HALF YEARLY REPORT FOR MUMBAI TRANS HARBOUR LINK

JULY TO DECEMBER 2019

Submitted to

Maharashtra Pollution Control Board (MPCB)

Submitted by

Mumbai Metropolitan Region Development Authority (MMRDA)

Information of Project officer and Nodal officer

1.	**Name of Project officer** **Email** **Phone /Fax Number**	Executive Engineer, MTHL- Project Implementation Unit 2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 Phone No.: 022-26594034
2.	**Name of Nodal officers** **Email** **Phone /Fax Number**	Chief Engineer, MTHL Project Implementation Unit 2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 Email : **chiefengineer1@mailmmrda.maharashtra.gov.in** Phone No.: 022-26594034

Photographs showing present progress of work

Please refer to the Quarterly Progress Report No. 9 and 10 for the photographs of the progress

Monitoring the Implementation of Environmental Safeguards

Ministry of environmental & Forest
Western Region, Regional Office, Bhopal
Monitoring Report
PART – I
DATA SHEET

No.	Particular		Information
1.	**Project type:** River Valley / Mining / Industry / Thermal / Nuclear / Others (specify)	**:**	Infrastructure
2.	**Name of the Project**	**:**	Mumbai Trans Harbour Link Project
3.	**Clearance letter (s) / OM No. and date**	:	F. No. 11-65/2012-IA.III on 25th January, 2016
4.	**Location**		**Start point:** Sewri in Mumbai City
	a) District (s)	**:**	**End Point:** Chirle in Raigad District
	b) State (s)	**:**	Maharashtra
	c) Location latitude / longitude	**:**	**Start:** Latitude: 18°59'48.57"N Longitude: 72°51'20.67"E **End:** Latitude: 18°56'18.33"N Longitude: 73° 1'52.92"E
5.	**Address for Correspondence** a) Address of the Concerned Project Chief Engineer (with Pin code & Telephone / Telex / Fax Numbers)	**:**	Chief Engineer, MTHL Project Implementation Unit 2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 Phone No.: 022-26594034
	b) Address of the Concerned Project Chief Engineer (with Pin code & Telephone / Telex / Fax Numbers)		
6.	**Salient features** a) of the Project	**:**	The proposed Mumbai Trans Harbour Link ('MTHL') is proposed to facilitate decongestion of the island city by improving connectivity between Island city and main land (Navi Mumbai) and development of Navi Mumbai Region.

No.	Particular		Information
			Mumbai Trans Harbour Link Project is 22 km long 6-lane bridge across the Mumbai bay connecting Sewri on Mumbai side to Chirle on Navi Mumbai side. **Benefits:** • Saving in travel time, Vehicle Operating Cost and Fuel Savings • Accelerated growth of Navi Mumbai • Decongestion of island city of Mumbai • Connectivity to MbPT and JNPT Ports • Faster access to Navi Mumbai International Airport • Connectivity to Pune Expressway and to South India
	b) of the Environmental Management Plans		Various measures stipulated in the Environmental Management Plan mentioned in the CRZ clearance are being complied.
7.	**Breakup of the Project Area** a) Submergence area: forest & non forest	**:**	Total Area of Right of Way: 120.228 Ha Forest area: 47.417 Ha Non-Forest area: 72.811 Ha
	b) Others		--
8.	**Breakup of the project affected population** with the enumeration of those losing Houses / Dwelling units only, Agricultural Land & Landless Laborers / Artisans: a) SC, ST / Adivasi b) Others (please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)	**:**	**Project affected population**: Please refer to the Quarterly Progress Report No. 9 and 10 for the project affected population. MMRDA has approved eligibility of 5379 fisher folks as project affected so far. Accordingly, fisheries department, Gov. of Maharashtra has paid compensation to eligible fisher-folk as per approved Fisherman Compensation Policy
9 a)	**Financial Details:** Project cost as originally planned and subsequent revised estimates and the year of price reference	:	The total cost of the project is Rs. 17,843 Crore Year of reference: 2016
b)	Allocation made for	:	Allocation of Rs. 335 Crore has been made for the

No.	Particular		Information
	environmental management plans with item wise and year wise breakup		implementation of Environment Management Plan for the MTHL project. The item-wise cost breakup of the EMP is attached as Annexure-II.
c)	Benefit cost ratio/Internal rate of Return and the year of assessment	:	-
d)	Whether (c)includes the cost of environmental management as shown in the above	:	-
e)	Actual expenditure incurred on the project so far	:	Rs. 3757.941 Crore
f)	Actual expenditure incurred on the environmental management plans so far	:	Please refer Annexure-II for actual expenditure incurred on the environmental management plans so far.
10	**Forest Land Requirement**		
a)	The status of approval for diversion of forest land for non-forestry use	:	Stage – I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22nd January 2016 vide letter F.No.8-89/2013-FC..
b)	The status of clearing felling	:	NOC from Hon. High Court for cutting of mangroves is received on 28th November 2016. Working Permission from Forest Department received on 22 May 2017.
c)	The status of compensatory afforestation, if any Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far	:	Fund have been transferred to Mangrove cell, Maharashtra State Forest Department for Compensatory Afforestation (CA). Mangrove cell, Mumbai submitted updated status report of plantation vide letter date 4th December 2019 (Attached as Annexure-IV)
11	The status of clear felling in non-forest areas (such as submergence area or reservoir, approach roads.), if any with quantitative information required.	:	Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Permission for cutting/transplantation in non-forest area on Nabi Mumbai side has been granted by CIDCO. Copy of permission letter is attached herewith as

No.	Particular		Information
			Annexure-V However, felling in non-forest area has not started yet.
12	**Status of construction** (Actual&/or planned)		Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Please refer to the Quarterly Progress Report No. 9 and 10 attached with this report.
a)	Date of commencement (Actual & / or planned)	:	Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018.
b)	Date of completion (Actual&/or planned)	:	--
13	**Reasons for the delay** if the project is yet to start	:	Not Applicable.
14	**Dates of Site Visits**		--
a)	The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	--
b)	Date of site visits for this monitoring report	:	**--**

Name: - Dr. D.T. Thube

Chief Engineer, MTHL Project Implementation Unit

New Administrative building, MMRDA, 2nd floor, Engineering Department, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051
Phone No.: 022-26594034

Signature:

Stamp: CHIEF ENGINEER (MTHL, PIU) MMRDA

HALF YEARLY COMPLIANCE REPORT

1.	**Project Type**	:	Infrastructure
2.	**Name of the Project**	:	Mumbai Trans Harbour Link (MTHL) Project
3.	**Clearance letter and date**	:	F. No. 11-65/2012-IA.III on 25th January, 2016
4.	**Location**	:	
	a. District	:	**Start point:** Sewri in Mumbai City **End Point:** Chirle in Raigad District
	b. State	:	Maharashtra
	c. Latitude/Longitude	:	**Start:** Latitude: 18°59'48.57"N Longitude: 72°51'20.67"E **End:** Latitude: 18°56'18.33"N Longitude: 73° 1'52.92"E
5.	**Address of correspondence**		
6.	**a. Address of concerned project Head**	:	Chief Engineer, MTHL Project Implementation Unit 2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 Phone No.: 022-26594034

Compliance to the Conditions Recommended in CRZ Clearance

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
i.	All the terms and conditions stipulated by the MCZMA in their letter No. CRZ 2015/CR236/TC 4 dated 26th November 2015 shall be strictly complied with.	Noted. MMRDA is following the conditions stipulated in the CRZ Clearance.
ii.	All the terms and conditions as mentioned in the earlier CRZ Clearance dated 19th July 2013, shall also be complied with in letter and spirit,	Noted. MMRDA is following the conditions stipulated in the CRZ Clearance dated 19th July 2013.
iii.	The Environment Management Plan as presented during the meeting shall be implemented in consultation with all the stakeholders.	MMRDA is implementing the Environment Management plan as stipulated in CRZ clearance. The implementation plan with detailed EMP is attached as an **Annexure I.**
iv.	The project/activity shall be carried out strictly be in accordance with the provisions of CRZ Notification, 2011, and shall not affect the coastal ecology of the area including flora and fauna.	Noted and is being complied
v.	The project proponent shall obtain all permissions from concerned authorities prior to commencement of the project and shall observe all safety requirements onshore and offshore.	Noted and will be complied
vi.	The project proponent shall not undertake any blasting/construction activities during night hours.	Noted
vii.	The proposal indicates the diversion of 47.417 ha forest land for which the proponent shall obtain the requisite Forest Clearance. The project may be executed in the entire stretch in non-forest land, and while making application to get the Forest Clearance, the execution of work on non-forest land shall not be cited as a reason for grant of FC and in case FC is declined, the forest land shall be maintained at its existing condition. The PP shall submit an undertaking to this effect at the earliest to	Stage – I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC vide letter dated 22nd January 2016. Working permission from forest department received on 22 May 2017

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
	the concerned Regional Office to this Ministry.	
viii.	All the wildlife mitigation measures as proposed by BNHS in their report dated 23.09.2015 for original alignment shall be implemented with the following modification	Noted and shall be complied
	a) Construction of jetty on both the ends passing through mud flats and mangroves must not exceed 30 months and construction of actual spans must not exceed more that further 12 months.	Noted
	b) The distance between the supporting pillars shall remain 50 m as currently proposed by the MMRDA.	The distance between the piers is maintained more than 50 m.
	c) MMRDA will partly bear the cost of setting of effluent treatment plant in the region as suggested by BNHS.	Noted and being complied.
ix.	The project proponent shall not undertake any blasting/construction activities during night hours.	Noted

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
1	Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.	Noted and shall be complied.
2	Full support shall be extended to the officers of this Ministry/Regional Office at Nagpur by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Noted and shall be complied.
3	A Six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Nagpur regarding the implementation of the stipulated	Noted and shall be complied

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	conditions.	
4	MoEF&CC or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of environment and the same shall be complied with.	Noted and shall be complied
5	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry.	Noted.
6	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the MoEF & CC.	Noted.
7	The project proponents shall inform to the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Noted.
8	A copy of the clearance letter shall be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal	Noted and complied
9	A copy of the CRZ Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/Tehsildar's Office for 30 days.	Noted and complied.
10	The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	Noted and will be complied.
11	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, and clearances under the	Noted and will be complied.

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	
12	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Nagpur.	Complied.
13	This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted.
14	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
15	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website.	Noted
16	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied.
17	The proponent Shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their	Noted. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA.
18	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF & CC, the respective Zonal Office of CPCB and the SPCB.	Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA.
19	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF & CC by e-mail.	Noted and shall be implemented

Annexures

Annexure I	Environment Management Plan
Annexure II	Item wise cost breakup of the Environmental Management Plan
Annexure III	Quarterly Progress Reports 9 & 10
Annexure IV	Letter dated 4th December 2019 from Mangrove Cell, Mumbai for updated status report of mangrove plantation
Annexure V	Letter dated 25th November 2019 CIDCO for cutting/transplantation of trees in non-forest area on Navi Mumbai

Annexure-I Environment Management Plan stipulated in CRZ clearance

Sr. No	Environmental attribute	Cost in Crores
1.	Environmental Monitoring- Air Act, Water Act, Noise levels	8
2.	Compensatory Restoration Plan (Mangroves)	25
3.	Implementation of the suggestions given by BNHS	25
4.	Noise barriers	45
5.	Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment	40
6.	• Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. • This can be used for Survey & Demarcation of Notified areas • Purchase of vehicles and equipment for anti-Encroachment drives, etc.	25
7.	Oil Spill Mitigation Plan	10
8.	Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program	20
9.	Appointment of Bird Monitor and his assistant till Restoration of Baseline data	4
10.	DMP, Firefighting, Risk Analysis	15
11.	Sustainable development including establishing Nature Interpretation Centre	10
12.	Safety and Security	15
13.	Energy conservation	10
14.	Landscaping-Plantation of trees, flower in plants etc.	8
15.	Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round	75
		335 crores

Half Yearly Report Annexure-II

	EMP break up for July to December 2019			Cumulative Expenditure (Rs. In Crore)
Sr. No	**Environmental attribute**	**Cost in crores (As stipulated in CRZ clearance) (Rs. in Crore)**	**Expenditure incurred on the environmental management plans (Rs. in Crore)**	
1.	Environmental Monitoring- Air Act, Water Act, Noise levels	8	0.097	0.547
2.	Compensatory Restoration Plan (Mangroves)	25	-	50.81
3.	Implementation of the suggestions given by BNHS	25	-	41.98
4.	Noise barriers	45	0.1077	0.7077
5.	Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment	40	-	5.80
6.	Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. This can be used for Survey & Demarcation of Notified areas. Purchase of vehicles and equipment for anti-Encroachment drives, etc.	25	-	25.00
7.	Oil Spill Mitigation Plan	10	0.1787	0.6887
8.	Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program	20	-	-
9.	Appointment of Bird Monitor and his assistant till	4	-	-

	EMP break up for July to December 2019			Cumulative Expenditure (Rs. In Crore)
Sr. No	**Environmental attribute**	**Cost in crores (As stipulated in CRZ clearance) (Rs. in Crore)**	**Expenditure incurred on the environmental management plans (Rs. in Crore)**	
	Restoration of Baseline data			
10.	DMP, Firefighting, Risk Analysis	15	0.6	1.74
11.	Sustainable development including establishing Nature Interpretation Centre	10	-	10.00
12.	Safety and Security	15	1.8	5.99
13.	Energy conservation	10	0.2376	2.5976
14.	Landscaping-Plantation of trees, flower in plants etc.	8	0.1337	0.5237
15.	Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round	75	-	48.93
		335 Crores	**3.1547 crores**	**195.31 crores**

AECOM PADECO dar al-handasah shair and partners TYLIN INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Ref No: MTHL/GC/MMRDA/LT/QPR- 000966 **/2019** **20th September 2019**

To,
The Chief Engineer
Engineering Division
Mumbai Metropolitan Regional Development Authority (MMRDA)
2nd Floor, New MMRDA Building,
Plot No R-06 & R-12, 'E' Block
Bandra Kurla Complex, Bandra (E),
Mumbai, Maharashtra, India 400051

Sub: General Consultancy services for Mumbai Trans Harbour Link (MTHL) project - **Submission of Quarterly Progress Report (QPR) No. 9 for April - June 2019**

Ref: **MTHL/GC/MMRDA/LT/QPR – 923/ 2019 Dated 20th August 2019**

Dear Sir,

With reference to the above subject, please find enclosed 1 hard copy of the corrected Quarterly Progress Report (QPR) No. 9 for the period of April to June 2019. You may forward the same to JICA at your earliest convenience.

Thanking you,

Yours faithfully,

20 SEPTEMBER 2019

Dr. S H Robin Sham, CBE
(BSc, PhD, DIC, FCGI, FRSA, CEng, FICE, FIStructE, FHKIE)
The Engineer
General Consultant (MTHL)

23/9/19

Encl: 1 copy of Quarterly Progress Report No. 9 (April - June 2019)

CC: Superintendent Engineer – MMRDA - Mr. Sakhalkar
Superintendent Engineer – MMRDA - Mr. Varaskar
Executive Engineer – MMRDA – Mr. Bhisikar
Executive Engineer – MMRDA – Mr. Vishal Jambhale
Executive Engineer – MMRDA – Mr. Deshpande

एम एम आर डी ए
MMRDA

No.MMRDA/MTHL-PIU/JICA-QPR-9/741/09-2019

MTHL-PIU
Date: 18.09.2019

To,
Mr. Katsuo Matsumoto
Chief Representative
Japan International Cooperation Agency (JICA),
16th Floor, Hindustan Times House,
18-20, Kasturba Gandhi Marg,
New Delhi-110-001.

Sub: Mumbai Trans Harbour Link Project (I) (ID-P255)
- Quarterly Progress Report-9 (April 2019-June 2019)

Sir,

The loan agreement for the Official Development Assistance (ODA) Loan for the Mumbai Trance Harbour Link Project (I) is signed between Japan International Cooperation Agency (JICA) and Mumbai Metropolitan Region Development Authority (MMRDA) on 31st March 2017 with MMRDA as a direct borrower of the Loan.

The Quarterly Progress Report No.9 for the Mumbai Trans Harbour Link Project (I) for the period from April 2019 to June 2019 is enclosed herewith for information.

Encl.: QPR-9 (April 2019 – June 2019)

Thanking you,

Yours faithfully,

18.9.19

(Dr. D.T. Thube)
Chief Engineer
MTHL-PIU

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.9

(From 1st April 2019 to 30th June 2019)

Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 9
1st April 2019 to 30th June 2019
Loan Agreement No. ID-P255 (Tranche–I)

ORGANIZATION INFORMATION

Borrower	**Mumbai Metropolitan Region Development Authority**	
	Person in Charge	**Metropolitan Commissioner, MMRDA**
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block, Bandra (East), Mumbai - 400051 Phone: +91-22-26594000 Fax No:+91-22-2659 1264
Executing Agency	**Mumbai Trans Harbour Link Project Implementation Unit**	
	Headed by:	Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block Bandra (East), Mumbai - 400 051 Phone: +91-22-2659 4034 Fax No: +91-22-2659 4179

Details of JICA Loan

Source of Finance	JICA ODA Loan Portion:	238,572 million Japanese YEN (JPY)
	Tranche-I:	144,795 million Japanese YEN (JPY) (Loan Agreement signed on 31st March 2017)
	Tranche-II:	66,909 Million Japanese YEN (JPY) (Loan Agreement to be signed)
Terms and Conditions of JICA ODA Loan (Tranche-1)	Interest Rate:	0.10533% (LIBOR-0.00533% + SPREAD RATE -0.1000%) from 20th March 2019 to 19th September 2019.
	Repayment Period:	30 years, including 10 years of grace period.

DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME		**Mumbai Trans Harbour Link Project**			
DOC NO.		**9**		**DATE OF ISSUE**	18/09/2019
DOC TITLE		**Quarterly Progress Report No. 9**			
REV No.	**DATE OF ISSUE**	**DESCRIPTION**	**PREPARED BY**	**CHECKED BY**	**APPROVED BY**
R0	05/07/2017	Quarterly Progress Report No. 1 (Apr-Jun 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/01/2018	Quarterly Progress Report No. 3 (Oct-Dec 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/04/2018	Quarterly Progress Report No. 4 (Jan-Mar 18)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	24/07/2018	Quarterly Progress Report No. 5 (Apr-Jun 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R0	10/10/2018	Quarterly Progress Report No. 6 (Jul-Sep 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R1	08/02/2019	Quarterly Progress Report No. 7 (Oct-Dec 18)	Prashant B	J Senthil/ Dr T K Sundaram	Dr Robin Sham
R0	05/04/2019	Quarterly Progress Report No. 8 (Jan-Mar 19)	Prashant B	J Senthil	V. D. Sharma/ Dr Robin Sham
R0	18/09/2019	Quarterly Progress Report No. 9 (Apr-Jun 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham

Contents

1.0 PROJECT DESCRIPTION

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.

Actual *(P/R, PCR)*

There is no change in the Project Objective.

1.2 Necessity of the Project

The Project is consistent with the development policy, sector plan, national/regional development plans and demand of target group of the recipient country.

Benefits from MTHL Project

- Saving in travel time 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.
- Improvement in environment 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.

Necessity of the Project

1. Although the urbanization in India has been rapidly progressing, infrastructure development in the urban areas has not caught up its progress. Particularly, the traffic congestion in the urban areas due to a lack of road network hinders the economic development. Thus, Government of India (GOI) places transport and connectivity as one of the “Growth Enablers” and plans to enhance road network in the “Three Year Acton Agenda 2017-2018 to 2019-20 (NITI Aayog)”.
2. Mumbai Metropolitan Region, which includes Mumbai and Navi Mumbai, has about 18.4 million people in population as of 2011 (Census 2011) and the population density reaches 20,694 people per square km in the center of Mumbai, which is one of the most overpopulated and high-density cities in the world.
3. Mumbai, the narrow stretch of land that has traditionally 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.

4. 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 spacious area for development, such as a 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.
5. Furthermore, a lack of connectivity 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 expressway and main hinterland.
6. 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.

   The MTHL is proposed to be developed as an expressway link comprising of a dual three-lane main carriageway bridge connecting Sewri in Mumbai to Chirle in Navi Mumbai. When completed, MTHL will reduce the distance between Mumbai and Navi Mumbai and will help save approximately an hour in travel time. Also, development of Navi Mumbai along with the imminent construction of the Navi Mumbai airport will lead to increased traffic between Mumbai and Navi Mumbai. Consequently, the project is envisaged to; improving accessibility between Mumbai and Navi Mumbai, accelerating growth of Navi Mumbai, smooth traffic flow from Navi Mumbai airport to Mumbai, accelerating economic development of Navi Mumbai and surrounding regions, greater economic integration of Mumbai with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug, and decongestion of Mumbai and dispersal of population to Navi Mumbai region and beyond.

7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and 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 to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.
8. Necessity of the Project: - 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)*

There is no change in the Necessity of the Project preamble.

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

1. At the opening year 2022, the daily traffic on the main bridge is expected to be 39,300 PCU. The traffic is projected to increase up to 103,900 by 2032 and up to 145,500 by the year 2042. The daily breakdown by vehicle class on the main bridge link is presented in the Table 1.3.1 below:

Table 1.3.1 Demand Projections Over the Period

Vehicle Type	Between Sewri Interchange and Shivaji Nager Interchange			Between Shivaji Nager Interchange and Chirle Interchange		
	2022	2032	2042	2022	2032	2042
Car	24,100	66,400	94,100	4,900	21,300	43,300
Taxi	2700	14,100	20,200	100	400	2,300
Bus	2,700	3,700	3,700	2,700	3,700	3,700
LCV	2,200	4,100	5,600	700	1,300	1,800
HCV	3,000	6,500	8,100	1,000	2,000	2,200
MAV	4,600	9,100	13,800	400	900	1,700
Total	**39,300**	**103,900**	**145,500**	**9,800**	**29,600**	**55,000**

LCV: Light Commercial Vehicle; HCV: Heavy Commercial Vehicle; MAV: Multi Axle Vehicle

2. At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.

3. 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

4. The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.

5. As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.

6. When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).

7. The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.

8. The major portion of MTHL structure is on sea and partly towards ends is on land with

different type and with different span, viz., PC box girder with 50 m spans which is typically applied on marine viaduct since, it is economical, easy to construct and maintain.

9. On the land portion, the PC box girder having span of generally 30m is used.
10. As far as the location in which long span (150-180 m) is required to cross significant obstacles, such as navigation channels, pipelines and creeks, the steel box girder bridge with steel deck is proposed with large block erection method to shorten the construction period.
11. The project is coded with three lanes of traffic in each direction. The reference toll is presented in the Table 1.3.2 below for each vehicle class in Year 2022 (based on 2015 monetary value reflecting price escalation).

Table 1.3.2: Base Toll Rates (Rs) for different class of vehicles between Interchanges

Vehicle Type	Sewri to Shivaji Nagar	Shivaji Nagar to 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) and **Toll Management System (TMS)**

12. The Toll Management System will be implemented in MTHL to collect tolls from all road users of MTHL. Two types of toll collection method will be adopted; Electronic Toll Collection (ETC) and Manual (paying by cash).
13. The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and Manual system shall be installed to ETC lanes for backup to be able to cope at the time of the trouble of ETC equipment failure.

Traffic management System

14. 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 Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
15. 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.
16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual *(P/R, PCR)*

There is no change in the Rationale of the Project Design.

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

Refer Table 2.1.1 and 2.1.2 for details on Scope of the Project.

Table 2.1.1 Comparison of Original and Actual location

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

Table 2.1.2 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)	• 1 Interchange (Sewri) • 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) • Road Furniture and roadside 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+187 (7.80 km)	• 1 Interchange (Shivaji Nagar) • 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) • Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers)	*(P/R and PCR)* Actual: *No View Barriers*
Package-3 Ch 18+187-21+800 (3.61 km)	• 2 Interchanges (State Highway-54, National Highway-4B) • 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 Rail-over-Bridges (ROB) • Viaduct Substructure (RC Concrete Structure) • Viaduct Foundation (Bored piles) • Cutting Section (6-lane with Slope Protection) • Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers)	*(P/R and PCR)* Actual: *No* Noise Barriers & *View Barriers*

Items	Original	Actual
Package-4 ITS (Intelligent Transport System)	• Administrative Buildings • Toll Booths (1 for main alignment and each on and off rumps 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-Classifier (ATCC), Variable Message Sign (VMS)) • Highway Lighting (Whole sections Low-positioned lighting for some sections) • Electrical Powering System including HV/ LV Ring Network across the Bridge.	*(P/R and PCR)*
Consulting Services	• Tender Assistance • Construction Supervision • Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP).	*(P/R and PCR)*

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

Table 2-2-1 Comparison of Original and Actual Schedule

Items	Original	Status *(P/R and PCR)* as on 30th June 2019
1) Completion of Land Acquisition and Resettlement	March 2019	May 2019
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	March 2019 – August 2019
b) Main Bidding	June 2019 – September 2020	September 2019 – December 2019
Package-5 (Geotechnical Investigation)		
a) Main Bidding	March-2016	March-2016
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018 – September 2022
Package-3	March 2018 – September 2021	March 2018 – September 2021
Package-4	October 2020 – September 2022	January 2020 – June 2022
Package-5 (Geotechnical Investigation)	March 2016– June 2016	March 2016– June 2016
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2024
Package-3	October 2021 – September 2023	October 2021 – September 2023
6) Commencement of Toll Collection	September -2022	September -2022
7) Selection of O&M Organization	October 2020 – September 2021	October 2021 – September 2022

Attachment: Package wise updated construction schedules at the end of second quarter (Apr-Jun 2019).

2.2.2 Reasons for changes of the schedule and their effects to the Project

(P/R and PCR)

No change in the Implementation Schedule except the selection of O&M Organization timeline.

2.3 Project Cost

2.3.1.a Comparison of Originally Planned and Actually Incurred Cost BY ITEM

Table 2.3.1.a.(i) Originally Planned Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	34,398	34,398	0	45,376	45,376	0	105,713	105,713	0
Package-2	26,513	26,513	0	32,617	32,617	0	77,774	77,774	0
Package-3	759	759	0	8,276	8,276	0	13,766	13,766	0
Package-4 (ITS)	0	0	0	1,444	1,444	0	2,269	2,269	0
Package-5 (Geotechnical Investigation)	0	0	0	166	0	166	260	0	260
Dispute Boards (Package-1, 2, 3 & 4)	63	63	0	45	45	0	134	134	0
Price Escalation	2,251	2,251	0	7,133	7,133	0	13,460	13,460	0
Physical Contingency	6,398	6,398	0	9,506	9,489	17	21,338	21,312	26
Consulting Services	1,650	1,650	0	1,587	1,587	0	4,145	4,145	0
Land Acquisition*	0	0	0	11,293	0	11,293	17,748	0	17,748
Administration Cost	0	0	0	4,898	0	4,898	7,698	0	7,698
GST	0	0	0	18,238	0	18,238	28,663	0	28,663
Import Tax	0	0	0	13,435	0	13,435	21,114	0	21,114
Interest during construction	2,942	0	2,942	0	0	0	2,942	0	2,942
Front End Fee	477	0	477	0	0	0	477	0	477
Total	**75,451**	**72,032**	**3,419**	**154,013**	**105,967**	**48,046**	**317,501**	**238,572**	**78,929**

(Note) 1. Exchange Rate: US$1=Rs. 71.9, US$1=JPY 113.0, Rs.1 = JPY 1.57
2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.
(b) Local Currency Portion: 4.13% p.a.
3. Physical Contingency: 10%
4. Base Year for Cost Estimation: December 2018
* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

Table 2.3.1.a.(ii) Actually Incurred Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	4,365	4,365	-	10,269	10,269		20,038	20,038	
Package-2	3,705	3,705	-	7,225	7,225		14,121	14,121	
Package-3	72	72	-	927	927		1,558	1,558	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	308		308
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			4	4		6	6	-
Physical Contingency	-			-			-		-
Consulting Services	253	253		276	276		812	812	
Land Acquisition*	-			3,859		3,859	6,059		6,059
Administration Cost	-			1,410		1,410	2,214		2,214
GST	-			2,804		2,804	4,402		4,402
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	**8,395**	**8,394**	**-**	**26,970**	**18,700**	**8,269**	**49,518**	**36,535**	**12,982**

(Note) 1. Exchange Rate: Rs.1 = JPY 1.57 for MMRDA Portion only
2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.
(b) Local Currency Portion: 4.13% p.a.
3. Physical Contingency: 10%
4. Base Year for Cost Estimation: December 2018
* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

2.3.1.b Comparison of Originally Planned and Actually Incurred Cost BY YEAR

Table 2.3.1.b.(i) Originally Planned Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	12,679	10,134	0	0	10,134	2,545
FY 2018	30,771	22,707	0	0	22,707	8,064
FY 2019	72,379	56,816	0	0	56,816	15,563
FY 2020	92,944	55,138	16,040	0	71,178	21,765
FY 2021	66,397	0	50,869	0	50,869	15,527
FY 2022	27,683	0	0	20,113	20,113	7,570
FY 2023	3,723	0	0	565	565	3,158
FY 2024	10,925	0	0	6,189	6,189	4,735
Total	**317,501**	**144,795**	**66,909**	**26,868**	**238,571**	**78,929**

Table 2.3.1.b.(ii) Actually Incurred Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	8,966	5,608			5,608	3,358
FY 2020						
FY 2021						
FY 2022						
FY 2023						
FY 2024						
Total	**49,517**	**36,535**	**-**	**-**	**36,535**	**12,982**

(Note) 1. Exchange Rate used: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Fiscal Year starting from 1st April and ending on 31st March.

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**.**

(P/R and PCR) There is No major gap between the original and actual cost.

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

Mumbai Metropolitan Region Development Authority (MMRDA) was established on 26thJanuary 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 implementation. After completion of the Project, MMRDA continues to be responsible for the efficient operation and maintenance of the Project.

The GoM appointed MMRDA as the implementing/ executing agency of MTHL vide Government Resolution dated 4th February 2009 and further the ownership of MTHL would be with MMRDA vide Government Resolution dated 8th June 2011.

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

Procurement

MMRDA shall have to adopt the JICA's Standard Biding 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 changed: (*P/R and PCR*)

There is no change made in original Organisation Set-up & Implementation methods. Refer Annexure III Organisation Chart.

2.4.2 Contractor(s)/ Supplier(s), and Consultant(s) and their Performance:

2.4.2.1 Procurement & Consultant

Table 2.4.2 Procurement of Contractor(s)/ Supplier(s) and Consultant(s)

Contract Package	Selection Method		
	Original: *(P/M)*		**Actual:** *(P/R and PCR)*
Construction Works			
1	Package-1: From CH 0+000 - To CH 10+380 (10.38 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
2	Package-2: From CH 10+380 - To CH 18+187 (7.80 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
3	Package-3: From CH 18+187 - To CH 21+800 (3.61 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
4	Package-4: To install ITS (Toll Management System and Highway Traffic Management System)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
5	Package-5: To conduct the geotechnical investigation	Local Competitive Bidding Process	No Change
Consulting Services			
1	Consulting Service for Supervision	Short List Method (QCBS)	No Change

2.4.2.2 Performance

Consultant's Progress:

April 2019:

1 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-011 & IPC-011 (80% ad-hoc), IPC-011 (detailed verification)
ii) Package-2: IPC-009 (80% ad-hoc), IPC-007 & 008 (detailed verification)
iii) Package-3: IPC-004 (detailed verification) & Mobilization Advance – (Part-2)

2 JICA representatives visited MTHL Project on 26th & 27th April 2019 to review the yearly financial disbursement and Environmental & Social Rehabilitation monitoring. GC attended them, and the project progress status were briefed through various scheduled meetings and presentation.

3 JICA Representatives along with MMRDA & GC officials also visited all the three Packages' sites on 26th & 27th April 2018 to review the physical progress.

4 Monthly Progress Review Meetings with the Package-1, Package-2 & Package-3 Contractors were conducted on 5th April 2019 at the GC Office. GC prepared the MOM and forwarded to the concerned stakeholders for further action.

May 2019:

1 GC submitted a revised draft of Pre-Qualification Document for the Package-4 (Intelligent Transport System, ITS) on 28th May 2019 to MMRDA for their review and to seek JICA approval.

2 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-013 (80% ad-hoc) and IPC-012 (detailed verification)
ii) Package-2: IPC-010 (80% ad-hoc) and IPC-009 (detailed verification)
iii) Package-3: IPC-005 (80% ad-hoc & detailed verification)

June 2019:

1 GC coordinated and arranged a BNHS Workshop on 11th June 2019 at MMRDA office to have awareness on Avian and Benthic Species found in the ROW for the Package-1 & Package-2.

2 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-014 (80% ad-hoc) and IPC-013 (detailed verification)
ii) Package-2: IPC-011 (80% ad-hoc) and IPC-010 (detailed verification)
iii) Package-3: IPC-006 (80% ad-hoc)

3 A site-walk and project review for the Package-1 held at the Package-1's Site Office on 21st June 2019.

4 GC organized and celebrated "World Environment Day" on 5th June 2019 with all the 3 Package Contractors and participated in Tree Plantation at the casting yard areas.

Contractor's Progress:

Package-1 Physical Progress

S. No	Activity	Total Scope	Unit	Cumulative Work done Achieved	% of Work done Progress	Remarks
1	**Geotechnical investigation (Field Works)**					
1.1	Marine	202	No.	202	100%	
1.2	Intertidal	117	No.	117	100%	
1.3	Interchange (Land Section)	228	No.	225	99%	
	Total	**547**	**No.**	**544**	**99%**	
2	**Gantry Track Foundation for PC Yard**					
2.1	Gantry Track Foundation	1814	Rmt	1814	100%	Gantry & Railway Track Installation Works in progress
3	**Temporary Access Bridge**					
3.1	Piles	626	No.	480	77%	
3.2	Bridge Deck	2953	Rmt	1539	35%	
4	**Test Pile**					
4.1	Test Piles	5	No.	4	80%	
5	**Permanent Bridge Works (Intertidal Zone)**					
5.1	Piles	236	No.	54	22.9%	
5.2	Pile Caps	57	No.	6	10.5%	
5.3	Piers	113	No.	5	4.4%	
6	**Permanent Bridge Works (Marine Zone)**					
6.1	Piles	484	No.	54	11.2%	
6.2	Pile Caps	100	No.	3	3%	
6.3	Piers	198	No.	-	-	
7	**Permanent Bridge Works (Land/ Interchange Zone)**					
7.1	Piles	517	No.	70	13.5%	
7.2	Pile Caps	165	No.	2	1.2%	
7.3	Piers	228	No.	-	-	
8	**Permanent Bridge Works (Total)**					
8.1	**Piles**	**1237**	No.	**178**	**14.38%**	
8.2	**Pile Caps**	**322**	No.	**11**	**3.41%**	
8.3	**Piers**	**539**	No.	**5**	**0.92%**	

Package-2 Physical Progress

S. No	Activity	Total Scope	Unit	Cumulative Work done Achieved	% of Work done Progress	Remarks
1	**Geotechnical investigation (Field Works)**					
1.1	Marine	154	No.	154	100%	
1.2	Intertidal	34	No.	34	100%	
1.3	Interchange	116	No.	116	100%	
	Total	**304**	**No.**	**304**	**100%**	
2	**Gantry Track Foundation for PC Yard**					
2.1	Gantry Track Foundation	1480	Rmt	1480	100%	Gantry & Railway Track Installation Works in progress
3	**Temporary Access Bridge**					
3.1	Piles	889	No.	574	64%	
3.2	Bridge Deck	2682	Rmt	1086	41%	
4	**Test Pile**					
4.1	Test Piles	4	No.	2	50%	
5	**Permanent Bridge Works (Intertidal Zone)**					
5.1	Piles	274	No.	0	0%	
5.2	Pile Caps	68	No.	0	0%	
6	**Permanent Bridge Works (Marine Zone)**					
6.1	Piles	552	No.	40	7%	
6.2	Pile Cap	122	No.	0	0%	
7	**Permanent Bridge Works (Land/ Interchange Zone)**					
7.1	Open Foundations	113	No.	0	0%	
8	**Permanent Bridge Works (Total)**					
8.1	**Piles**	**826**	No.	**40**	**4.84%**	
8.2	**Pile Caps**	**190**	No.	**0**	**0%**	

Package-3 Physical Progress

S. No	Activity	Unit	Total Scope	Cumulative Work done Achieved	% of Work done Progress	Remarks
1	**Survey Works**					
1.1	Topography Survey	3.61	skm	3.26	90%	
1.2	Tree Survey	3.61	skm	3.61	100%	
2	**Geotechnical Investigation Works**					
2.1	Geotechnical Investigation Works (Field)	208	No.	200	96%	
3	**Casting Yard Development**					
3.1	Boundary Demarcation & Fencing for the Casting Yard	1100	Rmt	330	30%	
3.2	Gantry Track Foundation	1120	Rmt	894	80%	
4	**Permanent Foundation Works**					
4.1	Open Foundations	196	No.	19	10%	

Package-4 (ITS)

Pre-Qualification documents have been submitted to MMRDA on 28th May 2019 for review and to seek JICA's concurrence.

Health & Safety and Environment (HSE)

The HSE Plans have been submitted by the respective construction agencies for the Packages which is being monitored by the GC on a regular basis.

Package-1 Safety Report

Sr. No	Description	For April to June 2019	Cumulative
1	Total Man Hours Since Inception	1286136	5306604
2	Number of Man-Hours (Accident Free Man-Hours)	1906632	5306604
3	Number of Man-Days	238329	663325
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	0
6	Number of Near Miss Incidents	7	16
7	Number of First Aid Cases	17	42
8	Number of Dangerous Occurrences	1	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	0	0
11	Number of Man-Days Lost	0	0
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
13	Number of Inspections done for Offices & Sites	67	159
14	Number of Training/ Induction done for Offices & Sites	21	90
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	5341	1035

16	Details of Safety Committee meetings	3	13
17	No. of toolbox talks	2986	8668
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	2784	6836
20	No. of Safety Walk down	12	63
21	No. of Safety Inductions completed	2402	6454

Package-2 Safety Report

Sr. No	Description	For April to June 2019	Cumulative
1	Total Man Hours Since Inception	519200	383295
2	Number of Man-Hours (Accident Free Man-Hours)	619454	383295
3	Number of Man-Days	84240	227374
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	2	2
6	Number of Near Miss Incidents	1	12
7	Number of First Aid Cases	7	28
8	Number of Dangerous Occurrences	1	2
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	517	836
11	Number of Man-Days Lost	47	76
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
13	Number of Inspections done for Offices & Sites	79	336
14	Number of Training/ Induction done for Offices & Sites	39	312
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	2808	526
16	Details of Safety Committee meetings	3	13
17	No. of toolbox talks	370	1114
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	769	2703
20	No. of Safety Walk down	11	43
21	No. of Safety Inductions completed	1143	3286

Package-3 Safety Report

Sr. No	Description	For April to June 2019	Cumulative
1	Total Man Hours Since Inception	133584	384745
2	Number of Man-Hours (Accident Free Man-Hours)	192250	384745
3	Number of Man-Days	24031	48093
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	0
6	Number of Near Miss Incidents	1	2
7	Number of First Aid Cases	8	12
8	Number of Dangerous Occurrences	0	0
9	Number of Reportable Sick Cases	0	0

10	Number of Man-Hours Lost	0	0
11	Number of Man-Days Lost	0	0
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
13	Number of Inspections done for Offices & Sites	18	78
14	Number of Training/ Induction done for Offices & Sites	21	54
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	575	1238
16	Details of Safety Committee meetings	3	11
17	No. of toolbox talks	421	972
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	554	1121
20	No. of Safety Walk down	12	41
21	No. of Safety Inductions completed	556	1160

Please refer **Attachment 5 - Site Progress Photos** for the development of the project.

3.0 BENEFITS 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 (Measures To Be Adopted/ Points Which Require Special Attention)

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)
3.2.1 General Issues **1. Toll Arrangement/ Toll Rate** Fixed toll rate as per 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 proposes to appoint separate agencies for Operation & Maintenance of the bridge and for Toll Management System. Both the agencies for O & M and Toll Management System may be appointed through open tendering process. Overall monitoring of the two agencies would be done by MMRDA in house through a separate cell which could be constituted for the purpose. MMRDA has confirmed to allocate adequate budget for engaging the Contractors.	*(P/R and PCR)* Appropriate Tolling Policy/ Rates will be finalized by December 2020. Single Operation and Maintenance Contractor will be appointed by December 2020.
3.2.2 Environmental and Social Consideration **a. CRZ Clearance** i. Supplemental EIA has been approved by MMRDA and disclosed on the website of JICA. Supplemental EIA report has been disclosed also on the website of MMRDA. ii. Furthermore, renewed CRZ Clearance has been obtained in January 2016. iii. In accordance with the conditions for	*(P/R and PCR)* • MMRDA has disclosed Supplemental EIA & SIA on MMRDA website. • The renewed CRZ clearance was granted on 25/1/2016 from MoEF&CC and the approval conditions have been imposed on the Contractors as the Employer's requirements. MMRDA has actively monitored the compliances of the approval conditions and maintains throughout the construction phase. • MMRDA appointed Mangroves & Marine

CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.	Biodiversity Foundation for bird monitoring and implementation of Flamingos and bird monitoring program for the MTHL project during the construction as well as the long-term monitoring after the construction. • Rs 91.42 Crore has been transferred to Mangroves & Marine Biodiversity Foundation, Mumbai for the development & conservation of mangrove area and its afforestation. Such funds will be managed by the mangrove foundation of Maharashtra State. • As per the renewed CRZ clearance condition, IIT Mumbai has been appointed for the DPR study to develop a Mahul creek Effluent Treatment Plant (ETP). Rs 4.98 Crore was secured for IIT services. Draft DPR was submitted by IIT and has been under review by the "Environmental committee (EC)" of the MTHL CRZ clearance.

b. Required Permits

The Permits to be obtained by MMRDA/ Contractors and the present status is given in the following Table.

Table 3.2.2 Present Status of some Important Permits

Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
Mangrove Cutting	Hon. Bombay High Court	MMRDA/ Contractor	Approval received from Hon. Bombay High Court on 28th November 2016	Mangrove cutting operation was completed with full compliance and as of now, no further follow up work is required.
Tree Cutting /Transplantation	Respective Tree Authorities	Contractor for respective Packages	-	Pkg-1 Tree cutting/ Transplantation permission is awaited from Tree Authority. Pkg-2 Tree Cutting/ Transplantation permission obtained & completed. Pkg-3 Tree Survey completed, and the report submitted to the Forest Department for approval.
Consent to Establish	Maharashtra Pollution Control Board	Contractor for respective Packages	Pkg-1-18.07.2018 Pkg-2-16.08.2018	Pkg-3 has applied for obtaining the Consent to Establish to MPCB.

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 (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.	Cell is established by MMRDA (Annexure III, Organization chart)
2. Rehabilitation and Land Acquisition Issues **a. Affected Area and Population** Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.09 ha of land will be handed over by CIDCO.	**Sewri:** Involuntary resettlement in Sewri section has been further validated by Social Development Cell of MMRDA. Out of 298 Project Affected Households (PAHs) have given consents as follows: • 165 PAHs Kanjurmarg for residential • 25 PAHs Kanjurmarg for commercial • 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial • 1 PAHs (commercial to residential) for Bhakti Park • 100 PAHs HDIL Kurla for residential **Navi Mumbai:** CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 101.95 ha has been handed over by CIDCO to MMRDA. CIDCO has yet to acquire 6.14 Ha with the help of Collector, Raigad.
b. Entitlement Policy MMRDA prepared the entitlement matrix for resettlement of non-title holders 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)**.	There have been no changes during the enforcement. As per the **Attachment 2-5** of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
c. Compensation to Project affected Fishermen Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen who are 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.	Updated **Attachments 2-8 and 2-10** are enclosed in the report.
d. Implementation Schedule The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per **Attachment 2-10.**	Updated **Attachment 2-10** is enclosed in the report.
e. Grievance Redressal Mechanism Grievance Redressal 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.	**Sewri:** FLGRC (Field Level Grievance Redressal Committee) and SLGRC (Senior Level Grievance Redressal Committee) were set as per the RAP and in operation. Compensation Committee has been constituted to address the issues of Compensation to Lease Holders at Sewri. **Fishermen:** GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.
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.	Internal Monitoring updates are mentioned in **Attachment 2-8.**
g. Qualitative Independent Evaluation	

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
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.	Updated **Attachment 2-10** is enclosed in the report.
h. RAP Implementation Budget The amount of estimated resettlement and compensation budget is Rs.906.26 Cr 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.	As updated in Aid Memoire dated 14/12/18, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr.
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.	EMP will be updated, if required, in due course of construction activities/progress.
j. Environmental Monitoring 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	Updated Environmental Monitoring Plan with package wise updated cost is reported in **Attachment 2-3.** Environmental Monitoring Results during the construction phase are reported in **Attachment 2-4**.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
Monitoring 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.	
k. Long Term Bird Monitoring 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 entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. • Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai 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 (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
Average Annual Daily Traffic (PCU/ day)	-	47,400
Daily Average Travel Time (min) * 1	61 min	15.8 min
Number of Users (Persons/ year) * 2	-	46,077,504
Cargo Volume (tons/ year) * 3	-	13,511,759

*1 Section on Sewri – Chirle
*2 Assumptions: average passengers of car and taxi (2.6 persons), bus (37.2 persons) based on JICA study. Number of passengers of LCV, HCV and MAV is assumed as 1 person each.
*3 Assumptions: the maximum capacity of respective vehicle (LCV: 1 ton, HCV and MAV: 15 tons) is used for estimation.

EIRR	**Original:** 15.4% Cost: Project cost (excluding Price Escalation, Tax and Duties and Administration cost) O&M cost, Land Acquisition Benefit: Travel Time cost and Vehicle Operation cost Project Life: 32 Years	**Actual:** *(PCR)* ____% Cost: Benefit: Project Life: **Attachment(s):** **Supporting data for computing EIRR**
FIRR	**Original:** 1.5% Cost: Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 32 Years	**Actual:** *(PCR)* ____%

3.5 Monitoring Plan for the indicators

Monitoring Methods, Section(s)/ department(s) in charge of monitoring, frequency, the term and so forth are given below:

Original: *(P/M and PCR)*

Monitoring Organization

PIU shall be In-Charge of Monitoring activities 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 hereto as per **Annex I**; 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 project 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 after completion of the Project, in the form of Project Status Report (PSR) attached hereto as per **Annex I**.

Actual: *(P/R and PCR)*

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

This QPR No. 9 is submitted for a period of April to June 2019.

3.6 Achievement of the Project Objective

(PCR)

4.0 OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY)

4.1 O&M and Management

- Organization Chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc.)

Original: *(P/M)*

Operation & Maintenance, Toll Management and ITS

MMRDA proposes to engage two separate agencies for O&M and Toll Management System. Though MMRDA will not directly carry out O&M, the overall monitoring over the O&M agency will be the responsibility of MMRDA. O&M Budget will be allocated by MMRDA. O&M and increase in toll rate will be done in accordance with the NHAI's manuals such as "NHAI Works manuals".

Actual: *(PCR)*

4.2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project, as well as the annual O&M budget.

(PCR) This will be reported when the outcome of the above work study is available.

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

Please describe your evaluation on the overall outcome of the project.

(PCR)

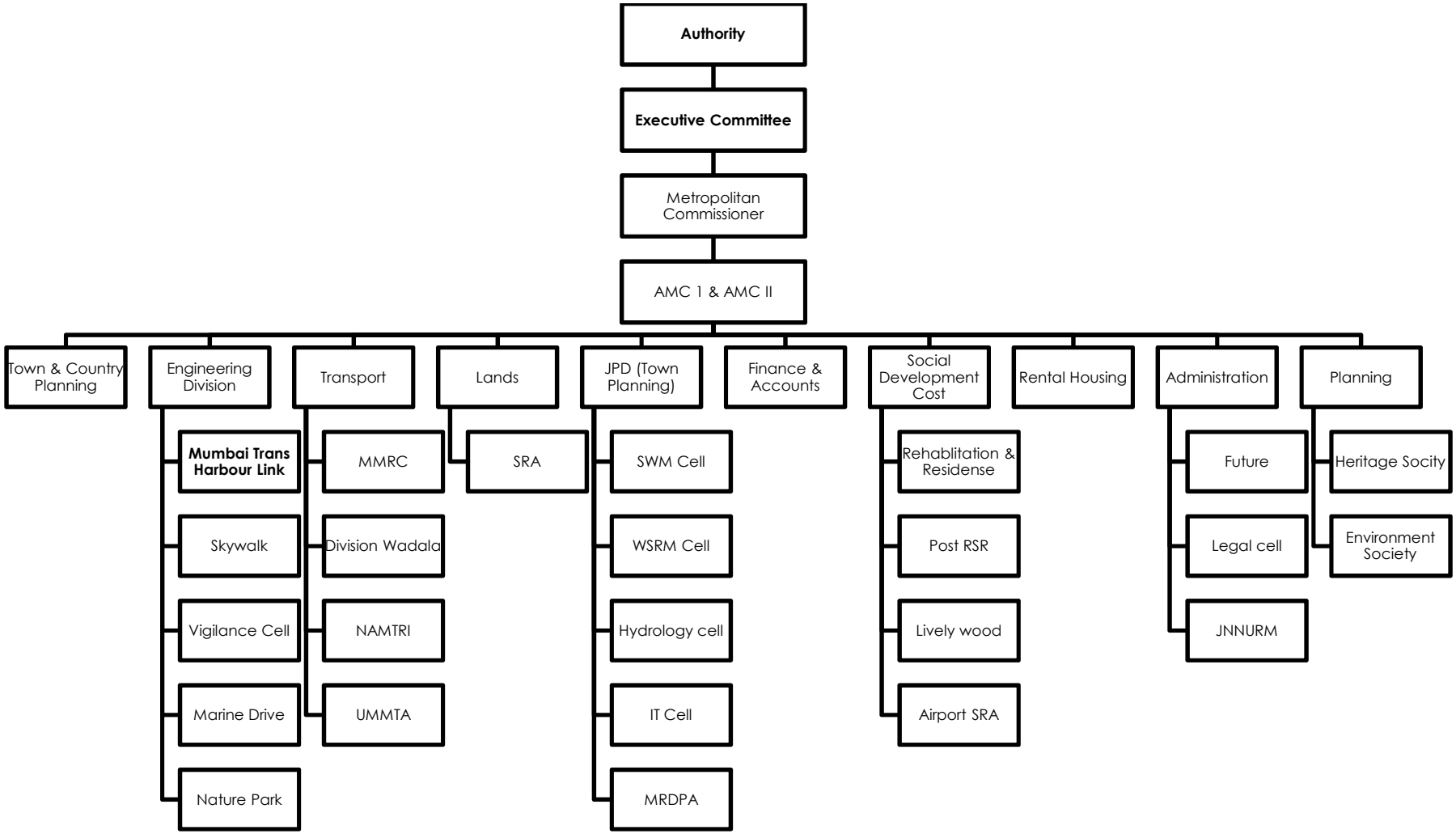
5.3 Lessons Learnt and Recommendations

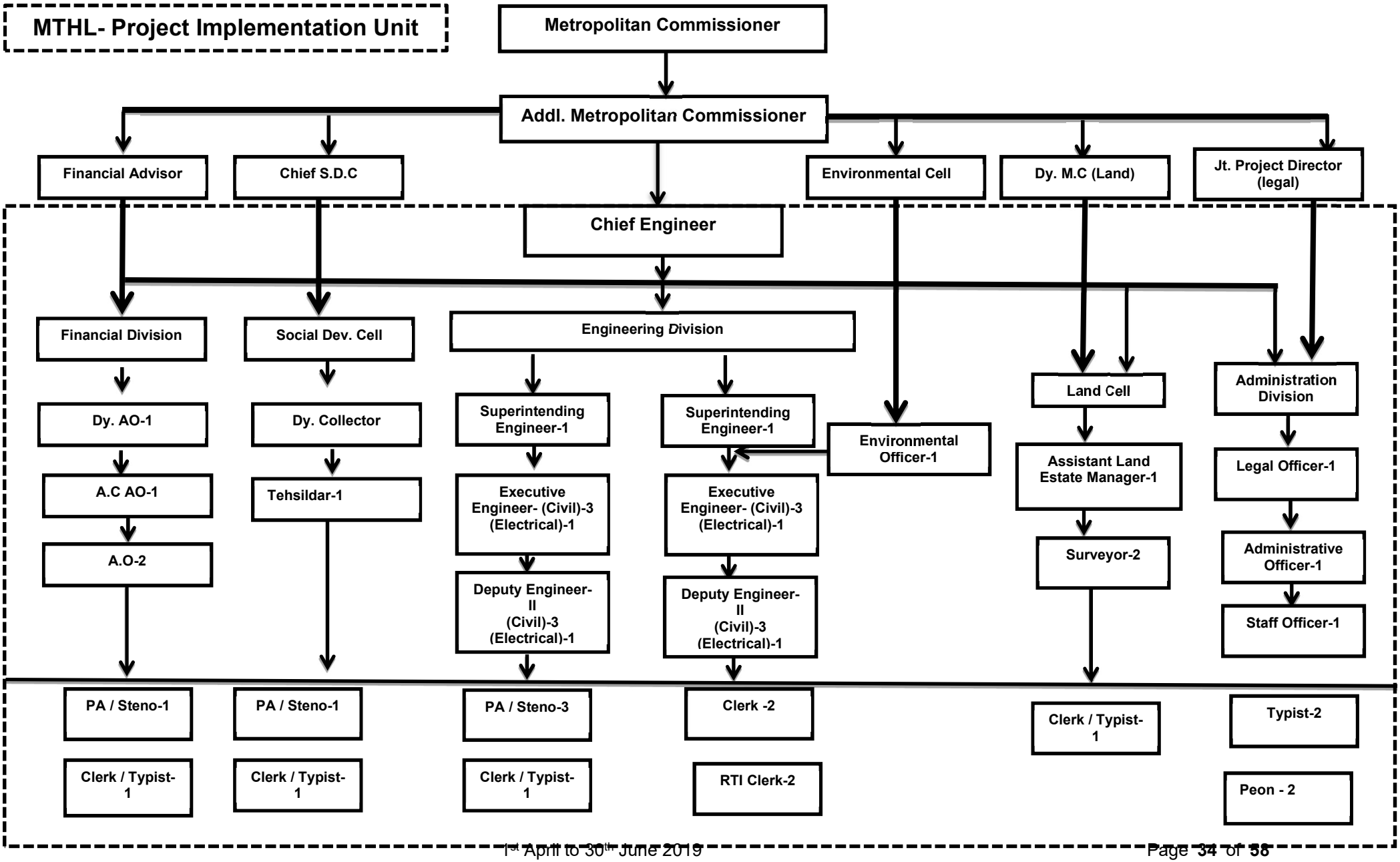
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart




MTHL- Project Implementation Unit
Metropolitan Commissioner
Addl. Metropolitan Commissioner
Financial Advisor
Chief S.D.C
Environmental Cell
Dy. M.C (Land)
Jt. Project Director (legal)
Chief Engineer
Financial Division
Social Dev. Cell
Engineering Division
Land Cell
Administration Division
Dy. AO-1
Dy. Collector
Superintending Engineer-1
Superintending Engineer-1
Environmental Officer-1
Assistant Land Estate Manager-1
Legal Officer-1
A.C AO-1
Tehsildar-1
Executive Engineer- (Civil)-3 (Electrical)-1
Executive Engineer- (Civil)-3 (Electrical)-1
Surveyor-2
Administrative Officer-1
A.O-2
Deputy Engineer-II (Civil)-3 (Electrical)-1
Deputy Engineer-II (Civil)-3 (Electrical)-1
Staff Officer-1
PA / Steno-1
PA / Steno-1
PA / Steno-3
Clerk -2
Clerk / Typist-1
Typist-2
Clerk / Typist-1
Clerk / Typist-1
Clerk / Typist-1
RTI Clerk-2
Peon - 2

Attachment 2- Environmental & Social Impacts Attachments

Attachment 2-3 - Environmental Monitoring Plan
Attachment 2-4 – Environmental Monitoring Result Reporting Form
Attachment 2-6 – MTHL Land Acquisition Status
Attachment 2-8 – RAP Internal Monitoring Form
Attachment 2-10 – Schedule of the RAP Implementation

Attachmemt 2-3

Updated Environmental Monitoring Plan with Packagewise Estimated Cost

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
Pollution	1	Air pollution	SO_2, NO_2, PM_{10}, $PM_{2.5}$, O_3, CO, (6 Items)	National Ambient Air Quality Standards, 2009	1. Sewri & Sewri bay area for package I	Fortnightly at all locations except 2 locations each near Batching plants	1,800,000	15,000,000	1,800,000	742,500	17,542,500	National Ambient Air Quality Standards (NAAQS) by Central Pollution Control Board (CPCB)	P1 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						(Standard for 24hrs: Industrial and Residential/ Ecological Sensitive area)	P 2 contractor Monitoring plan has been designed as per EIA of 2015
					3. Gavhan & Chirle for package III	Fortnightly only for 3 months (jan-2019 to Mar-2019). Then quarterly monitoring as per MOEF and CPCB norms						· SO_2: 80 / 80µg/m^3	P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
												· NO_2: 80 / 80µg/m^3	P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of biding. Later modifications suggested by GC were not accepted by P 2. P1 and P3 accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequecy would change after obtaining CTE.
												· PM_{10}: 100 / 100µg/m^3	
												· $PM_{2.5}$: 60 / 60µg/m^3	
												· O_3: 180 / 180µg/m^3	
												· CO: 0.4 / 0.4mg/m^3	
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	IS / AWWA	1. Sewri & Sewri bay area for package I	Quarterly	810,000	2,400,000	810,000	0	3,210,000	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Water Pollution not applicable for Pkg. 3
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						· pH : 6.5-9	
					3. Gavhan & Chirle for package III	Not applicable						· DO: 3 mg/l	
												· Turbidity: 30 NTU	
												· BOD: 5 mg/l	
												· O & G: 10 mg/l	
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	Volumetric	1. Sewri & Sewri bay area for package I	Daily	500,000	299,200,000	500,000	600,000	300,300,000		The cost of waste disposal for P1 includes C&D waste, Pile muck etc. from all areas like, interchange, intertidal and marine. The disposal location is at MCGM approved location Bhayandarpada, Thane.

