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INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Ref: MTHL/GC/MMRDA/Submsn/2017/055

Date: 01 Aug. 2017

To,
The Engineer-in-Chief
Engineering Division
Mumbai Metropolitan Regional Development Authority (MMRDA)
2nd Floor, New MMRDA Building,
Plot No R-05, R-06 & R-12, 'E' Block
Bandra Kurla Complex, Bandra (East), Mumbai – 400 051

Project: Mumbai Trans Harbour link Project (MTHL)

Subject: Quarterly Performance Report (QPR) No.1

Dear Sir,

With reference to above Subject We are pleased to submit the MTHL-GC Quarterly Progress Report copy for the Month of Dec-17 to Jul-17 for format approval, this report format is compiled as per GC-RFP and JAIC Project Format. Kindly review and Approve the Format.

Assuring you of our best services always.

Thanking you

Yours truly,

Raja R. Penmatsa

Rama Raju Penmatsa
Dy. Team Leader
General Consultants (MTHL)



**Quarterly Progress Report
No.1**

on

**Mumbai Trans Harbour Link Project
For the Quarter**

Ending 31st July 2017

<p>Quarterly Project Status Report No. 1 On Mumbai Trans Harbour Link Project For the Quarter Ending 30 July 2017 Loan Agreement No. ID – P – 192& ID-P-207</p>
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Organization Information

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Shri. Urvinder Pal Singh Madan, IAS, Metropolitan Commissioner, MMRDA
	Contact Address	M.M.R.D.A. OFFICE BUILDING, BANDRA-KURLA COMPLEX, C-14 & 15, E BLOCK BANDRA (EAST), MUMBAI - 400 051 Phone : +91-22-2659 0001 / 4000 Fax No. : +91-22-2659 1264
Executing Agency	Mumbai Trans Harbour Link Project	
	Headed by :	Chief Engineer Mumbai Trans Harbour Link Project
	Contact Address	

Outline of Loan Agreement

Source of Finance	JICA : ¥ 276,333Million ¥ 144,795Million 1 st Part Loan ¥ 131,538 Million 2 nd Part Loan
Terms and Conditions	For JICA - Interest Rate: 1.2% p.a. and 0.1% commitment charges on the undisbursed loan from the date of effectuation of loan agreement. - Repayment Period: 30 years, including 10 years of grace period. - Trying Status: General Untied.

1: Project Description (Relevance)

1-1 Project Objective

Original:

To improve connectivity in Mumbai Metropolitan region by construction the Mumbai Trans Harbour Link connecting Mumba with Navi Mumbai, thereby contributing to mitigation of traffic congestion and promoting regional economic development.

The Project is an effort to mitigate ever growing transportation demand in Mumbai and its surrounding and it will substantially reduce traffic congestion Mumbai City Traffic. This Mumbai Trans Harbour link Project need for the project arises from the undisputed fact that Greater Mumbai is already overcrowded and congested. The only solution to prevent the existing conditions from worsening is to expand on to the mainland, which to a limited extent, has already occurred in the northern half of Navi Mumbai. This is however, insufficient, and a major push to the development of the rest of Navi Mumbai can be given only by providing quick access to the southern half of Navi Mumbai and the southern half of Navi Mumbai is having 2,500 hectares of land, which will benefit most in terms of commuting time by the construction of the Link between mainland and south of Mumbai. When completed, Mumbai Trans Harbour Link project (MTHL) will reduce the distance between the island and the mainland and travel time

Actual (P/R, PCR)
No Change

1-2 Necessity of the Project

Consistency with development policy, sector plan, national/regional development plans and demand of target group and recipient country, conforming to the national and state laws.

Original:

Benefits from MTHL

- Savings in travel times for commuters from Mumbai to Navi Mumbai.
- Improved comfort and accessibility between the island and the mainland.
- Reduced operating costs of vehicles due to lesser congestion.
- Smooth traffic flow from Navi Mumbai airport to Mumbai Island.
- Accelerated economic development of Navi Mumbai and nearby regions
- Greater economic integration of Mumbai island with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug
- Environment improvement and reduced pollution levels
- Improved safety due to reduction in accidents
- Improvement in trade competitiveness through faster and improved logistics
- Accelerated growth of Navi Mumbai.
- Decongestion of Mumbai Island and dispersal of population to Navi Mumbai region & beyond

Mumbai Transport Sector in India

Necessity of the Project

Although the urbanization in India has been rapidly progressing, infrastructure

development in the urban areas has not caught up its progress. Particularly the have traffic congestion in the urban areas due to a lack of road network hinders the economic development. Given this situation, the necessity of comprehensive infrastructure development plan was given the importance for the growing economic developments in the 12th Five –years plan (April 2012 to Mar 2017).

Mumbai metropolitan region which includes Mumbai and Navi Mumbai, has about 18.4 million people is population as of 2011(census 2011) and population reaches 20.694 People per Square km in the centre of Mumbai, which is one of the most overpopulation and high density cities in the world. Mumbai the narrow stretch of land that has traditional been the epicentre of India's commerce, has seen a steady increase in population in the last three decades despite obvious spatial constraints. Thus the development of Navi Mumbai has been identified as an urgent requirement for broad development in Mumbai Metropolitan region. The government of Maharashtra (GoM), of which Mumbai Metropolitan Region is under jurisdiction, has been facilitating various development plans particularly in Navi Mumbai area which stands at the opposite site of Mumbai across the Mumbai bay and still has specious area for development such as new international airport, Special Economic Zone (SEZ) and expansion of Jawaharlal Nehru Port in order to promote the sustainable economic development in Mumbai metropolitan region, Furthermore a lack of connection in Mumbai has stunted its growth. The GoM has given importance to construct the faster connection with Mumbai to Navi Mumbai International airport, Jawaharlal Nehru Port, Mumbai- Pune express way and Main hinter land, accordingly the Mumbai Trans Harbour Link (MTHL) has been identified as the important infrastructure to improve the connectivity between Mumbai and Navi Mumbai, and continue economic development in Mumbai Metropolitan Region.

1. Comprehensive Transportation Study (CTS) for MMR

The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region (MMR), which was guided by MMRDA and supported by World Bank, was completed in July 2008 over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless, integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor in MMR to take care of the varied travel demands of the region for the horizon period up to 2031. Accordingly, whereas the CTS recommended to developing the metro and suburban railway network in the Mumbai's, it also proposed to develop the highway network in the region . The MTHL has been regarded as the priority road for MMR for long time, considering its function and importance connecting between the Greater Mumbai and Navi Mumbai

To Promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL

Actual (P/R, PCR)
No Change

1-3 Rationale of the Project Design

Please describe your opinion regarding relevance of the project design in terms of project objective, timing scale (programme benefit) and technological (technical excellence).

Original:

Overall Design

The MTHL which is about 21.8 Km long road on the Sea across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai located in State of Maharashtra, is to be constructed with the approach sections interchanges, ITS(Intelligence Transport System) and the Other necessary facilities for full access-controlled motorway marine bridges.

Under IRC(India road Congress) SP:99-2013, the Width of each lane of the main road is 3.5 meters when the design speed is 100Km/h. according to the traffic demand forecast the large vehicle ratio will be up to as low as 9.4%(2002) the lane width at 3.5 meters will ensure adequate safety and road functions. The Shoulder width of bridge are to be 2.5 meters on each left and 0.75 meters on each right to meet requirements for design speed of 100 Kph.

MTHL structure comprises of mostly an elevated sea portion and partly elevated land portion with different bridge types and spans. PC box girder with 50 m span which is typically applied to general section (typical marine viaduct), since it is economical and easy to construct and maintain. On the land portion, the PC box girder with 30m span is also commonly applied to construct. As for the location in which long span bridge (150-180 m) is required to cross significant obstacles such as channels, pipelines and creeks, the steel box girder bridge with steel deck is propose to be adopted. In addition, the large block erection method to shorten construction period is proposed to be adopted.

The project is coded with three lanes of traffic in each direction. The reference toll is presented in the table below for each vehicle class in Year 2015 monetary value.

Base Toll (Rs) Level by Vehicle Class per Vehicle between Interchanges

Vehicle Type	Sewri-Shivaji Nagar	Shivaji Nagar-Chirle	Total
Car	180	60	240
Bus	420	130	550
LCV	240	70	310
HCV	420	130	550
MAV	600	180	780

Intelligent Transport Systems (ITS)

Toll Management System(TMS)

The toll management system introduced into MTHL which is a toll road shall collect tolls from all road users of MTHL. Two types of toll collection method will be adopted; Electronic Toll Collection (ETC) and Manual (paying in cash).

The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and the Manual lane equipment (cash collection) shall be installed to ETC lanes for backup to be able to cope at the time of trouble of ETC equipment failure.

Traffic management System

Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including

Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifer (ATCC) and Meteorological Observation System (MET), and Information dissemination System including Variable message Sign (VMS)

CCTV Cameras shall be installed at around three places per 1 Km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information. The information collected by these devices is transmitted to the Traffic Control Centre through the medium of an Optical fibre cable laid in MTHL

Contract Packages

Package-1 includes the Sewri Interchange on land on Mumbai side and the adjoining 10.380 km (CH 0+000 km to CH 10+380 km) bridge above sea/creek. The typical width of carriageway will be approximately 14 m for each way.

Package-2 includes about 7.8 km long bridge (CH 10+380 km to CH18+187 km) above sea/creek and Shivaji Nagar Interchange on land at the Navi Mumbai side. The typical width of carriageway will be approximately 14 m for each way.

