HALF YEARLY REPORT FOR MUMBAIJANUARY TOTRANS HARBOUR LINKJUNE 2020



<u>Submitted to</u> Maharashtra Pollution Control Board (MPCB)

Submitted by



Information of Project officer and Nodal officer

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

Photographs showing present progress of work

Please refer to the Quarterly Progress Report No. 11 and 12 for the photographs of the progress

Monitoring the Implementation of Environmental Safeguards

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

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

| No. | Particular | | Information |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | Mumbai Trans Harbour Link Project is 22 km long 6- lane bridge across the Mumbai bay connecting Sewri on Mumbai side to Chirle on Navi Mumbai side. |
| | | | Benefits: Saving in travel time, Vehicle Operating Cost and Fuel Savings Accelerated growth of Navi Mumbai Decongestion of island city of Mumbai Connectivity to MbPT and JNPT Ports Faster access to Navi Mumbai International Airport Connectivity to Pune Expressway and to South India |
| | b) of the Environmental Management Plans | | Various measures stipulated in the Environmental Management Plan mentioned in the CRZ clearance are being complied. |
| 7. | Breakup of the Project Area | : | Total Area of Right of Way: 120.228 Ha |
| | a) Submergence area: forest & non forest | | Forest area: 47.417 Ha Non-Forest area: 72.811 Ha |
| | b) Others | | |
| 8. | Breakup of the project affected population with the enumeration of those losing Houses / Dwelling units only, Agricultural Land & Landless Laborers / Artisans: a) SC, ST / Adivasi b) Others (please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey) | : | Project affected population: Please refer to the Quarterly Progress Report No. 11 and 12 for the project affected population. MMRDA has approved eligibility of 5379 fisher folks as project affected so far. Accordingly, fisheries department, Gov. of Maharashtra has paid compensation to eligible fisher-folk as per approved Fisherman Compensation Policy |
| 9 a) | Financial Details: Project cost as originally planned and | : | The total cost of the project is Rs. 17,843 Crore Year of reference: 2016 |
| | subsequent revised estimates and the year of price reference | | |

| No. | Particular | | Information |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | environmental management plans with item wise and year wise breakup | | implementation of Environment Management Plan for the MTHL project. The item-wise cost breakup of the EMP is attached as Annexure-I. |
| c) | Benefit cost ratio/Internal rate of Return and the year of assessment | : | - |
| d) | Whether (c)includes the cost of environmental management as shown in the above | : | - |
| e) | Actual expenditure incurred on the project so far | : | Rs. 4751.54 Crore |
| f) | Actual expenditure incurred on the environmental management plans so far | : | Please refer Annexure-II for actual expenditure incurred on the environmental management plans so far. |
| 10 | Forest Land Requirement | | |
| a) | The status of approval for diversion of forest land for non-forestry use | : | Stage – I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22 nd January 2016 vide letter F.No.8-89/2013-FC. |
| b) | The status of clearing felling | : | NOC from Hon. High Court for cutting of mangroves is received on 28 th November 2016. Working Permission from Forest Department received on 22 May 2017. |
|)c) | The status of compensatory afforestation, if any Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far | : | Rs. 91.42 crores have been transferred to Mangrove cell of Mangroves & Marine Biodiversity Foundation, setup under Maharashtra State Forest Department for Compensatory Afforestation (CA). Mangrove cell, Mumbai submitted updated status report of plantation vide letter dated 4 th December 2019. |
| 11 | The status of clear felling in non-forest areas (such as submergence area or reservoir, approach roads.), if any with quantitative information required. | : | Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Permission for cutting/transplantation in non-forest area of Navi Mumbai side has been granted by CIDCO. However, felling in non-forest area has not yet started. |

| No. | Particular | | Information |
|-----|------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 | Status of construction (Actual&/or planned) | | Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Please refer to the Quarterly Progress Report No. 11 and 12 attached with this report. |
| a) | Date of commencement (Actual & / or planned) | : | Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. |
| b) | Date of completion (Actual&/or planned) | : | |
| 13 | Reasons for the delay if the project is yet to start | : | Not Applicable. |
| 14 | Dates of Site Visits | | |
| a) | The dates on which the project was monitored by the Regional Office on previous occasions, if any | : | |
| b) | Date of site visits for this monitoring report | : | |

Name: - Dr. D.T. Thube

Chief Engineer, MTHL Project Implementation Unit

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

Signature:

9212021 Chief Engineer

Engineering Division M.M.R.D.A.

Stamp:

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

HALF YEARLY COMPLIANCE REPORT

| Sr. No. | SPECIFIC CONDITIONS | COMPLIANCE STATUS |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| i. | All the terms and conditions stipulated by the MCZMA in their letter No. CRZ 2015/CR236/TC 4 dated 26 th November 2015 shall be strictly complied with. | Noted. MMRDA is following the conditions stipulated in the CRZ Clearance. |
| ii. | All the terms and conditions as mentioned in the earlier CRZ Clearance dated 19 th July 2013, shall also be complied with in letter and spirit, | Noted. MMRDA is following the conditions stipulated in the CRZ Clearance dated 19 th July 2013. |
| iii. | The Environment Management Plan as presented during the meeting shall be implemented in consultation with all the stakeholders. | MMRDAisimplementingtheEnvironmentManagementplanasstipulatedinCRZclearance.TheimplementationplanwithdetailedEMPisattachedasanAnnexure I. |
| iv. | The project/activity shall be carried out strictly be in accordance with the provisions of CRZ Notification, 2011, and shall not affect the coastal ecology of the area including flora and fauna. | Noted and is being complied. |
| v. | The project proponent shall obtain all permissions from concerned authorities prior to commencement of the project and shall observe all safety requirements onshore and offshore. | Noted and is being complied. |
| vi. | The project proponent shall not undertake any blasting/construction activities during night hours. | This condition has been revised by MoEF& CC vide letter dated 28 th August, 2017 having file no F. No. 11-65/2012- IA. III. |
| vii. | The proposal indicates the diversion of 47.417 ha forest land for which the proponent shall obtain the requisite Forest Clearance. The project may be executed in the entire stretch in non-forest land, and while making application to get the Forest Clearance, the execution of work on non- forest land shall not be cited as a reason for grant of FC and in case FC is declined, the forest land shall be maintained at its | Stage – I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22nd January 2016 vide letter F.No.8-89/2013-FC. Stage – II application is submitted to Deputy Conservator of Forest vide MMRDA letter 6-3-2017 and latest compliance submitted on 10-09-2018. |

Compliance to the Conditions Recommended in CRZ Clearance

| Sr. No. | SPECIFIC CONDITIONS | COMPLIANCE STATUS |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| | existing condition. The PP shall submit an undertaking to this effect at the earliest to the concerned Regional Office to this Ministry. | |
| viii. | All the wildlife mitigation measures as proposed by BNHS in their report dated 23.09.2015 for original alignment shall be implemented with the following modification | |
| | a) Construction of jetty on both the ends passing through mud flats and mangroves must not exceed 30 months and construction of actual spans must not exceed more that further 12 months. | Noted and being complied. |
| | b) The distance between the supporting pillars shall remain 50 m as currently proposed by the MMRDA. | The distance between the piers is maintained more than 50 m. |
| | c) MMRDA will partly bear the cost of setting of effluent treatment plant in the region as suggested by BNHS. | Noted and being complied |
| ix. | The project proponent shall not undertake any blasting/construction activities during night hours. | This condition has been revised by MoEF&CC vide letter dated 28 th August 2017 having file no F. No. 11-65/2012- IA. III. |

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

| Sr.No. | GENERAL CONDITIONS | COMPLIANCE STATUS |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | be submitted by the project proponents to the Regional Office of this Ministry at Nagpur regarding the implementation of the stipulated conditions. | Following Six-monthly compliance reports are also uploaded on MMRDA website : 1. January to June 2016. 2. July to December 2016. 3. January to June 2017. 4. July to December 2017. 5. January to June 2018. 6. July to December 2018. 7. January to June 2019. 8. July to December 2019 |
| 4 | MoEF&CC or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of environment and the same shall be complied with. | Noted and shall be complied |
| 5 | The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry. | Noted. |
| 6 | In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the MoEF & CC. | Noted. |
| 7 | The project proponents shall inform to the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work. | Noted. |
| 8 | A copy of the clearance letter shall be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal | Noted and complied |
| 9 | A copy of the CRZ Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/Tehsildar's Office for 30 days. | Noted and complied. |
| 10 | The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act | Noted and will be complied. |

| Sr.No. | GENERAL CONDITIONS | COMPLIANCE STATUS |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| | 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter. | |
| 11 | All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, and clearances under the Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities. | Noted and will be complied. |
| 12 | The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Nagpur. | Complied. |
| 13 | This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project. | Noted. |
| 14 | Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010. | Noted. |
| 15 | Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website. | Noted and is being complied. |
| 16 | A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local | Complied. |

| Sr.No. | GENERAL CONDITIONS | COMPLIANCE STATUS |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent. | |
| 17 | The proponent Shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. | Noted and is being complied. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA. |
| 18 | The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF & CC, the respective Zonal Office of CPCB and the SPCB. | Noted. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA. |
| 19 | The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF & CC by e-mail. | Noted. Individual construction packages have obtained CTE for batching plant and casting yards and the stipulations are being adhered to and are uploaded on the website of MMRDA |

Annexures

| Annexure IEnvironment Management Plan | | |
|-------------------------------------------------------------------------|------------------------------------|--|
| Annexure II Item wise cost breakup of the Environmental Management Plan | | |
| Annexure III | Quarterly Progress Reports 11 & 12 | |

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

Annexure-I Environment Management Plan stipulated in CRZ clearance

Annexure-II

| | EMP break | EMP break up for Jan to June 2020 | | | | |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------|-------------------------------|--|--|
| Sr. No | | | Expenditure incurred on the environmental management plans (Rs. in Crore) | Expenditure (Rs. In Crore) | | |
| 1. | Environmental Monitoring- Air Act, Water Act, Noise levels | 8 | 0.1696 | 0.7061 | | |
| 2. | Compensatory Restoration Plan (Mangroves) | 25 | 0 | 50.82 | | |
| 3. | Implementation of the suggestions given by BNHS | 25 | 0 | 41.98 | | |
| 4. | Noise barriers | 45 | 0.3413 | 1.051 | | |
| 5. | Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment | 40 | 0 | 5.8 | | |
| 6. | Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. This can be used for Survey & Demarcation of Notified areas. Purchase of vehicles and equipment for anti-Encroachment drives, etc. | 25 | 0 | 25 | | |
| 7. | Oil Spill Mitigation Plan | 10 | 0.271 | 0.9281 | | |
| 8. | Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program | 20 | 0 | 0 | | |
| 9. | Appointment of Bird Monitor and his assistant till | 4 | 0 | 0 | | |