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						**Municipal Soild Waste Management Rules, 2013** Generated waste shall be reused or disposed at designated site. Sites have been identified and the location for **Pkg. 1** is at Bhayandar Pada in Thane. For **Pkg. 2 & 3** is in Navi Mumbai at Pushpak Node nera "Teen Taki Junction" along the Amar Marg.	P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be
					3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.							
	4 and 8	Soil Contamination/ sedimentation	Heavy Metals & Oil & Grease (5-10 items shall be selected from Soil pollution standards)	IS / Methods Manual Soil Testing in India by Department of Agriculture and Cooperation, January 2011	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF)	
					2. Nhava temporary bridge & casting yard in Gavhan for package II							· Cd: 0.01mg/l	
					3. Gavhan & Chirle for package III	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only						· Lead: 0.01mg/l · Chromium (VI): 0.05mg/l · Arsenic: 0.01mg/l · T-Mercury: 0.0005mg/l · Copper: 125mg/kg (some items shall be selected from totally 25 standards items)	
	5	Noise and vibration	Ambient and road side noise (dB(A)L_{Aeq})	IS Standard	1. Sewri & Sewri bay area for package I	Fortnightly	150,000	54,000	150,000	369,000	573,000	**-Construction Noise; 85dB(A)**	
					2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year						**-Ambient Noise Standards in India (dB (A) $_{Leq}$)**	
					3. Gavhan & Chirle for package III	Fortnightly						1.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr) 3.Residential Area: Day Time: 55 (6-22hr) Night Time: 45 (22-6hr) 4.Silence Zone Day Time: 50 (6-22hr) Night Time: 40 (22-6hr)	
			Vibration (dB L10 or mm/sec)		1 Location Gavan area for package III	Half yearly	75,000	0	75,000	400,000	475,000	**- Construction vibration 75dB** **-Vibration Standards roadside** 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr)	Not applicable for Pkg. 1
	9 and 10	Protected Area /Ecosystem	1.Monitoring of mudflat conditions including fauna-flora	Ocular inspection and quantitative survey	Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	6,500,000	7,200,000	6,500,000	0	13,700,000		Not applicable for Pkg. 3
			2. Monitoring of Cutting Tree and replantation/		Along MTHL alignment and mangrove replant area for package II	4 Times / Year						Significant impacts are not caused by the project	
			transplanting area	1-1. Fauna-Flora	Not applicable for Package III								
			3.Monitoring of Mangrove Plantation area appointed by MoEF	Line-Point census and record number and appeared species								**Note)**	

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
Natural environment			4. Monitoring of sedimentation soil and ecological parameter (18items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1)Netprimary productivitye, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO_2)	1-2: Mangrove density and community survey								**Detailed monitoring plan will be setup during basic design stage**	
				1-3: Benthos Survey									
				2-1: Cutting trees confirmation								Standard for Soil; Supplemental EIA Table 6.1.15	
				3-1: Mangrove survey in the replanted area								Standard for Ecological Parameter:	
												· Netprimary Productivity	
												<1,500 mgC/m3/day at surface	
												· Chlorophyll-a	
												<4mg/m3	
												· Phosphate: 0.1-90µg/l	
												· Nitrate: 1.0-500µg/l	
												· Nitrite: <125µg/l	
												· Particulate Organic Carbon: 10-100mg/m^3	
												· SiO2: 10-5,000µg/l	
	11	Hydrology	Flooding situation	Flood level measurement during high precipitation periods	Not applicable for Package I		350,000	0	350,000	0	350,000	Project activities and structures does not cause flooding and impacts on tidal conditions	Not applicable for Pkg. 1 & 3
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year							
					Not applicable for Package III								
	12	Topography and Geology	Conditions in embankment area	Visual survey about Stability of embankment	Not applicable for Package I		115,000	0	115,000	0	115,000	Embankment shall be stabilized without any landslide and cracks	Not applicable for Pkg. 1 & 3
					Interchange in Shivaji Nagar for Package II	4 Times / Year							
					Not applicable for Package								
Social environment	13	Local economy such as employment and livelihood			Affected area		As per Actuals						
	14	Local conflict of interests	Construction worker's township	Confirmation of workers list from contractor	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	2 Times / Year	125,000	0	125,000	0	125,000	Employment opportunity shall be provided fairly	
	15	Infectious diseases such as HIV/AIDS	Number of infected patient	Confirmation of health check list from contractor	2 Locations	4 times / year x 4.5 years	525,000	0	525,000	0	525,000	Infection disease rate shall not be caused by the project	
	16	Labour Environment	Construction worker's condition	Confirmation of safety devices and conditions via interviews	2 Location (camp site in Sewri and Shivaji Nagar) for Package II	2 times / year	500,000	0	500,000	0	500,000	"Building And Other Construction Workers (Regulation of Emloyment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	
Other	17	Accidents	Number of accidents	Confirmation of accidents list from local government and State Traffic Police Department	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	4 Times / Year	400,000	0	400,000	0	400,000	Any accidents are not caused by construction	
		Total					**8140500**	**325,354,000**	**12,000,000**	**2,211,500**	**339,565,500**		

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - April to June 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

Area	No.	Item	Parameter	Location	Frequency a year	Item and Stanadard	Monitoring Result				Remark - reasons why the data is exceeding standard - counter measures when the data is exceeding
							Location 1- Pkg 1	Location 2	Location 3- Pkg 3	Location 4	
Pollution	1	Air pollution	SO_2, NO_2, PM_{10}, $PM_{2.5}$	1. Sewri & Sewri bay area for package I	Quarterly monitoring ia conducted at all locations.	**National Ambient Air Quality Standards (NAAQS)**	**Sewri**	**Shivaji Nagar**	**Chirle**		
				2. Nhava temporary bridge & casting yard in	4 Times / Year	**(Standard for 24hrs: Industrial and Residential)**					
				3. Gavhan & Chirle for package III	From march -2019 onwards monitoring is conducted quarterly as per MOEF and CPCB norms	1. SO_2: 80µg/m^3	BDL (DL =10)	BDL	23		BDL- Below Detectable Limit
						2. NO_2: 80µg/m^3	13	34	42		
						3. PM_{10}: 100µg/m^3	147	140	107		PM10 is high due to the ancillary development taking place around the area around Pkg II & III (casting
						4. $PM_{2.5}$: 60µg/m^3	20	21	53		During this period quarry and cnstruction activities are peek in extent to compare with other month, near
						5.CO:02mg/m3	0.88	1.7			
						6.VOCs	1.3	1.5			Benzene is analysed in ambient air
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	**Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)**	**Zone I**	**Zone II**	**Zone III**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	1. pH : 6.5-9	7.7	5.9	….		
				3. Gavhan & Chirle for package III	Not applicable	2. DO: 3 mg/l	5.1	6.9	….		
						3. Turbidity: 30 NTU	6.2	12.8	….		NOT applicable For MTHL Package-03
						4. BOD: 5 mg/l	2.9	BDL[DL=2]	….		
						5. O & G: 10 mg/l	BDL(DL=10)	BDL[DL=10]			
						6.COD	21	16			
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	1. Sewri & Sewri bay area for package I	Daily	**Municipal Soild Waste Management Rules, 2013**	**Sewri Camp Site**	16	**Chirle Camp Site**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	Generated waste soil (t) total	18258 T	**Shivaji Nagar Camp Site**	Exacavated soil shall be reused either for construction or else covering undulated area with in ROW of MTHL package -03		
				3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.	Generated cutting treel (ha) total	Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting so far NIL	Total 1200 CuM of muck collected in jumbo bags and disposal done on the location allotted by MbPT	Tree cutting proposal has been submitted and approval from competent authority is awaited. Tree Cutting so far NIL. CIDCO need to be award/ premit for further activity.		
						Generated domestic waste (t/month) total	2.5 T/quarter. It is disposed through MCGM daily.		Labor Camp and site municipal waste is collected and disposed through CIDCO at Gavan area from May 2nd week. (4470 Kg/Month)		Labour camp is started at 0 point By the month of June-2019.
						Confirmation of adequate disposal (visualt survey)	Yes	Camp established , site municipal waste is collected and disposed by CIDCO	Yes		
		Soil	Heavy Metals & Oil &	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	**Soil Pollution Standard in India (MOEF)**	MP12 TAB Sewri, dated 4.4.2019	Yes	**N/A**		
				2. Nhava temporary bridge & casting yard in		1. Cadmium: 0.01mg/l	0.02				
				3. Gavhan & Chirle for package III	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only	2. total cyanide : not detected					
						3. organic phosphorus: not detected					
						4. lead: 0.01mg/l	0.13				For package-03, Muck is not stalking yet at site, At diesel and other chemical storage area contain only soil. There is no availability of leachate at this stage. Therefore result will be as per CBCP it is complied in mg/Kg.
						5. chromium (VI): 0.05mg/l	BDL				
						6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)	0.03				
						7. total mercury: 0.005mg/l	BDL				
						8. alkyl mercury: not detected					
						9. PCBs: not detected					

Regarding soil contamination/sedimentation, some items shall be selected from the total 25 standards items during the Detailed Design. Only the selected items shall be reported t

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - April to June 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

JICA, and the rest of items shall be deleted from this form.

	4	Contamination/sedimentation	Grease			10. copper: 125mg/kg (only paddy field soil)	0.03				
						11. dichloromethane: 0.02mg/l	BDL				
						12. carbon tetrachloride: 0.002mg/l					
						13. 1,2-dichloroethane: 0.004mg/l	BDL				
						14. 1,1-dichloroethylene: 0.02mg/l					
						15. cis-1,2-dichloroethylene: 0.04mg/l					
						16. 1,1,1-trichloroethane: 1mg/l					
						17. 1,1,2-trichloroethane: 0.006 mg/l					
						18. trichloroethylene: 0.03mg/l					
						19. tetrachloroethylene: 0.01mg/l					
						20. 1,3-dichloropropene: 0.002mg/l					
						21. thiuram: 0.006mg/l					
						22. simazine: 0.003mg/l					
						23. thiobencarb: 0.02mg/l					
						24. benzene: 0.01mg/l					
						25. selenium: 0.01mg/l	BDL				
	5	Noise and vibration	Ambient and road side noise (dB(A)LAeq)	1. Sewri & Sewri bay area for package I	Fortnightly	**Construction area Standard 85 dB(A) daytime (Japan standard) Not constuction area : Ambient Noise Standard in India (dB(A) Laeq)**	**Sewri (ST 200-500) (Industrial area)**		**Shivaji Nagar (Commercial area)**		
				2. Nhava temporary	2 Times / Year	Day time : 6-22 hr (continious) dB(A)	67	**Sea Section (ST5000-5500) Migratory Bird Area**	69.5		
				3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continious) dB(A)	63		62.2		
						(only sea section)					
						Day time : 6-22 hr (10 min during 9-17 hrs)					
						Night time: 22-6 hr (10 min 22-24 hr)					
						Note (standard values in Not construction area)					
						1.Industrial Area					
						Day Time: 75 (6-22hr)					
						Night Time: 70 (22-6hr)					
						2.Commercial Area:					
						Day Time: 65 (6-22hr)					
						Night Time: 55 (22-6hr)					
			Vibration (dB) shall be converted from mm/s to dB	1 Location Gavan area for package III	Half yearly	**Construction area Standard 75 dB daytime (Japan standard) Not constuction area : Vibration Standard (Japan Standard along the road)**	**Sewri (ST 200-500) (Industrial area)**		**Chirle**		
						Day time : 6-22 hr (continious)		**Shivaji Nagar (Commercial area)**	0.025 mm/s		
						Night time: 22-6 hr (continious)			0.010 mm/s		
						Note (standard values in Not construction area)					
						1. Commercial /Industrial Area					
						Day Time: 70 (7-20hr)					
						Night Time: 65 (20-7hr)					
			1.Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and	Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	**Standard is not existing, but quantity and quality should not be worsen**	**Sewri side (ST500-5500)**		**Shivaji Nagar side (app. ST16000-19000)**	**Mangorove Replantation area appointed by State Government**	
				Along MTHL alignment and mangrove replant area for package II	4 Times / Year	1-1. Fauna-Flora (number of species and quantity		**Sea Section (ST5500-16000)**	N/A	N/A	
						(1) Number of species of bird	Refer remark				BNHS has submitted two quarterly reports uptil now. A total of 80 species of avifauna has been recorded in all of Thane creek. Of these 80 species, 70 species are water fowls and 10 species are prey birds.
						(2) Number of species of fish					
						(3) Estimated number of Flamingo					
						1-2: Mangrove density and community survey					Compensatory mangrove plantation has been completed in 105 ha area in Dhanu, Palghar and Mumbai region. Balance plantation in 125 ha area , suitable sites have been identified in Palghar district.

Regarding protected area (CRZ and Important Bird Area) and ecosystem, detailed long-term monitoring plan will be established during baseline survay of birds. This tentative monitoring form shall be updated based on the detailed long-term monitoring plan.

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - April to June 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

Natural Environment	6	Protected Area	replantation/transplation area 3.Monitoring of Mangrove Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO2)			(1) Number of species of mangorve		not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						1-3: Benthos Survey		not required			
						(1) Number of species and quantity by species	153 Species and 152 No/m2	not required			
						2-1: Cutting tree confirmation	Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting NIL	not required			
						(1) Number of cutting tree and species		not required			920 numbers of trees surveyed and the proposal has been submitted to Forest / CIDCO Department - Pkg III
						3-1: Mangrove survey in the replant area		not required			
						(1) Number of species of mangorve		not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						4. Ecologial Parameter		not required			
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface	600				
						(2) Chlorophyll-a: <4mg/m3	3.3				
						(3) Phosphate: 0.1-90µg/l	15.6				
						(4) Nitrate: 1.0-500µg/l	23				
						(5) Nitrite: <125µg/l					
						(6) Particulate Organic Carbon: 10-100mg/m^3					
		Ecosystem				(7) SiO2: 10-5,000µg/l	92				
	7	Hydrology	Flooding situation	Not applicable for Package I		**Criteria for evaluation** **Project activities and structures does not cause flooding and impacts on tidal conditions**	**Sewri**				
				2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year	Monitoring of flooding situation	No Flooding	**Shivaji Nagar**			
				Not applicable for Package III				No flooding			
	8	Topography and Geology	Conditions in embankment area	2 Locations (1. Embankment of Inter Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)	4 times / year x 4.5 years	**Criteria for evaluation** **Embankment shall be stabilized without any landslide and cracks**	**Shivaji Nagar**	**Chilre**	**Chirle**		**Yet to be observed.**
						Monitoring of embankment					
	9	Local conflict of interests	Construction worker's township	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Employment opportunity shall be provided fairly**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Chirle**		
						Number of hired workers by community		100-125			
	10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Infection disease rate shall not be caused by the project**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**			
						Confirmation of health check record and inspect project site	Malaria and Dengue Detetction Camp organised for Sub Contractor workers	Health Checks carried out but HIV/AIDS parameter is not there.	Health checks charried out near by tie up hospital @ ulwe. Form 28 and 29 is recorded by site doctor at present. HIV/ AIDS shall be carried out soon.		
	11	Labour Environment	Construction worker's cond	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	**Criteria for evaluation** **"Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Gavan Camp site**		
						Site Visual Inspection	All provisions as per BOCW	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996 as per IM -26A checklist		
Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji	4 times / year x 4.5 years	**Criteria for evaluation** **Any accidents are not caused by construction**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Other area**		

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

○				Nagar)		Number of recorded accident	NIL	Nil	Nil		

Monitoring Period - April to June 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha
Land in possession in MMRDA – 101.99 ha
Balance land acquisition- 6.10 ha

Note: The acquisition of 6.14 ha is in progress by CIDCO. The balance acquisition would be likely completed by the end of August 2019.

Land Required in ha		Land Acquired in ha		Balance Land to be acquired in ha	Anticipated date for Land Acquisition	Payment status (Payment made to Land Owners by CIDCO)	Remarks
Govt.	**Private**	**Govt.**	**Private**	**Private***			
98.75	9.34	98.75	3.24	6.10	30/08/2019	--	1. The payment status to the land owners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total 108.09		**98.75**	**3.24**	**6.10**			

***Portions of Private Land**

Sr. No.	Name of Village	Area (Hectare)	Acquired	Non-acquired
1	Gavhan	0.15	-	0.15
2	Jasai	8.72	3.24	5.48
3	Chirle	0.47	-	0.47
Total Area		**9.34**	**3.24**	**6.10**

Attachment 2-8

RAP Implementation Monitoring Form
For Mumbai Trans Harbour Link Project (MTHL)

1. General Information

a.	RAP Implementation Monitoring Results:	Progress Status Report (PSR) of 2nd quarter of 2019
b.	Date of Preparing This form	30.06.2019
c.	Person Preparing This form	Name: Robin Sham Position: Engineer and Team Leader Department/Organizations: General Consultants

2. Scale of Impact

2.1 Project Affected Households (PAHs) and Project Affected Persons (PAPs) for Sewri side

Total Project Affected Households (PAHs)	298 Hhs	Titleholders: 0 Hhs Non-titleholders: 298 Hhs
Total PAPs	1,282 persons*	Titleholders: 0 persons Non-titleholders: 1,282 persons*
PAHs who need relocation (as residents)	232 Hhs	Titleholders: 0 persons Non-titleholders:232 (1,088 persons) *
PAPs who do not need relocation (as residents)	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons
Commercial PAPs who need relocation	66 (194 persons) *	Titleholders: 0 persons Non-titleholders:53 (194 persons) *
Commercial PAPs who do not need relocation	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons

* - Figures for number of persons do not include no. of family members of few additional PAPs.

2.2 Structures

Structures	Residential: 231 Commercial: 66 Residential + Commercial: 1 (counted in Commercial) Community: 9 (Religious Properties 6, Public Toilets 3) Government: 16 (MbPT Structures 9, Occupants of Leased Plots 6 & Police Chowky1) Total: 323

2.3 Fishery

Categories of Fisher-folks	**Identified Number**		**Total**	**Remarks**
	Mumbai side	**Navi Mumbai side**		
C1: Fishing stakes and nets in RoW (250 m.)	217 For Trombay, Sewri & Mahul in process of approval	Survey in progress	217	Nil
C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	749	126	875	Scrutiny of the balance applications is in progress.
C3: Hand-pickers	416	1273	1689	

C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during construction period	Will be observed during construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during construction period	Will be observed during construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during construction period	Will be observed during construction period	----	Nil

2.4 Land Acquisition / Transfer

Location	**Land Required in Ha.**		**Land Acquired in Ha.**		**Balance Land to be acquired in Ha**	**Remarks**
	Govt.	**Private**	**Govt.**	**Private**		
Sewri	10.089	0	10.089	0	0	
Navi Mumbai	98.75	9.34	98.75	3.24	6.10	
Total	**118.179**		**108.839**	**3.24**	**6.10**	

3. Monitoring Results

3.1 Sewri Section

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Resettlement	No. of Residential PAHs provided with Allotment Letters of Alternate Tenements	232	141	0	141	32%	
	No. of Residential PAHs given possession of Alternate Tenements	232	77	0	77	0%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	20	0	20	0%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	1	1	1	0%	

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
	No. of Occupants of MbPT Leased Plots provided Compensation	6	3	3	3	0%	
	No. of Religious properties Relocated / Removed	6	0	0	0	0%	Jivdani Mandir allotment letter given
	No. of Other Community properties Relocated / Removed	4	0	0	0	0%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	0	0	0	0%	
	No. of PAHs/PAPs provided Shifting Charges / Arrangement	298	0	0	0	0%	
Rehabilitation	No. of PAHs / PAPs identified for Livelihood Support in Post Resettlement Assessment						
	No. of PAHs / PAPs provided Livelihood Support under Program-I (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-II (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-III (to be identified)						
	No. of new enterprises started						
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	0					
	No. of Grievances Received by SLGRC	0					
	No. of Grievances Disposed by SLGRC	0					
Post Resettlement Assistance	No. of CHSs Registration helped						
	No. of CHSs provided Tenements for Social Amenities						
	No. of CHSs' Maintenance Fund Invested						

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
	No. of CHSs' Office Bearers provided training						

3.2 Fishery Compensation

Categories of Fisher-folks	Identified Number		Total	Remarks
	Mumbai side	Navi Mumbai side		
C1: Fishing stakes and nets in RoW (250 m.)	217 For Trombay, Sewri & Mahul in process of approval	Survey in progress	217	Nil
C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	749	126	875	An amount of about 49 crores has been deposited with the Fisheries Department towards disbursement of compensation to 2564 Nos. of beneficiaries. Further, the Fisheries Department has started disbursing the amount to the individual PAPs on following due procedure. The scrutiny of the balance Nos. of applications of fisherfolk is in the process of scrutiny for deciding their eligibility for the compensation.
C3: Hand-pickers	416	1273	1689	
C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during construction period	Will be observed during construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during construction period	Will be observed during construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during construction period	Will be observed during construction period	----	Nil

List as per C2 & C3 category

Sr. No	Village name	Total No of family units surveyed	No of eligible family units
Mumbai side			
1.	Mahul & Sewri	336	336
2.	Trombay	829	829
Total Mumbai side		**1165**	**1165**
Navi Mumbai side			
3.	Bamandongri	235	25
4.	Belpada	484	329
5.	Ganeshpuri	25	50
6.	Jasai	26	18
7.	Gavhan	5	4
8.	Morave	190	83
9.	Kopar	548	228
10.	Mora	70	1
11.	Uran	65	0
12.	Jawale	232	1
13.	Shelghar	1	15
14.	Shivaji Nagar	2	64
15.	Ulwe	29	14
16.	Vahal	119	3
17.	Navakhadi	673	326
18.	Moha	222	146
19.	Kombadbhuja	134	92
Total Navi Mumbai side		**3060**	**1399**
Total (Mumbai side + Navi Mumbai side)		**4225**	**2564**

Note: MMRDA has received *13,112* new applications from Fishing families which are yet to be scrutinized.
Note: The category of fishermen is as per the Fishermen Compensation Policy

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

No. of Cases referred to GRC	No. of Cases		No. of Cases Rejected	No. of Cases under Consideration
	Allowed	Compensation Paid		
Nil	Nil	Nil	Nil	Nil

Implementation Schedule for Fisher-folks Compensation & Land Acquisition in Navi Mumbai

A. Implementation Schedule for Fisher-folks Compensation: -

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
1	Approval of fisher-folks' compensation Policy	Fisher-folks Compensation Committee (FCC)	08-10-2015	23-12-2015
2	Approval by MMRDA	MMRDA	10-12-2015	23-12-2015
3	Submission to JICA	MMRDA	--	04-01-2016
4	Detailed list of PAP and compensation plan	Detailed list of Fisher-folk PAP & disbursement is finalized by the Fisheries Department.	23-12-2015	1. *Total up to date applications scrutinized = 5881 nos* 2. *Eligible = 2564 nos* 3. *In-eligible = 06 nos* 4. *In process of approval = 2043 nos* 5. *Documents awaited = 1268 nos*
5	Validation of compensation plan	Fisher-folks Compensation Committee (FCC)	23-12-2015	1. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk from Sewri, Mahul & Trombay (Mumbai side) – *12th September 2017* and *20th November 2018* for C-2 & C3 Category only.

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
			23-12-2015	2. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on *25th April 2018.* 3. Validation of compensation is in progress and would be completed in phases.
6	Approval of compensation plan	FCC	23-11-2015	28-12-2017
7	Approval by MMRDA	MMRDA	23-11-2015	09-03-2018

B. **Implementation Schedule for Land Acquisition in Navi Mumbai:-**

Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Anticipated date for Land Acquisition	Payment status (Payment made to Landowners by CIDCO)	Remarks
Govt.	**Private**	**Govt.**	**Private**	**Private**			
98.75	9.34	98.75	3.24	6.10	31/08/2019	--	1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total	**108.09**	**101.99**		**6.10**			

Implementation Schedule for SIA (Sewri Section)

Task No.	Task Designation	Start Date	Completion / Forecast Date
1	**Preparation of Final SIA**		
1.1	MMRDA Approval	October 2015	January 2016
1.2	JICA Approval	November 2015	January 2016
1.3	Posting of project Information on MMRDA		
1.4	Translation and disclosure of entitlement policy in local language to all PAP's	December 2015	January 2016
2	**LARP Implementation**		
2.1	Grievance redress mechanism established	August 2016	August 2016
2.2	Staff deployment SIA implementation	June 2016	March 2020
2.3	Staff Deployment Public Relation	June 2016	June 2016
2.4	Hiring of Independent Evaluation Agency	November 2018	June 2019
2.5	Preparation and issue of allotment letters to	June 2018	August 2019
2.6	Notice of PAPs for shifting (Sewri Section)	December 2018	June 2019
2.7	Allotment of dwelling units to PAP's	September 2016	August 2019
2.8	Shifting of PAPs to resettlement Colony	December 2018	September 2019
2.9	Transfer of compensation / allowance/ assistance to PAPs	December 2018	September 2019
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	September 2019
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over	September 2019	December 2019
2.12	Registration of Co-operative housing societies, transfer of maintenance funds. (6 months period)	December 2019	June 2020
2.13	Signing of Civil Contract		January 2017
2.14	Notice of Civil works to proceed		March 2017
3	**Monitoring & Evaluation**		
3.1	Internal Monitoring- Monthly/ Quarterly	June 2016	January 2020
3.2	Independent Evaluation Mid-term and End term evaluation Mid Term End Term	 May 2019 November 2019	 July 2019 January 2020

Attachment 3- JICA's Concurrence Status

Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA's Concurrence on					
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 15th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	181.49	181.49	-	-	-	-	-	-

Attachment 4- Project Procurement and Financial Status till 30th June 2019

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 30th JUNE 2019

Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Award Date/ As per PIP Mar- 2018	Actual/ Projected Completion as per PIP June-2019	Overall % completion up to June 2019	% of Project Amount Disbursement (including Mobilization Advance & Price Adjustment) till June 2019
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	Nov 2017	Sep 2022	11.9%	21.12%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	Nov 2017	Sep 2022	10.47%	20.34%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	Nov 2017	Sep 2021	6.19%	12.52%
ITS	Package-4 Intelligent Transport System	181.49 (Estimated)	Design Stage	--	Jul 2020 (Estimated)	Sep 2022	Nil	Nil

Attachment 5- Project Progress Photos

Package 1- Site Progress Photos

Photo No. 1: Casting Yard Development in progress

Photo No. 2: 1st Segment Mould Assembly in progress

Photo No. 3: C2P8-C1P34-BP45 Pile Cap Concreting in progress

Photo No. 4: C2P5 Pile Cap and Pier Works in progress

Photo No. 5: Piling Works at MP4 in progress

Photo No. 6: Pile Cap & Pier Works at MP6 in progress

Photo No. 7: Pile Cap & Pier Works at MP7 in progress

Photo No. 8: Pile Cap & Pier works at MP8 in progress

Photo No. 9: Pile Cap Concreting at MP9 in progress

Photo No. 10: Pile Cap Works at MP10 in Progress

Photo No. 11: Pile Cap rebar tying works at MP11 in progress

Photo No. 12: World Environment Day Celebration at the Package-1 Site

Package 2 – Site Progress Photos

Photo No. 1: Pile Concreting at MP 164/01 LHS in progress

Photo No. 2: Pile Cap Bottom formwork mock-up at Belapur jetty location

Photo No. 3: Pile head breaking at MP 162 LHS location in progress

Photo No. 4: Pile Boring at Finger location MP 231 in progress

Photo No. 5: Liner Driving at MP 238/01 RHS location in progress

Photo No. 6: Geotechnical Investigation works at location 172A LHS in progress

Photo No. 7: Pile Reinforcement Cage preparation at Casting Yard in progress

Photo No. 8: Gantry Crane erection works at Bay-3 location in progress

Photo No. 9: Survey Tower erection at Bay-2 in progress

Photo No. 10: Safety Toolbox Talk at Casting Yard

Package 3 – Site Progress Photos

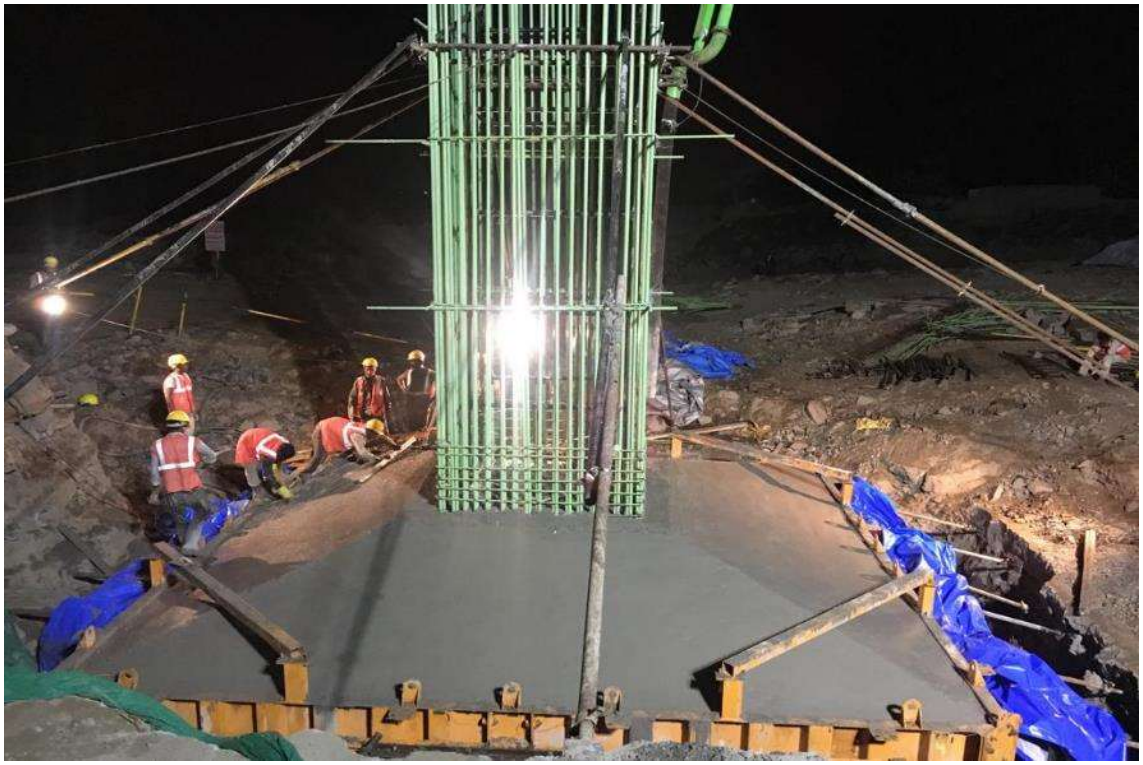


Photo No. 1: Casting of Foundation at location LP 16

Photo No. 2: PCC works at location LP 08 in progress

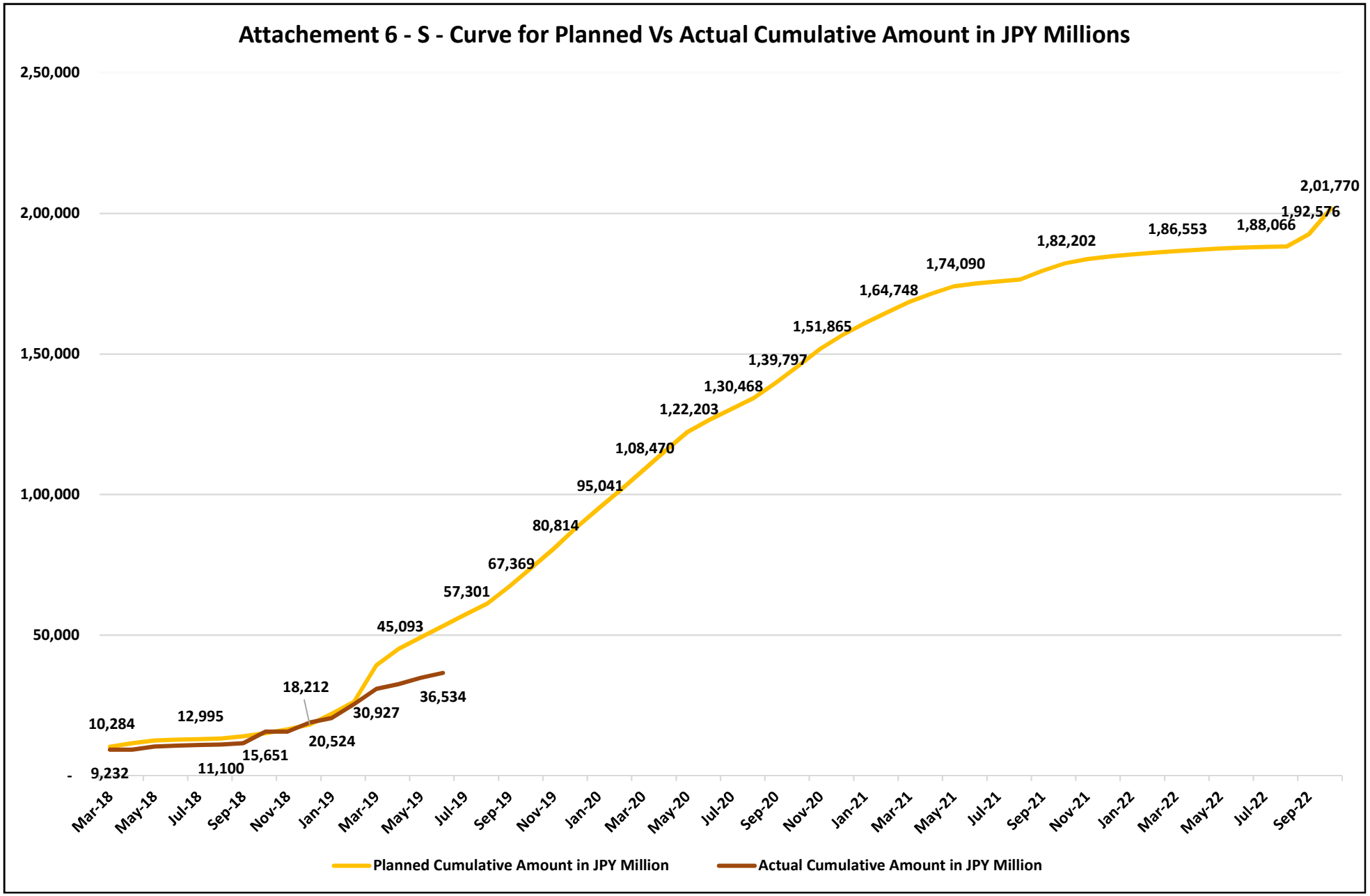
Photo No. 3: Reinforcement inspection for Foundation at RMP 282 in progress

Photo No. 4: Coal Tar Epoxy coating and Foundation Backfilling at RMP 267

Photo No. 5: Casting Yard Establishment works in progress

Photo No. 6: Commissioning of Concrete Batching plant in progress

Attachment 6- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million


Attachement 6 - S - Curve for Planned Vs Actual Cumulative Amount in JPY Millions
2,50,000
2,00,000
1,50,000
1,00,000
50,000
-
9,232
10,284
11,100
12,995
15,651
18,212
20,524
30,927
36,534
45,093
57,301
67,369
80,814
95,041
1,08,470
1,22,203
1,30,468
1,39,797
1,51,865
1,64,748
1,74,090
1,82,202
1,86,553
1,88,066
1,92,576
2,01,770
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20
Sep-20
Nov-20
Jan-21
Mar-21
May-21
Jul-21
Sep-21
Nov-21
Jan-22
Mar-22
May-22
Jul-22
Sep-22
Planned Cumulative Amount in JPY Million
Actual Cumulative Amount in JPY Million

Attachment 7- Package-1's Updated Construction Programme Till 25th June 2019

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR15	MTHL - June'19 Month Progress	1982	23-Mar-18	22-Sep-22	23-Mar-18 A	17-May-23	19.13%	11.9%	0	-237	-238
MPR15.1	Mumbai Trans Harbour Link - Package 1	1982	23-Mar-18	22-Sep-22	23-Mar-18 A	17-May-23	19.13%	11.9%	0	-237	-238
M10000	Commencement Date	0	23-Mar-18		23-Mar-18 A		100%	100%	0	0	
MPR15.1.1	Key Milestones	1515	19-Sep-18	22-Sep-22	15-Feb-19 A	17-May-23	0%	0%	-148	-237	-238
MPR15.1.2	Contractual Interface	1243	09-Oct-18	05-Mar-22	09-Oct-18 A	05-Mar-22	0%	0%	0	0	200
MPR15.1.3	Access to Site	165	23-Mar-18	03-Sep-18	23-Mar-18 A	26-Jun-19	0%	0%	0	-295	-168
MPR15.1.4	Document Submittals	180	23-Mar-18	18-Sep-18	23-Mar-18 A	24-Jul-19	0%	0%	0	-309	-295
MPR15.1.5	Survey	73	23-Mar-18	03-Jun-18	23-Mar-18 A	03-Jun-18 A	0%	0%	0	0	
MPR15.1.6	Geotechnical Investigation	374	23-Mar-18	03-Sep-18	23-Mar-18 A	25-Jun-19	0%	0%	0	-294	-265
MPR15.1.6.1	Phase 1	60	23-Mar-18	21-May-18	23-Mar-18 A	21-May-18 A	0%	0%	0	0	
MPR15.1.6.2	Phase 2	85	22-May-18	15-Jun-18	22-May-18 A	15-Jun-18 A	0%	0%	0	0	
MPR15.1.6.3	Phase 3	50	16-Jun-18	04-Aug-18	16-Jun-18 A	30-Dec-18 A	0%	0%	0	-147	
MPR15.1.6.4	Phase 4	230	21-Jul-18	03-Sep-18	05-Oct-18 A	25-Jun-19	0%	0%	-76	-294	-293
MPR15.1.7	Infrasturcture Facilties	343	23-Mar-18	05-Feb-19	23-Mar-18 A	12-Nov-19	0%	0%	0	-155	718
MPR15.1.7.1	Project Site Office Construction (Contractor + Employer + GC)	120	04-Apr-18	27-Nov-18	04-Apr-18 A	25-Nov-18 A	0%	0%	0	2	
MPR15.1.7.2	Casting Yard	319	20-Apr-18	05-Feb-19	20-Apr-18 A	12-Nov-19	0%	0%	0	-155	-46
MPR15.1.7.3	Fabrication Yard	258	23-Mar-18	30-Nov-18	23-Mar-18 A	26-Apr-19 A	0%	0%	0	-122	
MPR15.1.7.4	Rebar Yard	314	23-Mar-18	30-Nov-18	23-Mar-18 A	05-Oct-19	0%	0%	0	-181	-102
MPR15.1.7.5	Batching Plant Installation - CP30 & CP60	164	20-Apr-18	05-Feb-19	08-Sep-18 A	08-Dec-18 A	0%	0%	-47	49	
MPR15.1.8	Procurement Plan	1771	04-Apr-18	07-Sep-22	04-Apr-18 A	13-Apr-23	0%	0%	0	-218	-204
MPR15.1.8.1	Plant & Machinery Deployment Plan	1771	04-Apr-18	07-Sep-22	04-Apr-18 A	13-Apr-23	0%	0%	0	-218	-204
MPR15.1.8.4	Bulk Material Procurement Plan	1434	01-Sep-18	13-Jul-22	31-Aug-18 A	09-Mar-23	0%	0%	0	-239	-240
MPR15.1.9	Design & Engineering (Civil)	805	23-Mar-18	21-Sep-19	23-Mar-18 A	04-Jun-20	0%	0%	0	-257	-171
MPR15.1.9.1	Initial Design (General & Preliminary Design, DBR)	79	23-Mar-18	09-Jun-18	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-172	
MPR15.1.9.2	Finalization of Alignment	88	23-Mar-18	18-Jun-18	23-Mar-18 A	10-Sep-18 A	0%	0%	0	-83	
MPR15.1.9.3	Detailed Design and Construction Design	805	01-May-18	21-Sep-19	01-May-18 A	04-Jun-20	0%	0%	0	-257	-171
MPR15.1.10	Design, Engineering & Material Procurement (OSD)	913	23-Mar-18	17-Feb-20	23-Mar-18 A	20-Sep-20	0%	0%	0	-216	24
MPR15.1.10.1	Initial Design	53	23-Mar-18	14-May-18	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-198	
MPR15.1.10.3	Aerodynamic Analysis	329	23-Mar-18	14-Aug-18	23-Mar-18 A	05-Jul-19	0%	0%	0	-325	-178
MPR15.1.10.4	Technical Design	560	15-May-18	21-Mar-19	15-May-18 A	03-Oct-19	0%	0%	0	-196	-196
MPR15.1.10.5	Construction Design	409	12-Oct-18	20-Sep-19	02-Feb-19 A	23-Apr-20	0%	0%	-113	-216	-129
MPR15.1.10.6	Material Procurement (1st Lot)	314	02-Mar-19	17-Feb-20	01-Apr-19 A	20-Sep-20	0%	0%	-30	-216	24
MPR15.1.11	Tree Cutting and Transplantation	591	23-Mar-18	02-Nov-18	23-Mar-18 A	04-Nov-19	0%	0%	0	-366	-290
MPR15.1.12	Utility Diversion	601	19-Jun-18	14-Jan-19	01-Oct-18 A	14-Nov-19	0%	0%	-104	-303	9
MPR15.1.13	Construction	1863	11-Jun-18	22-Jun-22	11-Jun-18 A	28-Feb-23	13.63%	3.12%	0	-250	-159
MPR15.1.13.1	Sewri Interchange Section	1149	03-Nov-18	28-Feb-22	29-Mar-19 A	23-Nov-22	14.48%	1.89%	-146	-267	-62
MPR15.1.13.1.1	Sewri Interchnage - Work Front - 1	1135	03-Nov-18	28-Feb-22	18-May-19 A	15-Nov-22	14.29%	1.32%	-196	-259	-54
MPR15.1.13.1.1.1	Sewri Interchange - Work Front - 1 - Piling	442	03-Nov-18	15-Dec-20	18-May-19 A	23-Sep-21	38.9%	9.94%	-163	-156	-5
MPR15.1.13.1.1.1.1	Piling - Land Viaduct	54	13-Apr-19	16-Sep-19	18-Jan-20	23-Mar-20	98.15%	0%	-156	-156	-113
MPR15.1.13.1.1.1.2	Piling - Ramp A	394	03-Nov-18	17-Oct-20	18-May-19 A	24-Apr-21	34.54%	12.31%	-163	-156	-53
MPR15.1.13.1.1.1.3	Piling - Ramp E	36	20-Oct-20	01-Dec-20	24-Apr-21	07-Jun-21	0%	0%	-156	-156	-35
MPR15.1.13.1.1.1.4	Piling - Ramp F	12	02-Dec-20	15-Dec-20	07-Jun-21	23-Sep-21	0%	0%	-156	-156	-5
MPR15.1.13.1.1.2	Sewri Interchange - Work Front - 1 -Pile Cap	544	19-Nov-18	24-Mar-21	21-Jun-19 A	02-Feb-22	27.76%	0%	-175	-184	-44

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR15.1.13.1.1.2.1	Pile Cap - Land Viaduct	68	25-Apr-19	15-Oct-19	13-Mar-20	02-Jun-20	61.11%	0%	-192	-192	-149
MPR15.1.13.1.1.2.2	Pile Cap - Ramp A	488	19-Nov-18	15-Jan-21	21-Jun-19 A	26-Nov-21	25.81%	0%	-175	-184	-135
MPR15.1.13.1.1.2.3	Pile Cap - Ramp E	36	07-Jan-21	27-Feb-21	26-Nov-21	08-Jan-22	0%	0%	-192	-184	-24
MPR15.1.13.1.1.2.4	Pile Cap - Ramp F	20	01-Mar-21	24-Mar-21	08-Jan-22	02-Feb-22	0%	0%	-184	-184	-95
MPR15.1.13.1.1.3	Sewri Interchange - Work Front - 1 - Pier	580	12-Dec-18	20-May-21	11-Nov-19	09-Apr-22	16.87%	0%	-200	-192	-35
MPR15.1.13.1.1.3.1	Pier - Land Viaduct	52	29-May-19	30-Oct-19	15-Apr-20	18-Sep-20	20.37%	0%	-192	-192	-135
MPR15.1.13.1.1.3.2	Pier - Ramp A	496	12-Dec-18	09-Feb-21	11-Nov-19	29-Dec-21	25.81%	0%	-200	-192	-143
MPR15.1.13.1.1.3.3	Pier - Ramp E	96	27-Jan-21	20-May-21	15-Dec-21	09-Apr-22	0%	0%	-192	-192	-88
MPR15.1.13.1.1.3.4	Pier - Ramp F	83	23-Dec-20	01-Apr-21	03-Nov-21	10-Feb-22	0%	0%	-184	-184	14
MPR15.1.13.1.1.4	Sewri Interchange - Work Front - 1 - Pier Cap	579	05-Jan-19	11-Jun-21	04-Dec-19	02-May-22	13.88%	0%	-200	-192	120
MPR15.1.13.1.1.4.1	Pier Cap - Land Viaduct	49	16-Sep-19	14-Nov-19	04-May-20	02-Oct-20	0%	0%	-192	-192	-135
MPR15.1.13.1.1.4.2	Pier Cap - Ramp A	491	05-Jan-19	26-Feb-21	04-Dec-19	17-Jan-22	23.66%	0%	-200	-192	-143
MPR15.1.13.1.1.4.3	Pier Cap - Ramp E	100	13-Feb-21	11-Jun-21	03-Jan-22	02-May-22	0%	0%	-192	-192	120
MPR15.1.13.1.1.4.4	Pier Cap - Ramp F	86	31-Dec-20	13-Apr-21	11-Nov-21	22-Feb-22	0%	0%	-184	-184	30
MPR15.1.13.1.1.5	Sewri Interchange - Embankment Works - Ramp F	90	14-Apr-21	01-Nov-21	22-Feb-22	08-Jun-22	0%	0%	-184	-184	-35
MPR15.1.13.1.1.6	Sewri Interchange - Work Front - 1 - Super Structure Erection	964	04-May-19	28-Feb-22	26-Mar-20	15-Nov-22	2.24%	0%	-327	-259	-209
MPR15.1.13.1.1.6.1	Erection - Land Viaduct	96	19-Nov-19	11-Mar-20	06-Oct-20	30-Jan-21	0%	0%	-192	-192	-178
MPR15.1.13.1.1.6.2	Erection - Ramp A	484	04-May-19	09-Apr-21	26-Mar-20	28-Feb-22	3.95%	0%	-220	-218	-178
MPR15.1.13.1.1.6.3	Erection - Ramp E	146	10-Apr-21	02-Dec-21	28-Feb-22	19-Aug-22	0%	0%	-218	-218	-178
MPR15.1.13.1.1.6.4	Erection - Ramp F	52	28-Dec-21	28-Feb-22	14-Sep-22	15-Nov-22	0%	0%	-218	-218	-176
MPR15.1.13.1.2	Sewri Interchange - Work Front - 2	1149	03-Nov-18	11-Feb-22	29-Mar-19 A	23-Nov-22	18.4%	3%	-146	-284	-199
MPR15.1.13.1.2.1	Sewri Interchange - Work Front - 2 - Piling	492	03-Nov-18	01-Mar-21	29-Mar-19 A	16-Nov-21	36.08%	17.52%	-121	-138	-92
MPR15.1.13.1.2.1.1	Piling - Ramp C2	264	03-Nov-18	27-Feb-20	29-Mar-19 A	14-Nov-20	64.85%	49.13%	-121	-138	-92
MPR15.1.13.1.2.1.2	Piling - Ramp C1	140	03-Apr-19	18-Dec-19	21-Dec-19	05-Jun-20	44.29%	0%	-142	-142	-92
MPR15.1.13.1.2.1.3	Piling - Ramp B	84	21-Nov-20	01-Mar-21	06-May-21	16-Nov-21	0%	0%	-138	-138	-92
MPR15.1.13.1.2.2	Sewri Interchange - Work Front - 2 - Pile Cap	510	19-Nov-18	29-Apr-21	05-May-19 A	14-Jan-22	23.98%	3.36%	-140	-138	-76
MPR15.1.13.1.2.2.1	Pile Cap - Ramp C2	320	19-Nov-18	24-Apr-20	05-May-19 A	27-Feb-21	57.46%	15.19%	-140	-178	-90
MPR15.1.13.1.2.2.2	Pile Cap - Ramp C1	160	12-Apr-19	04-Feb-20	12-Feb-20	24-Nov-20	28%	0%	-178	-166	-80
MPR15.1.13.1.2.2.3	Pile Cap - Ramp B	131	25-Nov-20	29-Apr-21	10-May-21	14-Jan-22	0%	0%	-138	-138	-76
MPR15.1.13.1.2.3	Sewri Interchange - Work Front - 2 - Pier	528	12-Dec-18	21-May-21	09-Nov-19	05-Feb-22	21.96%	0%	-199	-138	45
MPR15.1.13.1.2.3.1	Pier - Ramp C2	332	12-Dec-18	09-May-20	09-Nov-19	15-Mar-21	58.09%	0%	-199	-178	-90
MPR15.1.13.1.2.3.2	Pier - Ramp C1	185	01-Apr-19	18-Feb-20	28-Jan-20	08-Dec-20	31.21%	0%	-175	-166	-64
MPR15.1.13.1.2.3.3	Pier - Ramp B	216	25-Apr-20	21-May-21	18-Feb-21	05-Feb-22	0%	0%	-170	-138	45
MPR15.1.13.1.2.4	Sewri Interchange - Work Front - 2 - Pier Cap	816	26-Dec-18	28-May-21	23-Nov-19	16-Feb-22	16.25%	0%	-332	-263	51
MPR15.1.13.1.2.4.1	Pier Cap - Ramp C2	335	26-Dec-18	27-May-20	23-Nov-19	01-Apr-21	57.93%	0%	-199	-178	-90
MPR15.1.13.1.2.4.2	Pier Cap - Ramp C1	189	18-Apr-19	12-Mar-20	14-Feb-20	30-Dec-20	16.79%	0%	-175	-166	-68
MPR15.1.13.1.2.4.3	Pier Cap - Ramp B	338	19-May-20	28-May-21	15-Mar-21	16-Feb-22	0%	0%	-300	-263	51
MPR15.1.13.1.2.5	Sewri Interchange - Embankment Works - Ramp C2	60	23-May-19	02-Nov-19	10-Mar-20	20-May-20	0%	0%	-166	-166	390
MPR15.1.13.1.2.6	Sewri Interchange - Work Front - 2 - Super Structure erection	998	18-Mar-19	11-Feb-22	29-Feb-20	23-Nov-22	9.47%	0%	-348	-284	-199
MPR15.1.13.1.2.6.1	Erection - Ramp C2	597	18-Mar-19	02-Nov-20	29-Feb-20	18-Oct-21	49.58%	0%	-348	-349	-262
MPR15.1.13.1.2.6.2	Erection - Ramp C1	194	08-Oct-19	26-May-20	19-Sep-20	11-May-21	0%	0%	-239	-239	-167
MPR15.1.13.1.2.6.3	Erection - Ramp B	316	28-Nov-20	11-Feb-22	12-Nov-21	23-Nov-22	0%	0%	-239	-239	-167
MPR15.1.13.1.3	Sewri Interchange - Work Front - 3 (Cast in situ Spans)	431	28-Feb-20	01-Feb-22	14-Nov-20	14-Jul-22	0%	0%	-138	-138	-42

