

**AECOM****PADECO****dar al-handasah**
sheer and partners**TYLIN**
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,

Me Sham 6 December 2019

P.S.
Dr. S H Robin Sham, CBE
(BSc, PhD, DIC, FCGI, FRSA, CEng, FICE, FStructE, 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 31 st 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 20 th March 2019 to 19 th September 2019.
	Repayment Period:	30 years, including 10 years of grace period.

DOCUMENT VERIFICATION AND REVISION RECORD

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R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
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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

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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

- 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

- 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.
- 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

- 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.
- 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.
- 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).
- 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.
- 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-Classifer (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)
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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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> • 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-Classifer (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	<ul style="list-style-type: none"> • 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 30 th 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 26th January 1975 in accordance with the Mumbai Metropolitan Development Act, 1974 to make Mumbai Metropolitan Region (MMR) a destination for economic activity by promoting infrastructure and regional planning. MMRDA takes all the necessary measures, required from time to time, in an effective manner and be fully responsible for the Project 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 Bidding Documents of the latest version, as stipulated in Section 4.01 (2) of "Guidelines for Procurement under Japanese ODA Loans.

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

Actual, if 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	<u>Package-1:</u> 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	<u>Package-2:</u> 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	<u>Package-3:</u> 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	<u>Package-4:</u> 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	<u>Package-5:</u> 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)
<p>3.2.1 General Issues</p> <p>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.</p> <p>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>	<p>(P/R and PCR)</p> <p>Appropriate Tolling Policy/ Rates will be finalized by December 2020.</p> <p>Single Operation and Maintenance Contractor will be appointed by December 2020.</p>
<p>3.2.2 Environmental and Social Consideration</p> <p>a. CRZ Clearance</p> <p>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.</p> <p>ii. Furthermore, renewed CRZ Clearance has been obtained in January 2016.</p> <p>iii. In accordance with the conditions for</p>	<p>(P/R and PCR)</p> <ul style="list-style-type: none"> • 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

<p>CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.</p>	<p>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.</p> <ul style="list-style-type: none"> • 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.
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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 28 th 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	-	<p>Pkg-1: Tree Cutting/ Transplantation permission is awaited from the Tree Authority.</p> <p>Pkg-2: Tree Cutting/ Transplantation permission obtained & completed.</p> <p>Pkg-3: Forest Department has issued a concurrence on 19/05/2019. CIDCO's permission for Tree Cutting/ Transplantation is awaited.</p>
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)
<p>1. Establishment of Effective Environmental and Social Cell in PIU</p> <p>MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.</p>	<p>Cell is established by MMRDA (Annexure III, Organization chart)</p>
<p>2. Rehabilitation and Land Acquisition Issues</p> <p>a. Affected Area and Population</p> <p>Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.09 ha of land will be handed over by CIDCO.</p>	<p>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:</p> <ul style="list-style-type: none"> • 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 <p>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.</p>
<p>b. Entitlement Policy</p> <p>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).</p>	<p>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.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>c. Compensation to Project affected Fishermen</p> <p>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.</p>	<p>Updated Attachments 2-8 and 2-10 are enclosed in the report.</p>
<p>d. Implementation Schedule</p> <p>The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per Attachment 2-10.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>e. Grievance Redressal Mechanism</p> <p>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.</p>	<p>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.</p> <p>Fishermen: GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.</p>
<p>f. Internal Monitoring</p> <p>Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Internal Monitoring updates are mentioned in Attachment 2-8.</p>
<p>g. Qualitative Independent Evaluation</p>	

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>h. RAP Implementation Budget</p> <p>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.</p>	<p>As updated in Aid Memoire dated 14/12/18, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr.</p>
<p>i. Environmental Management Plan (“EMP”)</p> <p>The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary.</p>	<p>EMP will be updated, if required, in due course of construction activities/progress.</p>
<p>j. Environmental Monitoring Plan (“EMoP”)</p> <p>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</p>	<p>Updated Environmental Monitoring Plan with package wise updated cost is reported in Attachment 2-3.</p> <p>Environmental Monitoring Results during the construction phase are reported in Attachment 2-4.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>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.</p>	
<p>k. Long Term Bird Monitoring</p> <p>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.</p>	<ul style="list-style-type: none"> • 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	<p>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</p>	<p>Actual: (PCR) _____% Cost: Benefit: Project Life: Attachment(s): Supporting data for computing EIRR</p>
FIRR	<p>Original: 1.5% Cost: Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 32 Years</p>	<p>Actual: (PCR) _____%</p>

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:

<p>Original: (P/M and PCR)</p> <p><u>Monitoring Organization</u></p> <p>PIU shall be In-Charge of Monitoring activities for the Project.</p> <p><u>Submission of QPR and PCR</u></p> <p>The timely submission of the following documents is required by MMRDA.</p> <p>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.</p> <p>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.</p>
<p>Actual: (P/R and PCR)</p> <p>Monitoring Organization</p> <p>PIU for MTHL has been established for monitoring the Project.</p> <p>Submission of QPR and PCR</p> <p>This QPR No. 10 is submitted for a period of July to September 2019.</p>

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)