| | EMP break | Cumulative | | |
|-----------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------|
| Sr. No | Environmental attribute | nvironmental attribute Cost in crores Exp (As stipulated in incu CRZ clearance) envi (Rs. in Crore) manag (Rs | | Expenditure (Rs. In Crore) |
| | Restoration of Baseline data | | | |
| 10. | DMP, Firefighting, Risk Analysis | 15 | 0.2026 | 1.9225 |
| 11. | Sustainable development including establishing Nature Interpretation Centre | 10 | 0 | 10 |
| 12. | Safety and Security | 15 | 3.0618 | 9.5401 |
| 13. | Energy conservation | 10 | 0.2837 | 2.9048 |
| 14. | Landscaping-Plantation of trees, flower in plants etc. | 8 | 0.085 | 0.578 |
| 15. | Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round | 75 | 40.37 | 89.3 |
| | | 335 Crores | 4.4785 Crores | 240.5306 Crores |



Mumbai Trans Harbour Link Project Quarterly Progress Report No. 11 1st October 2019 to 31st December 2019 Loan Agreement No. ID-P255 (Tranche–I)

ORGANIZATION INFORMATION

| | Mumbai Metropolitan Region Development Authority | | | | |
|-----------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| _ | Person in Charge | Metropolitan Commissioner, MMRDA | | | |
| Borrower | 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 | | | |
| | Mumbai Tra | umbai Trans Harbour Link Project Implementation Unit | | | |
| Executing | Headed by: | Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit | | | |
| Agency | 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

| | JICA ODA Loan | 238,572 million Japanese YEN (JPY) |
|------------------------------------|----------------------|----------------------------------------------------------------------|
| Source of | Portion: | |
| Finance | Tranche-I: | 144,795 million Japanese YEN (JPY) |
| Tinance | | (Loan Agreement signed on 31 st March 2017) |
| | Tranche-II: | 66,909 Million Japanese YEN (JPY) |
| | Tranche-II. | (Loan Agreement to be signed) |
| Terms and | Interest | 0.10000% (LIBOR(-0.04817%) + SPREAD RATE(0.10000%)) |
| Conditions | Rate: | from 20 th September 2019 to 19 th March 2020. |
| of JICA ODA Loan (Tranche-1) | Repayment Period: | 30 years, including 10 years of grace period. |

| PROJI | ECT NAME | Mumbai Trans Harbour Link Project | | | | | | | | | |
|------------|------------------|-----------------------------------------------|---------------------------|-----------------------|----------------------------|-----|-----------------------------------|--|--------------|-----|------------------|
| DOC | NO. | 11 | DATE OF ISSUE | | F ISSUE | 11/ | 02/2020 | | | | |
| DOC | TITLE | Quarterly Progress Report No. 11 | | | | | | | | | |
| REV No. | DATE OF ISSUE | DESCRIPTION | | PREPARED BY CHECKE | | BY | APPROVED BY | | | | |
| R0 | 05/07/2017 | Quarterly Progress Report No. 1 (Apr-Jun 17) | J Senthil | | J Senthil | | J Senthil | | Dr T K Sunda | ram | Dr Robin Sham |
| R0 | 05/10/2017 | Quarterly Progress Report No. 2 (Jul-Sep 17) | J Senthil Dr T K Sundaram | | Dr Robin Sham | | | | | | |
| R0 | 05/01/2018 | Quarterly Progress Report No. 3 (Oct-Dec 17) | J Se | nthil | Dr T K Sunda | ram | Dr Robin Sham | | | | |
| R0 | 05/04/2018 | Quarterly Progress Report No. 4 (Jan-Mar 18) | J Se | nthil | Dr T K Sunda | ram | Dr Robin Sham | | | | |
| R0 | 24/07/2018 | Quarterly Progress Report No. 5 (Apr-Jun 18) | Prasl | hant B | Dr T K Sunda | ram | Dr Robin Sham | | | | |
| R0 | 10/10/2018 | Quarterly Progress Report No. 6 (Jul-Sep 18) | Prasl | nant B | Dr T K Sunda | ram | Dr Robin Sham | | | | |
| R1 | 08/02/2019 | Quarterly Progress Report No. 7 (Oct-Dec 18) | Prasl | hant B | J Senthil/ Dr T K Sunda | | Dr Robin Sham | | | | |
| R0 | 05/04/2019 | Quarterly Progress Report No. 8 (Jan-Mar 19) | Prasl | nant 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 Gho | sh | Dr Robin Sham | | | | |
| R0 | 13/11/2019 | Quarterly Progress Report No. 10 (Jul-Sep 19) | Prasl | hant B | Mr. Som Gho | sh | Dr Robin Sham | | | | |
| R0 | 11/02/2020 | Quarterly Progress Report No.11(Oct-Dec 19) | Prasl | nant B | Mr. Som Gho | sh | Dr Robin Sham | | | | |
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DOCUMENT VERIFICATION AND REVISION RECORD

