s \_\_\_\_\_ (Name and address of Agent) to submit a Bid, and sign the contract with you against the above Bid Invitation.

We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation.

We also undertake to provide any or all of the following materials, notifications, and information pertaining to the Products manufactured or distributed by the Supplier:

- 1 Such Products as the Bank may opt to purchase from the Supplier, provided, that this option shall not relieve the Supplier of any warranty obligations under the Contract; and
- 2 in the event of termination of production of such Products:
- 3 advance notification to the Bank of the pending termination, in sufficient time to permit the Bank to procure needed requirements; and
- 4 Following such termination, furnishing at no cost to the Bank, the blueprints, design documents, operations manuals, standards, source codes and specifications of the Products, if requested.

We duly authorize the said firm to act on our behalf in fulfilling all installations, Technical support and maintenance obligations required by the contract.

Yours faithfully,

For and on behalf of M/s \_\_\_\_\_ (Name of the manufacturer)

Signature :  
Name :  
Designation:  
Address :  
Date :

Company Seal

*Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Technical Bid should include it.*

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)



**Format 11: Undertaking - Technical Support Arrangement with OEM**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Technical Support Arrangement with OEM**

We, the undersigned, having read and examined the requirements of the project, have licensed all our products /COTS that would complement the solution in the best possible way and that all the business and functional requirements would be fulfilled either by the products/COTS or through customizations.

We have/will enter(ed) into requisite arrangements with the OEMs for the following:

1. Professional Services and Technical Support: We confirm that we have chosen the products from OEMs who have professional support services in India (or through their authorized channel partners). These professionals will be made available as and when required for supporting all technical aspects of project implementation, solution maintenance and support during entire period of Project including extended period if any as stated in RFP. This does not include web support or remote support.
2. Vetting of solution: We confirm that OEM's support would be taken for vetting of the technical solution as proposed and implemented.
3. It is hereby confirmed that I/We are entitled to act on behalf of our company and empowered to sign this document as well as such other documents, which may be required in this connection.

**Summary of Arrangement with OEMs for implementation and operations support**

S. No.	OEM Name & Registered Office	Product	Arrangement for Technical Support

(Signature of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:





**Format 12: Sub-contractor Scope**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Sub-contractor Scope**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find below, details of sub-contractor details and portion of scope that is being sub-contracted.

Initiative	Portion of Scope being Subcontracted	Details of the Sub-contractor	Capabilities of the sub-contractor	Citation for Involvement Sub-contractor in similar projects

*NOTE: Bidders are requested to note that if they intend to sub-contract a portion of scope, they must sub-contract it to Indian agencies only. Sub-contracting to foreign agencies is not permitted. Also, the sub-contracted party shall have sufficient experience in handling such assignments.*

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

Name:

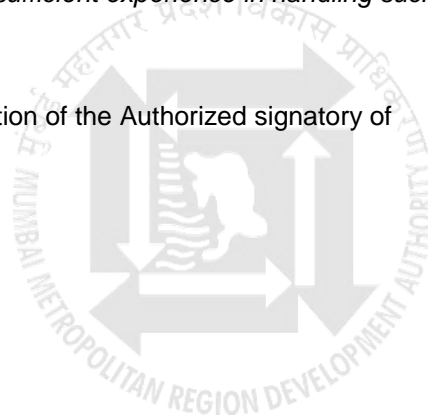
Designation:

Seal:

Date:

Place:

Business Address:





**Format 13: Pre-Bid queries**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory/ Or to be sent through official email ID of the authorized official in case of email communication>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Pre-Bid queries**

With reference to the subject RFP, please find below pre-bid clarifications request.

**Clarification Requested by:**

Name	
Designation	
Company	
Address	
Contact Number	
e-mail ID	
Date	

**Clarifications Requested:**

S. No.	RFP Document Reference(s) (Section & Page Number(s))	Content of RFP requiring Clarification(s)	Points of clarification

*Note: Bidders are requested to provide the queries in MS Word format*

Thanking you,

(Name and Designation of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 14: Completion Certificate/ Substantial Completion Certificate**

<< To be printed on the Letter Head of Client and shall be signed by Authorized of the Client>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Completion Certificate/ Substantial Completion Certificate**

<<<<<<<<<< Bidders shall ensure that the certificate/s shall have, at bare minimum, the following details.

- 1 Client details
- 2 Work Order number
- 3 Nature of Work
- 4 Duration of the project
- 5 Status of project – Completed/ Running
- 6 Level of Completion – Fully Completed/ No. of Milestones Completed/ Percentage Completion
- 7 Details of Milestones completed, including the UAT/ Other Testing details

Bidder shall note that MMRDA has a right to scrutinize the certificate details, at any point in time. In the event of MMRDA establishing discrepancy in the details provided by Bidder, MMRDA has a right to reject the bid in case Work Order is not released, or cancel the contract if awarded.>>>>>>>>>>

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Client)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 15: Performance Bank Guarantee**

<< To be executed on Stamp Paper as mandated by the Bank issuing the PBG>>

Ref: \_\_\_\_\_ Date: \_\_\_\_\_  
Bank Guarantee No.: \_\_\_\_\_

No. \_\_\_\_\_ Date: \_\_\_\_\_  
To:  
The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Against Contract covering “**Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**” (hereinafter called the said 'Contract') entered into between the Metropolitan Commissioner (MC), MMRDA - (hereinafter called the Purchaser) and \_\_\_\_\_ (hereinafter called the Bidder) this is to certify that at the request of the Bidder we \_\_\_\_\_ Bank Ltd., are holding in trust in favor of the Purchaser, the amount of \_\_\_\_\_ (write the sum here in words) to indemnify and keep indemnified the Purchaser against any loss or damage that may be caused to or suffered by the Purchaser by reason of any breach by the Bidder of any of the terms and conditions of the said contract and/or in the performance thereof. We agree that the decision of the Purchaser, whether any breach of any of the terms and conditions of the said contract and/or in the performance thereof has been committed by the Bidder and the amount of loss or damage that has been caused or suffered by the Purchaser shall be final and binding on us and the amount of the said loss or damage shall be paid by us forthwith on demand and without demur to the Purchaser.

We \_\_\_\_\_ Bank Ltd, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfillment in all respects of the said contract by the Bidder i.e. till \_\_\_\_\_ hereinafter called the said date and that if any claim accrues or arises against us \_\_\_\_\_ Bank Ltd, by virtue of this guarantee before the said date, the same shall be enforceable against us \_\_\_\_\_ Bank Ltd, notwithstanding the fact that the same is enforced within six months after the said date, provided that notice of any such claim has been given to us \_\_\_\_\_ Bank Ltd, by the Purchaser before the said date. Payment under this letter of guarantee shall be made promptly upon our receipt of notice to that effect from the Purchaser.

The Performance Bank Guarantee shall be valid from the date of acceptance of the Letter of Intent and shall continue till one hundred and eighty (180) days after the completion of all contractual liabilities (Till Go-live + Seven years) including warranty obligations and defect liability period as per CVC guidelines. It is fully understood that this guarantee is effective from the date of the said contract and that we \_\_\_\_\_ Bank Ltd, undertake not to revoke this guarantee during its currency without the consent in writing of the Purchaser.

We undertake to pay to the Purchaser any money so demanded notwithstanding any dispute or disputes raised by the Bidder in any suit or proceeding pending before any court or Tribunal relating thereto our liability under this present bond being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Bidder shall have no claim against us for making such payment.

The provisions relating to Sanctions for Violations specified in the Integrity Pact, entered into by the Bidder with the purchaser shall be applicable for forfeiture of Performance Bank guarantee in case of a decision by purchaser to forfeiture the same without assigning any reason for imposing sanction for violation for the Pact.



We \_\_\_\_\_ Bank Ltd, further agree that the Purchaser shall have the fullest liberty, without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said contract or to extend time of performance by the Bidder from time to time or to postpone for any time from time to time any of the powers exercisable by the Purchaser against the said Bidder and to forebear or enforce any of the terms and conditions relating to the said contract and we, \_\_\_\_\_ Bank Ltd., shall not be released from our liability under this guarantee by reason of any such variation or extension being granted to the said Bidder or for any forbearance by the Purchaser to the said Bidder or for any forbearance and or omission on the part of the Purchaser or any other matter or thing whatsoever, which under the law relating to sureties, would, but for this provision have the effect of so releasing us from our liability under this guarantee.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Bidder.

Date \_\_\_\_\_

Place \_\_\_\_\_ Signature \_\_\_\_\_

Witness \_\_\_\_\_ Printed name \_\_\_\_\_

(Bank's common seal)





**Format 16: Work orders and Client Citations**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Work orders and Client Citations**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below duly filled Work Order Details and client citation

Work Order Details and Client Citations		
S. No	Information Sought	Information
1	Client's name	
2	Assignment/Job name	
3	Name and Contact Details of the Client	
4	Description of Project	
5	Scope of Services as provided by your firm under the contract	
6	Technologies Used	
7	Outcomes of the Project	
8	Current Status (Completed / Phase Completion)	
9	Duration of Assignment/Job (months )	
10	Approx. value of the contract (in Rupees)	
11	Approx. value of the Assignment/job provided by your firm under the contract (in Rupees)	
12	Start date (month/year)	
13	Completion date (month/year)	
14	Copy of Work Order or Client Certificate or Certificate from Company Secretary	
15	Copy of Completion Certificate	
16	Any other Supporting Document	

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 17: Proposed Suggestions to RFP**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Proposed Suggestions to RFP**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below, suggestions proposed by us, with respect to RFP requirements.

Sr. No.	Suggestions	Impacted Deliverable(s)	Impacted Timeline(s)
1	<<<Description>>>	<<<Name of the deliverable affected>>>	<<<Effect on Timelines>>>
2	<<<Description>>>	<<<Name of the deliverable affected>>>	<<<Effect on Timelines>>>

*NOTE: The suggestions, if any, shall be submitted along with Pre-Bid Queries. Any suggestions, after Pre-Bid conference, will not be considered.*

Request you to consider these suggestions for incorporating in the RFP.

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Format 18: SLA Measurement Strategy**

<< To be printed on Lead Bidder Company's Letter Head and Signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**SLA Measurement Strategy**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Ref: RFP No.:** \_\_\_\_\_ **Dated** \_\_\_\_\_

Please find below, deviations proposed by us, with respect to RFP requirements.

Sr. No.	Performance Area	KPI	Brief Description of Solution Proposed to Measure the particular SLA
1	Uptime for WAN	>=99.9%	...
2	.....	...	...
3	.....	...	...

Thanking you,

(Signature, Name and Designation of the Authorized signatory of the Bidder)

Name:

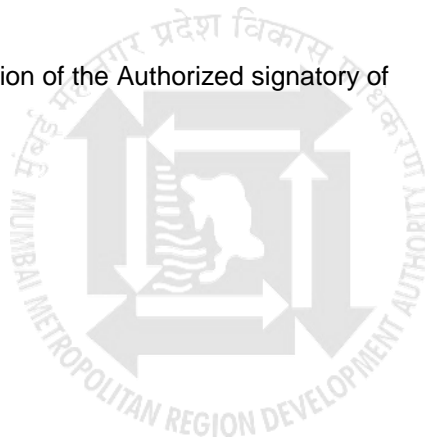
Designation:

Seal:

Date:

Place:

Business Address:







## **Annexure-3: Legal and Financial Formats**

This section contains the formats to be submitted by Bidders as part of Financial/ Commercial Evaluation of the Proposal. MMRDA will refer to the information contained in these formats at the time of Financial/ Commercial Evaluation. In addition to Financial Formats, the format of Joint Bid Agreement, to be entered into by consortium members, is also enclosed. These formats are in addition to the mandatory documentary evidence to be submitted as per RFP requirements.

Following is the list of formats:

- Format 1 : Commercial Bid Covering Letter
- Format 2 : Commercial Bid Format
- Format 3 : Joint Bidding Agreement
- Format 4 : Change Control Notice
- Format 5 : List of services provided by the MSI





**Format 1: Commercial Bid Covering Letter**

<< To be printed on the Lead Bidder's Letter Head and shall be signed by Authorized Signatory>>

No.

Date:

To:

The Metropolitan Commissioner  
Mumbai Metropolitan Region Development Authority (MMRDA)  
MMRDA Building,  
Bandra Kurla Complex, Bandra (East)  
Mumbai—400-051  
Email: [itcadmin@mailmmrda.maharashtra.gov.in](mailto:itcadmin@mailmmrda.maharashtra.gov.in)

Dear Sir,

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai - Commercial Bid Covering Letter**

1. We, the undersigned Bidders, having read and examined in detail all the bidding documents in respect to Selection of Master System Integrator for Design, Implementation, Operation and Maintenance of Smart BKC 1.0 Project of MMRDA, do hereby propose to provide our services as specified in the RFP.
2. **Price and Validity:** All the prices mentioned in our bid are in accordance with the terms as specified in the bidding documents. All the prices and other terms and conditions of this bid are valid for a period of 180 days from the date of opening of bids.
3. **Taxes:** We have studied the clause relating to Indian Income Tax and hereby declare that if any applicable direct or indirect taxes (Foreign, Central or State or Local), rates, duties, charges and levies (Foreign, Central or State or Local), except Service tax is altered under the law, we shall pay the same. If applicable, all taxes, duties, levies and charges which are to be paid for the delivery of services have been paid by the Bidders in their respective countries.
4. **Deviations:** We hereby declare that all terms and conditions mentioned in RFP (all volumes, Annexures and Corrigendum) are acceptable to us without any deviation and all the services shall be performed strictly in accordance with the bid documents.
5. **Unit Rates:** We have indicated in the relevant schedules enclosed, the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.
6. **Qualifying Data:** We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our Tender, we agree to furnish the same in time to your satisfaction.



7. **Contract Performance Guarantee:** We hereby declare that in case the contract is awarded to us, we shall submit the contract performance guarantee bond in the form prescribed at Section – IV, Annexure – 2, Format – 15, of the RFP, as per the Clause No. 4.2 of the Draft Agreement.
8. **Engagement Model:** We hereby agree to abide to the Engagement Model as prescribed in the RFP (Section - I, Clause 3.6).
9. **Fixed Parking Revenue:** We hereby agree to pay the Fixed Parking Revenue adjusted with Annual Inflation at the start of each year after expiry of existing Parking Management Contracts as per the details in Section – IV, Annexure – 4, Bid-related Information – 1.
10. **Additional Revenue from Parking:** We hereby agree to pay MMRDA 75% of the Actual Revenue Generated from parking over and above the fixed parking revenue at the end of every quarter post 2 years of Go-Live.
11. **Other Revenue Sources:** We hereby agree to pay MMRDA 75% of the Actual Revenue Generated from various Smart BKC initiatives as defined in the RFP at the end of every quarter post 2 years of Go-Live.
12. **Bid Prices:** We hereby declare that our Bid Price of Amount Rs. \_\_\_\_\_ (in figures) Rs. \_\_\_\_\_ (in words), inclusive of all applicable taxes, duties etc. covering CAPEX plus OPEX plus any other expenditure for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai for a period of 7 years is for the entire scope of the work as specified in the RFP documents. These prices are indicated in the subsequent sub-sections of this Section.
13. We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.
14. We understand that our bid is binding on us and that you are not bound to accept a Bid you receive. We confirm that all the members of Consortium are jointly and severally responsible for this commercial offer.

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



Format 2: Commercial Bid Formats

<< To be printed on the Lead Bidder’s Letter Head and shall be signed by Authorized Signatory>>

**TO WHOMSOEVER IT MAY CONCERN**

**Commercial Bid**

**Subject: RFP for Selection of Master System Integrator (MSI) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

Please find attached detailed Commercial Bid for the subject project initiative. This bid is exhaustive and includes all the required components and services to be consumed during the execution of this project.

<b>Summary of Commercial Bid for Design, Implementation, Operation and Maintenance of Smart BKC 1.0 Project</b>			
<b>Sr. No</b>	<b>Item</b>	<b>Reference Schedule</b>	<b>Amount (INR)</b>
1	Capital Expenditure (CAPEX)	A	<b>C</b>
2	Present Value of Operational Expenditure (OPEX) for 7 years	B	<b>OPV</b>
<b>Grand Total of CAPEX, OPEX (INR) [A+B]</b>			<b>T</b>
<b>Grand Total of CAPEX, OPEX (INR) [A+B](n Words)</b>			
<b>C – Total CAPEX Bid Price</b>			
<b>OPV – Total OPEX Bid Price (Present Value)</b>			
<b>T – Total Commercial Bid Price</b>			
<b>Prices must be inclusive of all applicable taxes/duties</b>			
<b>All figures in Indian Rupees only</b>			
<b>The Present Value Factor as mentioned in separate schedules should be adhered to</b>			
<b>Bidder should specify details of line items in respective schedules</b>			

*The consolidated price (Grand Total) as mentioned above would be used for evaluation and should be entered in MMRDA e-tendering Solution. Besides that the Bidder has to upload the Scanned, Signed PDF document of Detail Schedules as mentioned in subsequent tables as mentioned below, which would be an integral part of the Commercial Bid. In case bidder fails to submit any specific schedule, the bid would be summarily rejected.*

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:

Date:

Place:

Business Address:



**Schedule A - Summary of Commercial Bid (CAPEX) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai**

**Capital Expenditure (CAPEX)**

Sr. No	Item	Reference Schedule	CAPEX Amount (INR)
1	Street Layer Devices And Equipment's	A1	
2	Networking Equipment's	A2	
3	Command and Control Center/ NOC Set up	A3	
4	Software Components	A4	
5	Security Components	A5	
6	Data Centre	A6	
7	Disaster Recovery	A7	
8	Implementation Services	A8	
9	Miscellaneous Cost	A9	
<b>Total of Capital Expenditure (CAPEX) (A= A1+A2+A3+A4+A5+A6+A7+A8+A9)</b>			<b>C</b>
<b>C – Total CAPEX Bid Price</b>			
<b>Prices must be inclusive of all applicable taxes/duties All figures in Indian Rupees only</b>			

The bidder has to mention all line items in subsequent schedules to a greater detail

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:

Date:

Place:

Business Address:























Schedule B - Summary of Commercial Bid (OPEX) for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai										
Sr. No.	Description	Reference Schedule	Annual OPEX (INR) at end of each year							Total
			1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	
1	Bandwidth Cost	B1								
2	Operations & Maintenance, AMC Cost	B2								
3	Manpower Cost	B3								
4	Miscellaneous Cost	B4								
<b>Total Annual OPEX at the end of each year [A] (INR)</b>			<b>O<sub>1</sub></b>	<b>O<sub>2</sub></b>	<b>O<sub>3</sub></b>	<b>O<sub>4</sub></b>	<b>O<sub>5</sub></b>	<b>O<sub>6</sub></b>	<b>O<sub>7</sub></b>	
<b>PV Factor [B]*</b>			0.91	0.83	0.75	0.68	0.62	0.56	0.51	
<b>Present Value of OPEX [C] = A*B (INR)</b>			<b>OPV<sub>1</sub></b>	<b>OPV<sub>2</sub></b>	<b>OPV<sub>3</sub></b>	<b>OPV<sub>4</sub></b>	<b>OPV<sub>5</sub></b>	<b>OPV<sub>6</sub></b>	<b>OPV<sub>7</sub></b>	<b>OPV</b>
<b>Cumulative Present Value of OPEX for 7 Years (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (in Words)</b>										
O1 – O7: Yearly OPEX Bid Price OPV1 – OPV7: Yearly OPEX Bid Price (Present Value) OPV: Total OPEX Bid Price (Present Value)										
* Discounting factor 10%										
Prices must be inclusive of all applicable taxes/duties All figures in Indian Rupees only The Present Value Factor as mentioned in separate schedules should be adhered to. Bidder should specify details of line items in respective schedules										

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:          Date:          Place:          Business Address:



Schedule B1 – Bandwidth Cost ( Includes the cost of bandwidth for each initiative)										
Sr. No.	Description	Reference Schedule	Annual OPEX (INR) at end of each year							Total
			1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	
1	Free									
2	Premium									
3	For MMRDA Grounds		Refer below table to fill these values							
4	DC to MMRDA									
Total Annual OPEX at the end of each year [A] (INR)										
PV Factor [B]*			0.91	0.83	0.75	0.68	0.62	0.56	0.51	
Present Value of OPEX [C] = A*B (INR)										
Cumulative Present Value of OPEX for 7 Years (INR)										
Cumulative Present Value of OPEX for 7 Years (in Words)										
* Discounting factor 10%										
Specify details wherever required Prices must be inclusive of all applicable taxes/duties All figures in Indian Rupees only The Present Value Factor as mentioned in separate schedules should be adhered to. Bidder should specify details of line items in respective schedules										

Reference Table for B1

Type	Contention Ratio	Pipe	Cost in INR
Free	1:2	1 GB	
Premium	1:1	1 GB	
For MMRDA Grounds	1:1	1 GB Burstable to 2 GB	
DC to MMRDA	1:1	1 GB	

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:          Date:          Place:          Business Address:



**Schedule B2 – Operations, Maintenance, AMC Cost ( Includes the material cost that could be incurred by the MSI for running the project above desired levels, includes Power and Utility costs)**

Sr. No.	Description	Reference Schedule	Annual OPEX (INR) at end of each year							Total
			1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	
1	Smart Parking									
2	Wi-Fi									
3	Citizen Apps									
4	Command and Control Center									
5	Data Center									
6	Disaster Recovery Site									
<b>Total Annual OPEX at the end of each year [A] (INR)</b>										
<b>PV Factor [B]*</b>			0.91	0.83	0.75	0.68	0.62	0.56	0.51	
<b>Present Value of OPEX [C] = A*B (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (in Words)</b>										
* Discounting factor 10%										
Specify details wherever required Prices must be inclusive of all applicable taxes/duties All figures in Indian Rupees only The Present Value Factor as mentioned in separate schedules should be adhered to. Bidder should specify details of line items in respective schedules										

O&M/ AMC Resource cost shall include On Field staff & Off Field support team, FMS Help Desk, Team lead, Senior Management and any other resources required for O&M of the project for a period of 7 years Post – Go live. This doesn't include Dedicated On-Premises resources to be stationed at MMRDA as desired by MMRDA.