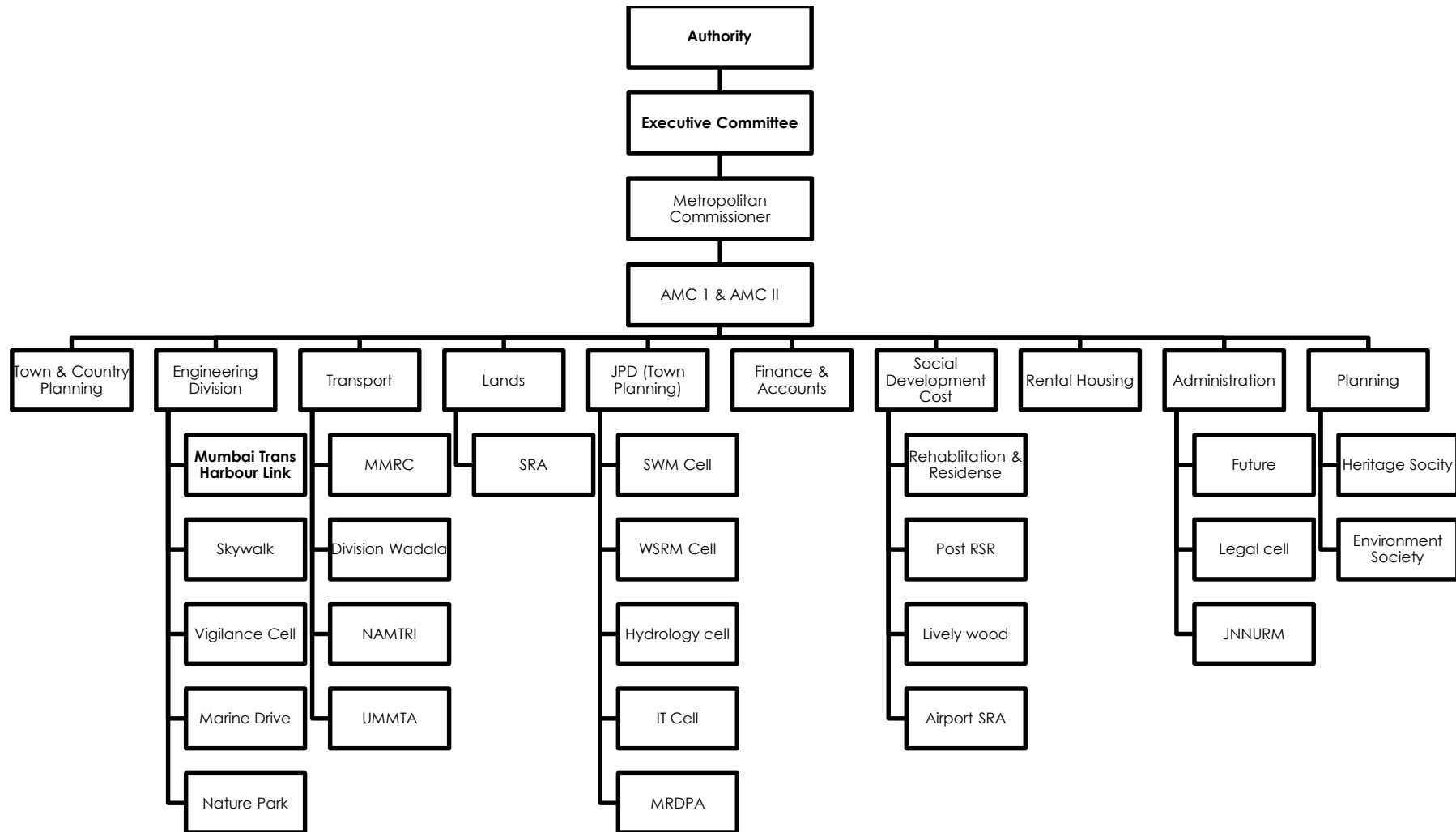
5.3 Lessons Learnt and Recommendations

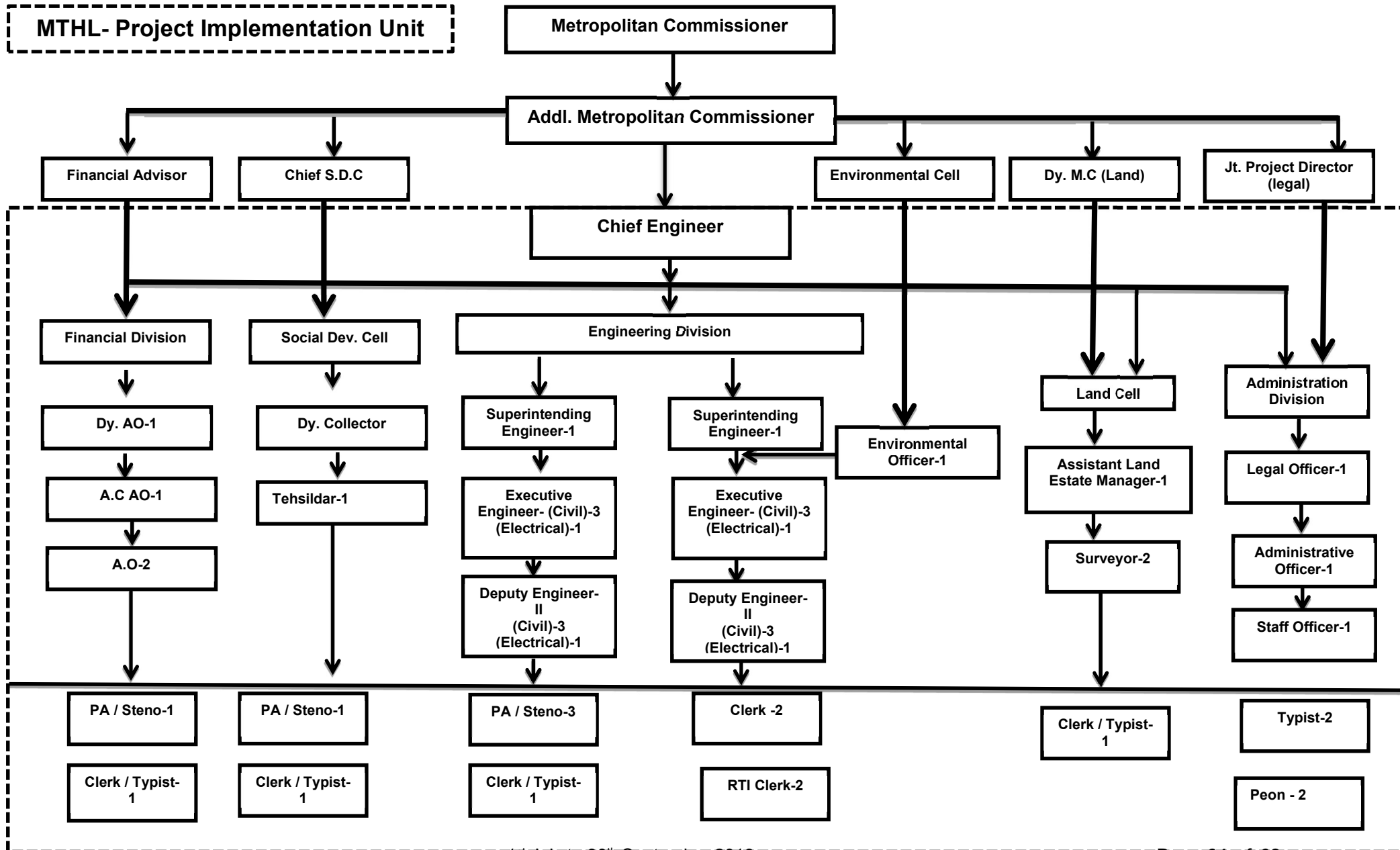
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart





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**

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 bidding. 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 frequency would change after obtaining CTE.
	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 Solid 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 near "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 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year *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	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF) Cd: 0.01mg/l 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_{eq}}) Vibration (dB L10 or mm/sec)	IS Standard	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III 1 Location Gavan area for package III	Fortnightly 2 Times / Year Fortnightly Half yearly	150,000 75,000	54,000 0	150,000 75,000	369,000 400,000	573,000 475,000	-Construction Noise; 85dB(A) -Ambient Noise Standards in India (dB (A) _{L_{eq}}) 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) - 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 2. Monitoring of Cutting Tree and replantation/transplanting area 3. Monitoring of Mangrove Plantation area appointed by MoEF	Ocular inspection and quantitative survey Line-Point census and record number and appeared species	Along MTHL alignment and mangrove replant area for Package I Along MTHL alignment and mangrove replant area for package II Not applicable for Package III	Quarterly during the construction Period 4 Times / Year	6,500,000	7,200,000	6,500,000	0	13,700,000	Significant impacts are not caused by the project Note)	Not applicable for Pkg. 3

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 (18 items on Supplemental EIA 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) SiO ₂)	1-2: Mangrove density and community survey								Detailed monitoring plan will be setup during basic design stage Standard for Soil; Supplemental EIA Table 6.1.15 Standard for Ecological Parameter: · Net primary Productivity <1,500 mgC/m ³ /day at surface · Chlorophyll-a <4mg/m ³ · Phosphate: 0.1-90µg/l · Nitrate: 1.0-500µg/l · Nitrite: <125µg/l · Particulate Organic Carbon: 10-100mg/m ³ · SiO ₂ : 10-5,000µg/l			
				1-3: Benthos Survey											
				2-1: Cutting trees confirmation											
				3-1: Mangrove survey in the replanted area											
	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 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"			
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			
							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

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 parameters in EMoP are covered.

Monitoring Period - July to September 2019

1. Environmental Monitoring during Construction for 4.5 years

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- Pkg 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) (Standard for 24hrs: Industrial and Residential)	Sewri	Shivaji Nagar	Chirle							
				2. Nhava temporary bridge & casting yard in	4 Times / Year											
				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		
												4. PM _{2.5} : 60µg/m ³	17	15		
												5.CO:02mg/m ³	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	
												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	*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							1. Cadmium: 0.01mg/l	BDL			
				3. Gavhan & Chirle for package III								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

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 parameters in EMoP are covered.

Monitoring Period - July to September 2019
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5	Noise and vibration	Ambient and road side noise (dB(A)LAeq)	1. Sewri & Sewri bay area for package I	Fortnightly	23. thiobencarb: 0.02mg/l 24. benzene: 0.01mg/l 25. selenium: 0.01mg/l		BDL BDL BDL				
			2. Nhava temporary	2 Times / Year	Day time : 6-22 hr (continuous) dB(A)	Noise Monitoring 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 (continuous) dB(A) (only sea section) Day time : 6-22 hr (10 min during 9-17 hrs) Night time: 22-6 hr (10 min 22-24 hr)		71.4	62			
			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 construction area : Vibration Standard (Japan Standard along the road) Day time : 6-22 hr (continuous)	Sewri (ST 200-500)(Industrial area)	Shivaji Nagar (Commercial area)	Chirle		Frequency: once in 6 month	
					Night time: 22-6 hr (continuous)		Not Applicable	Refer to Remark		(April-19 report), Next monitoring will be on OCTOBER month	
									Refer to Remark		
			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)	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 (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 survey 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

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 parameters in EMOp are covered.