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| 3.0 BI 3.1 3.2 3.3 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts | 24 24 24 26 |
| 3.0 BI 3.1 3.2 3.3 3.4 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators | 24 24 24 26 29 |
| 3.0 BI 3.1 3.2 3.3 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts | 24 24 26 29 30 |
| 3.0 B 3.1 3.2 3.3 3.4 3.5 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS). Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention). Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators | 24 24 26 29 30 30 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management | 24 24 26 29 30 30 31 31 |
| 3.0 BI 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget | 24 24 26 29 30 30 30 31 31 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget | 24 24 26 29 30 30 31 31 32 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget JICA and Borrower / Executing Agency performance | 24 24 26 29 30 30 31 31 32 32 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS). Operational and Physical Condition. Precautions (Measures To Be Adopted/ Points Which Require Special Attention). Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation | 24 24 26 29 30 30 31 31 31 32 32 32 |
| 3.0 BI 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Attach | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations ment 1- MMRDA & PIU Organization Chart. | 24 24 26 29 30 30 31 31 31 31 32 32 32 32 33 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Attach Attach | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS). Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention). Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. ment 1- MMRDA & PIU Organization Chart. ment 2- Environmental & Social Impacts Attachments. | 24 24 26 29 30 30 31 31 31 32 32 32 33 36 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Attach Attach | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations Imment 1- MMRDA & PIU Organization Chart. Imment 2- Environmental & Social Impacts Attachments Imment 3- JICA's Concurrence Status | 24 24 26 29 30 30 31 31 31 31 32 32 32 33 36 37 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Attach Attach Attach | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS). Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention). Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. ment 1- MMRDA & PIU Organization Chart. ment 2- Environmental & Social Impacts Attachments. | 24 24 26 29 30 31 31 31 32 32 32 33 36 37 39 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Attach Attach Attach Attach Attach | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations Imment 2- Environmental & Social Impacts Attachments Imment 3- JICA's Concurrence Status Imment 4- Project Procurement and Financial Status till 31st December 2019 Imment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million Imment 6- Package-1's Construction Programme Updated as on 25th December 2019 | 24 24 26 29 30 31 31 31 31 32 32 33 36 37 39 41 42 |
| 3.0 Bi 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Attach Attach Attach Attach Attach Attach | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. ment 1- MMRDA & PIU Organization Chart. ment 2- Environmental & Social Impacts Attachments. ment 3- JICA's Concurrence Status ment 4- Project Procurement and Financial Status till 31st December 2019 ment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million | 24 24 26 29 30 31 31 31 31 32 32 33 36 37 39 41 42 43 |

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

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

- 7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.
- 8. Necessity of the Project: To promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL.

Actual (P/R, PCR)

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

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

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

| Vehicle Type | | Sewri Interc | terchangeandBetween Shivaji Nager Interchange andangeChirle 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 |

Table 1.3.1 Demand Projections Over the Period

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

- 2. At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.
- 3. 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

- 4. The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.
- 5. As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.
- 6. When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).
- 7. The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.
- 8. The major portion of MTHL structure is on sea and partly towards ends is on land with

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

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

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

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

Intelligent Transport Systems (ITS) and Toll Management System (TMS)

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

Traffic management System

- 14. Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifier (ATCC) and Meteorological Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
- 15. CCTV Cameras shall be installed at around three places per 1 km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information.
- 16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual (P/R, PCR)

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

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

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

Table 2.1.1 Comparison of Original and Actual location

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

Table 2.1.2 Comparison of Original and Actual Scope

| Items | Original | Actual | | |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--|--|
| Construction work: 6-lane Marine Bridge Road (21.8 km) | | | | |
| Package-1 Ch 0+000- 10+380 (10.380 km) | 1 Interchange (Sewri) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) | (P/R and PCR) | | |
| Package-2 Ch 10+380- 18+187 (7.80 km) | 1 Interchange (Shivaji Nagar) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) | (P/R and PCR) Actual: No View Barriers | | |
| Package-3 Ch 18+187- 21+800 (3.61 km) | 2 Interchanges (State Highway-54, National Highway-4B) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Cutting Section (6-lane with Slope Protection) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) | (P/R and PCR) Actual: No Noise Barriers & View Barriers | | |

| Items | Original | Actual |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Package-4 ITS (Intelligent Transport System) | Administrative Buildings Toll Booths (1 for main alignment and each on and off rumps for 3 interchanges) Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-cum-Classifier (ATCC), Variable Message Sign (VMS)) Highway Lighting (Whole sections Low-positioned lighting for some sections) Electrical Powering System including HV/ LV Ring Network across the Bridge. | (P/R and PCR) |
| Consulting Services | Tender Assistance Construction Supervision Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP). | (P/R and PCR) |

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

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

| Items | | Original | Status (<i>P/R and PCR</i>) as on 31 st December 2019 |
|----------------------------------------------|-------------|-----------------------------------|-----------------------------------------------------------------------|
| 1) Completion of Land Acquisition and Res | | March 2019 | January 2020 |
| 2) Consulting Services | S | | |
| a) Selection of Co | onsultant | May – December 2016 | May – December 2016 |
| b) Consultancy W | /orks | December 2016 – September 2024 | December 2016 – September 2024 |
| 3) Selection of Contra | ctor | | |
| Package-1, Package-2 | & Package-3 | (Civil) | |
| a) Pre-Qualification | on Process | May – December 2016 | May – December 2016 |
| b) Main Bidding | | January – December 2017 | January – December 2017 |
| c) JICA's Concur Contract | rence of | February-2018 | February-2018 |
| Package-4 (ITS) | | | |
| a) Pre-Qualification | on Process | January 2019 – May 2019 | January 2020 – April 2020 |
| b) Main Bidding | | June 2019 – September 2020 | May 2020 – September 2020 |
| 4) Civil Construction | | | |
| Package-1 and Packag | je-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 | September 2020 – September 2022 |
| 5) Defect Liability Per | iod | | |
| Package-1, Package-2 Package-4 | and | October 2022 – September 2024 | October 2022 – September 2024 |
| Package-3 | | October 2021 – September 2023 | October 2021 – September 2023 |
| 6) Commencement of Collection | Toll | 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 fourth quarter (October-December 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

| | Foreign | Currency | Portion | Local | Currency P | ortion | Total | | |
|----------------------------------------------|-----------------------|---------------------------------|------------------------|--------------------|------------------------------|---------------------|--------------------|------------------------------|------------------------|
| Cost Breakdown | 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.