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:            Date:            Place:            Business Address:



Schedule B3 – Manpower Cost ( Includes the manpower deployment and its cost that could be incurred by the MSI for running the project above desired levels)										
Sr. No.	Description	Reference Schedule	Annual OPEX (INR) at end of each year							Total
			1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	
1	Smart Parking									
2	Wi-Fi									
3	Citizen Apps									
4	Command and Control Center									
5	Data Center									
6	Disaster Recovery Site									
7	Dedicated On Premises Team									
8	Project Manager									
9	Project Support									
10	Helpdesk Manager									
<b>Total Annual OPEX at the end of each year [A] (INR)</b>										
<b>PV Factor [B]*</b>			0.91	0.83	0.75	0.68	0.62	0.56	0.51	
<b>Present Value of OPEX [C] = A*B (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (in Words)</b>										
* Discounting factor 10%										
<b>Specify details wherever required</b>										
<b>Prices must be inclusive of all applicable taxes/duties</b>										
<b>All figures in Indian Rupees only</b>										
<b>The Present Value Factor as mentioned in separate schedules should be adhered to.</b>										
<b>Bidder should specify details of line items in respective schedules</b>										

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:            Date:            Place:            Business Address:



Schedule B4 – Miscellaneous Cost (the cost that could be incurred for any other services to be provided by MSI during O&M period)										
Sr. No.	Description	Reference Schedule	Annual OPEX (INR) at end of each year							Total
			1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	
1										
2										
3										
4										
5										
6										
<b>Total Annual OPEX at the end of each year [A] (INR)</b>										
<b>PV Factor [B]*</b>			0.91	0.83	0.75	0.68	0.62	0.56	0.51	
<b>Present Value of OPEX [C] = A*B (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (INR)</b>										
<b>Cumulative Present Value of OPEX for 7 Years (in Words)</b>										
* Discounting factor 10%										
Specify details wherever required										
Prices must be inclusive of all applicable taxes/duties										
All figures in Indian Rupees only										
The Present Value Factor as mentioned in separate schedules should be adhered to.										
Bidder should specify details of line items in respective schedules										

The Miscellaneous Cost for OPEX cannot be more than 5% of the total OPEX Cost

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:            Date:            Place:            Business Address:



**Manpower for Change Request**

Below is the table in reference to Change Request which defines the cost of each resource which would be considered for implementation activities\*\*  
(This will NOT be considered for Financial/Commercial Evaluation)

Sr. No.	Description	Unit	#One Man-Month Cost in INR
1.	Project Manager	Man-Month	
2.	Functional Lead	Man-Month	
3.	Technical Lead	Man-Month	
4.	Operations and Maintenance Lead	Man-Month	
5.	Solution Architect	Man-Month	
6.	Data Base Administrator	Man-Month	
7.	Module Leader/ TL	Man-Month	
8.	Web Designer	Man-Month	
9.	Web Developer	Man-Month	
10.	Module Tester	Man-Month	
11.	Content Writer	Man-Month	
12.	Business Analyst	Man-Month	
13.	Software Engineer	Man-Month	
14.	Testing Engineer	Man-Month	
15.	Helpdesk Support	Man-Month	
16.	System Analyst	Man-Month	

**Prices must be inclusive of all applicable taxes/duties**  
**All figures in Indian Rupees only**  
**\*\*This Schedule would NOT be used for Financial / Commercial Evaluation.**

Thanking you,  
Yours faithfully

(Signature of the authorized representative of the Bidder on behalf of all consortium members, if any)

Name:

Designation:

Seal:            Date:            Place:            Business Address:



**Format 3: Joint Bidding Agreement**

<< To be printed on a stamp paper and signed by Authorized signatories of the Lead Bidder and Consortium members>>

**MEMORANDUM OF UNDERSTANDING.**

This Memorandum of Understanding is made in \_\_\_\_\_ on the \_\_\_<sup>th</sup> Day of \_\_\_\_\_, 20\_\_.

**BY AND BETWEEN**

, \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as The Lead Bidder/ The Lead Consortium Partner)

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as 'Consortium Member1')

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as 'Consortium Member2')

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as 'Consortium Member3')

**[Name of The Lead Bidder], [Name of Consortium Member1], [Name of Consortium Member2] and [Name of Consortium Member3]** (which expression shall unless repugnant to the context or meaning thereof mean and indicate its successors in interest and assignees) shall collectively be referred to as 'Members' and individually as "the Member".

**WHEREAS:**

- a) \_\_\_\_\_ ('Client') has invited Tender no. \_\_\_\_\_ ('Tender' or 'RFP') dated \_\_\_\_\_ for the Selection of Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart BKC 1.0 Initiatives in Bandra-Kurla Complex, Mumbai ("Project").
- b) The Members wish to enter into this memorandum of understanding in order to establish a framework for their joint efforts in their participation of this Tender and the terms as per which the services would be rendered by the Members in connection with the Project.

**NOW, THEREFORE, THE MEMBERS AGREE AS FOLLOWS:**

- 1. The Members agree and acknowledge that they have understood the terms and requirements of the RFP and this MOU and agree to abide by the terms therein The 'Members' have agreed to work together as a Consortium of Consultants (hereinafter called the "Consortium") and submit a proposal jointly with each Member having specific role(s) as defined hereinafter.
- 2. [Name of Member] shall be The Lead Bidder/ The Lead Consortium Member ('LCM') of the Consortium and shall represent the Consortium in its dealing with the Client.
- 3. For the purpose of submission of bid proposal, the Consortium agrees to authorize the LCM to sign, submit and negotiate the entire technical and commercial offer on behalf of the Consortium based on the various cost proposals worked out by the Consortium. The other Member(s) shall provide all the required inputs and co-operation to the Lead Member for submitting the offer and providing all technical, financial and contractual clarifications to the Client in a timely manner. However LCM shall not submit any such application, proposals, documents, clarifications or other commitments before securing the written consent of the other Member(s) of the Consortium.



4. The Members agree that the sole purpose of the Consortium shall be the overall performance of the consultancy services for the Project pursuant to the contract with the Client (in case of being successful bidder) as agreed by the Consortium hereto on one part and Client on the other part ('Client Contract'). The scope of work to be performed by each Member shall be as provided in Section - II of the RFP.
5. LCM will provide Tender Fees, Performance Bank Guaranties (including cost of any extensions of such Performance Guarantee) and insurance policies (as called for by the Client). The cost of obtaining such Tender Fees/ Performance Guaranties/ Insurance policies would be shared by all the Members in proportion of their financial share of fee under the Client Contract.
6. The Members will be responsible for their own cost of men, material, equipment, services, taxes, duties, reimbursable etc indicated in their proposals.
7. All common expenses mutually agreed and worked out by Members would be added to above individual Member's cost and will be quoted to the Client in tender document formats along with suitable technical and financial terms and conditions (if any).
8. The Members undertake to fully abide by all the technical, commercial and legal provisions of the Tender document or any other instruction provided by the Client with respect to the Project unless it is duly commented by the Members in the proposal to Client and agreed to by the Client. Each Member of the Consortium shall be responsible for performance on his part and for which the Member shall be separately and directly compensated as agreed between the Members.
9. Joint and Several Liability: The Parties do hereby undertake to be jointly and severally responsible for all obligations and liabilities relating to the Project and in accordance with the terms of the RFP and the Master Service Agreement, till such time as the Financial Close for the Project is achieved under and in accordance with the Master Service Agreement.
10. The Members will maintain a close coordination between themselves, discuss and agree in writing all alterations, modifications, additions, deletion to their scope of work ( as defined above) duly signed confirming their agreement. Members would cooperate for providing all technical, financial and contractual clarifications to the Client in a timely manner to ensure the success of the Project.
11. Each Member shall assign staff with suitable expertise and experience to undertake his own obligations, responsibilities and scope of services as per Client Contract with the Client.
12. Each Member shall provide necessary support to the Consortium as the need be for due performance of responsibilities of the Consortium.
13. The role assigned to each Member with respect to performance of work under the Client Contract with the Client, or any variation order thereto or extensions shall be mutually determined reflecting the skills of each Member's personnel.
14. Each Member shall individually prepare the invoice for the services rendered in accordance with the terms of the MOU. All invoicing to Client shall be done by the LCM. The payment from Client will be made by the LCM to each Member separately promptly upon receipt of the payment from the Client.
15. This MOU shall not create any form of incorporated joint venture, partnership or other legal entity between the Members nor give rise to any agency one for the other.
16. Shareholding in the Consortium: The Parties agree that the proportion of shareholding among the Parties in the Consortium shall be as follows:  
First Party:  
Second Party:  
{Third Party:}



{Fourth Party:}

**17. Assignment And Third Members**

17.1 [Consortium Member1], [Consortium Member2] and [Consortium Member3] shall cooperate throughout the entire period of this MOU on the basis of exclusivity and shall not make arrangement or enter into agreement either directly or indirectly with any other firm or group of firms on matters relating to the Project except with prior written consent of the other Members.

17.2 This MOU shall not be assigned by any Member, in whole or in part, without obtaining the prior written consent of the other Members.

**18. Submission of Offer:** Each Member shall bear its own cost and expenses for preparation of their offer and subsequent business development expenses till award of the Project. Neither Member shall have power to commit on behalf of the other Member or the Consortium, financial or otherwise, without written consent of the other Member.

**19. Payments and Tax Liability**

19.1 Each Member shall be responsible for salaries, fees, social benefits, insurances, and any other payment due to his personnel or payable on behalf of or for the account of his personnel.

19.2 Each Member shall be responsible for payment of personal income tax, corporate tax and any other taxes of whatever nature that may be levied and incurred on each Member in connection with, or as a result of the performance of services required under the RFP or this MOU.

**20. Indemnity and Limitation of Liability**

20.1 Notwithstanding anything contained in the MOU or the RFP or the Client Contract, it is mutually agreed to between the Members that a Member shall be liable only for its respective (i) scope of work carried out in accordance with this MOU; (ii) terms and condition in the RFP and MOU. Hence, the Members shall have several and not joint liability against the Client.

20.2 Each Member shall indemnify the other Member for any liability, damage, costs, injury, harm or losses which arises to or suffered by the other Member as a result of (i) any work performed/not performed by such a Member for the Client and the Project; (ii) breach or non-compliance by the Member with the terms of the RFP under which the work has been awarded to the Consortium (iii) breach or non-compliance with the terms of this MOU.

20.3 Each Member's liability to the other in contract or tort or under statute or otherwise for any consequential, special, indirect, incidental, punitive or exemplary damages, costs, expenses or losses (including without limitation, lost profits and opportunity costs) suffered by a Member (or by any such other Member) arising from or in connection with the MOU or Project, however the indirect or consequential economic loss or damage is caused, shall be excluded.

**21. Documents & Confidentiality**

21.1 Each Member retains copyright and all other intellectual property rights in the documents, drawings, data, concepts, information and other materials provided by such Member to the other Member in connection with this MOU (MOU Material) and the Project. The LCM shall have right to use the MOU material for the purpose of the MOU and procuring award of the Client Contract to the Consortium. Neither the LCM nor the other Member may use or make copies of MOU material for any other purpose other than the Project.

21.2 Each Member agrees to maintain confidentiality of all matters/information received in connection with this MOU and/or the RFP/Project.

21.3 This restriction for disclosure shall continue to apply even after the expiration or termination of this MOU, but shall cease to apply to information or knowledge, which (i) may properly come into the public domain through no fault of the Member so restricted or (ii) any Member may be forced to disclose under any applicable rule, regulation or law or pursuant to an order of a competent authority whom the disclosing Member is bound to comply or (iii) was or becomes known through independent means or from a third Member which was under no obligation to the unrestricted Member to keep the said information confidential or (iv) which was developed



independently by a Member without referring to or relying upon the information disclosed by the other Member.

21.4 No Member will make any public announcement about this MOU or the Project unless the other Member given written consent to that announcement.

21.5 KPMG shall be entitled to share Confidential Information with its professional indemnity insurers/advisors in confidence only.

## 22. Exclusivity

22.1 It is hereby agreed that [Consortium Member1], [Consortium Member2] and [Consortium Member3] shall ensure that no subsidiary affiliate or associate over which it has actual control will):-

- i) While this MOU subsists or at any time after its termination, offer to perform or perform any of the services or give any assistance or support to any proposal made in connection with the Project, except as part of the Consortium; and
- ii) While this MOU subsists, perform any services in connection with the Project, except as part of the Consortium.
- iii) While this MOU subsists, will not enter into any negotiations or arrangement with any other company or group of companies or person or association of persons for the said Project without the prior written consent of the other Members of the Consortium.

22.2 This MOU shall not preclude any Member from contracting independently of the other on any other project that may be similar in nature to the said Project.

22.3 The Members agree that once the bid has been submitted, it shall not withdraw or deviate, under any circumstances, from the Project or from the allocation of the work as agreed. In the event any Member breaches this obligation, it shall be liable to indemnify the Consortium for all expenses, costs, damages, loss or any liability whatsoever arisen or which may arise by reason of such breach.

## 23. Conflict of Interest

The Members confirm that they are exclusively associated with the Consortium and have no conflicts of interest in relation to the Client (or if there is any, the conflicts have been managed by such Member), the services to be provided, the Project work and other Members of the Consortium.

## 24. Governing Law and Arbitration

24.1 The construction, validity and performance of this MOU shall be governed in all respects by the laws of India.

24.2 Any dispute, controversy or claim arising out of or relating to this MOU shall be settled in the first instance amicably among the Members. If an amicable settlement cannot be reached as above, it will be resolved by Steering Committee consisting of four members, one from each Member to be nominated by the Managing Directors (or equivalent) of the respective companies/firms to resolve the matter within 60 days. In case, a settlement is still not reached the matter shall be referred to Arbitration by a sole arbitrator in accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Mumbai. The arbitrator shall be appointed mutually by the Members. The venue for the arbitration shall be Mumbai, India and shall be conducted in the English language. Award of the arbitrator shall be final and binding on all Members to the MOU.

## 25. Representations and Warranties

Each Member represents, warrants and undertakes to the other Members that;

- It is a corporation duly incorporated entity, validly existing and in good standing in the jurisdiction of its incorporation.





- It has full corporate power and authority to enter into this MOU and to perform its obligations hereunder.
- The execution of this MOU has been duly authorized by all necessary and appropriate corporate actions, which will constitute valid and legally enforceable and binding terms and conditions hereof.

**26. Validity, Severability and Entire Understanding**

26.1 This MOU shall come into force from the date of signing and is valid and binding until completion by the Members of their respective obligation under the RFP.

Notwithstanding the above, the MOU shall automatically expire upon completion of the Project or except as mutually agreed between the Members.

26.2 If any term, clause or provision of this MOU for any reason whatsoever is found to be invalid, illegal or unenforceable by a court of competent jurisdiction such invalidity, illegality or unenforceability shall be deemed severable from the remaining terms, clauses or provisions, and shall in no way affect or impair the validity or legality or enforceability of the remaining terms, clauses or provisions and shall deemed to have been deleted from this MOU.

26.3 This MOU supersedes all the previous MOU/ Letter/Correspondence for the subject matter between the Members before signing of this MOU.

**27. Amendments**

Any amendments to the MOU shall be in writing with mutual consent of the Members.

**28. Force Majeure**

28.1 Any delay in or failure by any Member in his performance hereunder shall be excused if and to the extent caused by occurrences beyond the Member's reasonable control and without fault or negligence by such Member and which condition was not foreseeable by such Member at the time this MOU was entered into and could not have been prevented by such Member's taking reasonable steps however not beyond to the extent excused under the Client Contract.

28.2 Such conditions shall be limited to the conditions qualifying as Force Majeure in the contract but shall exclude delays or failures caused by failure to provide staff or inadequacy of their performance in accordance with the contract or as otherwise mutually agreed.

28.3 The Member claiming to be affected by any such events shall, as soon as reasonably practicable, give prompt notice to the other Members, specifying the full particulars thereof and the Members shall agree what action, if any, shall be taken.

**29. Notices**

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses.

Member		Other Member	

IN WITNESS WHEREOF THE MEMBERS, have executed this MOU the day, month and year first before written.

Name:



Designation:  
Duly authorized on behalf of [Name of Entity]:  
Date  
Stamp

Name:  
Designation:  
Duly authorized on behalf of [Name of Entity]:  
Date  
Stamp

Name:  
Designation:  
Duly authorized on behalf of [Name of Entity]:  
Date  
Stamp

Name:  
Designation:  
Duly authorized on behalf of [Name of Entity]:  
Date  
Stamp

**Notes:**

The mode of the execution of the Joint Bidding Agreement should be in accordance with the procedure, if any, laid down by the Applicable Law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.

Each Joint Bidding Agreement should attach a copy of the extract of the charter documents and documents such as resolution / power of attorney in favour of the person executing this Agreement for the delegation of power and authority to execute this Agreement on behalf of the Consortium Member.

For a Joint Bidding Agreement executed and issued overseas, the document shall be legalised by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney has been executed.



Format 4: Change Control Notice

<b>Change Control Note</b>		<b>CCN Number:</b>	
<b>Part A: Initiation</b>			
Title:			
Originator:			
Sponsor:			
Date of Initiation:			
<b>Details of Proposed Change</b>			
(To include reason for change and appropriate details/specifications. Identify any attachments as A1, A2, and A3 etc.)			
Authorized by Nodal Agency		Date:	
Name:			
Signature:		Date:	
Received by the IA			
Name:			
Signature:			
<b>Change Control Note</b>		<b>CCN Number:</b>	
<b>Part B : Evaluation</b>			
(Identify any attachments as B1, B2, and B3 etc.)			
Changes to Services, charging structure, payment profile, documentation, training, service levels and component working arrangements and any other contractual issue.			
<b>Brief Description of Solution:</b>			
<b>Impact:</b>			
<b>Deliverables:</b>			

<b>Timetable:</b>	
<b>Charges for Implementation:</b> (including a schedule of payments)	
<b>Other Relevant Information:</b> (including value-added and acceptance criteria)	
<b>Authorized by the Implementation Agency</b>	<b>Date:</b>
<b>Name:</b>	
<b>Signature:</b>	

<b>Change Control Note</b>		<b>CCN Number :</b>	
<b>Part C : Authority to Proceed</b>			
Implementation of this CCN as submitted in Part A, in accordance with Part B is: (tick as appropriate)			
<b>Approved</b>			

<b>Rejected</b>			
<b>Requires Further Information</b> (as follows, or as Attachment 1 etc.)			
<b>For Nodal Agency and its nominated agencies</b>		<b>For the Implementation Agency</b>	
Signature		Signature	
Name		Name	
Title		Title	
Date		Date	



**Format 5: List of services provided by the MSI**





## **Annexure-4: Other Bid related Information**

This section contains additional Bid related Information, which needs to be referred to while preparing and submitting the proposal.

Following is the list of formats:

- |                             |   |   |
|-----------------------------|---|---|
| Bid-related Information – 1 | : | High level estimate for business volume               |
| Bid-related Information – 2 | : | Summary of Parking Lots                               |
| Bid-related Information – 3 | : | Technical Specifications                              |
| Bid-related Information – 4 | : | Payment and Delivery Schedule                         |
| Bid-related Information – 5 | : | Data points for Integrated Building Monitoring System |



**Bid-related Information – 1: High level estimate for business volume**

The basic information for different Smart BKC 1.0 initiatives have been mentioned below. The numbers provided below are high level estimates based on preliminary survey by MMRDA. The numbers have been provided for reference to bring parity in terms of number of users. These numbers are subject to change (scale up/ scale down) post Go-Live based on actual usage of Smart BKC 1.0 initiatives. Post selection, MSI is required to conduct a detailed survey to study, validate and submit all updated documents, survey reports and maps as part of the proposed solution to MMRDA.

**Overall Assumptions**

Assumption	Values
Area Covered under BKC (E-Block) (approx.)	25 Ha
Area Covered under BKC (G-Block) (approx.)	135 Ha
Total Area Covered in BKC (E&G Block) (approx.)	160 Ha
Number of BKC Employees in E&G Block (approx.)	1,50,000
Floating population in BKC (as a % of employees)	10%
Number of Ancillary Staff	50,000
Average number of events in MMRDA Ground per year	70
Average duration of one event	6 days
Average number of visitors MMRDA exhibition grounds on exhibition days	80,000

**Wi-Fi Related Assumptions**

Assumption	Values
Number of days of usage of Wi-Fi	250
Number of instances of users accessing free Wi-Fi annually (including employees, ancillary, staff, floating population, MMRDA Exhibition visitors)	3,00,000
Number of instances of users accessing premium Wi-Fi	7,500
Average number of booths per exhibition/event per day	100

**Citizen App Related Assumptions**

Assumption	Values
Number of people in BKC downloading the app (employees and floating population)	8,500
Number of annual visitors and guests to exhibitions who would download the citizen app	50,000

**Smart Parking Related Assumptions**

		Indoor	Open (Temporary)	Open (Permanent)	Street Parking	Total
<b>Existing</b>	Two Wheeler	0	293	0	57	350
	Four Wheeler	850	538	80	151	1,619
	Buses	0	166	0	0	166
	<b>Total</b>	<b>850</b>	<b>997</b>	<b>80</b>	<b>208</b>	<b>2,135</b>
<b>Proposed</b>	Two Wheeler	0	66	0	0	66
	Four Wheeler	0	509	0	60	569
	Buses	0	74	0	0	74
	<b>Total</b>	<b>0</b>	<b>649</b>	<b>0</b>	<b>60</b>	<b>709</b>
<b>Grand Total</b>						<b>2,844</b>
<b>Assumed Occupancy of Parking Lots</b>						<b>100%</b>

**Integrated Building Monitoring System Related Assumptions**

Number of Buildings in BKC	70
----------------------------	----

**Bid-related Information – 2: Summary of Parking Lots**

The brief overview of the parking lots and conclusions based on proposed solutions have been mentioned below. The Vendor is required to visit all the mentioned parking lots and form relevant conclusions/solutions based on its own survey. The detailed maps of parking lots have been attached in Annexure - 5 for reference.