Package-3 includes about 3.6 km long road bridge (CH18+187 – CH21+800) having interchanges at Shivaji Nagar, State Highway-54, National Highway-4B near Chirle and Rail-over-Bridges (RoB) at two locations in Navi Mumbai. The typical width of the highway will be approximately 14 m for each way.

Package-4 consisting of Intelligent Transport Systems (ITS) including Operation & Maintenance Facility and Equipment Installation for the Project. Bid for the Package-4 will be issued at a later stage.

Actual (P/R, PCR)
No Change

2.0 Project Implementation (Efficiency)

2-1 Project scope

Table 2.1 1a Comparison of Original and Actual location

Location	Original: (P/M)	Actual : (P/R and PCR)
	Mumbai metropolitan region, Stat of Maharashtra	

Table 2.1 1b Comparison of Original and Actual Scope

Items	Original	Actual
Construction work: 6-lane Marine Bridge Road (21.8 km)		
Package 1 Ch 0+000- 10+380 (10.380 Km)	<ul style="list-style-type: none"> - 1 no interchange - Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) - Viaduct Substructure (RC Concrete Structure) - Viaduct Foundation (Bored piles) - High way Lighting (Whole Sections. Low-positioned lighting for some sections) - Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)
Package 2 Ch 10+380- 18+190 (7.81 km)	<ul style="list-style-type: none"> - 1 no interchange - Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) - Viaduct Substructure (RC Concrete Structure) - Viaduct Foundation (Bored piles) - High way Lighting (Whole Sections. Low-positioned lighting for some sections) - Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)

Items	Original	Actual
Package3 Ch 18+190- 21+830 (3.64 Km)	<ul style="list-style-type: none"> - 2 no's interchange - Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder (for Railway Flyover) - Viaduct Substructure (RC Concrete Structure) - Viaduct Foundation (Bored piles) - High way Lighting (Whole Sections. Low-positioned lighting for some sections) - Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual : No Marine Portion in Package-3
Package 4 ITS (Intelligent Transport System)	<ul style="list-style-type: none"> - 1 Administrative Building - Toll Booths (1 for Main Alignment and each on and off ramps for 3 Interchanges) - Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-Cum-Classifer (ATCC), Variable Message Sign (VMS)) 	(P/R and PCR)
Consulting Service	<ul style="list-style-type: none"> - Tender Assistance - Construction Supervision - Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP) and Resettlement Action Plan (RAP) 	(P/R and PCR)

2-2 Implementation Schedule

The original project commissioning target From Sewri Interchange to Chirle Interchange at State Highway-54 Jun, 2022 will be achievable.

Table 2-2-1: Comparison of original and actual schedule in Stage 1

Items	MMRDA & JICA MoM	Project Implementation Program	Delay in months
Completion of land acquisition and Resettlement	November 2016	June 2018	NA
Employment of General Consultant	June 2016	December 2016	NA
Invite Main Tender for construction of Packag-1,2 &3	June 2016	January-17	NA
Award and Commencement of construction of Packag-1,2&3	January 2016	December 2017	NA
Completion of construction of Packag-3	June 2020	June 2021	NA
Completion of construction of Packag-1&2	June 2021	June 2022	NA
Invite Main Tender for construction of Packag-4	September 2018	September 2018	NA
Award and Commencement of ITP Package-4	July2019	July 2019	NA
Completion of ITP Package-4	April 2022	April 2022	NA
Commercial Operation Date	June 2021	June2022	NA

Attachment:

2.2.2 Reasons for any changes of the schedule and their effects in the Project

**Actual (P/R and PCR)
 No Change**

2.3 Project Cost to be aligned with the Revised Project Cost Estimate for clear interpretation and comments

This section will be updated after finalisation of Revised Estimate

2-3.1b: Comparison of Original and Actual Cost by year

* Fiscal Year starting in April and ending in March Unit: (All Figures: in Crores INR)

Breakdown of Cost	Original			Actual		
	JICA Portion	Others	Total	JICA Portion	Others	Total
Year	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr
FY2016-2017	15100.16	2743.06	17843.22	-	176.40	176.40
FY2017-2018						
Total			17843.22			176.40

2-3-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

To be updated after finalisation of Revised Cost Estimate

Actual (P/R, PCR)
 No Change

2-4 Organization for Implementation

2-4 Organization for Implementation

2-4-1 Executing Agency:

Organization's role, financial position, capacity, cost recovery etc.,

Organization Chart including the unit in charge of the implementation and number of employees.

Original:

Executing Agency:

Mumbai Metropolitan Region Development Authority (MMRDA)

The GoM appointed the MMRDA as the implementing/ executing agency of MTHL based on resolution dated 4th February, 2009.

MMRDA was established on 26th January, 1975 in accordance with the Mumbai Metropolitan Development Act, 1974 to make Mumbai Metropolitan Region (MMR) a destination for economic activity by promoting infrastructure and regional planning. MMRDA takes all the necessary measures, required from time to time, in an effective manner and be fully responsible for the Project. After completion of the Project, MMRDA continues to be responsible for the efficient operation and maintenance of the Project.

Organization's Role:

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR, all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc.,...

Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

The PIU will be in charge of the Projects. The PIU will be headed by Chief Engineer, comprising of 6 Division/cells (Finance Division, Social Development Cell, Engineering Division, Land Cell, Administrative Division and Environmental Cell), Supervision/ITS Consultant and support staff.

Procurement

MMRDA shall have to adopt the JICA's Standard Bidding Documents of the latest version, as stipulated in Section 4.01 (2) of "Guidelines for Procurement under Japanese ODA Loans.

Procurement of goods and services, except for consulting services, converted by the Japanese ODA Loan should be implemented in accordance with "Guidelines for Procurement under Japanese ODA Loans", dated in April 2012. Employment of consultants should be implemented in accordance with "Guidelines of Employment of Consultant under Japanese ODA Loans", dated in April 2012. "Principles of Procurement under the Project" is attached for brief explanation of the above Guidelines.

Actual, If charged: (P/R and PCR)

Annexure III Organizational Chart

2-4-2-2 Performance

Executive Summary

Package-1

- Tender document issued on 4th January 2017 for JICA Concurrence on the PQ qualified contractors
- Pre Bid meeting was held on 31st January 2017,
- MTHL received 1158 Nos of Pre Bid queries up to 30th Jun 2017, and GC prepared the response and issued Addenda Nos. -1,2,3,4 &5 to Bidder on 7th Jul 2017.
- 186 nos. Contractual/ Technical Addendum were issued to bidder after getting the concurrence of JICA.

- Technical & Financial Bids were Submitted by Bidders on 7th Jul 2017.
- 6 nos. of Bids were received
- Envelop A for Tender Fee & EMD were open 19th Jul 2017
- Technical Bid were opened on 25th Jul 2017
- GC Started the Technical Evaluation on 25th Jul 2017

Packag-2

- Tender document issued on 4th January 2017 for JICA Concurrence on the PQ qualified contractors
- Pre Bid meeting was held on 31st January 2017,
- MTHL received 1226 Nos of Pre Bid queries up to 30th Jun 2017, and GC prepared the response and issued Addenda Nos. -1,2,3,4 & 5 to Bidder on 7th July 2017.
- 183 nos. Contractual/ Technical Addendum were issued to bidder after getting the concurrence of JICA.
- Technical & Financial Bids were Submitted by Bidders on 7th Jul 2017
- 6 nos. of Bids were received
- Envelop A for Tender Fee & EMD were open 19th Jul 2017
- Technical Bid were opened on 25th Jul 2017
- GC Started the Technical Evaluation on 25th Jul 2017

Packag-3

- Tender document issued on 4th January 2017 to JICA's Concurrence PQ qualified contractors
- Pre Bid meeting is held on 31st January 2017,
- MTHL received 434 Nos of Pre Bid queries up to 30th Jun 2017, and GC prepared the response and issued Addenda Nos. -1,2,3,4 & 5 to Bidder on 7th July 2017.
- 172 nos. Contractual/ Technical Addendum were issued to bidder after getting the concurrence of JICA.
- Technical & Financial Bids were Submitted by Bidders on 17th Jul 2017
- 6 nos. of Bids were received
- Envelop A for Tender Fee & EMD were open 19th Jul 2017
- Technical Bid were opened on 25th Jul 2017
- GC Started the Technical Evaluation on 25th Jul 2017

Packag-4

No significant event.

Safety

A daily safety inspection checklist for construction equipment has been introduced through the project. The application of a common form of reporting of inspections allows Contractors safety performance to be subjected to rational analysis.