| | Foreign | Currency | Portion | Local Currency Portion | | | | Total | | |
|----------------------------------------------|-----------------------|---------------------------------|------------------------|------------------------|------------------------------|---------------------|-----------------------|---------------------------------|------------------------|--|
| Cost Breakdown | 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 | 5,075 | 5,075 | - | 13,140 | 13,140 | | 25,660 | 25,660 | | |
| Package-2 | 3,705 | 3,705 | - | 9,105 | 9,105 | | 16,980 | 16,980 | | |
| Package-3 | 72 | 72 | - | 1,921 | 1,921 | | 3,066 | 3,066 | | |
| 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 | - | | | 1,819 | | 1,819 | 2,856 | | 2,856 | |
| GST | - | | | 3,392 | | 3,392 | 5,325 | | 5,325 | |
| Import Tax | - | | | - | | | - | | - | |
| Interest during construction | - | | | - | | | - | | - | |
| Front End Fee | - | | | - | | | - | | - | |
| Total | 9,105 | 9,105 | - | 35,144 | 24,469 | 10,675 | 63,342 | 46,582 | 16,760 | |

Table 2.3.1.a.(ii) Actually Incurred Cost BY ITEM (Need to be updated by MMRDA – Account Dept)

(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 | Total | | JICA Po | ortion | | Others (MMRDA |
|-----------|---------|-----------|------------|-------------|-----------|------------------|
| Breakdown | Total | 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 (Need to be updated by MMRDA – Account Dept)

(All Figures are in JPY mil)

| Cost | Total | | JICA Po | ortion | | Others (MMRDA |
|-----------|--------|-----------|------------|-------------|-----------|------------------|
| Breakdown | TOtal | 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 | 22,790 | 15,654 | | | 15,654 | 7,136 |
| FY 2020 | | | | | | |
| FY 2021 | | | | | | |
| FY 2022 | | | | | | |
| FY 2023 | | | | | | |
| FY 2024 | | | | | | |
| Total | 63,341 | 46,581 | - | - | 46,581 | 16,760 |

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

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

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

(P/R and PCR)

There is No major gap between the original and actual cost.

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

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

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

Organization's Role

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc. Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

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

Procurement

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

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

Actual, if changed: (*P/R and PCR*)

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

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

2.4.2.1 Procurement & Consultant

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

| Contract | Selection Method | | | | | | | |
|-------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------|--|--|--|--|--|
| Package | Original: (P/M) | Actual: (P/R and PCR) | | | | | | |
| Constructio | on 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 | Package-5: To conduct the geotechnical investigation | Local Competitive Bidding Process | No Change | | | | | |
| Consulting | Services | | | | | | | |
| 1 | Consulting Service for Supervision | Short List Method (QCBS) | No Change | | | | | |

2.4.2.2 Performance

Consultant's Progress:

October 2019:

- 1 The JICA Safety Review Mission visited MTHL project from 14th October to 17th October 2019 to review the health & safety, environmental and social obligations of the Employer and the Contractors. The Contractors and GC made a series of presentations on the Environmental & Safety Monitoring at the project sites.
- 2 GC scrutinized & certified the following invoices:
 - i) Package-1: IPC-018 (80% ad-hoc) and IPC-017 (detailed verification)
 - ii) Package-2: IPC-015 (80% ad-hoc) and IPC-014 (detailed verification)
 - iii) Package-3: IPC-010 (80% ad-hoc) and IPC-009 (detailed verification)
- 3 GC has deployed adequate number of staff at MTHL Project sites for the construction supervision works. Also, they are rigorously monitoring the quality, health & safety and environmental aspects of the project.

November 2019:

- 1 GC conducted Monthly Progress Review Meeting with all the three Package Contractors on 13th November 2019 to review the status of Design and Physical progress of the project.
- 2 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-019 (80% ad-hoc) and IPC-018 (detailed verification)
 - ii) Package-2: IPC-016 (80% ad-hoc) and IPC-015 (detailed verification)
 - iii) Package-3: IPC-011 (80% ad-hoc) and IPC-010 (detailed verification)
- 3 GC has deployed adequate number of staff at MTHL Project sites for supervision of the construction works. Also, they are rigorously monitoring the quality, health & safety and environmental aspects of the project.

December 2019:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-019 (80% ad-hoc) and IPC-018 (detailed verification)
 - ii) Package-2: IPC-017 (80% ad-hoc) and IPC-016 (detailed verification)
 - iii) Package-3: IPC-012 (80% ad-hoc) and IPC-011 (detailed verification)
- 2 GC has deployed adequate number of staff at MTHL Project sites for supervision of the construction works. Also, they are rigorously monitoring the quality, health & safety and environmental aspects of the project.
- 3 Approximately 80% of the foundation related designs have been reviewed and approved by GC. Approx. 65% of the substructure related designs have been reviewed and approved by GC. Approx. 25% of the superstructure related design have been reviewed and approved by GC.