**Existing Environment of Parking Lots**

Sr. No.	Block	Name of Parking Lots	Possession	Parking Management Contractor	Date of Contract Ending	Two Wheeler Spaces	Four Wheeler Spaces	Spaces for Buses	Current Status
1	G	Bandra-Kurla Complex, 'G' Block Plot No.R1-5, R1-6, R1-7 & R1-8.	MMRDA	Ashutosh Enterprises	May-16	98	224	87	In Operation
2	G	Bandra-Kurla Complex, 'G' Block Plot No.13	MMRDA	Ashutosh Enterprises	May-16	70	125	29	In Operation
3	G	Bandra-Kurla Complex, 'G' Block Plot No.RG-1B	MMRDA	Ashutosh Enterprises	May-16	86	166	0	In Operation
4	G-Txt	Bandra-Kurla Complex, 'G-Txt' Block CTM-1 (Part)	MMRDA	Mangal Raghunath Gawade	May-16	39	103	50	In Operation
5	E	Bandra-Kurla Complex, 'E' Block, 25 Mtr. Road, Opp. to CMC	MMRDA	AA Auctioners & Contractors Pvt Ltd	May-16	0	91	0	In Operation
6	E	Bandra-Kurla Complex, 'E' Block 25 Mtr. Road, Opp. RBI & Income Tax Office. Bldg.	MMRDA	Mangal Raghunath Gawade	May-16	57	60	0	In Operation
7	G	850 car parking spaces located in the multistoried car park building at Plot No. C-56 in G-Block of Bandra-Kurla Complex - Trident	MMRDA	Ashutosh Enterprises	May-17	0	850	0	In Operation



Sr. No.	Block	Name of Parking Lots	Possession	Parking Management Contractor	Date of Contract Ending	Two Wheeler Spaces	Four Wheeler Spaces	Spaces for Buses	Current Status
8	E	Bandra-Kurla Complex, 'E' Block, along 15 Mtr. wide Road, Opp. to AG Office & School Plot, Near Metropolitan Bldg.	MMRDA			0	262	0	Proposed
9	G	Bandra-Kurla Complex, 'G' Block Plot No. C-37, Opp. to MCA	MMRDA			0	118	21	Proposed
10	GN	Bandra-Kurla Complex, 'GN' Block along 15 Mtr. wide Road, behind BKC Police Station & Asian Heart Hospital	MMRDA			0	26	0	Proposed
11	GN	Bandra Kurla Complex, 'GN' Block Plot No. R-10 Near Arya Vidya Mandir	MMRDA			0	56	29	Proposed
12	G-Txt	Bandra-Kurla Complex, 'GTx' Block, Opp. to Trade Centre	MMRDA			66	107	24	Proposed

**Summary of Proposed Smart Parking Solution**

Parking Lot No	Block No	Site address	Features	Contract Expiry	Proposed Solution*
P1	E	Opp. CMC	<ul style="list-style-type: none"> <li>Street Parking Slots - 30</li> <li>Open (Permanent) Parking Slots - 60</li> <li>One entry/One Exit</li> </ul>	May 2016	<ul style="list-style-type: none"> <li>Geomagnetic Sensors/Edge based video analytics - Street Parking</li> <li>Barrier+ Geomagnetic Sensors (restricted entry/exit)- Open (Permanent) Parking</li> </ul>
P2	E	Opp. RBI	<ul style="list-style-type: none"> <li>Street Parking Slots for 4-wheeler: 40</li> <li>Street Parking Slots for Two wheelers: 57</li> <li>Open (Permanent) Parking Slots: 20</li> </ul>	May 2016	<ul style="list-style-type: none"> <li>Geomagnetic Sensors/ edge based video analytics - Street Parking</li> <li>Barrier+ Geomagnetic Sensors (restricted entry/exit)- Open (Permanent) Parking</li> <li>Innovative method to monitor two wheeler occupancy</li> </ul>





Parking Lot No	Block No	Site address	Features	Contract Expiry	Proposed Solution*
P3	E	Near Metropolitan Building	<ul style="list-style-type: none"><li>One entry/One Exit</li><li>Street Parking Slots for Four wheeler: 60</li><li>Open (Temporary) Parking Slots for Four wheeler: 200</li><li>One entry/One Exit</li></ul>	May 2016	<ul style="list-style-type: none"><li>Geomagnetic Sensors/ edge based video analytics - Street Parking</li><li>Barrier+ Handheld ticketing system (restricted entry/exit)- Open (Temporary) Parking</li></ul>
P4	G (G-Txt)	CTM-1	<ul style="list-style-type: none"><li>Open (Temporary) Parking</li><li>Parking Slots for Four wheeler: 103</li><li>Parking Slots for Two wheelers: 39</li><li>Parking Slots for Buses: 50</li><li>Two entries/Two exits</li></ul>	May 2016	<ul style="list-style-type: none"><li>Barrier+ Handheld ticketing system (restricted entry/exit)</li><li>Innovative method to monitor two wheeler occupancy</li></ul>
P5	G	RG 1-B	<ul style="list-style-type: none"><li>Open (Temporary) Parking</li><li>Parking Slots for Four wheelers: 166</li><li>Parking Slots for Two wheelers: 86</li><li>One entry/One Exit</li></ul>	May 2016	<ul style="list-style-type: none"><li>Barrier+ Handheld ticketing system</li><li>Innovative method to monitor two wheeler occupancy</li></ul>
P6	G	Plot No 13	<ul style="list-style-type: none"><li>Open (Temporary) Parking</li><li>Parking Slots for Four wheeler: 125</li><li>Parking Slots for 2-wheelers: 70</li><li>Parking Slots for Buses: 29</li><li>One entry/One Exit</li></ul>	May 2016	<ul style="list-style-type: none"><li>Barrier+ Handheld ticketing system (restricted entry/exit)</li><li>Innovative method to monitor two wheeler occupancy</li></ul>
P7	G	R1-5 to R1-8	<ul style="list-style-type: none"><li>Open (Temporary) Parking</li><li>Parking Slots for Four wheeler: 224</li><li>Parking Slots for Two wheelers: 98</li><li>Parking Slots for Buses: 87</li><li>Two entry/Two Exit</li></ul>	May 2016	<ul style="list-style-type: none"><li>Barrier+ Handheld ticketing system (restricted entry/exit)</li></ul>
P8	G	C-56, Trident	<ul style="list-style-type: none"><li>Indoor Parking</li><li>Parking Slots for Four wheeler: 850</li><li>One entry/One Exit</li><li>Existing system includes Boom Barrier and Parking Ticket Dispenser Machine</li></ul>	May 2017	<ul style="list-style-type: none"><li>Boom Barrier+ Geomagnetic Sensors (restricted entry/exit)</li></ul>
P9	G	Opp. to MCA	<ul style="list-style-type: none"><li>Open (Temporary) Parking</li><li>Parking Slots for Four wheeler: 118</li><li>Parking Slots for Buses: 21</li><li>One entry/One Exit</li></ul>	May 2016	<ul style="list-style-type: none"><li>Barrier+ Handheld ticketing system (restricted entry/exit)</li></ul>
P10	G (GN)	BKC Police station & Asian Heart Hospital	<ul style="list-style-type: none"><li>Open (Temporary) Parking</li><li>Parking Slots for Four wheeler: 26</li><li>One entry/One Exit</li></ul>	May 2016	<ul style="list-style-type: none"><li>Barrier+ Handheld ticketing system (restricted entry/exit)-</li></ul>



Parking Lot No	Block No	Site address	Features	Contract Expiry	Proposed Solution*
P11	G (GN)	Near Arya Vidya Mandir	Open (Temporary) Parking <ul style="list-style-type: none"> <li>• Parking Slots for Four wheeler: 56</li> <li>• Parking Slots for Buses: 29</li> <li>• One entry/One Exit</li> </ul>	May 2016	<ul style="list-style-type: none"> <li>• Barrier+ Handheld ticketing system (restricted entry/exit)</li> </ul>
P12	G (G-Txt)	Opp. Trade Centre	Open (Temporary) Parking <ul style="list-style-type: none"> <li>• Parking Slots for Four wheeler: 107</li> <li>• Parking Slots for Two wheelers: 66</li> <li>• Parking Slots for Buses: 24</li> <li>• Two entries/Two exits</li> </ul>	May 2016	<ul style="list-style-type: none"> <li>• Barrier+ Handheld ticketing system (restricted entry/exit)</li> <li>• Innovative method to monitor two wheeler occupancy</li> </ul>

**Fixed Parking Revenue from existing Parking Management Contracts**

Existing MMRDA Revenue	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	TOTAL
	0	1	2	3	4	5	6	7	
Annual "Fixed Parking Revenue" currently earned by MMRDA	NA	1,000.04	1,100.04	1,210.05	1,331.05	1,464.16	1,610.57	1,771.63	<b>9487.55</b>



**Bid-related Information – 3: Technical Specifications****High level list of Components for the Smart BKC 1.0 project****1. Active Component – Industry Standards Compliance**

Following is the list of Active Component, but not limited to, which are required for the Smart BKC 1.0 project

Sr. No.	Particular
1.	Core Routers
2.	Core Switch - Layer 3
3.	Core Switch - Layer 2
4.	Link Load Balancer
5.	Access Switch/Junction Switch
6.	Server Load Balancer
7.	Next Generation Firewalls
8.	Servers
9.	Wireless Controller
10.	SAN Storage

**2. Passive Component :**

- The bidder should ensure appropriate passive Components, but not limited to, which are required for the Smart BKC 1.0 project
- The bidder shall ensure last mile connectivity with OM3 Fiber and CAT6a cabling as deemed fit

**3. Street Infrastructure/ Command Centre Layer Components**

Following is the list of Street Infrastructure Layer Component, but not limited to, which are required for the Smart BKC 1.0 project

Sr. No	Description
1.	Wireless Access Points
2.	Geo Magnetic Sensors
3.	Parking Handheld devices
4.	Parking Controllers
5.	Wireless Controllers
6.	Parking Equipment's- Pay stations, Entry Devices, Barriers, Indicators, Display Panels
7.	Video Walls- LED display
8.	Workstations, Operator Terminal
9.	Video Controllers, Access Control and Surveillance Cameras, Smoke Detectors

**4. Software Solutions**

Following is the list of key solutions but not limited to, which are required for the Smart BKC 1.0 project. The MSI is responsible to install industry leading off-the-shelf solutions/ tools that are widely used on large and complex ICT projects like the Smart BKC 1.0 project. The MSI should not propose solutions/ tools that require a high degree of customization.

Sr. No	Description
1.	Parking Management & Guidance Solution
2.	Comprehensive Project Management Solution
3.	Network Security and Management Solution
4.	System Security Management Solution



**Technical Specifications**

Servers	
S. No	General features:
1.	OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders of latest Gartner magic quadrant for the respective category

Storage	
S. No	General features:
1.	OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders of the latest Gartner magic quadrant for the respective category

Core Router	
S. No	General features:
1.	OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders of Gartner magic quadrant for the wired and wireless LAN access infrastructure, June 2014
2.	The router should be chassis based with minimum 2 payload slots

Architecture	
3.	Should have N+1 redundant power supplies
4.	Minimum back-plane capacity of 72-Gbps & forwarding performance of 51 Million packets per sec of 64 bytes packet. The performance is considered with IPv4 & IPv6
5.	Should support 10/100/1000, Gigabit, 10-Gig or STM-1/4 interfaces
6.	Protocols to be supported: <ul style="list-style-type: none"><li>i. Border Gateway Protocol (BGP) V4</li><li>ii. Dynamic Host Configuration Protocol (DHCP)</li><li>iii. IP Multicast, PIM SM, PIM SSM, IGMP, MLD, MSDP, RP,</li><li>iv. Shall support multicast in L3 VPNs/ native IP using MPLS for QoS, reliability and resiliency.</li><li>v. Features like TE, bandwidth reservation and FRR shall be available to multicast traffic.</li><li>vi. Internet Protocol version 6 (IPv6)</li><li>vii. Intermediate System-to-Intermediate System (IS-IS)</li><li>viii. Label Distribution Protocol (LDP)</li><li>ix. Multi-protocol Label Switching (MPLS) L2 VPN, L3 VPN, VPLS, DiffServ Aware TE (DS-TE),</li><li>x. Open Shortest Path First (OSPF)</li><li>xi. Resource Reservation Protocol (RSVP)</li><li>xii. Sender Policy Framework Protocol (SPF)</li><li>xiii. The router shall support Virtual Router Redundancy Protocol (VRRP)</li><li>xiv. Support MPLS fast Re-route (RFC 4090)</li><li>xv. Shall support BFD (bi-directional forwarding) Non Stop Routing, Graceful Restart</li></ul>



Core Router	
S. No	General features:
7.	IPv4 Features: <ol style="list-style-type: none"> <li>Support for Routing Information Protocol</li> <li>Support for RIP Version 2 , OSPF , IS-IS , Border Gateway protocol</li> <li>Support for BGP confederations &amp; Route Reflectors</li> <li>Resource Reservation Protocol (RSVP), RSVP with IETF Integrated Services</li> </ol>
8.	IPv6 Features: <ol style="list-style-type: none"> <li>IPv6 ping IPv6 trace route</li> <li>Stateless Auto configuration or equivalent</li> <li>RIPng OSPF v3</li> <li>IS-IS</li> <li>IPv6 L3 forwarding in HW</li> <li>VRRPv6 , MLD , IPv6 ACL</li> </ol>
9.	The supported features should include: 802.3ad , 802.3x , 802.1Q , VLAN , 802.1p , LACP Jumbo Frames support STP, RSTP, MSTP (802.1d, 802.1s, 802.1w) L2 ACLs , IGMP Snooping (v1, v2, v3)
10.	Should support at-least 500K IPv4 routing entries per system and 500k IPv6 routing entries per system
11.	Should support at-least 128 K MAC addresses
12.	Should support minimum 100 VRF's
13.	Should support 15 logical routers
14.	Should support 2 K VPLS instances
Certifications	
15.	Router should be EAL 3+ or higher certified
16.	Safety certifications UL 60950-1
17.	EMC certifications FCC Class A

Core Switch	
S. No.	Features
1.	OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders of Gartner magic quadrant for the wired and wireless LAN access infrastructure, June 2014
2.	Shall have minimum 8 payload slots and 2 CPU for redundancy
3.	Shall have distributed, Non-blocking switching architecture, each module should be provisioned with adequate hardware/software to support the same. All the interfaces ports should be wire speed and non-blocking.
4.	Shall have CPU and power supply redundancy



Core Switch	
S. No.	Features
<b>Performance</b>	
5.	Dual Redundant Switch Fabric/CPU shall offer minimum 1.2 Tbps
6.	Minimum 720 Mpps performance or higher shall be supported for both IPv4 and IPv6
7.	Shall have hardware based unicast, multicast and broadcast suppression
8.	Should have distributed Switching Architecture
9.	Shall support minimum 8 hardware queues per port
10.	Shall support Hot-swappable power supplies and switching modules
<b>Layer 1 features</b>	
11.	Support for 10/100/1000 BASE-T, 100 BASE FX, 1000 BASE-SX, LX, LH, ZX GBIC/SFP and 10-Gig SR/LR/ZR
12.	Chassis shall support - Minimum 384 Gigabit ports - Minimum 64 Nos. of 10-Gig non-blocking ports
<b>Layer 2 features</b>	
13.	Shall have Layer 2 switch ports and VLAN trunks
14.	Shall have IEEE 802.3 ad Link aggregation and port Trunking across line cards
15.	Shall have IEEE 802.1Q VLAN encapsulation. The switch should support 4000 active VLANs
16.	Shall support VTP or equivalent centralized VLAN management to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting
17.	Shall have 128,000 system wide MAC addresses. Shall support display and clear MAC address information in MAC Address Table
18.	Shall have IEEE compliance for 802.1Q VLAN, 801.2p, 802.1d STP, 802.3ad, 802.1w RSTP, 802.1s MSTP, 802.3ad LACP, IEEE 802.1ab Link Layer Discovery Protocol.
<b>Layer 3 features</b>	
19.	Shall have advanced Routing-Static IP routing, RIP v1/v2, OSPF, RIPng PIM-SM and policy based routing, RIPng, OSPFv3, MLD
20.	Shall have VRRP or equivalent for redundancy
21.	Shall have IGMP v1, v2, v3
22.	Shall have IP multicast routing protocols PIM
23.	Shall support minimum 250K IPv4 and 250K IPv6 (both) unicast routes. Shall support minimum 100K IPv4 and 100K IPv6 (both) multicast routes.
24.	Support VRF/VRF-Lite
<b>QoS Features</b>	
25.	Shall have Per-port QoS configuration



Core Switch	
S. No.	Features
26.	Support for IEEE 802.1p QoS policies
27.	Support for Diff Serv QoS on all ports
28.	Shall have priority queuing
29.	Shall support Congestion Avoidance feature
Availability	
30.	Shall be provided with Dual Switching Fabric
31.	N+1/1+1 Redundant Power Supply from day one
32.	Hot Swap ability on all modules and Power Supply
33.	Hot Swappable Fan tray
Security	
34.	Shall have 802.1X user authentication, accounting
35.	Shall support Port Mirroring based on port basis/ Vlan basis to support intrusion prevention system deployment in different VLANs. Shall support port mirroring across the switches to remotely monitor ports in a Layer 2 switch network from any other switch in the same network
36.	Shall support DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses
37.	Shall prevents IP spoofing by forwarding only packets that have a source address consistent with the DHCP Snooping table
38.	Shall have SSHv1/ SSHv2, SNMPv1, SNMPv2, SNMPv3, SCP/SFTP /SNTP support
39.	Switch should be EAL 3+ or higher certified
40.	Minimum Configuration deliverable
41.	Core Switch Shall have minimum 40 x 10/100/1000 Mbps Base TX ports and 16 Nos of 10 Gig ports with SR transceivers. All the above mentioned should be non-blocking and should be distributed among minimum 2 slots.

Next Generation Firewalls	
S. No.	Features
Architecture	
1.	OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders or Challengers of Gartner magic quadrant for the Enterprise Network Firewalls, April 2014
2.	Chassis based architecture with option for expansion
3.	Hot swappable module and power supplies
Interfaces	



Next Generation Firewalls	
S. No.	Features
4.	4x 10/100/1000 RJ45
<b>System Performance</b>	
5.	Firewall Throughput – 10 Gbps
6.	IPS Throughput – 2 Gbps
7.	IPSec Throughput – 6 Gbps
8.	Concurrent Sessions – 500K
9.	Antivirus Throughput - 500 Mbps
10.	Connections per Second – 70K
<b>Layer 2 switching</b>	
11.	VLAN 802.1Q
12.	Link Aggregation 802.3ad/LACP
13.	STP, RSTP, MSTP
14.	Authentication 802.1x Port based and multiple supplicant
15.	4000 VLANs
<b>Routing (available from Day 1)</b>	
16.	Static routes
17.	RIPv2
18.	OSPF
19.	BGP
<b>Multicast</b>	
20.	IGMPv3, PIM, SDP, DVMRP
<b>Traffic Management</b>	
21.	Marking, policing, and shaping
22.	Class-based queuing with prioritization
23.	Weighted random early detection
<b>Security</b>	
<b>Firewall Features</b>	
24.	Firewall, zones, screens, policies





Next Generation Firewalls	
S. No.	Features
25.	Stateful firewall, stateless filters
26.	Network attack detection
27.	Screens denial of service (DoS) and provides distributed denial of service (DDoS) protection (anomaly-based)
28.	Prevent replay attack; Anti-Replay
29.	Unified Access Control
	- TCP reassembly for fragmented packet protection
	- Brute force attack mitigation
	- SyN cookie protection
	- Zone-based IP spoofing
	- Malformed packet protection
Intrusion Prevention System (IPS) Features	
30.	Protocol anomaly detection - Stateful protocol signatures
31.	Intrusion prevention system (IPS) attack pattern obfuscation
32.	User role-based policies
33.	Customer signatures creation
34.	Daily and emergency updates
35.	Custom signatures
36.	Dynamic signature updates
37.	User-based application policy enforcement
File-based antivirus	
38.	Signature database
39.	Protocols scanned: POP3, hTTP, SMTP, IMAP, FTP
40.	Antispyware
41.	Anti-adware
42.	Anti-keylogger
43.	Cloud-based antivirus
44.	Anti-spam
45.	Integrated enhanced Web filtering



Next Generation Firewalls	
S. No.	Features
46.	Redirect Web filtering
47.	Content filtering - Based on MIME type, file extension, and protocol commands
User Authentication	
48.	Third-party user authentication RADIUS, RSA SecureID, LDAP
49.	RADIUS accounting
50.	XAUTH VPN, Web-based, 802.X authentication
51.	PKI certificate requests
52.	Certificate Authorities : VeriSign, Entrust, Microsoft, RSA Keon, iPlanet, (Netscape), Baltimore, DoD PK
VPN	
53.	Tunnels (generic routing encapsulation, IP-in-IP, IPsec)
54.	IPsec, DES, 3DES, AES encryption
55.	MD5 and SHA-1 authentication
High Availability	
56.	VRRP
57.	Active/active—L3 mode
58.	Active/passive—L3 mode
59.	Dual Power
60.	Should support HALB mode
System Management	
61.	Web UI
62.	Command line interface (CLI)

Server Load Balancer	
S. No.	Architecture
1.	OEM must be in a Leader quadrant of the respective latest Gartner Magic Quadrant OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders of Gartner magic quadrant for the application delivery controller, September 2014



Server Load Balancer	
S. No.	Architecture
2.	Should be high performance purpose built next generation multi-tenant hardware with multicore CPU support. Platform should support multiple instances including link load balancing, application load balancing & SSL VPN functions with dedicated hardware resources for each virtual instance.
3.	The appliance should have minimum 10 Gbps of system throughput per virtual instance to support multiple load balancing and security functions
4.	The appliance should have minimum 8 x10G SFP+ interfaces from day one
5.	Hardware based SSL acceleration with up to 20Gbps of bulk SSL throughput. Minimum of 4,000 2k SSL transactions per second (TPS) per virtual instance
6.	Platform should support minimum 4 virtual instances and must have option to scale up to 16 virtual instance on same appliance. Each instance must have assigned dedicated hardware resource such as CPU, memory, SSL & I/O for guarantee performance
Application Load balancing features	
7.	Should able to load balancer both TCP and UDP based applications with layer 2 to layer 7 load balancing support
8.	The appliance should support server load balancing algorithms i.e. round robin, weighted round robin, least connection, Persistent IP, Hash IP, Hash Cookie, consistent hash IP, shortest response, proximity, SNMP, SIP session ID, hash header etc.
9.	Should support Multi-level virtual service policy routing – Static, default and backup policies for intelligent traffic distribution to backend servers
10.	Support for policy nesting at layer7 and layer4, solution should able to combine layer4 and layer7 policies to address the complex application integration.
11.	Script based functions support for content inspection, traffic matching and monitoring of HTTP, SOAP, XML, diameter, generic TCP, TCPS. Load balancer should support ePolicies to customize new features in addition to existing feature/functions of load balancer
12.	Traffic load balancing using ePolicies should support algorithms including round robin, least connections, shortest response, persistence IP, hash IP, hash IP and port, consistent hash IP and SNMP
13.	Should provide application & server health checks for well-known protocols such as ARP, ICMP, TCP, DNS, RADIUS, HTTP/HTTPS, RTSP etc.
IPv6 gateway and Application acceleration	
14.	Should provide performance optimization using TCP connection multiplexing, TCP buffering and IEEE 802.3ad link aggregation. Support for TCP optimization options including windows scaling, timestamp & Selective Acknowledgement for enhanced TCP transmission speed TCP optimization option configuration should be defined on per virtual service basis not globally.
15.	Appliance should provide real time Dynamic Web Content Compression to reduce server load and solution should provide selective compression for Text, HTML, XML, DOC, Java Scripts, CSS, PDF, PPT, and XLS Mime types.
16.	should provide advanced high performance memory/packet based reverse proxy Web cache; fully compliant with HTTP1.1 to enhance the speed and performance of web servers
17.	Should provide support for cache rules/filters to define granular cache policies based on cache-control headers, host name, file type, max object size, TTL objects etc..
18.	Should provide secure online application delivery using hardware-based high performance integrated SSL acceleration hardware. SSL hardware should support both 2048 and 4096 bit keys for encrypted application access.