Construction Activity not Started

Time to Completion

- The Revenue Operation Dates as per agreed JAIC Report Jun2021 –
 - Overall completion Jun 2022

Procurement Status

Type	Contract	Awarded or Estimated Value (in Rs. Cr.)	Current	Contractors	Award Date as per July 2017	Status / Remarks
CIVIL	Packag-1 (CH 0+000 km to CH 10+380 km)	6,599.56	Tendering Stage	NA	Dec 2017	
	Packag-2 (CH 10+380 km to CH18+187 km)	4,902.90	Tendering Stage	NA	Dec 2017	
	Packag-3 (CH18+187 – CH21+800)	1,306.61	Tendering Stage	NA	Dec 2017	
ITS	Packag-4 Intelligent Transport System	144.26	Design Stage	NA	Aug 2019	

Financial Report

The following is a breakdown of JICA and MMRDA share of project Cost:

- i. Package-1 – 100% JICA Contribution – Budgeted INR 6,599.56 Cr
- ii. Package-2 – 100% JICA Contribution – Budgeted INR 4,902.90 Cr
- iii. Package-3 – 100% JICA Contribution – Budgeted INR 1,306.61 Cr.
- iv. Package-4 – 100% JICA Contribution – Budgeted INR 144.26 Cr

3: Benefit Derived from the Project (effectiveness)

3-1 Operational and physical condition

(This section will be developed when the operational plan is available)

Facilities	Description of condition	Problems, its Background and Remedial Action Plan
(P/R and PCR)	(P/R and PCR)	(P/R and PCR)

3-2 Precautions

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)

<p>3-2-1 General Issues</p> <p>1. Tolling Arrangement/ Toll Rate Fixed toll rate by the type of vehicle will be levied for the road users after the completion of the Project. An appropriate tolling policy/ rates will be finalized in consultation with the state government prior to the completion of Civil works.</p> <p>2. Operation and Maintenance MMRDA will appoint a toll collection agency during project implementation period. Thereafter, a single operation and maintenance contractor shall be appointed through open tendering process. MMRDA has confirmed to allocate adequate budget for engaging the contractors.</p>	<p>(P/R and PCR)</p> <p>No significant event.</p> <p>No significant event.</p>
<p>3-2-2 Environmental and Social Consideration</p> <p>a) Environmental Clearance Supplemental EIA has been approved by MMRDA, and disclosed on the website of JICA. Supplemental EIA report will be disclosed also on the website of MMRDA. Furthermore, renewed CRZ Clearance will be obtained in a timely manner. In accordance with the conditions for CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.</p>	<p>(P/R and PCR)</p> <ul style="list-style-type: none"> - MMRDA has Uploaded Supplemental EIA & SIA on MMRDA website. - CRZ Clearance has been obtained on 25th Jan 2016 - MMRDA has appointed (BNHS) Bombay Natural History Society for bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program for the MTHL project - Rs31.92 Cr. Has to be deposited to Mangrove foundation of State government for periodical disbursement to BNHS

b) Required Permits

MMRDA assured that it will obtain all the necessary permits in a timely manner.

Clearance Required	Approved authority	Responsible Organization	Obtained by When	Status
Mangrove cutting	Bombay High Court	MMRDA	Before start of Construction	Approval received from Bombay High Court on 28 th Nov 2016
Tree cutting	Respective tree authorities	MMRDA/Contractor	6-7 days before cutting trees	NA
Consent to establish	Maharashtra Pollution Control Board	MMRDA/Contractor	Before start of construction	NA

Clearance Required	Approved authority	Responsible Organization	Obtained by When	Status
Environmental Certificate under EIA Notification Law 2006*	Maharashtra State and/or Central MoEF	Contractor	When the contractor develops new quarry, borrow pits and camp site, if required	NA

3-3 Environmental and Social Impacts

Major environmental and social impacts have occurred during project implementation (e.g. involuntary resettlement, poverty reduction, impacts on the natural environment).

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
(1) Establishment of Effective Environmental and Social Cell in PIU MMRDA confirmed that Social Development Cell, Land Cell, and Environmental Cell had been set up, which consists of two officers at each cell.	Cell is being established by MMRDA (Annexure III, Organization chart)
(2) Rehabilitation and Land Acquisition Issues a) Affected Area and Pollution Due to the Project, 1,272 non-titleholders will be involuntary resettled, and 96.36 ha of land will be handed over by CIDCO. b) Entitlement Policy MMRDA prepared the entitlement matrix for resettlement of non-titleholders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010) ("Guidelines") (Attachment 2-5).	This activity has been carried out and CIDCO has approved the land that will be used for resettlement. The entitlement policy has been made and approved by the MMRDA
c) Fishermen Compensation Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen to be affected by the Project. Based on the result of the baseline survey, MMRDA will compensate them in accordance with compensation policy prior to the construction. Monitoring will be conducted by MMRDA with assistance of the Consultant to gasp the exact impact during construction and operation phase.	Though the primary baseline data has been collected and processed the verification of the same is to be carried out. Also, the fishermen who did not have complete fishing documents or any fishing documents are also to be included into the list of likely eligibility list for compensation. MMRDA will also be settling up a Grievance Redressal Cell for the fishermen who might have compensation related issues.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>d) Implementation Schedule The Implementation schedule for land acquisition, resettlement and rehabilitation.</p>	<p>MMRDA have Social development department through that all work of resettlement & rehabilitation is carried out independently</p>
<p>e) Grievance Redresses Mechanism Grievance Redresses Committee ("GRC") set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO.</p>	<p>Social development cell, the Chief dealing with the grievances raised by PAP's in Sewri Compensation committee has been formulated to address issues/ grievances of the plot owners at MBPT area, Sewri</p>
<p>f) Internal Monitoring Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Sewri Area: Project Affect person (PAP) Out of 200 PAP150 PAP had given their consent to shift to HDIL buildings. HDIL Building Kurla,- Construction work in Progress for PAP</p> <p>Navi Mumbai Area :1,272 non-titleholders are to be involuntary resettled, and 96.36 ha of land will be handed over by CIDCO for the same.</p>
<p>g) Qualitative Independent Evaluation An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>MMRDA have Social development department through that all work of resettlement & rehabilitation is carried out independently</p> <p>Rehabilitation process is in progress and report will be submitted to JICA</p>
<p>h) RAP Implementation Budget The amount of estimated resettlement and compensation budget is Rs. XX. MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation</p>	<p>-NA-</p>
<p>i) Environmental Management Plan ("EMP") The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary.</p>	<p>The EMP followed by MMRDA has to be coincide with the compliance points set by MOEF and MCZMA during the CRZ clearance of MTHL. This also includes adhering to the implementation of construction schedule has decided by MMRDA</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
j) Environmental Motoring Plan ("EMoP") MMRDA takes overall responsibility for implementation of EMop. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Motoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.	No construction Activity started
k) MMRDA committed to conduct the long-term monitoring of birds and its habitat in sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society.	- MMRDA has appointed (BNHS) Bombay Natural History Society for bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program for the MTHL project - Rs31.92 Cr. Has to be deposited to Mangrove foundation of State government for periodical disbursement to BNHS

3-4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and / or FIRR
 Supporting data for Computing EIRR and/ or FIRR

Indicators	Original (Yr 2015)	Present (yr 2017)	Target (Yr 2023) 2 Year After Commercial Operation
Annual Average Daily Traffic (PCU/day)		NA	45,700
Daily Average Travel Time (min)*1	61 min	NA	15.8 Min

*1 Section on Sewri-Chirle

EIRR	Original: 13.7% Cost : Project cot (excluding Price Escalation, Tax and Duties and Administration cost)O&M cot, Land Acquisition Benefit: Travel Time cost and Vehicle	Actual: (PCR) _____% Cost: Benefit: Project Life: NA

	Operation cost Project Life: 32 Years	
FIRR	Original: 1.77% Cost : Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 35 Years	Actual: (PCR) _____% NA

3.5 Monitoring Plan for the indicators

-Monitoring Methods, Section(s)/department(s) in Charge of monitoring, Frequency, the Ter and So Forth

Original: (P/M and PCR)

Monitoring Organization

PIU shall be In-Charge of Monitoring activates for the Project

Submission of QPR and PCR

The timely submission of the following documents is required by MMRDA.

- a) Quarterly Progress Report (QPR): The progress report for the Project should be submitted by MMRDA to JICA on quarterly basis, not later than 30 days after the concerned quarter, in the form of project status report (PSR) attached as per annex II: Updated status land Acquisition, milestone achieved with respect to action plan with timetable, the monitoring form for environmental and social consideration should also be appended to the PSR. In addition, MMRDA shall also forward the Monthly & Quarterly Progress Reports (including S-Curve Chart) Prepared by the Consultant to JICA India Office on regular basis till completion.
- b) Project Completion report (PCR): A project completion report should be submitted by MMRDA to JICA promptly, but in any event not later than six months afte completion of Project in the form of Project status Report (PSR) attached as per Annex II

Actual (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established and monitoring the Project

Submission of QPR and PCR

Quarterly Progress Report prepare and Submitted to JICA from July 2017 on every Quarterly Year

3.6 Achievement of the Project Objective

(Achievement of Project Objective shall be communicated after start of revenue Operation of the Project)

Actual (PCR)

NA

4. Operation and Maintenance (O&M) Sustainability

4.1 O&M and Management

Original:

Overall

MMRDA will be responsible for O&M after the Completion of the Project. O&M Budget will be allocated by MMRDA. O&M and increase in toll rate will be done in accordance with NHAI's manuals Such as "NHAI Works manuals"

Operation & Maintenance , Tolling and ITS

MMRDA will appoint Operation, Maintenance and Tolling Contractor for the road maintenance and Toll collection and allocated adequate budget for engaging the Contractor. The Budget for O&M will be provided by MMRDA

Actual:

No Change

4-2 O&M Cost and Budget

This will be reported when the outcome of the above study is available.

It is assumed that O&M cost in Feasibility Study Report, 2012 is one percent of the total project cost, amounts 1,010 million INR at the year of commercial operation days (COD). And it is annually escalated 5% of escalation.