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR15.1.13.1.3.1	Sewri Interchange - Work Front - 3 - Piling	144	28-Feb-20	20-Nov-20	14-Nov-20	06-May-21	0%	0%	-138	-138	-92
MPR15.1.13.1.3.1.1	Piling - Ramp B	54	28-Feb-20	02-May-20	14-Nov-20	18-Jan-21	0%	0%	-138	-138	-92
MPR15.1.13.1.3.1.2	Piling - Ramp E	54	04-May-20	07-Oct-20	18-Jan-21	24-Mar-21	0%	0%	-138	-138	-92
MPR15.1.13.1.3.1.3	Piling - Ramp C1	36	08-Oct-20	20-Nov-20	24-Mar-21	06-May-21	0%	0%	-138	-138	-92
MPR15.1.13.1.3.2	Sewri Interchange - Work Front - 3 - Pile Cap	159	07-Mar-20	15-Dec-20	21-Nov-20	31-May-21	0%	0%	-138	-138	73
MPR15.1.13.1.3.2.1	Pile Cap - Ramp B	81	07-Mar-20	10-Jun-20	21-Nov-20	26-Feb-21	0%	0%	-138	-138	31
MPR15.1.13.1.3.2.2	Pile Cap - Ramp E	81	11-May-20	17-Nov-20	25-Jan-21	03-May-21	0%	0%	-138	-138	97
MPR15.1.13.1.3.2.3	Pile Cap - Ramp C1	45	23-Oct-20	15-Dec-20	07-Apr-21	31-May-21	0%	0%	-138	-138	62
MPR15.1.13.1.3.3	Sewri Interchange - Work Front - 3 - Pier	216	18-Mar-20	05-Mar-21	02-Dec-20	19-Nov-21	0%	0%	-138	-138	22
MPR15.1.13.1.3.3.1	Pier - Ramp B	135	18-Mar-20	27-Nov-20	02-Dec-20	13-May-21	0%	0%	-138	-138	-17
MPR15.1.13.1.3.3.2	Pier - Ramp E	135	21-May-20	01-Feb-21	05-Feb-21	18-Oct-21	0%	0%	-138	-138	49
MPR15.1.13.1.3.3.3	Pier - Ramp C1	90	18-Nov-20	05-Mar-21	03-May-21	19-Nov-21	0%	0%	-138	-138	11
MPR15.1.13.1.3.4	Sewri Interchange - Work Front - 3 - Pier Cap	196	24-Apr-20	19-Mar-21	09-Jan-21	03-Dec-21	0%	0%	-138	-138	22
MPR15.1.13.1.3.4.1	Pier Cap - Ramp B	115	24-Apr-20	11-Dec-20	09-Jan-21	27-May-21	0%	0%	-138	-138	-17
MPR15.1.13.1.3.4.2	Pier Cap - Ramp E	132	08-Jun-20	15-Feb-21	23-Feb-21	02-Nov-21	0%	0%	-138	-138	49
MPR15.1.13.1.3.4.3	Pier Cap - Ramp C1	77	17-Dec-20	19-Mar-21	01-Jun-21	03-Dec-21	0%	0%	-138	-138	11
MPR15.1.13.1.3.5	Sewri Interchange - Work Front - 3 - Super Structure	360	23-May-20	01-Feb-22	08-Feb-21	14-Jul-22	0%	0%	-138	-138	-42
MPR15.1.13.1.3.5.1	Super Structure - Ramp B	132	23-May-20	30-Jan-21	08-Feb-21	16-Oct-21	0%	0%	-138	-138	-28
MPR15.1.13.1.3.5.2	Super Structure - Ramp E	132	16-Jan-21	24-Sep-21	02-Oct-21	10-Mar-22	0%	0%	-138	-138	-28
MPR15.1.13.1.3.5.3	Super Structure - Ramp C1	120	09-Jun-21	01-Feb-22	23-Feb-22	14-Jul-22	0%	0%	-138	-138	-42
MPR15.1.13.2	Intertidal Section	1572	11-Jun-18	23-Oct-21	11-Jun-18 A	13-May-22	20.01%	8.11%	0	-201	-169
MPR15.1.13.2.1	Intertidal - Temporary Access Bridge Work	459	11-Jun-18	26-Sep-20	11-Jun-18 A	16-Sep-20	0%	0%	0	8	171
MPR15.1.13.2.1.1	Access Bridge	449	11-Jun-18	12-Jun-20	11-Jun-18 A	03-Jun-20	0%	0%	0	8	171
MPR15.1.13.2.1.1.1	Access Bridge - Piling	379	11-Jun-18	05-Jun-20	11-Jun-18 A	27-Jan-20	0%	0%	0	110	278
MPR15.1.13.2.1.1.2	Access Bridge - Decking	449	06-Oct-18	12-Jun-20	14-Jul-18 A	03-Jun-20	0%	0%	16	8	171
MPR15.1.13.2.1.2	Fingers	459	13-Oct-18	26-Sep-20	26-Sep-18 A	16-Sep-20	0%	0%	16	8	171
MPR15.1.13.2.1.2.1	Fingers - Piling	455	13-Oct-18	22-Sep-20	26-Sep-18 A	10-Jun-20	0%	0%	16	8	171
MPR15.1.13.2.1.2.2	Fingers - Decking	459	01-Nov-18	26-Sep-20	06-Oct-18 A	16-Sep-20	0%	0%	22	8	171
MPR15.1.13.2.2	Intertidal - Main Bridge Work	1572	14-Dec-18	23-Oct-21	14-Nov-18 A	13-May-22	20.01%	8.11%	30	-201	-169
MPR15.1.13.2.2.1	Intertidal - Main Bridge Work - Piling	1250	14-Dec-18	16-Mar-21	14-Nov-18 A	24-Jun-21	39.83%	22.37%	30	-100	-61
MPR15.1.13.2.2.2	Intertidal - Main Bridge Work - Pile Cap	562	29-Dec-18	06-Apr-21	17-Jan-19 A	01-Dec-21	23.73%	10.18%	-15	-121	-92
MPR15.1.13.2.2.3	Intertidal - Main Bridge Work - Pier	545	17-Jan-19	25-May-21	29-Mar-19 A	04-Jan-22	20.62%	3.54%	-59	-108	-81
MPR15.1.13.2.2.4	Intertidal - Main Bridge Work - Pier Cap	553	30-Jan-19	05-Jun-21	19-Sep-19	15-Jan-22	15.75%	0%	-117	-108	-81
MPR15.1.13.2.2.5	Intertidal - Main Bridge Work - Super Structure Erection	599	18-Apr-19	23-Oct-21	22-Nov-19	13-May-22	0%	0%	-104	-169	-142
MPR15.1.13.2.3	Intertidal - Finger Removal & Reuse	396	07-Mar-19	29-Dec-20	07-Oct-19	26-Apr-21	0%	0%	-102	-98	-13
MPR15.1.13.3	Marine Section	1484	18-Sep-18	17-Jun-22	14-Dec-18 A	06-Jan-23	14.97%	3.98%	-87	-202	-177
MPR15.1.13.3.1	Temporary Access Bridge Work -2 (MP70 to MP51- 21 Spans)	854	18-Sep-18	17-Jun-22	16-Sep-19	06-Jan-23	0%	0%	-226	-169	-148
MPR15.1.13.3.1.1	Loadout Berth -30 M x 6 M at MP 70	30	18-Sep-18	23-Oct-18	16-Sep-19	22-Oct-19	0%	0%	-226	-226	-115
MPR15.1.13.3.1.2	Temporary Access Bridge (MP70 to MP51)	181	24-Oct-18	28-May-19	23-Oct-19	25-May-20	0%	0%	-226	-226	-8
MPR15.1.13.3.1.3	Removal of Temporary Access Bridge	90	05-Mar-22	17-Jun-22	22-Sep-22	06-Jan-23	0%	0%	-169	-169	-148
MPR15.1.13.3.2	Marine - Main Bridge	1368	03-Nov-18	23-Feb-22	14-Dec-18 A	12-Sep-22	14.97%	3.98%	-41	-200	-174
MPR15.1.13.3.2.1	Marine - Piling	639	03-Nov-18	15-Mar-21	14-Dec-18 A	25-Oct-21	27.21%	11.64%	-34	-109	10
MPR15.1.13.3.2.3	Marine - Pile Cap	539	23-Nov-18	12-Apr-21	14-Jan-19 A	15-Jan-22	17.98%	3.23%	-43	-155	-39

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR15.1.13.3.2.4	Marine - Pier	868	22-Dec-18	02-Jun-21	06-Nov-19	22-Mar-22	13.22%	0%	-319	-293	-97
MPR15.1.13.3.2.2	Marine - Pier Cap	850	21-Jan-19	14-Jun-21	05-Dec-19	02-Apr-22	10.79%	0%	-318	-292	-50
MPR15.1.13.3.2.5	Marine - Super Structure Erection	641	19-Apr-19	23-Feb-22	03-Feb-20	12-Sep-22	0%	0%	-164	-169	-148
MPR15.1.13.4	Precast Segments	759	06-Feb-19	21-Aug-21	04-Nov-19	28-Apr-22	12.25%	0%	-227	-208	122
MPR15.1.13.4.1	Precast Segement - Sewri Interchange	693	06-Feb-19	24-May-21	12-Nov-19	16-Feb-22	16.32%	0%	-232	-224	183
MPR15.1.13.4.2	Precast Segement - Intertidal	753	28-Feb-19	14-Aug-21	04-Nov-19	21-Apr-22	12.96%	0%	-208	-208	-145
MPR15.1.13.4.3	Precast Segement - Marine	759	28-Feb-19	21-Aug-21	04-Nov-19	28-Apr-22	10.24%	0%	-208	-208	122
MPR15.1.13.5	Orthotropic Steel Deck (OSD) - Fabrication, Shipping, Assembly & Erection -	918	11-Jun-19	15-Mar-22	04-Jun-20	08-Dec-22	0%	0%	-359	-268	-78
MPR15.1.13.5.1	OSD - Fabrication	758	28-Sep-19	12-Oct-21	15-Jun-20	12-Jul-22	0%	0%	-261	-273	-215
MPR15.1.13.5.1.1	Fabrication - Factory A	720	28-Sep-19	16-Sep-21	15-Jun-20	04-Jun-22	0%	0%	-261	-261	-238
MPR15.1.13.5.1.1.1	OSD 01 - RHS Fabrication - MP50 to MP53 (320m)	330	28-Sep-19	22-Aug-20	15-Jun-20	10-May-21	0%	0%	-261	-261	-110
MPR15.1.13.5.1.1.2	OSD 03 - RHS Fabrication - MP75 to MP81 (770m)	450	26-Jan-20	19-Apr-21	13-Oct-20	05-Jan-22	0%	0%	-261	-261	-156
MPR15.1.13.5.1.1.3	OSD 04 - RHS Fabrication - MP124 to MP128 (560m)	360	22-Sep-20	16-Sep-21	10-Jun-21	04-Jun-22	0%	0%	-261	-261	-238
MPR15.1.13.5.1.2	Fabrication - Factory B	720	28-Sep-19	16-Sep-21	15-Jun-20	04-Jun-22	0%	0%	-261	-261	-197
MPR15.1.13.5.1.2.1	OSD 01 - LHS Fabrication - MP50 to MP53 (320m)	330	28-Sep-19	22-Aug-20	15-Jun-20	10-May-21	0%	0%	-261	-261	-131
MPR15.1.13.5.1.2.2	OSD 02 - RHS Fabrication - MP69 to MP75 (683m)	450	26-Jan-20	19-Apr-21	13-Oct-20	05-Jan-22	0%	0%	-261	-261	-180
MPR15.1.13.5.1.2.3	OSD 04 - LHS Fabrication - MP124 to MP128 (560m)	360	22-Sep-20	16-Sep-21	10-Jun-21	04-Jun-22	0%	0%	-261	-261	-197
MPR15.1.13.5.1.3	Fabrication - Factory C	660	23-Dec-19	12-Oct-21	21-Sep-20	12-Jul-22	0%	0%	-273	-273	-215
MPR15.1.13.5.1.3.1	OSD 02 - LHS Fabrication - MP69 to MP75 (683m)	420	23-Dec-19	14-Feb-21	21-Sep-20	14-Nov-21	0%	0%	-273	-273	-138
MPR15.1.13.5.1.3.2	OSD 03 - LHS Fabrication - MP75 to MP81 (770m)	420	19-Aug-20	12-Oct-21	19-May-21	12-Jul-22	0%	0%	-273	-273	-215
MPR15.1.13.5.2	OSD - Shipping	548	24-Jun-20	11-Dec-21	12-Mar-21	10-Sep-22	0%	0%	-261	-273	-96
MPR15.1.13.5.2.1	Shipping - Factory A	510	24-Jun-20	15-Nov-21	12-Mar-21	03-Aug-22	0%	0%	-261	-261	-58
MPR15.1.13.5.2.1.1	OSD 01 - RHS Shipping - MP50 to MP53 (320m)	120	24-Jun-20	21-Oct-20	12-Mar-21	09-Jul-21	0%	0%	-261	-261	-110
MPR15.1.13.5.2.1.2	OSD 03 - RHS Shipping - MP75 to MP81 (770m)	240	22-Oct-20	18-Jun-21	10-Jul-21	06-Mar-22	0%	0%	-261	-261	-100
MPR15.1.13.5.2.1.3	OSD 04 - RHS Shipping - MP124 to MP128 (560m)	180	20-May-21	15-Nov-21	05-Feb-22	03-Aug-22	0%	0%	-261	-261	-58
MPR15.1.13.5.2.2	Shipping - Factory B	510	24-Jun-20	15-Nov-21	12-Mar-21	03-Aug-22	0%	0%	-261	-261	-197
MPR15.1.13.5.2.2.1	OSD 01 - LHS Shipping - MP50 to MP53 (320m)	120	24-Jun-20	21-Oct-20	12-Mar-21	09-Jul-21	0%	0%	-261	-261	57
MPR15.1.13.5.2.2.2	OSD 02 - RHS Shipping - MP69 to MP75 (683m)	240	21-Nov-20	18-Jul-21	09-Aug-21	05-Apr-22	0%	0%	-261	-261	-210
MPR15.1.13.5.2.2.3	OSD 04 - LHS Shipping - MP124 to MP128 (560m)	180	20-May-21	15-Nov-21	05-Feb-22	03-Aug-22	0%	0%	-261	-261	-197
MPR15.1.13.5.2.3	Shipping - Factory C	450	18-Sep-20	11-Dec-21	18-Jun-21	10-Sep-22	0%	0%	-273	-273	-191
MPR15.1.13.5.2.3.1	OSD 02 - LHS Shipping - MP69 to MP75 (683m)	210	18-Sep-20	15-Apr-21	18-Jun-21	13-Jan-22	0%	0%	-273	-273	-109
MPR15.1.13.5.2.3.2	OSD 03 - LHS Shipping - MP75 to MP81 (770m)	210	16-May-21	11-Dec-21	13-Feb-22	10-Sep-22	0%	0%	-273	-273	-191
MPR15.1.13.5.3	OSD - Custom Clearance and Inland Transport (Last Module)	494	07-Sep-20	01-Jan-22	26-May-21	01-Oct-22	0%	0%	-261	-273	-96
MPR15.1.13.5.3.1	OSD 1 - MP50 to MP53 (320m)	75	07-Sep-20	20-Nov-20	26-May-21	08-Aug-21	0%	0%	-261	-261	57
MPR15.1.13.5.3.2	OSD 2 - MP69 to MP75 (683m)	262	17-Nov-20	17-Aug-21	17-Aug-21	05-May-22	0%	0%	-273	-261	-191
MPR15.1.13.5.3.3	OSD 3 - MP75 to MP81 (770m)	389	21-Dec-20	01-Jan-22	08-Sep-21	01-Oct-22	0%	0%	-261	-273	-191
MPR15.1.13.5.3.4	OSD 4 - MP124 to MP128 (560m)	141	19-Jul-21	06-Dec-21	06-Apr-22	24-Aug-22	0%	0%	-261	-261	-58
MPR15.1.13.5.4	OSD - Assembly	428	07-Oct-20	16-Feb-22	16-Sep-21	17-Nov-22	0%	0%	-344	-274	-84
MPR15.1.13.5.4.1	OSD 1 - MP50 to MP53 (320m)	43	07-Oct-20	11-Jan-21	16-Sep-21	06-Nov-21	0%	0%	-209	-172	15
MPR15.1.13.5.4.2	OSD 2 - MP69 to MP75 (683m)	241	17-Dec-20	13-Oct-21	16-Sep-21	29-Jun-22	0%	0%	-229	-218	-148
MPR15.1.13.5.4.3	OSD 3 - MP75 to MP81 (770m)	339	20-Jan-21	16-Feb-22	08-Oct-21	17-Nov-22	0%	0%	-219	-229	-181
MPR15.1.13.5.4.4	OSD 4 - MP124 to MP128 (560m)	144	18-Aug-21	04-Feb-22	06-May-22	25-Oct-22	0%	0%	-218	-220	-49
MPR15.1.13.5.5	OSD - Erection	611	11-Jun-19	15-Mar-22	04-Jun-20	08-Dec-22	0%	0%	-223	-226	-66

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR15.1.13.5.5.1	OSD 1 - MP50 to MP53 (320m)	137	21-May-20	26-Feb-21	18-May-21	29-Jan-22	0%	0%	-223	-203	-34
MPR15.1.13.5.5.2	OSD 2 - MP69 to MP75 (683m)	497	11-Jun-19	24-Dec-21	04-Jun-20	23-Jul-22	0%	0%	-223	-178	-128
MPR15.1.13.5.5.3	OSD 3 - MP75 to MP81 (770m)	388	07-Jan-21	10-Mar-22	01-Jun-21	08-Dec-22	0%	0%	-122	-230	-182
MPR15.1.13.5.5.4	OSD 4 - MP124 to MP128 (560m)	288	05-May-21	15-Mar-22	23-Dec-21	01-Dec-22	0%	0%	-117	-220	-60
MPR15.1.13.6	Post Erection Segmental Stitch Concrete (incl. Bearing Installation and Prestres	658	24-Apr-19	10-Mar-22	01-Apr-20	01-Dec-22	0%	0%	-209	-223	-59
MPR15.1.13.6.1	Stitch Concrete - Sewri Interchange	652	24-Apr-19	10-Mar-22	08-Apr-20	01-Dec-22	0%	0%	-215	-223	-59
MPR15.1.13.6.2	Stitch Concrete - Intertidal	519	29-Nov-19	22-Dec-21	01-Apr-20	17-Jun-22	0%	0%	-104	-148	-142
MPR15.1.13.6.3	Stitch Concrete - Marine	568	21-Oct-19	26-Feb-22	04-May-20	16-Sep-22	0%	0%	-164	-169	4
MPR15.1.13.7	Crash Barrier Works	652	05-Oct-19	11-Mar-22	18-Apr-20	12-Dec-22	0%	0%	-164	-231	-68
MPR15.1.13.7.1	Crash Barrier - Sewri Interchange	601	05-Oct-19	11-Mar-22	21-Sep-20	12-Dec-22	0%	0%	-215	-231	-68
MPR15.1.13.7.2	Crash Barrier - Intertidal	514	17-Dec-19	04-Jan-22	18-Apr-20	29-Jun-22	0%	0%	-104	-148	38
MPR15.1.13.7.3	Crash Barrier - Marine	546	26-Nov-19	09-Mar-22	08-Jun-20	27-Sep-22	0%	0%	-164	-169	-8
MPR15.1.13.7.4	Crash Barrier - Orthotropic Steel Deck	313	23-Dec-20	10-Mar-22	02-Dec-21	09-Dec-22	0%	0%	-209	-231	-72
MPR15.1.13.8	Bridge Deck (Superstructure) Water Proofing	647	15-Oct-19	16-Mar-22	30-Apr-20	17-Dec-22	0%	0%	-166	-232	-73
MPR15.1.13.8.1	Water Proofing - Sewri Interchange	598	15-Oct-19	14-Mar-22	30-Sep-20	17-Dec-22	0%	0%	-215	-234	-73
MPR15.1.13.8.2	Water Proofing - Intertidal	509	28-Dec-19	10-Jan-22	30-Apr-20	05-Jul-22	0%	0%	-104	-148	65
MPR15.1.13.8.3	Water Proofing - Marine	531	18-Dec-19	14-Mar-22	02-Oct-20	01-Oct-22	0%	0%	-164	-169	-8
MPR15.1.13.8.4	Water Proofing - Orthotropic Steel Deck	303	11-Jan-21	16-Mar-22	20-Dec-21	15-Dec-22	0%	0%	-209	-231	-72
MPR15.1.13.9	Stone Mastic Asphalt Pavement	202	23-Dec-21	22-Mar-22	27-Apr-22	23-Dec-22	0%	0%	-104	-232	-134
MPR15.1.13.9.1	Sewri Interchange	111	27-Dec-21	21-Mar-22	11-Aug-22	23-Dec-22	0%	0%	-192	-233	-134
MPR15.1.13.9.2	Main Bridge	200	23-Dec-21	22-Mar-22	27-Apr-22	20-Dec-22	0%	0%	-104	-230	-190
MPR15.1.13.10	Bridge Anclilaries and Misc. Works	680	31-Jan-20	22-Jun-22	03-Jun-20	28-Feb-23	0%	0%	-104	-209	-134
MPR15.1.13.10.1	Bridge Ancillaries	680	31-Jan-20	22-Jun-22	03-Jun-20	28-Feb-23	0%	0%	-104	-209	-134
MPR15.1.13.10.1.1	Noise Barrier, View Barrier and Safety Fence	636	31-Jan-20	26-May-22	03-Jun-20	06-Jan-23	0%	0%	-104	-188	-90
MPR15.1.13.10.1.1.1	Noise Barrier	611	31-Jan-20	19-May-22	03-Jun-20	08-Dec-22	0%	0%	-104	-169	-65
MPR15.1.13.10.1.1.2	View Barrier	440	13-Oct-20	26-May-22	28-Apr-21	06-Jan-23	0%	0%	-164	-188	-178
MPR15.1.13.10.1.1.3	Safety Fence	185	27-Oct-21	28-Feb-22	12-Apr-22	17-Nov-22	0%	0%	-140	-220	-136
MPR15.1.13.10.1.2	Traffic Signages and Marking	94	17-Mar-22	22-Jun-22	09-Nov-22	28-Feb-23	0%	0%	-199	-209	-134
MPR15.1.15	Handing Over	148	31-Mar-22	22-Sep-22	23-Nov-22	17-May-23	0%	0%	-199	-199	-200
MPR15.1.15.1	Testing and Handing Over	120	31-Mar-22	18-Aug-22	23-Nov-22	13-Apr-23	0%	0%	-199	-199	-200
MPR15.1.15.2	Final Handing Over	28	19-Aug-22	22-Sep-22	14-Apr-23	17-May-23	0%	0%	-199	-199	-200
MPR15.1.14	Invoice Schedule (Shows the Invoice items which are not covered in the above Cons	1907	23-Mar-18	22-Sep-22	23-Mar-18 A	17-May-23	23.37%	18.66%	0	-237	-238

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Attachment 8- Package-2's Updated Construction Programme Till 25th June 2019

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME (PACKAGE-2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
1	MTHL-PKG2-DETAILED WORK PROGRAMME_25062019_APPROVED_MPR.1		2793	17-Nov-17	21-Sep-24	17-Nov-17		22.41%	10.47%
2	PROJECT PRE-COMMENCEMENT ACTIVITY		126	17-Nov-17	22-Mar-18	17-Nov-17	16-Mar-18	0%	0%
3	PRE-COMMENCEMENT ACTIVITY		55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%
4	JV FORMATION AND REGISTRATION		55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%
5	PROJECT EVENT MILESTONE		2124	23-Mar-18	21-Mar-23	23-Mar-18		0%	0%
6	PROJECT KEY MILESTONE		2012	23-Mar-18	22-Sep-22	23-Mar-18		0%	0%
7	INTERFACE MILESTONE_ERG19		2096	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%
8	PYSYCAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25		1688	18-Sep-18	22-Jun-22	21-Sep-18		0%	0%
9	KEY DATE_ADDENDUM 2_NO.25_Obtain the Certificate of No Objection		1688	18-Sep-18	22-Jun-22	21-Sep-18		0%	0%
10	INTERFACE DATE_ADDENDUM 2_NO.25		819	17-Dec-18	20-Sep-21			0%	0%
11	CONSTRUCTION KEY MILESTONES		1293	03-Sep-18	06-Jul-21	25-Oct-18		0%	0%
12	CASTING YARD-OFFICE & CAMP DEVELOPMENT		484	04-Sep-18	25-Apr-19	25-Oct-18		0%	0%
13	STEEL BRIDGE ASSEMBLY YARD DEVELOPMENT		369	02-Nov-18	06-Nov-19			0%	0%
14	PERMANENT WORKS		1193	03-Sep-18	06-Jul-21	08-Dec-18		0%	0%
15	MANAGEMENT		521	20-Jan-18	18-Aug-18	12-Jan-18		0%	0%
16	SITE ORGANISATION		35	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-18	0%	0%
17	SO.1000	Submission of Proposal for Contractor's Representative	35	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-18	100%	100%
18	SO.1010	Submission of Proposal for Contractor's Site Organization	35	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-18	100%	100%
19	DEVELOPMENT OF MANAGEMENT SYSTEM		521	20-Jan-18	27-May-18	20-Jan-18		0%	0%
20	COUMMUNICATION / DOCUMENT CONTROL SYSTEM		315	20-Jan-18	10-May-18	20-Jan-18	24-Oct-18	0%	0%
21	QUALITY ASSURANCE AND MANAGEMENT SYSTEM		254	23-Mar-18	10-May-18	23-Mar-18	24-Oct-18	0%	0%
22	HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM		459	23-Mar-18	10-May-18	23-Mar-18		0%	0%
23	INTERFACE MANAGEMENT SYSTEM		49	23-Mar-18	10-May-18	23-Mar-18	24-Oct-18	0%	0%
24	RISK MANAGEMENT PLAN		66	23-Mar-18	27-May-18	23-Mar-18	24-Oct-18	0%	0%
25	DEVELOPMENT OF WORK PROGRAMME		63	23-Mar-18	24-May-18	23-Mar-18	21-Sep-18	0%	0%
26	CONTRACTOR'S WORK PROGRAMME		63	23-Mar-18	24-May-18	23-Mar-18	21-Sep-18	0%	0%
27	OTHER CONTRACTUAL SUBMITTALS		28	24-Mar-18	20-Apr-18	24-Mar-18	23-Apr-18	0%	0%
28	PERMIT & APPROVAL		389	20-Jan-18	18-Aug-18	12-Jan-18		0%	0%
29	SURVEYING & GEOTECHNICAL INVESTIGATION		35	20-Jan-18	23-Feb-18	12-Jan-18	09-Feb-18	0%	0%
30	CUTTING OF MANGROVES		70	20-Jan-18	30-Mar-18	25-Jan-18	23-Apr-18	0%	0%
31	SETTING UP BATCHING PLANT		313	06-Apr-18	18-Aug-18	06-Apr-18	28-Nov-18	0%	0%
32	PC YARD & CAMP		28	04-May-18	01-Jun-18	21-Mar-18	01-Oct-18	0%	0%
33	CONNECTION FOR ELECTRICITY & WATER		63	18-May-18	20-Jul-18	06-Apr-18		0%	0%
34	CUTTING OF TREES		35	23-Mar-18	26-Apr-18	10-May-18	02-Aug-18	0%	0%
35	IMPORT PERMITS/LICENCES FOR EQUIPMENTS & GOODS		70	23-Mar-18	31-May-18	15-May-18	31-May-18	0%	0%
36	NOC FOR PLANT & FACILITIES TO BE USED AT SITE		51	23-Mar-18	31-May-18	16-Aug-18	28-Nov-18	0%	0%
37	TEMPORARY ACCESS ROAD FOR MAIN BRIDGE & INTERCHANGE		58	23-Mar-18	19-May-18	23-Mar-18	28-Jul-18	0%	0%
38	DESIGN		901	20-Jan-18	04-Sep-19	01-Jan-18		94.1%	69.13%
39	EARLY STAGE DESIGN WORK / INFORMATION COLLECTION		549	20-Jan-18	17-Jul-18	01-Jan-18	25-Jun-19	100%	100%
40	INDEPENDENT DESIGN CHECKER APPROVAL		35	20-Jan-18	23-Feb-18	20-Jan-18	13-Apr-18	0%	0%
41	TOPOGRAPHIC SURVEY		116	20-Jan-18	16-May-18	01-Jan-18	20-Apr-18	0%	0%
42	BATHYMETRIC SURVEY		75	20-Jan-18	04-Apr-18	25-Jan-18	20-Mar-18	0%	0%
43	ADDITIONAL TIME FOR ONGC & BPCL PHYSCIAL VERIFICATION		180			21-Mar-18	07-May-19	0%	0%
44	GEOTECHNICAL INVESTIGATION		468	20-Jan-18	17-Jul-18	12-Jan-18	25-Jun-19	100%	100%
45	TEMPORARY WORK		621	22-Jan-18	01-Nov-18	20-Jan-18		100%	100%
46	PROJECT OFFICE LAYOUT		241	04-May-18	02-Jun-18	04-May-18	17-Jul-18	0%	0%
47	CASTING YARD LAYOUT		72	22-Jan-18	04-Apr-18	20-Jan-18	09-Oct-18	0%	0%
48	TEMPORARY BRIDGE		94	26-Feb-18	31-May-18	24-Feb-18	30-Aug-18	100%	100%
49	CASTING YARD STRUCTURE		199	10-May-18	10-Aug-18	20-Mar-18	20-Nov-18	0%	0%
50	STEEL BRIDGE FABRICATION YARD		102	20-Jul-18	01-Nov-18			0%	0%
51	CONCRETE MIX DESIGN		274	23-Mar-18	31-Aug-18	12-May-18	15-Nov-18	0%	0%
52	JFE DESIGN PROGRAMME		800	01-May-18	04-Sep-19	09-Apr-18		83.45%	13.35%
53	PROCUREMENT, MANUFACTURING AND LOGISTICS		1227	20-Jan-18	23-Aug-20	22-Dec-17		100%	50%
54	SURVEY & INVESTIGATION		72	20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%
55	TOPOGRAPHIC SURVEY AGENT		21	20-Jan-18	09-Feb-18	01-Jan-18	22-Jan-18	0%	0%
56	BATHYMETRIC SURVEY / UTILITY SURVEY AGENT		21	20-Jan-18	09-Feb-18	01-Jan-18	23-Jan-18	0%	0%
57	GEOTECHNICAL INVESTIGATION AGENCY		48	22-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%
58	TEMPORARY WORK		580	20-Jan-18	20-Oct-18	20-Jan-18		0%	0%

Project Baseline Bar | Actual Work | Remaining Work | Critical Remaining Work | Milestone | % Complete | Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

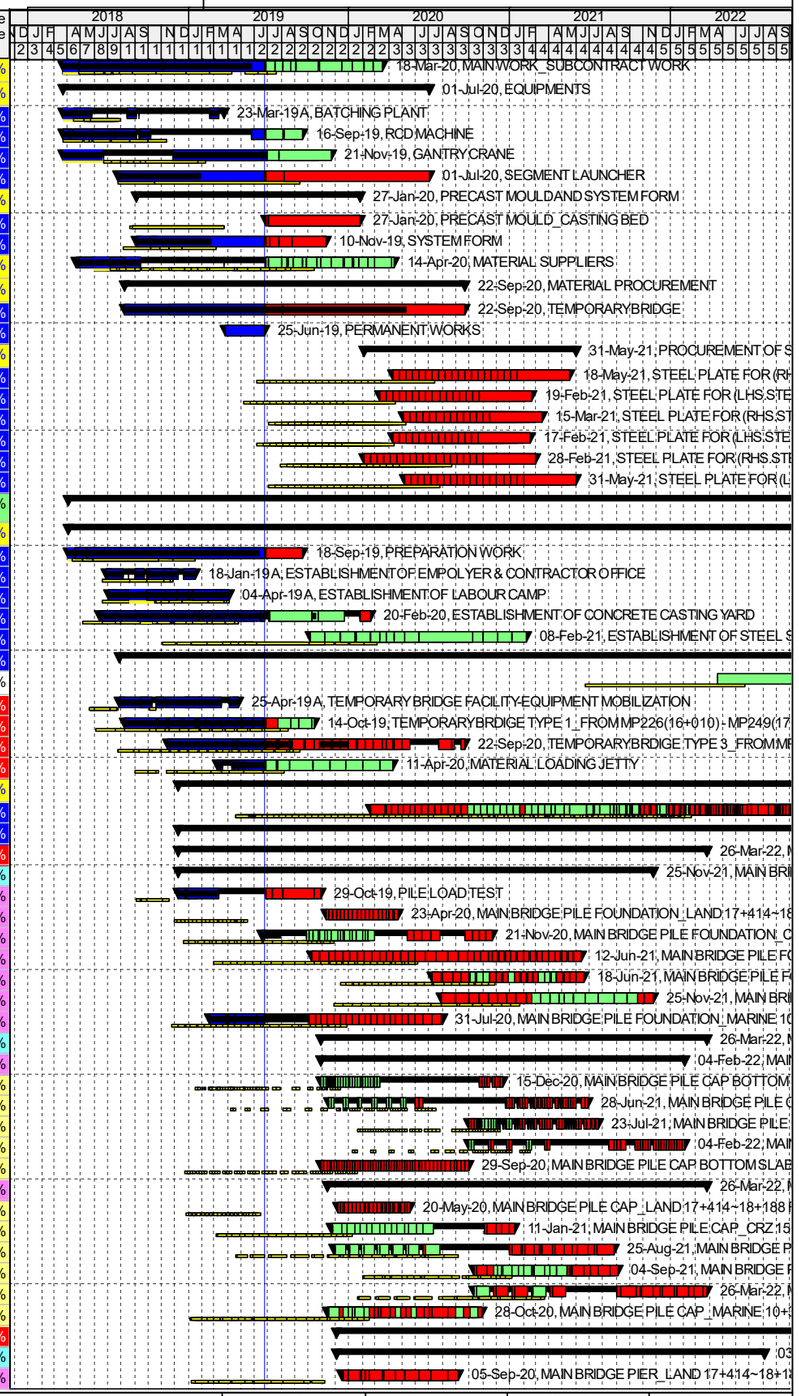
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME (PACKAGE-2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
59		MAIN WORK_SUBCONTRACT WORK	623	23-Mar-18	20-Jul-19	23-Mar-18		0%	0%
60		EQUIPMENTS	832	23-Mar-18	12-Sep-19	23-Mar-18		100%	100%
61		BATCHING PLANT	437	23-Mar-18	31-Jul-18	23-Mar-18	23-Mar-19	0%	0%
62		RCD MACHINE	543	23-Mar-18	11-Nov-18	23-Mar-18		0%	0%
63		GANTRY CRANE	609	23-Mar-18	08-Feb-19	23-Mar-18		100%	100%
64		SEGMENT LAUNCHER	708	24-Jul-18	12-Sep-19	24-Jul-18		0%	0%
65		PRECAST MOULD AND SYSTEM FORM	539	07-Aug-18	24-Mar-19	04-Sep-18		100%	0%
66		PRECAST MOULD_CASTING BED	217	20-Aug-18	24-Mar-19			100%	0%
67		SYSTEM FORM	460	07-Aug-18	04-Mar-19	04-Sep-18		0%	0%
68		MATERIAL SUPPLIERS	682	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%
69		MATERIAL PROCUREMENT	0			08-Aug-18		0%	0%
70		TEMPORARY BRIDGE	0			08-Aug-18		0%	0%
71		PERMANENT WORKS	0			25-Mar-19		0%	0%
72		PROCUREMENT OF STEEL GIRDER	482	07-May-19	23-Aug-20			0%	0%
73		STEEL PLATE FOR (RHS.STEEL MOUDLE-2_MP177 - MP182)	405	04-Jun-19	13-Jul-20			0%	0%
74		STEEL PLATE FOR (LHS.STEEL MOUDLE-2_MP177 - MP182)	345	07-May-19	16-Apr-20			0%	0%
75		STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186)	315	01-Jul-19	10-May-20			0%	0%
76		STEEL PLATE FOR (LHS.STEEL MOUDLE-3_MP183 - MP186)	315	04-Jun-19	14-Apr-20			0%	0%
77		STEEL PLATE FOR (RHS.STEEL MOUDLE-1_MP176 - MP171)	390	30-Jul-19	23-Aug-20			0%	0%
78		STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171)	390	02-Jul-19	26-Jul-20			0%	0%
79		CONSTRUCTION	1857	02-Apr-18	21-Jun-22	02-Apr-18		19.37%	8.26%
80		TEMPORARY WORK	1843	02-Apr-18	21-Jun-22	02-Apr-18		94.12%	69.5%
81		PREPARATION WORK	368	02-Apr-18	16-Jan-19	02-Apr-18		0%	0%
82		ESTABLISHMENT OF EMPOLYER & CONTRACTOR OFFICE	194	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%
83		ESTABLISHMENT OF LABOUR CAMP	464	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%
84		ESTABLISHMENT OF CONCRETE CASTING YARD	657	04-May-18	25-Apr-19	14-Jun-18		100%	87.46%
85		ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD	342	02-Nov-18	06-Mar-20			0%	0%
86		TEMPORARY BRIDGE	1791	20-May-18	21-Jun-22	27-Jul-18		89.94%	56.57%
87	A13700	Removal of Temporary Bridge & Casting Yard	365	21-Jun-21	21-Jun-22			0%	0%
88		TEMPORARY BRIDGE FACILITY-EQUIPMENT MOBILIZATION	372	20-May-18	19-Oct-18	27-Jul-18	25-Apr-19	0%	0%
89		TEMPORARY BRIDGE TYPE 1_FROM MP226(16+010) - MP249(17+320)	468	04-Jun-18	17-Aug-19	08-Aug-18		91.44%	100%
90		TEMPORARY BRIDGE TYPE 3_FROM MP207(14+870) - MP226(16+010)	544	24-Jul-18	12-Sep-19	16-Nov-18		93.39%	40.81%
91		MATERIAL LOADING JETTY	289	31-Aug-18	08-Aug-19	08-Mar-19		100%	56.7%
92		PERMANENT WORK	1590	03-Sep-18	24-May-22	08-Dec-18		9.6%	0.25%
93		PRE-FABRICATION AND ASSEMBLY	1020	18-Apr-19	19-Feb-22			1.27%	0%
94		MAIN BRIDGE	1590	03-Sep-18	24-May-22	08-Dec-18		13.69%	0.68%
95		MAIN BRIDGE FOUNDATION	1187	03-Sep-18	23-Mar-21	08-Dec-18		30.23%	2.14%
96		MAIN BRIDGE PILE FOUNDATION	1066	03-Sep-18	23-Jan-21	08-Dec-18		39.89%	4.18%
97		PILE LOAD TEST	193	03-Sep-18	19-Nov-18	08-Dec-18		100%	50%
98		MAIN BRIDGE PILE FOUNDATION_LAND 17+414~18+187 FROM MP250 TO MP266	140	30-Nov-18	15-May-19			100%	0%
99		MAIN BRIDGE PILE FOUNDATION_CRZ 15+890~17+414 FROM MP226 TO MP250	359	20-Dec-18	27-Nov-19	18-Jun-19		71.51%	0.59%
100		MAIN BRIDGE PILE FOUNDATION_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	480	27-Feb-19	06-Jun-20			16.5%	0%
101		MAIN BRIDGE PILE FOUNDATION_MARINE 13+610~14+800 FROM MP187 TO MP205	261	12-Dec-19	28-Nov-20			0%	0%
102		MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	355	27-Nov-19	23-Jan-21			0%	0%
103		MAIN BRIDGE PILE FOUNDATION_MARINE 10+380~11+880 FROM MP146 TO MP170	326	24-Nov-18	28-Dec-19	19-Feb-19		59.27%	20.71%
104		MAIN BRIDGE PILE CAP INSTALLATION	671	22-Dec-18	23-Mar-21			20.14%	0%
105		MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	629	22-Dec-18	17-Feb-21			0%	0%
106		MAIN BRIDGE PILE CAP BOTTOM SLAB_CRZ 15+890~17+414 FROM MP226 TO MP250	313	17-Jan-19	12-Dec-19			0%	0%
107		MAIN BRIDGE PILE CAP BOTTOM SLAB_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	458	06-Apr-19	18-Jul-20			0%	0%
108		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 13+610~14+800 FROM MP187 TO MP205	235	21-Jan-20	10-Dec-20			0%	0%
109		MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	379	08-Jan-20	17-Feb-21			0%	0%
110		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 10+380~11+880 FROM MP146 TO MP170	250	22-Dec-18	21-Jan-20			0%	0%
111		MAIN BRIDGE PILE CAP INSTALLATION	661	27-Dec-18	23-Mar-21			20.14%	0%
112		MAIN BRIDGE PILE CAP_LAND 17+414~18+188 FROM MP251 TO MP266	139	27-Dec-18	13-Jun-19			100%	0%
113		MAIN BRIDGE PILE CAP_CRZ 15+890~17+414 FROM MP226 TO MP250	319	04-Mar-19	08-Jan-20			27.38%	0%
114		MAIN BRIDGE PILE CAP_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	479	18-Apr-19	05-Sep-20			10%	0%
115		MAIN BRIDGE PILE CAP_MARINE 13+610~14+800 FROM MP187 TO MP205	248	01-Feb-20	06-Jan-21			0%	0%
116		MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	411	20-Jan-20	23-Mar-21			0%	0%
117		MAIN BRIDGE PILE CAP_MARINE 10+380~11+880 FROM MP146 TO MP170	263	03-Jan-19	17-Feb-20			44.48%	0%
118		MAIN BRIDGE SUB-STRUCTURE	1057	09-Jan-19	24-Sep-21			18.83%	0%
119		MAIN BRIDGE PIER INSTALLATION	735	09-Jan-19	28-Jul-21			21.56%	0%
120		MAIN BRIDGE PIER_LAND 17+414~18+188 FROM MB251 TO MB266	197	09-Jan-19	08-Nov-19			66.76%	0%



Project Baseline Bar | Critical Remaining Work | Summary
Actual Work | Milestone
Remaining Work | % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

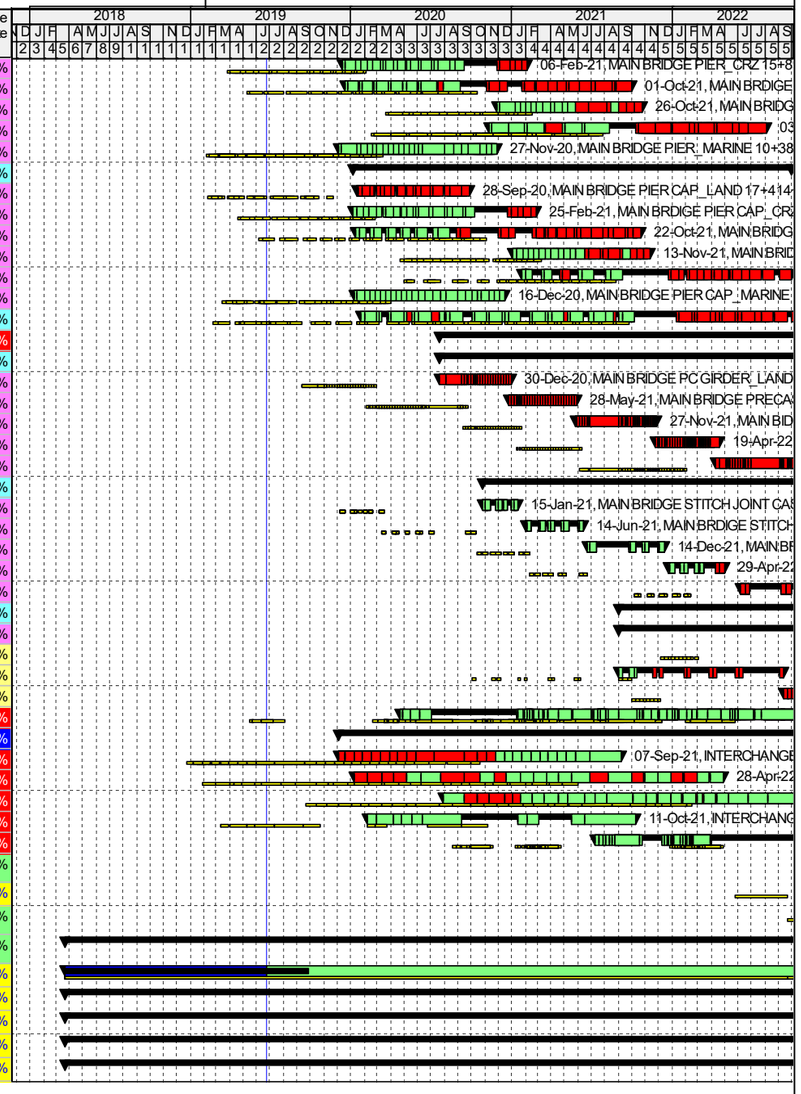
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME (PACKAGE-2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
121		MAIN BRIDGE PIER_CRZ 15+890~17+414 FROM MB226 TO MB250	322	26-Mar-19	06-Feb-20			21.29%	0%
122		MAIN BRIDGE PIER_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	482	11-May-19	16-Oct-20			4.82%	0%
123		MAIN BRIDGE PIER_MARINE 13+610~14+800 FROM MB187 TO MB205	244	19-Mar-20	18-Feb-21			0%	0%
124		MAIN BRIDGE PIER_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	480	17-Feb-20	28-Jul-21			0%	0%
125		MAIN BRIDGE PIER_MARINE 10+380~11+880 FROM MB146 TO MB170	269	07-Feb-19	13-Mar-20			37.67%	0%
126		MAIN BRIDGE PIER CAP INSTALLATION	738	08-Feb-19	27-Aug-21			17.18%	0%
127		MAIN BRIDGE PIER CAP_LAND 17+414~18+188 FROM MB251 TO MB266	185	08-Feb-19	23-Nov-19			57.58%	0%
128		MAIN BRIDGE PIER CAP_CRZ 15+890~17+414 FROM MB226 TO MB250	317	19-Apr-19	25-Feb-20			17.11%	0%
129		MAIN BRIDGE PIER CAP_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	477	06-Jun-19	05-Nov-20			2.61%	0%
130		MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB187 TO MB205	230	23-Apr-20	10-Mar-21			0%	0%
131		MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	449	30-Apr-20	27-Aug-21			0%	0%
132		MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROMMB146 TO MB170	255	15-Mar-19	01-Apr-20			27.99%	0%
133		MAIN BRIDGE BEARING PAD AND BEARING INSALLATION	1007	22-Feb-19	24-Sep-21			2.54%	0%
134		MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION	935	12-Sep-19	01-Mar-22			0%	0%
135		MAIN BRIDGE CONCRETE GIRDER INSTALLATION	873	12-Sep-19	02-Feb-22			0%	0%
136		MAIN BRIDGE PC GIRDER_LAND 15+890~17+414 FROM MP251 TO MP266	163	12-Sep-19	27-Feb-20			0%	0%
137		MAIN BRIDGE PRECAST GIRDER_CRZ 15+890~17+414 FROM MP226 TO MP250	129	04-Feb-20	25-Sep-20			0%	0%
138		MAIN BIDGE PRECAST GIRDER_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	104	12-Sep-20	23-Jan-21			0%	0%
139		MAIN BRIDGE PRECAST GIRDER_MARINE 13+610~14+800 FROM MP187 TO MP205	124	12-Jan-21	10-Jun-21			0%	0%
140		MAIN BRIDGE PRECAST GIRDER_MARINE 10+380~11+880 FROM MP146 TO MP170	154	04-Jun-21	02-Feb-22			0%	0%
141		STITCH JOINT CASTING	619	07-Dec-19	12-Feb-22			0%	0%
142		MAIN BRIDGE STITCH JOINT CASTING_LAND 15+890~17+414 FROM MP251 TO MP266	68	07-Dec-19	16-Mar-20			0%	0%
143		MAIN BRDIGE STITCH JOINT CASTING_CRZ 15+890~17+414 FROM MP226 TO MP250	113	11-Mar-20	13-Oct-20			0%	0%
144		MAIN BRIDGE STITCH JOINT CASTING_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	126	14-Oct-20	10-Feb-21			0%	0%
145		MAIN BRIDGE STITCH JOINT CASTING_MARINE 13+610~14+800 FROM MP187 TO MP205	108	11-Feb-21	21-Jun-21			0%	0%
146		MAIN BRIDGE STITCH JOINT CASTING_MARINE 10+380~11+880 FROM MP146 TO MP170	146	06-Oct-21	12-Feb-22			0%	0%
147		MAIN BRIDGE STEEL GIRDER INSTALLATION	388	03-Oct-20	01-Mar-22			0%	0%
148		MAN BRIDGE STEEL GIRDER INSTALLATION_MARINE 11+880~13+610 FROM MP171 TO MP 186	388	03-Oct-20	01-Mar-22			0%	0%
149		STEEL MODULE-01_MP176 - MP171	71	07-Dec-21	01-Mar-22			0%	0%
150		STEEL MODULE-02_MP182 - MP177	262	03-Oct-20	30-Sep-21			0%	0%
151		STEEL MODULE-03_MP186 - MP183	57	30-Sep-21	07-Dec-21			0%	0%
152		MISCELLANEOUS & FINISHING WORKS	812	16-May-19	24-May-22			0.54%	0%
153		INTERCHANGE	1218	24-Dec-18	28-Apr-22			29.71%	0%
154		INTERCHANGE FOUNDATION	643	24-Dec-18	22-Oct-20			42.69%	0%
155		INTERCHANGE SUBSTRUCTURE & BEARING	628	29-Jan-19	31-May-21			18.2%	0%
156		INTERCHANGE SUPERSTRUCTURE INSTALLATION	647	20-Sep-19	15-Feb-22			0%	0%
157		INTERCHANGE RETAINING STRUCTURE	382	11-Mar-19	06-Nov-20			37.49%	0%
158		MISCELLANEOUS & FINISHING WORKS	468	19-Aug-20	28-Apr-22			0%	0%
159		PROJECT HANDINGOVER	65	24-May-22	22-Sep-22			0%	0%
160		CHECKLIST	65	24-May-22	22-Sep-22			0%	0%
161		DEFECT LIABILITY PERIOD (DLP)	724	22-Sep-22	21-Sep-24			0%	0%
162		PRICE SCHEDULE	2192	23-Mar-18	21-Mar-23	23-Mar-18		42.29%	28.39%
163		SCHEDULE-1	2192	23-Mar-18	21-Mar-23	23-Mar-18		67.7%	65.43%
164		SCHEDULE-2	1644	23-Mar-18	22-Sep-22	23-Mar-18		27.9%	27.9%
165		SCHEDULE-3	1644	23-Mar-18	22-Sep-22	23-Mar-18		27.9%	27.9%
166		SCHEDULE-12	1644	23-Mar-18	22-Sep-22	23-Mar-18		27.9%	27.9%
167		SCHEDULE-13	1644	23-Mar-18	22-Sep-22	23-Mar-18		27.9%	1.96%



Project Baseline Bar | Actual Work | Remaining Work | Critical Remaining Work | Milestone | % Complete | Summary

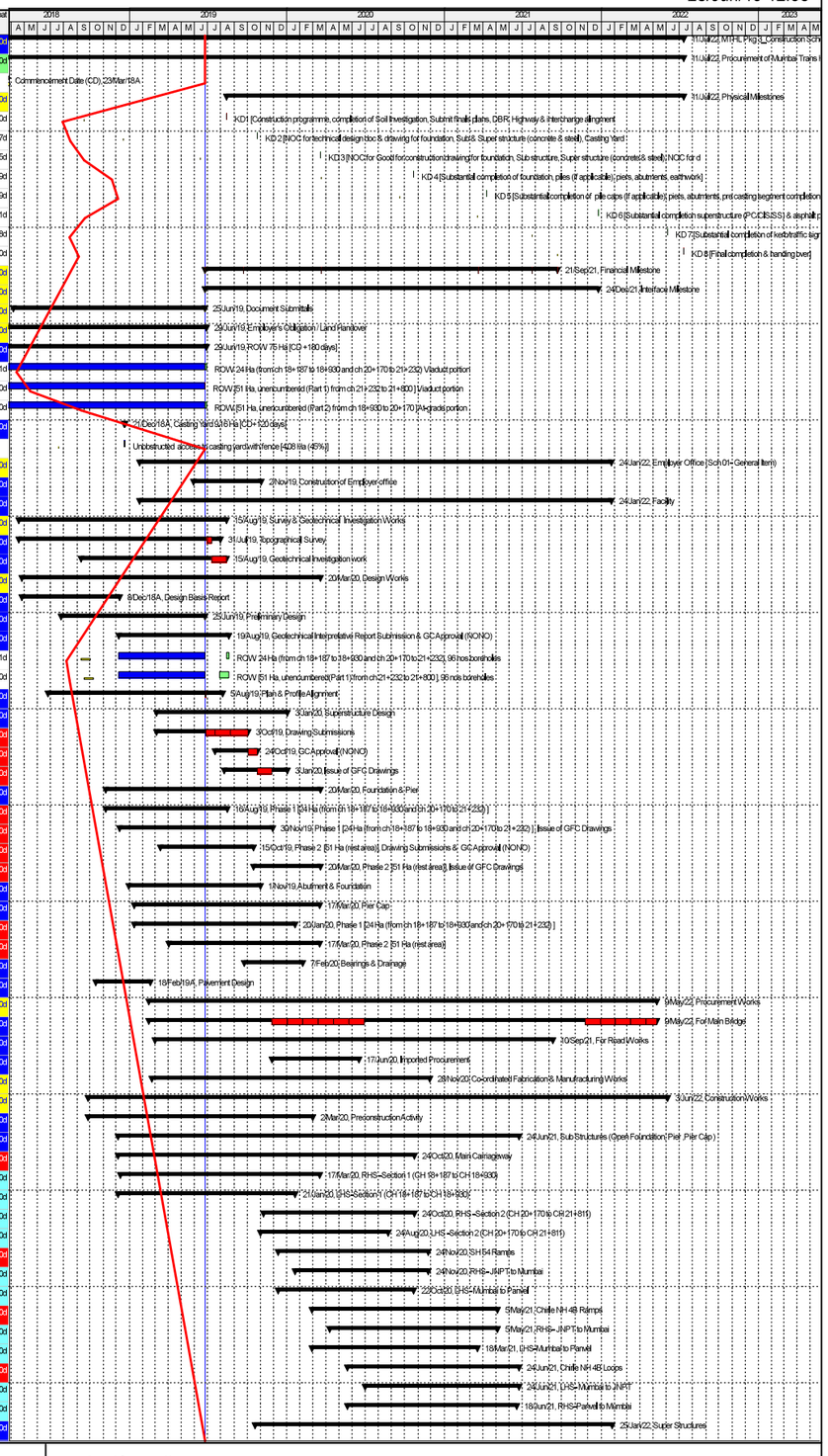
EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-19	R0		