Server Load Balancer	
S. No.	Architecture
19.	Should support certificate parser and solution should integrate with client certificates to maintain end to end security and non-repudiation
20.	The appliance should support Certificate format as "OpenSSL/Apache, *.PEM", "MS IIS, *.PFX", and "Netscape, *.DB".
21.	Should support OCSP protocol to check the validity of the certificates online. Certificate bases access control, CRL's (HTTP, FTP, and LDAP) support.
22.	Should provide full ipv6 support and OEM should be IPv6 gold-certified. OEM should be listed vendor for ipv6 phase-2 certification.
23.	IPv6 gateway should provide compressive support for IPv6 functions to help with ipv4-to-ipv6 transition without business disruption and must provide support for dual stack, DNS64, NAT 64, DNS 46, NAT 46, IPv6 NAT
24.	Should support various deployment modes for seamless integration including reverse proxy (IPv6 to IPv4, IPv4 to IPv6) and IPv6 to IPv6 transparent and reverse proxy mode.
Network security	
25.	Should support advance ACL's to protect against network based flooding attacks. Administrator should able to define ACL's rules based on connections per second (CPS) and concurrent connections (CC), cookie value.
26.	Appliance should have security features like reverse proxy firewall, Syn-flood and dos attack protection features from the day of installation.
27.	Should support integrated network based firewall to protect against network based attacks; administrator should able to configure the security policies on per interface basis.
Clustering and failover	
28.	Should provide comprehensive and reliable support for high availability with Active-active & active standby unit redundancy mode. Should support both device level and VA level High availability
29.	should support built in failover decision/health check conditions (both hardware and software based) including CPU overheated, SSL card, port health, CPU utilization, system memory, process health check and gateway health check to support the failover in complex application environment
30.	Should have option to define customized rules for gateway health check - administrator should able to define a rule to inspect the status of the link between the unit and a gateway
31.	Support for automated configuration synchronization support at boot time and during run time to keep consistence configuration on both units.
32.	should support floating MAC address to avoid MAC table updates on the upstream routers/switches and to minimize the failover delay
33.	Support for multiple communication links for real-time configuration synchronizations including HA group, gateway health check, decision rules, SSF sessions etc. and heartbeat information
34.	Clustering function should support IPv6 VIP's (virtual service) switchover
35.	N+1 clustering support with active-active and active-standby configurations.
Global Server Load Balancer	
36.	The appliance should have feature of GSLB for future requirement



Server Load Balancer	
S. No.	Architecture
37.	Should support global load balancing algorithms like global round robin (GRR), VIP based weighted global round robin, global connection overflow, global least connections, IP overflow, Proximity etc.,
38.	Per host name TTL value control - TTL (Time to live) controls RTO failover and hence could be different for different services which needs to have TTL control per host name
39.	GSLB (Global Server Load Balancer) for Application Failover across Datacenter - GSLB to be supported on same appliance. The appliance should have ability to select Server Per Site for failover and BCP drills for server selection for application continuity, Should Support Topology.
40.	GSLB should be capable of monitoring health of application across data center example Primary site and DR site - GSLB at the primary data center should have intelligence and visibility of application across Data center and DR
41.	Support DNS Rate Limiting and DNS DDOS Protection
42.	DNS report per host name - DNS report per host name provides usage trending patterns to help capacity planning
43.	Capable of handling complete DNS bind records including A,MX, AAAA etc.
44.	should support dynamic proximity rules instead of static proximity rules to direct the traffic to closest datacenter
Management	
45.	Centralized management appliance should have extensive reporting and logging with inbuilt tcpdump like tool and log collecting functionality
46.	The appliance should have SSH CLI, Direct Console, SNMP, Single Console per Cluster with inbuilt reporting.
47.	Should support XML-RPC for integration with 3rd party management and monitoring
48.	Should support role based access control with different privilege levels for configuration management and monitoring.
49.	The appliance should provide detailed logs and graphs for real time and time based statistics

Link Load Balancer	
S. No.	Hardware
1.	OEM must be in a Leader quadrant of the respective latest Gartner Magic Quadrant OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders of Gartner magic quadrant for the application delivery controller, September 2014
2.	Should be appliance based solution with 64 bit Speed Core Architecture & purpose built hardware for high performance.
3.	Intel based CPU with 8 GB RAM to support multiple features and load balancing functions.



Link Load Balancer	
S. No.	Hardware
4.	The appliance should have minimum 8 triple speed gigabit 10/100/1000 copper ports .and 2 x 1GbE SFP with Ports
5.	Appliance should support Non Uniform Memory access (NUMA) support for better performance
6.	The appliance should have 10 Gbps of system throughput
7.	Should provide 4 Million concurrent connections from day one
8.	Appliance should provide full ipv6 support and OEM should be IPv6ready.org gold-certified. OEM should be listed vendor for ipv6ready.org phase-2 certification only
9.	Should support NAT 46/64, DNS 46/64 functionality along with dual stack
10.	Should need server load balancer license by default in link load balancer appliance without any additional cost
Load balancing Features	
11.	Support for multiple internet links in Active-Active load balancing and active-standby failover mode.
12.	Appliance must have link load balancer license & server load balancer license comes by default along with base license including ipv6
13.	Extensible policies (epolicies) TCL scripts to implement business logic on network without changes in application code.
14.	Should support Outbound load balancing algorithms like round robin, Weighted round robin, shortest response, hash IP, target proximity and dynamic detect
15.	Should support inbound load balancing algorithms like round robin, Weighted round robin, target proximity & dynamic detect.
16.	Should support Static NAT, Port based NAT and advanced NAT for transparent use of multiple WAN / Internet links.
17.	IPV6 support with IPv6 to IP4 and IPv4 to IPv6 translation and full IPv6 support.
18.	IPV6 support with DNS 6 to DNS 4 & DNS 4 to DNS 6 translation
19.	Domain name support for outbound link selection for FQDN based load balancing.
20.	Dynamic detect (DD) based health check for intelligent traffic routing and failover
21.	In case of link failure, device should detect it in less than 30 seconds and divert the traffic to other available links.
22.	Shall provide individual link health check based on physical port, ICMP Protocols, user defined I4 ports and destination path health checks.
23.	Should provide mechanism to bind multiple health checks, support for Application specific VIP health check and next gateway health checks.
24.	Should support persistency features including RTS (return to sender) and ip flow persistence.
High Availability and Cluster	



Link Load Balancer	
S. No.	Hardware
25.	Should provide comprehensive and reliable support for high availability and N+1 clustering based on Per VIP based Active-active & active standby unit redundancy mode.
26.	Stateful session failover with N+1 clustering support when deployed in HA mode
27.	Should support USB based FFO link to synchronize configuration at boot time of HA
28.	Support for multiple communication links for real time configuration synchronizations including HA group, gateway health check, decision rules, SSF sessions etc... and heartbeat information
29.	Should support floating MAC address to avoid MAC table updates on the upstream routers/switches and to speed up the failover
30.	Should support for secondary communication link for backup purpose
31.	Should support floating IP address and group for statefull failover support. Appliance must have support 256 floating ip address for a floating group
32.	Should support built in failover decision/health check conditions including, CPU overheated, system memory, process health check, unit failover, group failover and reboot
33.	Should also have option to define customized rules for gateway health check - the administrator should able to define a rule to inspect the status of the link between the unit and a gateway
34.	Configuration synchronization at boot time and during run time to keep consistence configuration on both units.
Security and Application Performance	
35.	Should support advance ACL's to protect against network based flooding attacks. Administrator should able to define ACL's rules based on connections per second (CPS) and concurrent connections (CC), cookie value.
36.	Should define ACL rules to restrict the connections per second (CPS) and concurrent connections (CC) utilizable for the clients on a specified subnet/IP or network
37.	Should provide performance optimization using TCP connection multiplexing, TCP buffering and IEEE 802.3ad link aggregation.
38.	Should support TCP optimization options including windows scaling, timestamp & Selective Acknowledgement for enhanced TCP transmission speed.
39.	TCP optimization option configuration must be defined on per virtual service basis not globally.
40.	Software based compression for HTTP based application, support and high speed HTTP processing on same appliance.
41.	Should support QOS for traffic prioritization, CBQ, borrow and unborrow bandwidth from queues.
42.	Should provide QOS filters based on port and protocols including TCP, UDP and ICMP Protocols.
43.	Should support rate shaping for setting user defined rate limits on critical application.
44.	Should support integrated firewall module to protect the device itself from network based DOS and DDOS attacks.



Link Load Balancer	
S. No.	Hardware
45.	Appliance should have security features like reverse proxy firewall, Syn-flood and dos attack protection features from the day of installation.
Centralized Management	
46.	The appliance should have extensive reporting and logging with inbuilt tcpdump like tool and log collection functionality
47.	The appliance should have SSH CLI, Direct Console, SNMP, and Single Console per Cluster with inbuilt reporting.
48.	Should support XML-RPC for integration with 3rd party management and monitoring of the devices.
49.	The appliance should provide detailed logs and graphs for real time and time based statistics
50.	Appliance must support multiple configuration files with 2 bootable partitions for better availability and easy upgrade / fallback.
51.	The system should support led warning and system log alert for failure of any of the power and CPU issues

Antivirus Software	
S. No.	Minimum features requirement for Antivirus software
1.	OEM must be in a Leader quadrant of the respective latest Gartner Magic Quadrant OEM should be from the Top 5 vendors in terms of revenue and market share as per the latest IDC quarterly report for respective category or Leaders or Challengers of Gartner magic quadrant for end point protection, December 2014
2.	The Antivirus solution shall be up-graded as and when the new updates of solution are made available.
3.	Solution shall have minimum impact on LAN traffic
4.	The solution shall be such that it shall be able to cater to the antivirus needs of minimum 700 client agents.
5.	The solution shall be able to apply security policies
6.	Solution shall always hide the client software from the clients "Add/Remove Program" list
7.	Solution shall be able to Detect and block malicious software in real time, including viruses, worms, Trojan horses, spyware, Adware, and RootKit etc. It shall provide zero-day detection (heuristic) technology.
8.	The solution shall protect clients from multiple forms of anomalous network behavior that is designed to disrupt system availability and/or stability.
9.	The solution shall be able to identify Infections by name, category, severity (xyz-Trojan, keylogger, etc.), host or User etc.
10.	The solution shall be able to report Bot incidents by specific malicious activity (Spam, Spyware, IP Scanning, etc...). The solution shall have in built intelligence & co-relation capability to inspect for, detect, and block active and dormant bots.





Antivirus Software	
S. No.	Minimum features requirement for Antivirus software
11.	Solution should be able to block devices based on the Windows Class ID. These devices should include USB, Infrared, Bluetooth, Serial Port Parallel Ports, fire wire, SCSI and PCMCIA. Solution should also be able to block and give read/write/execute Permission for mentioned devices.
12.	The solution shall protect the transmission of data from being sent to a hacker system who has spoofed their IP or Mac Address
13.	The software shall not affect the system resources with less consumption of system resources which include RAM, CPU and H.D Space utilization.
14.	Antivirus solution shall be able to Scan POP 3 email traffic including email clients Microsoft outlook, outlook express.
15.	Desktop Firewall Policies shall be configurable depending upon the time and day.
16.	The Solution shall have readymade policies including- a) To Make all removable drives read only , b) To block program from running from removable drives , c) Protect clients files and registry keys , d) Log files written to USB drives , e) Block modifications to host files
17.	Proposed Antivirus and Anti -SPAM solution shall be for the SMTP gateway and as well as for the messaging servers. This protection shall include content filtering and data loss prevention
18.	The administrator should have feature to prevent peer-to-peer sharing, streaming media, games, and other Internet applications from accessing the Internet.
19.	The solution shall be able to schedule internet access time for user.
20.	The solution should offer in built URL filtering with flexible policy controls, and in-depth reporting and alerts. The solution should have URL category wise blocking of websites e.g. pornographic websites etc., time based, user based, IP based policies.
21.	Solution shall also consider cases of PC's that rarely power up, example PC used for presentation in training division or Conference room
22.	The Solution shall support standard reports as well as customized reports based on dynamic requirement as report on specific virus, region, update status etc.
23.	Solution shall provide adequate documentation with solution and additional documents if required.
24.	The technical documentation involving detailed instruction for operation and maintenance, users' manual etc. is to be delivered with every unit of the equipment supplied. The language of the documentation shall be English.

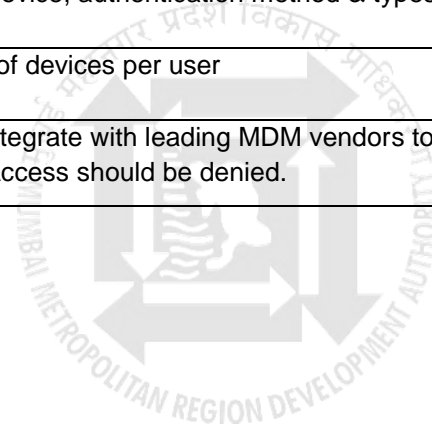
Access Switch	
S. No.	Required Minimum Specifications
Architecture	
1.	OEM must be in a Leader quadrant of the respective latest Gartner Magic Quadrant
2.	Switch fabric capacity - 800 Gbps
3.	Switch forwarding rates – 600 Mpps for IPv4 and IPv6



4.	10G/Gigabit Ethernet port - 40 ports populated with 40x10G SR optics
5.	Non-blocking switch architecture
<b>Connectivity</b>	
6.	802.3ad based standard port/link aggregation, Jumbo frames, storm control
<b>Switching Features</b>	
7.	Support at least 2500 VLAN and 24,000 MAC Address
8.	Datacenter bridging exchange, IEEE 802.1Qbb
<b>Security</b>	
9.	802.1X Network Security and Radius/TACACS AAA authentication
10.	MAC Address filtering based on source and destination address
11.	Support for various ACLs like port based, VLAN based and L2- L4 ACL's
<b>Network Protocols</b>	
12.	Layer3 routing protocols like Static, RIP, OSPF, RIPnG, OSPFv3 from day 1 for the solution.
<b>QoS</b>	
13.	Minimum 8 number of hardware queues per port
14.	DSCP, 802.1p
<b>Multicast</b>	
15.	IGMP v1,v2,v3, IGMP snooping, PIM SM/DM, MLD
<b>Management</b>	
16.	SNMP v1, v2, v3, RMON/RMON-II enabled, SSH,telnet,GUI, Web management and should have out of Band Management port
17.	Switch should support port mirroring feature for monitoring network traffic of a particular port/VLAN.
18.	Switch should support Link Aggregation on two different switches
19.	Built-in real-time performance monitoring capabilities and atleast two switches should be managed using single IP address
20.	Power Supply: Switch should have internal Hot Swappable redundant Power supply
21.	Cooling Fans: Should have redundant cooling FANS
<b>Certification</b>	
22.	Router should be EAL 3+ or higher certified



S. No.	AAA server
1.	AAA OEM must be in a Leader quadrant of latest NAC Gartner Magic Quadrant.
2.	Bidder should quote hardware based AAA server and single server should support minimum 5000 concurrent devices/authentication.
3.	Support any type of networking equipment (wired, wireless, VPN) and support 802.1X, MAC authentication, Web authentication methods.
4.	AAA server must support both functionality RADIUS server for client device authentication and TACACS+ for network device authentication and logging from day 1
5.	Support Location Based Access
6.	Support Time Based Access
7.	Support Bandwidth Consumption based
8.	Must incorporate a complete set of tools for reporting, analysis, and troubleshooting.
9.	Policy model should support incorporation of several contextual elements including identity, endpoint health, device, authentication method & types, and conditions such as location, time, day, etc.
10.	Limit the number of devices per user
11.	Must be able to integrate with leading MDM vendors to fetch the attributes, for eg. If the device is rooted Access should be denied.





**Bid-related Information – 4: Payment and Delivery Schedule**

Key Deliverables	Minimum Components To Be Included In Deliverables	Timeline (in Months)
<b>Signing of Contract</b>	Signed Contract Agreement	T
<b>First Month Deliverables</b>		
<b>Project Charter</b>	Project directory	T+1
	Understanding of project vision and objectives	
	Project lifecycle management plan	
	Scope management plan	
	Resource management plan	
	Communication management plan	
	Stakeholder management plan	
	Project financials and budget management plan	
	Implementation strategy and execution plan	
	Database design standards and data sharing procedures	
	Test management plan (including UAT plan)	
	Security management plan	
	Quality assurance and quality control plan	
	Change management plan	
	Risk management plan	
	Project governance and oversight management plan	
	Issue management and escalation plan	
	Standard Operating Procedures (SOPs)	
	SLA and policy management plan	
	Asset tracking and management plan	
Operations and maintenance plan		
On-field service and facility management plan		
Organizational, environmental, and external assumptions		
Key performance indicators		
<b>Stakeholder responsibility assignment (RACI) matrix</b>	Identification of key project stakeholders, including their roles, responsibilities, areas of influence, and level of authorities	T+1
<b>Detailed quality assurance and quality control reporting</b>	Quality assurance procedures	T+1
	Quality control procedures	
	Validation and verification procedures	
	QA-QC reporting procedures	
	Third party security and performance audit	
<b>Periodic project status and progress reports</b>	Weekly project status reports highlighting, at minimum, key activities, accomplishments, issues, and risks.	Periodic
	Monthly project progress report highlighting, at minimum, key performance indicators, project road blocks, issue/risk escalations, and financial (budget versus actuals) reporting	



Third Month Deliverables		
Detailed Project Management Plan	Must include detailed work breakdown structure (WBS) encompassing all project implementation activities	T+3
	Must include standard charts illustrating tasks, activities, timelines, and dependencies	
	Must be a multidimensional project plan with the ability to track and correlate WBS in real-time with deliverables, milestones, resources, efforts, priorities, dependencies, constraints, cost	
	Must reflect real-time status of project activities and project financials, by tracking planned versus actuals	
	Must track delays in project execution in real time and generate appropriate alerts when issues occur	
	Must highlight project risks and track risk mitigation in real-time	
Current state (As-Is) assessment	Understanding of current business processes based on interviews and surveys	T+3
	Detailed site survey reports and maps	
	Assessment of the project environment, including organizational, technical, and external dependencies and constraints	
	Implementation feasibility assessment	
	Report highlighting gaps, challenges, and constraints in the current state process	
To-Be process design	Design of to be process maps based on interviews with all key stakeholders	T+3
	Revised functional and technical requirements	
	Implementation roadmap	
	Target operating model design	
Requirement Traceability Matrix (RTM)	Mapping of detailed project requirements to project scope and implementation strategy	T+3
	Following client and project requirements should be mapped at minimum:	
	o Functional requirements	
	o Workflow requirements	
	o Usability requirements	
	o Technical requirements	
	o Networking requirements	
	o Integration requirements	
	o Contractual requirements	
	o Procedural requirements	
	o Regulatory requirements	
	o Compliance requirements	
	Linkage and dependencies among requirements should be clearly mapped and tracked in real-time	
Accountability around each requirement should be clearly mapped in the RTM		
Traceability procedures for all requirements should be clearly established and defined		
Detailed design documents	Detailed functional specifications	T+3
	Detailed technical specifications	



	<p>Detailed integration specifications, including specifications for internal and external interfaces</p> <p>Detailed specifications of shared services</p> <p>Detailed specifications of networking requirements</p>	
Comprehensive project budget management	<p>Comprehensive tracking of all project financials (capital expenditure, operational expenditure, and revenue) based on the project schedule and tasks, as defined in the detailed project management plan</p> <p>Highlight financial anomalies and generate appropriate alerts</p> <p>Must track project financials during all project phases, including inception, kick-off, pre-implementation assessments, requirements gathering, implementation, and post implementation operation and maintenance</p>	T+3
Detailed system and network architecture	<p>Detailed logical system architecture</p> <p>Detailed data flow diagrams</p> <p>Detailed solution integration and data exchange diagrams (including internal and external interfaces)</p> <p>Detailed database management system (DBMS) architecture</p> <p>Detailed network architecture</p> <p>Detailed technical system architecture including at minimum, application, software, database, hardware, storage, networking, shared services, external gateways, and DC-DR components</p> <p>Testing requirements</p> <p>Test execution plan</p> <p>Test management plan</p> <p>User Acceptance Testing (UAT)</p>	T+3
Detailed test management and execution plan	<p>Overall testing strategy, defining types (modes) of testing required, environments, dependencies, timelines, and user involvement</p>	T+3
Detailed security management plan	<p>Must (at minimum) define security policies and security management procedures for:</p> <ul style="list-style-type: none"> <li>o Project security</li> <li>o User (citizen) security</li> <li>o System security</li> <li>o Software security</li> <li>o Hardware security</li> <li>o Network security</li> <li>o Data (information) security</li> <li>o Storage and backup security</li> <li>o Identity and access management (IAM)</li> <li>o Infrastructure security</li> <li>o Physical security (vandal-proof)</li> </ul> <p>Must define and track role based authentication and approval procedures</p> <p>Must have defined procedures in place in case security is breached</p>	T+3
Equipment commissioning	<p>Detailed plan to manage and track in real-time equipment's (devices, sensors,</p>	T+3



and procurement management plan	hardware, network, etc.) procurement, supply, inventory replenishment, installation, returns, warranty, and expiration	
	Track all financials related to equipment procurement management	
Detailed Project Report	Detailed Project Report	T+3
<b>Fourth Month Deliverables</b>		
Equipment procurement, installation and commissioning at BKC	All equipment procured, installed and commissioned at BKC in actuals	T+4
<b>Sixth- Go-Live Month Deliverables</b>		
User Acceptance Testing	Functional Test Reports	T+6
	Technical Test Reports	
	System and Network Performance Test Reports	
	User Acceptance and Sign off	
IT Infrastructure and Security Audit	Information Security Testing and Assessment	T+6
	Software Testing and Assessment	
	Security Audit	
	Website/ App Quality Certification based on National and International Standards/Best practices	
Go-live strategy and planning	IT Infrastructure Audit- (Environment, Logical & Physical Security Controls)	T+6
	UAT	
Training, capacity building and Standard Operating Procedures (SOPs)	Defining go-live strategy and go-live execution plan	T+6
	Knowledge transfer procedures	T+6
	Training documents	
	User manuals	
	User trainings	
	User hand holding and guidance post go-live	
SOPs for		
Go-live	Actual Go-live	T+6



**Bid-related Information – 5: Representative Data points for Integrated Building Monitoring System**

S. No	Data points and categories
1	Electrical Consumption Bifurcation from systems (HVAC, lighters, boilers etc.) <ul style="list-style-type: none"><li>• Common area lighting</li><li>• Chillers and pumps</li><li>• Air Handling Unit</li><li>• Treated Fresh Air Unit</li><li>• Fan Coil Unit</li><li>• Puzzle parking system</li><li>• DG unit consumption details</li></ul>
3	Lift and Emergency system power consumption
4	Fire System power consumption
5	Water System power consumption <ul style="list-style-type: none"><li>• Fire water</li><li>• Domestic Water</li><li>• Flushing, Planting and HVAC</li></ul>







## **Annexure-5: Maps and Overview for Smart BKC 1.0**

This section contains Maps of E & G Blocks giving information like ISP Network, Power network, Proposed Wi-Fi Points etc, and Overview of Logical Architecture for Smart BKC 1.0. The Bidders are requested to note that these maps are for information purpose only. Bidders are required to carry out their own survey in order to gather information about these details.