5. Evaluation

5-1 JICA and Borrower / Executing Agency performance

JICA:
(PCR)

Borrower/Executing Agency:
(PCR)

5-2 Overall evaluation

(PCR)

5-3 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

Experience learnt

No Change

Annexure I

Land Acquisition Summary

Land Acquisition:

Sr.No	Description	Area	Status
1	Land acquisition ROW (permanent)		
1.1	Sewri side		
a)	Land Acquisition on Sewri Side for ROW (permanent)	10.089 Ha	<ul style="list-style-type: none"> • Handing over of ROW area and Casting yard area from MbPT by Oct 2017 • Out of 18 Plots at Sewri Gadi Adda, 5 plots are in vacated position and Notices to remaining 13 plot Lessees under MR& TP Act, 1966 Section 126, 1(a) & (b) are issued by MMRDA for land acquisition.
1.2	Navi mumbai side		
a)	Area handed over by CIDCO to MMRDA	98.77 Ha	MMRDA taken Possession
b)	Area remaining to be handed over by CIDCO	13.8 Ha	Handing over process is in progress
	Total Land for ROW	122.659 Ha	
2	Land allocation for Casting yards (Temporary)		
2.1	Sewri side		
a)	Package -1	15.17 Ha	Handing over of ROW area and Casting yard area from MbPT by Oct 2017
2.2	Navi Mumbai Side		
a)	Package -2	16 Ha	Both casting yard areas are handed over by CIDCO to MMRDA.
b)	Package -3	11 Ha	
	Total Area for Casting Yards	42.17 Ha	

Annexure II

Project Status and Procurement Summary

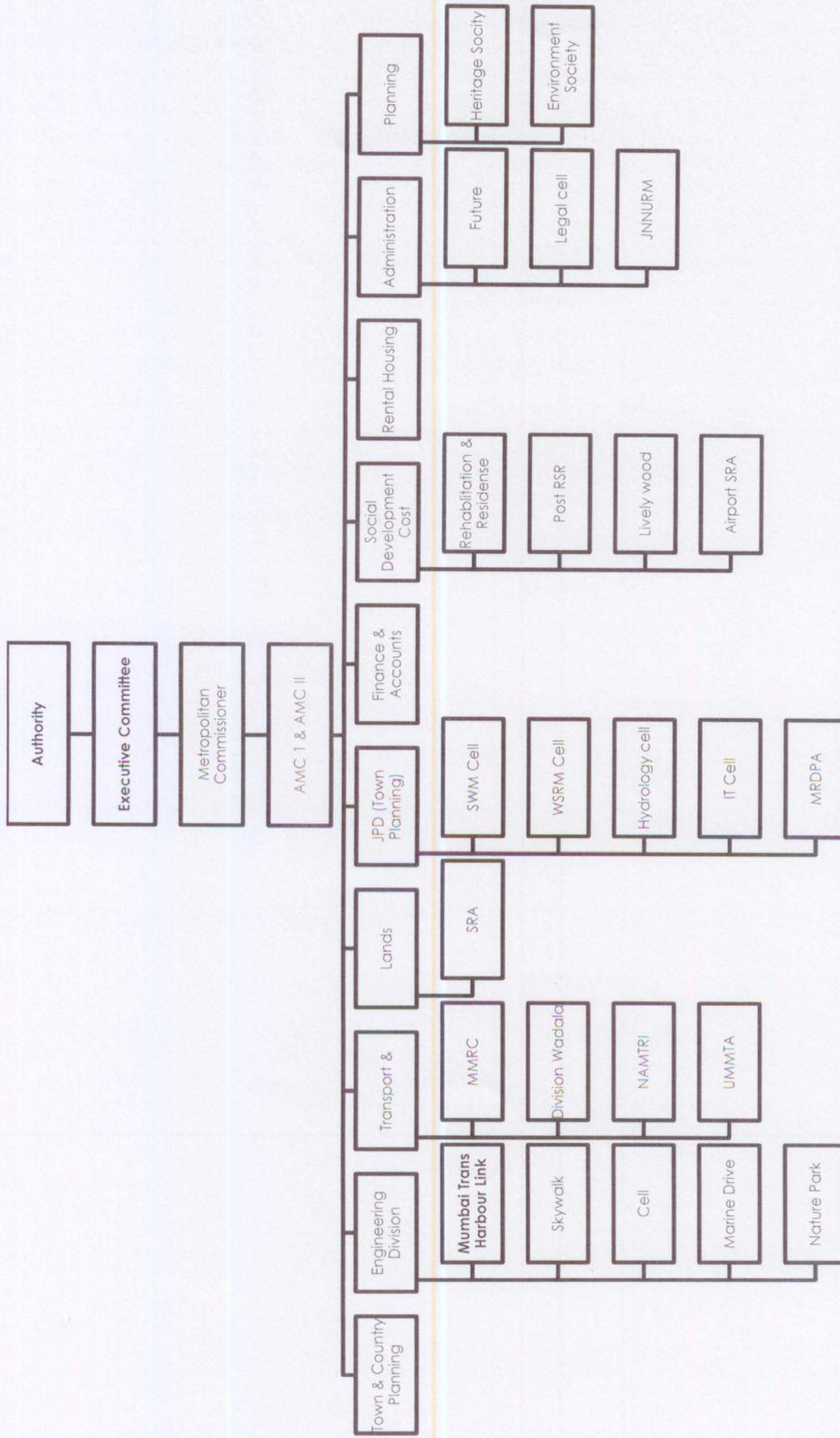
Type	Contract	Awarded or Estimated Value (in Rs. Cr.)	Current Status	Contractors	Award Date/Projected award date in - July 17	Original Date of completion	Actual Date of completion / Target date Jul-17	Physical % complete July 17	Present Financial Progress (Up To 31-07-2017)
CIVIL	Packag-1 (CH 0+000 km to CH 10+380 km)	6,599.56	Tendering		Dec 2017			0%	
	Packag-2 (CH 10+380 km to CH18+187 km)	4,902.90	Tendering		Dec 2017			0%	
	Packag-3 (CH18+187 - CH21+800)	1,306.61	Tendering		Dec 2017			0%	
ITS	Packag-4 Intelligent Transport System	144.26	Design Stage		Aug 2019			0%	

Annexure III

Organization chart

Authority Organization chart

Authority Organization chart



Annexure IV

JICA's Concurrence Procedure

Sl. No.	Brief description	Procurement procedure	Estimated Cost			JICA's Concurrence on					Contract
			Foreign Currency (Cr Rs)	Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Evaluation Criteria with PQ Documents	PQ Result	Tender Documents	Technical Bids	Bid Analysis and proposal for Award	
1.	Packag-1(CH 0+000 km to CH 10+380 km	ICB with PQ (2P)		6,599.56	6,599.56	JICA's review Completed on 9 th May 2106	JICA's review Completed 22 nd Dec 2016	JICA's review Completed On 4 th Jan 2017			
2.	Packag-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)		4,902.90	4,902.90	JICA's review Completed on 9 th May 2106	JICA's review Completed 22 nd Dec 2016	JICA's review Completed On 4 th Jan 2017			
3.	Packag-3 (CH18+187 – CH21+800)	ICB with PQ (2P)		1,306.61	1,306.61	JICA's review Completed on 9 th May 2106	JICA's review Completed 25 th Nov 2016	JICA's review Completed On 4 th Jan 2017			
4.	Packag-4 Intelligent Transport System	ICB with PQ (2P)		144.26	144.26						

Summary of Deployment of GC's Staff July 2017

Staff Level	Organisation	Home Office	Expatriate In India	Indian Personnel	Total
PA-1& PA2	AECOM	-	4	3	7
	PADECO	-	3	2	5
	Dar Dar Al Handasha	-	-	1	1
	T.Y.LIN	-	-	1	1
	Sub-total	0	7	6	13
PB-1,PB2 &PB3	AECOM	-	-	6	6
	PADECO	-	-	11	11
	Dar Dar Al Handasha	-	-	-	-
	T.Y.LIN	-	-	-	-
	Sub-total	0	0	17	17
Support Person	AECOM	-	-	2	2
	PADECO	-	-	7	7
	Dar Dar Al Handasha	-	-	-	-
	T.Y.LIN	-	-	-	-
	Sub-total	0	0	9	9
	Total	0	7	33	40

**Quarterly Progress Report
No.1**

on

**Mumbai Trans Harbour Link Project
For the Quarter**

Ending 31st July 2017

<p>Quarterly Project Status Report No. 1 On Mumbai Trans Harbour Link Project For the Quarter Ending 30 July 2017 Loan Agreement No. ID – P – 192& ID-P-207</p>
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Organization Information

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Shri. Urvinder Pal Singh Madan, IAS, Metropolitan Commissioner, MMRDA
	Contact Address	New M.M.R.D.A. OFFICE BUILDING, BANDRA-KURLA COMPLEX, Plot no. R5,6&12, E BLOCK BANDRA (EAST),MUMBAI - 400 051 Phone : +91-22-2659 0001 / 4000 Fax No. : +91-22-2659 1264
Executing Agency	Mumbai Trans Harbour Link Project	
	Headed by :	Engineer in Chief/ Chief Engineer Mumbai Trans Harbour Link Project
	Contact Address	New M.M.R.D.A. OFFICE BUILDING, BANDRA-KURLA COMPLEX, Plot no. R5,6&12, E BLOCK BANDRA (EAST),MUMBAI - 400 051 Phone : +91-22-2659 0001 / 4000 Fax No. : +91-22-2659 1264

Outline of Loan Agreement

Source of Finance	JICA : ¥ 276,333Million ¥ 144,795Million 1 st Part Loan ¥ 131,538 Million 2 nd Part Loan
Terms and Conditions	For JICA <ul style="list-style-type: none"> - Interest Rate: 1.2% p.a. and 0.1% commitment charges on the undisbursed loan from the date of effectuation of loan agreement. - Repayment Period: 30 years, including 10 years of grace period. - Trying Status: General Untied.

1: Project Description (Relevance)

1-1 Project Objective

Original:

To improve connectivity in Mumbai Metropolitan region by constructing the Mumbai Trans Harbour Link connecting Mumbai with Navi Mumbai, thereby contributing to mitigation of traffic congestion and promoting regional economic development.