Attachment 9- Package-3's Updated Construction Programme Till 25th June 2019

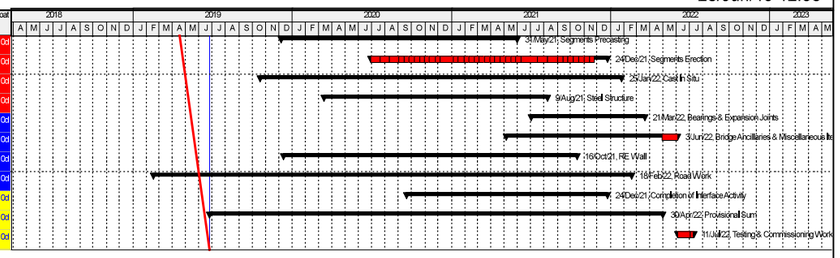
Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Variance - BL Project Finish	Schedule % Complete	Activity % Complete	Performance % Complete	Budgeted Total Cost	Actual Total Cost	Cost Performance Index	Schedule Performance Index	Planned Value Cost	Earned Value Cost	Actual Duration	Total Float	Free Float
MTHL Pkg 3_Construction Schedule Jun19		1218d	23Mar18	21Sep21	23Mar18A	11Jul22	-249d	38.04%		6.19%	₹10,137,001,023.76	₹592,980,226.05	1.06	0.16	₹3,856,644,337.42	₹627,498,535.06	376d	0d	0d
Procurement of Mumbai Trans Harbour Link Project (Package-3)-Constructi		1218d	23Mar18	21Sep21	23Mar18A	11Jul22	-249d	38.04%		6.19%	₹10,137,001,023.76	₹592,980,226.05	1.06	0.16	₹3,856,644,337.42	₹627,498,535.06	376d	0d	0d
2	Commencement Date (CD)	0d	23Mar18		23Mar18A		0d	100%	100%	100%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d		
Physical Milestones		1081d	18Sep18	21Sep21	15Aug19	11Jul22	-293d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	0d	0d
KD1001	KD1 [Construction programme, completion of Soil Investigation, Submit finals plans, DBR, Highway & interchange alignment	0d	18Sep18	18Sep18	15Aug19	15Aug19*	-331d	100%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	0d	0d
KD1002	KD 2 [NOC for technical design doc & drawing for foundation, Sub & Super structure (concrete & steel), Casting Yard	0d	17Dec18	17Dec18	25Oct19	25Oct19	-313d	100%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	990d	147d
KD1003	KD 3 [NOC for Good for construction drawing for foundation, Sub structure, Super structure (concrete & steel), NOC for d	0d	15Jun19	15Jun19	20Mar20	20Mar20	-280d	100%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	843d	215d
KD1004	KD 4 [Substantial completion of foundation, piles (if applicable), piers, abutments, earthwork]	0d	21Mar20	21Mar20	22Oct20	22Oct20	-215d	0%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	627d	169d
KD1005	KD 5 [Substantial completion of pile caps (if applicable), piers, abutments, pre casting segment completion]	0d	19Sep20	19Sep20	9Apr21	9Apr21	-202d	0%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	458d	259d
KD1006	KD 6 [Substantial completion superstructure (PC/CIS/SS) & asphalt pavement]	0d	20Mar21	20Mar21	24Dec21	24Dec21	-279d	0%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	199d	161d
KD1007	KD 7 [Substantial completion of kerb/traffic signs, Marking & noise barrier, Restoration of removed structures and As+bu	0d	24Jul21	24Jul21	3Jun22	3Jun22	-314d	0%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	38d	38d
KD1008	KD 8 [Final completion & handing over]	0d	21Sep21	21Sep21	11Jul22	11Jul22	-293d	0%	0%	0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	0d	0d
Financial Milestone		819d	18Sep18	21Sep21	25Jun19	21Sep21	0d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	0d	0d
Interface Milestone		913d	17Dec18	6Mar21	25Jun19	24Dec21	-293d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	199d	0d
Document Submittals		45d	23Mar18	6May18	6Apr18A	25Jun19	-414d	100%		60%	₹74,992,895.00	₹74,992,895.00	0.60	0.60	₹74,992,895.00	₹44,995,737.00	445d	51d	0d
Employer's Obligation / Land Handover		151d	19Apr18	18Sep18	23Mar18A	29Jun19	-285d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	459d	189d	0d
ROW 75 Ha [CD + 180 days]		0d	19Apr18	18Sep18	23Mar18A	29Jun19	-285d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	459d	140d	0d
E Obt1000	ROW 24 Ha (from ch 18+187 to 18+930 and ch 20+170 to 21+232) Viaduct portion	0d	19Apr18	19Apr18	23Mar18A	29Jun19	-437d	100%	72%	72%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	459d	1d	1d
E Obt1001	ROW [51 Ha, unencumbered (Part 1) from ch 21+232 to 21+800] Viaduct portion	0d	16May18	16May18	23Mar18A	25Jun19	-405d	100%	27%	27%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	459d	0d	0d
E Obt1002	ROW [51 Ha, unencumbered (Part 2) from ch 18+930 to 20+170] Abgrade portion	0d	18Sep18	18Sep18	23Mar18A	29Jun19	-285d	100%	97%	97%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	459d	146d	0d
Casting Yard 9.16 Ha [CD+ 120 days]		0d	20Jul18	20Jul18	20Dec18A	21Dec18A	-155d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	2d		0d
E Obt1003	Unobstructed access to casting yard with fence [408 Ha (45%)]	0d	20Jul18	20Jul18	20Dec18A	21Dec18A	-155d	100%	100%	100%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	2d		
Employer Office (Sch 01- General Item)		801d	20Aug18	16Sep21	25Jan19A	24Jan22	-109d	82.73%		20%	₹142,351,965.01	₹13,431,464.33	2.12	0.24	₹117,768,903.79	₹28,470,393.00	126d	143d	0d
Construction of Employer office		110d	20Aug18	11Dec18	30May19A	2Nov19	-247d	100%		20%	₹112,791,965.01	₹7,519,464.33	3.00	0.20	₹112,791,965.01	₹22,558,393.00	23d	141d	0d
Facility		980d	12Dec18	16Sep21	25Jan19A	24Jan22	-130d	16.84%		20%	₹29,560,000.00	₹5,912,000.00	1.00	1.19	₹4,976,938.78	₹5,912,000.00	151d	167d	0d
Survey & Geotechnical Investigation Works		346d	19Apr18	22Oct18	19Apr18A	15Aug19	-230d	100%		95.75%	₹242,300,772.82	₹212,013,176.18	1.09	0.66	₹242,300,772.82	₹232,002,990.03	335d	76d	0d
Topographical Survey		346d	19Apr18	22Oct18	19Apr18A	31Jul19	-224d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	335d	82d	0d
Geotechnical investigation work		93d	17May18	17Sep18	10Sep18A	15Aug19	-259d	100%		95.75%	₹242,300,772.82	₹212,013,176.18	1.09	0.66	₹242,300,772.82	₹232,002,990.03	240d	0d	0d
Design Works		335d	7May18	14Jun19	25Apr18A	20Mar20	-209d	100%		22.51%	₹159,122,500.04	₹40,396,750.00	0.89	0.23	₹159,122,500.04	₹36,812,230.47	349d	375d	0d
Design Basis Report		48d	7May18	30Jun18	25Apr18A	8Dec18A	-109d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	165d		0d
Preliminary Design		47d	2Jul18	25Aug18	25Jul18A	25Jun19	-250d	100%		80%	₹286,875.00	₹286,875.00	0.80	0.80	₹286,875.00	₹229,500.00	283d	74d	0d
Geotechnical Interpretative Report Submission & GC Approval (NONO)		24d	11Sep18	8Oct18	7Dec18A	19Aug19	-315d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	200d	227d	0d
DES1004	ROW 24 Ha (from ch 18+187 to 18+930 and ch 20+170 to 21+232), 96 nos boreholes	21d	11Sep18	1Oct18	7Dec18A	19Aug19	-323d	100%	89%	89%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	200d	64d	1d
DES1005	ROW [51 Ha, unencumbered (Part 1) from ch 21+232 to 21+800], 96 nos boreholes	21d	18Sep18	8Oct18	7Dec18A	19Aug19	-315d	100%	63%	63%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	200d	228d	0d
Plan & Profile Alignment		77d	6Jun18	14Aug18	25Jun18A	5Aug19	-275d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	279d	49d	0d
Superstructure Design		184d	16Aug18	26Feb19	5Mar19A	3Jan20	-234d	100%		0%	₹65,075,000.00	₹0.00	0.00	0.00	₹65,075,000.00	₹0.00	112d	151d	0d
Drawing Submissions		107d	16Aug18	24Nov18	5Mar19A	3Oct19	-235d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	112d	0d	0d
GC Approval (NONO)		98d	9Sep18	15Dec18	18Jul19	24Oct19	-312d	100%		0%	₹78,603,750.00	₹0.00	0.00	0.00	₹78,603,750.00	₹0.00	0d	60d	0d
Issue of GFC Drawings		123d	1Oct18	26Feb19	8Aug19	3Jan20	-260d	100%		0%	₹6,471,250.00	₹0.00	0.00	0.00	₹6,471,250.00	₹0.00	0d	151d	0d
Foundation & Pier		247d	5Oct18	14Jun19	6Nov18A	20Mar20	-209d	100%		29.09%	₹28,434,375.04	₹12,791,250.00	0.65	0.29	₹28,434,375.04	₹8,282,105.47	193d	176d	0d
Phase 1 [24 Ha (from ch 18+187 to 18+930 and ch 20+170 to 21+232)]		54d	5Oct18	1Dec18	6Nov18A	16Aug19	-196d	100%		48%	₹12,791,250.00	₹12,791,250.00	0.48	0.48	₹12,791,250.00	₹6,139,800.00	193d	79d	0d
Phase 1 [24 Ha (from ch 18+187 to 18+930 and ch 20+170 to 21+232)], Issue of GFC Drawings		141d	3Dec18	19Mar19	8Dec18A	30Nov19	-215d	100%		31%	₹1,069,453.14	₹0.00	0.00	0.31	₹1,069,453.14	₹331,530.47	166d	22d	0d
Phase 2 [51 Ha (rest area)], Drawing Submissions & GC Approval (NONO)		47d	9Oct18	5Dec18	14Mar19A	15Oct19	-236d	100%		14%	₹12,791,250.00	₹0.00	0.00	0.14	₹12,791,250.00	₹1,790,775.00	86d	193d	0d
Phase 2 [51 Ha (rest area)], Issue of GFC Drawings		133d	6Dec18	14Jun19	15Oct19	20Mar20	-235d	100%		0%	₹1,782,421.90	₹0.00	0.00	0.00	₹1,782,421.90	₹0.00	0d	201d	0d
Abutment & Foundation		136d	15Oct18	16Jan19	31Dec18A	1Nov19	-216d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	147d	235d	0d
Pier Cap		244d	24Oct18	10May19	11Jan19A	17Mar20	-236d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	139d	169d	0d
Phase 1 [24 Ha (from ch 18+187 to 18+930 and ch 20+170 to 21+232)]		196d	24Oct18	4Apr19	11Jan19A	20Jan20	-218d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	139d	52d	0d
Phase 2 [51 Ha (rest area)]		182d	15Nov18	10May19	2Apr19A	17Mar20	-236d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	71d	169d	0d
Bearings & Drainage		115d	17Nov18	3Apr19	24Sep19	7Feb20	-235d	100%		0%	₹18,005,625.00	₹0.00	0.00	0.00	₹18,005,625.00	₹0.00	0d	410d	0d
Pavement Design		71d	1Jul18	27Aug18	15Oct18A	18Feb19A	-143d	100%		100%	₹27,320,625.00	₹27,320,625.00	1.00	1.00	₹27,320,625.00	₹27,320,625.00	105d		0d
Procurement Works		853d	12Sep18	8Jun21	15Feb19A	9May22	-256d	78.05%		0%	₹1,387,160,497.58	₹0.00	0.00	0.00	₹1,062,668,496.39	₹0.00	103d	0d	0d
For Main Bridge		853d	12Sep18	8Jun21	15Feb19A	9May22	-256d	74.94%		0%	₹977,933,218.00	₹0.00	0.00	0.00	₹695,265,233.41	₹0.00	109d	0d	0d
For Road Works		456d	4Apr19	13Jan21	1Mar19A	10Sep21	-175d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	97d	129d	0d
Imported Procurement		170d	22Jan19	10Aug19	28Nov19	17Jun20	-280d	83.28%		0%	₹509,227,249.58	₹0.00	0.00	0.00	₹427,403,264.98	₹0.00	0d	290d	0d
Co-ordinated Fabrication & Manufracturing Works		400d	27Sep18	10Feb20	21Feb19A	28Nov20	-222d	37.83%		0%	₹360,805,952.00	₹0.00	0.00	0.00	₹147,762,059.00	₹0.00	104d	226d	0d
Construction Works		980d	20Jul18	23Jul21	29Sep18A	3Jun22	-249d	23.19%		4.05%	₹7,093,465,448.22	₹252,143,940.54	1.14	0.17	₹1,638,045,501.57	₹286,217,184.66	227d	32d	0d
Preconstruction Activity		338d	20Jul18	1Jul19	29Sep18A	2Mar20	-180d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	227d	253d	0d
Sub Structures (Open Foundation, Pier ,Pier Cap)		687d	8Dec18	7Nov20	5Dec18A	24Jun21	-191d	33.19%		6.43%	₹3,392,806,949.20	₹218,070,690.52	1.00	0.19	₹1,126,138,413.42	₹218,070,690.52	169d	297d	0d
Main Carriageway		494d	8Dec18	24Jan20	5Dec18A	24Oct20	-207d	58.94%		11.27%	₹1,821,401,625.36	₹218,070,690.52	1.00	0.29	₹1,073,524,698.42	₹218,070,690.52	169d	500d	0d
RHS -Section 1 (CH 18+ 187 to CH 18+930)		321d	8Dec18	23May19	10Dec18A	17Mar20	-225d	100%		34.03%	₹303,566,937.56	₹103,296,645.72	1.00	0.34	₹303,566,937.56	₹103,296,645.72	165d	166d	0d
LHS-Section 1 (CH 18+ 187 to CH 18+930)		216d	10Dec18	23May19	5Dec18A	21Jan20	-178d	100%		37.81%	₹303,566,937.56	₹114,774,050.80	1.00	0.38	₹303,566,937.56	₹114,774,050.80	168d	235d	0d
RHS -Section 2 (CH 20+ 170 to CH 21+811)		273d	27Feb19	24Jan20	8Nov19	24Oct20	-207d	38.48%		0%	₹607,133,875.12	₹0.00	0.00	0.00	₹233,605,318.97	₹0.00	0d	500d	0d
LHS -Section 2 (CH 20+ 170 to CH 21+811)		228d	17Jan19	24Jan20	1Nov19	24Aug20	-157d	38.34%		0%	₹607,133,875.12	₹0.00	0.00	0.00	₹232,785,504.32	₹0.00	0d	227d	0d
SH 54 Ramps		269d	27Feb19	6Mar20	11Dec19	24Nov20	-196d	15.38%		0%	₹232,139,422.84	₹0.00	0.00	0.00	₹35,713,757.36	₹0.00	0d	200d	0d
RHS- JNPT to Mumbai		236d	9Apr19	6Mar20	21Jan20	24Nov20	-196d	16.57%		0%	₹107,141,272.08	₹0.00	0.00	0.00	₹17,856,878.68	₹0.00	0d	180d	0d
LHS- Mumbai to Panvel		242d	27Feb19	4Mar20	11Dec19	22Oct20	-171d	14.29%		0%	₹124,998,150.76	₹0.00	0.00	0.00	₹17,856,878.68	₹0.00	0d	227d	0d
Chirle NH 4B Ramps		336d	20May19	5Sep20	29Feb20	5May21	-203d	1.88%		0%	₹874,987,095.32	₹0.00	0.00	0.00	₹16,899,957.64	₹0.00	0d	209d	0d
RHS- JNPT to Mumbai		302d	28Jun19	20Jul20	10Apr20	5May21	-225d	0%		0%	₹446,421,967.20	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	209d	0d
LHS- Mumbai to Panvel		297d	20May19	5Sep20	29Feb20	18Mar21	-163d	3.94%		0%	₹428,565,088.32	₹0.00	0.00	0.00	₹16,899,957.64	₹0.00	0d	227d	0d
Chirle NH 4B Loops		311d	9Sep19	7Nov20	21May20	24Jun21	-191d	0%		0%	₹464,278,845.68	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	209d	0d
LHS- Mumbai to JNPT		277d	19Oct19	7Nov20	30Jun20	24Jun21	-191d	0%		0%	₹214,282,544.16	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	209d	0d
RHS-Panvel to Mumbai		306d	9Sep19	2Nov20	21May20	18Jun21	-191d	0%		0%	₹249,996,301.52	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	209d	0d
Super Structures		647d	27Feb19	12Apr21	19Oct19	25Jan22	-216d	8.58%		0%	₹1,408,927,165.15	₹0.00	0.00	0.00	₹120,898,992.18	₹0.00	0d	110d	0d



Actual Level of Effort
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Baseline Milestone
Milestone
summary

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Variance - BL Project Finish Date	Schedule % Complete	Activity % Complete	Performance % Complete	Budgeted Total Cost	Actual Total Cost	Cost Performance Index	Schedule Performance Index	Planned Value Cost	Earned Value Cost	Actual Duration	Total Float	Free Float
	Segments Precasting	429d	30/Mar19	9/Nov20	7/Dec19	31/May21	-169d	6,28%		0%	₹760,156,099.20	₹0.00	0.00	0.00	₹52,260,731.82	₹0.00	0d	113d	0d
	Segments Erection	405d	29/Aug19	20/Jan21	29/Jun20	24/Dec21	-256d	0%		0%	₹70,699,409.92	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	109d	0d
	Cast In Situ	647d	27/Feb19	12/Apr21	19/Oct19	25/Jan22	-216d	12,33%		0%	₹464,334,354.02	₹0.00	0.00	0.00	₹57,234,388.27	₹0.00	0d	110d	0d
	Steel Structure	390d	10/May19	17/Nov20	14/Mar20	9/Aug21	-205d	10,03%		0%	₹113,737,302.01	₹0.00	0.00	0.00	₹11,403,674.09	₹0.00	0d	151d	0d
	Bearings & Expansion Joints	195d	3/Aug20	12/Apr21	2/Jul21	21/Mar22	-282d	0%		0%	₹10,454,697.06	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	64d	0d
	Bridge Ancillaries & Miscellaneous Item	306d	12/Aug20	23/Jul21	7/May21	3/Jun22	-249d	0%		0%	₹180,521,957.01	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	0d	0d
	RE Wall	516d	27/Feb19	18/Feb21	11/Dec19	16/Oct21	-175d	6,75%		0%	₹461,687,248.20	₹0.00	0.00	0.00	₹31,144,140.79	₹0.00	0d	129d	0d
	Road Work	698d	20/Apr19	18/May21	16/Feb19A	18/Feb22	-206d	22,37%		4,24%	₹1,608,667,399.20	₹34,073,244.02	2.00	0.19	₹359,863,955.18	₹68,146,488.04	108d	43d	0d
	Completion of Interface Activity	360d	19/Sep20	6/Mar21	19/Sep20	24/Dec21	-219d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	170d	0d
	Provisional Sum	800d	23/Apr18	23/Aug21	25/Jun19	30/Apr22	-208d	58,12%		0%	₹677,901,024.00	₹0.00	0.00	0.00	₹393,983,209.12	₹0.00	0d	59d	0d
	Testing & Commissioning Works	32d	29/Jul21	21/Sep21	3/Jun22	11/Jul22	-249d	0%		0%	₹0.00	₹0.00	0.00	0.00	₹0.00	₹0.00	0d	0d	0d



Actual Level of Effort
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Baseline Milestone
Milestone
summary

TASK filter: All Activities

O/C

AECOM | PADECO | dar al-handasah shair and partners | TY·LIN INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Ref No: MTHL/GC/MMRDA/LT/QPR- 1093 **/2019** **6th December 2019**

To,
The Chief Engineer
Engineering Division
Mumbai Metropolitan Regional Development Authority (MMRDA)
2nd Floor, New MMRDA Building,
Plot No R-06 & R-12, 'E' Block
Bandra Kurla Complex, Bandra (E),
Mumbai, Maharashtra, India 400051

Sub: General Consultancy services for Mumbai Trans Harbour Link (MTHL) project -
Submission of Quarterly Progress Report (QPR) No. 10 for July – Sept. 2019

Ref: MTHL/GC/MMRDA/LT/QPR – 1075/ 2019 Dated 26th November 2019

Dear Sir,

With reference to the above subject, please find enclosed 1 hard copy of the corrected Quarterly Progress Report (QPR) No. 10 for the period of July to September 2019. You may forward the same to JICA at your earliest convenience.

Thanking you,

Yours faithfully,

6 December 219

P.S.

Dr. S H Robin Sham, CBE
(BSc, PhD, DIC, FCGI, FRSA, CEng, FICE, FIStructE, FHKIE)
The Engineer
General Consultant (MTHL)

Encl: 1 copy of Quarterly Progress Report No. 10 (July - September 2019)

CC: Superintendent Engineer – MMRDA - Mr. Sakhalkar
Executive Engineer – MMRDA – Mr. Bhisikar
Executive Engineer – MMRDA – Mr. Vishal Jambhale
Executive Engineer – MMRDA – Mr. Deshpande

एम एम आर डी ए
MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.10

(From 1st July 2019 to 30th September 2019)

Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 10
1st July 2019 to 30th September 2019
Loan Agreement No. ID-P255 (Tranche–I)

ORGANIZATION INFORMATION

Borrower	**Mumbai Metropolitan Region Development Authority**	
	Person in Charge	**Metropolitan Commissioner, MMRDA**
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block, Bandra (East), Mumbai - 400051 Phone: +91-22-26594000 Fax No:+91-22-2659 1264
Executing Agency	**Mumbai Trans Harbour Link Project Implementation Unit**	
	Headed by:	Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block Bandra (East), Mumbai - 400 051 Phone: +91-22-2659 4034 Fax No: +91-22-2659 4179

Details of JICA Loan

Source of Finance	JICA ODA Loan Portion:	238,572 million Japanese YEN (JPY)
	Tranche-I:	144,795 million Japanese YEN (JPY) (Loan Agreement signed on 31st March 2017)
	Tranche-II:	66,909 Million Japanese YEN (JPY) (Loan Agreement to be signed)
Terms and Conditions of JICA ODA Loan (Tranche-1)	Interest Rate:	0.10533% (LIBOR-0.00533% + SPREAD RATE -0.1000%) from 20th March 2019 to 19th September 2019.
	Repayment Period:	30 years, including 10 years of grace period.

DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME	Mumbai Trans Harbour Link Project		
DOC NO.	10	DATE OF ISSUE	13/11/2019
DOC TITLE	Quarterly Progress Report No. 10		

REV No.	DATE OF ISSUE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY
R0	05/07/2017	Quarterly Progress Report No. 1 (Apr-Jun 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/01/2018	Quarterly Progress Report No. 3 (Oct-Dec 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/04/2018	Quarterly Progress Report No. 4 (Jan-Mar 18)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	24/07/2018	Quarterly Progress Report No. 5 (Apr-Jun 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R0	10/10/2018	Quarterly Progress Report No. 6 (Jul-Sep 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R1	08/02/2019	Quarterly Progress Report No. 7 (Oct-Dec 18)	Prashant B	J Senthil/ Dr T K Sundaram	Dr Robin Sham
R0	05/04/2019	Quarterly Progress Report No. 8 (Jan-Mar 19)	Prashant B	J Senthil	V. D. Sharma/ Dr Robin Sham
R0	18/09/2019	Quarterly Progress Report No. 9 (Apr-Jun 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	13/11/2019	Quarterly Progress Report No. 10 (Jul-Sep 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham

Contents

1.0 PROJECT DESCRIPTION

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.

Actual *(P/R, PCR)*

There is no change in the Project Objective.

1.2 Necessity of the Project

The Project is consistent with the development policy, sector plan, national/regional development plans and demand of target group of the recipient country.

Benefits from MTHL Project

- Saving in travel time 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.
- Improvement in environment 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.

Necessity of the Project

1. Although the urbanization in India has been rapidly progressing, infrastructure development in the urban areas has not caught up its progress. Particularly, the traffic congestion in the urban areas due to a lack of road network hinders the economic development. Thus, Government of India (GOI) places transport and connectivity as one of the “Growth Enablers” and plans to enhance road network in the “Three Year Acton Agenda 2017-2018 to 2019-20 (NITI Aayog)”.
2. Mumbai Metropolitan Region, which includes Mumbai and Navi Mumbai, has about 18.4 million people in population as of 2011 (Census 2011) and the population density reaches 20,694 people per square km in the center of Mumbai, which is one of the most overpopulated and high-density cities in the world.
3. Mumbai, the narrow stretch of land that has traditionally 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.

4. 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 spacious area for development, such as a 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.

5. Furthermore, a lack of connectivity 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 expressway and main hinterland.

6. 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.

   The MTHL is proposed to be developed as an expressway link comprising of a dual three-lane main carriageway bridge connecting Sewri in Mumbai to Chirle in Navi Mumbai. When completed, MTHL will reduce the distance between Mumbai and Navi Mumbai and will help save approximately an hour in travel time. Also, development of Navi Mumbai along with the imminent construction of the Navi Mumbai airport will lead to increased traffic between Mumbai and Navi Mumbai. Consequently, the project is envisaged to; improving accessibility between Mumbai and Navi Mumbai, accelerating growth of Navi Mumbai, smooth traffic flow from Navi Mumbai airport to Mumbai, accelerating economic development of Navi Mumbai and surrounding regions, greater economic integration of Mumbai with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug, and decongestion of Mumbai and dispersal of population to Navi Mumbai region and beyond.

7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and 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 to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.

8. Necessity of the Project: - 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)*

There is no change in the Necessity of the Project preamble.

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

1. At the opening year 2022, the daily traffic on the main bridge is expected to be 39,300 PCU. The traffic is projected to increase up to 103,900 by 2032 and up to 145,500 by the year 2042. The daily breakdown by vehicle class on the main bridge link is presented in the Table 1.3.1 below:

Table 1.3.1 Demand Projections Over the Period

Vehicle Type	Between Sewri Interchange and Shivaji Nager Interchange			Between Shivaji Nager Interchange and Chirle Interchange		
	2022	2032	2042	2022	2032	2042
Car	24,100	66,400	94,100	4,900	21,300	43,300
Taxi	2700	14,100	20,200	100	400	2,300
Bus	2,700	3,700	3,700	2,700	3,700	3,700
LCV	2,200	4,100	5,600	700	1,300	1,800
HCV	3,000	6,500	8,100	1,000	2,000	2,200
MAV	4,600	9,100	13,800	400	900	1,700
Total	**39,300**	**103,900**	**145,500**	**9,800**	**29,600**	**55,000**

LCV: Light Commercial Vehicle; HCV: Heavy Commercial Vehicle; MAV: Multi Axle Vehicle

2. At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.

3. 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

4. The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.

5. As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.

6. When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).

7. The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.

8. The major portion of MTHL structure is on sea and partly towards ends is on land with

different type and with different span, viz., PC box girder with 50 m spans which is typically applied on marine viaduct since, it is economical, easy to construct and maintain.

9. On the land portion, the PC box girder having span of generally 30m is used.
10. As far as the location in which long span (150-180 m) is required to cross significant obstacles, such as navigation channels, pipelines and creeks, the steel box girder bridge with steel deck is proposed with large block erection method to shorten the construction period.
11. The project is coded with three lanes of traffic in each direction. The reference toll is presented in the Table 1.3.2 below for each vehicle class in Year 2022 (based on 2015 monetary value reflecting price escalation).

Table 1.3.2: Base Toll Rates (Rs) for different class of vehicles between Interchanges

Vehicle Type	Sewri to Shivaji Nagar	Shivaji Nagar to 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) and **Toll Management System (TMS)**

12. The Toll Management System will be implemented in MTHL to collect tolls from all road users of MTHL. Two types of toll collection method will be adopted; Electronic Toll Collection (ETC) and Manual (paying by cash).
13. The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and Manual system shall be installed to ETC lanes for backup to be able to cope at the time of the trouble of ETC equipment failure.

Traffic management System

14. 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 Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
15. 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.
16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual *(P/R, PCR)*

There is no change in the Rationale of the Project Design.

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

Refer Table 2.1.1 and 2.1.2 for details on Scope of the Project.

Table 2.1.1 Comparison of Original and Actual location

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

Table 2.1.2 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)	• 1 Interchange (Sewri) • 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) • Road Furniture and roadside 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+187 (7.80 km)	• 1 Interchange (Shivaji Nagar) • 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) • Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers)	*(P/R and PCR)* Actual: *No View Barriers*
Package-3 Ch 18+187-21+800 (3.61 km)	• 2 Interchanges (State Highway-54, National Highway-4B) • 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 Rail-over-Bridges (ROB) • Viaduct Substructure (RC Concrete Structure) • Viaduct Foundation (Bored piles) • Cutting Section (6-lane with Slope Protection) • Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers)	*(P/R and PCR)* Actual: *No* Noise Barriers & *View Barriers*

Items	Original	Actual
Package-4 ITS (Intelligent Transport System)	• Administrative Buildings • Toll Booths (1 for main alignment and each on and off rumps 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-Classifier (ATCC), Variable Message Sign (VMS)) • Highway Lighting (Whole sections Low-positioned lighting for some sections) • Electrical Powering System including HV/ LV Ring Network across the Bridge.	*(P/R and PCR)*
Consulting Services	• Tender Assistance • Construction Supervision • Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP).	*(P/R and PCR)*

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

Table 2-2-1 Comparison of Original and Actual Schedule

Items	Original	Status *(P/R and PCR)* as on 30th September 2019
1) Completion of Land Acquisition and Resettlement	March 2019	December 2019
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	March 2019 – August 2019
b) Main Bidding	June 2019 – September 2020	September 2019 – December 2019
Package-5 (Geotechnical Investigation)		
a) Main Bidding	March-2016	March-2016
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018 – September 2022
Package-3	March 2018 – September 2021	March 2018 – September 2021
Package-4	October 2020 – September 2022	January 2020 – June 2022
Package-5 (Geotechnical Investigation)	March 2016– June 2016	March 2016– June 2016
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2024
Package-3	October 2021 – September 2023	October 2021 – September 2023
6) Commencement of Toll Collection	September -2022	September -2022
7) Selection of O&M Organization	October 2020 – September 2021	October 2021 – September 2022

Attachment: Package wise updated construction schedules at the end of third quarter (July-September 2019).

2.2.2 Reasons for changes of the schedule and their effects to the Project

(P/R and PCR)
No change in the Implementation Schedule except the selection of O&M Organization timeline.

2.3 Project Cost

2.3.1.a Comparison of Originally Planned and Actually Incurred Cost BY ITEM

Table 2.3.1.a.(i) Originally Planned Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	34,398	34,398	0	45,376	45,376	0	105,713	105,713	0
Package-2	26,513	26,513	0	32,617	32,617	0	77,774	77,774	0
Package-3	759	759	0	8,276	8,276	0	13,766	13,766	0
Package-4 (ITS)	0	0	0	1,444	1,444	0	2,269	2,269	0
Package-5 (Geotechnical Investigation)	0	0	0	166	0	166	260	0	260
Dispute Boards (Package-1, 2, 3 & 4)	63	63	0	45	45	0	134	134	0
Price Escalation	2,251	2,251	0	7,133	7,133	0	13,460	13,460	0
Physical Contingency	6,398	6,398	0	9,506	9,489	17	21,338	21,312	26
Consulting Services	1,650	1,650	0	1,587	1,587	0	4,145	4,145	0
Land Acquisition*	0	0	0	11,293	0	11,293	17,748	0	17,748
Administration Cost	0	0	0	4,898	0	4,898	7,698	0	7,698
GST	0	0	0	18,238	0	18,238	28,663	0	28,663
Import Tax	0	0	0	13,435	0	13,435	21,114	0	21,114
Interest during construction	2,942	0	2,942	0	0	0	2,942	0	2,942
Front End Fee	477	0	477	0	0	0	477	0	477
Total	**75,451**	**72,032**	**3,419**	**154,013**	**105,967**	**48,046**	**317,501**	**238,572**	**78,929**

(Note) 1. Exchange Rate: US$1=Rs. 71.9, US$1=JPY 113.0, Rs.1 = JPY 1.57
2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.
(b) Local Currency Portion: 4.13% p.a.
3. Physical Contingency: 10%
4. Base Year for Cost Estimation: December 2018
* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

Table 2.3.1.a.(ii) Actually Incurred Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	4,695	4,695	-	11,186	11,186		22,291	22,291	
Package-2	3,705	3,705	-	8,275	8,275		15,712	15,712	
Package-3	72	72	-	1,356	1,356		2,203	2,203	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	308		308
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			4	4		6	6	-
Physical Contingency	-			-			-		-
Consulting Services	253	253		299	299		870	870	
Land Acquisition*	-			5,268		5,268	8,271		8,271
Administration Cost	-			1,513		1,513	2,375		2,375
GST	-			2,829		2,829	4,442		4,442
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	**8,725**	**8,725**	**-**	**30,926**	**21,119**	**9,806**	**56,478**	**41,081**	**15,395**

(Note) 1. Exchange Rate: Rs.1 = JPY 1.57 for MMRDA Portion only
2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.
(b) Local Currency Portion: 4.13% p.a.
3. Physical Contingency: 10%
4. Base Year for Cost Estimation: December 2018
* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

2.3.1.b Comparison of Originally Planned and Actually Incurred Cost BY YEAR

Table 2.3.1.b.(i) Originally Planned Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	12,679	10,134	0	0	10,134	2,545
FY 2018	30,771	22,707	0	0	22,707	8,064
FY 2019	72,379	56,816	0	0	56,816	15,563
FY 2020	92,944	55,138	16,040	0	71,178	21,765
FY 2021	66,397	0	50,869	0	50,869	15,527
FY 2022	27,683	0	0	20,113	20,113	7,570
FY 2023	3,723	0	0	565	565	3,158
FY 2024	10,925	0	0	6,189	6,189	4,735
Total	**317,501**	**144,795**	**66,909**	**26,868**	**238,571**	**78,929**

Table 2.3.1.b.(ii) Actually Incurred Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	15,926	10,155			10,155	5,771
FY 2020						
FY 2021						
FY 2022						
FY 2023						
FY 2024						
Total	**56,477**	**41,082**	**-**	**-**	**41,082**	**15,395**

(Note) 1. Exchange Rate used: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Fiscal Year starting from 1st April and ending on 31st March.

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**.**

(P/R and PCR) There is No major gap between the original and actual cost.

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

Mumbai Metropolitan Region Development Authority (MMRDA) was established on 26thJanuary 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 implementation. After completion of the Project, MMRDA continues to be responsible for the efficient operation and maintenance of the Project.

The GoM appointed MMRDA as the implementing/ executing agency of MTHL vide Government Resolution dated 4th February 2009 and further the ownership of MTHL would be with MMRDA vide Government Resolution dated 8th June 2011.

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

Procurement

MMRDA shall have to adopt the JICA's Standard Biding 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 changed: (*P/R and PCR*)

There is no change made in original Organisation Set-up & Implementation methods. Refer Annexure III Organisation Chart.

2.4.2 Contractor(s)/ Supplier(s), and Consultant(s) and their Performance:

2.4.2.1 Procurement & Consultant

Table 2.4.2 Procurement of Contractor(s)/ Supplier(s) and Consultant(s)

Contract Package	Selection Method		
	Original: *(P/M)*		**Actual:** *(P/R and PCR)*
Construction Works			
1	Package-1: From CH 0+000 - To CH 10+380 (10.38 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
2	Package-2: From CH 10+380 - To CH 18+187 (7.80 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
3	Package-3: From CH 18+187 - To CH 21+800 (3.61 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
4	Package-4: To install ITS (Toll Management System and Highway Traffic Management System)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
5	Package-5: To conduct the geotechnical investigation	Local Competitive Bidding Process	No Change
Consulting Services			
1	Consulting Service for Supervision	Short List Method (QCBS)	No Change

2.4.2.2 Performance

Consultant's Progress:

July 2019:

1 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-015 (80% ad-hoc) and IPC-014 (detailed verification)
ii) Package-2: IPC-012 (80% ad-hoc) and IPC-011 (detailed verification)
iii) Package-3: IPC-007 (80% ad-hoc) and IPC-006 (detailed verification))

2 GC has provided conditional "NONO" for Wind Tunnel Test Results on 30th July 2019 for both the Package-1 & Package-2.

August 2019:

1 GC conducted Monthly Progress Review Meeting with all the three Package Contractors on 2nd August 2019 to review the status of Design and Physical progress of the project.

2 Environmental Monitoring Committee (EMC) and Environmental Cell (EC) conducted meetings on 22nd August 2019 at MMRDA office to discuss the environmental monitoring for MTHL project.

3 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-016 (80% ad-hoc) and IPC-015 (detailed verification)
ii) Package-2: IPC-013 (80% ad-hoc) and IPC-012 (detailed verification)
iii) Package-3: IPC-008 (80% ad-hoc) and IPC-007 (detailed verification)

September 2019:

1 GC conducted Monthly Progress Review Meeting with the Package-1 Contractor on 19th September 2019 and with the Package-2 & the Package-3 Contractors on 25th September 2019 to review the status of Design and Construction progress of the project.

2 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-017 (80% ad-hoc) and IPC-016 (detailed verification)
ii) Package-2: IPC-014 (80% ad-hoc) and IPC-013 (detailed verification)
iii) Package-3: IPC-009 (80% ad-hoc) and IPC-008 (detailed verification)

Contractor's Progress:

Package-1 Physical Progress till 30th September 2019

S. No	Activity	Total Scope	Unit	Cumulative Work done Achieved	% of Work done Progress	Remarks
1	**Temporary Access Bridge**					
1.1	Piles	626	No.	542	87%	
1.2	Bridge Deck	2953	Rmt	1923	65%	
2	**Permanent Bridge Works - Land/ Interchange Zone**					
2.1	Piles	517	No.	141	27.27%	
2.2	Pile Caps	165	No.	10	6.06%	
2.3	Piers	228	No.	4	1.75%	
2.4	Pier Caps	228	No.	0	0%	
3	**Permanent Bridge Works - Intertidal Zone**					
3.1	Piles	236	No.	119	50.42%	
3.2	Pile Caps	57	No.	13	22.80%	
3.3	Piers	113	No.	18	15.92%	
3.4	Pier Caps	113	No.	0	0%	
4	**Permanent Bridge Works - Marine Zone**					
4.1	Piles	484	No.	67	13.84%	
4.2	Pile Caps	100	No.	3	3%	
4.3	Piers	198	No.	0	0%	
4.4	Pier Caps	198	No.	0	0%	
5	**Precast Segments**					
5.1	Segment Casting – Interchange	1785	No.	0	0%	
5.2	Segment Casting - Intertidal	1978	No.	0	0%	
5.3	Segment Casting - Marine	2946	No.	22	0.74%	
5.4	**Segment Casting - Total**	**6709**	**No.**	**22**	**0.32%**	
6	**Permanent Bridge Works - Total**					
6.1	**Piles**	**1237**	**No.**	**327**	**26.43%**	
6.2	**Pile Caps**	**322**	**No.**	**26**	**8.07%**	
6.3	**Piers**	**539**	**No.**	**22**	**4.08%**	

Package-2 Physical Progress till 30th September 2019

S. No	Activity	Total Scope	Unit	Cumulative Work done Achieved	% of Work done Progress	Remarks
1	**Temporary Access Bridge**					
1.1	Piles	967	No.	670	69.28%	Scope has been amended due to revised design
1.2	Bridge Deck	2682	Rmt	1482	55.25%	
2	**Permanent Bridge Works - Marine Zone**					
2.1	Piles	514	No.	45	8.75%	Scope has been amended due to revised design
2.2	Pile Caps	122	No.	0	0%	
2.3	Piers	126	No.	0	0%	
3	**Permanent Bridge Works - Intertidal Zone**					
3.1	Piles	290	No.	37	12.75%	Scope has been amended due to revised design
3.2	Pile Caps	70	No.	1	1.42%	Scope has been amended due to revised design
3.3	Piers	72	No.	0	0%	
4	**Permanent Bridge Works – Land/ Interchange Zone**					
4.1	**Open Foundations**	**113**	**No.**	**15**	**13.27%**	Scope has been amended due to revised design
4.2	**Piers**	**113**	**No.**	**0**	**0%**	
5	**Permanent Bridge Works - Total**					
5.1	**Piles**	**804**	**No.**	**82**	**10.19%**	
5.2	**Pile Caps**	**192**	**No.**	**1**	**0.52%**	
5.3	**Piers**	**311**	**No.**	**2**	**0.64%**	

Package-3 Physical Progress till 30th September 2019

S. No	Activity	Total Scope	Unit	Cumulative Work done Achieved	% of Work done Progress	Remarks
1	**Permanent Foundation Works**					
1.1	**Open Foundations**	**191**	**No.**	**39**	**20.41%**	Scope has been amended due to revised design
1.2	**Piers**	**191**	**No.**	**2**	**1.04%**	
2	**Precast Segments**					
2.1	**Segment Casting**	**896**	**No.**	**4**	**0.44%**	

Package-4 (ITS)

MMRDA has invited "Request for Pre-Qualification" from prospective bidders on 30th August 2019.

Health & Safety and Environment (HSE)

The HSE Plans have been submitted by the respective construction agencies for the Packages which is being monitored by the GC on a regular basis.

Package-1 Safety Report

Sr. No	Description	From July to September 2019	Cumulative
1	Total Man Hours Since Inception	2536632	7843236
2	Number of Man-Hours (Accident Free Man-Hours)	1873944	1873944
3	Number of Man-Days	317079	980404
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	1	1
6	Number of Near Miss Incidents	2	15
7	Number of First Aid Cases	18	56
8	Number of Dangerous Occurrences	0	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	448	448
11	Number of Man-Days Lost	53	53
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	1
13	Number of Inspections done for Offices & Sites	61	146
14	Number of Training/ Induction done for Offices & Sites	32	122
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	6210	1156
16	Details of Safety Committee meetings	3	16
17	No. of toolbox talks	3821	12489
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	2262	7852
20	No. of Safety Walk down	13	113
21	No. of Safety Inductions completed	2262	7852

Package-2 Safety Report

Sr. No	Description	From July to September 2019	Cumulative
1	Total Man Hours Since Inception	977339	3463183
2	Number of Man-Hours (Accident Free Man-Hours)	977339	1360634
3	Number of Man-Days	88837	
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	2
6	Number of Near Miss Incidents	3	15
7	Number of First Aid Cases	4	32
8	Number of Dangerous Occurrences	1	3
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	0	836
11	Number of Man-Days Lost	0	76
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
13	Number of Inspections done for Offices & Sites	76	412
14	Number of Training/ Induction done for Offices & Sites	48	356
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	3006	606
16	Details of Safety Committee meetings	3	17
17	No. of toolbox talks	542	1656
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	855	3807
20	No. of Safety Walk down	4	47
21	No. of Safety Inductions completed	871	3615

Package-3 Safety Report

Sr. No	Description	From July to September 2019	Cumulative
1	Total Man Hours Since Inception	209726	594471
2	Number of Man-Hours (Accident Free Man-Hours)	209726	594471
3	Number of Man-Days	26216	74309
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	0
6	Number of Near Miss Incidents	0	2
7	Number of First Aid Cases	10	23
8	Number of Dangerous Occurrences	0	0
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	0	0
11	Number of Man-Days Lost	0	0
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
13	Number of Inspections done for Offices & Sites	18	96
14	Number of Training/ Induction done for Offices & Sites	26	80
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	622	1890
16	Details of Safety Committee meetings	3	14
17	No. of toolbox talks	591	1563
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	326	1447
20	No. of Safety Walk down	12	53
21	No. of Safety Inductions completed	334	1494

Please refer **Attachment 5 - Site Progress Photos** for the development of the project.

3.0 BENEFITS 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 (Measures To Be Adopted/ Points Which Require Special Attention)

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)
3.2.1 General Issues **1. Toll Arrangement/ Toll Rate** Fixed toll rate as per 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 proposes to appoint separate agencies for Operation & Maintenance of the bridge and for Toll Management System. Both the agencies for O & M and Toll Management System may be appointed through open tendering process. Overall monitoring of the two agencies would be done by MMRDA in house through a separate cell which could be constituted for the purpose. MMRDA has confirmed to allocate adequate budget for engaging the Contractors.	*(P/R and PCR)* Appropriate Tolling Policy/ Rates will be finalized by December 2020. Single Operation and Maintenance Contractor will be appointed by December 2020.
3.2.2 Environmental and Social Consideration **a. CRZ Clearance** i. Supplemental EIA has been approved by MMRDA and disclosed on the website of JICA. Supplemental EIA report has been disclosed also on the website of MMRDA. ii. Furthermore, renewed CRZ Clearance has been obtained in January 2016. iii. In accordance with the conditions for	*(P/R and PCR)* • MMRDA has disclosed Supplemental EIA & SIA on MMRDA website. • The renewed CRZ clearance was granted on 25/1/2016 from MoEF&CC and the approval conditions have been imposed on the Contractors as the Employer's requirements. MMRDA has actively monitored the compliances of the approval conditions and maintains throughout the construction phase. • MMRDA appointed Mangroves & Marine

CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.	Biodiversity Foundation for bird monitoring and implementation of Flamingos and bird monitoring program for the MTHL project during the construction as well as the long-term monitoring after the construction. • Rs 91.42 Crore has been transferred to Mangroves & Marine Biodiversity Foundation, Mumbai for the development & conservation of mangrove area and its afforestation. Such funds will be managed by the mangrove foundation of Maharashtra State. • As per the renewed CRZ clearance condition, IIT Mumbai has been appointed for the DPR study to develop a Mahul creek Effluent Treatment Plant (ETP). Rs 4.98 Crore was secured for IIT services. Draft DPR was submitted by IIT and has been under review by the "Environmental committee (EC)" of the MTHL CRZ clearance.

b. Required Permits

The Permits to be obtained by MMRDA/ Contractors and the present status is given in the following Table.

Table 3.2.2 Present Status of some Important Permits

Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
Mangrove Cutting	Hon. Bombay High Court	MMRDA/ Contractor	Approval received from Hon. Bombay High Court on 28th November 2016	Mangrove cutting operation was completed with full compliance and as of now, no further follow up work is required.
Tree Cutting /Transplantation	Respective Tree Authorities	Contractor for respective Packages	-	**Pkg-1:** Tree Cutting/ Transplantation permission is awaited from the Tree Authority. **Pkg-2:** Tree Cutting/ Transplantation permission obtained & completed. **Pkg-3:** Forest Department has issued a concurrence on 19/05/2019. CIDCO's permission for Tree Cutting/ Transplantation is awaited.
Consent to Establish	Maharashtra Pollution Control Board	Contractor for respective Packages	Pkg-1-18.07.2018 Pkg-2-16.08.2018 Pkg-3-29.05.2019	

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 (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.	Cell is established by MMRDA (Annexure III, Organization chart)
2. Rehabilitation and Land Acquisition Issues **a. Affected Area and Population** Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.09 ha of land will be handed over by CIDCO.	**Sewri:** Involuntary resettlement in Sewri section has been further validated by Social Development Cell of MMRDA. Out of 298 Project Affected Households (PAHs) have given consents as follows: • 165 PAHs Kanjurmarg for residential • 25 PAHs Kanjurmarg for commercial • 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial • 1 PAHs (commercial to residential) for Bhakti Park • 100 PAHs HDIL Kurla for residential **Navi Mumbai:** CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 101.95 ha has been handed over by CIDCO to MMRDA. CIDCO has yet to acquire 6.14 Ha with the help of Collector, Raigad.
b. Entitlement Policy MMRDA prepared the entitlement matrix for resettlement of non-title holders 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)**.	There have been no changes during the enforcement. As per the **Attachment 2-5** of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
c. Compensation to Project affected Fishermen Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen who are 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.	Updated **Attachments 2-8 and 2-10** are enclosed in the report.
d. Implementation Schedule The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per **Attachment 2-10.**	Updated **Attachment 2-10** is enclosed in the report.
e. Grievance Redressal Mechanism Grievance Redressal 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.	**Sewri:** FLGRC (Field Level Grievance Redressal Committee) and SLGRC (Senior Level Grievance Redressal Committee) were set as per the RAP and in operation. Compensation Committee has been constituted to address the issues of Compensation to Lease Holders at Sewri. **Fishermen:** GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.
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.	Internal Monitoring updates are mentioned in **Attachment 2-8.**
g. Qualitative Independent Evaluation	

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
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.	Updated **Attachment 2-10** is enclosed in the report.
h. RAP Implementation Budget The amount of estimated resettlement and compensation budget is Rs.906.26 Cr 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.	As updated in Aid Memoire dated 14/12/18, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr.
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.	EMP will be updated, if required, in due course of construction activities/progress.
j. Environmental Monitoring 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	Updated Environmental Monitoring Plan with package wise updated cost is reported in **Attachment 2-3.** Environmental Monitoring Results during the construction phase are reported in **Attachment 2-4**.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
Monitoring 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.	
k. Long Term Bird Monitoring 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 entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. • Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai 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 (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
Average Annual Daily Traffic (PCU/ day)	-	47,400
Daily Average Travel Time (min) * 1	61 min	15.8 min
Number of Users (Persons/ year) * 2	-	46,077,504
Cargo Volume (tons/ year) * 3	-	13,511,759

*1 Section on Sewri – Chirle
*2 Assumptions: average passengers of car and taxi (2.6 persons), bus (37.2 persons) based on JICA study. Number of passengers of LCV, HCV and MAV is assumed as 1 person each.
*3 Assumptions: the maximum capacity of respective vehicle (LCV: 1 ton, HCV and MAV: 15 tons) is used for estimation.

EIRR	**Original:** 15.4% Cost: Project cost (excluding Price Escalation, Tax and Duties and Administration cost) O&M cost, Land Acquisition Benefit: Travel Time cost and Vehicle Operation cost Project Life: 32 Years	**Actual:** *(PCR)* ____% Cost: Benefit: Project Life: **Attachment(s):** **Supporting data for computing EIRR**
FIRR	**Original:** 1.5% Cost: Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 32 Years	**Actual:** *(PCR)* ____%

3.5 Monitoring Plan for the indicators

Monitoring Methods, Section(s)/ department(s) in charge of monitoring, frequency, the term and so forth are given below:

Original: *(P/M and PCR)*

Monitoring Organization

PIU shall be In-Charge of Monitoring activities 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 hereto as per **Annex I**; 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 project 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 after completion of the Project, in the form of Project Status Report (PSR) attached hereto as per **Annex I**.

Actual: *(P/R and PCR)*

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

This QPR No. 10 is submitted for a period of July to September 2019.

3.6 Achievement of the Project Objective

(PCR)

4.0 OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY)

4.1 O&M and Management

- Organization Chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc.)

Original: *(P/M)*

Operation & Maintenance, Toll Management and ITS

MMRDA proposes to engage two separate agencies for O&M and Toll Management System. Though MMRDA will not directly carry out O&M, the overall monitoring over the O&M agency will be the responsibility of MMRDA. O&M Budget will be allocated by MMRDA. O&M and increase in toll rate will be done in accordance with the NHAI's manuals such as "NHAI Works manuals".

Actual: *(PCR)*

4.2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project, as well as the annual O&M budget.

(PCR) This will be reported when the outcome of the above work study is available.

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

Please describe your evaluation on the overall outcome of the project.

(PCR)

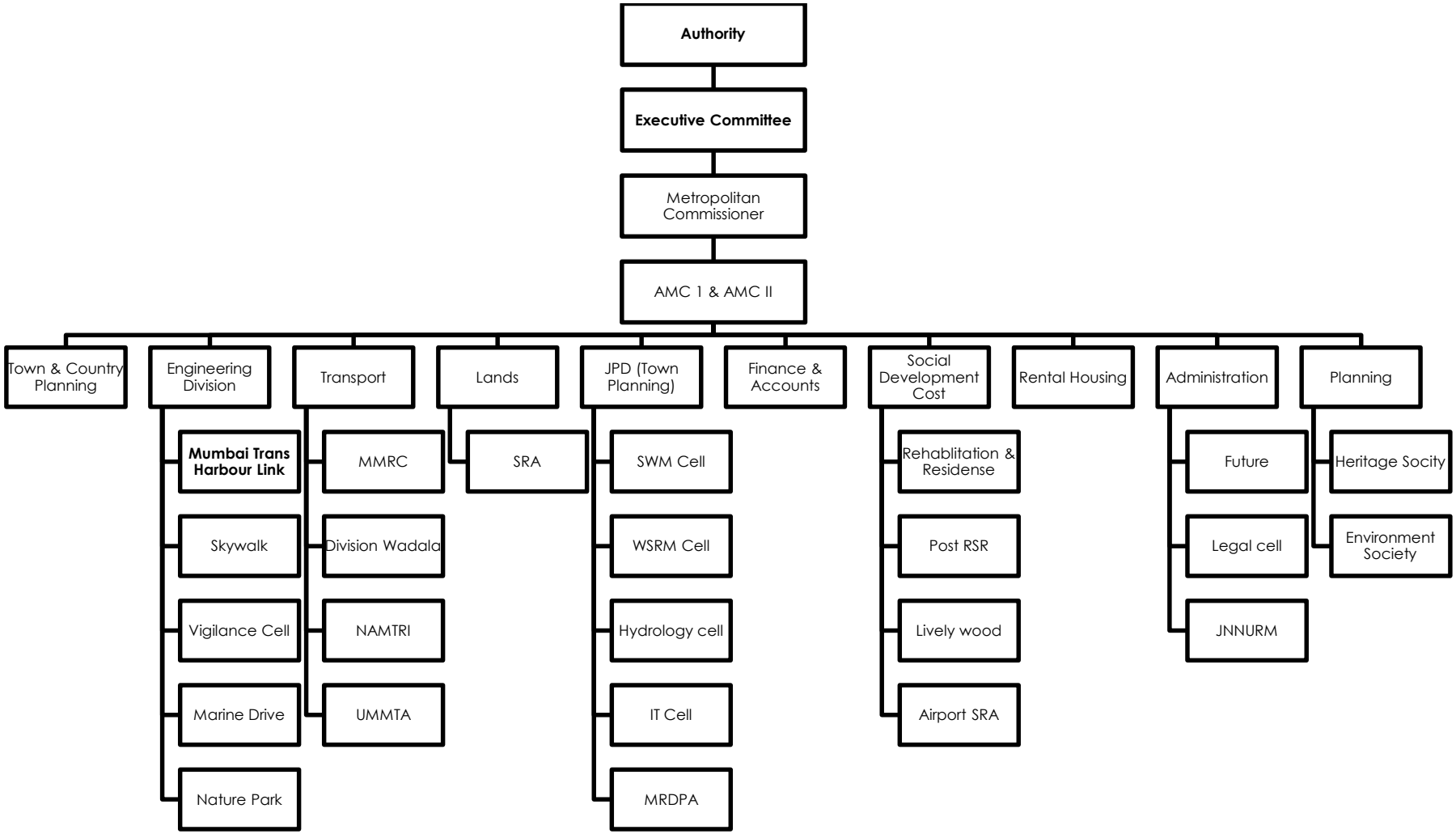
5.3 Lessons Learnt and Recommendations

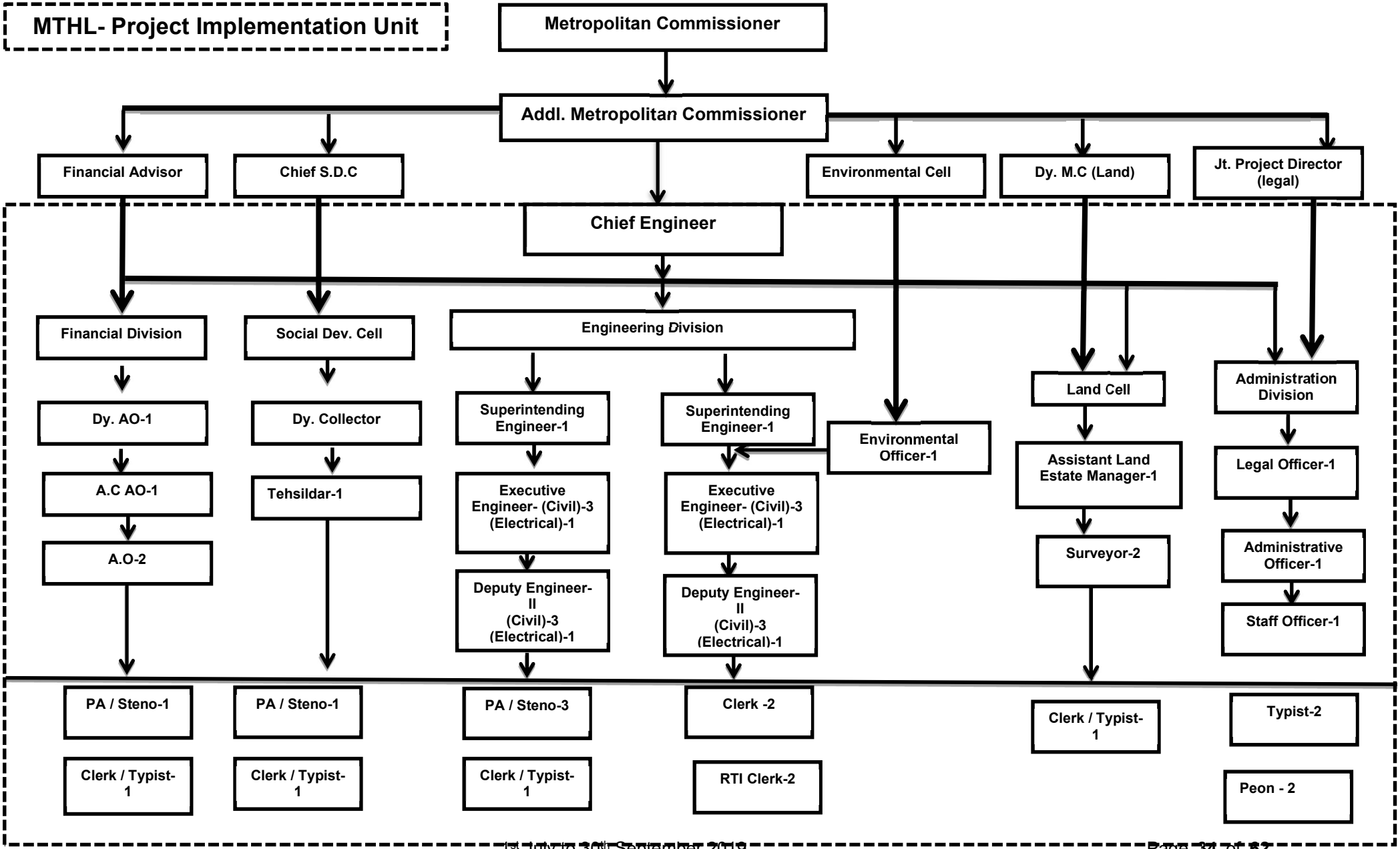
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart




MTHL- Project Implementation Unit
Metropolitan Commissioner
Addl. Metropolitan Commissioner
Financial Advisor
Chief S.D.C
Environmental Cell
Dy. M.C (Land)
Jt. Project Director (legal)
Chief Engineer
Financial Division
Social Dev. Cell
Engineering Division
Land Cell
Administration Division
Dy. AO-1
Dy. Collector
Superintending Engineer-1
Superintending Engineer-1
Environmental Officer-1
Assistant Land Estate Manager-1
Legal Officer-1
A.C AO-1
Tehsildar-1
Executive Engineer- (Civil)-3 (Electrical)-1
Executive Engineer- (Civil)-3 (Electrical)-1
Surveyor-2
Administrative Officer-1
A.O-2
Deputy Engineer-II (Civil)-3 (Electrical)-1
Deputy Engineer-II (Civil)-3 (Electrical)-1
Staff Officer-1
PA / Steno-1
PA / Steno-1
PA / Steno-3
Clerk -2
Clerk / Typist-1
Typist-2
Clerk / Typist-1
Clerk / Typist-1
Clerk / Typist-1
RTI Clerk-2
Peon - 2

Attachment 2- Environmental & Social Impacts Attachments

Attachment 2-3 - Environmental Monitoring Plan
Attachment 2-4 – Environmental Monitoring Result Reporting Form
Attachment 2-6 – MTHL Land Acquisition Status
Attachment 2-8 – RAP Internal Monitoring Form
Attachment 2-10 – Schedule of the RAP Implementation

Attachmemt 2-3

Updated Environmental Monitoring Plan with Packagewise Estimated Cost

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
Pollution	1	Air pollution	SO_2, NO_2, PM_{10}, $PM_{2.5}$, O_3, CO, (6 Items)	National Ambient Air Quality Standards, 2009	1. Sewri & Sewri bay area for package I	Fortnightly at all locations except 2 locations each near Batching plants	1,800,000	15,000,000	1,800,000	742,500	17,542,500	National Ambient Air Quality Standards (NAAQS) by Central Pollution Control Board (CPCB)	P1 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						(Standard for 24hrs: Industrial and Residential/ Ecological Sensitive area)	P 2 contractor Monitoring plan has been designed as per EIA of 2015
					3. Gavhan & Chirle for package III	Fortnightly only for 3 months (jan-2019 to Mar-2019). Then quarterly monitoring as per MOEF and CPCB norms						· SO_2: 80 / 80µg/m^3	P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
												· NO_2: 80 / 80µg/m^3	P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of biding. Later modifications suggested by GC were not accepted by P 2. P1 and P3 accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequecy would change after obtaining CTE.
												· PM_{10}: 100 / 100µg/m^3	
												· $PM_{2.5}$: 60 / 60µg/m^3	
												· O_3: 180 / 180µg/m^3	
												· CO: 0.4 / 0.4mg/m^3	
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	IS / AWWA	1. Sewri & Sewri bay area for package I	Quarterly	810,000	2,400,000	810,000	0	3,210,000	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Water Pollution not applicable for Pkg. 3
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						· pH : 6.5-9	
					3. Gavhan & Chirle for package III	Not applicable						· DO: 3 mg/l	
												· Turbidity: 30 NTU	
												· BOD: 5 mg/l	
												· O & G: 10 mg/l	
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	Volumetric	1. Sewri & Sewri bay area for package I	Daily	500,000	299,200,000	500,000	600,000	300,300,000		The cost of waste disposal for P1 includes C&D waste, Pile muck etc. from all areas like, interchange, intertidal and marine. The disposal location is at MCGM approved location Bhayandarpada, Thane.