Monitoring Period - July to September 2019

1. Environmental Monitoring during Construction for 4.5 years

667	6	Protected Area	replantation/transplantation 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 mangrove		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			
					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		
					(1) Number of cutting tree and species		not required			Package -03. Got forest department approval for cutting and land for compensatory 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/ permit for further activity.
					3-1: Mangrove survey in the replant area		not required			Need to cut 326 trees (75 forest trees and 251 CIDCO trees). Awaiting CIDCO permission. Compansatory land has approved by forest dept. Total 877 no's need to plant on forest land as compensatory plantation.
					(1) Number of species of mangrove		not required			
					(2) Density of mangrove (xx trees/10m x 10m)		not required			
					4. Ecological 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										
(7) SiO2: 10-5,000µg/l	193									
7	Hydrology	Flooding situation	Not applicable for Package I	4 Times / Year	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		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 contractor 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		98.75	3.24	6.10			
108.09							

***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

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

1. General Information

a. RAP Implementation Monitoring Results:	Progress Status Report (PSR) of 3 rd 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
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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 / 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.
C3: Hand-pickers	416	1273	1689	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.
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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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 25 th 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	May 2019	Nov. 2019
	End Term	November 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 25 th September 2019	% of Overall Financial Progress (Including Mobilization Advance & Price Adjustment) till 30 th 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

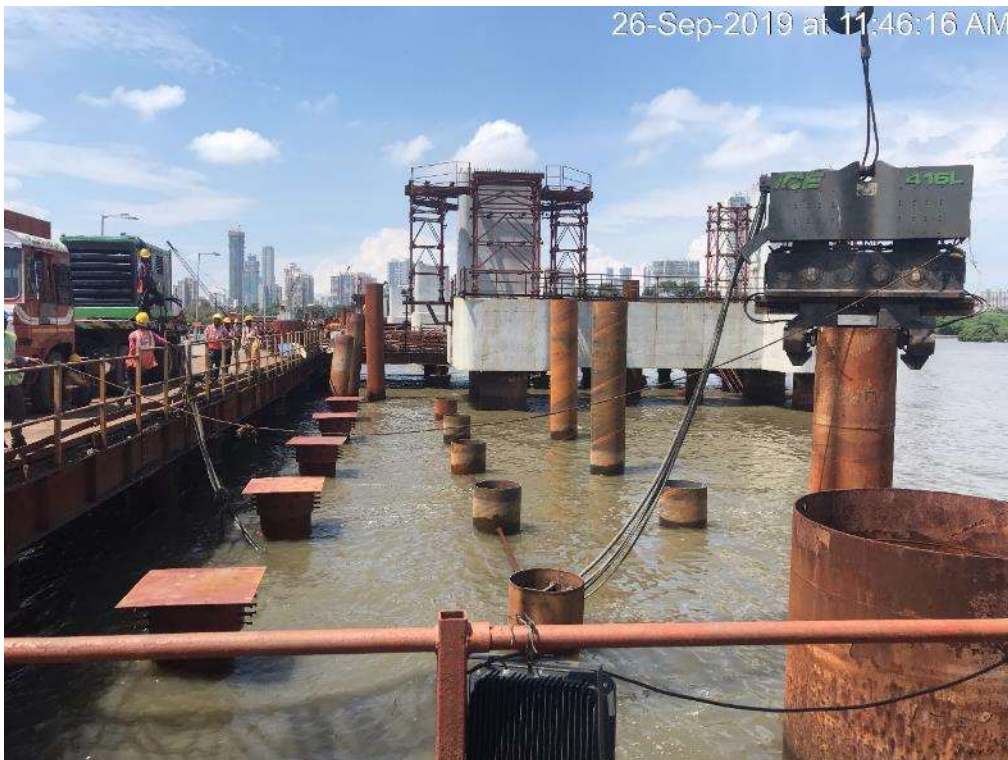


Photo No. 12: Preparation of Platform for LG erection at MP 10 is in progress

Package 2 – Site Progress Photos



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

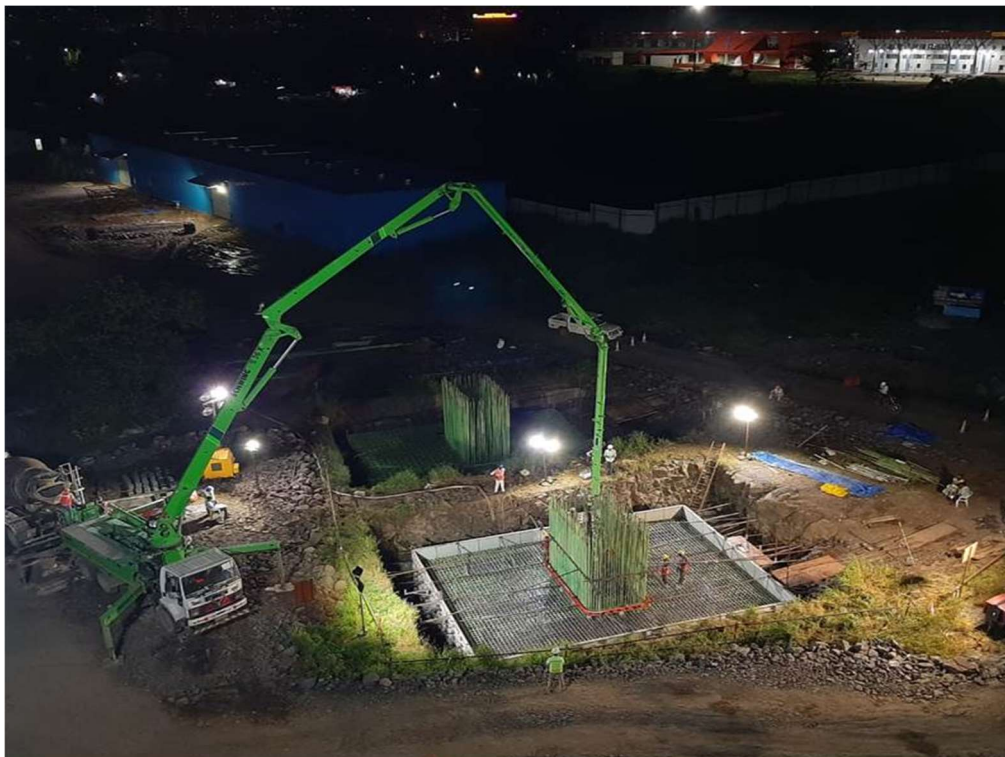


Photo No. 2: Open Foundation Concreting at MP 264 RHS in progress



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



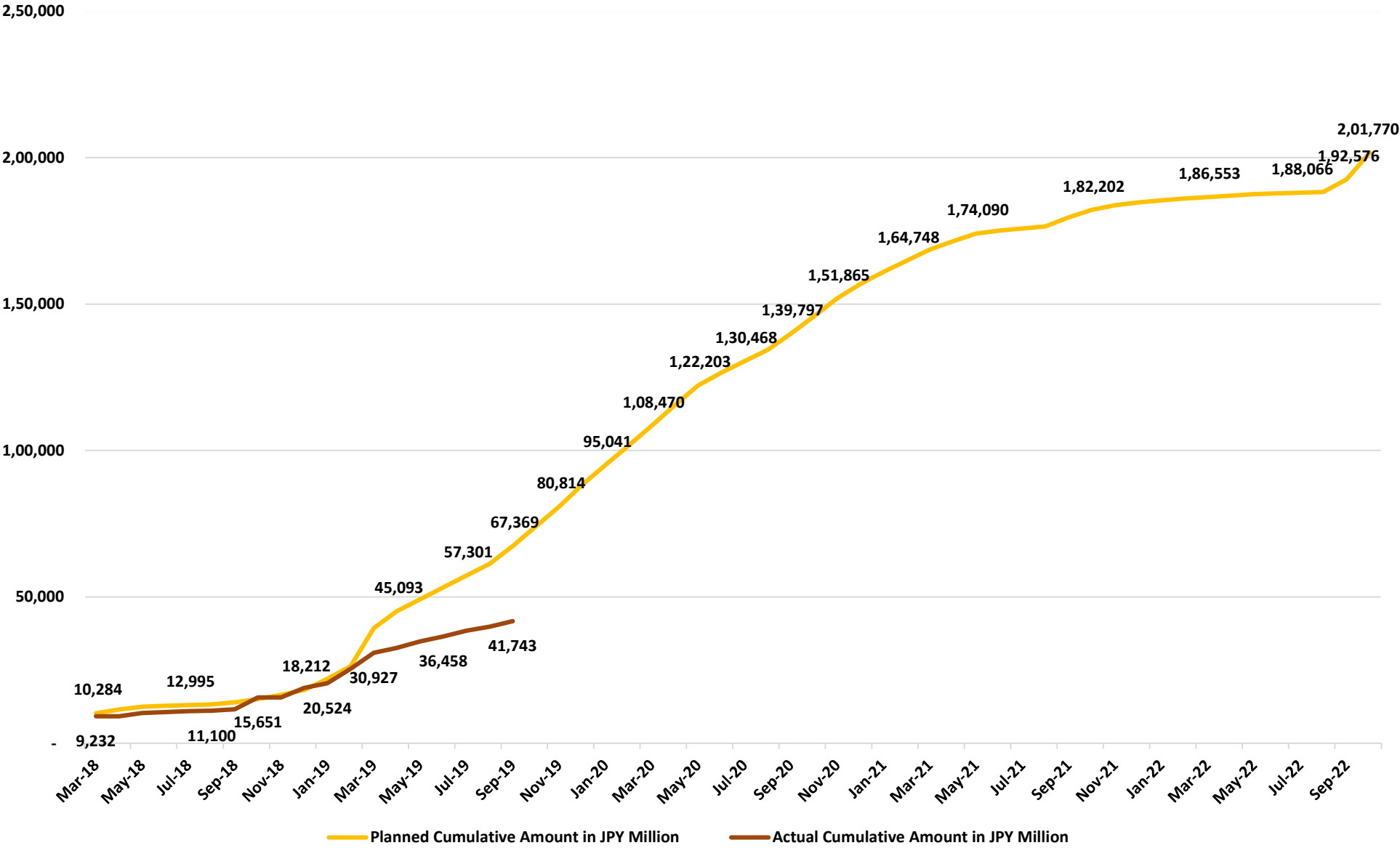
Photo No. 11: Casting Yard establishment at the Pkg-3 site