The Project is an effort to mitigate ever growing transportation demand in Mumbai and its surrounding and it will substantially reduce traffic congestion of Mumbai City Traffic. This Mumbai Trans Harbour link Project need for the project arises from the undisputed fact that Greater Mumbai is already overcrowded and congested. The only solution to prevent the existing conditions from worsening is to expand on to the mainland, which to a limited extent, has already occurred in the northern half of Navi Mumbai. This is however, insufficient, and a major push to the development of the rest of Navi Mumbai can be given only by providing quick access to the southern half of Navi Mumbai and the southern half of Navi Mumbai is having 2,500 hectares of land, which will benefit most in terms of commuting time by the construction of the Link between mainland and south of Mumbai. When completed, Mumbai Trans Harbour Link project (MTHL) will reduce the distance between the island and the mainland as well as travel time

Actual (P/R, PCR)

No Change

1-2 Necessity of the Project

Consistency with development policy, sector plan, national/regional development plans and demand of target group and recipient country, conforming to the national and state laws.

Original:

Benefits from MTHL

- Savings in travel times for commuters from Mumbai to Navi Mumbai.
- Improved comfort and accessibility between the island and the mainland.
- Reduced operating costs of vehicles due to lesser congestion.
- Smooth traffic flow from Navi Mumbai airport to Mumbai Island.
- Accelerated economic development of Navi Mumbai and nearby regions
- Greater economic integration of Mumbai island with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug
- Environment improvement and reduced pollution levels
- Improved safety due to reduction in accidents
- Improvement in trade competitiveness through faster and improved logistics
- Accelerated growth of Navi Mumbai.
- Decongestion of Mumbai Island and dispersal of population to Navi Mumbai region & beyond

Mumbai Transport Sector in India

Necessity of the Project

Although the urbanization in India has been rapidly progressing, infrastructure

development in the urban areas has not caught up its progress. Particularly the have traffic congestion in the urban areas due to a lack of road network hinders the economic development. Given this situation, the necessity of comprehensive infrastructure development plan was given the importance for the growing economic developments in the 12th Five –years plan (April 2012 to Mar 2017). Mumbai metropolitan region which includes Mumbai and Navi Mumbai, has about 13.59 million people is population as of 2011(census 2011) and population reaches 17,400 People per Square km in the centre of Mumbai, which is one of the most overpopulation and high density cities in the world. Mumbai the narrow stretch of land that has traditional been the epicentre of India's commerce, has seen a steady increase in population in the last three decades despite obvious spatial constraints. Thus the development of Navi Mumbai has been identified as an urgent requirement for broad development in Mumbai Metropolitan region. The government of Maharashtra (GoM), of which Mumbai Metropolitan Region is under jurisdiction, has been facilitating various development plans particularly in Navi Mumbai area which stands at the opposite site of Mumbai across the Mumbai bay and still has specious area for development such as new international airport, Special Economic Zone (SEZ) and expansion of Jawaharlal Nehru Port in order to promote the sustainable economic development in Mumbai metropolitan region, Furthermore a lack of connection in Mumbai has stunted its growth. The GoM has given importance to construct the faster connection with Mumbai to Navi Mumbai International airport, Jawaharlal Nehru Port, Mumbai- Pune express way and Main hinter land, accordingly the Mumbai Trans Harbour Link (MTHL) has been identified as the important infrastructure to improve the connectivity between Mumbai and Navi Mumbai, and continue economic development in Mumbai Metropolitan Region.

1. Comprehensive Transportation Study (CTS) for MMR

The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region (MMR), which was guided by MMRDA and supported by World Bank, was completed in July 2008 over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless, integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor in MMR to take care of the varied travel demands of the region for the horizon period up to 2031. Accordingly, whereas the CTS recommended to developing the metro and suburban railway network in the Mumbai's, it also proposed to develop the highway network in the region . The MTHL has been regarded as the priority road for MMR for long time, considering its function and importance connecting between the Greater Mumbai and Navi Mumbai

To Promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL

Actual (P/R, PCR)
No Change

1-3 Rationale of the Project Design

Please describe your opinion regarding relevance of the project design in terms of project objective, timing scale (programme benefit) and technological (technical excellence).

Original:

Overall Design

The MTHL which is about 21.8 Km long road on the Sea across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai located in State of Maharashtra, is to be constructed with the approach sections interchanges, ITS(Intelligence Transport System) and the Other necessary facilities for full access-controlled motorway marine bridges.

Under IRC(India road Congress) SP:99-2013, the Width of each lane of the main road is 3.5 meters when the design speed is 100Km/h. according to the traffic demand forecast the large vehicle ratio will be up to as low as 9.4%(2002) the lane width at 3.5 meters will ensure adequate safety and road functions. The Shoulder width of bridge are to be 2.5 meters on each left and 0.75 meters on each right to meet requirements for design speed of 100 Kph.

MTHL structure comprises of mostly an elevated sea portion and partly elevated land portion with different bridge types and spans. PC box girder with 50 m span which is typically applied to general section (typical marine viaduct), since it is economical and easy to construct and maintain. On the land portion, the PC box girder with 30m span is also commonly applied to construct. As for the location in which long span bridge (150-180 m) is required to cross significant obstacles such as channels, pipelines and creeks, the steel box girder bridge with steel deck is propose to be adopted. In addition, the large block erection method to shorten construction period is proposed to be adopted.

The project is coded with three lanes of traffic in each direction. The reference toll is presented in the table below for each vehicle class in Year 2015 monetary value.

Base Toll (Rs) Level by Vehicle Class per Vehicle between Interchanges

Vehicle Type	Sewri-Shivaji Nagar	Shivaji Chirle Nagar-	Total
Car	180	60	240
Bus	420	130	550
LCV	240	70	310
HCV	420	130	550
MAV	600	180	780

Intelligent Transport Systems (ITS)

Toll Management System(TMS)

The toll management system introduced into MTHL which is a toll road shall collect tolls from all road users of MTHL. Two types of toll collection method will be adopted; Electronic Toll Collection (ETC) and Manual (paying in cash).

The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and the Manual lane equipment (cash collection) shall be installed to ETC lanes for backup to be able to cope at the time of trouble of ETC equipment failure.

Traffic management System

Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including

Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifier (ATCC) and Meteorological Observation System (MET), and Information dissemination System including Variable message Sign (VMS)

CCTV Cameras shall be installed at around three places per 1 Km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information. The information collected by these devices is transmitted to the Traffic Control Centre through the medium of an Optical fibre cable laid in MTHL

Contract Packages

Package-1 includes the Sewri Interchange on land towards Mumbai side and the adjoining 10.380 km (CH 0+000 km to CH 10+380 km) bridge above sea/creek. The typical width of carriageway will be approximately 14 m for each way.

Package-2 includes about 7.8 km long bridge (CH 10+380 km to CH18+187 km) above sea/creek and Shivaji Nagar Interchange on land at the Navi Mumbai side. The typical width of carriageway will be approximately 14 m for each way.

Package-3 includes about 3.6 km long road bridge (CH18+187 – CH21+800) having interchanges at Shivaji Nagar, State Highway-54, National Highway-4B near Chirle and Rail-over-Bridges (RoB) at two locations in Navi Mumbai. The typical width of the highway will be approximately 14 m for each way.

Package-4 consisting of Intelligent Transport Systems (ITS) including Operation & Maintenance Facility and Equipment Installation for the Project. Bid for the Package-4 will be issued at a later stage.

Actual (P/R, PCR)
No Change

2.0 Project Implementation (Efficiency)

2-1 Project scope

Table 2.1 1a Comparison of Original and Actual location

Location	Original: (P/M)	Actual : (P/R and PCR)
	Mumbai Metropolitan Region Development Authority, State of Maharashtra	

Table 2.1 1b Comparison of Original and Actual Scope

Items	Original	Actual
Construction work: 6-lane Marine Bridge Road (21.8 km)		
Package 1 Ch 0+000- 10+380 (10.380 Km)	<ul style="list-style-type: none"> - 1 no interchange - Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) - Viaduct Substructure (RC Concrete Structure) - Viaduct Foundation (Bored piles) - High way Lighting (Whole Sections. Low-positioned lighting for some sections) - Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)
Package 2 Ch 10+380- 18+190 (7.81 km)	<ul style="list-style-type: none"> - 1 no interchange - Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) - Viaduct Substructure (RC Concrete Structure) - Viaduct Foundation (Bored piles) - High way Lighting (Whole Sections. Low-positioned lighting for some sections) - Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)

Items	Original	Actual
Package3 Ch 18+190- 21+830 (3.64 Km)	<ul style="list-style-type: none"> - 2 no's interchange - Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder (for Railway Flyover) - Viaduct Substructure (RC Concrete Structure) - Viaduct Foundation (Bored piles) - High way Lighting (Whole Sections. Low-positioned lighting for some sections) - Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual : No Marine Portion in Package-3
Package 4 ITS (Intelligent Transport System)	<ul style="list-style-type: none"> - 1 Administrative Building - Toll Booths (1 for Main Alignment and each on and off ramps for 3 Interchanges) - Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-Cum-Classifer (ATCC), Variable Message Sign (VMS)) 	(P/R and PCR)
Consulting Service	<ul style="list-style-type: none"> - Tender Assistance - Construction Supervision - Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP) and Resettlement Action Plan (RAP) 	(P/R and PCR)

2-2 Implementation Schedule

The original project commissioning target From Sewri Interchange to Chirle Interchange at State Highway-54 Jun, 2022 will be achievable.