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						**Municipal Soild Waste Management Rules, 2013** Generated waste shall be reused or disposed at designated site. Sites have been identified and the location for **Pkg. 1** is at Bhayandar Pada in Thane. For **Pkg. 2 & 3** is in Navi Mumbai at Pushpak Node nera "Teen Taki Junction" along the Amar Marg.	P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be
					3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.							
	4 and 8	Soil Contamination/ sedimentation	Heavy Metals & Oil & Grease (5-10 items shall be selected from Soil pollution standards)	IS / Methods Manual Soil Testing in India by Department of Agriculture and Cooperation, January 2011	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF)	
					2. Nhava temporary bridge & casting yard in Gavhan for package II							· Cd: 0.01mg/l	
					3. Gavhan & Chirle for package III	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only						· Lead: 0.01mg/l · Chromium (VI): 0.05mg/l · Arsenic: 0.01mg/l · T-Mercury: 0.0005mg/l · Copper: 125mg/kg (some items shall be selected from totally 25 standards items)	
	5	Noise and vibration	Ambient and road side noise (dB(A)L_{Aeq})	IS Standard	1. Sewri & Sewri bay area for package I	Fortnightly	150,000	54,000	150,000	369,000	573,000	**-Construction Noise; 85dB(A)**	
					2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year						**-Ambient Noise Standards in India (dB (A) $_{Leq}$)**	
					3. Gavhan & Chirle for package III	Fortnightly						1.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr) 3.Residential Area: Day Time: 55 (6-22hr) Night Time: 45 (22-6hr) 4.Silence Zone Day Time: 50 (6-22hr) Night Time: 40 (22-6hr)	
			Vibration (dB L10 or mm/sec)		1 Location Gavan area for package III	Half yearly	75,000	0	75,000	400,000	475,000	**- Construction vibration 75dB** **-Vibration Standards roadside** 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr)	Not applicable for Pkg. 1
	9 and 10	Protected Area /Ecosystem	1.Monitoring of mudflat conditions including fauna-flora	Ocular inspection and quantitative survey	Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	6,500,000	7,200,000	6,500,000	0	13,700,000		Not applicable for Pkg. 3
			2. Monitoring of Cutting Tree and replantation/		Along MTHL alignment and mangrove replant area for package II	4 Times / Year						Significant impacts are not caused by the project	
			transplanting area	1-1. Fauna-Flora	Not applicable for Package III								
			3.Monitoring of Mangrove Plantation area appointed by MoEF	Line-Point census and record number and appeared species								**Note)**	

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
Natural environment			4. Monitoring of sedimentation soil and ecological parameter (18items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1)Netprimary productivitye, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO_2)	1-2: Mangrove density and community survey								**Detailed monitoring plan will be setup during basic design stage**	
				1-3: Benthos Survey									
				2-1: Cutting trees confirmation								Standard for Soil; Supplemental EIA Table 6.1.15	
				3-1: Mangrove survey in the replanted area								Standard for Ecological Parameter:	
												· Netprimary Productivity	
												<1,500 mgC/m3/day at surface	
												· Chlorophyll-a	
												<4mg/m3	
												· Phosphate: 0.1-90µg/l	
												· Nitrate: 1.0-500µg/l	
												· Nitrite: <125µg/l	
												· Particulate Organic Carbon: 10-100mg/m^3	
												· SiO2: 10-5,000µg/l	
	11	Hydrology	Flooding situation	Flood level measurement during high precipitation periods	Not applicable for Package I		350,000	0	350,000	0	350,000	Project activities and structures does not cause flooding and impacts on tidal conditions	Not applicable for Pkg. 1 & 3
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year							
					Not applicable for Package III								
	12	Topography and Geology	Conditions in embankment area	Visual survey about Stability of embankment	Not applicable for Package I		115,000	0	115,000	0	115,000	Embankment shall be stabilized without any landslide and cracks	Not applicable for Pkg. 1 & 3
					Interchange in Shivaji Nagar for Package II	4 Times / Year							
					Not applicable for Package								
Social environment	13	Local economy such as employment and livelihood			Affected area		As per Actuals						
	14	Local conflict of interests	Construction worker's township	Confirmation of workers list from contractor	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	2 Times / Year	125,000	0	125,000	0	125,000	Employment opportunity shall be provided fairly	
	15	Infectious diseases such as HIV/AIDS	Number of infected patient	Confirmation of health check list from contractor	2 Locations	4 times / year x 4.5 years	525,000	0	525,000	0	525,000	Infection disease rate shall not be caused by the project	
	16	Labour Environment	Construction worker's condition	Confirmation of safety devices and conditions via interviews	2 Location (camp site in Sewri and Shivaji Nagar) for Package II	2 times / year	500,000	0	500,000	0	500,000	"Building And Other Construction Workers (Regulation of Emloyment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	
Other	17	Accidents	Number of accidents	Confirmation of accidents list from local government and State Traffic Police Department	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	4 Times / Year	400,000	0	400,000	0	400,000	Any accidents are not caused by construction	
		Total					**8140500**	**325,354,000**	**12,000,000**	**2,211,500**	**339,565,500**		

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - July to September 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

Area	No.	Item	Parameter	Location	Frequency a year	Item and Stanadard	Monitoring Result: Location 1- Pkg 1	Location 2- Pkg 2	Location 3- Pkg 3	Location 4	Remark: - reasons why the data is exceeding standard - counter measures when the data is exceeding
Pollution	1	Air pollution	SO_2, NO_2, PM_{10}, $PM_{2.5}$	1. Sewri & Sewri bay area for package I	Quarterly monitoring ia conducted at all locations.	**National Ambient Air Quality Standards (NAAQS)**	**Sewri**	**Shivaji Nagar**	**Chirle**		
				2. Nhava temporary bridge & casting yard in	4 Times / Year	**(Standard for 24hrs: Industrial and Residential)**					
				3. Gavhan & Chirle for package III	From march -2019 onwards monitoring is conducted quarterly as per MOEF and CPCB norms	1. SO_2: 80µg/m^3	BDL (DL =5)	BDL	Refer to Remarks		BDL- Below Detectable Limit
						2. NO_2: 80µg/m^3	16	16			
						3. PM_{10}: 100µg/m^3	62	55			As per amended EMoP (Ref: L&T/ MMRDA/MTHL-P3/0241 dated 30.11.2018) After March Pkg -03 is
						4. $PM_{2.5}$: 60µg/m^3	17	15			Quarterly monitoring has been cancelled due to monsoon as per GC instruction
						5.CO:02mg/m3	1.2				
						6.VOCs	1.4				
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	**Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)**	**Zone I**	**Zone II**	**Zone III**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	1. pH : 6.5-9	7.7	6.9	….		
				3. Gavhan & Chirle for package III	Not applicable	2. DO: 3 mg/l	5.8	3.5	….		
						3. Turbidity: 30 NTU	76	8.7	….		NOT applicable For MTHL Package-03
						4. BOD: 5 mg/l	3.3	BDL	….		
						5. O & G: 10 mg/l	BDL (DL =2)				
						6.COD	22				
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	1. Sewri & Sewri bay area for package I	Daily	**Municipal Soild Waste Management Rules, 2013**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Chirle Camp Site**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	Generated waste soil (t) total	14168 m3	Total 1200 CuM Collected in jumbo bags and Disposed off in EBB Location and Casting Yard			
				3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.	Generated cutting treel (ha) total	Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting so far NIL				
						Generated domestic waste (t/month) total	2.85 T/quarter. It is disposed through MCGM daily.				
						Confirmation of adequate disposal (visualt survey)	Yes				
	4	Soil Contamination/sedimentation	Heavy Metals & Oil & Grease	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	**Soil Pollution Standard in India (MOEF)**		**N/A**			
				2. Nhava temporary bridge & casting yard in		1. Cadmium: 0.01mg/l		BDL			
				3. Gavhan & Chirle for package III	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only	2. total cyanide : not detected		BDL			
						3. organic phosphorus: not detected		BDL			
						4. lead: 0.01mg/l		0.16	Refer to Remark		Frequency is Once in a year.If any minor or major incident has not occure at storage area.
						5. chromium (VI): 0.05mg/l		BDL			
						6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)		BDL			
						7. total mercury: 0.005mg/l		BDL			
						8. alkyl mercury: not detected					
						9. PCBs: not detected					
						10. copper: 125mg/kg (only paddy field soil)					
						11. dichloromethane: 0.02mg/l		BDL			
						12. carbon tetrachloride: 0.002mg/l		BDL			
						13. 1,2-dichloroethane: 0.004mg/l		BDL			
						14. 1,1-dichloroethylene: 0.02mg/l		BDL			
						15. cis-1,2-dichloroethylene: 0.04mg/l		BDL			
						16. 1,1,1-trichloroethane: 1mg/l		BDL			
						17. 1,1,2-trichloroethane: 0.006 mg/l		BDL			
						18. trichloroethylene: 0.03mg/l		BDL			
						19. tetrachloroethylene: 0.01mg/l		BDL			
						20. 1,3-dichloropropene: 0.002mg/l		BDL			
						21. thiuram: 0.006mg/l		BDL			
						22. simazine: 0.003mg/l		BDL			

Regarding soil contamination/sedimentation, some items shall be selected from the total 25 standards items during the Detailed Design. Only the selected items shall be reported to JICA, and the rest of items shall be deleted from this form.

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - July to September 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

						23. thiobencarb: 0.02mg/l		BDL			
						24. benzene: 0.01mg/l		BDL			
						25. selenium: 0.01mg/l		BDL			
	5	Noise and vibration	Ambient and road side noise (dB(A)LAeq)	1. Sewri & Sewri bay area for package I	Fortnightly	**Construction area Standard 85 dB(A) daytime (Japan standard)** **Not constuction area : Ambient Noise Standard in India (dB(A) Laeq)**	**Sewri (ST 200-500)(Industrial area)**	**Sea Section (ST5000-5500) Migratory Bird Area (no standard on sea section)**	**Shivaji Nagar (Commercial area)**		
				2. Nhava temporary [illegible]	2 Times / Year	Day time : 6-22 hr (continious) dB(A)	Noise Monitroing not conducted due to monsoon season	74.8	63.8		September month report.
				3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continious) dB(A)		71.4	62		
						(only sea section)					
						Day time : 6-22 hr (10 min during 9-17 hrs)					
						Night time: 22-6 hr (10 min 22-24 hr)					
						Note (standard values in Not construction area)					
						1.Industrial Area					
						Day Time: 75 (6-22hr)					
						Night Time: 70 (22-6hr)					
						2.Commercial Area:					
						Day Time: 65 (6-22hr)					
						Night Time: 55 (22-6hr)					
			Vibration (dB) shall be converted from mm/s to dB	1 Location Gavan area for package III	Half yearly	**Construction area Standard 75 dB daytime (Japan standard)** **Not constuction area : Vibration Standard (Japan Standard along the road)**	**Sewri (ST 200-500)(Industrial area)**	**Shivaji Nagar (Commercial area)**	**Chirle**		
						Day time : 6-22 hr (continious)		Not Applicable	Refer to Remark		Frequency: once in 6 month
						Night time: 22-6 hr (continious)			Refer to Remark		(April-19 report), Next monitoring will be on OCTOBER month
						Note (standard values in Not construction area)					
						1. Commercial /Industrial Area					
						Day Time: 70 (7-20hr)					
						Night Time: 65 (20-7hr)					
				Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	**Standard is not existing, but quantity and quality should not be worsen**	**Sewri side(ST500-5500)**	**Sea Section (ST5500-16000)**	**Shivaji Nagar side (app. ST16000-19000)**	**Mangrove Replantation area appointed by State Government**	
				Along MTHL alignment and mangrove replant area for package II	4 Times / Year	1-1. Fauna-Flora (number of species and quantity			N/A	N/A	
						(1) Number of species of bird					
						(2) Number of species of fish					
			1.Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and			(3) Estimated number of Flamingo					
						1-2: Mangrove density and community survey		not required			

Regarding protected area (CRZ and Important Bird Area) and ecosystem, detailed long-term monitoring plan will be established during baseline survay of birds. This tentative monitoring form shall be updated based on the detailed long-term monitoring plan.

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - July to September 2019

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all perameters in EMoP are covered.

			replantation/transplation area 3.Monitoring of Mangrove Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO2)			(1) Number of species of mangorve		not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						1-3: Benthos Survey		not required			
						(1) Number of species and quantity by species		not required			
	6	Protected Area				2-1: Cutting tree confirmation	Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting NIL	not required	Tree cutting Nil		**Package -03**. Got forest department approval for cutting and land for compansatory plantation. Further CIDCO area tree cutting proposal has been submitted for approval from CIDCO is awaited. Tree Cutting so far NIL. CIDCO need to be award/ premit for further activity.
667						(1) Number of cutting tree and species		not required			Need to cut 326 trees (75 forest trees and 251 CIDCO trres). Awaiting CIDCO permission. Compansetory land has approved by forest dept. Total 877 no's need to plant on forest land as compansetory plantation.
						3-1: Mangrove survey in the replant area		not required			
						(1) Number of species of mangorve		not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						4. Ecologial Parameter					
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface	667				
						(2) Chlorophyll-a: <4mg/m3	3				
						(3) Phosphate: 0.1-90µg/l	14.4				
						(4) Nitrate: 1.0-500µg/l	47				
						(5) Nitrite: <125µg/l					
						(6) Particulate Organic Carbon: 10-100mg/m^3					
		Ecosystem				(7) SiO2: 10-5,000µg/l	193				
	7	Hydrology	Flooding situation	Not applicable for Package I		**Criteria for evaluation** **Project activities and structures does not cause flooding and impacts on tidal conditions**	**Sewri**	**Shivaji Nagar**			
				2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year	Monitoring of flooding situation	No Flooding	No flooding			
				Not applicable for Package III							
	8	Topography and Geology	Conditions in embankment area	2 Locations (1. Embankment of Inter Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)	4 times / year x 4.5 years	**Criteria for evaluation** **Embankment shall be stabilized without any landslide and cracks**	**Shivaji Nagar**	**Shivaji Nagar Camp Site**	**Chirle**		
						Monitoring of embankment		125-150			
	9	Local conflict of interests	Construction worker's township	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Employment opportunity shall be provided fairly**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Chirle**		
						Number of hired workers by community		Health Checks carried out but HIV/AIDS parameter is not there.			
	10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Infection disease rate shall not be caused by the project**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**			
						Confirmation of health check record and inspect project site	72 sub contrcator workers benefitted by "Preventive Health Screening & Malaria/Dengue Awareness Camp" on 13th September 2019. 640 sub contractor workers were benefitted by "Safety & essential Kit Distribution Camp" under "Building & other Construction Worker Welfare Board".	Conforming with BOCW Act 1996			
	11	Labour Environment	Construction worker's cond	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	**Criteria for evaluation** **"Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Gavan Camp site**		
						Site Visual Inspection	All provisions as per BOCW	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996 as per IM -26A checklist		
Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Any accidents are not caused by construction**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Other area**		
						Number of recorded accident	NIL	NIL	Nil		

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha
Land in possession in MMRDA – 101.99 ha
Balance land acquisition- 6.10 ha

Note: The acquisition of 6.10 ha is in progress by CIDCO. The balance acquisition would be likely completed by the end of December 2019.

Land Required in ha		Land Acquired in ha		Balance Land to be acquired in ha	Anticipated date for Land Acquisition	Payment status (Payment made to Land Owners by CIDCO)	Remarks
Govt.	**Private**	**Govt.**	**Private**	**Private***			
98.75	9.34	98.75	3.24	6.10	31/12/2019	--	1. The payment status to the land owners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total 108.09		**98.75**	**3.24**	**6.10**			

***Portions of Private Land**

Sr. No.	Name of Village	Area (Hectare)	Acquired	Non-acquired
1	Gavhan	0.15	-	0.15
2	Jasai	8.72	3.24	5.48
3	Chirle	0.47	-	0.47
Total Area		**9.34**	**3.24**	**6.10**

Attachment 2-8

RAP Implementation Monitoring Form
For Mumbai Trans Harbour Link Project (MTHL)

1. General Information

a.	RAP Implementation Monitoring Results:	Progress Status Report (PSR) of 3rd quarter of 2019
b.	Date of Preparing This form	30.09.2019
c.	Person Preparing This form	Name: Robin Sham Position: Engineer and Team Leader Department/Organizations: General Consultants

2. Scale of Impact

2.1 Project Affected Households (PAHs) and Project Affected Persons (PAPs) for Sewri side

Total Project Affected Households (PAHs)	297 Hhs	Titleholders: 0 Hhs Non-titleholders: 297 Hhs
Total PAPs	1,282 persons*	Titleholders: 0 persons Non-titleholders: 1,282 persons*
PAHs who need relocation (as residents)	231 Hhs	Titleholders: 0 persons Non-titleholders:231 (1,088 persons) *
PAPs who do not need relocation (as residents)	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons
Commercial PAPs who need relocation	66 (194 persons) *	Titleholders: 0 persons Non-titleholders:66 (194 persons) *
Commercial PAPs who do not need relocation	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons

* - Figures for number of persons do not include no. of family members of few additional PAPs.

2.2 Structures

Structures	Residential: 231 Commercial: 65 Residential + Commercial: 1 (counted in Commercial) Community: 9 (Religious Properties 6, Public Toilets 3) Government: 16 (MbPT Structures 9, Occupants of Leased Plots 6 & Police Chowky1) Total: 322

2.3 Fishery

Categories of Fisher-folks	**Identified Number**		**Total**	**Remarks**
	Mumbai side	**Navi Mumbai side**		
C1: Fishing stakes and nets in RoW (250 m.)	217 For Trombay, Sewri & Mahul in process of approval	Survey in progress	217	Nil
C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	749	126	875	Scrutiny of the balance applications is in progress.
C3: Hand-pickers	416	1273	1689	

C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during construction period	Will be observed during construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during construction period	Will be observed during construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during construction period	Will be observed during construction period	----	Nil

2.4 Land Acquisition / Transfer

Location	**Land Required in Ha.**		**Land Acquired in Ha.**		**Balance Land to be acquired in Ha**	**Remarks**
	Govt.	**Private**	**Govt.**	**Private**		
Sewri	10.089	0	10.089	0	0	
Navi Mumbai	98.75	9.34	98.75	3.24	6.10	
Total	**118.179**		**108.839**	**3.24**	**6.10**	

3. Monitoring Results

3.1 Sewri Section

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Resettlement	No. of Residential PAHs provided with Allotment Letters of Alternate Tenements	231	141	0	141	32%	
	No. of Residential PAHs given possession of Alternate Tenements	231	77	47	124	54%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	20	0	20	30%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	1	19	20	30%	

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
	No. of Occupants of MbPT Leased Plots provided Compensation	6	3	2	5	84%	
	No. of Religious properties Relocated / Removed	6	0	0	0	0%	Jivdani Mandir allotment letter given
	No. of Other Community properties Relocated / Removed	4	0	0	0	0%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	0	0	0	0%	
	No. of PAHs/PAPs provided Shifting Charges / Arrangement	297	0	0	0	0%	
Rehabilitation	No. of PAHs identified for Livelihood Support in Post Resettlement Assessment						
	No. of PAHs / PAPs provided Livelihood Support under Program-I (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-II (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-III (to be identified)						
	No. of new enterprises started						
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	0					
	No. of Grievances Received by SLGRC	0					
	No. of Grievances Disposed by SLGRC	0					
Post Resettlement Assistance	No. of CHSs Registration helped						
	No. of CHSs provided Tenements for Social Amenities						
	No. of CHSs' Maintenance Fund Invested						

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
	No. of CHSs' Office Bearers provided training						

3.2 Fishery Compensation

Categories of Fisher-folks	Identified Number		Total	Remarks
	Mumbai side	Navi Mumbai side		
C1: Fishing stakes and nets in RoW (250 m.)	217 For Trombay, Sewri & Mahul in process of approval	Survey in progress	217	Nil
C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	749	126	875	An amount of about 49 crores has been deposited with the Fisheries Department towards disbursement of compensation to 2564 Nos. of beneficiaries. Further, the Fisheries Department has started disbursing the amount to the individual PAPs on following due procedure. The scrutiny of the balance Nos. of applications of fisherfolk is in the process of scrutiny for deciding their eligibility for the compensation.
C3: Hand-pickers	416	1273	1689	
C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during construction period	Will be observed during construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during construction period	Will be observed during construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during construction period	Will be observed during construction period	----	Nil

List as per C2 & C3 category

Sr. No	Village name	Total No of family units surveyed	No of eligible family units
Mumbai side			
1.	Mahul & Sewri	336	336
2.	Trombay	829	829
Total Mumbai side		**1165**	**1165**
Navi Mumbai side			
3.	Bamandongri	235	25
4.	Belpada	484	329
5.	Ganeshpuri	25	50
6.	Jasai	26	18
7.	Gavhan	5	4
8.	Morave	190	83
9.	Kopar	548	228
10.	Mora	70	1
11.	Uran	65	0
12.	Jawale	232	1
13.	Shelghar	1	15
14.	Shivaji Nagar	2	64
15.	Ulwe	29	14
16.	Vahal	119	3
17.	Navakhadi	673	326
18.	Moha	222	146
19.	Kombadbhuja	134	92
Total Navi Mumbai side		**3060**	**1399**
Total (Mumbai side + Navi Mumbai side)		**4225**	**2564**

Note: MMRDA has received *16,281* new applications from Fishing families which are yet to be scrutinized.
Note: The category of fishermen is as per the Fishermen Compensation Policy

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

No. of Cases referred to GRC	No. of Cases		No. of Cases Rejected	No. of Cases under Consideration
	Allowed	Compensation Paid		
Nil	Nil	Nil	Nil	Nil

Implementation Schedule for Fisher-folks Compensation & Land Acquisition in Navi Mumbai

A. Implementation Schedule for Fisher-folks Compensation: -

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
1	Approval of fisher-folks' compensation Policy	Fisher-folks Compensation Committee (FCC)	08-10-2015	23-12-2015
2	Approval by MMRDA	MMRDA	10-12-2015	23-12-2015
3	Submission to JICA	MMRDA	--	04-01-2016
4	Detailed list of PAP and compensation plan	Detailed list of Fisher-folk PAP & disbursement is finalized by the Fisheries Department.	23-12-2015	1. *Total up to date applications scrutinized = 5881 nos* 2. *Eligible = 2564 nos* 3. *In-eligible = 06 nos* 4. *In process of approval = 2043 nos* 5. *Documents awaited = 1268 nos*
5	Validation of compensation plan	Fisher-folks Compensation Committee (FCC)	23-12-2015	1. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk from Sewri, Mahul & Trombay (Mumbai side) – *12th September 2017* and *20th November 2018* for C-2 & C3 Category only.

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
			23-12-2015	2. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on *25th April 2018.* 3. Validation of compensation is in progress and would be completed in phases.
6	Approval of compensation plan	FCC	23-11-2015	28-12-2017
7	Approval by MMRDA	MMRDA	23-11-2015	09-03-2018

B. **Implementation Schedule for Land Acquisition in Navi Mumbai:-**

Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Anticipated date for Land Acquisition	Payment status (Payment made to Landowners by CIDCO)	Remarks
Govt.	**Private**	**Govt.**	**Private**	**Private**			
98.75	9.34	98.75	3.24	6.10	31/08/2019	--	1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total	**108.09**	**101.99**		**6.10**			

Implementation Schedule for SIA (Sewri Section)

Task No.	Task Designation	Start Date	Completion / Forecast Date
1	**Preparation of Final SIA**		
1.1	MMRDA Approval	October 2015	January 2016
1.2	JICA Approval	November 2015	January 2016
1.3	Posting of project Information on MMRDA		
1.4	Translation and disclosure of entitlement policy in local language to all PAP's	December 2015	January 2016
2	**LARP Implementation**		
2.1	Grievance redress mechanism established	August 2016	August 2016
2.2	Staff deployment SIA implementation	June 2016	March 2020
2.3	Staff Deployment Public Relation	June 2016	June 2016
2.4	Hiring of Independent Evaluation Agency	November 2018	September 2019
2.5	Preparation and issue of allotment letters to	June 2018	December 2019
2.6	Notice of PAPs for shifting (Sewri Section)	December 2018	December 2019
2.7	Allotment of dwelling units to PAP's	September 2016	December 2019
2.8	Shifting of PAPs to resettlement Colony	December 2018	December 2019
2.9	Transfer of compensation / allowance/ assistance to PAPs	December 2018	December 2019
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	March 2020
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over	September 2019	June 2020
2.12	Registration of Co-operative housing societies, transfer of maintenance funds. (6 months period)	December 2019	September 2020
2.13	Signing of Civil Contract		January 2017
2.14	Notice of Civil works to proceed		March 2017
3	**Monitoring & Evaluation**		
3.1	Internal Monitoring- Monthly/ Quarterly	June 2016	January 2020
3.2	Independent Evaluation Mid-term and End term evaluation Mid Term End Term	 May 2019 November 2019	 Nov. 2019 January 2020

Attachment 3- JICA's Concurrence Status

Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA's Concurrence on					
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 15th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	181.49	181.49	JICA's Concurrence - 19th August 2019	-	-	-	-	-

Attachment 4- Project Procurement and Financial Status till 30th September 2019

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 30th SEPTEMBER 2019

Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Project Commencement Date	Stipulated Project Completion Date	% of Overall Project completion (Design/ Procurement/ Construction) up to 25th September 2019	% of Overall Financial Progress (Including Mobilization Advance & Price Adjustment) till 30th September 2019
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	March 2018	Sep 2022	14.15%	23.56%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	March 2018	Sep 2022	12.38%	22.33%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	March 2018	Sep 2021	8.37%	19.53%
	Package-4 Intelligent Transport System	181.49 (Estimated)	Design Stage	--	Jul 2020 (Estimated)	Sep 2022	NA	NA

Attachment 5- Project Progress Photos

Package 1- Site Progress Photos

Photo No. 1: Pier Reinforcement at MP-17 N is in progress

Photo No. 2: Pier cap shuttering work at MP-06 N is in progress

Photo No. 3: Pier Cap reinforcement work at MP 06 N is in progress

Photo No. 4: Pier cap reinforcement work at MP 06 N is in progress

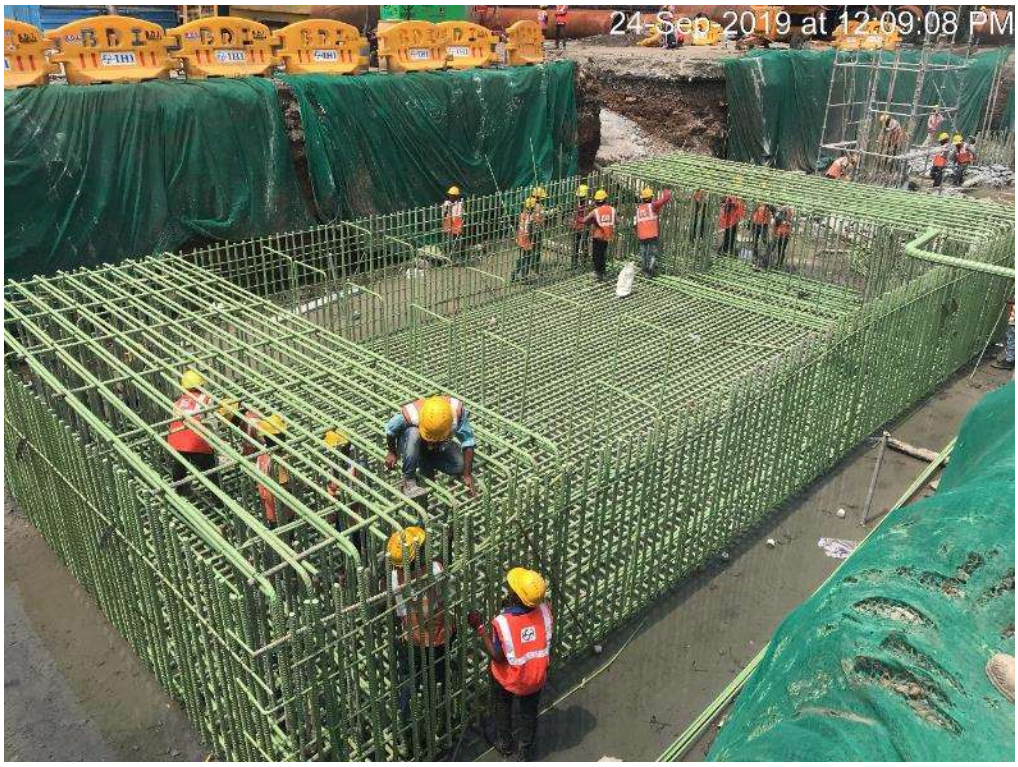


Photo No. 5: Pile Cap reinforcement work at BP 50 Interchange location is in progress

Photo No. 6: Reinforcement work for Pier at the interchange location is in progress

Photo No. 7: Casting of Segment No. 82-83 NS3

Photo No. 8: Reinforcement Inspection at Zig of Segment 88-89 NS4 is in progress

Photo No. 9: Stacking of the segment in the casting yard

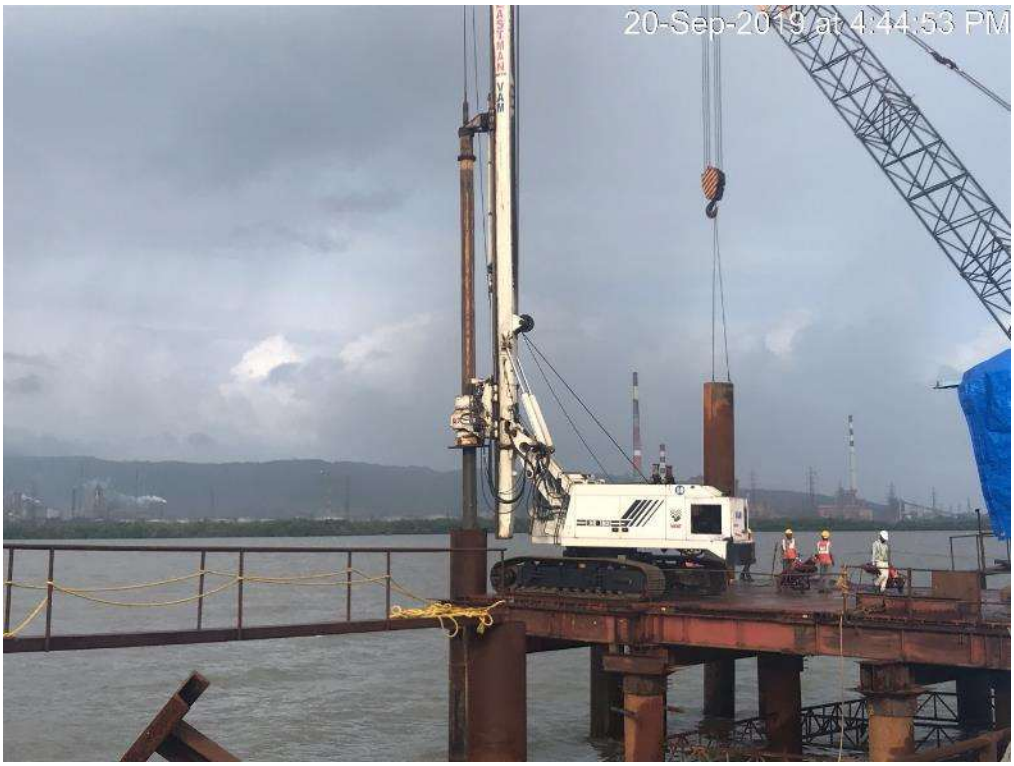


Photo No. 10: Pile Boring at Finger MP-25 is in progress

Photo No. 11: Core drilling at MP 19 location is in progress

Photo No. 12: Preparation of Platform for LG erection at MP 10 is in progress

Package 2 – Site Progress Photos

Photo No. 1: MMRDA officials visited the Pkg-2 site on 11th September 2019

Photo No. 2: Open Foundation Concreting at MP 264 RHS in progress

Photo No. 3: Pile Cap Reinforcement Works at MP 238 RHS in progress

Photo No. 4: Pile Cap formwork at MP 238 RHS in progress

Photo No. 5: Pile Cap concreting at MP 238 RHS in progress

Photo No. 6: Preparatory works for Gantry Crane Load Test in progress

Photo No. 7: Pile Concreting at MP 158/04 RHS in progress

Photo No. 8: Pile Cap bottom formwork at MP 238 LHS in progress

Photo No. 9: Composite Slab formwork for Span 78 in progress

Photo No. 10: Open foundation Concreting at MP 266 RHS in progress

Photo No. 11: Pile Reinforcement Cage inspection at MP 239/01 LHS in progress

Photo No. 12: Liner driving in progress at MP 233 RHS in progress

Package 3 – Site Progress Photos

Photo No. 1: Foundation casting at PMP 11 Chirle location is in progress

Photo No. 2: Pier casting at RMP 278 location is in progress

Photo No. 3: Foundation casting at JMP 13 Chirle location is in progress

Photo No. 4: Survey for Pre-pour checking at PMP 07 in progress

Photo No. 5: OGL Survey at LP02 RHS location is in progress

Photo No. 6: At-Grade area Access Road at CH 20+020 location

Photo No. 7: Excavation at At-Grade area at CH 19+750 is in progress

Photo No. 8: Charging for blasting works at Ch 19+800 location is ongoing

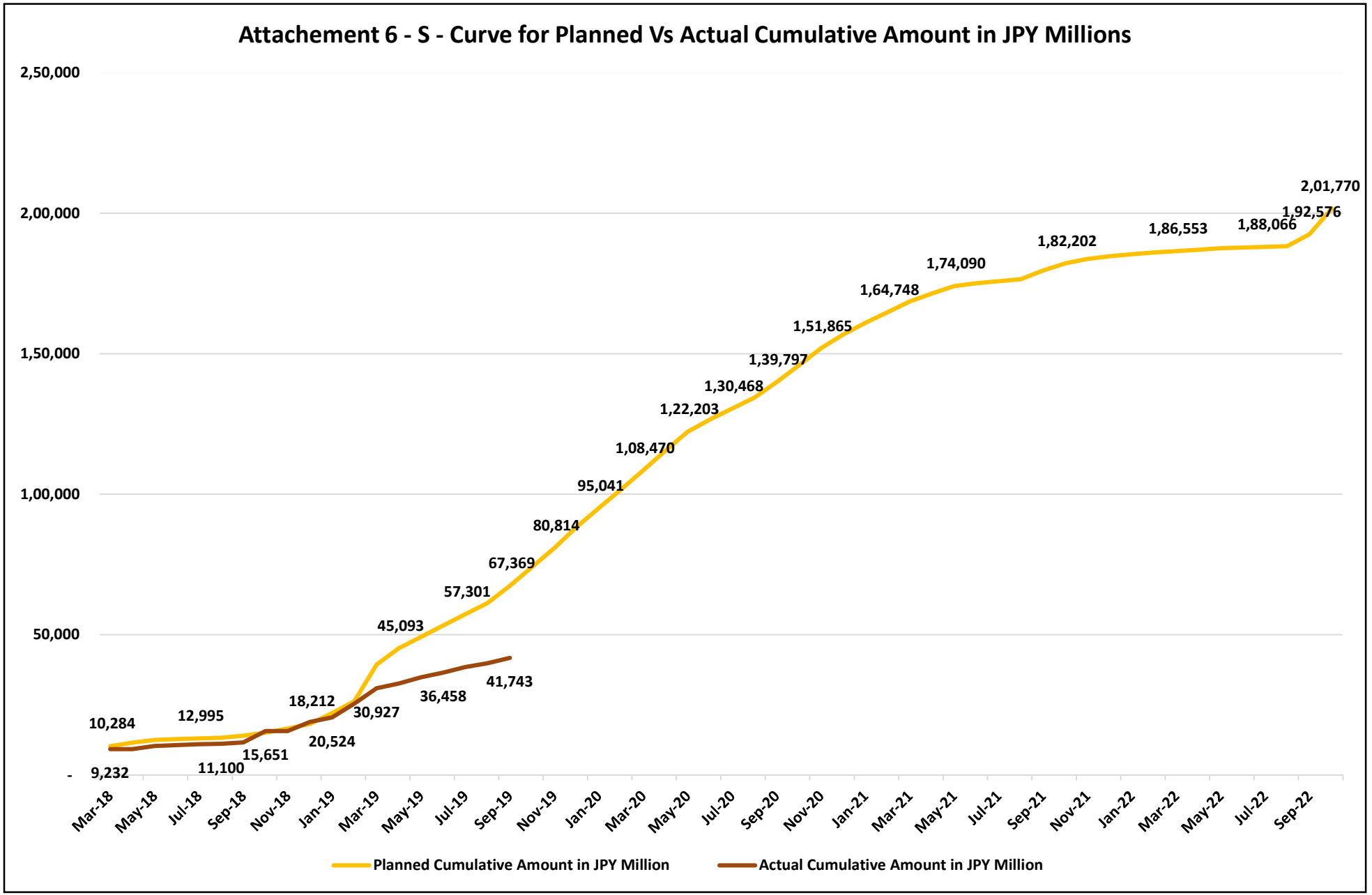
Photo No. 9: Excavated material shifting at At-grade area Ch @ 19+720 is in progress

Photo No. 10: First precast Segment Casting Ceremony at the Pkg-3 Precast yard dated 11th Sept. 2019

Photo No. 11: Casting Yard establishment at the Pkg-3 site

Photo No. 12: Employer's Office construction works in progress

Attachment 6- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million


Attachement 6 - S - Curve for Planned Vs Actual Cumulative Amount in JPY Millions
2,50,000
2,00,000
1,50,000
1,00,000
50,000
-
9,232
10,284
11,100
12,995
15,651
18,212
20,524
30,927
36,458
41,743
45,093
57,301
67,369
80,814
95,041
1,08,470
1,22,203
1,30,468
1,39,797
1,51,865
1,64,748
1,74,090
1,82,202
1,86,553
1,88,066
1,92,576
2,01,770
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20
Sep-20
Nov-20
Jan-21
Mar-21
May-21
Jul-21
Sep-21
Nov-21
Jan-22
Mar-22
May-22
Jul-22
Sep-22
Planned Cumulative Amount in JPY Million
Actual Cumulative Amount in JPY Million

Attachment 7- Package-1's Construction Programme Updated as on 25th September 2019

MUMBAI TRANS HARBOUR LINK PACKAGE 1, UPDATED BASELINE PROGRAMME FOR SEPTEMBER 2019

L&T - IHI | MMRDA | AECOM | PADECO | dar al-handasah | TYLIN INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR18 MTHL P1 - Sep'19 Month Progress		1062	23-Mar-18	22-Sep-22	1501	23-Mar-18 A	29-Jun-23	22.85%	14.15%	0	-235	-236
MPR18.1 Mumbai Trans Harbour Link - Package 1		1062	23-Mar-18	22-Sep-22	1501	23-Mar-18 A	29-Jun-23	22.85%	14.15%	0	-235	-236
M10000	Commencement Date	0	23-Mar-18		0	23-Mar-18 A		100%	100%	0	0	
MPR18.1.1 Key Milestones		1464	19-Sep-18	22-Sep-22	1558	15-Feb-19 A	29-Jun-23	0%	0%	-148	-279	-280
MPR18.1.2 Contractual Interface		1243	09-Oct-18	05-Mar-22	1243	09-Oct-18 A	05-Mar-22	0%	0%	0	0	200
MPR18.1.3 Access to Site		165	23-Mar-18	03-Sep-18	165	23-Mar-18 A	25-Sep-19	0%	0%	0	-386	-235
MPR18.1.4 Document Submittals		180	23-Mar-18	18-Sep-18	180	23-Mar-18 A	21-Oct-19	0%	0%	0	-398	-307
MPR18.1.5 Survey		73	23-Mar-18	03-Jun-18	73	23-Mar-18 A	03-Jun-18 A	0%	0%	0	0	
MPR18.1.6 Geotechnical Investigation		165	23-Mar-18	03-Sep-18	165	23-Mar-18 A	23-Jul-19 A	0%	0%	0	-322	
MPR18.1.6.1 Phase 1		60	23-Mar-18	21-May-18	60	23-Mar-18 A	21-May-18 A	0%	0%	0	0	
MPR18.1.6.2 Phase 2		25	22-May-18	15-Jun-18	25	22-May-18 A	15-Jun-18 A	0%	0%	0	0	
MPR18.1.6.3 Phase 3		50	16-Jun-18	04-Aug-18	50	16-Jun-18 A	30-Dec-18 A	0%	0%	0	-147	
MPR18.1.6.4 Phase 4		45	21-Jul-18	03-Sep-18	45	05-Oct-18 A	23-Jul-19 A	0%	0%	-76	-322	
MPR18.1.7 Infrasturcture Facilties		188	23-Mar-18	05-Feb-19	355	23-Mar-18 A	22-Nov-19	0%	0%	0	-164	709
MPR18.1.7.1 Project Site Office Construction (Contractor + Employer + GC)		120	04-Apr-18	27-Nov-18	120	04-Apr-18 A	25-Nov-18 A	0%	0%	0	2	
MPR18.1.7.2 Casting Yard		164	20-Apr-18	05-Feb-19	355	20-Apr-18 A	22-Nov-19	0%	0%	0	-164	-55
MPR18.1.7.3 Fabrication Yard		133	23-Mar-18	30-Nov-18	133	23-Mar-18 A	26-Apr-19 A	0%	0%	0	-122	
MPR18.1.7.4 Rebar Yard		133	23-Mar-18	30-Nov-18	326	23-Mar-18 A	21-Oct-19	0%	0%	0	-193	-93
MPR18.1.7.5 Batching Plant Installation - CP30 & CP60		164	20-Apr-18	05-Feb-19	164	08-Sep-18 A	08-Dec-18 A	0%	0%	-47	49	
MPR18.1.8 Procurement Plan		1618	04-Apr-18	07-Sep-22	2088	04-Apr-18 A	27-May-23	0%	0%	0	-261	-247
MPR18.1.8.1 Plant & Machinery Deployment Plan		1618	04-Apr-18	07-Sep-22	2088	04-Apr-18 A	27-May-23	0%	0%	0	-261	-247
MPR18.1.8.1.1 P&M Lot 1		1618	04-Apr-18	07-Sep-22	2088	04-Apr-18 A	27-May-23	0%	0%	0	-261	-247
MPR18.1.8.1.2 P&M Lot 2		1547	11-Jun-18	04-Sep-22	1950	11-Jun-18 A	04-Apr-23	0%	0%	0	-212	-195
MPR18.1.8.1.3 P&M Lot 3		1243	20-Oct-18	15-Mar-22	1422	19-Feb-19 A	10-Jan-23	0%	0%	-122	-301	-111
MPR18.1.8.4 Bulk Material Procurement Plan		1412	01-Sep-18	13-Jul-22	1679	31-Aug-18 A	21-Apr-23	0%	0%	0	-281	-282
MPR18.1.9 Design & Engineering (Civil)		302	23-Mar-18	21-Sep-19	525	23-Mar-18 A	31-Jul-20	0%	0%	0	-223	-152
MPR18.1.9.1 Initial Design (General & Preliminary Design, DBR)		79	23-Mar-18	09-Jun-18	79	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-172	
MPR18.1.9.2 Finalization of Alignment		88	23-Mar-18	18-Jun-18	88	23-Mar-18 A	10-Sep-18 A	0%	0%	0	-83	
MPR18.1.9.3 Detailed Design and Construction Design		269	01-May-18	21-Sep-19	525	01-May-18 A	31-Jul-20	0%	0%	0	-223	-152
MPR18.1.9.3.1 GIR		133	22-May-18	01-Oct-18	193	22-May-18 A	08-Oct-19	0%	0%	0	-372	-252
MPR18.1.9.3.2 Test Pile		113	01-May-18	15-Dec-18	316	01-May-18 A	29-Oct-19	0%	0%	0	-187	-129
MPR18.1.9.3.3 Design Phase -1 (Accelerated Design of Initial Items)		137	19-Jun-18	02-Nov-18	137	27-Jun-18 A	28-Sep-19	0%	0%	-8	-329	-295
MPR18.1.9.3.4 Design Phase -2 (Accelerated Design of Initial Items)		163	04-Jul-18	13-Dec-18	163	26-Jul-18 A	21-Oct-19	0%	0%	-22	-312	-255
MPR18.1.9.3.5 Design Phase -3		221	19-Jun-18	25-Jan-19	144	25-Aug-18 A	13-Nov-19	0%	0%	-67	-292	-247
MPR18.1.9.3.6 Design Phase -4		220	07-Jul-18	11-Feb-19	220	05-Oct-18 A	09-Dec-19	0%	0%	-90	-300	-232
MPR18.1.9.3.7 Design Phase -5		242	07-Jul-18	05-Mar-19	579	19-Dec-18 A	30-Dec-19	0%	0%	-165	-299	-238
MPR18.1.9.3.8 Design Phase -6		221	26-Aug-18	03-Apr-19	708	24-Dec-18 A	20-Feb-20	0%	0%	-120	-322	-310
MPR18.1.9.3.9 Design Phase -7		272	26-Aug-18	24-May-19	753	11-Jan-19 A	07-Apr-20	0%	0%	-138	-319	-132
MPR18.1.9.3.10 Design Phase -8		355	02-Oct-18	21-Sep-19	359	08-Feb-19 A	31-Jul-20	0%	0%	-129	-314	-228
MPR18.1.10 Design, Engineering & Material Procurement (OSD)		697	23-Mar-18	17-Feb-20	976	23-Mar-18 A	22-Nov-20	0%	0%	0	-279	-39
MPR18.1.10.1 Initial Design		53	23-Mar-18	14-May-18	53	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-198	
MPR18.1.10.3 Aerodynamic Analysis		145	23-Mar-18	14-Aug-18	145	23-Mar-18 A	30-Jul-19 A	0%	0%	0	-349	
MPR18.1.10.4 Technical Design		311	15-May-18	21-Mar-19	643	15-May-18 A	25-Dec-19	0%	0%	0	-279	-270

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match withimpacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR18.1.10.4.1	OS01NS/SS	150	15-May-18	11-Oct-18	150	15-May-18 A	09-Sep-19 A	0%	0%	0	-332	
MPR18.1.10.4.2	OS02NS/SS	164	26-Jun-18	06-Dec-18	530	26-Jun-18 A	15-Oct-19	0%	0%	0	-313	-313
MPR18.1.10.4.3	OS03NS/SS	164	14-Aug-18	24-Jan-19	552	04-Nov-18 A	25-Dec-19	0%	0%	-82	-335	-279
MPR18.1.10.4.4	OS04NS/SS	164	09-Oct-18	21-Mar-19	425	06-Feb-19 A	15-Oct-19	0%	0%	-120	-208	-199
MPR18.1.10.5	Construction Design	344	12-Oct-18	20-Sep-19	805	02-Feb-19 A	25-Jun-20	0%	0%	-113	-279	-192
MPR18.1.10.5.1	OS01NS/SS	201	12-Oct-18	30-Apr-19	680	02-Feb-19 A	21-Feb-20	0%	0%	-113	-297	-307
MPR18.1.10.5.2	OS02NS/SS	231	07-Dec-18	25-Jul-19	231	16-Oct-19	02-Jun-20	0%	0%	-313	-313	-313
MPR18.1.10.5.3	OS03NS/SS	183	25-Jan-19	26-Jul-19	183	26-Dec-19	25-Jun-20	0%	0%	-335	-335	-279
MPR18.1.10.5.4	OS04NS/SS	183	22-Mar-19	20-Sep-19	183	16-Oct-19	15-Apr-20	0%	0%	-208	-208	-121
MPR18.1.10.6	Material Procurement (1st Lot)	353	02-Mar-19	17-Feb-20	342	15-Mar-19 A	22-Nov-20	0%	0%	-13	-279	-39
MPR18.1.11	Tree Cutting and Transplantation	225	23-Mar-18	02-Nov-18	683	23-Mar-18 A	04-Feb-20	0%	0%	0	-458	-361
MPR18.1.12	Utility Diversion	210	19-Jun-18	14-Jan-19	692	01-Oct-18 A	12-Feb-20	0%	0%	-104	-394	-82
MPR18.1.13	Construction	919	11-Jun-18	22-Jun-22	1247	11-Jun-18 A	02-May-23	16.41%	5.81%	0	-261	-186
MPR18.1.13.1	Sewri Interchange Section	779	03-Nov-18	28-Feb-22	1094	29-Mar-19 A	23-Jan-23	16.14%	3.56%	-121	-276	-104
MPR18.1.13.1.1	Sewri Interchnage - Work Front - 1	779	03-Nov-18	28-Feb-22	1093	18-May-19 A	21-Jan-23	16.78%	2.67%	-163	-275	-103
MPR18.1.13.1.1.1	Sewri Interchange - Work Front - 1 - Piling	490	03-Nov-18	15-Dec-20	710	18-May-19 A	22-Oct-21	40.36%	17.31%	-163	-181	-30
MPR18.1.13.1.1.1.1	Piling - Land Viaduct	54	13-Apr-19	16-Sep-19	298	25-Jun-19 A	24-Apr-20	100%	58.33%	-53	-185	-142
MPR18.1.13.1.1.1.2	Piling - Ramp A	442	03-Nov-18	17-Oct-20	662	18-May-19 A	24-May-21	36.08%	13.33%	-163	-181	-78
MPR18.1.13.1.1.1.3	Piling - Ramp E	36	20-Oct-20	01-Dec-20	36	24-May-21	07-Oct-21	0%	0%	-181	-181	-60
MPR18.1.13.1.1.1.4	Piling - Ramp F	12	02-Dec-20	15-Dec-20	12	07-Oct-21	22-Oct-21	0%	0%	-181	-181	-30
MPR18.1.13.1.1.2	Sewri Interchange - Work Front - 1 -Pile Cap	560	19-Nov-18	24-Mar-21	765	21-Jun-19 A	19-Mar-22	29.26%	2.84%	-175	-222	-82
MPR18.1.13.1.1.2.1	Pile Cap - Land Viaduct	68	25-Apr-19	15-Oct-19	106	06-Sep-19 A	13-Nov-20	74.07%	1.11%	-43	-250	-207
MPR18.1.13.1.1.2.2	Pile Cap - Ramp A	504	19-Nov-18	15-Jan-21	729	21-Jun-19 A	04-Feb-22	25.81%	3.39%	-175	-242	-193
MPR18.1.13.1.1.2.3	Pile Cap - Ramp E	44	07-Jan-21	27-Feb-21	75	18-Dec-21	19-Mar-22	0%	0%	-211	-242	-82
MPR18.1.13.1.1.2.4	Pile Cap - Ramp F	20	01-Mar-21	24-Mar-21	20	01-Feb-22	24-Feb-22	0%	0%	-203	-203	-114
MPR18.1.13.1.1.3	Sewri Interchange - Work Front - 1 - Pier	588	12-Dec-18	20-May-21	578	21-Jan-20	16-Jun-22	18.45%	0%	-260	-250	-93
MPR18.1.13.1.1.3.1	Pier - Land Viaduct	52	29-May-19	30-Oct-19	52	25-Sep-20	27-Nov-20	38.89%	0%	-250	-250	-193
MPR18.1.13.1.1.3.2	Pier - Ramp A	504	12-Dec-18	09-Feb-21	494	21-Jan-20	10-Mar-22	25.81%	0%	-260	-250	-201
MPR18.1.13.1.1.3.3	Pier - Ramp E	96	27-Jan-21	20-May-21	96	23-Feb-22	16-Jun-22	0%	0%	-250	-250	-146
MPR18.1.13.1.1.3.4	Pier - Ramp F	83	23-Dec-20	01-Apr-21	83	25-Nov-21	05-Mar-22	0%	0%	-203	-203	-5
MPR18.1.13.1.1.4	Sewri Interchange - Work Front - 1 - Pier Cap	587	05-Jan-19	11-Jun-21	577	13-Feb-20	08-Jul-22	15.32%	0%	-260	-250	62
MPR18.1.13.1.1.4.1	Pier Cap - Land Viaduct	49	16-Sep-19	14-Nov-19	49	13-Oct-20	11-Dec-20	6.48%	0%	-250	-250	-193
MPR18.1.13.1.1.4.2	Pier Cap - Ramp A	499	05-Jan-19	26-Feb-21	489	13-Feb-20	28-Mar-22	25.16%	0%	-260	-250	-201
MPR18.1.13.1.1.4.3	Pier Cap - Ramp E	100	13-Feb-21	11-Jun-21	100	14-Mar-22	08-Jul-22	0%	0%	-250	-250	62
MPR18.1.13.1.1.4.4	Pier Cap - Ramp F	86	31-Dec-20	13-Apr-21	99	03-Dec-21	01-Apr-22	0%	0%	-203	-216	-2
MPR18.1.13.1.1.5	Sewri Interchange - Embankment Works - Ramp F	90	14-Apr-21	01-Nov-21	90	17-Mar-22	30-Jun-22	0%	0%	-203	-203	-54
MPR18.1.13.1.1.6	Sewri Interchange - Work Front - 1 - Super Structure Erection	628	04-May-19	28-Feb-22	647	05-Jun-20	21-Jan-23	5.93%	0%	-256	-275	-233
MPR18.1.13.1.1.6.1	Erection - Land Viaduct	96	19-Nov-19	11-Mar-20	96	15-Dec-20	09-Apr-21	0%	0%	-250	-250	-236
MPR18.1.13.1.1.6.2	Erection - Ramp A	486	04-May-19	09-Apr-21	482	05-Jun-20	07-May-22	10.45%	0%	-280	-276	-236
MPR18.1.13.1.1.6.3	Erection - Ramp E	146	10-Apr-21	02-Dec-21	146	07-May-22	28-Oct-22	0%	0%	-276	-276	-236
MPR18.1.13.1.1.6.4	Erection - Ramp F	52	28-Dec-21	28-Feb-22	52	22-Nov-22	21-Jan-23	0%	0%	-276	-276	-234
MPR18.1.13.1.2	Sewri Interchange - Work Front - 2	765	03-Nov-18	11-Feb-22	1094	29-Mar-19 A	23-Jan-23	19.58%	5.44%	-121	-290	-218
MPR18.1.13.1.2.1	Sewri Interchange - Work Front - 2 - Piling	553	03-Nov-18	01-Mar-21	762	29-Mar-19 A	23-Dec-21	37.54%	26.96%	-121	-170	-124