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



**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



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 Infrastructure Facilities		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



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



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
MPR18.1.10.4.1	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



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



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
MPR18.1.13.1.2.1.1	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



MUMBAI TRANS HARBOUR LINK PACKAGE 1, UPDATED
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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
	MPR18.1.13.2.1.1 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



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




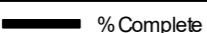
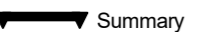


General Consultant for Mumbai Trans Harbour Link Project

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
	MPR18.1.13.5.3.2 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 Ancillaries 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

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

#	Activity ID	Activity Name	BL Project Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	023	
1	MTHL-PKG2-MPR.18.DT.JV MTHL-PKG2-DETAILED WORK PROGRAMME_250820															
2	MTHL-PKG2-MPR.18.DT.JV.1	PROJECT PRE-COMMENCEMENT ACTIVITY	126.00d	17-Nov-1	22-Mar-18	17-Nov-17	16-Mar-1	0%	0%	16-Mar-18 A, MTHL-PKG2-MPR.18.DT.JV.1 PROJECT PRE-COMMENCEMENT ACTIVITY						
3	MTHL-PKG2-MPR.18.DT.JV.2	PRE-COMMENCEMENT ACTIVITY	55.00d	15-Dec-1	07-Feb-18	15-Dec-17	20-Mar-1	0%	0%	20-Mar-18 A, MTHL-PKG2-MPR.18.DT.JV.2 PRE-COMMENCEMENT ACTIVITY						
4	MTHL-PKG2-MPR.18.DT.JV.2.1	JV FORMATION AND REGISTRATION	55.00d	15-Dec-1	07-Feb-18	15-Dec-17	20-Mar-1	0%	0%	20-Mar-18 A, MTHL-PKG2-MPR.18.DT.JV.2.1 JV FORMATION AND REGISTRATION						
5	MTHL-PKG2-MPR.18.DT.JV.3	PROJECT EVENT MILESTONE	1824.34d	23-Mar-1	21-Mar-23	23-Mar-18		0%	0%							
6	MTHL-PKG2-MPR.18.DT.JV.3.1	PROJECT KEY MILESTONE	1644.34d	23-Mar-1	22-Sep-22	23-Mar-18		0%	0%							
7	MTHL-PKG2-MPR.18.DT.JV.3.2	INTERFACE MILESTONE_ERG19	1796.34d	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%							
8	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.3.4	CONSTRUCTION KEY MILESTONES	1037.25d	03-Sep-1	06-Jul-21	25-Oct-18		0%	0%	22-Feb-21, MTHL-PKG2-MPR.18.DT.JV.3.4: CONSTRUCTION KEY MILESTONES						
10	MTHL-PKG2-MPR.18.DT.JV.4	MANAGEMENT	210.38d	20-Jan-18	18-Aug-18	12-Jan-18		0%	0%	05-Oct-19, MTHL-PKG2-MPR.18.DT.JV.4 MANAGEMENT						
11	MTHL-PKG2-MPR.18.DT.JV.4.1	SITE ORGANISATION	35.00d	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-1	0%	0%	07-Mar-18 A, MTHL-PKG2-MPR.18.DT.JV.4.1: SITE ORGANISATION						
12	MTHL-PKG2-MPR.18.DT.JV.4.2	DEVELOPMENT OF MANAGEMENT SYSTEM	127.38d	20-Jan-18	27-May-18	20-Jan-18	22-Aug-1	0%	0%	22-Aug-19 A, MTHL-PKG2-MPR.18.DT.JV.4.2 DEVELOPMENT OF MANAGEMENT SYSTEM						
13	MTHL-PKG2-MPR.18.DT.JV.4.3	DEVELOPMENT OF WORK PROGRAMME	63.00d	23-Mar-1	24-May-18	23-Mar-18	21-Sep-1	0%	0%	21-Sep-18 A, MTHL-PKG2-MPR.18.DT.JV.4.3 DEVELOPMENT OF WORK PROGRAMME						
14	MTHL-PKG2-MPR.18.DT.JV.4.4	OTHER CONTRACTUAL SUBMITTALS	28.00d	24-Mar-1	20-Apr-18	24-Mar-18	23-Apr-18	0%	0%	23-Apr-18 A, MTHL-PKG2-MPR.18.DT.JV.4.4 OTHER CONTRACTUAL SUBMITTALS						
15	MTHL-PKG2-MPR.18.DT.JV.4.5	PERMIT & APPROVAL	210.38d	20-Jan-18	18-Aug-18	12-Jan-18		0%	0%	05-Oct-19, MTHL-PKG2-MPR.18.DT.JV.4.5 PERMIT & APPROVAL						
16	MTHL-PKG2-MPR.18.DT.JV.5	DESIGN	592.33d	20-Jan-18	04-Sep-19	01-Jan-18		100%	70.14%	30-Aug-20, MTHL-PKG2-MPR.18.DT.JV.5 DESIGN						
17	MTHL-PKG2-MPR.18.DT.JV.5.1	EARLY STAGE DESIGN WORK / INFORMATION COLLECTION	178.25d	20-Jan-18	17-Jul-18	01-Jan-18		100%	100%	25-Sep-19, MTHL-PKG2-MPR.18.DT.JV.5.1 EARLY STAGE DESIGN WORK / INFORMATION COLLECTION						
18	MTHL-PKG2-MPR.18.DT.JV.5.2	TEMPORARY WORK	283.33d	22-Jan-18	01-Nov-18	20-Jan-18		100%	100%	08-Jan-20, MTHL-PKG2-MPR.18.DT.JV.5.2 TEMPORARY WORK						
19	MTHL-PKG2-MPR.18.DT.JV.5.3	CONCRETE MIX DESIGN	161.33d	23-Mar-1	31-Aug-18	12-May-18	15-Nov-1	0%	0%	15-Nov-18 A, MTHL-PKG2-MPR.18.DT.JV.5.3 CONCRETE MIX DESIGN						
20	MTHL-PKG2-MPR.18.DT.JV.5.4	JFE DESIGN PROGRAMME	491.00d	01-May-1	04-Sep-19	09-Apr-18		100%	16.19%	30-Aug-20, MTHL-PKG2-MPR.18.DT.JV.5.4 JFE DESIGN PROGRAMME						
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	01-May-18		100%	100%							
23	MTHL-PKG2-MPR.18.DT.JV.5.4.5	DESIGN BASIS REPORT	49.00d	18-May-1	06-Jul-18	11-May-18	14-Jun-19	0%	0%	14-Jun-19 A, MTHL-PKG2-MPR.18.DT.JV.5.4.5 DESIGN BASIS REPORT						
24	MTHL-PKG2-MPR.18.DT.JV.5.4.8	ADDITIONAL TIME FOR DESIGN BASIS REPORT_STEEL	0.00d			05-Oct-18	14-Jun-19	0%	0%	14-Jun-19 A, MTHL-PKG2-MPR.18.DT.JV.5.4.8 ADDITIONAL TIME FOR DESIGN BASIS REPORT_STEEL						
25	MTHL-PKG2-MPR.18.DT.JV.5.4.2	INITIAL DESIGN	125.00d	01-May-1	03-Sep-18	01-May-18	12-Aug-1	0%	0%	12-Aug-19 A, MTHL-PKG2-MPR.18.DT.JV.5.4.2 INITIAL DESIGN						