Table 2-2-1: Comparison of original and actual schedule in Stage 1

Items	MMRDA & JICA MoM	Project Implementation Program	Delay in months
Completion of land acquisition and Resettlement	November 2016	June 2018	NA
Employment of General Consultant	June 2016	December 2016	6 month
Invite Main Tender for construction of Packag-1,2 &3	June 2016	January-17	7 month
Award and Commencement of construction of Packag-1,2&3	January 2016	December 2017	11 month
Completion of construction of Packag-3	June 2020	June 2021	12 month
Completion of construction of Packag-1&2	June 2021	June 2022	12 month
Invite Main Tender for construction of Packag-4	September 2018	September 2019	12 month
Award and Commencement of ITP Package-4	July2019	July 2020	12 month
Completion of ITP Package-4	June 2021	April 2022	10 month
Commercial Operation Date	June 2021	June2022	12 month

Attachment:

2.2.2 Reasons for any changes of the schedule and their effects in the Project

Actual (P/R and PCR)
No Change

2.3 Project Cost to be aligned with the Revised Project Cost Estimate for clear interpretation and comments

This section will be updated after finalisation of Revised Estimate

2-3.1b: Comparison of Original and Actual Cost by year

* Fiscal Year starting in April and ending in March Unit: (All Figures: in Crores INR)

Breakdown of Cost	Original			Actual		
	JICA Portion	Others	Total	JICA Portion	Others	Total
Year	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr
FY2016-2017	15100.16	2743.06	17843.22	-	176.40	176.40
FY2017-2018						
Total			17843.22			176.40

2-3-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

To be updated after finalisation of Revised Cost Estimate

Actual (P/R, PCR)
 No Change

2-4 Organization for Implementation

2-4 Organization for Implementation

2-4-1 Executing Agency:

Organization's role, financial position, capacity, cost recovery etc.,

Organization Chart including the unit in charge of the implementation and number of employees.

Original:

Executing Agency:

Mumbai Metropolitan Region Development Authority (MMRDA)

The GoM appointed the MMRDA as the implementing/ executing agency of MTHL based on resolution dated 4th February, 2009.

MMRDA was established on 26th January, 1975 in accordance with the Mumbai Metropolitan Development Act, 1974 to make Mumbai Metropolitan Region (MMR) a destination for economic activity by promoting infrastructure and regional planning. MMRDA takes all the necessary measures, required from time to time, in an effective manner and be fully responsible for the Project. After completion of the Project, MMRDA continues to be responsible for the efficient operation and maintenance of the Project.

Organization's Role:

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR, all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc,...

Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

The PIU will be in charge of the Projects. The PIU will be headed by Chief Engineer, comprising of 6 Division/cells (Finance Division, Social Development Cell, Engineering Division, Land Cell, Administrative Division and Environmental Cell), Supervision/ITS Consultant and support staff.

Procurement

MMRDA shall have to adopt the JICA's Standard Bidding Documents of the latest version, as stipulated in Section 4.01 (2) of "Guidelines for Procurement under Japanese ODA Loans.

Procurement of goods and services, except for consulting services, converted by the Japanese ODA Loan should be implemented in accordance with "Guidelines for Procurement under Japanese ODA Loans", dated in April 2012. Employment of consultants should be implemented in accordance with "Guidelines of Employment of Consultant under Japanese ODA Loans", dated in April 2012. "Principles of Procurement under the Project" is attached for brief explanation of the above Guidelines.

Actual, If charged: (P/R and PCR)

Annexure III Organizational Chart

2-4-2-2 Performance

Executive Summary

Package-1

- Tender document issued on 4th January 2017 for JICA Concurrence on the PQ qualified contractors
- Pre Bid meeting was Scheduled on 31st January 2017,
- For Package-1 1564 Nos of Pre Bid queries were received up to 26th Jun 2017, and GC prepared the response and issued Addenda Nos. -1,2,3,4 &5 to Bidder before 7th Jul 2017.
- 186 nos. Contractual/ Technical Amendments were issued to bidder after getting the

- concurrence of JICA.
- Technical & Financial Bids are Submitted by Bidders on 17th Jul 2017.
- 6 nos. of Bids are received
- Envelop A for Tender Fee & EMD is opened 19th Jul 2017
- Envelop B Technical Bid are opened on 25th Jul 2017
- GC Started the Technical Evaluation on 25th Jul 2017

Packag-2

- Tender document issued on 4th January 2017 for JICA Concurrence on the PQ qualified contractors
- Pre Bid meeting was schedule on 31st January 2017,
- For Package-2 1226 Nos of Pre Bid queries were received up to 26th Jun 2017, and GC prepared the response and issued Addenda Nos. -1,2,3,4 &5 to Bidder before 7th July 2017.
- 182 nos. Contractual/ Technical Addendum are issued to bidder after getting the concurrence of JICA.
- Technical & Financial Bids are Submitted by Bidders on 18th Jul 2017
- 6 nos. of Bids are received
- Envelop A for Tender Fee & EMD is opened 19th Jul 2017
- Envelop B Technical Bid are opened on 25th Jul 2017
- GC Started the Technical Evaluation on 25th Jul 2017

Packag-3

- Tender document issued on 4th January 2017 to JICA's Concurrence PQ qualified contractors
- Pre Bid meeting was schedule held on 31st January 2017,
- For Package-3 434 Nos of Pre Bid queries were received up to 26th Jun 2017, and GC prepared the response and issued Addenda Nos. -1,2,3,4 &5 to Bidder before 7th July 2017.
- 172 nos. Contractual/ Technical Addendum are issued to bidder after getting the concurrence of JICA.
- Technical & Financial Bids were Submitted by Bidders on 17th Jul 2017
- 5 nos. of Bids were received
- Envelop A for Tender Fee & EMD is opened 19th Jul 2017
- Envelop B Technical Bid are opened on 25th Jul 2017
- GC Started the Technical Evaluation on 25th Jul 2017

Packag-4

No significant event.

Safety

A daily safety inspection checklist for construction equipment has been introduced through the project. The application of a common form of reporting of inspections allows Contractors safety performance to be subjected to rational analysis.

(Construction Activity not Started)

Time to Completion

- The Revenue Operation Dates as per agreed JICA Report Jun2021 –
 - Overall completion Jun 2022

Procurement Status

Type	Contract	Awarded or Estimated Value (in Rs. Cr.)	Current	Contractors	Award Date as per July 2017	Status / Remarks
CIVIL	Packag-1 (CH 0+000 km to CH 10+380 km)	6,599.56*	Tendering Stage	NA	Dec 2017	*Estimated Value
	Packag-2 (CH 10+380 km to CH18+187 km)	4,902.90*	Tendering Stage	NA	Dec 2017	*Estimated Value
	Packag-3 (CH18+187 – CH21+800)	1,306.61*	Tendering Stage	NA	Dec 2017	*Estimated Value
ITS	Packag-4 Intelligent Transport System	144.26*	Design Stage	NA	Jul 2020	*Estimated Value

Financial Report

The following is a breakdown of JICA and MMRDA share of project Cost:

- i. Package-1 – 100% JICA Contribution – Budgeted INR 6,599.56 Cr
- ii. Package-2 – 100% JICA Contribution – Budgeted INR 4,902.90 Cr
- iii. Package-3 – 100% JICA Contribution – Budgeted INR1,306.61Cr.
- iv. Package-4 – 100% JICA Contribution – Budgeted INR144.26Cr

3: Benefit Derived from the Project (effectiveness)

3-1 Operational and physical condition

(This section will be developed when the operational plan is available)

Facilities	Description of condition	Problems, its Background and Remedial Action Plan
(P/R and PCR)	(P/R and PCR)	(P/R and PCR)

3-2 Precautions

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)

<p>3-2-1 General Issues</p> <ol style="list-style-type: none"> 1. Tolling Arrangement/ Toll Rate Fixed toll rate by the type of vehicle will be levied for the road users after the completion of the Project. An appropriate tolling policy/ rates will be finalized in consultation with the state government prior to the completion of Civil works. 2. Operation and Maintenance MMRDA will appoint a toll collection agency during project implementation period. Thereafter, a single operation and maintenance contractor shall be appointed through open tendering process. MMRDA has confirmed to allocate adequate budget for engaging the contractors. 	<p>(P/R and PCR)</p> <p>No significant event.</p> <p>No significant event.</p>
<p>3-2-2 Environmental and Social Consideration</p> <p>a) Environmental Clearance Supplemental EIA has been approved by MMRDA, and disclosed on the website of JICA. Supplemental EIA report will be disclosed also on the website of MMRDA. Furthermore, renewed CRZ Clearance will be obtained in a timely manner. In accordance with the conditions for CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.</p>	<p>(P/R and PCR)</p> <ul style="list-style-type: none"> - MMRDA has Uploaded Supplemental EIA & SIA on MMRDA website. - CRZ Clearance has been obtained on 25th Jan 2016 - MMRDA has appointed (BNHS) Bombay Natural History Society for bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program for the MTHL project - Rs31.92 Cr. Has to be deposited to Mangrove foundation of State government for periodical disbursement to BNHS

b) Required Permits

MMRDA assured that it will obtain all the necessary permits in a timely manner.