Contractor's Progress:

Package-1 Physical Progress till 31st December 2019

| S. No | Activity | Total Scope | Unit | Cumulative Achieved Works | % of Work done Against the Total Scope | Remarks | | | |
|----------|------------------------------------------|----------------|---------|---------------------------------|-------------------------------------------------|---------|--|--|--|
| 1 | Temporary Access Bridge | | | | | | | | |
| 1.1 | Bridge Deck | 2953 | Rmt | 2422 | 82% | | | | |
| 2 | Test Pile | | | | | | | | |
| 2.1 | Test Piles | 5 | No. | 4 | 80% | | | | |
| 3 | Permanent Bridge Works - Land | / Intercha | nge Zon | e | | | | | |
| 3.1 | Piles | 517 | No. | 231 | 45% | | | | |
| 3.2 | Pile Caps | 165 | No. | 25 | 15% | | | | |
| 3.3 | Piers | 228 | No. | 44 | 19% | | | | |
| 3.4 | Pier Caps | 228 | No. | 0 | 0% | | | | |
| 4 | Permanent Bridge Works - Intertidal Zone | | | | | | | | |
| 4.1 | Piles | 236 | No. | 170 | 72% | | | | |
| 4.2 | Pile Caps | 57 | No. | 26 | 46% | | | | |
| 4.3 | Piers | 113 | No. | 36 | 32% | | | | |
| 4.4 | Pier Caps | 113 | No. | 12 | 11% | | | | |
| 5 | Permanent Bridge Works - Marir | ne Zone | | | | | | | |
| 5.1 | Piles | 484 | No. | 155 | 32% | | | | |
| 5.2 | Pile Caps | 100 | No. | 11 | 11% | | | | |
| 5.3 | Piers | 198 | No. | 2 | 1% | | | | |
| 5.4 | Pier Caps | 198 | No. | 0 | 0% | | | | |
| 6 | Permanent Bridge Works - Total | | | | | | | | |
| 6.1 | Piles | 1237 | No. | 556 | 45% | | | | |
| 6.2 | Pile Caps | 322 | No. | 62 | 19% | | | | |
| 6.3 | Piers | 539 | No. | 82 | 15% | | | | |
| 6.4 | Pier Caps | 539 | No. | 12 | 2% | | | | |
| 7 | Precast Segments | | | | | | | | |
| 7.1 | Segment Casting | 6709 | No. | 185 | 3% | | | | |
| 7.2 | Segment Erection | 6709 | No. | 0 | 0% | | | | |

| S. No | Activity | Total Scope | Unit | Cumulative Achieved Works | % of Work done Against the Total Scope | Remarks |
|----------|---------------------------------|----------------|----------|---------------------------------|-------------------------------------------------|---------|
| 1 | Temporary Access Bridge | | | | | |
| 1.1 | Bridge Deck | 2682 | Rmt | 2312 | 86% | |
| 2 | Test Pile | | | | | |
| 2.1 | Test Piles | 3 | No. | 2 | 67% | |
| 3 | Permanent Bridge Works - Land | Intercha | nge Zone |) | | |
| 3.1 | Open Foundations | 113 | No. | 27 | 24% | |
| 3.3 | Piers | 113 | No. | 2 | 2% | |
| 3.3 | Pier Caps | 113 | No. | 0 | 0% | |
| 4 | Permanent Bridge Works - Intert | idal & CR | Z Zone | | | |
| 4.1 | Piles | 282 | No. | 134 | 48% | |
| 4.2 | Pile Caps | 70 | No. | 7 | 10% | |
| 4.3 | Piers | 72 | No. | 2 | 3% | |
| 4.4 | Pier Caps | 72 | No. | 2 | 3% | |
| 5 | Permanent Bridge Works - Marin | e Zone | | | | |
| 5.1 | Piles | 522 | No. | 48 | 9% | |
| 5.2 | Pile Caps | 122 | No. | 0 | 0% | |
| 5.3 | Piers | 126 | No. | 0 | 0% | |
| 5.4 | Pier Caps | 126 | No. | 0 | 0% | |
| 6 | Permanent Bridge Works - Total | | | | | |
| 6.1 | Open Foundations | 113 | No. | 27 | 24% | |
| 6.1 | Piles | 804 | No. | 182 | 23% | |
| 6.2 | Pile Caps | 192 | No. | 7 | 4% | |
| 6.3 | Piers | 198 | No. | 4 | 2% | |
| 6.4 | Pier Caps | 198 | No. | 2 | 1% | |
| 7 | Precast Segments | | | | | |
| 7.1 | Segment Casting | 3142 | No. | 16 | 1% | |
| 7.2 | Segment Erection | 3142 | No. | 0 | 0% | |

| Pack | Package-3 Physical Progress till 31 st December 2019 | | | | | |
|----------|-----------------------------------------------------------------|----------------|------|---------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------|
| S. No | Activity | Total Scope | Unit | Cumulative Achieved Works | % of Work done Against the Total Scope | Remarks |
| 1 | Permanent Bridge Works | | | | | |
| 1.1 | Open Foundations | 195 | No. | 98 | 50% | The total scope has been amended as per the field conditions |
| 1.2 | Piers | 195 | No. | 18 | 9% | The total scope has been amended as per the field conditions |
| 1.3 | Pier Caps | 195 | No. | 0 | 0% | |
| 1.4 | Segment Casting | 854 | No. | 20 | 2% | The total scope has been amended as per the field conditions |
| 1.5 | Segment Erection | 854 | No. | 0 | 0% | |

Package-4 (ITS)

Pre-Qualification (PQ) is ongoing. Also, preparation of Bid Documents for ITS system is in progress.