Following is the list of Maps:

E Block: Map 1 - Layout Plan for E-Block of Bandra-Kurla Complex  
E Block: Map 2 - Proposed Wi-Fi Access Points in E-Block Of Bandra-Kurla Complex  
E Block: Map 3 - Existing Layout of Internet Service Providers in E Block of BKC - Airtel  
E Block: Map 4 - Existing Layout of Internet Service Providers in E Block of BKC - Vodafone  
E Block: Map 5 - Existing Layout of Internet Service Providers in E Block of BKC - Reliance  
E Block: Map 6 - Existing Layout of Internet Service Providers in E Block of BKC - MTNL  
E Block: Map 7 - Existing Layout of Internet Service Providers in E Block of BKC - Reliance Jio  
E Block: Map 8 - Existing Layout of Internet Service Providers in E Block of BKC - TTL-TCL  
E Block: Map 9 - Existing Layout of Reliance Power Network in E Block of BKC  
E Block: Map 10 - Proposed Parking Layout Plan for E Block of Bandra Kurla Complex

G Block: Map 1 - Layout Plan for G-Block of Bandra-Kurla Complex  
G Block: Map 2 - Proposed Wi-Fi Access Points in G-Block Of Bandra-Kurla Complex  
G Block: Map 3 - Existing Layout of Internet Service Providers in G Block of BKC - Airtel  
G Block: Map 4 - Existing Layout of Internet Service Providers in G Block of BKC - Vodafone  
G Block: Map 5 - Existing Layout of Internet Service Providers in G Block of BKC - Reliance  
G Block: Map 6 - Existing Layout of Internet Service Providers in G Block of BKC - MTNL  
G Block: Map 7 - Existing Layout of Internet Service Providers in G Block of BKC – Reliance Jio  
G Block: Map 8 - Existing Layout of Internet Service Providers in G Block of BKC – TTL-TCL  
G Block: Map 9 - Existing Layout of Reliance Power Network in G Block of BKC  
G Block: Map 10 - Existing Layout of Tata Power Network in G Block of BKC  
G Block: Map 11 - Proposed Parking Layout Plan for E Block of Bandra Kurla Complex

Smart BKC 1.0 – Overview of Logical Architecture

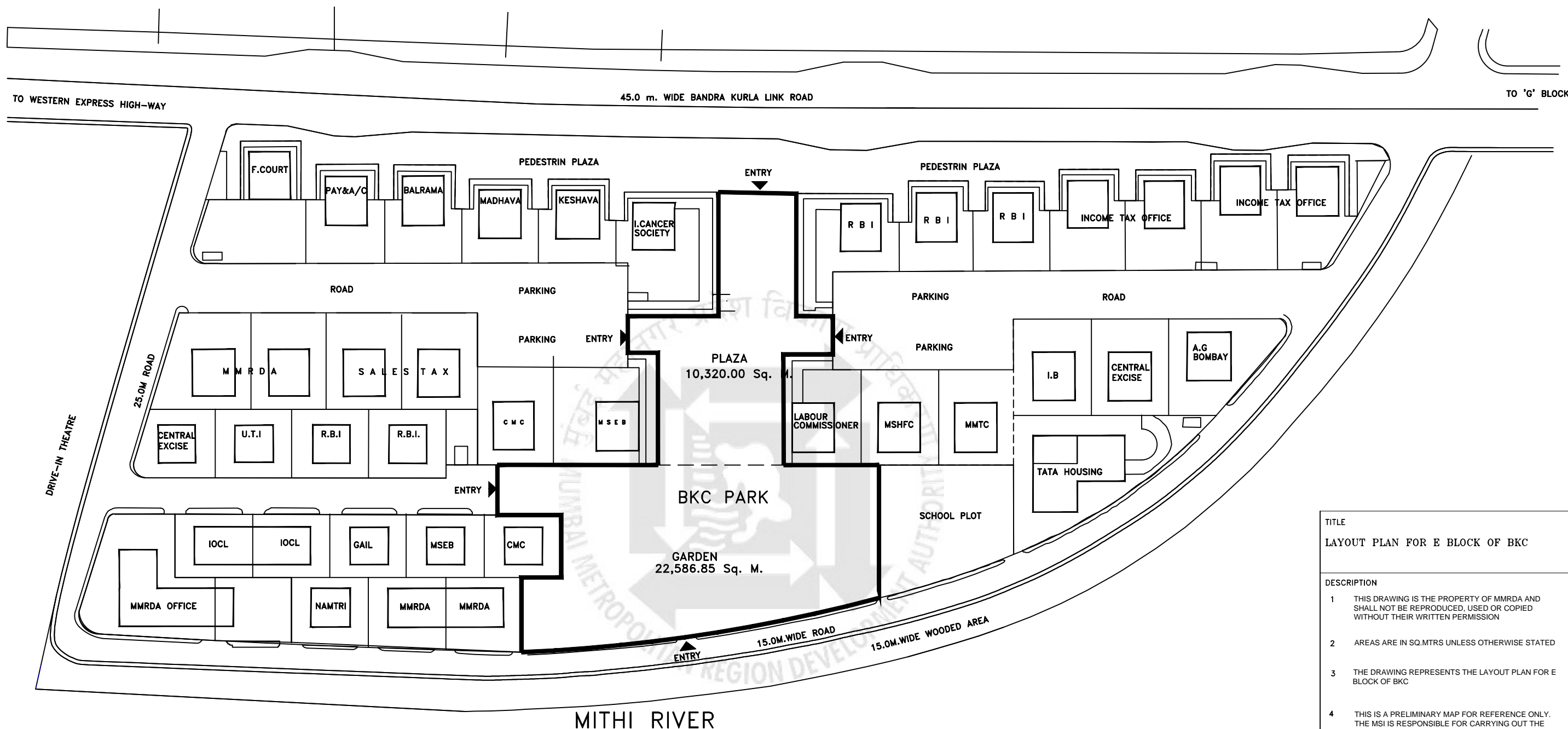
These maps are attached after this Section.

Disclaimer: The information provided in the attached Maps is indicative in nature. The Bidders are requested to have their due diligence regarding the information and submit their bids accordingly.

NOTE: This RFP has total 358 pages, plus additional 21 Maps, with 10 maps of E Block and 11 maps of G Block, and one page of Overview of Logical Architecture.

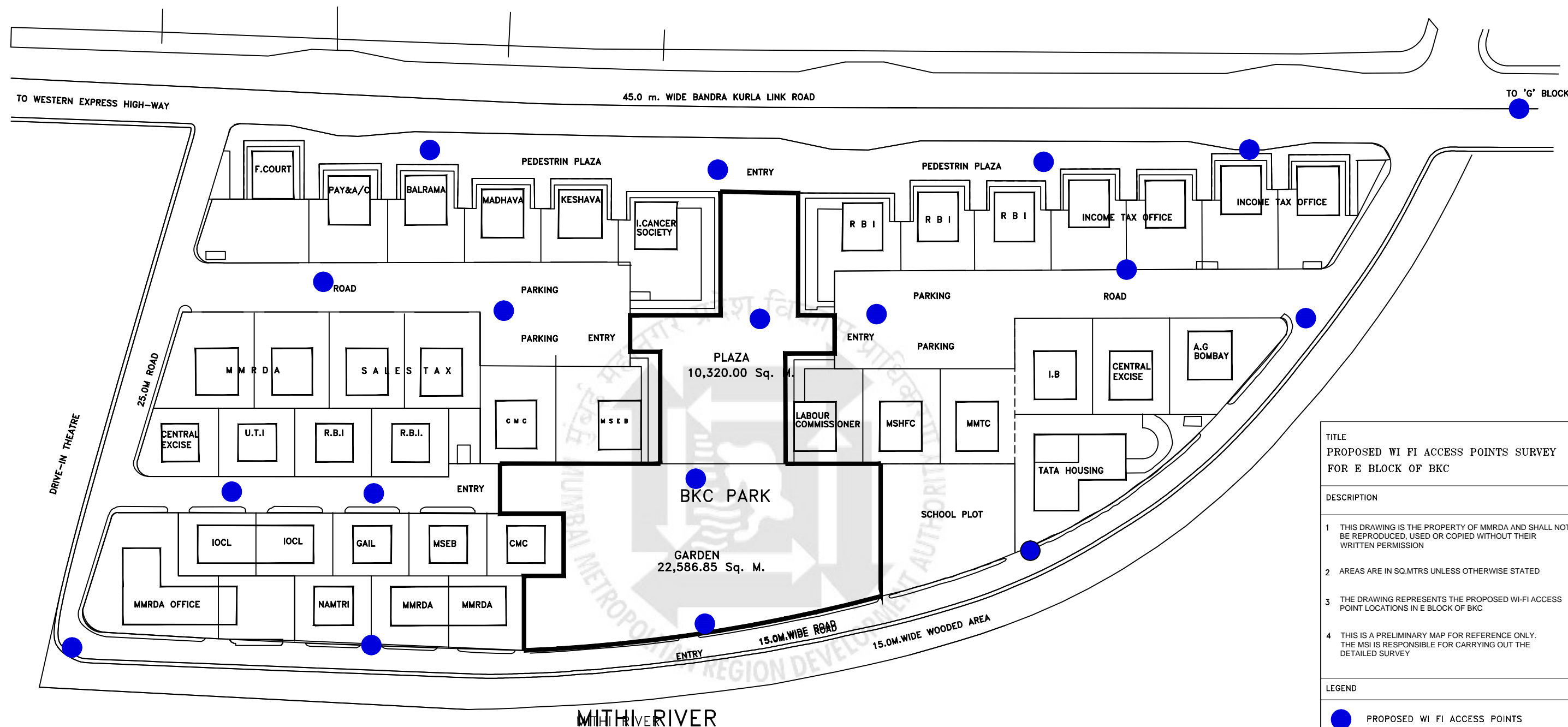
# LAYOUT PLAN FOR E-BLOCK OF BANDRA KURLA COMPLEX


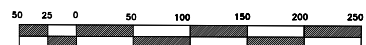
GOVT. COLONY



TITLE	
LAYOUT PLAN FOR E BLOCK OF BKC	
DESCRIPTION	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT THEIR WRITTEN PERMISSION
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE LAYOUT PLAN FOR E BLOCK OF BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
PROJECT	SMART BKC 1.0
DRAWING NUMBER	E 01
SCALE:-	1:2500
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE:	SMART BKC 1.0 RFP DRAWINGS JULY 2015
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX BANDRA (E)	

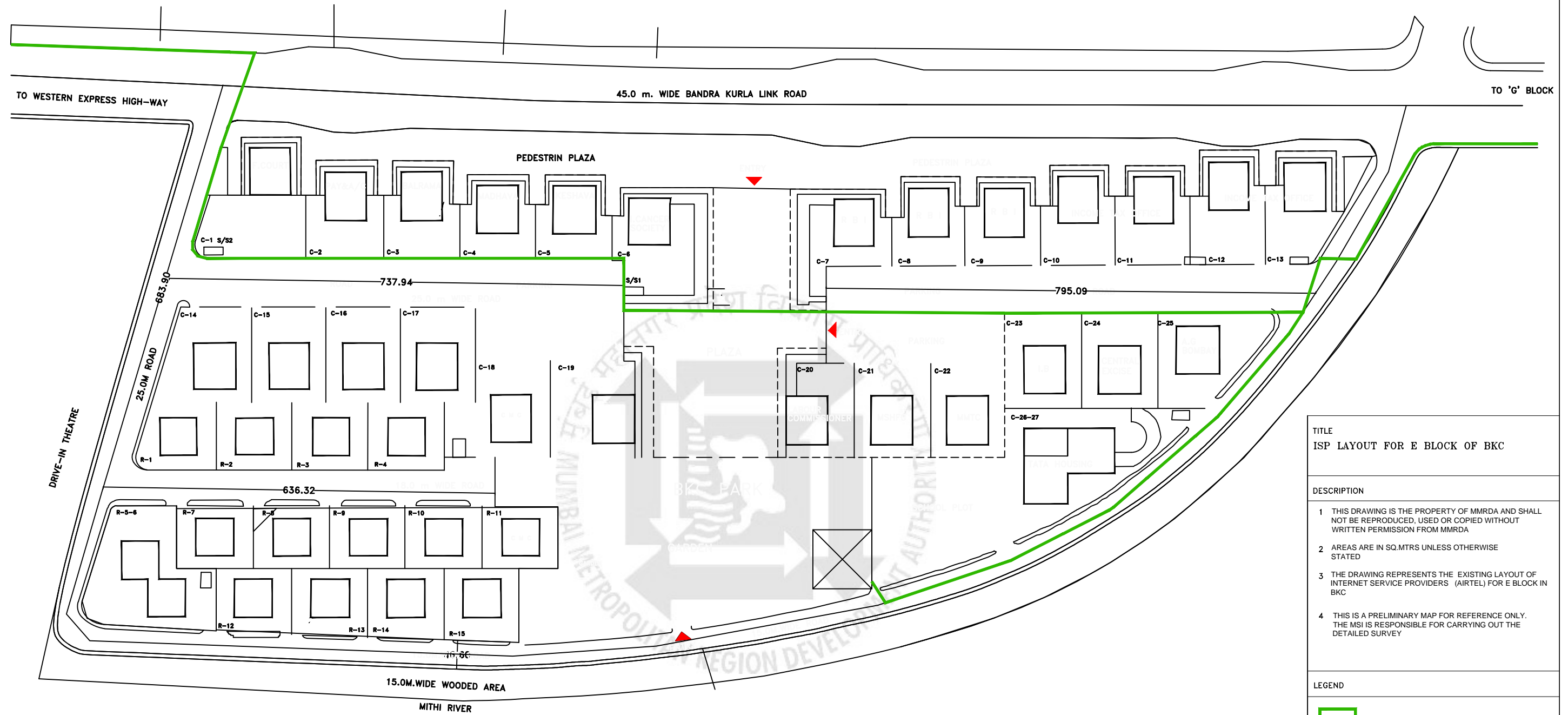
# PROPOSED WIFI ACCESS POINTS IN E BLOCK OF BANDRA KURLA COMPLEX



<b>TITLE</b> PROPOSED WI FI ACCESS POINTS SURVEY FOR E BLOCK OF BKC	
<b>DESCRIPTION</b> 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT THEIR WRITTEN PERMISSION 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED 3 THE DRAWING REPRESENTS THE PROPOSED WI-FI ACCESS POINT LOCATIONS IN E BLOCK OF BKC 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY	
<b>LEGEND</b>  PROPOSED WI FI ACCESS POINTS	
PROJECT SMART BKC 1.0	DRAWING NUMBER E 02
SCALE:- 1:2500 	
CLIENT M.M.R.D.A.	
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX BANDRA (E)	

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN E BLOCK OF BKC

GOVT. COLONY



TITLE  
ISP LAYOUT FOR E BLOCK OF BKC

DESCRIPTION

- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
- 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
- 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS (AIRTEL) FOR E BLOCK IN BKC
- 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

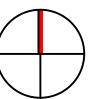
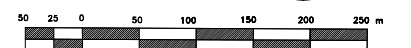
LEGEND

 AIRTEL

PROJECT SMART BKC 1.0

DRAWING NUMBER E 03

SCALE:- 1:2500



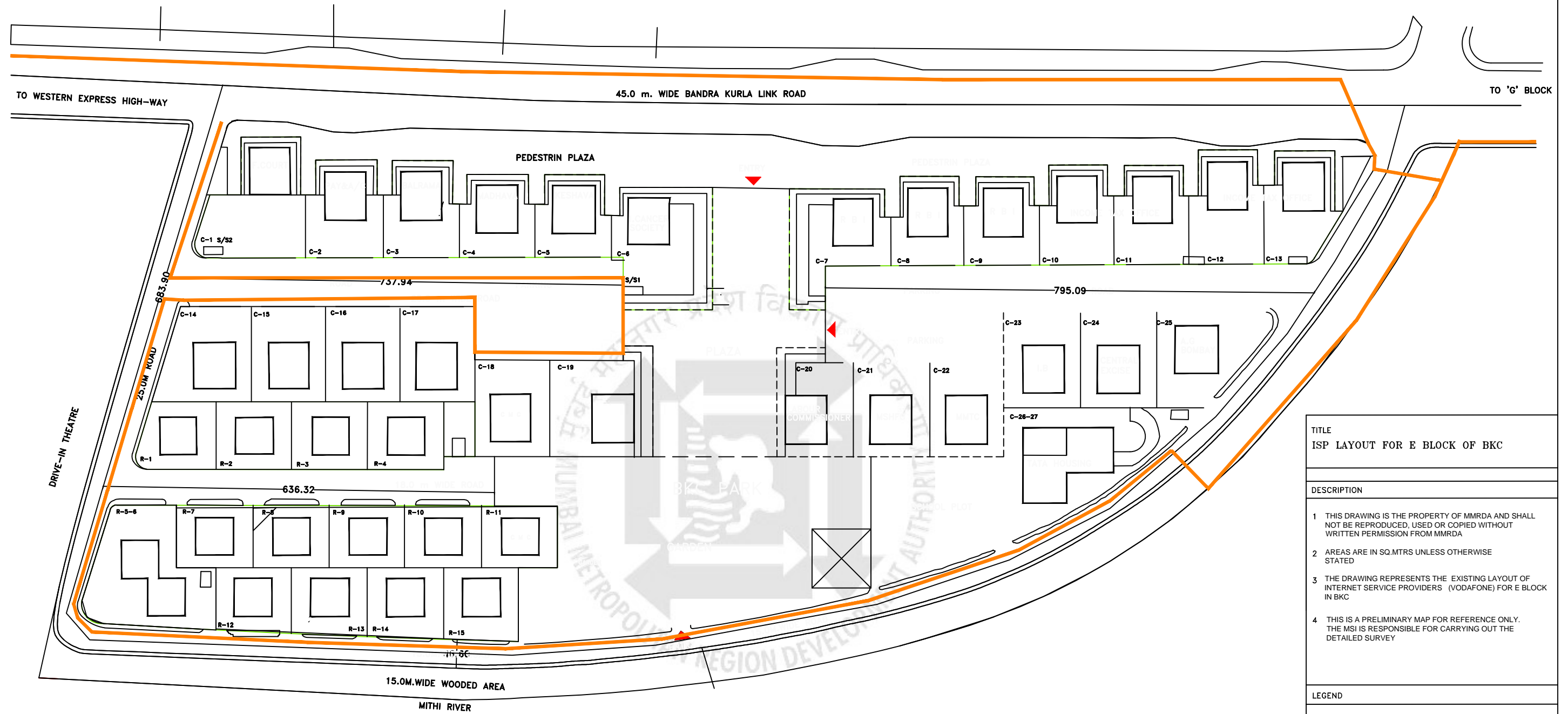
CLIENT  
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX  
BANDRA (E)

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN E BLOCK OF BKC

GOVT. COLONY



TITLE  
ISP LAYOUT FOR E BLOCK OF BKC

DESCRIPTION

- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
- 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
- 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS (VODAFONE) FOR E BLOCK IN BKC
- 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

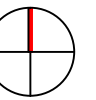
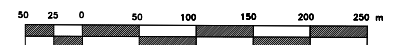
LEGEND

 VODAFONE

PROJECT SMART BKC 1.0

DRAWING NUMBER E 04

SCALE:- 1:2500



CLIENT

M.M.R.D.A.

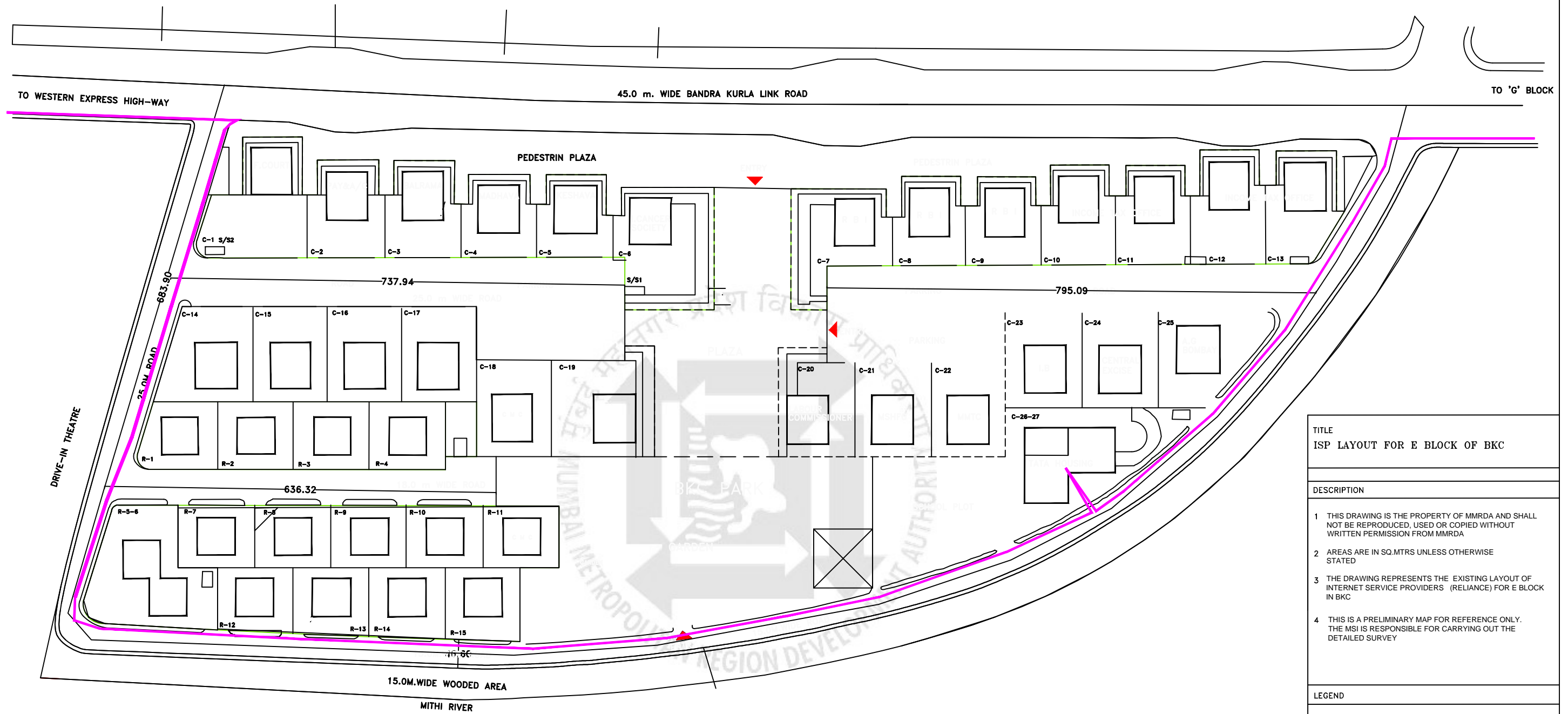
PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS


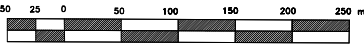
JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX  
BANDRA (E)