26	MTHL-PKG2-MPR.18.DT.JV.5.4.6	DESKTOP ANALYSIS ON AERODYNAMIC STABILITY	83.00d	01-May-1	23-Jul-18	28-May-18		100%	100%	30-Sep-19, MTHL-PKG2-MPR.18.DT.JV.5.4.6 DESKTOP ANALYSIS ON AERODYNAMIC STABILITY						
27	MTHL-PKG2-MPR.18.DT.JV.5.4.9	ADDITIONAL TIME FOR WIND TUNNEL TEST	0.00d			07-Jul-18		0%	0%	24-Nov-19, MTHL-PKG2-MPR.18.DT.JV.5.4.9 ADDITIONAL TIME FOR WIND TUNNEL TEST						
28	MTHL-PKG2-MPR.18.DT.JV.5.4.3	TECHNICAL DESIGN	243.00d	23-Jul-18	23-Mar-19	30-Aug-18		100%	44.33%	17-Feb-20, MTHL-PKG2-MPR.18.DT.JV.5.4.3 TECHNICAL DESIGN						
29	MTHL-PKG2-MPR.18.DT.JV.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%	27-Dec-19, MTHL-PKG2-MPR.18.DT.JV.5.4.3.2 TECHNICAL DESIGN(LHS STEEL MOUDLE-3_MP183 - MP186)						
30	MTHL-PKG2-MPR.18.DT.JV.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%	18-Jan-20, MTHL-PKG2-MPR.18.DT.JV.5.4.3.1 TECHNICAL DESIGN (RHS STEEL MOUDLE-3_MP183 - MP186)						
31	MTHL-PKG2-MPR.18.DT.JV.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%	26-Nov-19, MTHL-PKG2-MPR.18.DT.JV.5.4.3.3 TECHNICAL DESIGN (LHS STEEL MOUDLE-2_MP177 - MP182)						
32	MTHL-PKG2-MPR.18.DT.JV.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%	18-Jan-20, MTHL-PKG2-MPR.18.DT.JV.5.4.3.4 TECHNICAL DESIGN (RHS STEEL MOUDLE-2_MP177 - MP182)						
33	MTHL-PKG2-MPR.18.DT.JV.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%	09-Feb-20, MTHL-PKG2-MPR.18.DT.JV.5.4.3.5 TECHNICAL DESIGN (LHS STEEL MOUDLE-1_MP176 - MP171)						
34	MTHL-PKG2-MPR.18.DT.JV.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%	17-Feb-20, MTHL-PKG2-MPR.18.DT.JV.5.4.3.6 TECHNICAL DESIGN (RHS STEEL MOUDLE-1_MP176 - MP172)						
35	MTHL-PKG2-MPR.18.DT.JV.5.4.7	DESIGN CONDITION BY THE SERVICE RECIPIENT	101.00d	23-Jul-18	01-Nov-18			0%	0%	18-Dec-19, MTHL-PKG2-MPR.18.DT.JV.5.4.7 DESIGN CONDITION BY THE SERVICE RECIPIENT						
36	MTHL-PKG2-MPR.18.DT.JV.5.4.1	TEMPORARY WORKS DESIGN BY SERVICE RECIPIENT	52.00d	07-Nov-1	29-Dec-18			0%	0%	13-Feb-20, MTHL-PKG2-MPR.18.DT.JV.5.4.1 TEMPORARY WORKS DESIGN BY SERVICE RECIPIENT						
37	MTHL-PKG2-MPR.18.DT.JV.5.4.4	CONSTRUCTION DESIGN	257.00d	21-Dec-1	04-Sep-19			100%	0%	30-Aug-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4 CONSTRUCTION DESIGN						
38	MTHL-PKG2-MPR.18.DT.JV.5.4.4.1	CONSTRUCTION DESIGN DRAWINGS (LHS STEEL MOUDLE-2_MP177 - N)	201.00d	21-Dec-1	10-Jul-19			100%	0%	21-Jun-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4.1 CONSTRUCTION DESIGN DRAWINGS (LHS STEEL MOUDLE-2_MP177 - N)						
39	MTHL-PKG2-MPR.18.DT.JV.5.4.4.2	CONSTRUCTION DESIGN DRAWINGS (RHS STEEL MOUDLE-2_MP177 - N)	176.00d	18-Jan-19	13-Jul-19			100%	0%	12-Jul-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4.2 CONSTRUCTION DESIGN DRAWINGS (RHS STEEL MOUDLE-2_MP177 - N)						
40	MTHL-PKG2-MPR.18.DT.JV.5.4.4.3	CONSTRUCTION DESIGN DRAWINGS (LHS STEEL MOUDLE-3_MP183 - N)	201.00d	18-Jan-19	07-Aug-19			100%	0%	15-Jul-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4.3 CONSTRUCTION DESIGN DRAWINGS (LHS STEEL MOUDLE-3_MP183 - N)						
41	MTHL-PKG2-MPR.18.DT.JV.5.4.4.4	CONSTRUCTION DESIGN DRAWINGS (RHS STEEL MOUDLE-3_MP183 - N)	176.00d	15-Feb-1	10-Aug-19			100%	0%	18-Jul-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4.4 CONSTRUCTION DESIGN DRAWINGS (RHS STEEL MOUDLE-3_MP183 - N)						
42	MTHL-PKG2-MPR.18.DT.JV.5.4.4.5	CONSTRUCTION DESIGN DRAWINGS (LHS STEEL MOUDLE-1_MP176 - N)	201.00d	15-Feb-1	04-Sep-19			100%	0%	12-Aug-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4.5 CONSTRUCTION DESIGN DRAWINGS (LHS STEEL MOUDLE-1_MP176 - N)						
43	MTHL-PKG2-MPR.18.DT.JV.5.4.4.6	CONSTRUCTION DESIGN DRAWINGS (RHS STEEL MOUDLE-1_MP176 - N)	171.00d	17-Mar-1	04-Sep-19			100%	0%	30-Aug-20, MTHL-PKG2-MPR.18.DT.JV.5.4.4.6 CONSTRUCTION DESIGN DRAWINGS (RHS STEEL MOUDLE-1_MP176 - N)						
44	MTHL-PKG2-MPR.18.DT.JV.6	PROCUREMENT, MANUFACTURING AND LOGISTICS	946.29d	20-Jan-18	23-Aug-20	22-Dec-17		100%	54.17%	04-Mar-21, MTHL-PKG2-MPR.18.DT.JV.6 PROCUREMENT, MANUFACTURING AND LOGISTICS						
45	MTHL-PKG2-MPR.18.DT.JV.6.1	SURVEY & INVESTIGATION	72.33d	20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%	04-Apr-18 A, MTHL-PKG2-MPR.18.DT.JV.6.1 SURVEY & INVESTIGATION						
46	MTHL-PKG2-MPR.18.DT.JV.6.2	TEMPORARY WORK	273.33d	20-Jan-18	20-Oct-18	20-Jan-18		0%	0%	23-Nov-19, MTHL-PKG2-MPR.18.DT.JV.6.2 TEMPORARY WORK						
47	MTHL-PKG2-MPR.18.DT.JV.6.3	MAIN WORK SUBCONTRACT WORK	415.38d	23-Mar-1	20-Jul-19	23-Mar-18		0%	0%	18-May-20, MTHL-PKG2-MPR.18.DT.JV.6.3 MAIN WORK SUBCONTRACT WORK						
48	MTHL-PKG2-MPR.18.DT.JV.6.4	EQUIPMENTS	538.03d	23-Mar-1	12-Sep-19	23-Mar-18		100%	100%	13-Apr-20, MTHL-PKG2-MPR.18.DT.JV.6.4 EQUIPMENTS						
49	MTHL-PKG2-MPR.18.DT.JV.6.4.1	BATCHING PLANT	131.00d	23-Mar-1	31-Jul-18	23-Mar-18	23-Mar-1	0%	0%	23-Mar-19 A, MTHL-PKG2-MPR.18.DT.JV.6.4.1 BATCHING PLANT						
50	MTHL-PKG2-MPR.18.DT.JV.6.4.2	RCD MACHINE	234.00d	23-Mar-1	11-Nov-18	23-Mar-18	24-Aug-1	0%	0%	24-Aug-19 A, MTHL-PKG2-MPR.18.DT.JV.6.4.2 RCD MACHINE						
51	MTHL-PKG2-MPR.18.DT.JV.6.4.3	GANTRY CRANE	323.00d	23-Mar-1	08-Feb-19	23-Mar-18		100%	100%	21-Feb-20, MTHL-PKG2-MPR.18.DT.JV.6.4.3 GANTRY CRANE						