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match withimpacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR18.1.13.1.2.1.1	Piling - Ramp C2	325	03-Nov-18	27-Feb-20	534	29-Mar-19 A	22-Dec-20	64.85%	75.59%	-121	-170	-124
MPR18.1.13.1.2.1.2	Piling - Ramp C1	140	03-Apr-19	18-Dec-19	140	18-Mar-20	04-Dec-20	49.29%	0%	-215	-215	-124
MPR18.1.13.1.2.1.3	Piling - Ramp B	84	21-Nov-20	01-Mar-21	84	12-Jun-21	23-Dec-21	0%	0%	-170	-170	-124
MPR18.1.13.1.2.2	Sewri Interchange - Work Front - 2 - Pile Cap	591	19-Nov-18	29-Apr-21	811	05-May-19 A	22-Feb-22	25.86%	8.48%	-140	-170	-108
MPR18.1.13.1.2.2.1	Pile Cap - Ramp C2	361	19-Nov-18	24-Apr-20	625	05-May-19 A	12-Apr-21	57.46%	38.35%	-140	-214	-126
MPR18.1.13.1.2.2.2	Pile Cap - Ramp C1	172	12-Apr-19	04-Feb-20	172	27-Mar-20	21-Jan-21	32.67%	0%	-215	-215	-125
MPR18.1.13.1.2.2.3	Pile Cap - Ramp B	131	25-Nov-20	29-Apr-21	131	18-Sep-21	22-Feb-22	0%	0%	-170	-170	-108
MPR18.1.13.1.2.3	Sewri Interchange - Work Front - 2 - Pier	589	12-Dec-18	21-May-21	487	04-Sep-19 A	16-Mar-22	23.53%	2%	-155	-170	13
MPR18.1.13.1.2.3.1	Pier - Ramp C2	353	12-Dec-18	09-May-20	295	04-Sep-19 A	26-Apr-21	58.09%	5.99%	-155	-214	-126
MPR18.1.13.1.2.3.2	Pier - Ramp C1	194	01-Apr-19	18-Feb-20	189	10-Sep-19 A	05-Feb-21	35.21%	2.55%	-64	-215	-113
MPR18.1.13.1.2.3.3	Pier - Ramp B	248	25-Apr-20	21-May-21	204	12-Apr-21	16-Mar-22	0%	0%	-214	-170	13
MPR18.1.13.1.2.4	Sewri Interchange - Work Front - 2 - Pier Cap	583	26-Dec-18	28-May-21	488	18-Feb-20	31-Mar-22	17.64%	0%	-272	-177	7
MPR18.1.13.1.2.4.1	Pier Cap - Ramp C2	356	26-Dec-18	27-May-20	298	18-Feb-20	14-May-21	57.93%	0%	-272	-214	-126
MPR18.1.13.1.2.4.2	Pier Cap - Ramp C1	198	18-Apr-19	12-Mar-20	190	11-Apr-20	27-Feb-21	20.28%	0%	-223	-215	-117
MPR18.1.13.1.2.4.3	Pier Cap - Ramp B	235	19-May-20	28-May-21	201	30-Apr-21	31-Mar-22	0%	0%	-211	-177	7
MPR18.1.13.1.2.5	Sewri Interchange - Embankment Works - Ramp C2	60	23-May-19	02-Nov-19	60	22-May-20	04-Nov-20	0%	0%	-228	-228	328
MPR18.1.13.1.2.6	Sewri Interchange - Work Front - 2 - Super Structure erection	654	18-Mar-19	11-Feb-22	677	02-May-20	23-Jan-23	10.11%	0%	-267	-290	-218
MPR18.1.13.1.2.6.1	Erection - Ramp C2	343	18-Mar-19	02-Nov-20	341	02-May-20	18-Dec-21	52.94%	0%	-267	-265	-193
MPR18.1.13.1.2.6.2	Erection - Ramp C1	194	08-Oct-19	26-May-20	194	21-Nov-20	10-Sep-21	0%	0%	-291	-291	-219
MPR18.1.13.1.2.6.3	Erection - Ramp B	316	28-Nov-20	11-Feb-22	316	13-Jan-22	23-Jan-23	0%	0%	-291	-291	-219
MPR18.1.13.1.3	Sewri Interchange - Work Front - 3 (Cast in situ Spans)	431	28-Feb-20	01-Feb-22	431	22-Dec-20	22-Aug-22	0%	0%	-170	-170	-74
MPR18.1.13.1.3.1	Sewri Interchange - Work Front - 3 - Piling	144	28-Feb-20	20-Nov-20	144	22-Dec-20	12-Jun-21	0%	0%	-170	-170	-124
MPR18.1.13.1.3.1.1	Piling - Ramp B	54	28-Feb-20	02-May-20	54	22-Dec-20	25-Feb-21	0%	0%	-170	-170	-124
MPR18.1.13.1.3.1.2	Piling - Ramp E	54	04-May-20	07-Oct-20	54	25-Feb-21	30-Apr-21	0%	0%	-170	-170	-124
MPR18.1.13.1.3.1.3	Piling - Ramp C1	36	08-Oct-20	20-Nov-20	36	30-Apr-21	12-Jun-21	0%	0%	-170	-170	-124
MPR18.1.13.1.3.2	Sewri Interchange - Work Front - 3 - Pile Cap	159	07-Mar-20	15-Dec-20	159	29-Dec-20	09-Oct-21	0%	0%	-170	-170	41
MPR18.1.13.1.3.2.1	Pile Cap - Ramp B	81	07-Mar-20	10-Jun-20	81	29-Dec-20	06-Apr-21	0%	0%	-170	-170	-1
MPR18.1.13.1.3.2.2	Pile Cap - Ramp E	81	11-May-20	17-Nov-20	81	05-Mar-21	09-Jun-21	0%	0%	-170	-170	65
MPR18.1.13.1.3.2.3	Pile Cap - Ramp C1	45	23-Oct-20	15-Dec-20	45	15-May-21	09-Oct-21	0%	0%	-170	-170	30
MPR18.1.13.1.3.3	Sewri Interchange - Work Front - 3 - Pier	216	18-Mar-20	05-Mar-21	216	09-Jan-21	27-Dec-21	0%	0%	-170	-170	-10
MPR18.1.13.1.3.3.1	Pier - Ramp B	135	18-Mar-20	27-Nov-20	135	09-Jan-21	22-Sep-21	0%	0%	-170	-170	-49
MPR18.1.13.1.3.3.2	Pier - Ramp E	135	21-May-20	01-Feb-21	135	16-Mar-21	25-Nov-21	0%	0%	-170	-170	17
MPR18.1.13.1.3.3.3	Pier - Ramp C1	90	18-Nov-20	05-Mar-21	90	09-Jun-21	27-Dec-21	0%	0%	-170	-170	-21
MPR18.1.13.1.3.4	Sewri Interchange - Work Front - 3 - Pier Cap	196	24-Apr-20	19-Mar-21	196	17-Feb-21	11-Jan-22	0%	0%	-170	-170	-10
MPR18.1.13.1.3.4.1	Pier Cap - Ramp B	115	24-Apr-20	11-Dec-20	115	17-Feb-21	06-Oct-21	0%	0%	-170	-170	-49
MPR18.1.13.1.3.4.2	Pier Cap - Ramp E	132	08-Jun-20	15-Feb-21	132	02-Apr-21	09-Dec-21	0%	0%	-170	-170	17
MPR18.1.13.1.3.4.3	Pier Cap - Ramp C1	77	17-Dec-20	19-Mar-21	77	11-Oct-21	11-Jan-22	0%	0%	-170	-170	-21
MPR18.1.13.1.3.5	Sewri Interchange - Work Front - 3 - Super Structure	360	23-May-20	01-Feb-22	360	18-Mar-21	22-Aug-22	0%	0%	-170	-170	-74
MPR18.1.13.1.3.5.1	Super Structure - Ramp B	132	23-May-20	30-Jan-21	132	18-Mar-21	24-Nov-21	0%	0%	-170	-170	-60
MPR18.1.13.1.3.5.2	Super Structure - Ramp E	132	16-Jan-21	24-Sep-21	132	10-Nov-21	16-Apr-22	0%	0%	-170	-170	-60
MPR18.1.13.1.3.5.3	Super Structure - Ramp C1	120	09-Jun-21	01-Feb-22	120	02-Apr-22	22-Aug-22	0%	0%	-170	-170	-74
MPR18.1.13.2	Intertidal Section	715	11-Jun-18	23-Oct-21	1009	11-Jun-18 A	20-Jul-22	21.64%	19.72%	0	-227	-200
MPR18.1.13.2.1	Intertidal - Temporary Access Bridge Work	467	11-Jun-18	26-Sep-20	478	11-Jun-18 A	18-Apr-20	0%	0%	0	57	220

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match withimpacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR18.1.13.2.1.1	Access Bridge	457	11-Jun-18	12-Jun-20	468	11-Jun-18 A	07-Apr-20	0%	0%	0	57	220
MPR18.1.13.2.1.1.1	Access Bridge - Piling	451	11-Jun-18	05-Jun-20	366	11-Jun-18 A	07-Dec-19	0%	0%	0	152	320
MPR18.1.13.2.1.1.2	Access Bridge - Decking	437	06-Oct-18	12-Jun-20	468	14-Jul-18 A	07-Apr-20	0%	0%	16	57	220
MPR18.1.13.2.1.2	Fingers	441	13-Oct-18	26-Sep-20	478	26-Sep-18 A	18-Apr-20	0%	0%	16	57	220
MPR18.1.13.2.1.2.1	Fingers - Piling	437	13-Oct-18	22-Sep-20	474	26-Sep-18 A	14-Apr-20	0%	0%	16	57	220
MPR18.1.13.2.1.2.2	Fingers - Decking	426	01-Nov-18	26-Sep-20	478	06-Oct-18 A	18-Apr-20	0%	0%	22	57	220
MPR18.1.13.2.2	Intertidal - Main Bridge Work	638	14-Dec-18	23-Oct-21	944	14-Nov-18 A	20-Jul-22	21.64%	19.72%	26	-227	-200
MPR18.1.13.2.2.1	Intertidal - Main Bridge Work - Piling	531	14-Dec-18	16-Mar-21	747	14-Nov-18 A	29-Nov-21	43.74%	51.48%	26	-137	-103
MPR18.1.13.2.2.2	Intertidal - Main Bridge Work - Pile Cap	536	29-Dec-18	06-Apr-21	781	17-Jan-19 A	08-Jan-22	25.5%	22.37%	-15	-153	-124
MPR18.1.13.2.2.3	Intertidal - Main Bridge Work - Pier	562	17-Jan-19	25-May-21	821	29-Mar-19 A	25-Feb-22	21.95%	15.04%	-59	-152	-125
MPR18.1.13.2.2.4	Intertidal - Main Bridge Work - Pier Cap	562	30-Jan-19	05-Jun-21	573	10-Aug-19 A	14-Mar-22	16.46%	0.35%	-115	-155	-128
MPR18.1.13.2.2.5	Intertidal - Main Bridge Work - Super Structure Erection	534	18-Apr-19	23-Oct-21	620	04-Jan-20	20-Jul-22	0%	0%	-141	-227	-200
MPR18.1.13.2.3	Intertidal - Finger Removal & Reuse	400	07-Mar-19	29-Dec-20	394	04-Dec-19	24-Sep-21	0%	0%	-151	-145	-60
MPR18.1.13.3	Marine Section	911	18-Sep-18	17-Jun-22	1169	14-Dec-18 A	17-Mar-23	15.94%	4.55%	-73	-227	-206
MPR18.1.13.3.1	Temporary Access Bridge Work -2 (MP70 to MP51- 21 Spans)	911	18-Sep-18	17-Jun-22	905	25-Sep-19	17-Mar-23	0%	0%	-233	-227	-206
MPR18.1.13.3.2	Marine - Main Bridge	775	03-Nov-18	23-Feb-22	1072	14-Dec-18 A	22-Nov-22	15.94%	4.55%	-34	-227	-206
MPR18.1.13.3.2.1	Marine - Piling	564	03-Nov-18	15-Mar-21	810	14-Dec-18 A	12-Jan-22	28.66%	13.72%	-34	-176	-58
MPR18.1.13.3.2.3	Marine - Pile Cap	572	23-Nov-18	12-Apr-21	809	14-Jan-19 A	10-Feb-22	19.3%	3.03%	-43	-176	-60
MPR18.1.13.3.2.4	Marine - Pier	590	22-Dec-18	02-Jun-21	563	21-Nov-19	30-Mar-22	14.1%	0%	-200	-173	-87
MPR18.1.13.3.2.2	Marine - Pier Cap	576	21-Jan-19	14-Jun-21	549	19-Dec-19	11-Apr-22	11.87%	0%	-200	-173	-49
MPR18.1.13.3.2.5	Marine - Super Structure Erection	636	19-Apr-19	23-Feb-22	687	17-Feb-20	22-Nov-22	0%	0%	-176	-227	-206
MPR18.1.13.4	Precast Segments	778	06-Feb-19	21-Aug-21	798	07-Aug-19 A	30-Jun-22	22.4%	0.3%	-154	-261	69
MPR18.1.13.4.1	Precast Segement - Sewri Interchange	701	06-Feb-19	24-May-21	709	22-Nov-19	18-Mar-22	29.63%	0%	-241	-249	158
MPR18.1.13.4.1.1	Precast Segement - Land Viaduct	276	04-Apr-19	27-Feb-20	276	28-Jan-20	22-Dec-20	54.69%	0%	-249	-249	535
MPR18.1.13.4.1.2	Precast Segement - Ramp A	396	30-Mar-19	14-Jul-20	396	14-Jan-20	30-Apr-21	32.74%	0%	-241	-241	-99
MPR18.1.13.4.1.3	Precast Segement - Ramp B	297	17-Mar-20	06-Mar-21	297	08-Jan-21	28-Dec-21	0%	0%	-249	-249	-115
MPR18.1.13.4.1.4	Precast Segement - Ramp C1	290	04-Apr-19	16-Mar-20	290	28-Jan-20	08-Jan-21	52.73%	0%	-249	-249	-115
MPR18.1.13.4.1.5	Precast Segement - Ramp C2	143	06-Feb-19	24-Jul-19	143	22-Nov-19	11-May-20	100%	0%	-241	-241	-77
MPR18.1.13.4.1.6	Precast Segement - Ramp E	253	15-Jul-20	14-May-21	253	30-Apr-21	26-Feb-22	0%	0%	-241	-241	-99
MPR18.1.13.4.1.7	Precast Segement - Ramp F	107	16-Jan-21	24-May-21	115	01-Nov-21	18-Mar-22	0%	0%	-241	-249	-115
MPR18.1.13.4.2	Precast Segement - Intertidal	753	28-Feb-19	14-Aug-21	754	25-Dec-19	10-Jun-22	23.7%	0%	-250	-251	-188
MPR18.1.13.4.3	Precast Segement - Marine	759	28-Feb-19	21-Aug-21	777	07-Aug-19 A	30-Jun-22	18.83%	0.62%	-135	-261	69
MPR18.1.13.5	Orthotropic Steel Deck (OSD) - Fabrication, Shipping, Assembly & Erection -	608	11-Jun-19	15-Mar-22	636	12-Jun-20	14-Jan-23	0%	0%	-230	-258	-98
MPR18.1.13.5.1	OSD - Fabrication	746	28-Sep-19	12-Oct-21	786	26-Jun-20	21-Aug-22	0%	0%	-273	-313	-255
MPR18.1.13.5.1.1	Fabrication - Factory A	720	28-Sep-19	16-Sep-21	749	26-Jun-20	15-Jul-22	0%	0%	-273	-302	-279
MPR18.1.13.5.1.2	Fabrication - Factory B	720	28-Sep-19	16-Sep-21	726	26-Jun-20	22-Jun-22	0%	0%	-273	-279	-215
MPR18.1.13.5.1.3	Fabrication - Factory C	660	23-Dec-19	12-Oct-21	660	31-Oct-20	21-Aug-22	0%	0%	-313	-313	-255
MPR18.1.13.5.2	OSD - Shipping	536	24-Jun-20	11-Dec-21	576	23-Mar-21	20-Oct-22	0%	0%	-273	-313	-136
MPR18.1.13.5.2.1	Shipping - Factory A	510	24-Jun-20	15-Nov-21	539	23-Mar-21	13-Sep-22	0%	0%	-273	-302	-99
MPR18.1.13.5.2.2	Shipping - Factory B	510	24-Jun-20	15-Nov-21	516	23-Mar-21	21-Aug-22	0%	0%	-273	-279	-215
MPR18.1.13.5.2.3	Shipping - Factory C	450	18-Sep-20	11-Dec-21	450	28-Jul-21	20-Oct-22	0%	0%	-313	-313	-231
MPR18.1.13.5.3	OSD - Custom Clearance and Inland Transport (Last Module)	482	07-Sep-20	01-Jan-22	522	06-Jun-21	10-Nov-22	0%	0%	-273	-313	-136
MPR18.1.13.5.3.1	OSD 1 - MP50 to MP53 (320m)	75	07-Sep-20	20-Nov-20	75	06-Jun-21	20-Aug-21	0%	0%	-273	-273	45

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match withimpacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR18.1.13.5.3.2	OSD 2 - MP69 to MP75 (683m)	274	17-Nov-20	17-Aug-21	240	26-Sep-21	23-May-22	0%	0%	-313	-279	-209
MPR18.1.13.5.3.3	OSD 3 - MP75 to MP81 (770m)	377	21-Dec-20	01-Jan-22	388	19-Oct-21	10-Nov-22	0%	0%	-302	-313	-231
MPR18.1.13.5.3.4	OSD 4 - MP124 to MP128 (560m)	141	19-Jul-21	06-Dec-21	164	24-Apr-22	04-Oct-22	0%	0%	-279	-302	-99
MPR18.1.13.5.4	OSD - Assembly	337	07-Oct-20	16-Feb-22	390	16-Sep-21	24-Dec-22	0%	0%	-209	-262	-101
MPR18.1.13.5.4.1	OSD 1 - MP50 to MP53 (320m)	80	07-Oct-20	11-Jan-21	43	16-Sep-21	06-Nov-21	0%	0%	-209	-172	15
MPR18.1.13.5.4.2	OSD 2 - MP69 to MP75 (683m)	252	17-Dec-20	13-Oct-21	224	26-Oct-21	16-Jul-22	0%	0%	-261	-233	-163
MPR18.1.13.5.4.3	OSD 3 - MP75 to MP81 (770m)	329	20-Jan-21	16-Feb-22	337	18-Nov-21	24-Dec-22	0%	0%	-253	-261	-213
MPR18.1.13.5.4.4	OSD 4 - MP124 to MP128 (560m)	142	18-Aug-21	04-Feb-22	162	24-May-22	03-Dec-22	0%	0%	-233	-253	-82
MPR18.1.13.5.5	OSD - Erection	608	11-Jun-19	15-Mar-22	636	12-Jun-20	14-Jan-23	0%	0%	-230	-258	-98
MPR18.1.13.5.5.1	OSD 1 - MP50 to MP53 (320m)	157	21-May-20	26-Feb-21	130	26-May-21	29-Jan-22	0%	0%	-230	-203	-34
MPR18.1.13.5.5.2	OSD 2 - MP69 to MP75 (683m)	542	11-Jun-19	24-Dec-21	505	12-Jun-20	10-Aug-22	0%	0%	-230	-193	-143
MPR18.1.13.5.5.3	OSD 3 - MP75 to MP81 (770m)	279	07-Jan-21	10-Mar-22	352	22-Nov-21	14-Jan-23	0%	0%	-189	-262	-214
MPR18.1.13.5.5.4	OSD 4 - MP124 to MP128 (560m)	185	05-May-21	15-Mar-22	310	07-Jan-22	10-Jan-23	0%	0%	-129	-254	-94
MPR18.1.13.6	Post Erection Segmental Stitch Concrete (incl. Bearing Installation and Prestres	644	24-Apr-19	10-Mar-22	673	14-May-20	01-Feb-23	0%	0%	-246	-275	-111
MPR18.1.13.6.1	Stitch Concrete - Sewri Interchange	644	24-Apr-19	10-Mar-22	652	09-Jun-20	01-Feb-23	0%	0%	-267	-275	-111
MPR18.1.13.6.2	Stitch Concrete - Intertidal	475	29-Nov-19	22-Dec-21	540	14-May-20	25-Aug-22	0%	0%	-141	-206	-200
MPR18.1.13.6.3	Stitch Concrete - Marine	563	21-Oct-19	26-Feb-22	614	18-May-20	25-Nov-22	0%	0%	-176	-227	-54
MPR18.1.13.7	Crash Barrier Works	585	05-Oct-19	11-Mar-22	667	01-Jun-20	11-Feb-23	0%	0%	-201	-283	-120
MPR18.1.13.7.1	Crash Barrier - Sewri Interchange	585	05-Oct-19	11-Mar-22	601	23-Nov-20	11-Feb-23	0%	0%	-267	-283	-120
MPR18.1.13.7.2	Crash Barrier - Intertidal	470	17-Dec-19	04-Jan-22	535	01-Jun-20	06-Sep-22	0%	0%	-141	-206	-20
MPR18.1.13.7.3	Crash Barrier - Marine	541	26-Nov-19	09-Mar-22	592	24-Sep-20	05-Dec-22	0%	0%	-176	-227	-66
MPR18.1.13.7.4	Crash Barrier - Orthotropic Steel Deck	291	23-Dec-20	10-Mar-22	345	02-Dec-21	16-Jan-23	0%	0%	-209	-263	-104
MPR18.1.13.8	Bridge Deck (Superstructure) Water Proofing	581	15-Oct-19	16-Mar-22	662	12-Jun-20	17-Feb-23	0%	0%	-203	-284	-125
MPR18.1.13.8.1	Water Proofing - Sewri Interchange	579	15-Oct-19	14-Mar-22	598	02-Dec-20	17-Feb-23	0%	0%	-267	-286	-125
MPR18.1.13.8.2	Water Proofing - Intertidal	465	28-Dec-19	10-Jan-22	530	12-Jun-20	12-Sep-22	0%	0%	-141	-206	7
MPR18.1.13.8.3	Water Proofing - Marine	526	18-Dec-19	14-Mar-22	577	16-Oct-20	09-Dec-22	0%	0%	-176	-227	-66
MPR18.1.13.8.4	Water Proofing - Orthotropic Steel Deck	281	11-Jan-21	16-Mar-22	335	20-Dec-21	21-Jan-23	0%	0%	-209	-263	-104
MPR18.1.13.9	Stone Mastic Asphalt Pavement	74	23-Dec-21	22-Mar-22	217	08-Jun-22	23-Feb-23	0%	0%	-141	-284	-186
MPR18.1.13.9.1	Sewri Interchange	70	27-Dec-21	21-Mar-22	105	21-Oct-22	23-Feb-23	0%	0%	-250	-285	-186
MPR18.1.13.9.2	Main Bridge	74	23-Dec-21	22-Mar-22	195	08-Jun-22	27-Jan-23	0%	0%	-141	-262	-222
MPR18.1.13.10	Bridge Anclilaries and Misc. Works	575	31-Jan-20	22-Jun-22	695	17-Oct-20	02-May-23	0%	0%	-141	-261	-186
MPR18.1.13.10.1	Bridge Ancillaries	575	31-Jan-20	22-Jun-22	695	17-Oct-20	02-May-23	0%	0%	-141	-261	-186
MPR18.1.13.10.1.1	Noise Barrier, View Barrier and Safety Fence	552	31-Jan-20	26-May-22	657	17-Oct-20	17-Mar-23	0%	0%	-141	-246	-148
MPR18.1.13.10.1.2	Traffic Signages and Marking	84	17-Mar-22	22-Jun-22	112	19-Dec-22	02-May-23	0%	0%	-233	-261	-186
MPR18.1.15	Handing Over	148	31-Mar-22	22-Sep-22	150	02-Jan-23	29-Jun-23	0%	0%	-233	-235	-236
MPR18.1.15.1	Testing and Handing Over	120	31-Mar-22	18-Aug-22	122	02-Jan-23	27-May-23	0%	0%	-233	-235	-236
MPR18.1.15.2	Final Handing Over	28	19-Aug-22	22-Sep-22	28	27-May-23	29-Jun-23	0%	0%	-235	-235	-236
MPR18.1.14	Invoice Schedule (Shows the Invoice items which are not covered in the above Cons	1645	23-Mar-18	22-Sep-22	2150	23-Mar-18 A	29-Jun-23	27.81%	20.59%	0	-279	-280

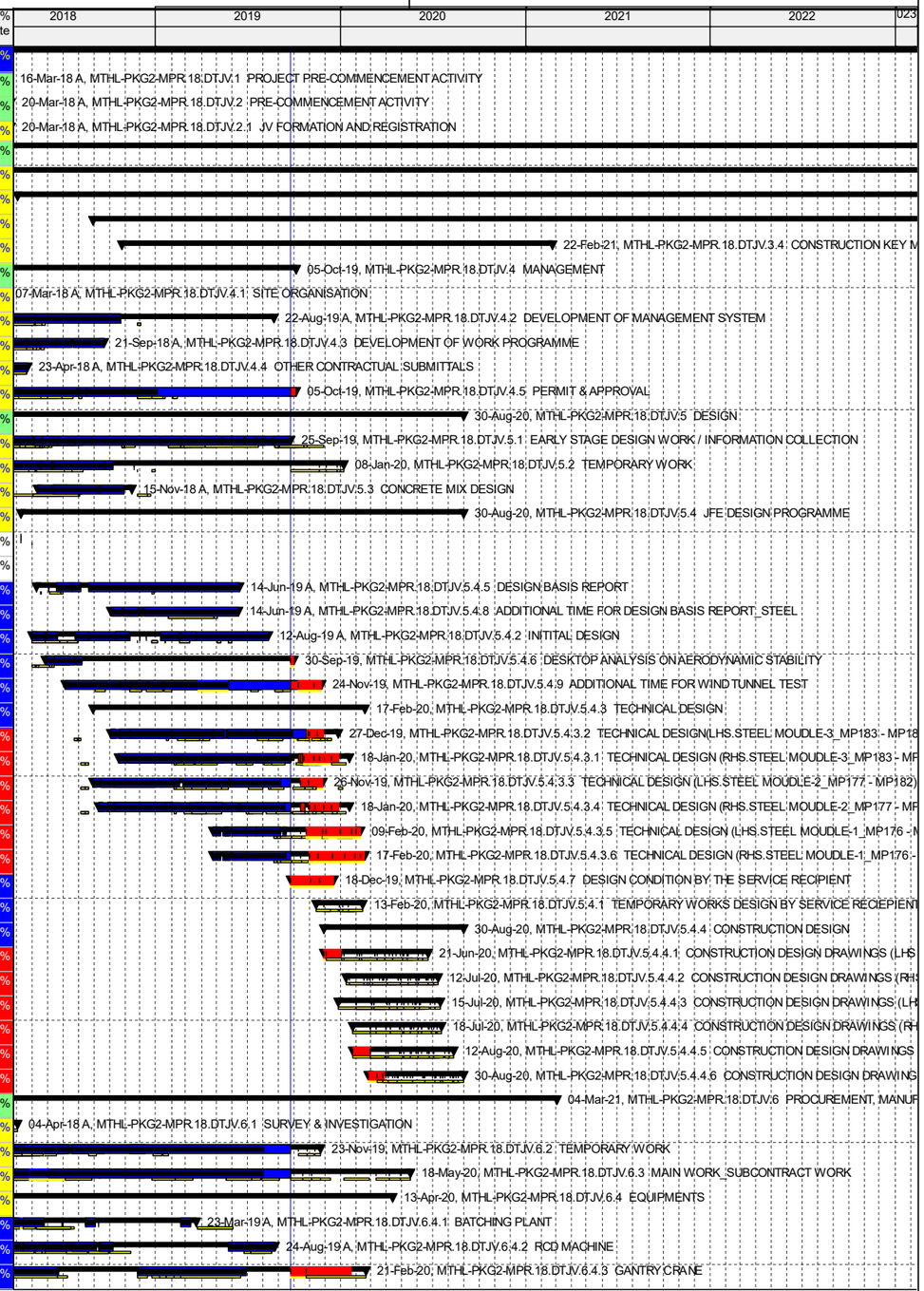
Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match withimpacted schedule submitted with the EOT-02 proposal for the contractor's eligibility for extension of time.

Attachment 8- Package-2's Construction Programme Updated as on 25th September 2019

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10 380 - CH 18 187) ACROSS THE MUMBAI BAY INCL. SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO. MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME - Summary

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
1	MTHL-PKG2-MPR.18.DTJV	MTHL-PKG2-DETAILED WORK PROGRAMME_250820	2500.07d	17-Nov-17	21-Sep-24	17-Nov-17		26.23%	12.38%
2	MTHL-PKG2-MPR.18.DTJV.1	PROJECT PRE-COMMENCEMENT ACTIVITY	126.00d	17-Nov-1	22-Mar-18	17-Nov-17	16-Mar-1	0%	0%
3	MTHL-PKG2-MPR.18.DTJV.2	PRE-COMMENCEMENT ACTIVITY	55.00d	15-Dec-1	07-Feb-18	15-Dec-17	20-Mar-1	0%	0%
4	MTHL-PKG2-MPR.18.DTJV.2.1	JV FORMATION AND REGISTRATION	55.00d	15-Dec-1	07-Feb-18	15-Dec-17	20-Mar-1	0%	0%
5	MTHL-PKG2-MPR.18.DTJV.3	PROJECT EVENT MILESTONE	1824.34d	23-Mar-1	21-Mar-23	23-Mar-18		0%	0%
6	MTHL-PKG2-MPR.18.DTJV.3.1	PROJECT KEY MILESTONE	1644.34d	23-Mar-1	22-Sep-22	23-Mar-18		0%	0%
7	MTHL-PKG2-MPR.18.DTJV.3.2	INTERFACE MILESTONE_ERG19	1796.34d	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%
8	MTHL-PKG2-MPR.18.DTJV.3.3	PHYSICAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25	1373.00d	18-Sep-1	22-Jun-22	31-Aug-18		0%	0%
9	MTHL-PKG2-MPR.18.DTJV.3.4	CONSTRUCTION KEY MILESTONES	1037.25d	03-Sep-1	06-Jul-21	25-Oct-18		0%	0%
10	MTHL-PKG2-MPR.18.DTJV.4	MANAGEMENT	210.38d	20-Jan-18	18-Aug-18	12-Jan-18		0%	0%
11	MTHL-PKG2-MPR.18.DTJV.4.1	SITE ORGANISATION	35.00d	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-1	0%	0%
12	MTHL-PKG2-MPR.18.DTJV.4.2	DEVELOPMENT OF MANAGEMENT SYSTEM	127.38d	20-Jan-18	27-May-18	20-Jan-18	22-Aug-1	0%	0%
13	MTHL-PKG2-MPR.18.DTJV.4.3	DEVELOPMENT OF WORK PROGRAMME	63.00d	23-Mar-1	24-May-18	23-Mar-18	21-Sep-1	0%	0%
14	MTHL-PKG2-MPR.18.DTJV.4.4	OTHER CONTRACTUAL SUBMITTALS	28.00d	24-Mar-1	20-Apr-18	24-Mar-18	23-Apr-18	0%	0%
15	MTHL-PKG2-MPR.18.DTJV.4.5	PERMIT & APPROVAL	210.38d	20-Jan-18	18-Aug-18	12-Jan-18		0%	0%
16	MTHL-PKG2-MPR.18.DTJV.5	DESIGN	592.33d	20-Jan-18	04-Sep-19	01-Jan-18		100%	70.14%
17	MTHL-PKG2-MPR.18.DTJV.5.1	EARLY STAGE DESIGN WORK / INFORMATION COLLECTION	178.25d	20-Jan-18	17-Jul-18	01-Jan-18		100%	100%
18	MTHL-PKG2-MPR.18.DTJV.5.2	TEMPORARY WORK	283.33d	22-Jan-18	01-Nov-18	20-Jan-18		100%	100%
19	MTHL-PKG2-MPR.18.DTJV.5.3	CONCRETE MIX DESIGN	161.33d	23-Mar-1	31-Aug-18	12-May-18	15-Nov-1	0%	0%
20	MTHL-PKG2-MPR.18.DTJV.5.4	JFE DESIGN PROGRAMME	491.00d	01-May-1	04-Sep-19	09-Apr-18		100%	16.19%
21	JFE.DQP.1000	Design Quality Plan	0.00d	01-May-1	01-May-18	09-Apr-18	09-Apr-18	100%	100%
22	JFE.MOB.1000	JFE Design Team Mobilization	0.00d	01-May-1		01-May-18		100%	100%
23	MTHL-PKG2-MPR.18.DTJV.5.4.5	DESIGN BASIS REPORT	49.00d	18-May-1	06-Jul-18	11-May-18	14-Jun-19	0%	0%
24	MTHL-PKG2-MPR.18.DTJV.5.4.8	ADDITIONAL TIME FOR DESIGN BASIS REPORT_STEEL	0.00d			05-Oct-18	14-Jun-19	0%	0%
25	MTHL-PKG2-MPR.18.DTJV.5.4.2	INITITAL DESIGN	125.00d	01-May-1	03-Sep-18	01-May-18	12-Aug-1	0%	0%
26	MTHL-PKG2-MPR.18.DTJV.5.4.6	DESKTOP ANALYSIS ON AERODYNAMIC STABILITY	83.00d	01-May-1	23-Jul-18	28-May-18		100%	100%
27	MTHL-PKG2-MPR.18.DTJV.5.4.9	ADDITIONAL TIME FOR WIND TUNNEL TEST	0.00d			07-Jul-18		0%	0%
28	MTHL-PKG2-MPR.18.DTJV.5.4.3	TECHNICAL DESIGN	243.00d	23-Jul-18	23-Mar-19	30-Aug-18		100%	44.33%
29	MTHL-PKG2-MPR.18.DTJV.5.4.3.2	TECHNICAL DESIGN(LHS.STEEL MOUDLE-3_MP183 - MP186)	227.00d	23-Jul-18	07-Mar-19	04-Oct-18		100%	70%
30	MTHL-PKG2-MPR.18.DTJV.5.4.3.1	TECHNICAL DESIGN (RHS.STEEL MOUDLE-3_MP183 - MP186)	219.00d	06-Aug-1	13-Mar-19	19-Oct-18		100%	56%
31	MTHL-PKG2-MPR.18.DTJV.5.4.3.3	TECHNICAL DESIGN (LHS.STEEL MOUDLE-2_MP177 - MP182)	229.00d	06-Aug-1	23-Mar-19	30-Aug-18		100%	70%
32	MTHL-PKG2-MPR.18.DTJV.5.4.3.4	TECHNICAL DESIGN (RHS.STEEL MOUDLE-2_MP177 - MP182)	229.00d	06-Aug-1	23-Mar-19	11-Sep-18		100%	70%
33	MTHL-PKG2-MPR.18.DTJV.5.4.3.5	TECHNICAL DESIGN (LHS.STEEL MOUDLE-1_MP176 - MP171)	229.00d	06-Aug-1	23-Mar-19	23-Apr-19		100%	0%
34	MTHL-PKG2-MPR.18.DTJV.5.4.3.6	TECHNICAL DESIGN (RHS.STEEL MOUDLE-1_MP176 - MP172)	229.00d	06-Aug-1	23-Mar-19	23-Apr-19		100%	0%
35	MTHL-PKG2-MPR.18.DTJV.5.4.7	DESIGN CONDITION BY THE SERVICE RECIPIENT	101.00d	23-Jul-18	01-Nov-18			0%	0%
36	MTHL-PKG2-MPR.18.DTJV.5.4.1	TEMPORARY WORKS DESIGN BY SERVICE RECIEPIENT	52.00d	07-Nov-1	29-Dec-18			0%	0%
37	MTHL-PKG2-MPR.18.DTJV.5.4.4	CONSTRUCTION DESIGN	257.00d	21-Dec-1	04-Sep-19			100%	0%
38	MTHL-PKG2-MPR.18.DTJV.5.4.4.1	CONSTRUCTION DESIGN DRAWINGS (LHS.STEEL MOUDLE-2_MP177 - M	201.00d	21-Dec-1	10-Jul-19			100%	0%
39	MTHL-PKG2-MPR.18.DTJV.5.4.4.2	CONSTRUCTION DESIGN DRAWINGS (RHS.STEEL MOUDLE-2_MP177 - M	176.00d	18-Jan-19	13-Jul-19			100%	0%
40	MTHL-PKG2-MPR.18.DTJV.5.4.4.3	CONSTRUCTION DESIGN DRAWINGS (LHS.STEEL MOUDLE-3_MP183 - M	201.00d	18-Jan-19	07-Aug-19			100%	0%
41	MTHL-PKG2-MPR.18.DTJV.5.4.4.4	CONSTRUCTION DESIGN DRAWINGS (RHS.STEEL MOUDLE-3_MP183 - M	176.00d	15-Feb-1	10-Aug-19			100%	0%
42	MTHL-PKG2-MPR.18.DTJV.5.4.4.5	CONSTRUCTION DESIGN DRAWINGS (LHS.STEEL MOUDLE-1_MP176 - M	201.00d	15-Feb-1	04-Sep-19			100%	0%
43	MTHL-PKG2-MPR.18.DTJV.5.4.4.6	CONSTRUCTION DESIGN DRAWINGS (RHS.STEEL MOUDLE-1_MP176 - M	171.00d	17-Mar-1	04-Sep-19			100%	0%
44	MTHL-PKG2-MPR.18.DTJV.6	PROCUREMENT, MANUFACTURING AND LOGISTICS	946.29d	20-Jan-18	23-Aug-20	22-Dec-17		100%	54.17%
45	MTHL-PKG2-MPR.18.DTJV.6.1	SURVEY & INVESTIGATION	72.33d	20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%
46	MTHL-PKG2-MPR.18.DTJV.6.2	TEMPORARY WORK	273.33d	20-Jan-18	20-Oct-18	20-Jan-18		0%	0%
47	MTHL-PKG2-MPR.18.DTJV.6.3	MAIN WORK_SUBCONTRACT WORK	415.38d	23-Mar-1	20-Jul-19	23-Mar-18		0%	0%
48	MTHL-PKG2-MPR.18.DTJV.6.4	EQUIPMENTS	538.03d	23-Mar-1	12-Sep-19	23-Mar-18		100%	100%
49	MTHL-PKG2-MPR.18.DTJV.6.4.1	BATCHING PLANT	131.00d	23-Mar-1	31-Jul-18	23-Mar-18	23-Mar-1	0%	0%
50	MTHL-PKG2-MPR.18.DTJV.6.4.2	RCD MACHINE	234.00d	23-Mar-1	11-Nov-18	23-Mar-18	24-Aug-1	0%	0%
51	MTHL-PKG2-MPR.18.DTJV.6.4.3	GANTRY CRANE	323.00d	23-Mar-1	08-Feb-19	23-Mar-18		100%	100%



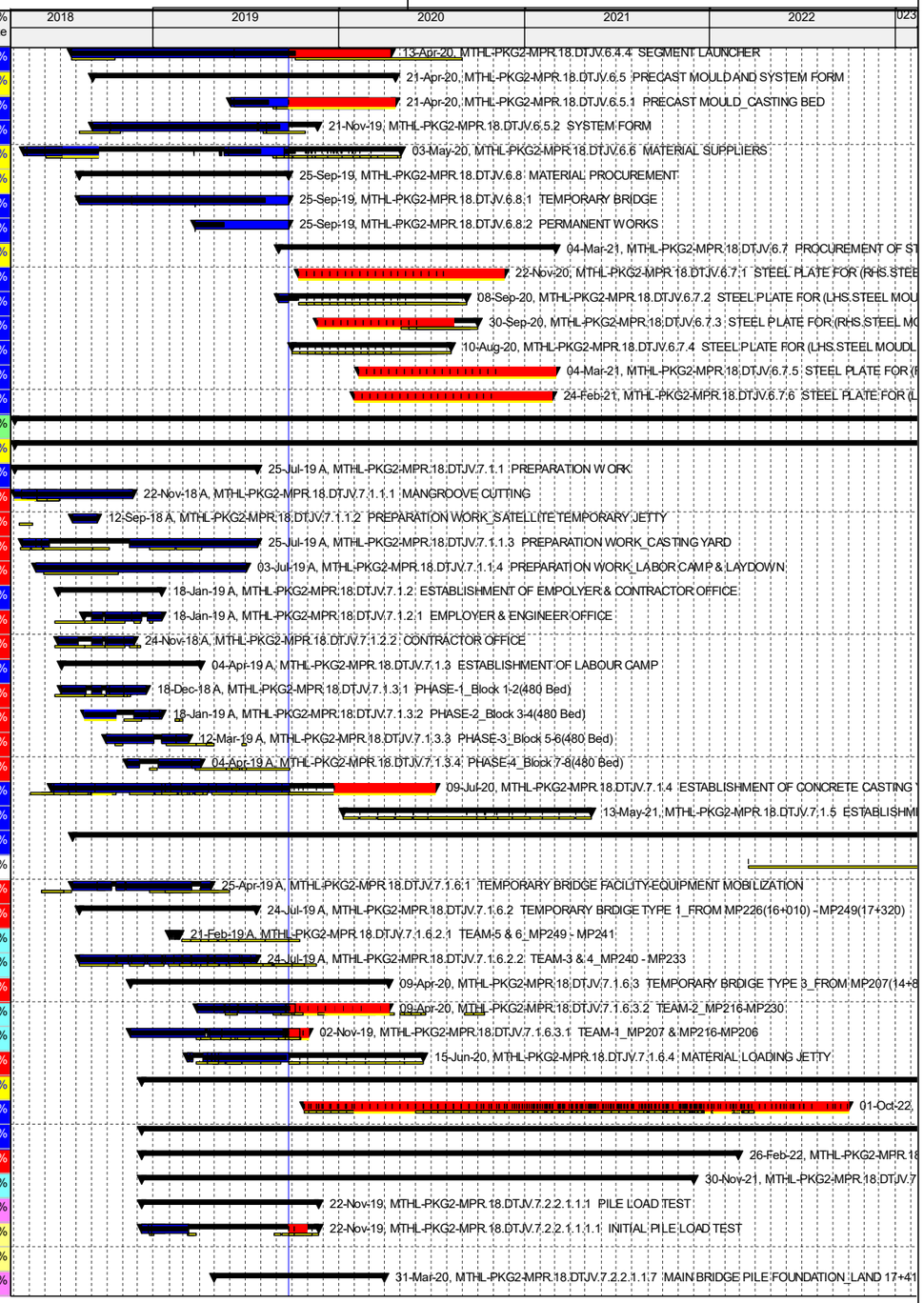
Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
52	MTHL-PKG2-MPR.18.DTJV.6.4.4	SEGMENT LAUNCHER	415.00d	24-Jul-18	12-Sep-19	24-Jul-18		0%	0%
53	MTHL-PKG2-MPR.18.DTJV.6.5	PRECAST MOULD AND SYSTEM FORM	229.91d	07-Aug-1	24-Mar-19	04-Sep-18		100%	8.33%
54	MTHL-PKG2-MPR.18.DTJV.6.5.1	PRECAST MOULD_CASTING BED	217.00d	20-Aug-1	24-Mar-19	03-Jun-19		100%	8.33%
55	MTHL-PKG2-MPR.18.DTJV.6.5.2	SYSTEM FORM	209.00d	07-Aug-1	04-Mar-19	04-Sep-18		0%	0%
56	MTHL-PKG2-MPR.18.DTJV.6.6	MATERIAL SUPPLIERS	500.38d	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%
57	MTHL-PKG2-MPR.18.DTJV.6.8	MATERIAL PROCUREMENT	0.00d			08-Aug-18		0%	0%
58	MTHL-PKG2-MPR.18.DTJV.6.8.1	TEMPORARY BRIDGE	0.00d			08-Aug-18		0%	0%
59	MTHL-PKG2-MPR.18.DTJV.6.8.2	PERMANENT WORKS	0.00d			25-Mar-19		0%	0%
60	MTHL-PKG2-MPR.18.DTJV.6.7	PROCUREMENT OF STEEL GIRDER	474.00d	07-May-1	23-Aug-20	04-Sep-19		0%	0%
61	MTHL-PKG2-MPR.18.DTJV.6.7.1	STEEL PLATE FOR (RHS.STEEL MOUDLE-2_MP177 - MP182)	405.00d	04-Jun-19	13-Jul-20			0%	0%
62	MTHL-PKG2-MPR.18.DTJV.6.7.2	STEEL PLATE FOR (LHS.STEEL MOUDLE-2_MP177 - MP182)	345.00d	07-May-1	16-Apr-20	04-Sep-19		0%	0%
63	MTHL-PKG2-MPR.18.DTJV.6.7.3	STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186)	315.00d	01-Jul-19	10-May-20			0%	0%
64	MTHL-PKG2-MPR.18.DTJV.6.7.4	STEEL PLATE FOR (LHS.STEEL MOUDLE-3_MP183 - MP186)	315.00d	04-Jun-19	14-Apr-20			0%	0%
65	MTHL-PKG2-MPR.18.DTJV.6.7.5	STEEL PLATE FOR (RHS.STEEL MOUDLE-1_MP176 - MP171)	390.00d	30-Jul-19	23-Aug-20			0%	0%
66	MTHL-PKG2-MPR.18.DTJV.6.7.6	STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171)	390.00d	02-Jul-19	26-Jul-20			0%	0%
67	MTHL-PKG2-MPR.18.DTJV.7	CONSTRUCTION	1541.32d	02-Apr-18	21-Jun-22	02-Apr-18		23.2%	10.05%
68	MTHL-PKG2-MPR.18.DTJV.7.1	TEMPORARY WORK	1541.32d	02-Apr-18	21-Jun-22	02-Apr-18		97.95%	80.85%
69	MTHL-PKG2-MPR.18.DTJV.7.1.1	PREPARATION WORK	289.17d	02-Apr-18	16-Jan-19	02-Apr-18	25-Jul-19	0%	0%
70	MTHL-PKG2-MPR.18.DTJV.7.1.1.1	MANGROOVE CUTTING	67.00d	02-Apr-18	30-Jun-18	02-Apr-18	22-Nov-1	0%	0%
71	MTHL-PKG2-MPR.18.DTJV.7.1.1.2	PREPARATION WORK_SATELLITE TEMPORARY JETTY	21.00d	12-Apr-18	07-May-18	25-Jul-18	12-Sep-1	0%	0%
72	MTHL-PKG2-MPR.18.DTJV.7.1.1.3	PREPARATION WORK_CASTING YARD	161.00d	13-Apr-18	16-Jan-19	19-Apr-18	25-Jul-19	0%	0%
73	MTHL-PKG2-MPR.18.DTJV.7.1.1.4	PREPARATION WORK_LABOR CAMP & LAYDOWN	50.00d	29-May-1	24-Oct-18	15-May-18	03-Jul-19	0%	0%
74	MTHL-PKG2-MPR.18.DTJV.7.1.2	ESTABLISHMENT OF EMPOLYER & CONTRACTOR OFFICE	159.75d	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%
75	MTHL-PKG2-MPR.18.DTJV.7.1.2.1	EMPLOYER & ENGINEER OFFICE	159.75d	20-Jun-18	27-Nov-18	17-Aug-18	18-Jan-19	100%	100%
76	MTHL-PKG2-MPR.18.DTJV.7.1.2.2	CONTRACTOR OFFICE	159.75d	20-Jun-18	27-Nov-18	27-Jun-18	24-Nov-1	0%	0%
77	MTHL-PKG2-MPR.18.DTJV.7.1.3	ESTABLISHMENT OF LABOUR CAMP	289.00d	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%
78	MTHL-PKG2-MPR.18.DTJV.7.1.3.1	PHASE-1_Block 1-2(480 Bed)	149.83d	20-Jun-18	17-Nov-18	03-Jul-18	18-Dec-1	0%	0%
79	MTHL-PKG2-MPR.18.DTJV.7.1.3.2	PHASE-2_Block 3-4(480 Bed)	124.88d	19-Aug-1	22-Dec-18	19-Aug-18	18-Jan-19	0%	0%
80	MTHL-PKG2-MPR.18.DTJV.7.1.3.3	PHASE-3_Block 5-6(480 Bed)	111.17d	16-Oct-18	04-Feb-19	29-Sep-18	12-Mar-1	0%	0%
81	MTHL-PKG2-MPR.18.DTJV.7.1.3.4	PHASE-4_Block 7-8(480 Bed)	155.17d	01-Nov-1	05-Apr-19	10-Nov-18	04-Apr-19	0%	0%
82	MTHL-PKG2-MPR.18.DTJV.7.1.4	ESTABLISHMENT OF CONCRETE CASTING YARD	355.83d	04-May-1	25-Apr-19	14-Jun-18		100%	95.96%
83	MTHL-PKG2-MPR.18.DTJV.7.1.5	ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD	342.00d	02-Nov-1	06-Mar-20			0%	0%
84	MTHL-PKG2-MPR.18.DTJV.7.1.6	TEMPORARY BRIDGE	1493.32d	20-May-1	21-Jun-22	27-Jul-18		96.49%	70.04%
85	A13700	Removal of Temporary Bridge & Casting Yard	365.00d	21-Jun-21	21-Jun-22			0%	0%
86	MTHL-PKG2-MPR.18.DTJV.7.1.6.1	TEMPORARY BRIDGE FACILITY-EQUIPMENT MOBILIZATION	152.08d	20-May-1	19-Oct-18	27-Jul-18	25-Apr-19	0%	0%
87	MTHL-PKG2-MPR.18.DTJV.7.1.6.2	TEMPORARY BRDIGE TYPE 1_FROM MP226(16+010) - MP249(17+320)	439.17d	04-Jun-18	17-Aug-19	08-Aug-18	24-Jul-19	100%	100%
88	MTHL-PKG2-MPR.18.DTJV.7.1.6.2.1	TEAM-5 & 6_MP249 - MP241	130.00d	04-Jun-18	21-Jan-19	01-Feb-19	21-Feb-1	0%	0%
89	MTHL-PKG2-MPR.18.DTJV.7.1.6.2.2	TEAM-3 & 4_MP240 - MP233	374.17d	08-Aug-1	17-Aug-19	08-Aug-18	24-Jul-19	100%	100%
90	MTHL-PKG2-MPR.18.DTJV.7.1.6.3	TEMPORARY BRDIGE TYPE 3_FROM MP207(14+870) - MP226(16+010)	415.08d	24-Jul-18	12-Sep-19	16-Nov-18		100%	62.05%
91	MTHL-PKG2-MPR.18.DTJV.7.1.6.3.2	TEAM-2_MP216-MP230	415.08d	24-Jul-18	12-Sep-19	28-Mar-19		100%	43.84%
92	MTHL-PKG2-MPR.18.DTJV.7.1.6.3.1	TEAM-1_MP207 & MP216-MP206	236.04d	26-Jul-18	19-Mar-19	16-Nov-18		100%	90.38%
93	MTHL-PKG2-MPR.18.DTJV.7.1.6.4	MATERIAL LOADING JETTY	260.00d	31-Aug-1	08-Aug-19	08-Mar-19		100%	56.7%
94	MTHL-PKG2-MPR.18.DTJV.7.2	PERMANENT WORK	1359.24d	03-Sep-1	24-May-22	08-Dec-18		13.43%	0.8%
95	MTHL-PKG2-MPR.18.DTJV.7.2.1	PRE-FABRICATION AND ASSEMBLY	1038.33d	18-Apr-19	19-Feb-22			2.6%	0%
96	MTHL-PKG2-MPR.18.DTJV.7.2.2	MAIN BRIDGE	1359.24d	03-Sep-1	24-May-22	08-Dec-18		18.48%	2.12%
97	MTHL-PKG2-MPR.18.DTJV.7.2.2.1	MAIN BRIDGE FOUNDATION	932.00d	03-Sep-1	23-Mar-21	08-Dec-18		36.88%	6.68%
98	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1	MAIN BRIDGE PILE FOUNDATION	873.04d	03-Sep-1	23-Jan-21	08-Dec-18		46.26%	11.99%
99	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.1	PILE LOAD TEST	77.17d	03-Sep-1	19-Nov-18	08-Dec-18		100%	75%
100	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.1.1	INITIAL PILE LOAD TEST	50.75d	03-Sep-1	19-Nov-18	08-Dec-18		100%	75%
101	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.1.2	ROUTINE & DYNAMIC LOAD TEST	0.00d					0%	0%
102	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.7	MAIN BRIDGE PILE FOUNDATION_LAND 17+414~18+187 FROM	140.00d	30-Nov-1	15-May-19	01-May-19		100%	30.15%



Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

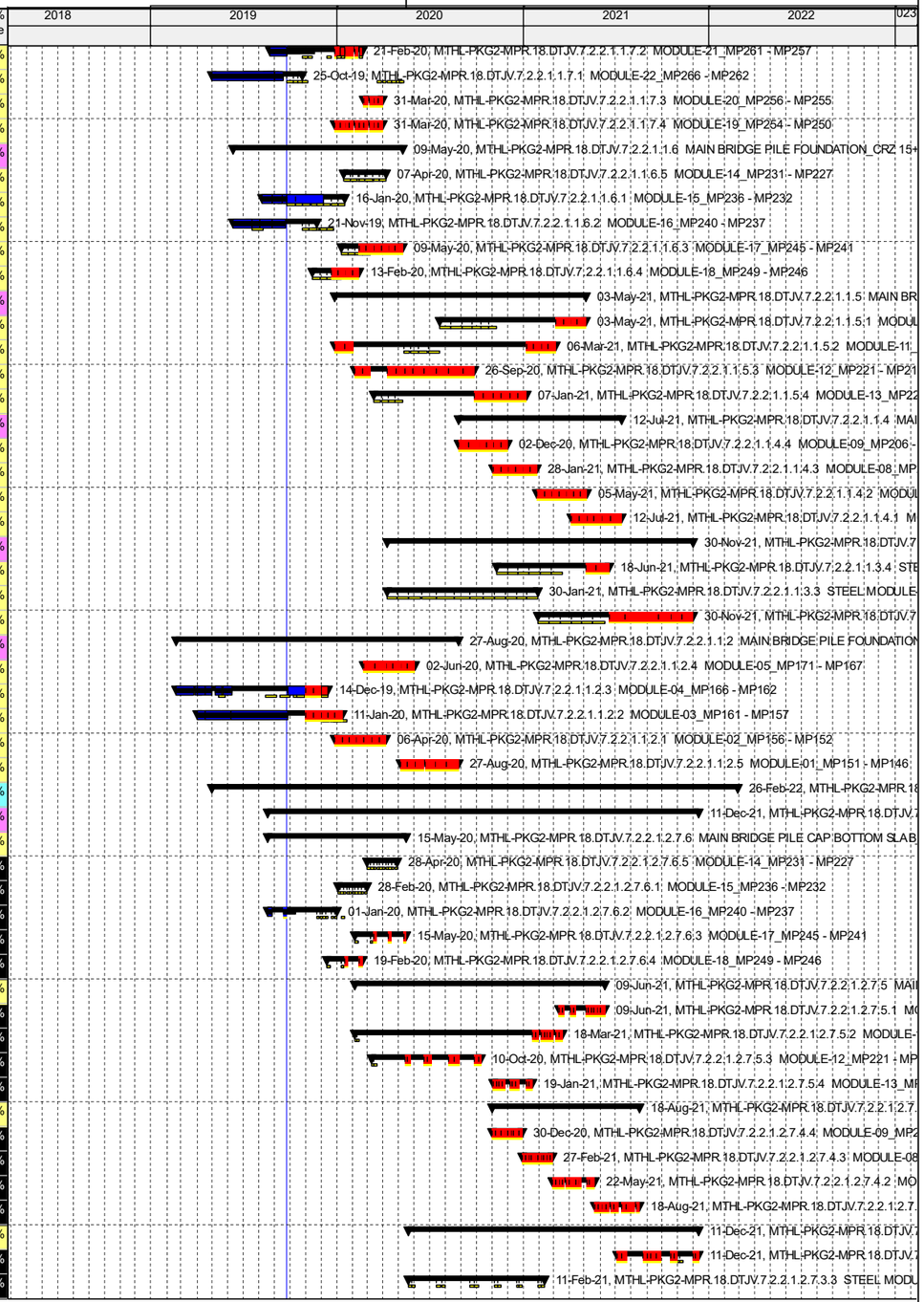
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10 380 - CH 18 187) ACROSS THE MUMBAI BAY INCL. SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO. MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME - Summary