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN E BLOCK OF BKC

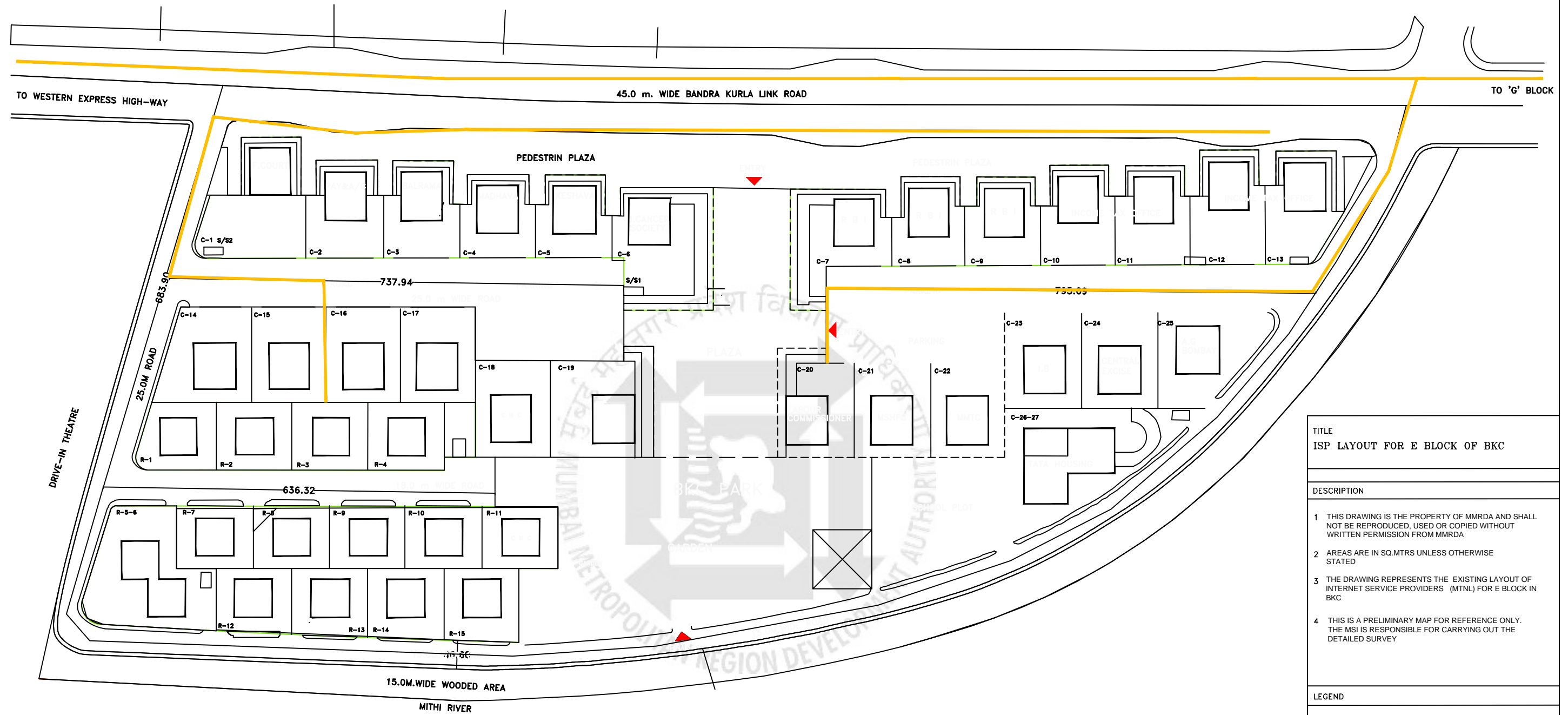
GOVT. COLONY


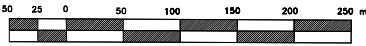


TITLE	
ISP LAYOUT FOR E BLOCK OF BKC	
DESCRIPTION	
<ol style="list-style-type: none"> <li>THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA</li> <li>AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED</li> <li>THE DRAWING REPRESENTS THE EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS (RELIANCE) FOR E BLOCK IN BKC</li> <li>THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY</li> </ol>	
LEGEND	
	RELIANCE
PROJECT	SMART BKC 1.0
DRAWING NUMBER	E 05
SCALE:-	1:2500
	
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX BANDRA (E)	

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN E BLOCK OF BKC

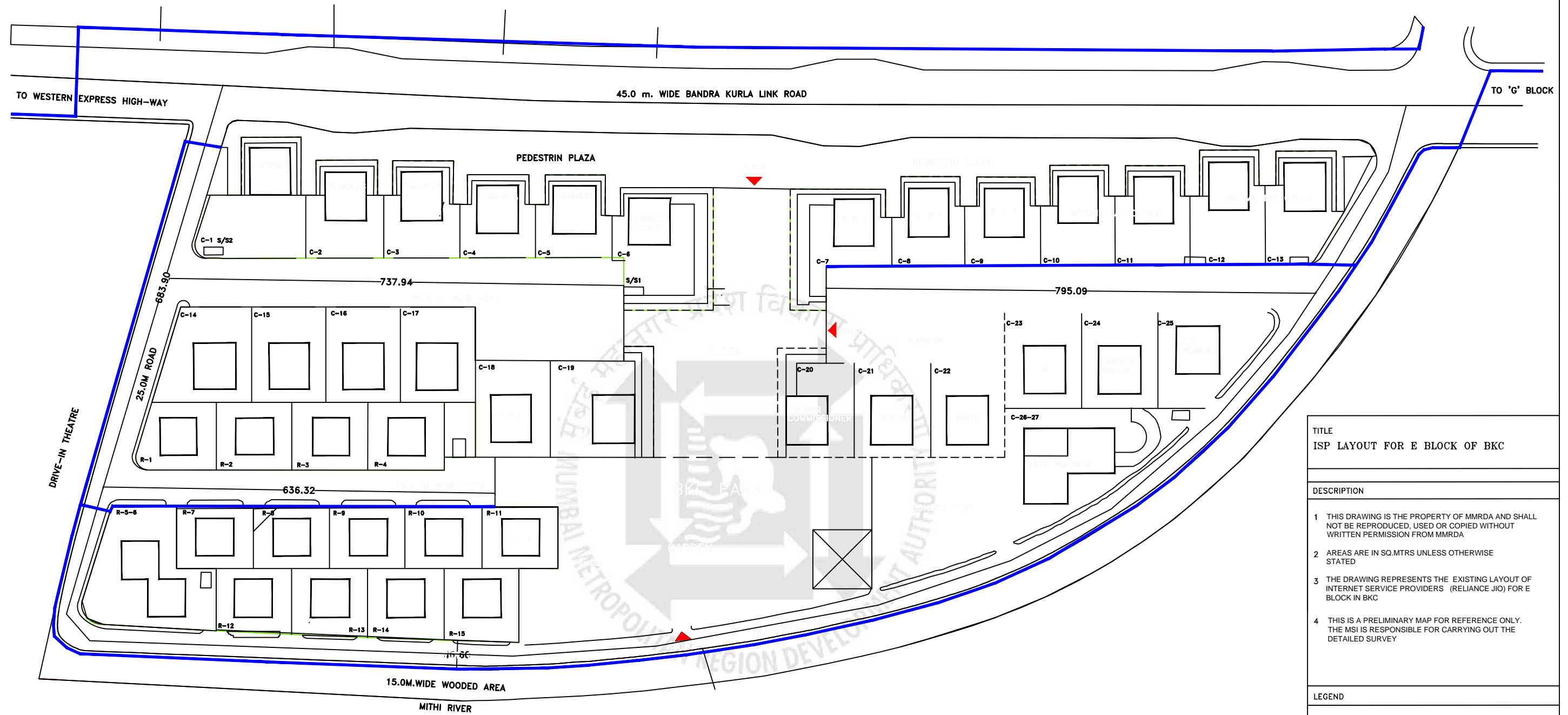
GOVT. COLONY



TITLE ISP LAYOUT FOR E BLOCK OF BKC	
DESCRIPTION	
<ol style="list-style-type: none"> <li>THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA</li> <li>AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED</li> <li>THE DRAWING REPRESENTS THE EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS (MTNL) FOR E BLOCK IN BKC</li> <li>THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY</li> </ol>	
LEGEND	
	MTNL
PROJECT	SMART BKC 1.0
DRAWING NUMBER	E 06
SCALE:-	1:2500
	
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX BANDRA (E)	

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN E BLOCK OF BKC

GOVT. COLONY



TITLE  
ISP LAYOUT FOR E BLOCK OF BKC

DESCRIPTION

- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
- 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
- 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS (RELIANCE JIO) FOR E BLOCK IN BKC
- 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

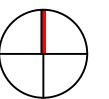
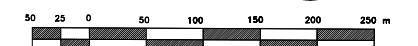
LEGEND

 RELIANCE JIO

PROJECT SMART BKC 1.0

DRAWING NUMBER E 07

SCALE:- 1:2500



CLIENT  
M.M.R.D.A.

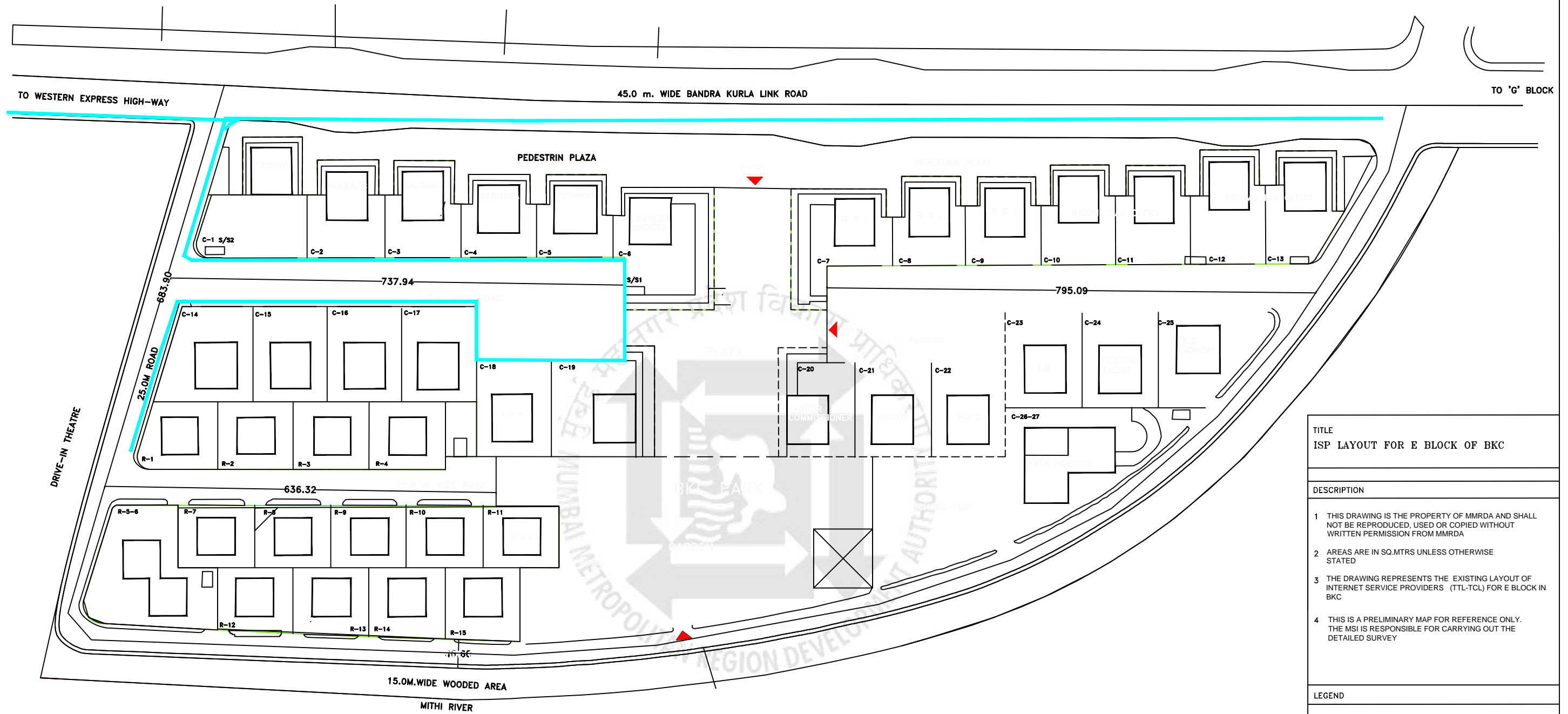
PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX  
BANDRA (E)



# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN E BLOCK OF BKC

GOVT. COLONY



TITLE  
ISP LAYOUT FOR E BLOCK OF BKC

DESCRIPTION

- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
- 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
- 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS (TTL-TCL) FOR E BLOCK IN BKC
- 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

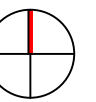
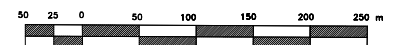
LEGEND

TTL-TCL FIBRE ROUTE

PROJECT SMART BKC 1.0

DRAWING NUMBER E 08

SCALE:- 1:2500



CLIENT

M.M.R.D.A.

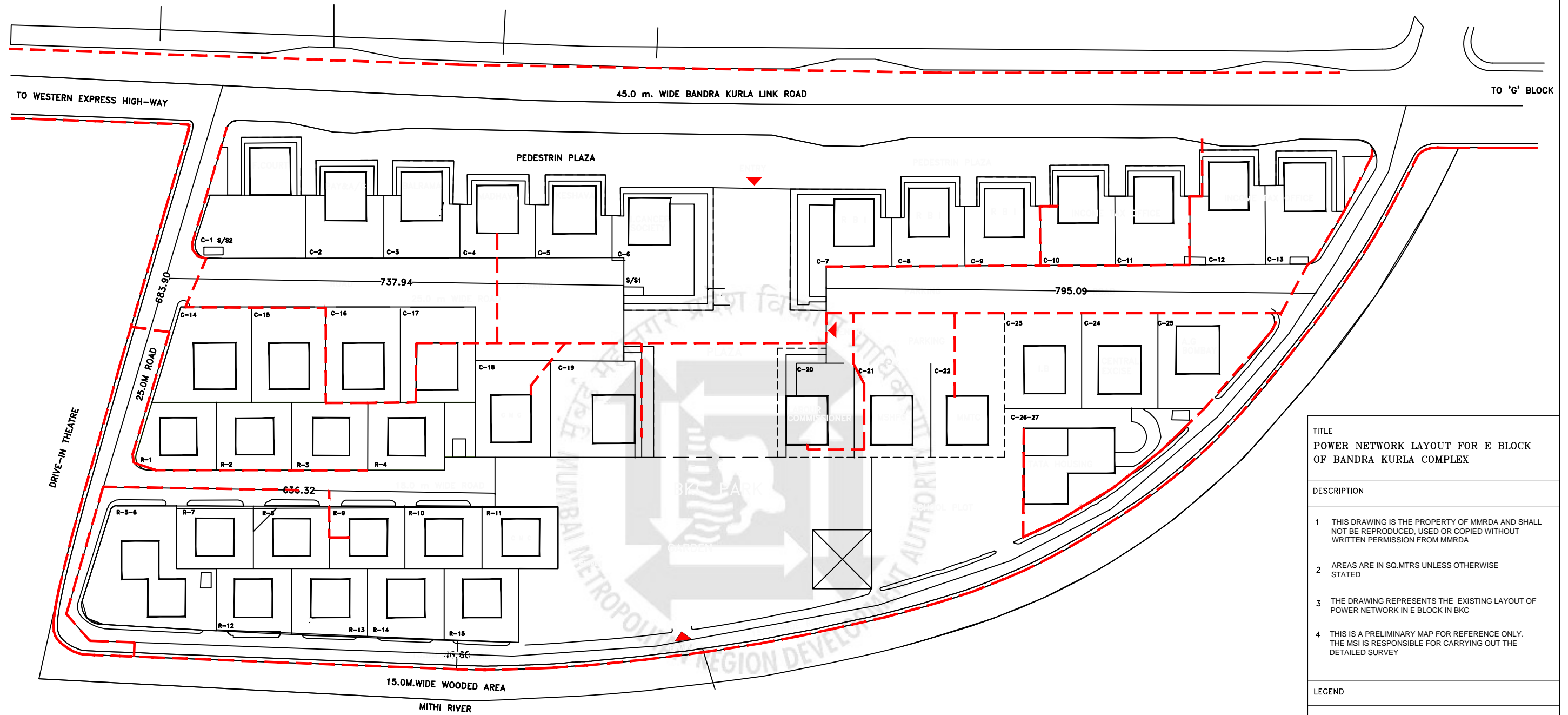
PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS

JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX  
BANDRA (E)

# EXISTING LAYOUT OF RELIANCE POWER NETWORK IN E BLOCK OF BKC

GOVT. COLONY



TITLE  
POWER NETWORK LAYOUT FOR E BLOCK  
OF BANDRA KURLA COMPLEX

DESCRIPTION

- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
- 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
- 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF POWER NETWORK IN E BLOCK IN BKC
- 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

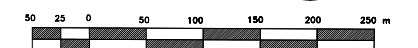
LEGEND

RELIANCE ENERGY ELECTRIC NETWORK

PROJECT SMART BKC 1.0

DRAWING NUMBER E 09

SCALE:- 1:2500



CLIENT

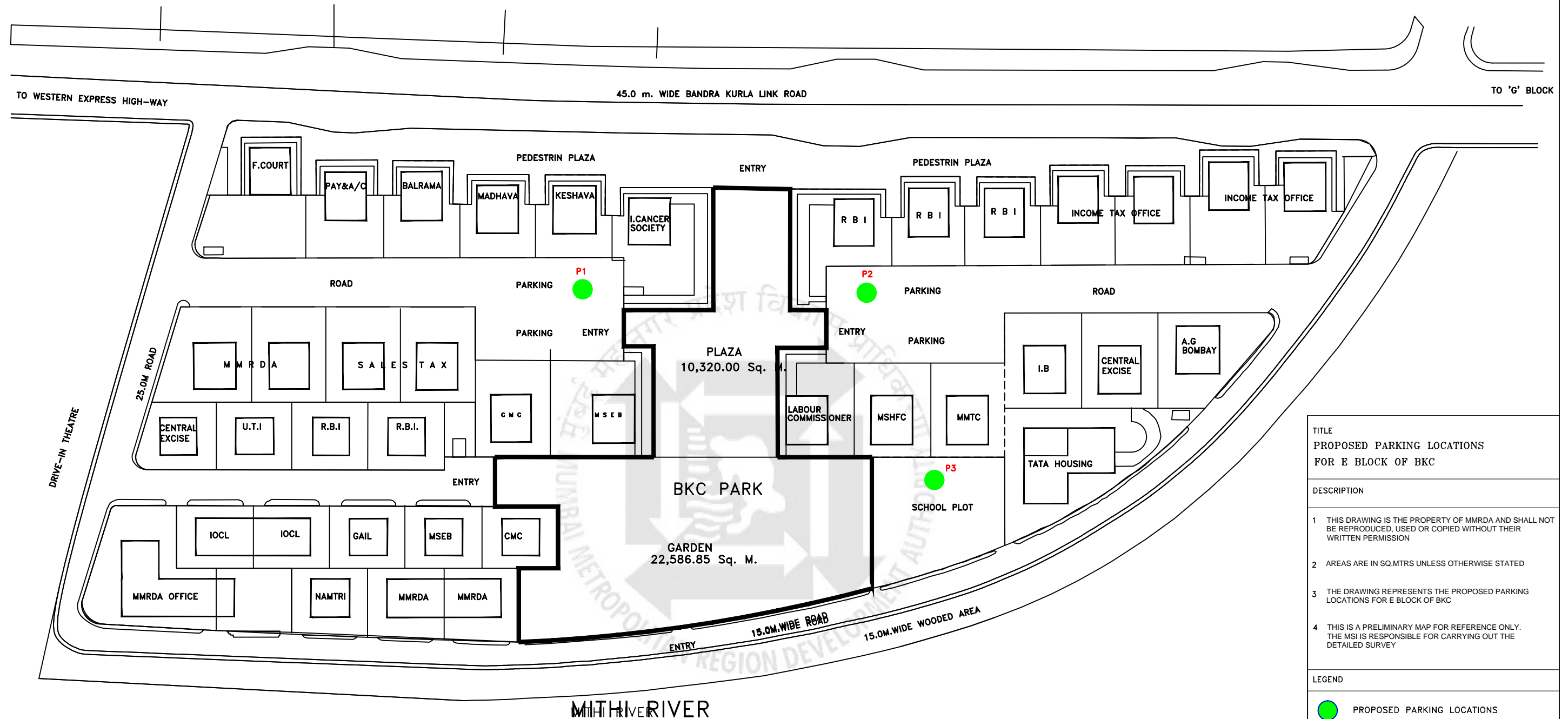
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS

JULY 2015

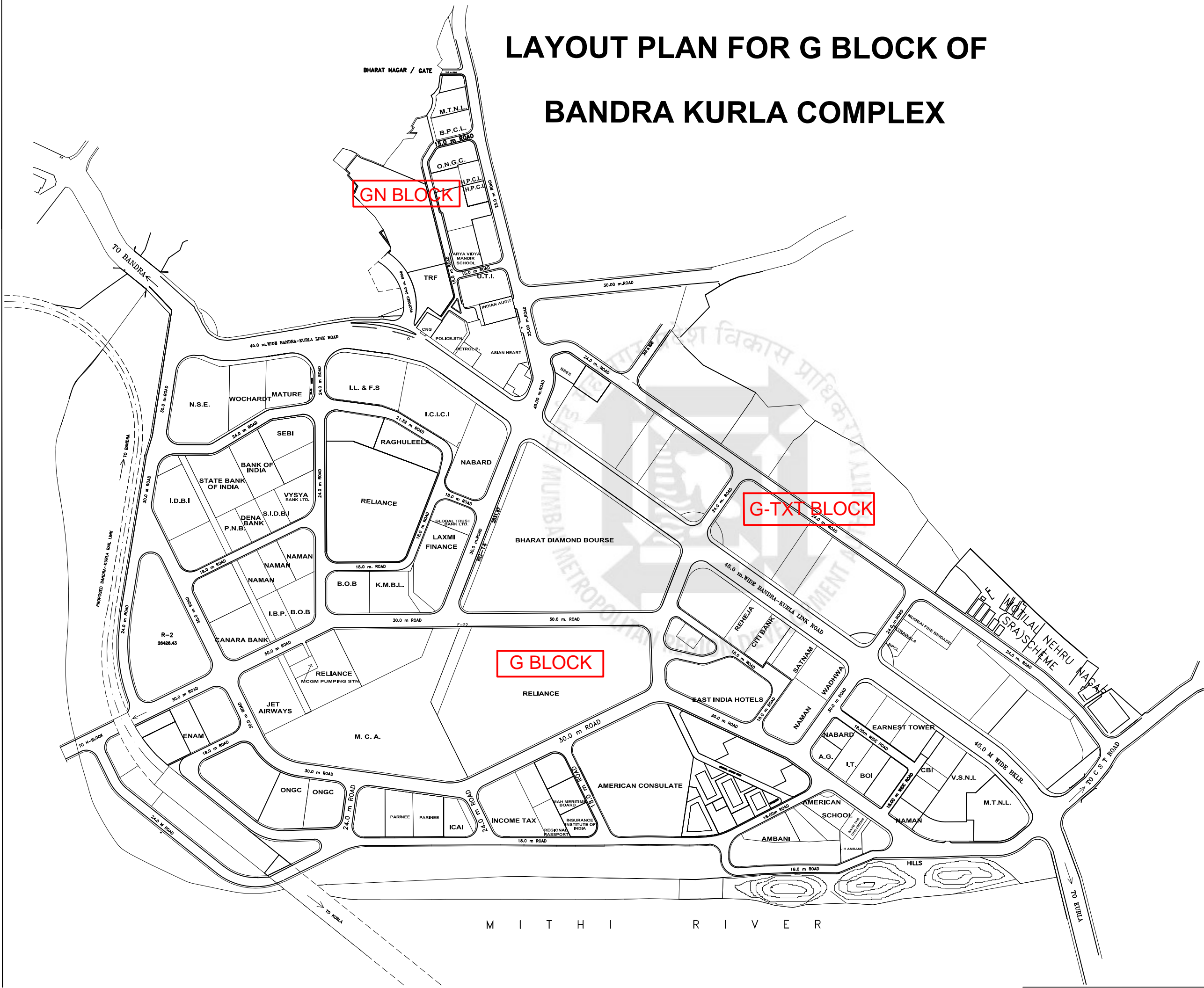
M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX  
BANDRA (E)