 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	2018	2019	2020	2021	2022	023
52	MTHL-PKG2-MPR.18.DT.JV.6.4.4	SEGMENT LAUNCHER	415.00d	24-Jul-18	12-Sep-19	24-Jul-18		0%	0%			13-Apr-20			
53	MTHL-PKG2-MPR.18.DT.JV.6.5	PRECAST MOULD AND SYSTEM FORM	229.91d	07-Aug-1	24-Mar-19	04-Sep-18		100%	8.33%				21-Apr-20		
54	MTHL-PKG2-MPR.18.DT.JV.6.5.1	PRECAST MOULD_CASTING BED	217.00d	20-Aug-1	24-Mar-19	03-Jun-19		100%	8.33%				21-Apr-20		
55	MTHL-PKG2-MPR.18.DT.JV.6.5.2	SYSTEM FORM	209.00d	07-Aug-1	04-Mar-19	04-Sep-18		0%	0%				21-Nov-19		
56	MTHL-PKG2-MPR.18.DT.JV.6.6	MATERIAL SUPPLIERS	500.38d	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%			03-May-20			
57	MTHL-PKG2-MPR.18.DT.JV.6.8	MATERIAL PROCUREMENT	0.00d			08-Aug-18		0%	0%				25-Sep-19		
58	MTHL-PKG2-MPR.18.DT.JV.6.8.1	TEMPORARY BRIDGE	0.00d			08-Aug-18		0%	0%				25-Sep-19		
59	MTHL-PKG2-MPR.18.DT.JV.6.8.2	PERMANENT WORKS	0.00d			25-Mar-19		0%	0%				25-Sep-19		
60	MTHL-PKG2-MPR.18.DT.JV.6.7	PROCUREMENT OF STEEL GIRDER	474.00d	07-May-1	23-Aug-20	04-Sep-19		0%	0%				04-Mar-21		
61	MTHL-PKG2-MPR.18.DT.JV.6.7.1	STEEL PLATE FOR (RHS.STEEL MOUDLE-2_MP177 - MP182)	405.00d	04-Jun-19	13-Jul-20			0%	0%				22-Nov-20		
62	MTHL-PKG2-MPR.18.DT.JV.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%				08-Sep-20		
63	MTHL-PKG2-MPR.18.DT.JV.6.7.3	STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186)	315.00d	01-Jul-19	10-May-20			0%	0%				30-Sep-20		
64	MTHL-PKG2-MPR.18.DT.JV.6.7.4	STEEL PLATE FOR (LHS.STEEL MOUDLE-3_MP183 - MP186)	315.00d	04-Jun-19	14-Apr-20			0%	0%				10-Aug-20		
65	MTHL-PKG2-MPR.18.DT.JV.6.7.5	STEEL PLATE FOR (RHS.STEEL MOUDLE-1_MP176 - MP171)	390.00d	30-Jul-19	23-Aug-20			0%	0%				04-Mar-21		
66	MTHL-PKG2-MPR.18.DT.JV.6.7.6	STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171)	390.00d	02-Jul-19	26-Jul-20			0%	0%				24-Feb-21		
67	MTHL-PKG2-MPR.18.DT.JV.7	CONSTRUCTION	1541.32d	02-Apr-18	21-Jun-22	02-Apr-18		23.2%	10.05%						
68	MTHL-PKG2-MPR.18.DT.JV.7.1	TEMPORARY WORK	1541.32d	02-Apr-18	21-Jun-22	02-Apr-18		97.95%	80.85%						
69	MTHL-PKG2-MPR.18.DT.JV.7.1.1	PREPARATION WORK	289.17d	02-Apr-18	16-Jan-19	02-Apr-18	25-Jul-19	0%	0%				25-Jul-19 A		
70	MTHL-PKG2-MPR.18.DT.JV.7.1.1.1	MANGROOVE CUTTING	67.00d	02-Apr-18	30-Jun-18	02-Apr-18	22-Nov-1	0%	0%				22-Nov-18 A		
71	MTHL-PKG2-MPR.18.DT.JV.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%				12-Sep-18 A		
72	MTHL-PKG2-MPR.18.DT.JV.7.1.1.3	PREPARATION WORK_CASTING YARD	161.00d	13-Apr-18	16-Jan-19	19-Apr-18	25-Jul-19	0%	0%				25-Jul-19 A		
73	MTHL-PKG2-MPR.18.DT.JV.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%				03-Jul-19 A		
74	MTHL-PKG2-MPR.18.DT.JV.7.1.2	ESTABLISHMENT OF EMPLOYER & CONTRACTOR OFFICE	159.75d	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%				18-Jan-19 A		
75	MTHL-PKG2-MPR.18.DT.JV.7.1.2.1	EMPLOYER & ENGINEER OFFICE	159.75d	20-Jun-18	27-Nov-18	17-Aug-18	18-Jan-19	100%	100%				18-Jan-19 A		
76	MTHL-PKG2-MPR.18.DT.JV.7.1.2.2	CONTRACTOR OFFICE	159.75d	20-Jun-18	27-Nov-18	27-Jun-18	24-Nov-1	0%	0%				24-Nov-18 A		
77	MTHL-PKG2-MPR.18.DT.JV.7.1.3	ESTABLISHMENT OF LABOUR CAMP	289.00d	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%				04-Apr-19 A		
78	MTHL-PKG2-MPR.18.DT.JV.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%				18-Dec-18 A		
79	MTHL-PKG2-MPR.18.DT.JV.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%				18-Jan-19 A		
80	MTHL-PKG2-MPR.18.DT.JV.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%				12-Mar-19 A		
81	MTHL-PKG2-MPR.18.DT.JV.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%				04-Apr-19 A		
82	MTHL-PKG2-MPR.18.DT.JV.7.1.4	ESTABLISHMENT OF CONCRETE CASTING YARD	355.83d	04-May-1	25-Apr-19	14-Jun-18		100%	95.96%				09-Jul-20		
83	MTHL-PKG2-MPR.18.DT.JV.7.1.5	ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD	342.00d	02-Nov-1	06-Mar-20			0%	0%				13-May-21		
84	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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%				25-Apr-19 A		
87	MTHL-PKG2-MPR.18.DT.JV.7.1.6.2	TEMPORARY BRIDGE 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%				24-Jul-19 A		
88	MTHL-PKG2-MPR.18.DT.JV.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%				21-Feb-19 A		
89	MTHL-PKG2-MPR.18.DT.JV.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%				24-Jul-19 A		
90	MTHL-PKG2-MPR.18.DT.JV.7.1.6.3	TEMPORARY BRIDGE TYPE 3_FROM MP207(14+870) - MP226(16+010)	415.08d	24-Jul-18	12-Sep-19	16-Nov-18		100%	62.05%				09-Apr-20		
91	MTHL-PKG2-MPR.18.DT.JV.7.1.6.3.2	TEAM-2_MP216-MP230	415.08d	24-Jul-18	12-Sep-19	28-Mar-19		100%	43.84%				09-Apr-20		
92	MTHL-PKG2-MPR.18.DT.JV.7.1.6.3.1	TEAM-1_MP207 & MP216-MP206	236.04d	26-Jul-18	19-Mar-19	16-Nov-18		100%	90.38%				02-Nov-19		
93	MTHL-PKG2-MPR.18.DT.JV.7.1.6.4	MATERIAL LOADING JETTY	260.00d	31-Aug-1	08-Aug-19	08-Mar-19		100%	56.7%				15-Jun-20		
94	MTHL-PKG2-MPR.18.DT.JV.7.2	PERMANENT WORK	1359.24d	03-Sep-1	24-May-22	08-Dec-18		13.43%	0.8%						
95	MTHL-PKG2-MPR.18.DT.JV.7.2.1	PRE-FABRICATION AND ASSEMBLY	1038.33d	18-Apr-19	19-Feb-22			2.6%	0%				01-Oct-22		
96	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.7.2.2.1	MAIN BRIDGE FOUNDATION	932.00d	03-Sep-1	23-Mar-21	08-Dec-18		36.88%	6.68%				26-Feb-22		
98	MTHL-PKG2-MPR.18.DT.JV.7.2.2.1.1	MAIN BRIDGE PILE FOUNDATION	873.04d	03-Sep-1	23-Jan-21	08-Dec-18		46.26%	11.99%				30-Nov-21		
99	MTHL-PKG2-MPR.18.DT.JV.7.2.2.1.1.1	PILE LOAD TEST	77.17d	03-Sep-1	19-Nov-18	08-Dec-18		100%	75%				22-Nov-19		
100	MTHL-PKG2-MPR.18.DT.JV.7.2.2.1.1.1.1	INITIAL PILE LOAD TEST	50.75d	03-Sep-1	19-Nov-18	08-Dec-18		100%	75%				22-Nov-19		
101	MTHL-PKG2-MPR.18.DT.JV.7.2.2.1.1.1.2	ROUTINE & DYNAMIC LOAD TEST	0.00d					0%	0%						
102	MTHL-PKG2-MPR.18.DT.JV.7.2.2.1.1.1.7	MAIN BRIDGE PILE FOUNDATION_LAND 17+414-18+187 FROM	140.00d	30-Nov-1	15-May-19	01-May-19		100%	30.15%				31-Mar-20		