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
103	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.7.2	MODULE-21_MP261 - MP257	80.00d	30-Nov-1	05-Mar-19	23-Aug-19		100%	27.01%
104	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.7.1	MODULE-22_MP266 - MP262	60.00d	06-Mar-1	15-May-19	01-May-19		100%	70.74%
105	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.7.3	MODULE-20_MP256 - MP255	32.00d	05-Dec-1	10-Jan-19			100%	0%
106	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.7.4	MODULE-19_MP254 - MP250	80.00d	11-Jan-19	16-Apr-19			100%	0%
107	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.6	MAIN BRIDGE PILE FOUNDATION_CRZ 15+890~17+414 FROM M	253.25d	20-Dec-1	27-Nov-19	12-Jun-19		82.2%	19.81%
108	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.6.5	MODULE-14_MP231 - MP227	72.00d	17-Aug-1	27-Nov-19			19.95%	0%
109	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.6.1	MODULE-15_MP236 - MP232	120.00d	08-Mar-1	26-Aug-19	08-Aug-19		100%	29%
110	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.6.2	MODULE-16_MP240 - MP237	65.25d	20-Dec-1	08-Mar-19	12-Jun-19		100%	75.22%
111	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.6.3	MODULE-17_MP245 - MP241	72.00d	20-Mar-1	17-Jun-19			100%	0%
112	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.6.4	MODULE-18_MP249 - MP246	53.00d	21-Jan-19	26-Mar-19			100%	0%
113	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.5	MAIN BRIDGE PILE FOUNDATION_INTERTIDAL 14+800~15+890	356.75d	27-Feb-1	06-Jun-20			25.78%	0%
114	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.5.1	MODULE-10_MP211 - MP207	72.00d	12-Mar-2	06-Jun-20			0%	0%
115	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.5.2	MODULE-11_MP216 - MP212	304.00d	27-Feb-1	03-Apr-20			19.86%	0%
116	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.5.3	MODULE-12_MP221 - MP217	140.00d	06-Apr-19	30-Oct-19			80.94%	0%
117	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.5.4	MODULE-13_MP226 - MP222	84.00d	30-Oct-19	06-Feb-20			0%	0%
118	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.4	MAIN BRIDGE PILE FOUNDATION_MARINE 13+610~14+800 FRO	263.00d	12-Dec-1	28-Nov-20			0%	0%
119	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.4.4	MODULE-09_MP206 - MP202	72.00d	12-Dec-1	06-Mar-20			0%	0%
120	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.4.3	MODULE-08_MP201 - MP197	72.00d	22-Feb-2	19-May-20			0%	0%
121	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.4.2	MODULE-07_MP196 - MP192	81.00d	02-May-2	08-Sep-20			0%	0%
122	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.4.1	MODULE-06_MP191 - MP187	72.00d	21-Aug-2	28-Nov-20			0%	0%
123	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.3	MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880~13+	324.00d	27-Nov-1	23-Jan-21			0%	0%
124	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.3.4	STEEL MODULE-03_MP186 - MP183	112.75d	30-May-2	21-Nov-20			0%	0%
125	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.3.3	STEEL MODULE-02_MP182 - MP177	216.00d	27-Nov-1	10-Sep-20			0%	0%
126	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.3.2	STEEL MODULE-01_MP176 - MP171	130.88d	30-Jul-20	23-Jan-21			0%	0%
127	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.2	MAIN BRIDGE PILE FOUNDATION_MARINE 10+380~11+880 FRO	302.00d	24-Nov-1	28-Dec-19	19-Feb-19		75.16%	22.76%
128	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.2.4	MODULE-05_MP171 - MP167	70.00d	19-Jun-19	16-Oct-19			75.3%	0%
129	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.2.3	MODULE-04_MP166 - MP162	72.00d	24-Nov-1	18-Feb-19	19-Feb-19		100%	70.21%
130	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.2.2	MODULE-03_MP161 - MP157	72.00d	22-Jan-19	18-Apr-19	03-Apr-19		100%	39.72%
131	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.2.1	MODULE-02_MP156 - MP152	72.00d	16-Apr-19	27-Jul-19			100%	0%
132	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.1.2.5	MODULE-01_MP151 - MP146	72.00d	04-Oct-19	28-Dec-19			0%	0%
133	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2	MAIN BRIDGE PILE CAP INSTALLATION	622.38d	22-Dec-1	23-Mar-21	01-May-19		27.07%	1.14%
134	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7	MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	594.50d	22-Dec-1	17-Feb-21	19-Aug-19		0%	0%
135	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.6	MAIN BRIDGE PILE CAP BOTTOM SLAB_CRZ 15+890~17+4	243.13d	17-Jan-19	12-Dec-19	19-Aug-19		0%	0%
136	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.6.5	MODULE-14_MP231 - MP227	61.88d	28-Sep-1	12-Dec-19			0%	0%
137	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.6.1	MODULE-15_MP236 - MP232	106.00d	05-Apr-19	11-Sep-19			0%	0%
138	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.6.2	MODULE-16_MP240 - MP237	51.25d	17-Jan-19	20-Mar-19	19-Aug-19		0%	0%
139	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.6.3	MODULE-17_MP245 - MP241	58.00d	17-Apr-19	03-Jul-19			0%	0%
140	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.6.4	MODULE-18_MP249 - MP246	44.00d	19-Feb-1	12-Apr-19			0%	0%
141	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.5	MAIN BRIDGE PILE CAP BOTTOM SLAB_INTERTIDAL 14+8	350.00d	06-Apr-19	18-Jul-20			0%	0%
142	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.5.1	MODULE-10_MP211 - MP207	68.00d	15-Apr-20	18-Jul-20			0%	0%
143	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.5.2	MODULE-11_MP216 - MP212	282.00d	06-Apr-19	15-Apr-20			0%	0%
144	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.5.3	MODULE-12_MP221 - MP217	122.00d	10-May-1	12-Nov-19			0%	0%
145	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.5.4	MODULE-13_MP226 - MP222	66.00d	03-Dec-1	18-Feb-20			0%	0%
146	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.4	MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 13+610~	239.00d	21-Jan-20	10-Dec-20			0%	0%
147	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.4.4	MODULE-09_MP206 - MP202	50.00d	21-Jan-20	20-Mar-20			0%	0%
148	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.4.3	MODULE-08_MP201 - MP197	58.00d	23-Mar-2	30-May-20			0%	0%
149	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.4.2	MODULE-07_MP196 - MP192	77.00d	30-May-2	08-Oct-20			0%	0%
150	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.4.1	MODULE-06_MP191 - MP187	52.00d	08-Oct-20	10-Dec-20			0%	0%
151	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.3	MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEI	308.00d	08-Jan-20	17-Feb-21			0%	0%
152	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.3.2	STEEL MODULE-01_MP176 - MP171	90.13d	02-Nov-2	17-Feb-21			0%	0%
153	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.3.3	STEEL MODULE-02_MP182 - MP177	190.00d	08-Jan-20	26-Sep-20			0%	0%



Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

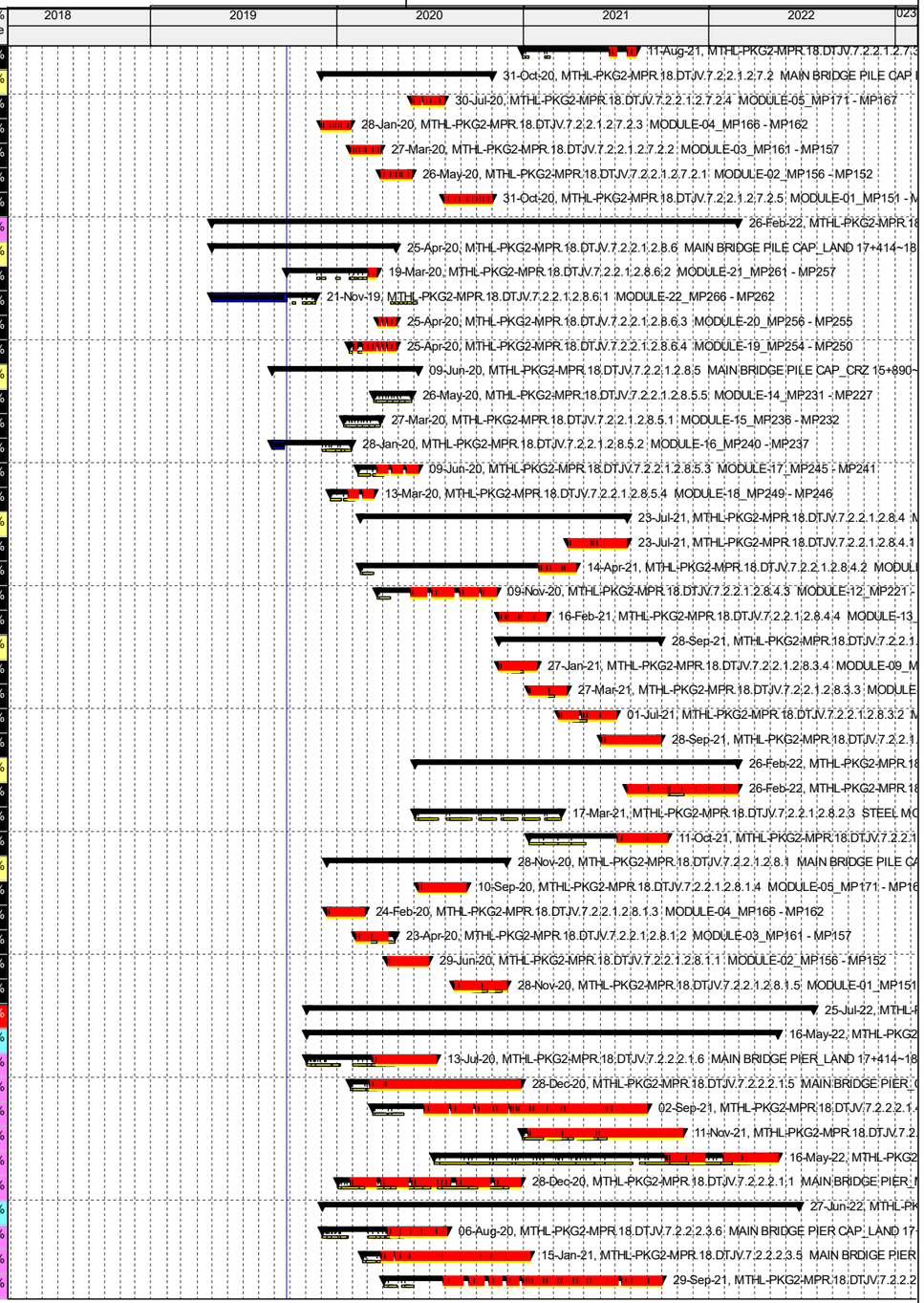
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10 380 - CH 18 187) ACROSS THE MUMBAI BAY INCL. SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO. MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME - Summary

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
154	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.3.4	STEEL MODULE-03_MP186 - MP183	82.00d	07-Aug-2	03-Dec-20			0%	0%
155	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.2	MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 10+380~	298.00d	22-Dec-1	21-Jan-20			0%	0%
156	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.2.4	MODULE-05_MP171 - MP167	44.00d	24-Aug-1	28-Oct-19			0%	0%
157	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.2.3	MODULE-04_MP166 - MP162	58.00d	22-Dec-1	01-Mar-19			0%	0%
158	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.2.2	MODULE-03_MP161 - MP157	58.00d	01-Mar-1	10-May-19			0%	0%
159	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.2.1	MODULE-02_MP156 - MP152	58.00d	15-May-1	16-Aug-19			0%	0%
160	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.7.2.5	MODULE-01_MP151 - MP146	68.00d	01-Nov-1	21-Jan-20			0%	0%
161	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8	MAIN BRIDGE PILE CAP INSTALLATION	619.13d	27-Dec-1	23-Mar-21	01-May-19		27.07%	1.14%
162	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.6	MAIN BRIDGE PILE CAP_LAND 17+414~18+188 FROM MP2	139.00d	27-Dec-1	13-Jun-19	01-May-19		100%	9.09%
163	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.6.2	MODULE-21_MP261 - MP257	79.00d	27-Dec-1	30-Mar-19	24-Sep-19		100%	0%
164	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.6.1	MODULE-22_MP266 - MP262	59.00d	02-Apr-19	13-Jun-19	01-May-19		100%	30%
165	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.6.3	MODULE-20_MP256 - MP255	31.00d	01-Jan-19	06-Feb-19			100%	0%
166	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.6.4	MODULE-19_MP254 - MP250	79.00d	08-Feb-1	13-May-19			100%	0%
167	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.5	MAIN BRIDGE PILE CAP_CRZ 15+890~17+414 FROM MP22	228.63d	04-Mar-1	08-Jan-20	28-Aug-19		55.78%	2.22%
168	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.5.5	MODULE-14_MP231 - MP227	64.63d	24-Oct-19	08-Jan-20			0%	0%
169	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.5.1	MODULE-15_MP236 - MP232	60.00d	02-Sep-1	22-Nov-19			2.57%	0%
170	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.5.2	MODULE-16_MP240 - MP237	47.00d	02-Jul-19	26-Sep-19	28-Aug-19		98.03%	12.5%
171	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.5.3	MODULE-17_MP245 - MP241	71.00d	29-Apr-19	16-Aug-19			100%	0%
172	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.5.4	MODULE-18_MP249 - MP246	57.00d	04-Mar-1	10-May-19			100%	0%
173	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.4	MAIN BRIDGE PILE CAP_INTERTIDAL 14+800~15+890 FRO	366.00d	18-Apr-19	05-Sep-20			17.78%	0%
174	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.4.1	MODULE-10_MP211 - MP207	84.00d	27-Apr-20	05-Sep-20			0%	0%
175	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.4.2	MODULE-11_MP216 - MP212	295.00d	18-Apr-19	13-May-20			20%	0%
176	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.4.3	MODULE-12_MP221 - MP217	135.00d	22-May-1	09-Dec-19			51.13%	0%
177	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.4.4	MODULE-13_MP226 - MP222	79.00d	14-Dec-1	17-Mar-20			0%	0%
178	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.3	MAIN BRIDGE PILE CAP_MARINE 13+610~14+800 FROM M	252.00d	01-Feb-2	06-Jan-21			0%	0%
179	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.3.4	MODULE-09_MP206 - MP202	63.00d	01-Feb-2	16-Apr-20			0%	0%
180	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.3.3	MODULE-08_MP201 - MP197	71.00d	03-Apr-20	06-Jul-20			0%	0%
181	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.3.2	MODULE-07_MP196 - MP192	94.00d	15-Jun-20	11-Nov-20			0%	0%
182	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.3.1	MODULE-06_MP191 - MP187	65.00d	21-Oct-20	06-Jan-21			0%	0%
183	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.2	MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880~13+610	325.88d	20-Jan-20	23-Mar-21			0%	0%
184	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.2.2	STEEL MODULE-01_MP176 - MP171	102.00d	21-Nov-2	23-Mar-21			0%	0%
185	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.2.3	STEEL MODULE-02_MP182 - MP177	208.00d	20-Jan-20	02-Nov-20			0%	0%
186	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.2.4	STEEL MODULE-03_MP186 - MP183	102.13d	27-Aug-2	07-Jan-21			0%	0%
187	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.1	MAIN BRIDGE PILE CAP_MARINE 10+380~11+880 FROM M	311.00d	03-Jan-19	17-Feb-20			62.02%	0%
188	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.1.4	MODULE-05_MP171 - MP167	57.00d	10-Sep-1	25-Nov-19			1.66%	0%
189	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.1.3	MODULE-04_MP166 - MP162	71.00d	03-Jan-19	29-Mar-19			100%	0%
190	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.1.2	MODULE-03_MP161 - MP157	71.00d	14-Mar-1	08-Jun-19			100%	0%
191	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.1.1	MODULE-02_MP156 - MP152	71.00d	27-May-1	26-Sep-19			96.37%	0%
192	MTHL-PKG2-MPR.18.DTJV.7.2.2.1.2.8.1.5	MODULE-01_MP151 - MP146	81.00d	14-Nov-1	17-Feb-20			0%	0%
193	MTHL-PKG2-MPR.18.DTJV.7.2.2.2	MAIN BRIDGE SUB-STRUCTURE	989.13d	09-Jan-19	24-Sep-21			30.71%	0%
194	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1	MAIN BRIDGE PIER INSTALLATION	701.13d	09-Jan-19	28-Jul-21			34.68%	0%
195	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1.6	MAIN BRIDGE PIER_LAND 17+414~18+188 FROM MB251 TO MI	221.09d	09-Jan-19	08-Nov-19			95.04%	0%
196	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1.5	MAIN BRIDGE PIER_CRZ 15+890~17+414 FROM MB226 TO MB	234.00d	26-Mar-1	06-Feb-20			43.87%	0%
197	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1.4	MAIN BRIDGE PIER_INTERTIDAL 14+800~15+890 FROM MB206	375.38d	11-May-1	16-Oct-20			13.64%	0%
198	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1.3	MAIN BRIDGE PIER_MARINE 13+610~14+800 FROM MB187 TO	249.00d	19-Mar-2	18-Feb-21			0%	0%
199	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1.2	MAIN BRIDGE PIER_MARINE (STEEL) 11+880~13+610 FROM MI	394.88d	17-Feb-2	28-Jul-21			0%	0%
200	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1.1	MAIN BRIDGE PIER_MARINE 10+380~11+880 FROM MB146 TO	303.00d	07-Feb-1	13-Mar-20			54.64%	0%
201	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3	MAIN BRIDGE PIER CAP INSTALLATION	692.13d	08-Feb-1	27-Aug-21			28.62%	0%
202	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3.6	MAIN BRIDGE PIER CAP_LAND 17+414~18+188 FROM MB251 T	209.09d	08-Feb-1	23-Nov-19			82.38%	0%
203	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3.5	MAIN BRIDGE PIER CAP_CRZ 15+890~17+414 FROM MB226 TO	229.00d	19-Apr-19	25-Feb-20			34.04%	0%
204	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3.4	MAIN BRIDGE PIER CAP_INTERTIDAL 14+800~15+890 FROM M	370.38d	06-Jun-19	05-Nov-20			10%	0%



Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

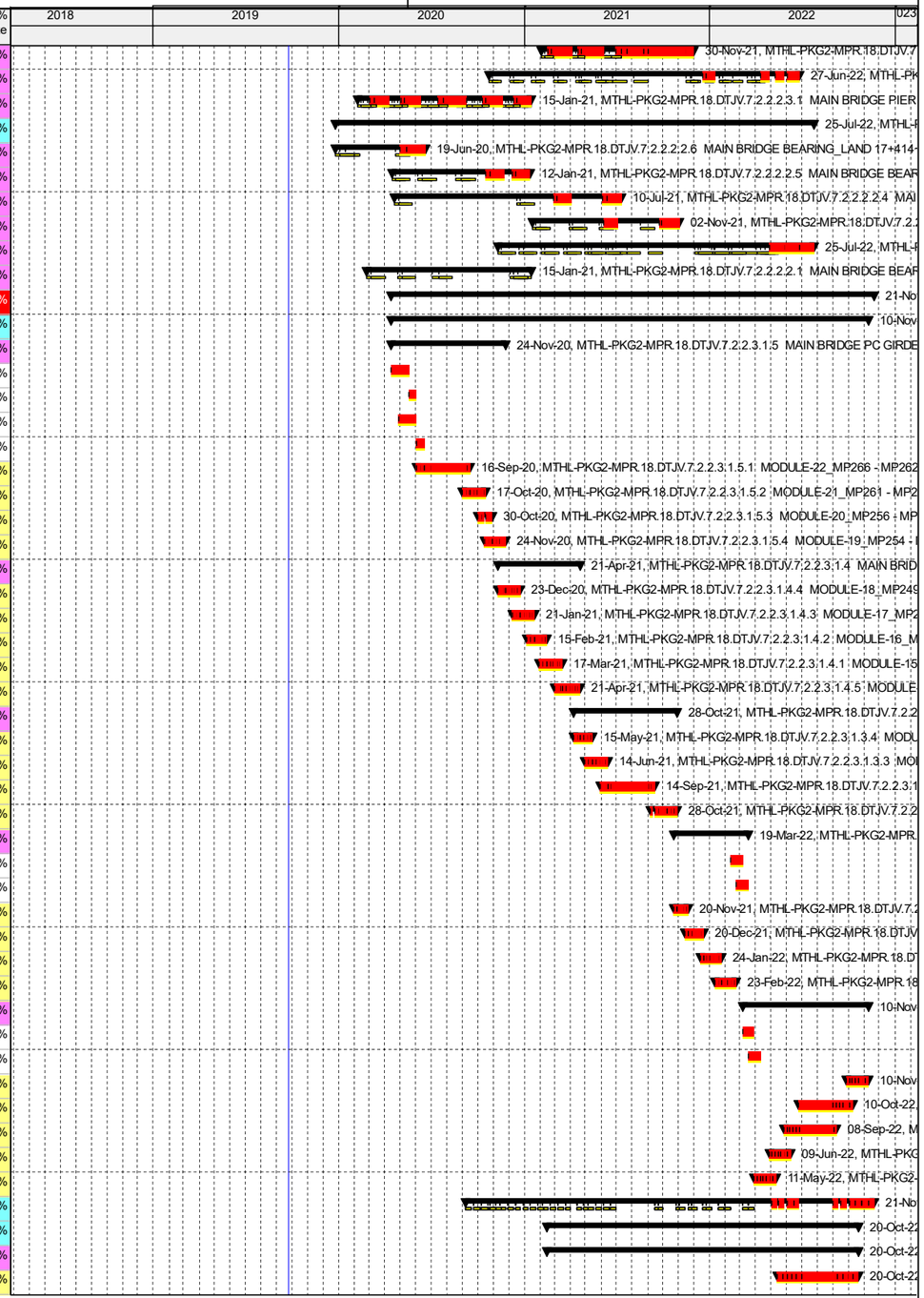
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10 380 - CH 18 187) ACROSS THE MUMBAI BAY INCL. SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO. MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME - Summary

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
205		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3.3 MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB18'	235.00d	23-Apr-20	10-Mar-21			0%	0%
206		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3.2 MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FRO	348.88d	30-Apr-20	27-Aug-21			0%	0%
207		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3.1 MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROM MB14(	289.00d	15-Mar-1	01-Apr-20			45.53%	0%
208		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2 MAIN BRIDGE BEARING PAD AND BEARING INSALLATION	944.79d	22-Feb-1	24-Sep-21			4.8%	0%
209		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2.6 MAIN BRIDGE BEARING_LAND 17+414~18+188 FROM MB251 T	180.50d	22-Feb-1	22-Aug-19			100%	0%
210		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2.5 MAIN BRIDGE BEARING_CRZ 15+890~17+414 FROM MB226 TO	287.88d	08-May-1	20-Feb-20			40%	0%
211		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2.4 MAIN BRIDGE BEARING_INTERTIDAL 14+800~15+890 FROM MI	443.00d	29-Jun-19	14-Sep-20			25%	0%
212		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2.3 MAIN BRIDGE BEARING_MARINE 13+610~14+800 FROM MB187	308.25d	07-Apr-20	09-Feb-21			0%	0%
213		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2.2 MAIN BRIDGE BEARING_MARINE (STEEL) 11+880~13+610 FRO	493.25d	19-May-2	24-Sep-21			0%	0%
214		MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2.1 MAIN BRIDGE BEARING_MARINE 10+380~11+880 FROM MB146	359.34d	25-Apr-19	18-Apr-20			50%	0%
215		MTHL-PKG2-MPR.18.DTJV.7.2.2.3 MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION	901.30d	12-Sep-1	01-Mar-22			0%	0%
216		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1 MAIN BRIDGE CONCRETE GIRDER INSTALLATION	874.29d	12-Sep-1	02-Feb-22			0%	0%
217		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5 MAIN BRIDGE PC GIRDER_LAND 15+890~17+414 FROM MP251	168.29d	12-Sep-1	27-Feb-20			0%	0%
218	CN.LGA.1000	Assembly of Structural Parts in Launching Gantry_1	35.00d	12-Sep-1	17-Oct-19			36.88%	0%
219	CN.LGA.1005	Assembly of Mechanical Parts in Launching Gantry_1	15.00d	17-Oct-19	01-Nov-19			0%	0%
220	CN.LGA.1010	Assembly of Structural Parts in Launching Gantry_2	35.00d	12-Sep-1	17-Oct-19			36.88%	0%
221	CN.LGA.1015	Assembly of Mechanical Parts in Launching Gantry_2	15.00d	17-Oct-19	01-Nov-19			0%	0%
222		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.1 MODULE-22_MP266 - MP262	45.88d	01-Nov-1	25-Dec-19			0%	0%
223		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.2 MODULE-21_MP261 - MP257	45.88d	02-Dec-1	23-Jan-20			0%	0%
224		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.3 MODULE-20_MP256 - MP255	30.88d	31-Dec-1	04-Feb-20			0%	0%
225		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.4 MODULE-19_MP254 - MP250	40.88d	11-Jan-20	27-Feb-20			0%	0%
226		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4 MAIN BRIDGE PRECAST GIRDER_CRZ 15+890~17+414 FROM M	145.88d	04-Feb-2	25-Sep-20			0%	0%
227		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.4 MODULE-18_MP249 - MP246	45.88d	04-Feb-2	28-Mar-20			0%	0%
228		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.3 MODULE-17_MP245 - MP241	45.88d	05-Mar-2	27-Apr-20			0%	0%
229		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.2 MODULE-16_MP240 - MP237	40.88d	03-Apr-20	21-May-20			0%	0%
230		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.1 MODULE-15_MP236 - MP232	45.88d	27-Apr-20	19-Jun-20			0%	0%
231		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.5 MODULE-14_MP231 - MP227	50.88d	27-May-2	25-Sep-20			0%	0%
232		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3 MAIN BIDGE PRECAST GIRDER_INTERTIDAL 14+800~15+890 F	110.97d	12-Sep-2	23-Jan-21			0%	0%
233		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.4 MODULE-13_MP226 - MP222	30.97d	12-Sep-2	21-Oct-20			0%	0%
234		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.3 MODULE-12_MP221 - MP217	35.97d	08-Oct-20	20-Nov-20			0%	0%
235		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.2 MODULE-11_MP216 - MP212	35.97d	09-Nov-2	19-Dec-20			0%	0%
236		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.1 MODULE-10_MP211 - MP207	40.97d	08-Dec-2	23-Jan-21			0%	0%
237		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2 MAIN BRIDGE PRECAST GIRDER_MARINE 13+610~14+800 FRO	125.97d	12-Jan-21	10-Jun-21			0%	0%
238	CN.LGD.1000	Dismantling of Launching Gantry_1	20.00d	18-May-2	10-Jun-21			0%	0%
239	CN.LGD.1010	Dismantling of Launching Gantry_2	20.00d	12-May-2	03-Jun-21			0%	0%
240		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.4 MODULE-09_MP206 - MP202	30.97d	12-Jan-21	17-Feb-21			0%	0%
241		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.3 MODULE-08_MP201 - MP197	35.97d	05-Feb-2	19-Mar-21			0%	0%
242		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.2 MODULE-07_MP196 - MP192	35.97d	08-Mar-2	17-Apr-21			0%	0%
243		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.1 MODULE-06_MP191 - MP187	30.97d	12-Apr-21	18-May-21			0%	0%
244		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1 MAIN BRIDGE PRECAST GIRDER_MARINE 10+380~11+880 FRO	150.97d	04-Jun-21	02-Feb-22			0%	0%
245	CN.LGA.1020	Assembling of Launching Gantry_1	20.00d	10-Jun-21	03-Sep-21			0%	0%
246	CN.LGA.1030	Assembling of Launching Gantry_2	20.00d	04-Jun-21	26-Jun-21			0%	0%
247		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.4 MODULE-05_MP171 - MP167	30.97d	28-Dec-2	02-Feb-22			0%	0%
248		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.3 MODULE-04_MP166 - MP162	30.97d	29-Nov-2	03-Jan-22			0%	0%
249		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.2 MODULE-03_MP161 - MP157	30.97d	30-Oct-21	04-Dec-21			0%	0%
250		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.1 MODULE-02_MP156 - MP152	30.97d	29-Sep-2	05-Nov-21			0%	0%
251		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.5 MODULE-01_MP151 - MP146	30.97d	28-Jun-21	06-Oct-21			0%	0%
252		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.3 STITCH JOINT CASTING	630.50d	07-Dec-1	12-Feb-22			0%	0%
253		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2 MAIN BRIDGE STEEL GIRDER INSTALLATION	378.00d	03-Oct-20	01-Mar-22			0%	0%
254		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1 MAN BRIDGE STEEL GIRDER INSTALLATION_MARINE 11+880~'	378.00d	03-Oct-20	01-Mar-22			0%	0%
255		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1.2 STEEL MODULE-01_MP176 - MP171 (INSTALLATION)	72.00d	07-Dec-2	01-Mar-22			0%	0%



Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

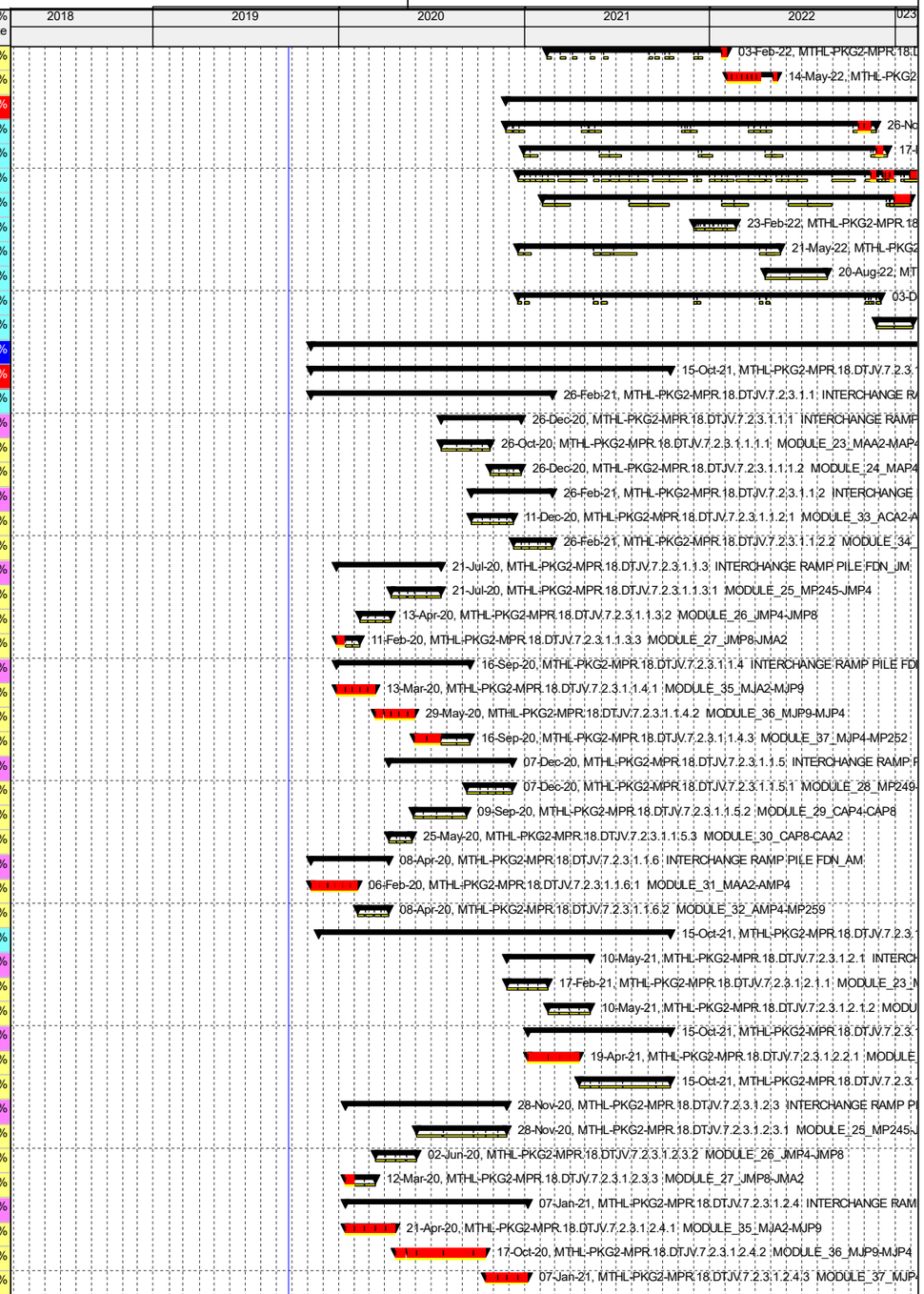
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACROSS THE MUMBAI BAY INCL. SHIVAJI NAGAR INTERCHANGE
UNDER IDENTIFICATION NO. MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME - Summary

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
256		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1.3 STEEL MODULE-02_MP182 - MP177 (INSTALLATION)	251.00d	03-Oct-20	30-Sep-21			0%	0%
257		MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1.4 STEEL MODULE-03_MP186 - MP183 (INSTALLATION)	57.00d	30-Sep-2	07-Dec-21			0%	0%
258		MTHL-PKG2-MPR.18.DTJV.7.2.2.4 MISCELLANEOUS & FINISHING WORKS	809.84d	16-May-1	24-May-22			2.15%	0%
259		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.2 CRASH BARRIER & GURARD RAILS	546.66d	20-Feb-2	07-Mar-22			0%	0%
260		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.4 WATER PROOFING	526.66d	26-Mar-2	17-Mar-22			0%	0%
261		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.5 PAVEMENT	593.63d	16-Mar-2	24-May-22			0%	0%
262		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.1 EXPANSION JOINT	503.75d	27-May-2	21-Apr-22			0%	0%
263		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.3 SUB STATION	508.88d	16-May-1	15-Apr-21			33.33%	0%
264		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.7 NOISE BARRIER	387.53d	16-Mar-2	14-Sep-21			0%	0%
265		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.6 FENDER INSTALLATION	80.00d	24-Jul-21	24-Nov-21			0%	0%
266		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.8 DRAINAGE WORKS	528.66d	16-Mar-2	09-Mar-22			0%	0%
267		MTHL-PKG2-MPR.18.DTJV.7.2.2.4.9 SIGN BOARDS	60.00d	12-Feb-2	23-Apr-22			0%	0%
268		MTHL-PKG2-MPR.18.DTJV.7.2.3 INTERCHANGE	1221.08d	24-Dec-1	28-Apr-22			40.33%	0%
269		MTHL-PKG2-MPR.18.DTJV.7.2.3.1 INTERCHANGE FOUNDATION	668.08d	24-Dec-1	22-Oct-20			53.82%	0%
270		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1 INTERCHANGE RAMP PILE FOUNDATION	321.00d	24-Dec-1	05-Mar-20			63.41%	0%
271		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.1 INTERCHANGE RAMP PILE FDN_MA	104.00d	05-Aug-1	03-Jan-20			21.95%	0%
272		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.1.1 MODULE_23_MAA2-MAP4	52.00d	05-Aug-1	02-Nov-19			43.53%	0%
273		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.1.2 MODULE_24_MAP4-MP246	52.00d	02-Nov-1	03-Jan-20			0%	0%
274		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.2 INTERCHANGE RAMP PILE FDN_AC	130.00d	01-Oct-19	05-Mar-20			0%	0%
275		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.2.1 MODULE_33_ACA2-ACP5	65.00d	01-Oct-19	19-Dec-19			0%	0%
276		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.2.2 MODULE_34_ACP5-MP256	65.00d	19-Dec-1	05-Mar-20			0%	0%
277		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.3 INTERCHANGE RAMP PILE FDN_JM	156.00d	03-Jan-19	05-Aug-19			100%	0%
278		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.3.1 MODULE_25_MP245-JMP4	65.00d	22-Apr-19	05-Aug-19			100%	0%
279		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.3.2 MODULE_26_JMP4-JMP8	52.00d	19-Feb-1	20-Apr-19			100%	0%
280		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.3.3 MODULE_27_JMP8-JMA2	39.00d	03-Jan-19	18-Feb-19			100%	0%
281		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.4 INTERCHANGE RAMP PILE FDN_MJ	182.00d	03-Jan-19	01-Oct-19			98.02%	0%
282		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.4.1 MODULE_35_MJA2-MJP9	65.00d	03-Jan-19	21-Mar-19			100%	0%
283		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.4.2 MODULE_36_MJP9-MJP4	65.00d	22-Mar-1	10-Jun-19			100%	0%
284		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.4.3 MODULE_37_MJP4-MP252	52.00d	11-Jun-19	01-Oct-19			93.03%	0%
285		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.5 INTERCHANGE RAMP PILE FDN_CA	156.00d	28-May-1	23-Jan-20			36.57%	0%
286		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.5.1 MODULE_28_MP249-CAP4	65.00d	08-Nov-1	23-Jan-20			0%	0%
287		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.5.2 MODULE_29_CAP4-CAP8	52.00d	14-Aug-1	08-Nov-19			34.73%	0%
288		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.5.3 MODULE_30_CAP8-CAA2	39.00d	28-May-1	14-Aug-19			100%	0%
289		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.6 INTERCHANGE RAMP PILE FDN_AM	130.00d	24-Dec-1	27-May-19			100%	0%
290		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.6.1 MODULE_31_MAA2-AMP4	78.00d	24-Dec-1	26-Mar-19			100%	0%
291		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.1.6.2 MODULE_32_AMP4-MP259	52.00d	27-Mar-1	27-May-19			100%	0%
292		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2 INTERCHANGE RAMP PILE CAP INSTALLATION	417.00d	08-Jan-19	22-Oct-20			40.04%	0%
293		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.1 INTERCHANGE RAMP PILE CAP_MA	136.00d	06-Dec-1	15-May-20			0%	0%
294		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.1.1 MODULE_23_MAA2-MAP4	68.00d	06-Dec-1	24-Feb-20			0%	0%
295		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.1.2 MODULE_24_MAP4-MP246	68.00d	24-Feb-2	15-May-20			0%	0%
296		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.2 INTERCHANGE RAMP PILE CAP_AC	170.00d	15-Jan-20	22-Oct-20			0%	0%
297		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.2.1 MODULE_33_ACA2-ACP5	85.00d	15-Jan-20	24-Apr-20			0%	0%
298		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.2.2 MODULE_34_ACP5-MP256	85.00d	24-Apr-20	22-Oct-20			0%	0%
299		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.3 INTERCHANGE RAMP PILE CAP_JM	204.00d	18-Jan-19	06-Dec-19			71.94%	0%
300		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.3.1 MODULE_25_MP245-JMP4	85.00d	18-Jun-19	06-Dec-19			32.65%	0%
301		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.3.2 MODULE_26_JMP4-JMP8	68.00d	21-Mar-1	17-Jun-19			100%	0%
302		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.3.3 MODULE_27_JMP8-JMA2	51.00d	18-Jan-19	20-Mar-19			100%	0%
303		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.4 INTERCHANGE RAMP PILE CAP_MJ	238.00d	18-Jan-19	15-Jan-20			61.66%	0%
304		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.4.1 MODULE_35_MJA2-MJP9	85.00d	18-Jan-19	29-Apr-19			100%	0%
305		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.4.2 MODULE_36_MJP9-MJP4	85.00d	30-Apr-19	26-Oct-19			72.65%	0%
306		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.4.3 MODULE_37_MJP4-MP252	68.00d	26-Oct-19	15-Jan-20			0%	0%



Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

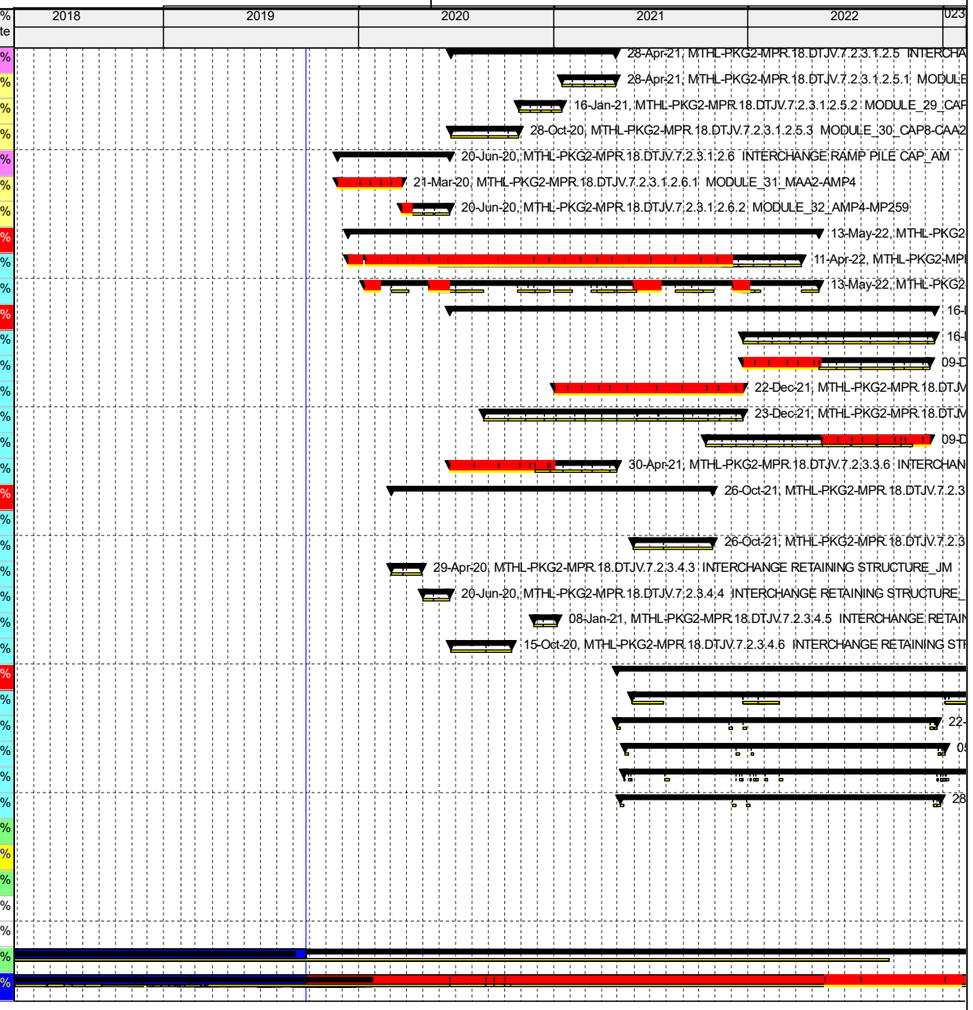
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10 380 - CH 18 187) ACROSS THE MUMBAI BAY INCL. SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO. MMRDA/ENG/000753

ANNEXURE-5A CONSTRUCTION UPDATED PROGRAMME - Summary

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
307		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5 INTERCHANGE RAMP PILE CAP_CA	204.00d	15-Oct-19	27-Jun-20			0%	0%
308		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5.1 MODULE_28_MP249-CAP4	85.00d	05-Mar-2	27-Jun-20			0%	0%
309		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5.2 MODULE_29_CAP4-CAP8	68.00d	16-Dec-1	05-Mar-20			0%	0%
310		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5.3 MODULE_30_CAP8-CAA2	51.00d	15-Oct-19	16-Dec-19			0%	0%
311		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.6 INTERCHANGE RAMP PILE CAP_AM	170.00d	08-Jan-19	15-Oct-19			91.62%	0%
312		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.6.1 MODULE_31_MAA2-AMP4	102.00d	08-Jan-19	09-May-19			100%	0%
313		MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.6.2 MODULE_32_AMP4-MP259	68.00d	10-May-1	15-Oct-19			79.04%	0%
314		MTHL-PKG2-MPR.18.DTJV.7.2.3.2 INTERCHANGE SUBSTRUCTURE & BEARING	637.00d	29-Jan-19	31-May-21			27.38%	0%
315		MTHL-PKG2-MPR.18.DTJV.7.2.3.2.1 INTERCHANGE RAMP PIER INSTALLATION	609.00d	29-Jan-19	27-Apr-21			27.38%	0%
316		MTHL-PKG2-MPR.18.DTJV.7.2.3.2.2 INTERCHANGE BEARING INSTALLATION	612.00d	27-Feb-1	31-May-21			0%	0%
317		MTHL-PKG2-MPR.18.DTJV.7.2.3.3 INTERCHANGE SUPERSTRUCTURE INSTALLATION	641.00d	20-Sep-1	15-Feb-22			0%	0%
318		MTHL-PKG2-MPR.18.DTJV.7.2.3.3.1 INTERCHANGE BOX GIRDER INSTALLATION_MA	255.00d	09-Jan-21	03-Jan-22			0%	0%
319		MTHL-PKG2-MPR.18.DTJV.7.2.3.3.2 INTERCHANGE BOX GIRDER INSTALLATION_AC	207.78d	27-Feb-2	27-Dec-21			0%	0%
320		MTHL-PKG2-MPR.18.DTJV.7.2.3.3.3 INTERCHANGE BOX GIRDER INSTALLATION_JM	250.00d	11-Mar-2	26-Feb-21			0%	0%
321		MTHL-PKG2-MPR.18.DTJV.7.2.3.3.4 INTERCHANGE BOX GIRDER INSTALLATION_MJ	350.00d	20-Sep-1	08-Jan-21			0%	0%
322		MTHL-PKG2-MPR.18.DTJV.7.2.3.3.5 INTERCHANGE BOX GIRDER INSTALLATION_CA	351.00d	30-Oct-20	15-Feb-22			0%	0%
323		MTHL-PKG2-MPR.18.DTJV.7.2.3.3.6 INTERCHANGE BOX GIRDER INSTALLATION_AM	230.00d	14-Oct-19	19-Aug-20			0%	0%
324		MTHL-PKG2-MPR.18.DTJV.7.2.3.4 INTERCHANGE RETAINING STRUCTURE	606.25d	11-Mar-1	06-Nov-20			51.9%	0%
325		MTHL-PKG2-MPR.18.DTJV.7.2.3.4.1 INTERCHANGE RETAINING STRUCTURE_MA	0.00d					0%	0%
326		MTHL-PKG2-MPR.18.DTJV.7.2.3.4.2 INTERCHANGE RETAINING STRUCTURE_AC	58.00d	24-Jun-20	06-Nov-20			0%	0%
327		MTHL-PKG2-MPR.18.DTJV.7.2.3.4.3 INTERCHANGE RETAINING STRUCTURE_JM	50.00d	11-Mar-1	08-May-19			100%	0%
328		MTHL-PKG2-MPR.18.DTJV.7.2.3.4.4 INTERCHANGE RETAINING STRUCTURE_MJ	35.00d	09-May-1	11-Jul-19			100%	0%
329		MTHL-PKG2-MPR.18.DTJV.7.2.3.4.5 INTERCHANGE RETAINING STRUCTURE_CA	39.00d	06-Feb-2	24-Mar-20			0%	0%
330		MTHL-PKG2-MPR.18.DTJV.7.2.3.4.6 INTERCHANGE RETAINING STRUCTURE_AM	41.00d	12-Jul-19	24-Oct-19			59.49%	0%
331		MTHL-PKG2-MPR.18.DTJV.7.2.3.5 MISCELLANEOUS & FINISHING WORKS	463.88d	19-Aug-2	28-Apr-22			0%	0%
332		MTHL-PKG2-MPR.18.DTJV.7.2.3.5.1 EXPANSION JOINT	435.88d	01-Oct-20	22-Apr-22			0%	0%
333		MTHL-PKG2-MPR.18.DTJV.7.2.3.5.2 CRASH BARRIER & GURARD RAILS	407.88d	19-Aug-2	21-Feb-22			0%	0%
334		MTHL-PKG2-MPR.18.DTJV.7.2.3.5.3 WATER PROOFING	407.88d	10-Sep-2	08-Mar-22			0%	0%
335		MTHL-PKG2-MPR.18.DTJV.7.2.3.5.4 PAVEMENT	453.88d	07-Sep-2	28-Apr-22			0%	0%
336		MTHL-PKG2-MPR.18.DTJV.7.2.3.5.5 DRAINAGE WORKS	407.88d	28-Aug-2	26-Feb-22			0%	0%
337		MTHL-PKG2-MPR.18.DTJV.8 PROJECT HANDINGOVER	64.88d	24-May-2	22-Sep-22			0%	0%
338		MTHL-PKG2-MPR.18.DTJV.8.2 CHECKLIST	64.88d	24-May-2	22-Sep-22			0%	0%
339		MTHL-PKG2-MPR.18.DTJV.10 DEFECT LIABILITY PERIOD (DLP)	729.88d	22-Sep-2	21-Sep-24			0%	0%
340	DLP.1000	Return of the land of Casting Yard after cleaning on completion	180.00d	22-Sep-2	21-Mar-23			0%	0%
341	DLP.1010	Defect Liability Period (24 Months)	0.00d	21-Sep-2	21-Sep-24			0%	0%
342		MTHL-PKG2-MPR.18.DTJV.9 PRICE SCHEDULE	1824.11d	23-Mar-1	21-Mar-23	23-Mar-18		46.72%	31.89%
343		MTHL-PKG2-MPR.18.DDC MTHL-PKG2-RAMBOLL DESIGN PROGRAMME_25082	1122.00d	15-Jan-18	17-Jun-22	16-Dec-17		96.39%	58.37%



Primary Baseline
Actual Work
Critical Remaining Work
% Complete
Summary

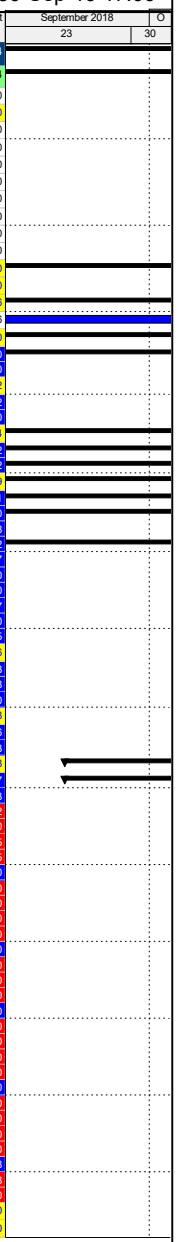
EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-19	R0		

Attachment 9- Package-3's Construction Programme Updated as on 25th September 2019