# PROPOSED PARKING LAYOUT PLAN FOR E BLOCK OF BANDRA KURLA COMPLEX



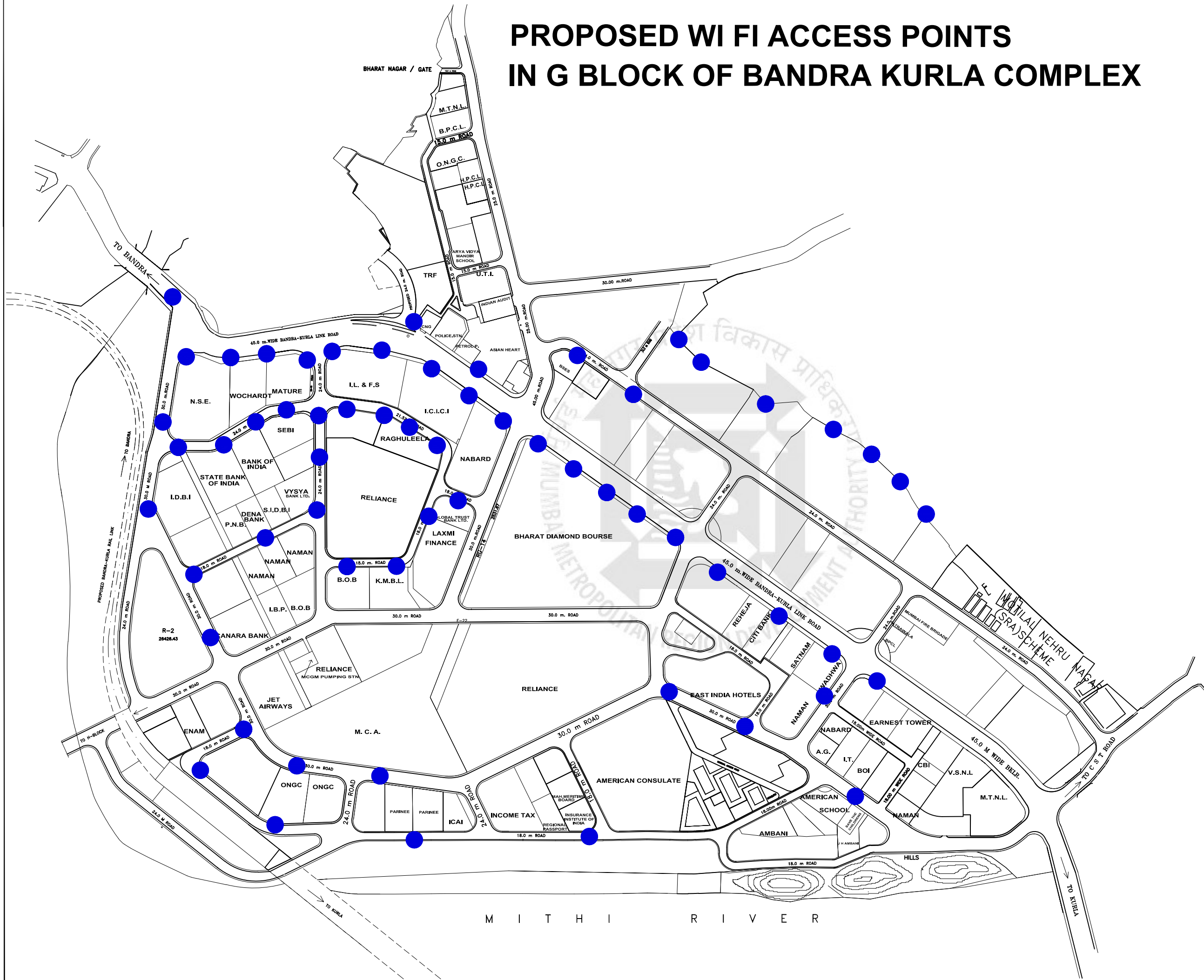
<b>TITLE</b> PROPOSED PARKING LOCATIONS FOR E BLOCK OF BKC	
<b>DESCRIPTION</b>	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT THEIR WRITTEN PERMISSION
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE PROPOSED PARKING LOCATIONS FOR E BLOCK OF BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
<b>LEGEND</b>	
	PROPOSED PARKING LOCATIONS
<b>PROJECT</b> SMART BKC 1.0 <b>DRAWING NUMBER</b> E 10	
<b>SCALE:- 1:2500</b> 	
<b>CLIENT</b> M.M.R.D.A.	
<b>PURPOSE AND DATE OF ISSUE:</b> SMART BKC 1.0 RFP DRAWINGS JULY 2015	
<b>M.M.R.D.A.</b> TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14,C-15 ,BANDRA-KURLA COMPLEX BANDRA (E)	

# LAYOUT PLAN FOR G BLOCK OF BANDRA KURLA COMPLEX



<b>TITLE</b>	
LAYOUT OF G,GN&G-TXT BLOCK BANDRA-KURLA COMPLEX	
<b>DESCRIPTION</b>	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE LAYOUT AND BUILDING NAMES FOR G BLOCK IN BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE M.S.I IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
<b>SCALE:- 1:2500</b>	
<b>PROJECT</b>	SMART BKC 1.0
<b>DRAWING NUMBER</b>	G 01
<b>CLIENT</b>	M.M.R.D.A.
<b>PURPOSE AND DATE OF ISSUE:</b> SMART BKC 1.0 RFP DRAWINGS JULY 2015	
<b>M.M.R.D.A.</b> TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX BANDRA (E) MUMBAI-400 051	


# PROPOSED WI FI ACCESS POINTS IN G BLOCK OF BANDRA KURLA COMPLEX



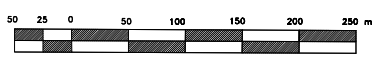
TITLE  
PROPOSED WI FI ACCESS POINTS IN  
G BLOCK OF BANDRA KURLA COMPLEX

- DESCRIPTION
- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT THEIR WRITTEN PERMISSION
  - 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
  - 3 THE DRAWING REPRESENTS PROPOSED WI-FI ACCESS POINT LOCATIONS IN G BLOCK OF BKC
  - 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

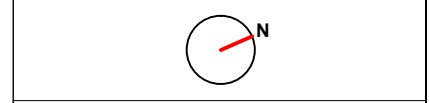
LEGEND

 WI FI ACCESS POINTS

SCALE:- 1:2500



PROJECT SMART BKC 1.0  
DRAWING NUMBER G 02

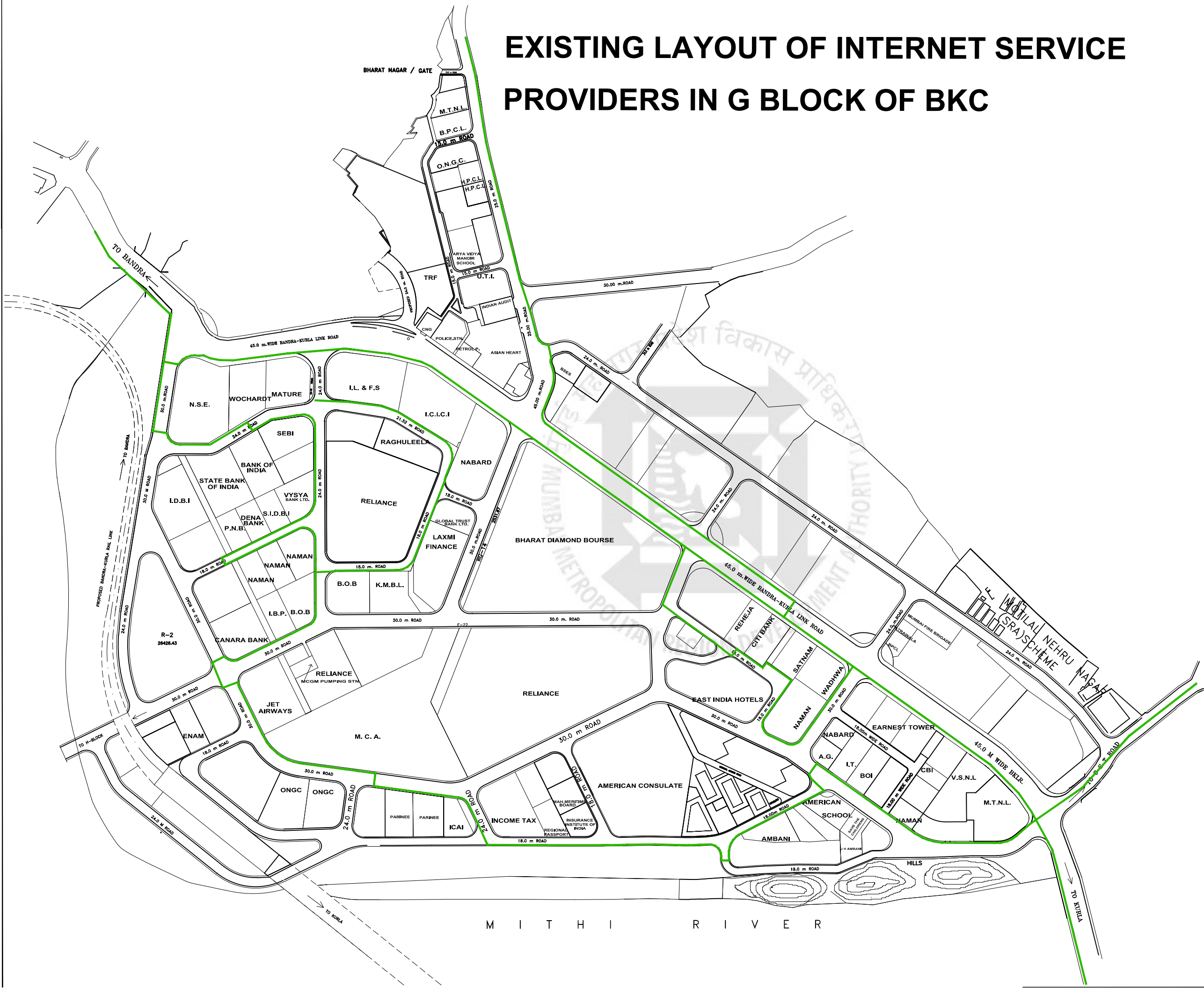


CLIENT  
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14, C-15, BANDRA-KURLA COMPLEX  
BANDRA (E)  
MUMBAI-400 051

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN G BLOCK OF BKC

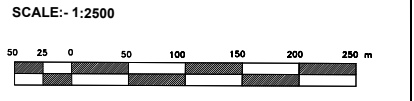


TITLE  
ISP LAYOUT OF G BLOCK OF  
BANDRA KURLA COMPLEX

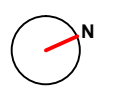
- DESCRIPTION
- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
  - 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
  - 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF VARIOUS INTERNET SERVICE PROVIDERS (AIRTEL) FOR G BLOCK IN BKC
  - 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

LEGEND

AIRTEL



PROJECT SMART BKC 1.0  
DRAWING NUMBER G 03

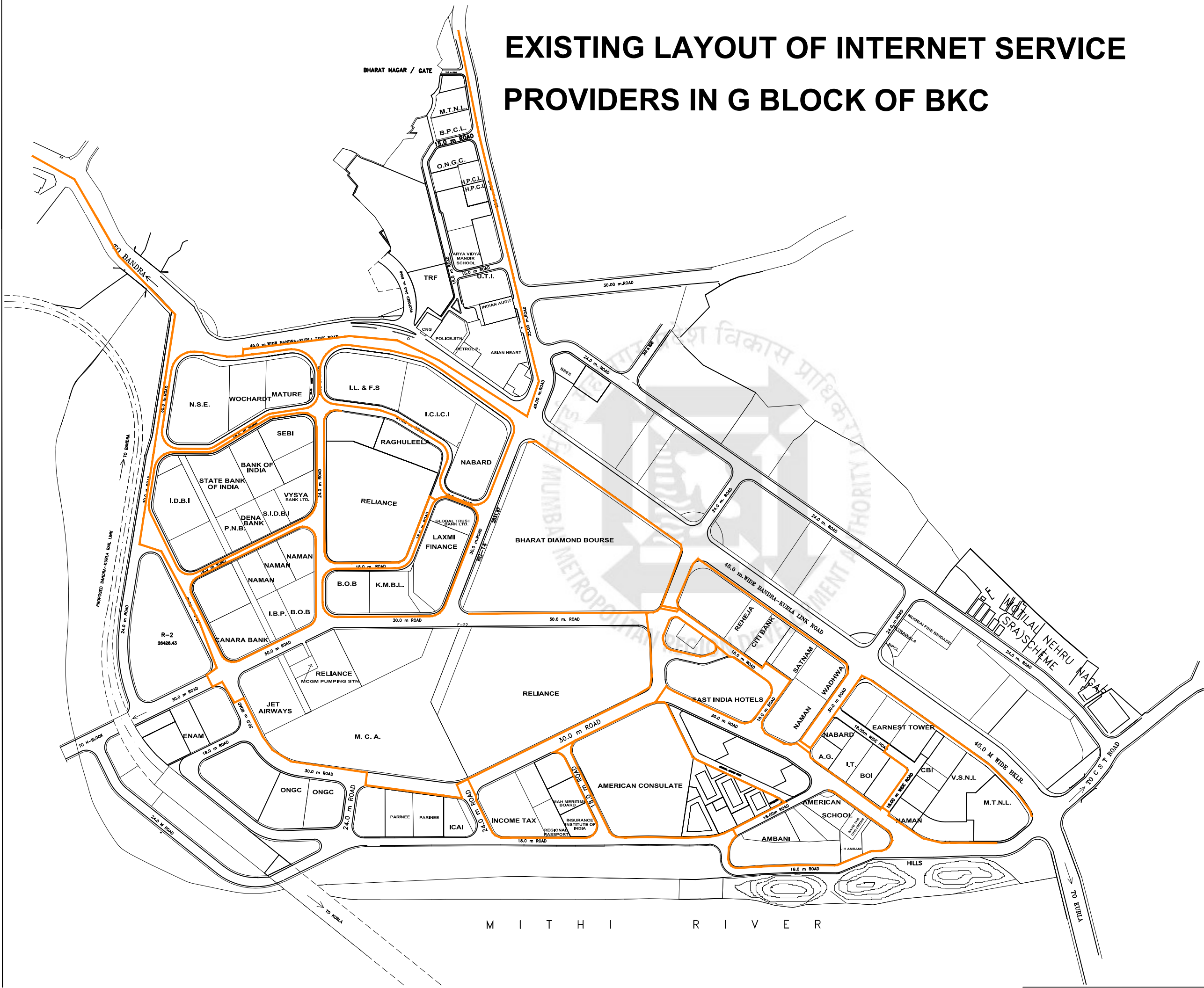



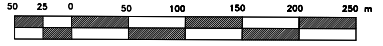

CLIENT  
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JULY 2015

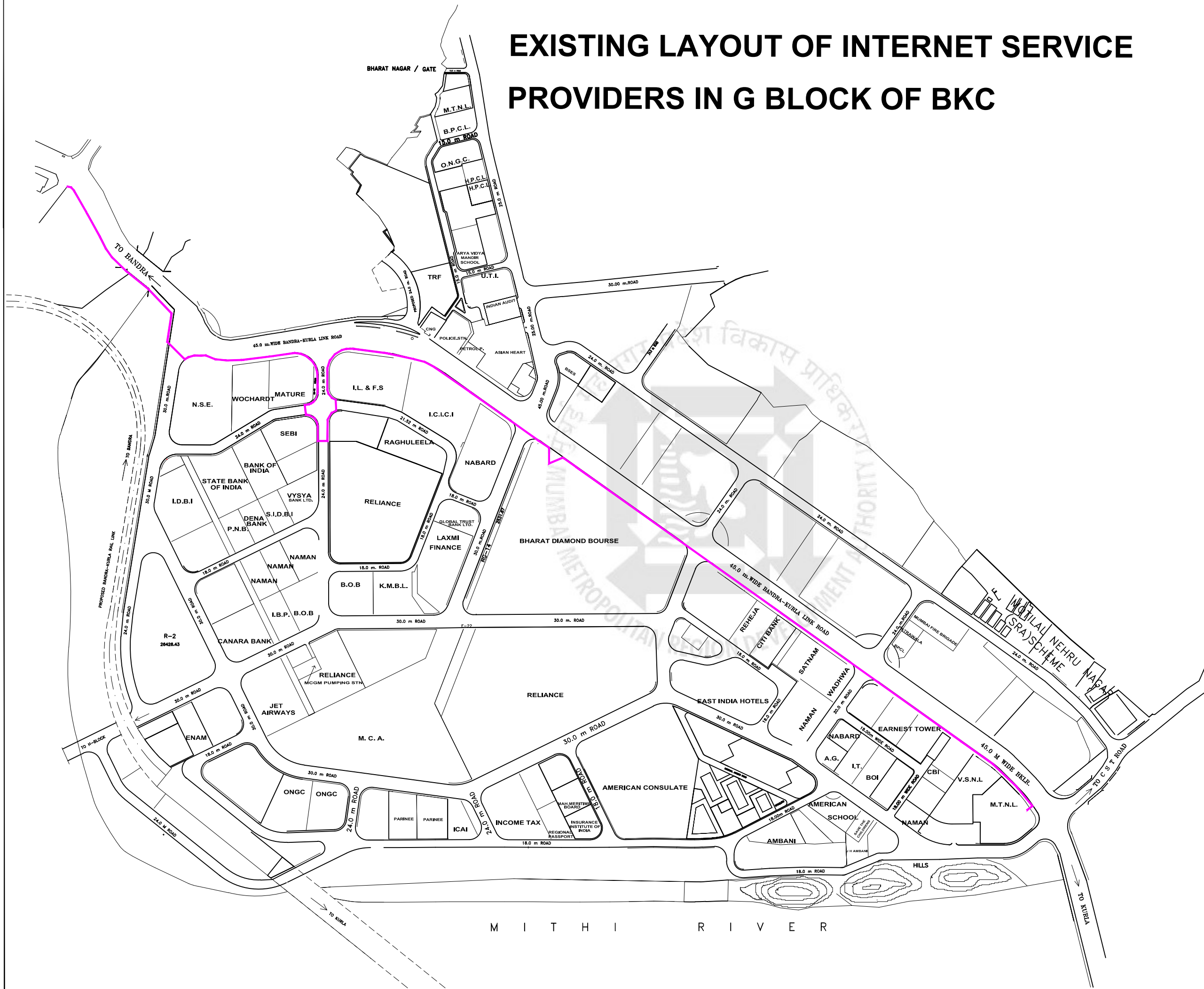
M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX  
BANDRA (E)  
MUMBAI-400 051



# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN G BLOCK OF BKC



TITLE	
ISP LAYOUT OF G BLOCK OF BANDRA KURLA COMPLEX	
DESCRIPTION	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE EXISTING LAYOUT OF VARIOUS INTERNET SERVICE PROVIDERS (VODAFONE) FOR G BLOCK IN BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
LEGEND	
	VODAFONE
SCALE:- 1:2500	
	
PROJECT	SMART BKC 1.0
DRAWING NUMBER	G 04
	
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX BANDRA (E) MUMBAI-400 051	

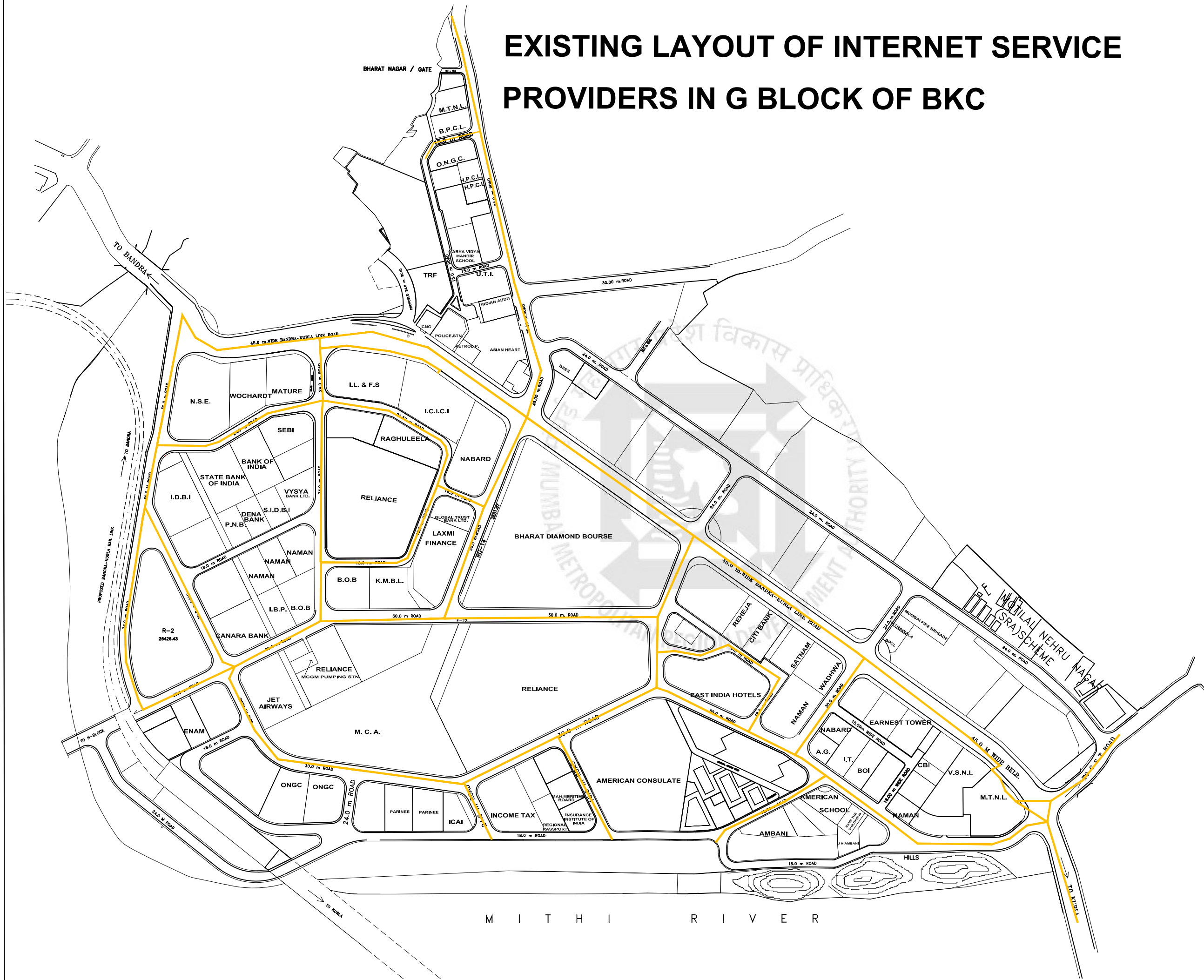
# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN G BLOCK OF BKC


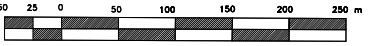



TITLE	
ISP LAYOUT OF G BLOCK OF BANDRA KURLA COMPLEX	
DESCRIPTION	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE EXISTING LAYOUT OF VARIOUS INTERNET SERVICE PROVIDERS (RELIANCE) FOR G BLOCK IN BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
LEGEND	
	RELIANCE
SCALE:- 1:2500	
PROJECT	SMART BKC 1.0
DRAWING NUMBER	G 05
	