 Primary Baseline
 Actual Work
 Critical Remaining Work
% Complete icon" data-bbox="145 858 165 870"/> % 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	2018	2019	2020	2021	2022	023
103	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.2.1.1.6	MAIN BRIDGE PILE FOUNDATION_CRZ 15+890-17+414 FROM N	253.25d	20-Dec-1	27-Nov-19	12-Jun-19		82.2%	19.81%						
108	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.2.1.1.4	MAIN BRIDGE PILE FOUNDATION_MARINE 13+610-14+800 FRC	263.00d	12-Dec-1	28-Nov-20			0%	0%						
119	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.2.1.2.7.6	MAIN BRIDGE PILE CAP BOTTOM SLAB_CRZ 15+890-17+	243.13d	17-Jan-19	12-Dec-19	19-Aug-19		0%	0%						
136	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.2.1.2.7.3.3	STEEL MODULE-02_MP182 - MP177	190.00d	08-Jan-20	26-Sep-20			0%	0%						

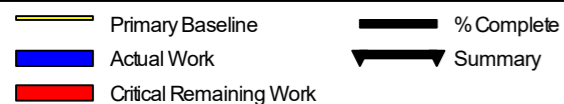
 Primary Baseline
 Actual Work
 Critical Remaining Work
% Complete icon" data-bbox="145 861 177 871"/> % Complete
 Summary

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	2018	2019	2020	2021	2022	023
154		MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.2.2 MAIN BRIDGE SUB-STRUCTURE	989.13d	09-Jan-19	24-Sep-21			30.71%	0%						
194		MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.2.2.3.5 MAIN BRIDGE PIER CAP_CRZ 15+890-17+414 FROM MB226 TC	229.00d	19-Apr-19	25-Feb-20			34.04%	0%						
204		MTHL-PKG2-MPR.18.DT.JV.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%						



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	2018	2019	2020	2021	2022	023
205	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.3	MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB18	235.00d	23-Apr-20	10-Mar-21			0%	0%					30-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.3	
206	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2	MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FRO	348.88d	30-Apr-20	27-Aug-21			0%	0%					27-Jun-22, MTHL-PK	
207	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1	MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROM MB14	289.00d	15-Mar-19	01-Apr-20			45.53%	0%					15-Jan-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1	
208	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2	MAIN BRIDGE BEARING PAD AND BEARING INSALLATION	944.79d	22-Feb-19	24-Sep-21			4.8%	0%					25-Jul-22, MTHL-P	
209	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.6	MAIN BRIDGE BEARING_LAND 17+414~18+188 FROM MB251 T	180.50d	22-Feb-19	22-Aug-19			100%	0%					19-Jun-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.2.6	
210	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.5	MAIN BRIDGE BEARING_CRZ 15+890~17+414 FROM MB226 TC	287.88d	08-May-19	20-Feb-20			40%	0%					12-Jan-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.2.5	
211	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.4	MAIN BRIDGE BEARING_INTERTIDAL 14+800~15+890 FROM MI	443.00d	29-Jun-19	14-Sep-20			25%	0%					10-Jul-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.2.4	
212	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3	MAIN BRIDGE BEARING_MARINE 13+610~14+800 FROM MB18	308.25d	07-Apr-20	09-Feb-21			0%	0%					02-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.2.3	
213	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.2	MAIN BRIDGE BEARING_MARINE (STEEL) 11+880~13+610 FRO	493.25d	19-May-19	24-Sep-21			0%	0%					25-Jul-22, MTHL-P	
214	MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1	MAIN BRIDGE BEARING_MARINE 10+380~11+880 FROM MB14	359.34d	25-Apr-19	18-Apr-20			50%	0%					15-Jan-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.2.1	
215	MTHL-PKG2-MPR.18.DTJV.7.2.2.3	MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION	901.30d	12-Sep-19	01-Mar-22			0%	0%					21-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3	
216	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1	MAIN BRIDGE CONCRETE GIRDER INSTALLATION	874.29d	12-Sep-19	02-Feb-22			0%	0%					10-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1	
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-19	27-Feb-20			0%	0%					24-Nov-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5	
218	CN.LGA.1000	Assembly of Structural Parts in Launching Gantry_1	35.00d	12-Sep-19	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-19	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-19	25-Dec-19			0%	0%					16-Sep-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.1	
223	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.2	MODULE-21_MP261 - MP257	45.88d	02-Dec-19	23-Jan-20			0%	0%					17-Oct-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.2	
224	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.3	MODULE-20_MP256 - MP255	30.88d	31-Dec-19	04-Feb-20			0%	0%					30-Oct-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.3	
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%					24-Nov-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.5.4	
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-20	25-Sep-20			0%	0%					21-Apr-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4	
227	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.4	MODULE-18_MP249 - MP246	45.88d	04-Feb-20	28-Mar-20			0%	0%					23-Dec-20, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.4	
228	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.3	MODULE-17_MP245 - MP241	45.88d	05-Mar-20	27-Apr-20			0%	0%					21-Jan-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.3	
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%					15-Feb-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.2	
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%					17-Mar-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.1	
231	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.5	MODULE-14_MP231 - MP227	50.88d	27-May-20	25-Sep-20			0%	0%					21-Apr-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.4.5	
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-20	23-Jan-21			0%	0%					28-Oct-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3	
233	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.4	MODULE-13_MP226 - MP222	30.97d	12-Sep-20	21-Oct-20			0%	0%					15-May-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.4	
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%					14-Jun-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.3	
235	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.2	MODULE-11_MP216 - MP212	35.97d	09-Nov-20	19-Dec-20			0%	0%					14-Sep-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.2	
236	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.1	MODULE-10_MP211 - MP207	40.97d	08-Dec-20	23-Jan-21			0%	0%					28-Oct-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.3.1	
237	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2	MAIN BRIDGE PRECAST GIRDER_MARINE 13+610~14+800 FRC	125.97d	12-Jan-21	10-Jun-21			0%	0%					19-Mar-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2	
238	CN.LGD.1000	Dismantling of Launching Gantry_1	20.00d	18-May-21	10-Jun-21			0%	0%						
239	CN.LGD.1010	Dismantling of Launching Gantry_2	20.00d	12-May-21	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%					20-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.4	
241	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.3	MODULE-08_MP201 - MP197	35.97d	05-Feb-21	19-Mar-21			0%	0%					20-Dec-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.3	
242	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.2	MODULE-07_MP196 - MP192	35.97d	08-Mar-21	17-Apr-21			0%	0%					24-Jan-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.2	
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%					23-Feb-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.2.1	
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%					10-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1	
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-21	02-Feb-22			0%	0%					10-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.4	
248	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.3	MODULE-04_MP166 - MP162	30.97d	29-Nov-21	03-Jan-22			0%	0%					10-Oct-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.3	
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%					08-Sep-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.2	
250	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.1	MODULE-02_MP156 - MP152	30.97d	29-Sep-21	05-Nov-21			0%	0%					09-Jun-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.1	
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%					11-May-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.1.1.5	
252	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.3	STITCH JOINT CASTING	630.50d	07-Dec-21	12-Feb-22			0%	0%					21-Nov-21, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.3	
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%					20-Oct-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2	
254	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1	MAIN BRIDGE STEEL GIRDER INSTALLATION_MARINE 11+880~1	378.00d	03-Oct-20	01-Mar-22			0%	0%					20-Oct-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1	
255	MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1.2	STEEL MODULE-01_MP176 - MP171 (INSTALLATION)	72.00d	07-Dec-21	01-Mar-22			0%	0%					20-Oct-22, MTHL-PKG2-MPR.18.DTJV.7.2.2.3.2.1.2	