Clearance Required	Approved authority	Responsible Organization	Obtained by When	Status
Mangrove cutting	Bombay High Court	MMRDA	Before start of Construction	Approval received from Bombay High Court on 28 th Nov 2016
Tree cutting	Respective tree authorities	MMRDA/Contractor	6-7 days before cutting trees	NA
Consent to establish	Maharashtra Pollution Control Board	MMRDA/Contractor	Before start of construction	NA

Clearance Required	Approved authority	Responsible Organization	Obtained by When	Status
Environmental Certificate under EIA Notification Law 2006*	Maharashtra State and/or Central MoEF	Contractor	When the contractor develops new quarry, borrow pits and camp site, if required	NA

3-3 Environmental and Social Impacts

Major environmental and social impacts have occurred during project implementation (e.g. involuntary resettlement, poverty reduction, impacts on the natural environment).

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
(1) Establishment of Effective Environmental and Social Cell in PIU MMRDA confirmed that Social Development Cell, Land Cell, and Environmental Cell had been set up, which consists of two officers at each cell.	Cell is being established by MMRDA (Annexure III, Organization chart)
(2) Rehabilitation and Land Acquisition Issues a) Affected Area and Pollution Due to the Project, 1,272 non-titleholders will be involuntary resettled, and 96.36 ha of land will be handed over by CIDCO. b) Entitlement Policy MMRDA prepared the entitlement matrix for resettlement of non-titleholders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010) ("Guidelines") (Attachment 2-5).	This activity has been carried out and CIDCO has approved the land that will be used for resettlement. The entitlement policy has been made and approved by the MMRDA
c) Fishermen Compensation Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen to be affected by the Project. Based on the result of the baseline survey, MMRDA will compensate them in accordance with compensation policy prior to the construction. Monitoring will be conducted by MMRDA with assistance of the Consultant to grasp the exact impact during construction and operation phase.	Though the primary baseline data has been collected and processed the verification of the same is to be carried out. Also, the fishermen who did not have complete fishing documents or any fishing documents are also to be included into the list of likely eligibility list for compensation. MMRDA will also be settling up a Grievance Redressal Cell for the fishermen who might have compensation related issues.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>d) Implementation Schedule The Implementation schedule for land acquisition, resettlement and rehabilitation.</p>	<p>MMRDA have Social development department through that all work of resettlement & rehabilitation is carried out independently</p>
<p>e) Grievance Redresses Mechanism Grievance Redresses Committee ("GRC") set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO.</p>	<p>Social development cell, the Chief dealing with the grievances raised by PAP's in Sewri Compensation committee has been formulated to address issues/ grievances of the plot owners at MBPT area, Sewri</p>
<p>f) Internal Monitoring Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Sewri Area: Project Affect person (PAP) Out of 200 PAP150 PAP had given their consent to shift to HDIL buildings. HDIL Building Kurla,- Construction work in Progress for PAP</p> <p>Navi Mumbai Area :1,272 non-titleholders are to be involuntary resettled, and 96.36 ha of land will be handed over by CIDCO for the same.</p>
<p>g) Qualitative Independent Evaluation An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>MMRDA have Social development department through that all work of resettlement & rehabilitation is carried out independently</p> <p>Rehabilitation process is in progress and report will be submitted to JICA</p>
<p>h) RAP Implementation Budget The amount of estimated resettlement and compensation budget is Rs. XX. MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation</p>	<p>-NA-</p>
<p>i) Environmental Management Plan ("EMP") The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary.</p>	<p>The EMP followed by MMRDA has to be coincide with the compliance points set by MOEF and MCZMA during the CRZ clearance of MTHL. This also includes adhering to the implementation of construction schedule has decided by MMRDA</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
j) Environmental Motoring Plan ("EMoP") MMRDA takes overall responsibility for implementation of EMoP. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Motoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.	No construction Activity started
k) MMRDA committed to conduct the long-term monitoring of birds and its habitat in sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society.	- MMRDA has appointed (BNHS) Bombay Natural History Society for bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program for the MTHL project - Rs31.92 Cr. Has to be deposited to Mangrove foundation of State government for periodical disbursement to BNHS

3-4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and / or FIRR
 Supporting data for Computing EIRR and/ or FIRR

Indicators	Original (Yr 2015)	Present (yr 2017)	Target (Yr 2023) 2 Ys After Commercial Operation
Annual Average Daily Traffic (PCU/day)		NA	45,700
Daily Average Travel Time (min)*1	61 min	NA	15.8 Min

*1 Section on Sewri-Chirle

EIRR	Original: 13.7% Cost : Project cot (excluding Price Escalation, Tax and Duties and Administration cost)O&M cot, Land Acquisition Benefit: Travel Time cost and Vehicle	Actual: (PCR) ____% Cost: Benefit: Project Life: NA
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	Operation cost Project Life: 32 Years	
FIRR	Original: 1.77% Cost : Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 35 Years	Actual: (PCR) _____% NA

3.5 Monitoring Plan for the indicators

-Monitoring Methods, Section(s)/department(s) in Charge of monitoring, Frequency, the Ter and So Forth

<p>Original: (P/M and PCR) <u>Monitoring Organization</u> PIU shall be In-Charge of Monitoring activates for the Project <u>Submission of QPR and PCR</u> The timely submission of the following documents is required by MMRDA.</p> <ol style="list-style-type: none"> a) Quarterly Progress Report (QPR): The progress report for the Project should be submitted by MMRDA to JICA on quarterly basis, not later than 30 days after the concerned quarter, in the form of project status report (PSR) attached as per annex II: Updated status land Acquisition, milestone achieved with respect to action plan with timetable, the monitoring form for environmental and social consideration should also be appended to the PSR. In addition, MMRDA shall also forward the Monthly & Quarterly Progress Reports (including S-Curve Chart) Prepared by the Consultant to JICA India Office on regular basis till completion. b) Project Completion report (PCR): A project completion report should be submitted by MMRDA to JICA promptly, but in any event not later than six months afte completion of Project in the form of Project status Report (PSR) attached as per Annex II
<p>Actual (P/R and PCR) <u>Monitoring Organization</u> PIU for MTHL has been established and monitoring the Project <u>Submission of QPR and PCR</u> Quarterly Progress Report prepare and Submitted to JICA from July 2017 on every Quarterly Year</p>

3.6 Achievement of the Project Objective

(Achievement of Project Objective shall be communicated after start of revenue Operation of the Project)

Actual (PCR) NA

4. Operation and Maintenance (O&M) Sustainability

4.1 O&M and Management

Original:

Overall

MMRDA will be responsible for O&M after the Completion of the Project. O&M Budget will be allocated by MMRDA. O&M and increase in toll rate will be done in accordance with NHAI's manuals Such as "NHAI Works manuals"

Operation & Maintenance , Tolling and ITS

MMRDA will appoint Operation, Maintenance and Tolling Contractor for the road maintenance and Toll collection and allocated adequate budget for engaging the Contractor. The Budget for O&M will be provided by MMRDA

Actual:

No Change

4-2 O&M Cost and Budget

This will be reported when the outcome of the above study is available.

It is assumed that O&M cost in Feasibility Study Report, 2012 is one percent of the total project cost, amounts 1,010 million INR at the year of commercial operation days (COD). And it is annually escalated 5% of escalation.

5. Evaluation

5-1 JICA and Borrower / Executing Agency performance

JICA:
(PCR)

Borrower/Executing Agency:
(PCR)

5-2 Overall evaluation

(PCR)

5-3 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

Experience learnt

No Change

Annexure I

Land Acquisition Summary

Land Acquisition:

Sr.No	Description	Area	Status
1	Land acquisition ROW (permanent)		
1.1	Sewri side		
a)	Land Acquisition on Sewri Side for ROW (permanent)	10.089 Ha	<ul style="list-style-type: none"> • Handing over of ROW area and Casting yard area from MbPT by Oct 2017 • Out of 18 Plots at Sewri Gadi Adda,5 plots are in vacated position and Notices to remaining 13 plot Lessees under MR& TP Act ,1966 Section 126 ,1(a) & (b)are issued by MMRDA for land acquisition.
1.2	Navi mumbai side		
a)	Area handed over by CIDCO to MMRDA	98.77 Ha	MMRDA taken Possession
b)	Area remaining to be handed over by CIDCO	13.8 Ha	Handing over process is in progress
	Total Land for ROW	122.659 Ha	
2	Land allocation for Casting yards (Temporary)		
2.1	Sewri side		
a)	Package -1	15.17 Ha	Handing over of ROW area and Casting yard area from MbPT by Oct 2017
2.2	Navi Mumbai Side		
a)	Package -2	16 Ha	Both casting yard areas are handed over by CIDCO to MMRDA.
b)	Package -3	11 Ha	
	Total Area for Casting Yards	42.17 Ha	