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 October to December 2019 | Cumulative |
|--------|----------------------------------------------------------------------|-------------------------------------|-------------|
| 1 | Total Man Hours Since Inception | 30,31,008 | 1,06,43,040 |
| 2 | Number of Man-Hours (Accident Free Man-Hours) | 22,22,304 | 22,22,304 |
| 3 | Number of Man-Days | 3,71,996 | 13,59,280 |
| 4 | Number of Reportable Fatal Accidents | 1 | 1 |
| 5 | Number of Non-Fatal Accidents | 0 | 1 |
| 6 | Number of Near Miss Incidents | 11 | 28 |
| 7 | Number of First Aid Cases | 22 | 82 |
| 8 | Number of Dangerous Occurrences | 0 | 1 |
| 9 | Number of Reportable Sick Cases | 0 | 0 |
| 10 | Number of Man-Hours Lost | 48,000 | 48,448 |
| 11 | Number of Man-Days Lost | 6,000 | 6,058 |
| 12 | Number of Reportable Accidents per 100,000 Man-Hours Worked | 1 | 2 |
| 13 | Number of Inspections done for Offices & Sites | 65 | 197 |
| 14 | Number of Training/ Induction done for Offices & Sites | 48 | 159 |
| 15 | Daily Average Manpower (Including all Workmen & Staff) for the Month | 8,564 | 1394 |
| 16 | Details of Safety Committee meetings | 3 | 19 |
| 17 | No. of toolbox talks | 5,176 | 17,665 |
| 18 | No. of critical excavations. | 9 | 8 |
| 19 | Pre-employment Medical check-up | 3,348 | 12,065 |
| 20 | No. of Safety Walk down | 14 | 107 |
| 21 | No. of Safety Inductions completed | 3,238 | 12,065 |

Package-2 Safety Report

| Sr. No | Description | From October to December 2019 | Cumulative |
|--------|----------------------------------------------------------------------|-------------------------------------|------------|
| 1 | Total Man Hours Since Inception | 885819 | 4822134 |
| 2 | Number of Man-Hours (Accident Free Man-Hours) | 885819 | 2675706 |
| 3 | Number of Man-Days | 80529 | 439752 |
| 4 | Number of Reportable Fatal Accidents | 0 | 0 |
| 5 | Number of Non-Fatal Accidents | 0 | 2 |
| 6 | Number of Near Miss Incidents | 7 | 25 |
| 7 | Number of First Aid Cases | 7 | 42 |
| 8 | Number of Dangerous Occurrences | 1 | 4 |
| 9 | Number of Reportable Sick Cases | 0 | 0 |
| 10 | Number of Man-Hours Lost | 0 | 836 |
| 11 | Number of Man-Days Lost | 0 | 89 |
| 12 | Number of Reportable Accidents per 100,000 Man-Hours Worked | 0 | 0 |
| 13 | Number of Inspections done for Offices & Sites | 78 | 490 |
| 14 | Number of Training/ Induction done for Offices & Sites | 46 | 400 |
| 15 | Daily Average Manpower (Including all Workmen & Staff) for the Month | 4151 | 719 |
| 16 | Details of Safety Committee meetings | 3 | 20 |
| 17 | No. of toolbox talks | 654 | 2296 |
| 18 | No. of critical excavations. | 0 | 0 |
| 19 | Pre-employment Medical check-up | 1264 | 4794 |
| 20 | No. of Safety Walk down | 10 | 59 |
| 21 | No. of Safety Inductions completed | 1293 | 4807 |

Package-3 Safety Report

| Sr. No | Description | From October to December 2019 | Cumulative |
|--------|----------------------------------------------------------------------|-------------------------------------|------------|
| 1 | Total Man Hours Since Inception | 231385 | 825856 |
| 2 | Number of Man-Hours (Accident Free Man-Hours) | 231385 | 825856 |
| 3 | Number of Man-Days | 28923 | 103232 |
| 4 | Number of Reportable Fatal Accidents | 0 | 0 |
| 5 | Number of Non-Fatal Accidents | 0 | 0 |
| 6 | Number of Near Miss Incidents | 2 | 4 |
| 7 | Number of First Aid Cases | 10 | 33 |
| 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 | 34 | 140 |
| 14 | Number of Training/ Induction done for Offices & Sites | 17 | 99 |
| 15 | Daily Average Manpower (Including all Workmen & Staff) for the Month | 693 | 2583 |
| 16 | Details of Safety Committee meetings | 3 | 17 |
| 17 | No. of toolbox talks | 575 | 2138 |
| 18 | No. of critical excavations. | 3 | 3 |
| 19 | Pre-employment Medical check-up | 601 | 2129 |
| 20 | No. of Safety Walk down | 12 | 65 |
| 21 | No. of Safety Inductions completed | 602 | 2129 |