Primary Baseline
 Actual Work
 Critical Remaining Work
% Complete icon"/> % 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	2018	2019	2020	2021	2022	023
256	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.7.2.2.4	MISCELLANEOUS & FINISHING WORKS	809.84d	16-May-1	24-May-22			2.15%	0%						
259	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.2	CRASH BARRIER & GURARD RAILS	546.66d	20-Feb-2	07-Mar-22			0%	0%						
260	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.4	WATER PROOFNG	526.66d	26-Mar-2	17-Mar-22			0%	0%						
261	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.5	PAVEMENT	593.63d	16-Mar-2	24-May-22			0%	0%						
262	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.1	EXPANSION JOINT	503.75d	27-May-2	21-Apr-22			0%	0%						
263	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.3	SUB STATION	508.88d	16-May-1	15-Apr-21			33.33%	0%						
264	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.7	NOISE BARRIER	387.53d	16-Mar-2	14-Sep-21			0%	0%						
265	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.6	FENDER INSTALLATION	80.00d	24-Jul-21	24-Nov-21			0%	0%						
266	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.8	DRAINAGE WORKS	528.66d	16-Mar-2	09-Mar-22			0%	0%						
267	MTHL-PKG2-MPR.18.DT.JV.7.2.2.4.9	SIGN BOARDS	60.00d	12-Feb-2	23-Apr-22			0%	0%						
268	MTHL-PKG2-MPR.18.DT.JV.7.2.3	INTERCHANGE	1221.08d	24-Dec-1	28-Apr-22			40.33%	0%						
269	MTHL-PKG2-MPR.18.DT.JV.7.2.3.1	INTERCHANGE FOUNDATION	668.08d	24-Dec-1	22-Oct-20			53.82%	0%						
270	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.7.2.3.1.2.3.1	MODULE_25_MP245-JMP4	85.00d	18-Jan-19	06-Dec-19			32.65%	0%						
301	MTHL-PKG2-MPR.18.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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.DT.JV.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 icon" data-bbox="145 860 175 870"/> % 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	2018	2019	2020	2021	2022	023
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%				28-Apr-21	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5	INTERCHA
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%				28-Apr-21	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5.1	MODULE
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%				16-Jan-21	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5.2	MODULE_29_CAP
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%				28-Oct-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.5.3	MODULE_30_CAP8-CAA2
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%				20-Jun-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.6	INTERCHANGE RAMP PILE CAP_AM
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%				21-Mar-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.6.1	MODULE_31_MAA2-AMP4
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%				20-Jun-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.1.2.6.2	MODULE_32_AMP4-MP259
314	MTHL-PKG2-MPR.18.DTJV.7.2.3.2	INTERCHANGE SUBSTRUCTURE & BEARING	637.00d	29-Jan-19	31-May-21			27.38%	0%				13-May-22	MTHL-PKG2	
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%				11-Apr-22	MTHL-PKG2-MP	
316	MTHL-PKG2-MPR.18.DTJV.7.2.3.2.2	INTERCHANGE BEARING INSTALLATION	612.00d	27-Feb-1	31-May-21			0%	0%				13-May-22	MTHL-PKG2	
317	MTHL-PKG2-MPR.18.DTJV.7.2.3.3	INTERCHANGE SUPERSTRUCTURE INSTALLATION	641.00d	20-Sep-1	15-Feb-22			0%	0%				16-		
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%				16-		
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%				09-D		
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%				22-Dec-21	MTHL-PKG2-MPR.18.DTJV	
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%				23-Dec-21	MTHL-PKG2-MPR.18.DTJV	
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%				09-D		
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%				30-Apr-21	MTHL-PKG2-MPR.18.DTJV.7.2.3.3.6	INTERCHAN
324	MTHL-PKG2-MPR.18.DTJV.7.2.3.4	INTERCHANGE RETAINING STRUCTURE	606.25d	11-Mar-1	06-Nov-20			51.9%	0%				26-Oct-21	MTHL-PKG2-MPR.18.DTJV.7.2.3	
325	MTHL-PKG2-MPR.18.DTJV.7.2.3.4.1	INTERCHANGE RETAINING STRUCTURE_MA	0.00d					0%	0%				26-Oct-21	MTHL-PKG2-MPR.18.DTJV.7.2.3	
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%				29-Apr-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.4.3	INTERCHANGE RETAINING STRUCTURE_JM
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%				20-Jun-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.4.4	INTERCHANGE RETAINING STRUCTURE
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%				08-Jan-21	MTHL-PKG2-MPR.18.DTJV.7.2.3.4.5	INTERCHANGE RETAIN
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%				15-Oct-20	MTHL-PKG2-MPR.18.DTJV.7.2.3.4.6	INTERCHANGE RETAINING ST
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_250821	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**

MTHL Pkg 3_Construction Schedule Sep19

Baseline Schedule (Updated as on 25th Sep 2019)

30-Sep-19 17:06

Activity ID	Activity Name	Original Duration	BLT Start	BLT Finish	Start	Finish	Variance - BL Project	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	
																		23	30
MTHL Pkg 3_Construction Schedule Sep19																			
1266		1266	23-Mar-18	21-Sep-21	23-Mar-18 A	05-Sep-22	-297	0		Rs10,137,901,022	Rs77,800,528	50.27%	8.37%	1.12	0.17	Rs5,247,298,488	Rs874,027,824		
Procurement of Mumbai Trans Harbour Link Project (Pa																			
2	Commencement Date (CD)		0 23-Mar-18	21-Sep-21	23-Mar-18 A	05-Sep-22	0	100%		Rs0	Rs0	100%	100%	0.00	0.00	Rs0	Rs0		
Physical Milestones																			
1012		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	KD1 [Construction programme, completion of Soil Invest		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	100%	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/C/IS/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 & handover 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		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		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		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		
Submit1000	Submissions within 14,28,45 days from Commencem		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		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	21-Dec-18	-155			Rs0	Rs0	0%	0%	0.00	0.00	Rs0	Rs0		
Employer Office (Sch 01 - General Item)																			
801		801	20-Aug-18	16-Sep-21	25-Jan-19 A	26-Mar-22	-162	138		Rs142,351,965	Rs43,509,322	84.88%	30.50%	1.00	0.30	Rs120,543,954	Rs43,509,322		
Construction of Employer office			110 20-Aug-18	11-Dec-18	30-May-19 A	02-Jun-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	Rs6,912,000	26.22%	20%	1.00	0.76	Rs7,751,969	Rs6,912,000		
Survey & Geotechnical Investigation Works																			
348		348	19-Apr-18	22-Oct-18	19-Apr-18 A	26-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	26-Oct-19	-262	72		Rs0	Rs0	100%	93.29%	1.00	0.93	Rs109	Rs102		
Geotechnical Investigation work			93 17-May-18	17-Sep-18	10-Sep-18 A	26-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		412	07-May-18	14-Jun-19	25-Apr-18 A	19-Jun-20	-285	327		Rs199,122,500	Rs45,311,484	100%	35.94%	1.26	0.38	Rs199,123,270	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	23-Oct-19	-334	38		Rs0	Rs0	100%	80%	0.00	0.80	Rs102	Rs102		
Superstructure Design			257 16-Aug-18	26-Feb-19	05-Mar-19 A	30-Mar-20	-307	126		Rs85,075,000	Rs4,912,134	100%	5.77%	1.00	0.06	Rs85,075,144	Rs4,912,767		
Foundation & Pier			324 05-Oct-18	14-Jun-19	05-Nov-18 A	19-Jun-20	-298	147		Rs28,434,375	Rs12,791,250	100%	47.07%	1.00	0.47	Rs28,434,455	Rs13,384,320		
Abutment & Foundation			203 15-Oct-18	16-Jan-19	31-Dec-18 A	20-Jun-20	-283	215		Rs0	Rs0	100%	37.41%	0.00	0.37	Rs41	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		900	12-Sep-18	05-Jun-21	15-Feb-19 A	04-Jul-22	-304	0		Rs1,387,180,466	Rs0	89.98%	0%	0.00	0.00	Rs1,489,432,161	Rs128		
For Main Bridge			900 12-Sep-18	05-Jun-21	15-Feb-19 A	04-Jul-22	-304	0		Rs77,933,218	Rs0	78.85%	0%	0.00	0.00	Rs69,224,115	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	Rs16		
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 & Manufacturing Works																			
489		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	Rs393,204,002	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	Rs393,205,601	Rs198		
Permanent Works Assembly			489 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		1028	20-Jul-18	23-Jul-21	26-Sep-18 A	29-Jul-22	-297	32		Rs7,063,485,446	Rs447,259,827	34.98%	6.81%	1.08	0.19	Rs2,470,932,578	Rs481,333,238		
Preconstruction Activity																			
388		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	06-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 09-Dec-18	24-Jan-20	05-Dec-18 A	01-Feb-21	-289	465		Rs1,821,401,625	Rs298,412,632	76.88%	16.38%	1.00	0.21	Rs1,400,249,849	Rs298,412,632		
SH 4 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		Rs74,987,055	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		637	27-Feb-19	12-Apr-21	22-Jan-20	18-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	Rs6,433,205	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		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	Rs			

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Variance - BL Project End 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		0
	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	23	30	

■ Actual Work ■ Critical Remaining W...
■ Remaining Work ◆ ◆ Milestone

Employer : MMRDA
Page 2 of 2

TASK filter: All Activities

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