Annexure II

Project Status and Procurement Summary

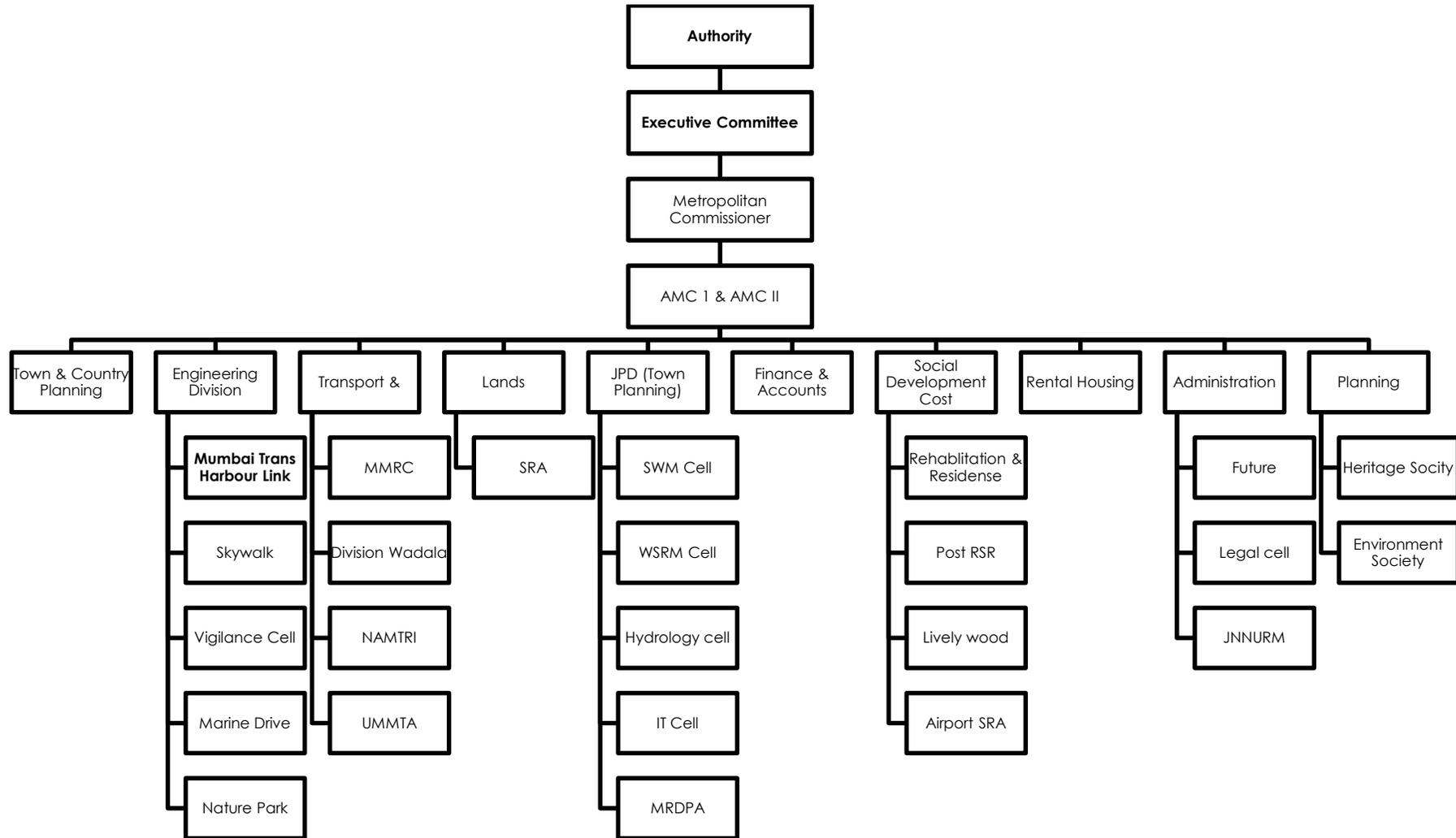
Type	Contract	Awarded or Estimated Value (in Rs. Cr.)	Current Status	Contractors	Award Date/Projected award date in - July 17	Original Date of completion	Actual Date of completion / Target date Jul-17	Physical % complete July 17	Present Financial Progress (Up To 31-07-2017)
CIVIL	Packag-1 (CH 0+000 km to CH 10+380 km)	6,599.56	Tendering		Dec 2017			0%	
	Packag-2 (CH 10+380 km to CH18+187 km)	4,902.90	Tendering		Dec 2017			0%	
	Packag-3 (CH18+187 – CH21+800)	1,306.61	Tendering		Dec 2017			0%	
ITS	Packag-4 Intelligent Transport System	144.26	Design Stage		Jul 2020			0%	

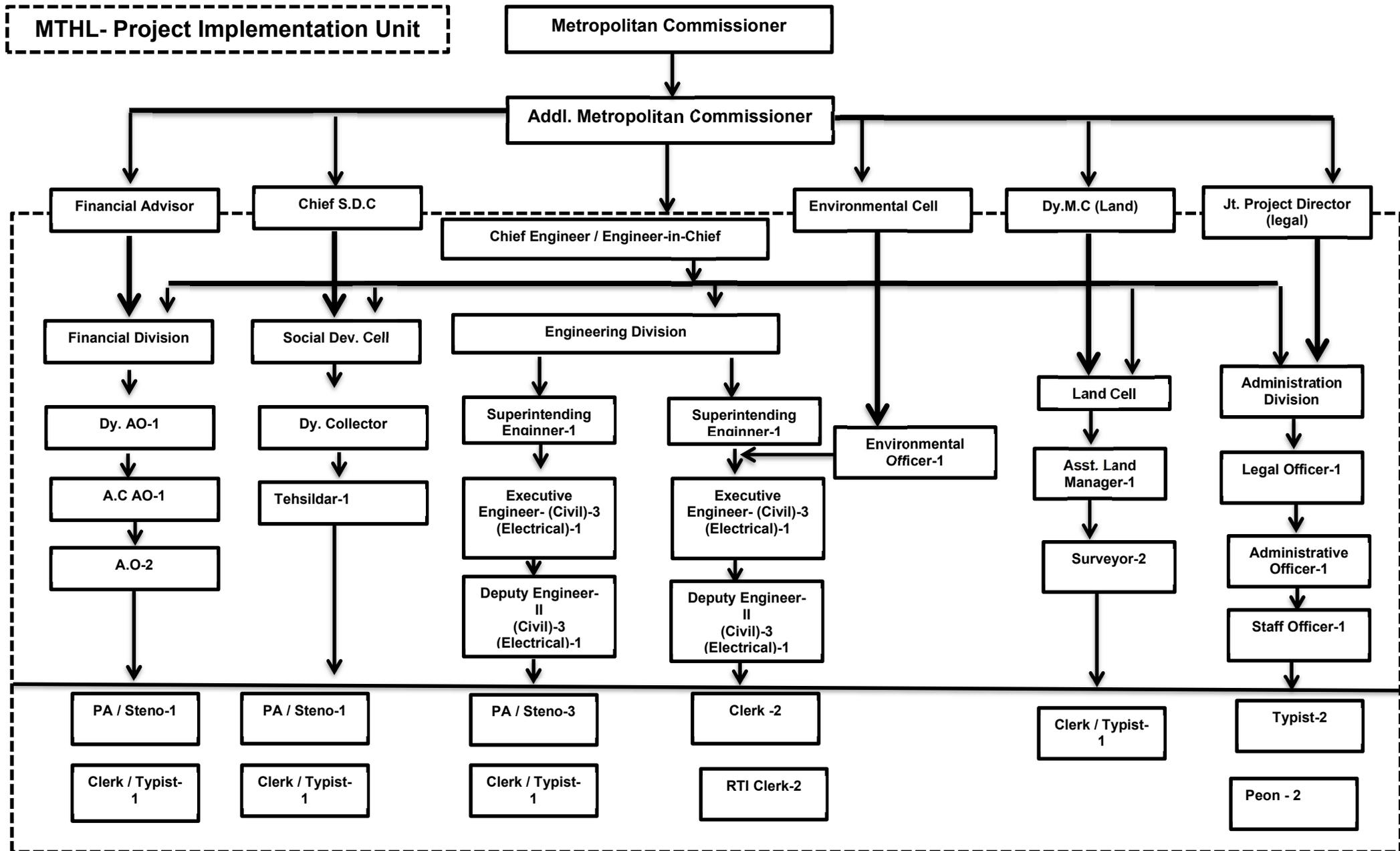
Annexure III

Organization chart

Authority Organization chart

Authority Organization chart





Annexure IV

JICA's Concurrence Procedure

Sl. No.	Brief description	Procurement procedure	Estimated Cost			JICA's Concurrence on					
			Foreign Currency (Cr Rs)	Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Evaluation Criteria with PQ Documents	PQ Result	Tender Documents	Technical Bids	Bid Analysis and proposal for Award	Contract
1.	Packag-1 (CH 0+000 km to CH 10+380 km)	ICB with PQ (2P)		6,599.56	6,599.56	JICA's review Completed on 9 th May 2106	JICA's review Completed 22 nd Dec 2016	JICA's review Completed On 4 th Jan 2017			
2.	Packag-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)		4,902.90	4,902.90	JICA's review Completed on 9 th May 2106	JICA's review Completed 22 nd Dec 2016	JICA's review Completed On 4 th Jan 2017			
3.	Packag-3 (CH18+187 – CH21+800)	ICB with PQ (2P)		1,306.61	1,306.61	JICA's review Completed on 9 th May 2106	JICA's review Completed 25 th Nov 2016	JICA's review Completed On 4 th Jan 2017			
4.	Packag-4 Intelligent Transport System	ICB with PQ (2P)		144.26	144.26	-	-	-			

Annexure V

GC Staff Deployment Position (Key Personnel) as of 31st July 2017

Summary of Deployment of GC's Staff July 2017

Staff Level	Organisation	Home Office	Expatriate In India	Indian Personnel	Total
PA-1 & PA2	AECOM	-	4	3	7
	PADECO	-	3	2	5
	Dar Dar Al Handasha	-	-	1	1
	T.Y.LIN	-	-	1	1
	Sub-total	0	7	6	13
PB-1, PB2 & PB3	AECOM	-	-	6	6
	PADECO	-	-	11	11
	Dar Dar Al Handasha	-	-	-	-
	T.Y.LIN	-	-	-	-
	Sub-total	0	0	17	17
Support Person	AECOM	-	-	2	2
	PADECO	-	-	7	7
	Dar Dar Al Handasha	-	-	-	-
	T.Y.LIN	-	-	-	-
	Sub-total	0	0	9	9
Total		0	7	33	40