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Variance - BL Project Finish Date	Total Float	Activity % Complete	Budgeted Total Cost	Actual Total Cost	Schedule % Complete	Performance % Complete	Cost Performance Index	Schedule Performance Index	Planned Value Cost	Earned Value Cost
MTHL Pkg 3_Construction Schedule Sep19		1266	23-Mar-18	21-Sep-21	23-Mar-18 A	05-Sep-22	-297	0		Rs10,137,901,022	Rs777,800,528	50.27%	8.37%	1.12	0.17	Rs5,247,298,488	Rs874,027,824
Procurement of Mumbai Trans Harbour Link Project (Pa		1266	23-Mar-18	21-Sep-21	23-Mar-18 A	05-Sep-22	-297	0		Rs10,137,901,022	Rs777,800,528	50.27%	8.37%	1.12	0.17	Rs5,247,298,488	Rs874,027,824
2	Commencement Date (CD)	0	23-Mar-18		23-Mar-18 A		0		100%	Rs0	Rs0	100%	100%	0.00	0.00	Rs0	Rs0
Physical Milestones		1012	18-Sep-18	21-Sep-21	28-Nov-19	05-Sep-22	-349	0		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
KD1001	KD 1 [Construction programme, completion of Soil Investi	0	18-Sep-18	18-Sep-18	28-Nov-19	28-Nov-19	-436	1012	0%	Rs0	Rs0	100%	0%	0.00	0.00	Rs0	Rs0
KD1002	KD 2 [NOC for technical design doc & drawing for founda	0	17-Dec-18	17-Dec-18	26-Jan-20	26-Jan-20	-406	953	0%	Rs0	Rs0	100%	0%	0.00	0.00	Rs0	Rs0
KD1003	KD 3 [NOC for Good for construction drawing for foundat	0	15-Jun-19	15-Jun-19	19-Jun-20	19-Jun-20	-371	808	0%	Rs0	Rs0	100%	0%	0.00	0.00	Rs0	Rs0
KD1004	KD 4 [Substantial completion of foundation, piles (if applic	0	21-Mar-20	21-Mar-20	17-Jan-21	17-Jan-21	-302	596	0%	Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
KD1005	KD 5 [Substantial completion of pile caps (if applicable),	0	19-Sep-20	19-Sep-20	10-Aug-21	10-Aug-21	-325	391	0%	Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
KD1006	KD 6 [Substantial completion superstructure (PC/CIS/SS	0	20-Mar-21	20-Mar-21	21-Feb-22	21-Feb-22	-338	196	0%	Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
KD1007	KD 7 [Substantial completion of kerb/traffic signs, Markin	0	24-Jul-21	24-Jul-21	29-Jul-22	29-Jul-22	-370	38	0%	Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
KD1008	KD 8 [Final completion & handing over]	0	21-Sep-21	21-Sep-21	05-Sep-22	05-Sep-22	-349	0	0%	Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Financial Milestone		758	18-Sep-18	21-Sep-21	23-Mar-18 A	21-Sep-21	0	349		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Interface Milestone		877	17-Dec-18	06-Mar-21	25-Sep-19	18-Feb-22	-349	199		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Document Submittals		45	23-Mar-18	06-May-18	06-Apr-18 A	25-Sep-19	-506	84		Rs74,992,895	Rs59,994,316	100%	80%	1.00	0.80	Rs74,992,895	Rs59,994,316
Submi1000	Submissions within 14,28,45 days from Commencemer	45	23-Mar-18	06-May-18	06-Apr-18 A	25-Sep-19	-506	84	80%	Rs74,992,895	Rs59,994,316	100%	80%	1.00	0.80	Rs74,992,895	Rs59,994,316
Employer's Obligation / Land Handover		151	19-Apr-18	18-Sep-18	23-Mar-18 A	29-Sep-19	-377	157		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
ROW 75 Ha [CD +180 days]		0	19-Apr-18	18-Sep-18	23-Mar-18 A	29-Sep-19	-377	111		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Casting Yard 9.16 Ha [CD+120 days]		0	20-Jul-18	20-Jul-18	20-Dec-18 A	21-Dec-18	-155			Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Employer Office (Sch 01- General Item)		801	20-Aug-18	16-Sep-21	25-Jan-19 A	26-Mar-22	-162	138		Rs142,351,965	Rs43,509,322	84.68%	30.56%	1.00	0.36	Rs120,543,954	Rs43,509,322
Construction of Employer office		110	20-Aug-18	11-Dec-18	30-May-19 A	02-Jan-20	-298	137		Rs112,791,965	Rs37,597,322	100%	33.33%	1.00	0.33	Rs112,791,965	Rs37,597,322
Facility		980	12-Dec-18	16-Sep-21	25-Jan-19 A	26-Mar-22	-191	162		Rs29,560,000	Rs5,912,000	26.22%	20%	1.00	0.76	Rs7,751,989	Rs5,912,000
Survey & Geotechnical Investigation Works		346	19-Apr-18	22-Oct-18	19-Apr-18 A	28-Nov-19	-310	138		Rs242,300,773	Rs181,725,579	100%	95.75%	1.28	0.96	Rs242,300,945	Rs232,003,154
Topographical Survey		346	19-Apr-18	22-Oct-18	19-Apr-18 A	25-Oct-19	-282	72		Rs0	Rs0	100%	93.29%	0.00	0.93	Rs109	Rs102
Geotechnical Investigation work		93	17-May-18	17-Sep-18	10-Sep-18 A	28-Nov-19	-339	138		Rs242,300,773	Rs181,725,579	100%	95.75%	1.28	0.96	Rs242,300,836	Rs232,003,052
Design Works		412	07-May-18	14-Jun-19	25-Apr-18 A	19-Jun-20	-286	327		Rs159,122,500	Rs45,311,484	100%	35.94%	1.26	0.36	Rs159,123,270	Rs57,187,449
Design Basis Report		48	07-May-18	30-Jun-18	25-Apr-18 A	08-Dec-18	-108			Rs0	Rs0	100%	100%	0.00	1.00	Rs51	Rs51
Preliminary Design		47	02-Jul-18	25-Aug-18	26-Jul-18 A	25-Sep-19	-301	71		Rs286,875	Rs286,875	100%	80%	0.80	0.80	Rs286,875	Rs229,500
Geotechnical Interpretative Report Submission & GC Approval (NONO)		24	11-Sep-18	08-Oct-18	07-Dec-18 A	02-Dec-19	-420	179		Rs0	Rs0	100%	91%	0.00	0.91	Rs42	Rs38
Plan & Profile Alignment		77	06-Jun-18	14-Aug-18	25-Jun-18 A	29-Oct-19	-334	38		Rs0	Rs0	100%	80%	0.00	0.80	Rs102	Rs82
Superstructure Design		257	16-Aug-18	26-Feb-19	05-Mar-19 A	30-Mar-20	-307	126		Rs85,075,000	Rs4,912,734	100%	5.77%	1.00	0.06	Rs85,075,144	Rs4,912,767
Foundation & Pier		324	05-Oct-18	14-Jun-19	06-Nov-18 A	19-Jun-20	-286	147		Rs28,434,375	Rs12,791,250	100%	47.07%	1.05	0.47	Rs28,434,435	Rs13,384,320
Abutment & Foundation		203	15-Oct-18	16-Jan-19	31-Dec-18 A	20-Jan-20	-283	215		Rs0	Rs0	100%	37.41%	0.00	0.37	Rs81	Rs30
Pier Cap		322	24-Oct-18	10-May-19	11-Jan-19 A	17-Jun-20	-314	138		Rs0	Rs0	100%	12.72%	0.00	0.13	Rs290	Rs37
Bearings & Drainage		115	17-Nov-18	03-Apr-19	21-Jan-19 A	09-May-20	-312	362		Rs18,005,625	Rs0	100%	62.98%	0.00	0.63	Rs18,005,625	Rs11,340,000
Pavement Design		71	01-Jul-18	27-Aug-18	15-Oct-18 A	18-Feb-19	-143			Rs27,320,625	Rs27,320,625	100%	100%	1.00	1.00	Rs27,320,625	Rs27,320,625
Procurement Works		900	12-Sep-18	08-Jun-21	15-Feb-19 A	04-Jul-22	-304	0		Rs1,387,160,466	Rs0	88.98%	0%	0.00	0.00	Rs1,499,432,161	Rs126
For Main Bridge		900	12-Sep-18	08-Jun-21	15-Feb-19 A	04-Jul-22	-304	0		Rs877,933,218	Rs0	78.85%	0%	0.00	0.00	Rs692,241,115	Rs108
For Road Works		503	04-Apr-19	13-Jan-21	01-Mar-19 A	10-Nov-21	-225	127		Rs0	Rs0	28.57%	4.29%	0.00	0.15	Rs120	Rs18
Imported Procurement		170	22-Jan-19	10-Aug-19	22-Feb-20	11-Sep-20	-333	205		Rs509,227,248	Rs0	100%	0%	0.00	0.00	Rs807,190,926	Rs0
Co-ordinated Fabrication & Manufracturing Works		489	27-Sep-18	10-Feb-20	21-Feb-19 A	04-Mar-21	-302	194		Rs390,605,953	Rs0	72.5%	0%	0.00	0.00	Rs283,204,002	Rs218
Permanent Works fabrication		459	27-Sep-18	06-Jan-20	21-Feb-19 A	28-Jan-21	-302	194		Rs390,605,953	Rs0	72.5%	0%	0.00	0.00	Rs283,203,601	Rs136
Permanent Works Assembly		459	22-Oct-18	10-Feb-20	25-Feb-19 A	04-Mar-21	-302	194		Rs0	Rs0	74.26%	15.28%	0.00	0.21	Rs401	Rs83
Construction Works		1028	20-Jul-18	23-Jul-21	26-Sep-18 A	29-Jul-22	-297	32		Rs7,063,465,446	Rs447,259,827	34.98%	6.81%	1.08	0.19	Rs2,470,932,576	Rs481,333,238
Preconstruction Activity		388	20-Jul-18	01-Jul-19	26-Sep-18 A	30-Apr-20	-230	251		Rs0	Rs0	100%	29.65%	0.00	0.30	Rs565	Rs167
Sub Structures (Open Foundation, Pier ,Pier Cap)		774	08-Dec-18	07-Nov-20	05-Dec-18 A	08-Nov-21	-278	257		Rs3,392,806,949	Rs413,186,583	43.71%	12.18%	1.00	0.28	Rs1,483,154,769	Rs413,186,583
Main Carriageway		566	08-Dec-18	24-Jan-20	05-Dec-18 A	01-Feb-21	-289	465		Rs1,821,401,625	Rs298,412,532	76.88%	16.38%	1.00	0.21	Rs1,400,249,849	Rs298,412,532
SH 54 Ramps		289	27-Feb-19	06-Mar-20	25-Apr-19 A	08-Mar-21	-283	161		Rs232,139,423	Rs45,909,620	15.38%	19.78%	1.00	1.29	Rs35,713,757	Rs45,909,620
Chirle NH 4B Ramps		347	20-May-19	05-Sep-20	07-May-19 A	04-Sep-21	-280	178		Rs874,987,055	Rs34,432,215	4.08%	3.94%	1.00	0.96	Rs35,713,757	Rs34,432,215
Chirle NH 4B Loops		331	09-Sep-19	07-Nov-20	21-Aug-19 A	08-Nov-21	-278	168		Rs464,278,846	Rs34,432,215	2.47%	7.42%	1.00	3.00	Rs11,477,405	Rs34,432,215
Super Structures		637	27-Feb-19	12-Apr-21	22-Jan-20	16-Apr-22	-286	88		Rs1,408,927,165	Rs0	17.73%	0%	0.00	0.00	Rs249,745,170	Rs0
Segments Precasting		422	30-Mar-19	09-Nov-20	28-Jan-20	23-Jul-21	-204	125		Rs760,156,099	Rs0	20.21%	0%	0.00	0.00	Rs153,615,378	Rs0
Segments Erection		405	26-Aug-19	20-Jan-21	23-Sep-20	18-Feb-22	-304	108		Rs70,699,410	Rs0	5.31%	0%	0.00	0.00	Rs3,755,906	Rs0
Cast In Situ		637	27-Feb-19	12-Apr-21	22-Jan-20	16-Apr-22	-286	88		Rs464,334,354	Rs0	14.31%	0%	0.00	0.00	Rs66,433,205	Rs0
Steel Structure		390	10-May-19	17-Nov-20	09-Jun-20	17-Nov-21	-278	126		Rs113,737,302	Rs0	22.81%	0%	0.00	0.00	Rs25,940,681	Rs0
Bearings & Expansion Joints		210	03-Aug-20	12-Apr-21	21-Sep-21	26-May-22	-319	55		Rs10,454,697	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Precast Segments		180	03-Aug-20	17-Mar-21	21-Sep-21	21-Apr-22	-310	85		Rs3,689,893	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
CIS		180	07-Sep-20	12-Apr-21	27-Oct-21	26-May-22	-319	55		Rs3,689,893	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Steel Structure		142	12-Oct-20	30-Mar-21	02-Dec-21	17-May-22	-322	63		Rs3,074,911	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Bridge Ancillaries & Miscellaneous Item		284	12-Aug-20	23-Jul-21	25-Aug-21	29-Jul-22	-297	0		Rs180,921,987	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Crash Barrier & Safety fence		229	12-Aug-20	12-Apr-21	25-Aug-21	26-May-22	-319	55		Rs38,328,587	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Painting works		133	28-Jan-21	07-Jul-21	24-Feb-22	29-Jul-22	-304	0		Rs39,808,055	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
kerb, traffic Sign & pavement marking		169	03-Mar-21	23-Jul-21	27-Dec-21	12-Jul-22	-283	14		Rs96,849,390	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Restoration of removed structure and As-built doc & maintenance manu		154	08-Apr-21	07-Jul-21	31-Jan-22	29-Jul-22	-304	0		Rs5,935,955	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
RE Wall		499	27-Feb-19	18-Feb-21	29-Feb-20	15-Dec-21	-225	127		Rs461,687,248	Rs0	9.63%	0%	0.00	0.00	Rs44,476,086	Rs0
Raft		264	27-Feb-19	06-Feb-20	29-Feb-20	06-Feb-21	-283	271		Rs71,575,695	Rs0	62.14%	0%	0.00	0.00	Rs44,476,034	Rs0
RE wall with backfill		264	10-May-19	24-Apr-20	12-May-20	19-Apr-21	-277	271		Rs378,591,600	Rs0	0%	0%	0.00	0.00	Rs52	Rs0
GSB & WMM		120	20-Jan-20	09-Jun-20	19-Jan-21	10-Jun-21	-283	227		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Ashpalt pavement		120	29-Sep-20	18-Feb-21	23-Jun-21	15-Dec-21	-225	127		Rs11,519,953	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Road Work		746	20-Apr-19	18-May-21	16-Feb-19 A	18-May-22	-283	14		Rs1,608,667,400	Rs34,073,244	43.11%	4.24%	2.00	0.10	Rs693,555,986	Rs68,146,488
For At Grade work		624	20-Apr-19	02-Mar-21	16-Feb-19 A	27-Dec-21	-225	117		Rs1,566,696,139	Rs34,073,244	44.27%	4.35%	2.00	0.10	Rs693,555,986	Rs68,146,488
For Bridge and ramps		45	25-Mar-21	18-May-21	26-Mar-22	18-May-22	-283	14		Rs41,971,261	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Completion of Interface Activity		408	19-Sep-20	06-Mar-21	19-Sep-20	18-Feb-22	-267	170		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0
Provisional Sum		800	23-Apr-18	23-Aug-21	25-Sep-19	29-Jun-22	-259	56		Rs677,901,024	Rs0	58.38%	0%	0.00	0.00	Rs396,768,685	Rs0



Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Variance - BL Project Finish Date	Total Float	Activity % Complete	Budgeted Total Cost	Actual Total Cost	Schedule % Complete	Performance % Complete	Cost Performance Index	Schedule Performance Index	Planned Value Cost	Earned Value Cost	September 2018	O
																		23	30
	Testing & Commissioning Works	32	26-Jul-21	20-Sep-21	29-Jul-22	05-Sep-22	-297	0		Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0		

Annexure-IV

अपर प्रधान मुख्य वनसंरक्षक, कांदळवन कक्ष, मुंबई यांचे कार्यालय,
एस.आर.ए.बिल्डींग, ए-विंग, दुसरा मजला, अनंतर काणेकर मार्ग, बांद्रा (पूर्व), मुंबई-400 051.
फोन व फॅक्स-022 26591586, Email:-ccfmangrove@mahaforest.gov.in/ccfmmumbai@gmail.com

विषय :- MMRDA अंतर्गत घेण्यात आलेल्या कांदळवन रोपवनाच्या कामाबाबत.

जा.क्र.कक्ष-6/योजना/ 1867/ 2019-20
बांद्रा, मुंबई- 400 051, दि. 24/12/2019.

प्रति,
श्री. जी.जी.देशपांडे,
कार्यकारी अभियंता,
मुंबई महानगर प्रदेश विकास प्राधिकरण,
मुंबई.

संदर्भ :-1) आपले कडील पत्र क्र.एमटीएचएल/फॉरेस्ट लॅण्ड/सीए/डीसीएफ अलीबाग/ स्टेटस रिपोर्ट /18/87, दि. 21.06.2018.
2) आपले कडील पत्र क्रइ.डी./एमटीएचएल/सीसीएफ मॉग्रोव्ह/पेमेंट16/ दि.9.3.2016.
3) आपले कडील पत्र क्रइ.डी./एमटीएचएल/सीसीएफ मॉग्रोव्ह/पेमेंट16/ दि.17.10.2016.
4) आपले कडील पत्र क्र. एमटीएचएल/फॉरेस्ट लॅण्ड/सीए/डीसीएफ अलीबाग/ स्टेटस रिपोर्ट/19/ 62/ दि. 16.10.2019.
5) या कार्यालयाचे पत्र क्र. कक्ष-6/ योजना/975/ दि. 27.07.2018.

आपले कडील उपरोक्त संदर्भिय पत्र क्र.2 व 3 अन्वये कांदळवनाकरिता 200.00 हे. रापवनाचे उद्दिष्ट साद्य करण्याकरिता आपणाकडुन रक्कम रु.5,05,89,422/- प्राप्त झालेले आहे. मुंबई महानगर प्रदेश विकास प्राधिकरण अंतर्गत मुंबई ट्रान्स हार्बर (MTHL) या योजने मध्ये एकूण 200.00 हे. रोपवन क्षेत्राचे उद्दिष्ट खालीलप्रमाणे वनविभागास वाटप करण्यात आले होते. त्यापैकी सन 2017-18 व 2018-19 च्या पावसाळयात 200.00 हे. क्षेत्रावर कांदळवनांचे रोपवन घेण्यात आलेले आहे. त्याचा तपशिल खालीलप्रमाणे.

अ.क्र.	वनविभाग	साध्य केलेले उद्दीष्ट						
		वर्ष	वनक्षेत्र		स. नं.	क्षेत्र	पूर्व पावसाळी व प्रथम वर्षी रोपवनावर झालेला खर्च रक्कम रु. (Preplantation operation+ First	2 ते 7 व्या वर्षाकरिता लागणारे अनुदान
1	डहाणू (रोपवाटीकासह)	2015-16	बोईसर	मौजे पामटेंभी	161	15.00	2351479/-	
2			सफाळे	मौजे करवेला	47	15.00	2608343/-	
3		2017-18	बोईसर	मौजे पामटेंभी	161	10.00	2044986/-	
4			बोईसर	सालवड	107	10.00	2044986/-	
5			बोईसर	चंडीगाव	729	10.00	2136455/-	
6			सफाळे	माकुणसार	283/अ व 247/2	20.00	4319819/-	

7	मुंबई कांदळवन संधारण घटक	2017-18	ठाणे खाडी फलेमिंगो	कांजूरं	275 न.भू.क्र 657अ.	10.00	(प्रथम वर्ष) 1216996/- (दितीय वर्ष) 243336/-	
8				मुलूंड व भांडूप	157 न.भू.क्र 1318.	15.00	(प्रथम वर्ष) 1825494/- (दितीय वर्ष) 197101/-	
9	डहाणू वनविभाग	2018-19	डहाणू	पालघर	धनसार 64	45.00	2569984/-	2,76,67,879/
10				सफाळे	करवेळा 47	20.00	2569984/-	
11				बोईसर	नवापूर 161	10.00	1284992/-	
12					सालवड 107	10.00	1284992/-	
13				पालघर	शिरगाव 1287	10.00	1284992/-	
	एकुण क्षेत्र					200.00	2,79,83,939/-	2,76,67,879/
	एकुण एकंदर					200.00	5,56,51,818/-	

मुंबई महानगर प्रदेश विकास प्राधिकरण अंतर्गत घेण्यांत येणाऱ्या MTHL प्रस्ताव अंतर्गत कांदळवन कक्षामध्ये 200.00 हे. रोपवन लागवडीचे कामे झालेली आहेत. व त्यास आपणा कडून मंजुरी व एकूण अनुदान रक्कम रु.5,05,89,422/- प्राप्त झाले होते. परंतू हाती घेण्यांत आलेल्या 200.00हे. करिता अंदाज किती खर्चअपेक्षित राहील याबाबत रोपवनाचे 1 ते 7 वर्षाचे अदांजपत्रक तयार करुन सोबत जोडण्यांत आले आहे. त्यानुसार अनुदानाची अपेक्षित राहील. अंदाजपत्रकीय 1 ते 7 वर्षाचे एकूण रक्कम रु. 5,56,51,818/- अशी होते. व आपणा कडुन रक्कम रु.5,05,89,422/- प्राप्त झालेली आहे. कृपया नमुद केलेली सदरची वाढीव रक्कम रु. 50,62,396/- मिळण्यास विनंती आहे.

तसेच या कार्यालयाचे पत्र क्र. कक्ष-6/योजना/975/ दि. 27.7.2018चे पत्रातील नमुद करण्यांत आलेल्या प्रत्येक रोपवन ठिकाणाचे आपणाकडुन KML फाईलची संदर्भिय पत्राअन्वये मागणी केल्याप्रमाणे वरिल प्रपत्रात नमुद केलेल्या कांदळवन रोपवनाचे KML फाईल यासोबत सादर करण्यांत येत आहे. कृपया अवलोकन होण्यास विनंती.

सहपत्र :- KML फाईल सी.डी. स्वरुपात आहे.

अपर प्रधान मुख्य वनसंरक्षक,
कांदळवन कक्ष, मुंबई

मुंबई महानगर प्रदेश विकास प्राधिकरण (MMRDA) अंतर्गत घेण्यांत येणाऱ्या MTHL प्रस्ताव अंतर्गत घेण्यांत येणाऱ्या 200.00हे. कांदळवन रोपवनाचे 1 ते 7 वर्षाचे अंदाजपत्रक

गोषवारा

Sr.No.	Year	Amount
1	First Year	29320931
2	Second Year	9070370
3	Third Year	6361044
4	Forth Year	6852500
5	Fifth Year	5497684
6	Sixth Year	6047387
7	Seventh Year	665202
	Total	55651818

village
Spacement : 1.5 m x 1.5 m

First Year Operations
Estimate of Mangrove Plantation
Daily Wages rates - 360.76

Sr.No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	Preparation of site (including removal of weeds and climbersetc.) and alignment etc.	25	8538.5	311	8849.5	5000	1803800	62200	1866000
2	Nursery cost	30	10246.2	1126	11372.2	6000	2164560	225200	2389760
3	Excavation of primary and secondary canals in hard stiff clay for letting in tidal waters (92 cmt/ha.)	140	47815.6	0	47815.6	28000	10101280	0	10101280
4	Transport of plants by Boat/Tempo from nursery to plantation site incl. loading etc.	12.54	4282.912	14000	18282.91	2508	904786.1	2800000	3704786
5	Planting incl. carrying of plants by headload	70	23907.8	0	23907.8	14000	5050640	0	5050640
6	Purchase of material (Ghamela, phawda, rope etc. plantation board etc.)	0	0	2500	2500	0	0	500000	500000
7	Casualty Replacement (20%) including carrying the plants by headloads.	20	6830.8	0	6830.8	4000	1443040	0	1443040
8	Removal of garbage and moss around the plants etc.	20	6830.8	0	6830.8	4000	1443040	0	1443040
9	Controlling of pests and insects by using pesticides and insecticides . Spraying nutrients for better growth of plants	0	0	1500	1500	0	0	300000	300000
10	Watch and ward, period 6 monts , 1 lab for 10 ha.	15.6	5328.024	0	5328.024	3120	1125571	0	1125571
11	Repairs of channels	7	2390.78	0	2390.78	1400	505064		505064
		340.14					24541781	3887400	28429181
12	labour welfare 3% on wages								736253.4
13	Contingencies 4% on M &S								155496
	Total								29320931

0

village

Spacement : 1.5 m x 1.5 m

Second Year Operations
Estimate of Mangrove Plantation
Daily Wages rates - 376.98

Sr. No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	Nursery cost for 890 plants	6	2261.88	1800	4061.88	1200	452376	360000	812376
2	Trnasport of seedlings from nursery to planting site by vehicles incl. loading and unloading	2.5	942.45	2800	3742.45	500	188490	560000	748490
3	Casuality replacement incl. transport by headload	20	7539.6	0	7539.6	4000	1507920	0	1507920
4	Maintenance of canals	19	7162.62	0	7162.62	3800	1432524	0	1432524
5	Removing moss, algae and other litter around plants	20	7539.6	0	7539.6	4000	1507920	0	1507920
6	Controlling pestes by spraying pesticides	1	376.98	200	576.98	200	75396	40000	115396
7	watch and ward 1 watchman for 10 ha. For 12 months	31.2	11761.78	0	11761.78	6240	2352355	0	2352355
	total			0					8476981
	Equipment and contigencies 3% + labour welfare 4% Total 7%								593388.7
	Total								9070370

village

Spacement : 1.5 m x 1.5 m

Third Year Operations

Estimate of Mangrove Plantation

Daily Wages rates - 414.67

Sr.No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	removing moss, algae and other litter around plants	20	8293.4	0	8293.4	4000	1658680	0	1658680
2	maintenance of canals	19	7878.73	0	7878.73	3800	1575746	0	1575746
3	controlling pastes by spraying pesticides	1	414.67	200	614.67	200	82934	40000	122934
4	watch and ward 1 watchman for 35 ha. For 12 months	31.2	12937.7	0	12937.7	6240	2587541	0	2587541
	total			0					5944901
	Equipment and contigencies 3% + labour welfare 4% Total 7%								416143.1
									6361044

village
Spacement : 1.5 m x 1.5 m

forth Year Operations
Estimate of Mangrove Plantation
Daily Wages rates - 456.14

Sr.No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	Removing moss, algae and other litter around plants	20	9122.8	0	9122.8	4000	1824560	0	1824560
2	maintenance of canals	19	8666.66	0	8666.66	3800	1733332	0	1733332
3	watch and ward 1 watchman for 35 ha. For 12 months	31.2	14231.57	0	14231.57	6240	2846314	0	2846314
	total			0					6404206
	Equipment and contigencies 3 % + labour welfare 4% Total 7%								448294.4
	Total								6852500

village

Spacement : 1.5 m x 1.5 m

Fifth Year Operations

Estimate of Mangrove Plantation

Daily Wages rates - 501.76

Sr.No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	Removing moss, algae and other litter around plants	20	10035.2	0	10035.2	4000	2007040	0	2007040
2	Watch and ward 1 watchman for 35ha. For 12months	31.2	15654.91	0	15654.91	6240	3130982	0	3130982
	total			0					5138022
	Equipment and contigencies 3%+labour welfare 4% Total 7%								359661.6
	Total								5497684

village

Spacement : 1.5 m x 1.5 m

Sixth Year Operations

Estimate of Mangrove Plantation

Daily Wages rates - 551.93

Sr.No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	Removing moss, algae and other litter around plants	20	11038.6	0	11038.6	4000	2207720	0	2207720
2	Watch and ward 1 watchman for 35 ha. For 12months	31.2	17220.22	0	17220.22	6240	3444043	0	3444043
	total			0					5651763
	Equipment and contigencies 3%+labour welfare 4% Total 7%								395623.4
	Total								6047387

village
Spacement : 1.5 m x 1.5 m

Seventh Year Operations
Estimate of Mangrove Plantation
Daily Wages rates - 607.13

Sr.No.	Item of work	1 ha.				200 ha			
		mandys	wages	m/s	Total	mandys	wages	m/s	Total
1	Removing moss, algae and other litter around plants	20	12142.6	0	12142.6	4000	2428520	0	2428520
2	Watch and ward 1 watchman for 35 ha. For 12months	31.2	18942.46	0	18942.46	6240	3788491	0	3788491
	total			0					6217011
	Equipment and contigencies 3%+labour welfare 4% Total 7%								435190.8
	Total								6652202

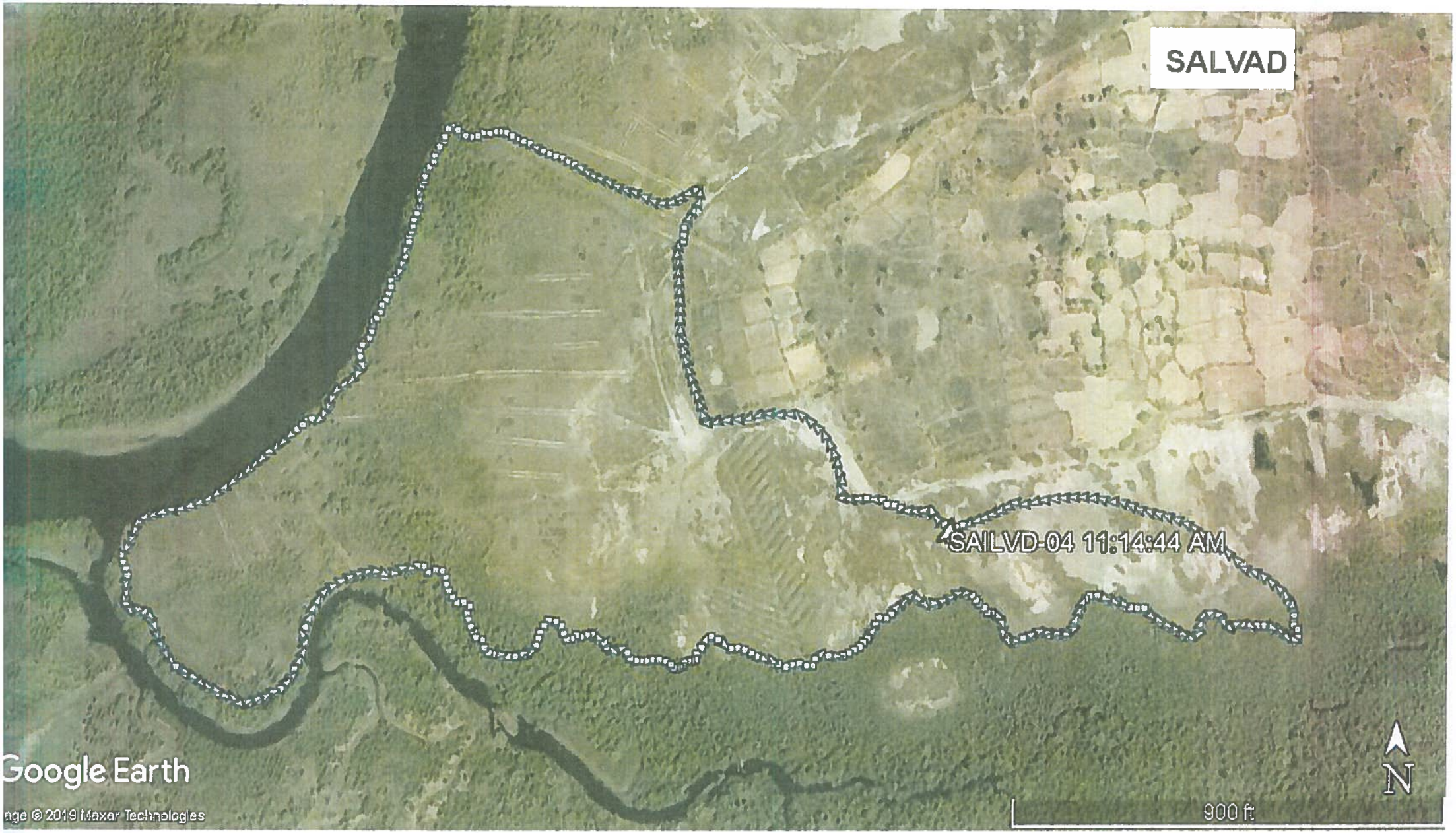

PAMTEMBHI
मौजे - पामटेंभी
स.नं. १६१
क्षेत्र - १५.०० हे
arth


Track 002
KARVELA35 10:33:44

(3)


PAMTEMBHI 10.00 Ha.
TEMBHI 10HA2:39:41 PM
Google Earth
Image © 2019 Maxar Technologies
N
1000 ft

(4) (4)

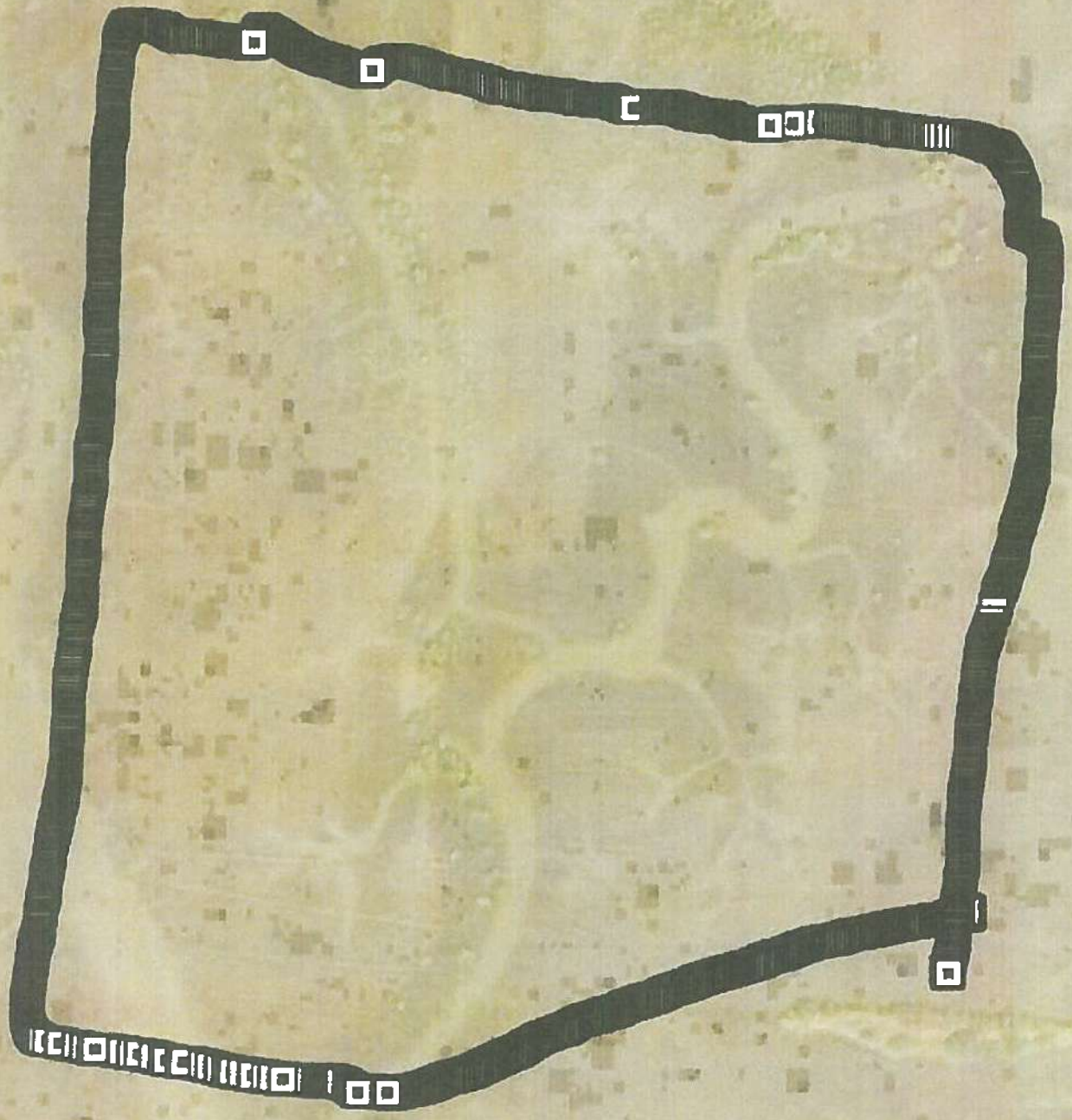

SALVAD
SALVD-04 11:14:44 AM
Google Earth
age © 2019 Maxar Technologies
N
900 ft

CHANDIGAON.

GAON

5

5

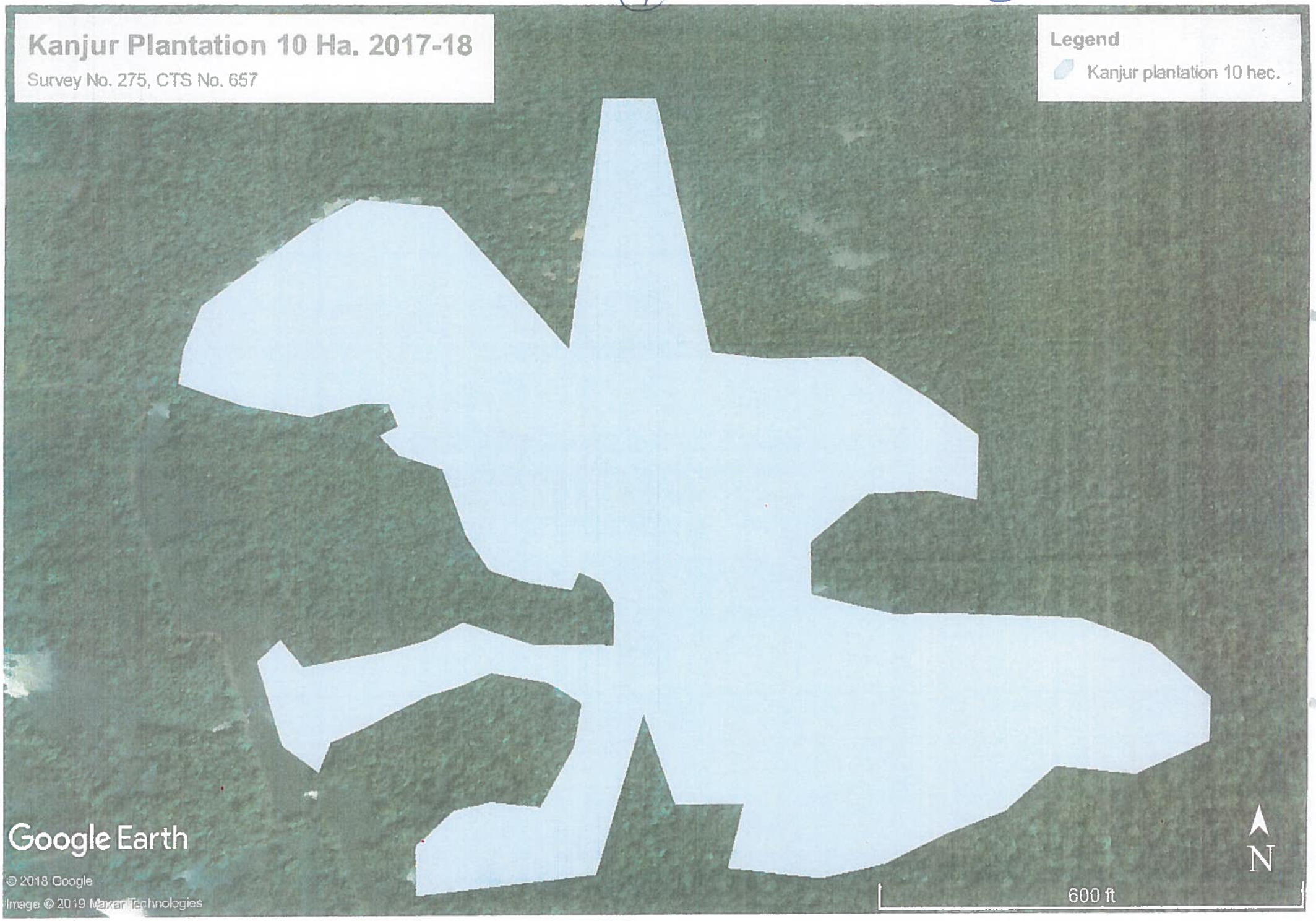


arth

(6) (6)


MANKUSAR
MAKO20196 08:55:06 AM-381
MAKO20196 08:55:06 AM
Google Earth
nage © 2019 Maxar Technologies
N
1000 ft

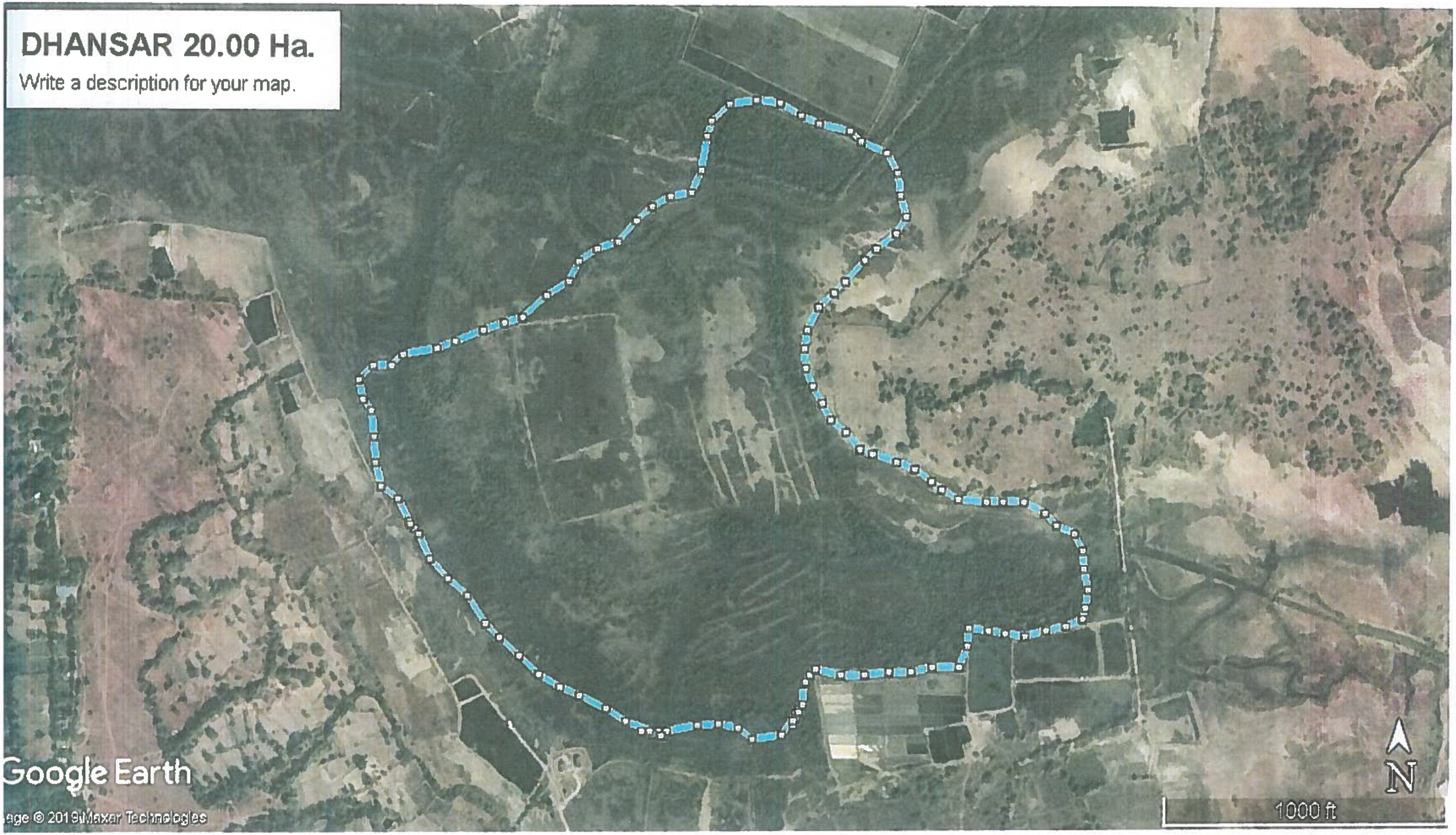
(7) (7)


Kanjur Plantation 10 Ha. 2017-18
Survey No. 275, CTS No. 657
Legend
Kanjur plantation 10 hec.
Google Earth
© 2018 Google
Image © 2019 Maxar Technologies
N
600 ft

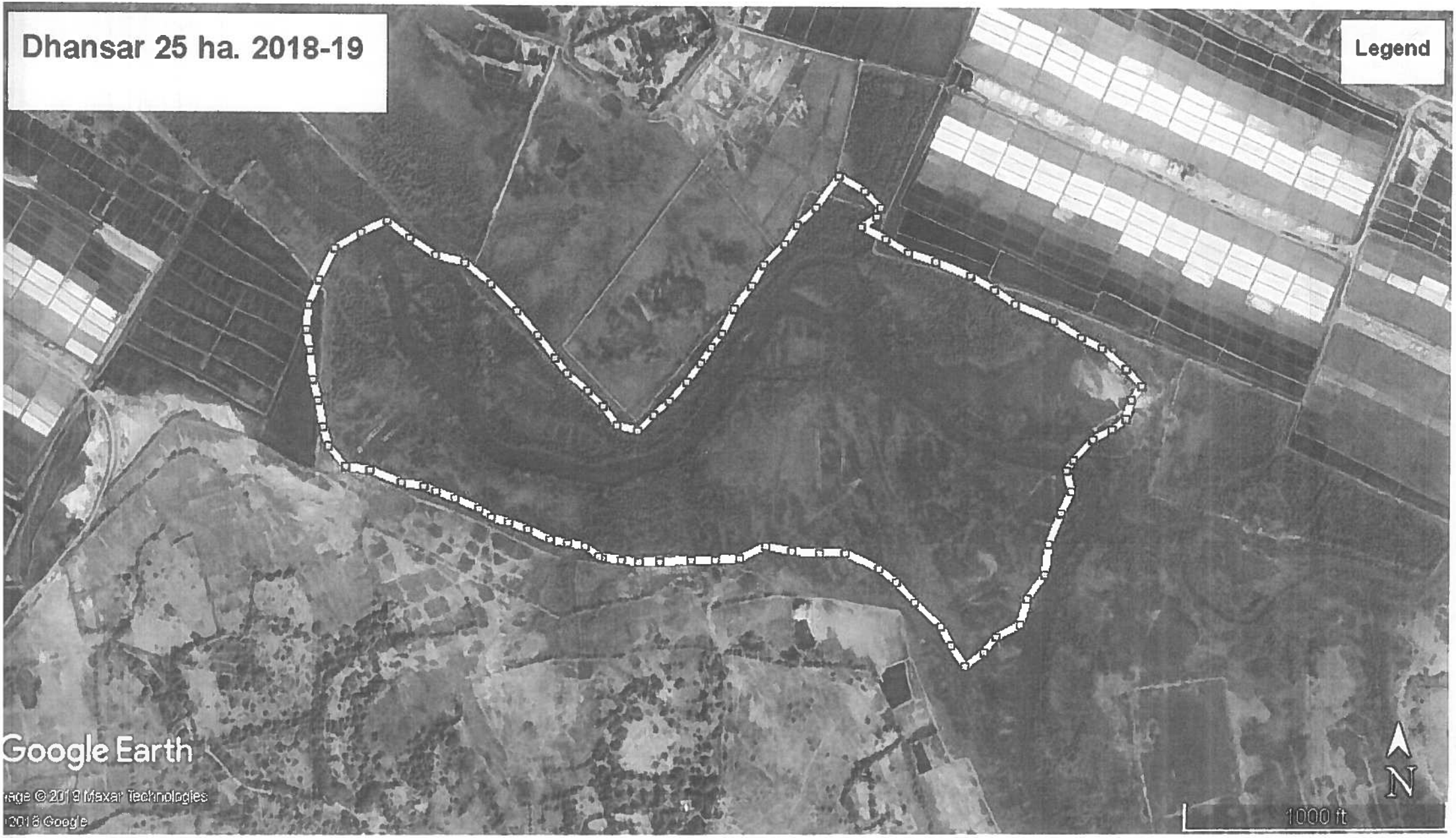

Bhandup Plantation 15 Ha. 2017-18
Survey No. 63, CTS No. 1318
Legend
bhandup plantation 15 hec.
Google Earth
© 2018 Google
Image © 2019 Maxar Technologies
700 ft
N

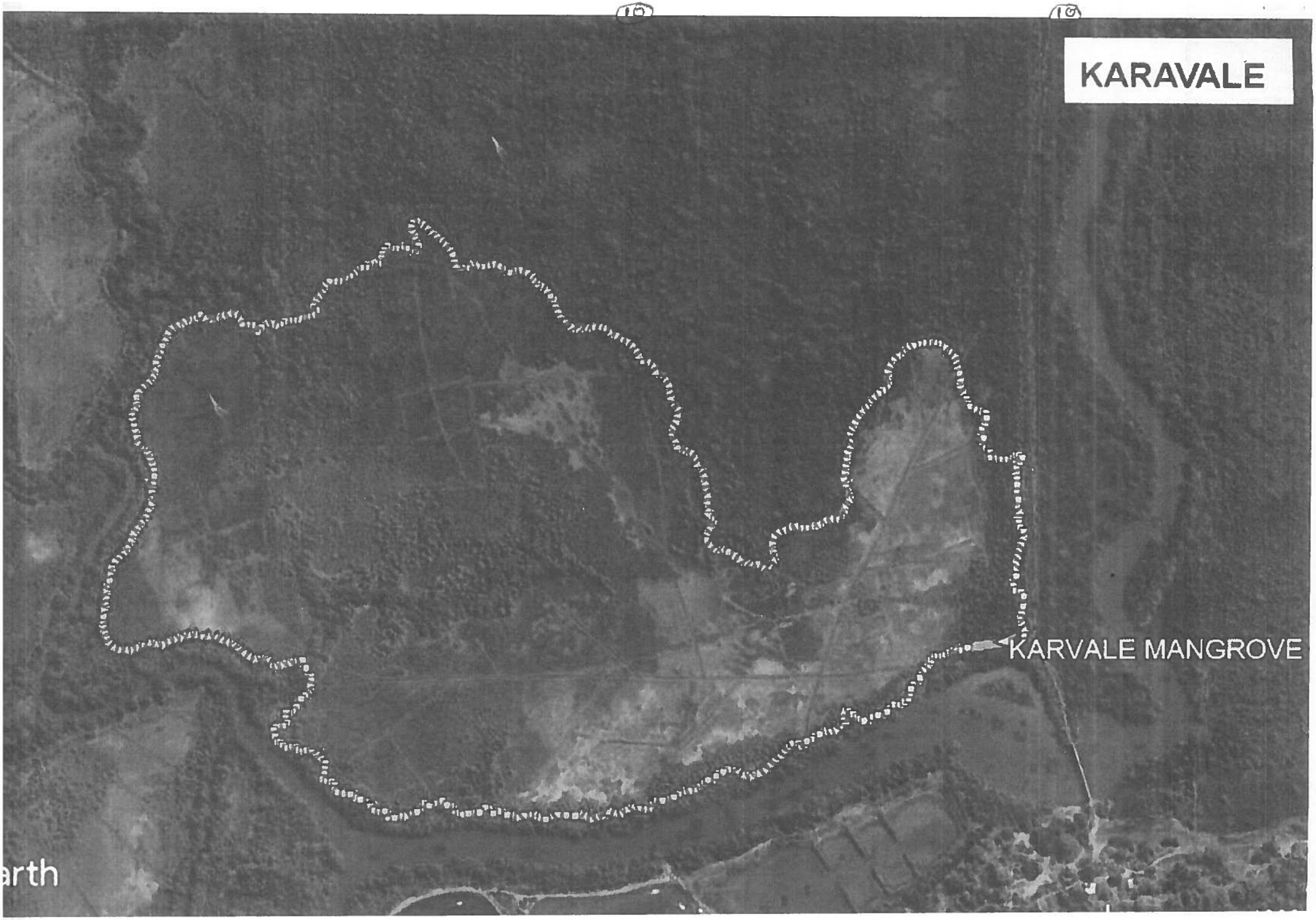
(9)-A 20.00

(9)-ब 20.00



(9)-B- 25.00 Hr (9) ब 25.00 हे




KARAVALE
KARVALE MANGROVE
arth


NAVAPUR
NAVAPUR5 07:17:30 PM-165
NAVAPUR5 07:1

12

12


SALVAD 10.00 Ha.
Write a description for your map.
SALVAD492 08:27:22 AM
Google Earth
1000 ft
N


SHIRGAON
SHIRGAON 10 H
arth

Annexure-V

CITY AND INDUSTRIAL DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED

(CIN - U99999 MH 1970 SGC - 014574)

REGD. OFFICE:
"NIRMAL", 2nd Floor, Nariman Point,
Mumbai - 400 021.
PHONE : 00-91-22-6650 0900
FAX : 00-91-22-2202 2509

HEAD OFFICE:
CIDCO Bhavan, CBD Belapur,
Navi Mumbai - 400 614.
PHONE: 00-91-22-6791 8100
FAX : 00-91-22-6791 8166

Ref. No. NO.CIDCO/Hort/2019/191 *Date :* 25.11.2019

To,
Shri. G.G.Ddeshpande,
Executive Engineer (MMRDA),
Mumbai Trans Harbour Link (MTHL),
Bandra Kurla Complex, Bandra East,
Mumbai – 400051.

Sub: - Permission for removal of existing trees falling in the alignment of construction of Mumbai Trans Harbour Link (MTHL) Project (CH.18+187-CH.19+607KM and CH.20+087-CH.21+800KM) on Navi Mumbai side.

Ref:- MTHL/CIDCO/Tree Removal Permission/19/012/MTHL dt.14.05.2019

Sir,

With reference to above it is to inform that your request for removal of 348 no of trees falling in the alignment of construction of Mumbai Trans Harbour Link (MTHL) Project (CH.18+187-CH.19+607KM and CH.20+087-CH.21+800KM) on Navi Mumbai side has been considered by the Tree Authority under section 8(3) of the Maharashtra (Urban Areas) Protection and Preservation of Trees Act, 1975 & rules called the Maharashtra (Urban Areas) Protection and Preservation of Tree rules – 2009 & amendment up to 2016 subject to the following conditions.:

1) The Tree Authority Committee of CIDCO has granted the permission to cut 266 no of existing trees and to transplant 82 no of existing trees. You should retain 504 no of existing trees. The details are as below;

Sr. No	Description	Tree no.
1	Trees to be cut	1, 3, 4, 5, 6, 7, 8, 9, 12, 13, 15, 16, 17, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 59, 66, 67, 80, 90, 101, 102, 103, 104, 105, 118, 119, 120, 121, 123, 143, 144, 147, 148, 149, 150, 151, 153, 156, 157, 158, 159, 162, 165, 166, 173, 174, 175, 176, 177, 178, 179, 186, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 225, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 277, 278, 279, 289, 325, 327, 330, 336, 346, 350, 355, 356, 363, 367, 382, 384, 385, 386, 387, 389, 390, 391, 401, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436,

		437, 438, 439, 440, 441, 444, 445, 447, 449, 450, 451, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 496, 497, 498, 499, 500, 501, 503, 504, 517, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 597, 599, 600, 601, 602, 603, 604, 624, 627, 628, 637, 639, 640, 641, 642, 643, 644, 658, 659, 661, 662, 663, 667, 678, 679, 680, 682, 683, 684, 688, 696, 698, 699, 700, 701, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 715, 730, 731, 744, 745, 754, 756, 758, 760, 761, 762, 773, 775, 776, 778, 779, 780, 783, 784, 785, 786, 787, 789, 790, 792, 793, 794, 795, 797, 824, 825, 826, 827, 831, 832.
2	Trees to be Transplant	2, 14, 19, 20, 21, 58, 65, 68, 79, 91, 122, 152, 154, 155, 160, 161, 163, 164, 274, 275, 276, 324, 326, 328, 329, 331, 332, 333, 334, 335, 347, 348, 349, 354, 357, 364, 365, 366, 383, 388, 413, 448, 452, 598, 638, 647, 660, 664, 665, 666, 668, 669, 670, 671, 672, 675, 676, 677, 681, 685, 686, 687, 689, 690, 691, 692, 693, 694, 695, 697, 702, 714, 732, 743, 755, 757, 759, 777, 781, 788, 791, 796.
3	Trees to be Retain	10, 11, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 60, 61, 62, 63, 64, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 81, 82, 83, 84, 85, 86, 87, 88, 89, 92, 93, 94, 95, 96, 97, 98, 99, 100, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 124, 125, 126, 128, 129, 130, 131, 132, 133, 135, 136, 137, 138, 139, 140, 141, 142, 145, 146, 167, 168, 169, 170, 171, 172, 180, 181, 182, 183, 184, 185, 187, 188, 189, 190, 191, 192, 193, 194, 218, 219, 220, 221, 222, 223, 224, 226, 227, 228, 229, 230, 231, 232, 233, 234, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 280, 281, 282, 283, 284, 285, 286, 287, 288, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 337, 338, 339, 340, 341, 342, 343, 344, 345, 351, 352, 353, 358 359, 360, 361, 362, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 392, 393, 394, 395, 396, 397, 398, 399, 400, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 442, 443, 446, 453, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 502, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 605, 606, 607, 608, 609, 610, 611, 612, 615, 616, 617, 618, 619, 620, 621, 622, 623, 625, 626, 629, 630, 631, 632, 633, 634, 635, 636, 645, 646, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 673, 674, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 746, 747, 748, 749, 750, 751, 752, 753, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 774, 782, 798, 799, 800, 801, 802, 803, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 828, 829, 830, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858.

2) As per the provision under Section 8(3) (a) of the said Act, you are hereby directed that no tree shall be cut/transplanted until fifteen days (15) after the permission is given by the Tree Authority.

3) It is mandatory on your part to plant 2 no of trees against each tree to be cut. As per the provision of Maharashtra (Urban Areas) Protection and Preservation of Trees (amendment) Act, 2016 the new trees shall be plant within fifteen days from the date of tree (s) is felled.

4) You have to plant 532 no of new trees (against cutting of 266 no of trees) & to transplant 82 no of existing trees at Survey No. 347, Village- Gavhan, Tal-Uran, Dist-Raigad. While planting trees, suitable distance should be kept from the boundary of the plots, so that the newly planted trees will not obstruct the construction of compound wall or any other civil structure in future.

   You shall maintain & protect the new tree plantation (532 no of trees) and transplanted trees (82 no of existing trees) for the period of three years & care should be taken so that tree grows properly & give a report to the tree officer about the condition of these trees once in six months for a period of three years as per the form – G under section 9(2).

5) Your attention is kindly drawn to the provisions under section of 21 of the Maharashtra (Urban Areas) Protection & Preservation of Trees Act. 1975, as modified on 9th June, 2004.

   21 (1) Whoever fells any tree or causes any tree to be felled in contraventions of the provision of the Act or without reasonable excuse fails to comply with any order issued or condition imposed by the Tree Officer or the Tree Authority or voluntarily obstructs and member of the Tree Authority or the Tree Officer or any officers and Servants subordinate to him in the discharge of their functions under this Act. Shall, on convection, be punished with the fine of not less than one thousand rupees which may extend up to five thousand rupees for every offence and also with imprisonment for a term of not less than one week, which may extent up to one year.

   (3) The felling or causing of felling of each tree without the Permission of The Tree Authority shall constitute a separate offence.

6) At the time of transplanting or cutting of trees, if any social problem occurs, you will have to resolve the same at your end.

7) You shall submit the report for Cutting and transplantation of the trees carried out to Tree officer, CIDCO.

8) Tree authority Committee, CIDCO has granted the permission for removal of 348 no of trees (To Cut 266 nos and to transplant 82 nos). At the time of actual execution of work, applicant Executive Engineer, MTHL Project, MMRDA should take care to remove only those trees which are falling in alignment of construction activities.

9) The said permission is valid only up to 90 days from the receipt thereof.

Thanking You.

Yours faithfully,

15/11/19

Tree Officer

(Tree Authority Committee, CIDCO)