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX BANDRA (E) MUMBAI-400 051	

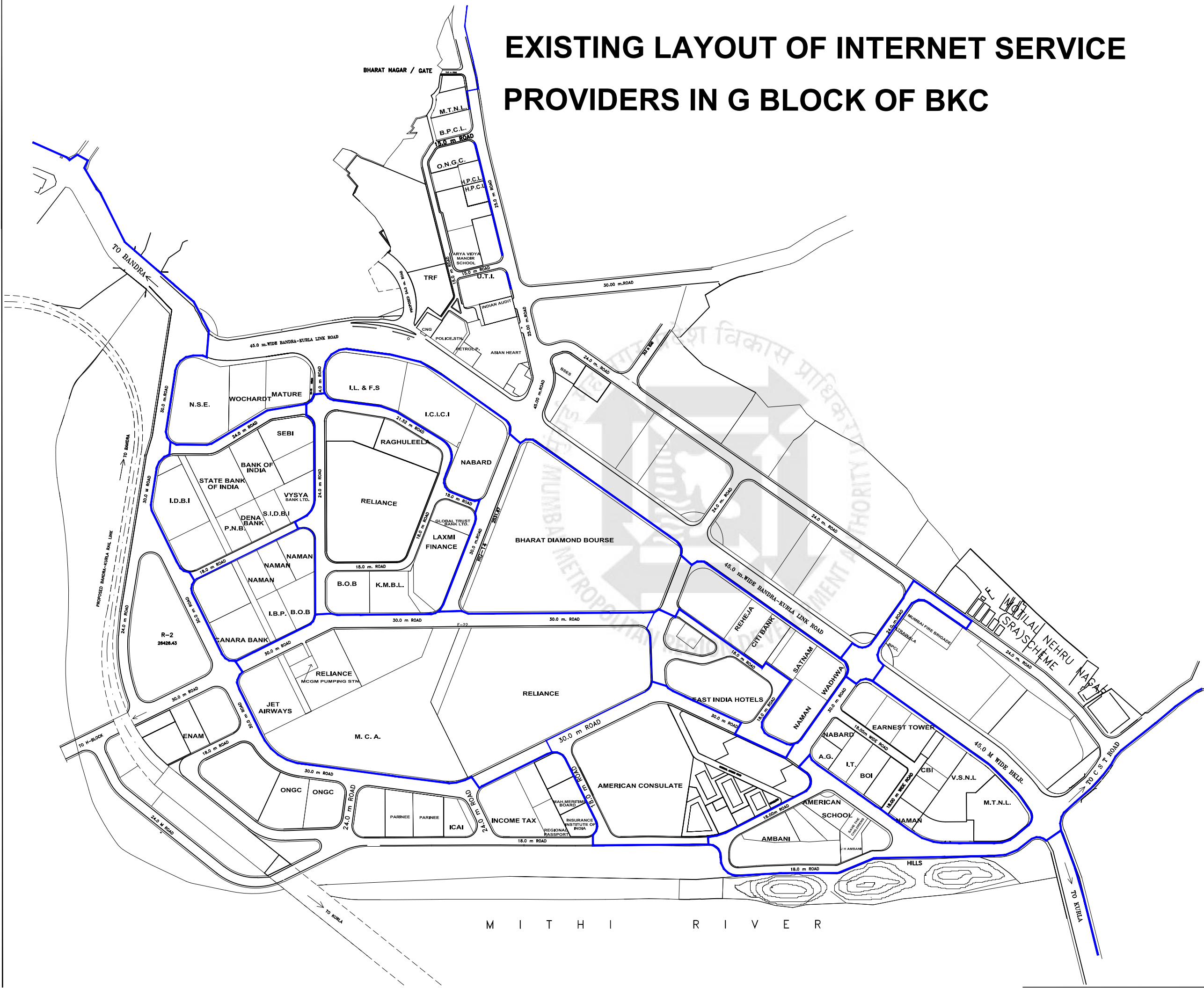



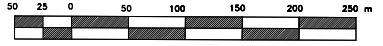

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN G BLOCK OF BKC



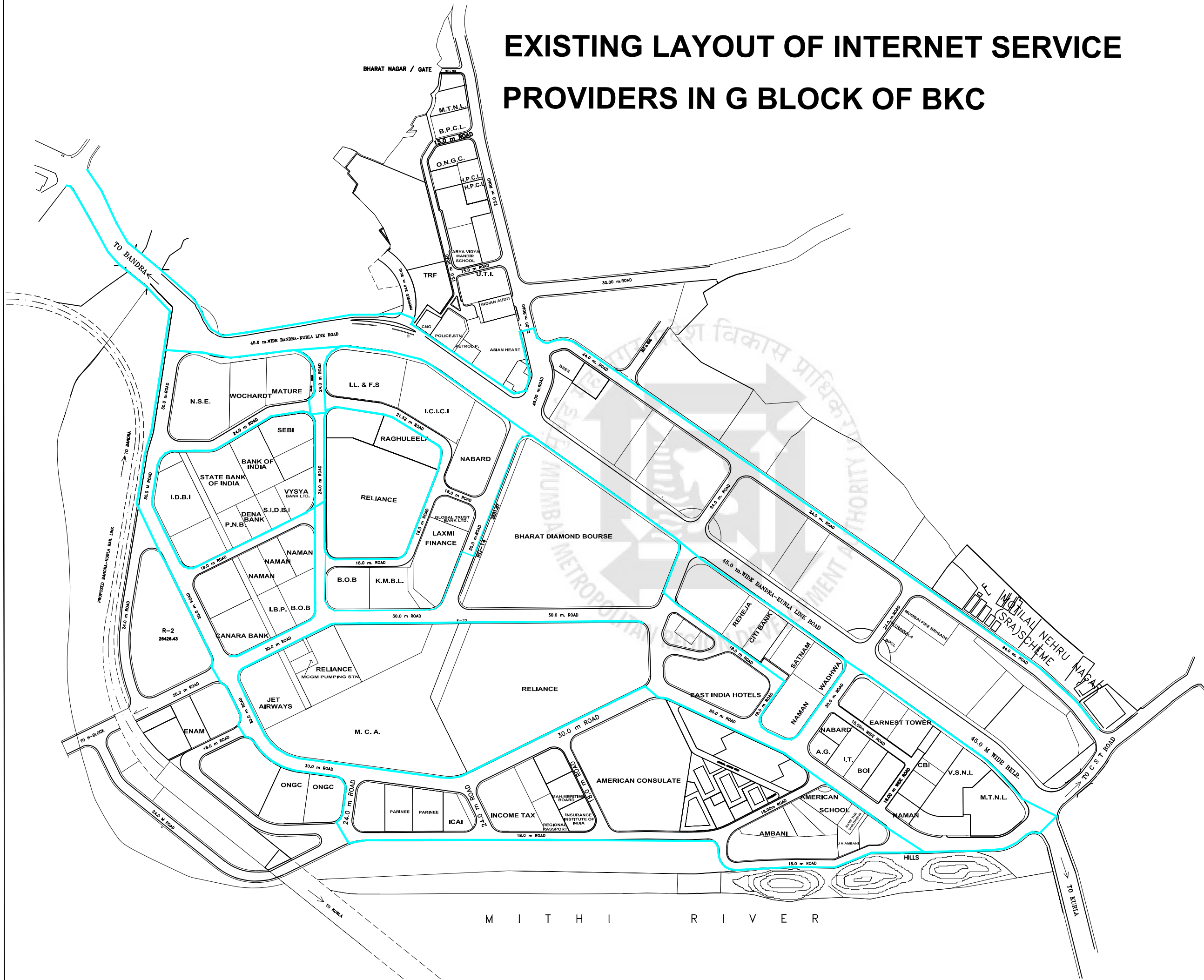
TITLE	
ISP LAYOUT OF G BLOCK OF BANDRA KURLA COMPLEX	
DESCRIPTION	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA.
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE EXISTING LAYOUT OF VARIOUS INTERNET SERVICE PROVIDERS (MTNL) FOR G BLOCK IN BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
LEGEND	
	MTNL
SCALE:- 1:2500	
	
PROJECT	SMART BKC 1.0
DRAWING NUMBER	G 06
	
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14,C-18, BANDRA-KURLA COMPLEX BANDRA (E) MUMBAI-400 051	

# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN G BLOCK OF BKC



TITLE	
ISP LAYOUT OF G BLOCK OF BANDRA KURLA COMPLEX	
DESCRIPTION	
1	THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
2	AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
3	THE DRAWING REPRESENTS THE EXISTING LAYOUT OF VARIOUS INTERNET SERVICE PROVIDERS (RELIANCE JIO) FOR G BLOCK IN BKC
4	THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY
LEGEND	
	RELIANCE JIO
SCALE:- 1:2500	
	
PROJECT	SMART BKC 1.0
DRAWING NUMBER	G 07
	
CLIENT	M.M.R.D.A.
PURPOSE AND DATE OF ISSUE: SMART BKC 1.0 RFP DRAWINGS JULY 2015	
M.M.R.D.A. TOWN AND COUNTRY PLANNING DIVISION PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX BANDRA (E) MUMBAI-400 051	


# EXISTING LAYOUT OF INTERNET SERVICE PROVIDERS IN G BLOCK OF BKC



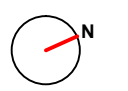
TITLE  
ISP LAYOUT OF G BLOCK OF  
BANDRA KURLA COMPLEX

- DESCRIPTION
- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
  - 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
  - 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF VARIOUS INTERNET SERVICE PROVIDERS (TTL-TCL) FOR G BLOCK IN BKC
  - 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

LEGEND  
 TTL-TCL

SCALE:- 1:2500  


PROJECT SMART BKC 1.0  
DRAWING NUMBER G 08

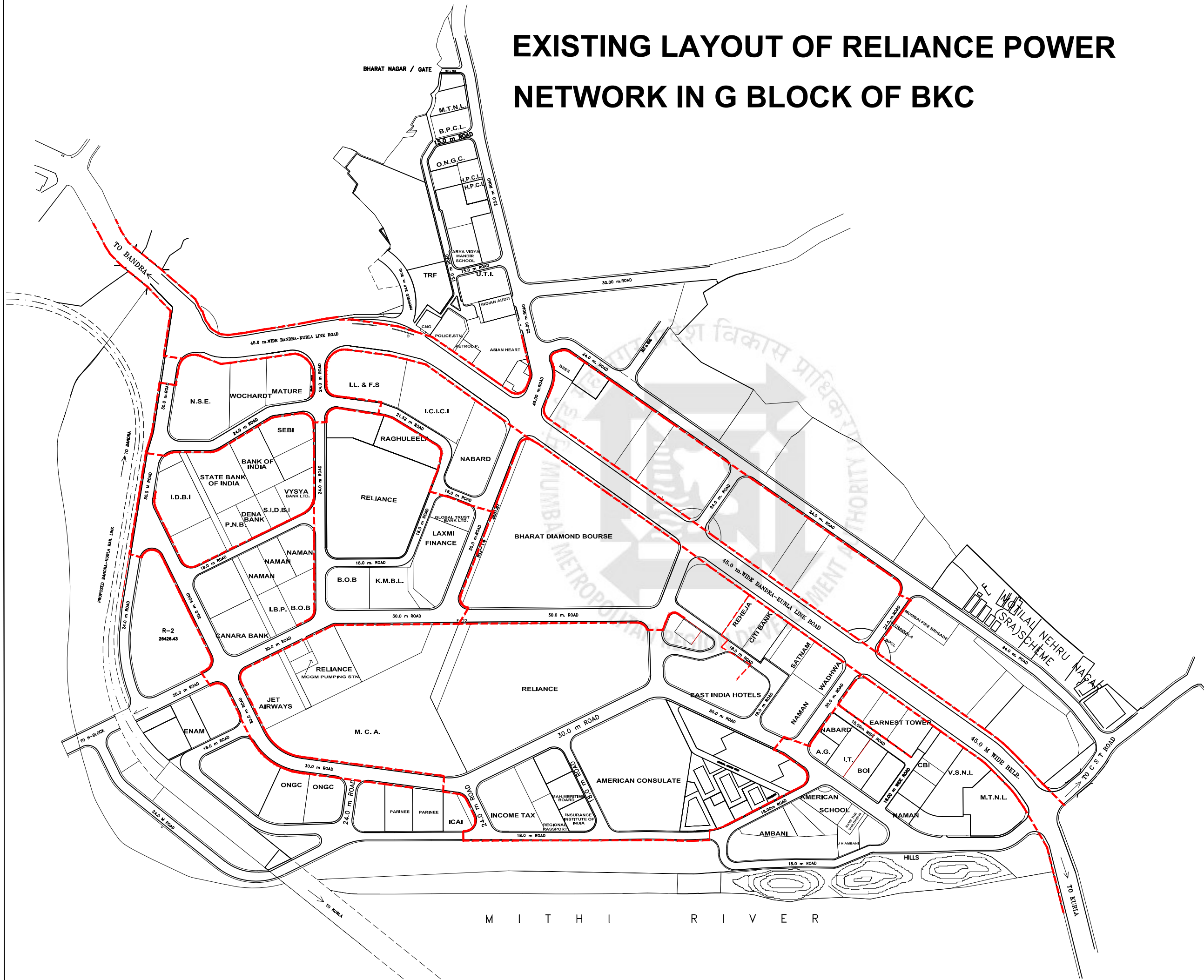


CLIENT  
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX  
BANDRA (E)  
MUMBAI-400 051


# EXISTING LAYOUT OF RELIANCE POWER NETWORK IN G BLOCK OF BKC




TITLE  
ISP AND POWER NETWORK LAYOUT  
FOR G BLOCK OF BKC

- DESCRIPTION
- 1 THIS DRAWING IS THE PROPERTY OF MMEDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMEDA
  - 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
  - 3 THE DRAWING REPRESENTS THE EXISTING LAYOUT OF RELIANCE POWER NETWORK FOR G BLOCK IN BKC
  - 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY, THE MSH IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

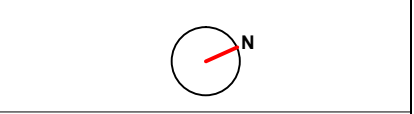
LEGEND

 RELIANCE ENERGY ELECTRIC NETWORK

SCALE:- 1:2500



PROJECT SMART BKC 1.0  
DRAWING NUMBER G 09



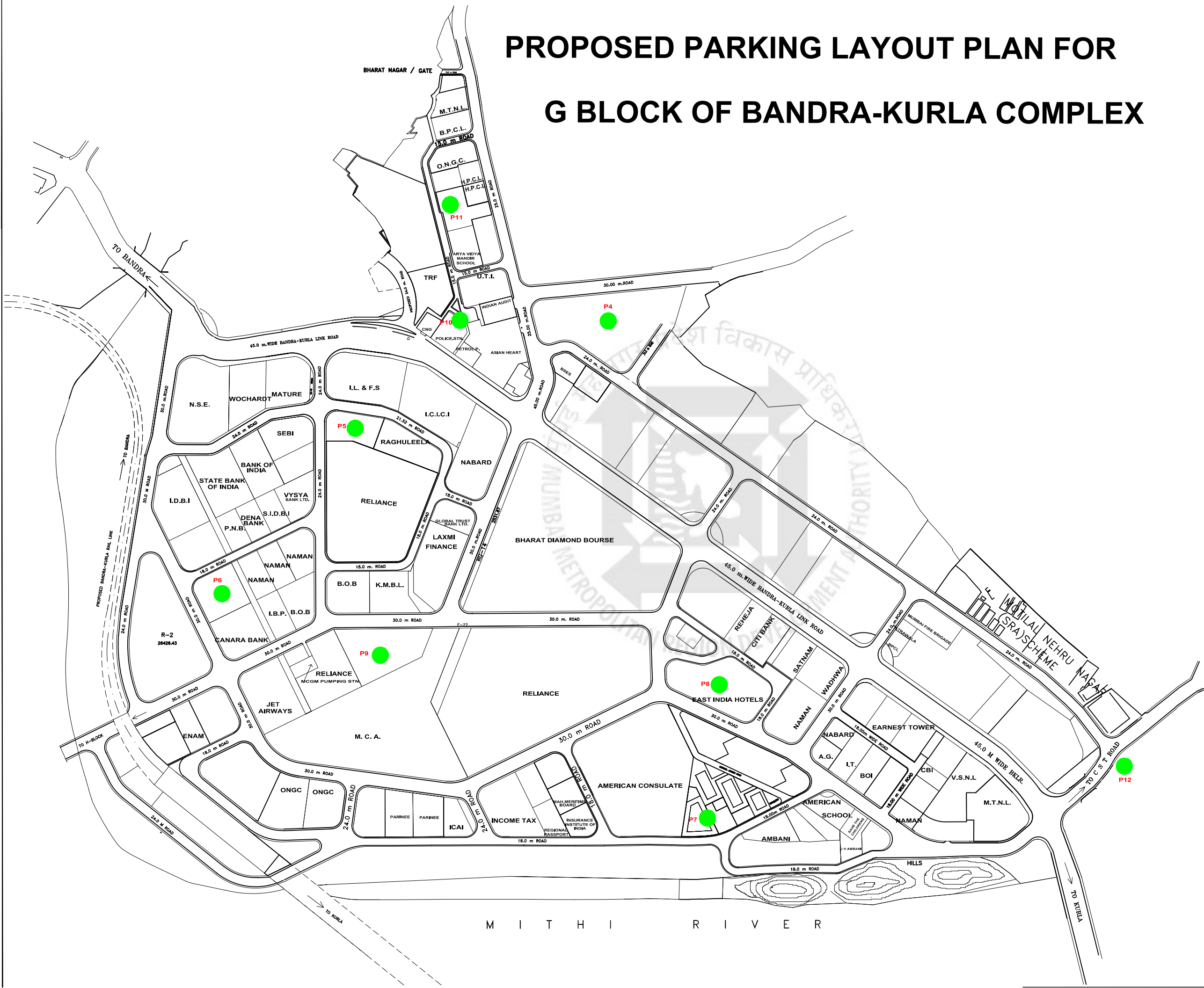
CLIENT  
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JULY 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX  
BANDRA (E)  
MUMBAI-400 051



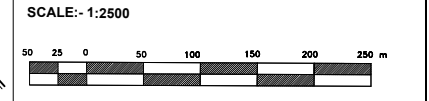
# PROPOSED PARKING LAYOUT PLAN FOR G BLOCK OF BANDRA-KURLA COMPLEX



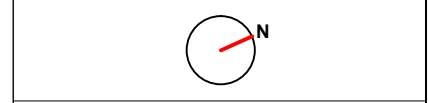
TITLE  
PROPOSED PARKING LOCATIONS FOR  
G BLOCK OF BANDRA-KURLA COMPLEX

- DESCRIPTION
- 1 THIS DRAWING IS THE PROPERTY OF MMRDA AND SHALL NOT BE REPRODUCED, USED OR COPIED WITHOUT WRITTEN PERMISSION FROM MMRDA
  - 2 AREAS ARE IN SQ.MTRS UNLESS OTHERWISE STATED
  - 3 THE DRAWING REPRESENTS THE PROPOSED PARKING LOCATIONS FOR G BLOCK IN BKC
  - 4 THIS IS A PRELIMINARY MAP FOR REFERENCE ONLY. THE MSI IS RESPONSIBLE FOR CARRYING OUT THE DETAILED SURVEY

LEGEND  
● PROPOSED PARKING LOCATIONS



PROJECT SMART BKC 1.0  
DRAWING NUMBER G 11

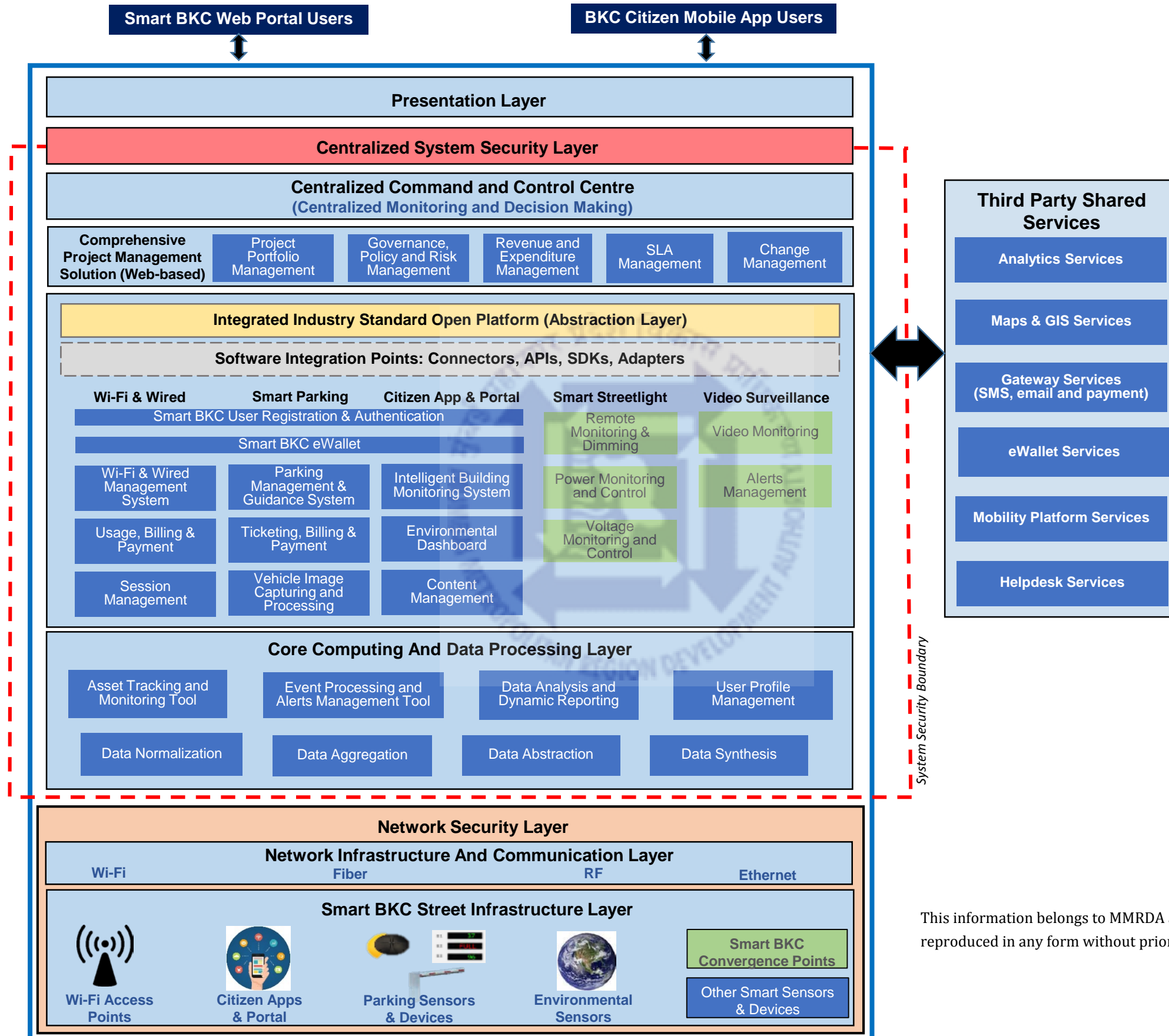


CLIENT  
M.M.R.D.A.

PURPOSE AND DATE OF ISSUE:  
SMART BKC 1.0 RFP DRAWINGS  
JUNE 2015

M.M.R.D.A.  
TOWN AND COUNTRY PLANNING DIVISION  
PLOT NO. C-14, C-18, BANDRA-KURLA COMPLEX  
BANDRA (E)  
MUMBAI-400 051

# OVERVIEW OF SMART BKC 1.0 LOGICAL ARCHITECTURE



This information belongs to MMRDA and cannot be publicly used, reproduced in any form without prior consent of MMRDA.



**END OF RFP**