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

3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

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

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

3.2 Precautions (Measures To Be Adopted/ Points Which Require Special Attention)

| Original Issues and Countermeasure(s) | Actual Issues and Countermeasure(s) |
|---------------------------------------------|-----------------------------------------------------|
| 3.2.1 General Issues | (P/R and PCR) |
| 1. Toll Arrangement/ Toll Rate | |
| Fixed toll rate as per the type of vehicle | Appropriate Tolling Policy/ Rates will be finalized |
| will be levied for the road users after the | by December 2020. |
| completion of the Project. An appropriate | |
| tolling policy/ rates will be finalized in | |
| consultation with the state government | |
| prior to the completion of Civil works. | |
| 2. Operation and Maintenance | |
| MMRDA proposes to appoint separate | |
| agencies for Operation & Maintenance of | Single Operation and Maintenance Contractor |
| the bridge and for Toll Management | will be appointed by December 2020. |
| 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. | |
| 3.2.2 Environmental and Social | (, , , , , , , , , , , , , , , , , , , |
| Consideration | • MMRDA has disclosed Supplemental EIA & |
| a. CRZ Clearance | SIA on MMRDA website. |
| i. Supplemental EIA has been approved | 5 |
| by MMRDA and disclosed on the | |
| website of JICA. Supplemental EIA | • |
| report has been disclosed also on the | |
| website of MMRDA. | MMRDA has actively monitored the |
| ii. Furthermore, renewed CRZ Clearance | |
| has been obtained in January 2016. | maintains throughout the construction phase. |
| iii. In accordance with the conditions for | MMRDA appointed Mangroves & Marine |

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

b. Required Permits

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

| 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 /Transplantati on | Respective Tree Authorities | Contractor for respective Packages | - | Pkg-1:TreeCutting/Transplantation permission is awaited from the TreeAuthority.Pkg-2:TreeCutting/Transplantation permission obtained & completed.Pkg-3:Forest Department has issued a concurrence on 19/05/2019.19/05/2019.CIDCO's permission for Tree Cutting/ Transplantation obtained on 25th November 2019. |
| 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 | |

 Table 3.2.2 Present Status of some Important Permits

3.3 Environmental and Social Impacts

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

| Issue(s) | Action or countermeasure(s) taken and |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | remaining problem(s) |
| 1. Establishment of Effective Environmental and Social Cell in PIU | Cell is established by MMRDA (Annexure III, Organization chart) |
| MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up. 2. Rehabilitation and Land Acquisition | Sewri: Involuntary resettlement in Sewri section |
| a. Affected Area and Population | has been further validated by Social Development Cell of MMRDA. Out of 298 Project Affected Households (PAHs) have given consents as |
| Due to the Project, 1282 non- titleholders will be involuntary resettled, and 108.09 ha of land will be handed | follows: 165 PAHs Kanjurmarg for residential |
| over by CIDCO. | 25 PAHs Kanjurmarg for commercial |
| | 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial |
| | 1 PAHs (commercial to residential) for Bhakti Park |
| | 100 PAHs HDIL Kurla for residential |
| | Navi Mumbai: CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 101.99 ha has been handed over by CIDCO to MMRDA. CIDCO is going to acquire the balance 6.10 Ha with the help of Collector, Raigad. |
| b. Entitlement Policy | |
| MMRDA prepared the entitlement matrix for resettlement of non-title holders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010) | There have been no changes during the enforcement. As per the Attachment 2-5 of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy. |

| Issue(s) | Action or countermeasure(s) taken and |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13346(3) | remaining problem(s) |
| ("Guidelines") (Attachment 2-5). | |
| c. Compensation to Project affected | |
| Fishermen | Updated Attachments 2-8 and 2-10 are enclosed |
| 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 | in the report. |
| impact during construction and | |
| operation phase. | |
| d. Implementation Schedule The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per Attachment 2-10. | Updated Attachment 2-10 is enclosed in the report. |
| e. Grievance Redressal Mechanism | |
| Grievance Redressal Committee ("GRC") set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO. | Sewri: FLGRC (Field Level Grievance Redressal Committee) and SLGRC (Senior Level Grievance Redressal Committee) were set as per the RAP and in operation. Compensation Committee has been constituted to address the issues of Compensation to Lease Holders at Sewri. Fishermen: GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation. |
| f. Internal Monitoring | |
| Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation. | Internal Monitoring updates are mentioned in Attachment 2-8 . |

| | lssue(s) | Action or countermeasure(s) taken and | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| | | remaining problem(s) | | |
| g. | Qualitative Independent Evaluation | | | |
| | An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner. | Updated Attachment 2-10 is enclosed in the report. | | |
| h. | RAP Implementation Budget | | | |
| | The amount of estimated resettlement and compensation budget is Rs.906.26 Cr MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation. | As updated in MOD dated 03/09/2019 for MTHL- II, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr. | | |
| i. | Environmental Management Plan | | | |
| | ("EMP") The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary. | EMP will be updated, if required, in due course of construction activities/progress. | | |
| j. | Environmental Monitoring Plan | | | |
| | ("EMoP") MMRDA takes overall responsibility for implementation of EMoP. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis as a part of Progress | Updated Environmental Monitoring Plan with package wise updated cost is reported in Attachment 2-3 . Environmental Monitoring Results during the construction phase are reported in Attachment 2- 4 . | | |

| Issue(s) | Action or countermeasure(s) taken and remaining problem(s) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status Report (PSR) by filling in the Reporting Form of Environmental Monitoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi- annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA. | |
| k. Long Term Bird Monitoring MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society. | MMRDA has entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai for periodical disbursement to BNHS. |

3.4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and/ or FIRR

Supporting data for Computing EIRR and/ or FIRR

| Indicators | Original (Year 2015) | Target (Year 2024) 2 Years After Commercial Operation | | |
|--------------------------------------------|-------------------------|-------------------------------------------------------------|--|--|
| Average Annual Daily Traffic (PCU/ day) | - | 47,400 | | |
| Daily Average Travel Time (min) * 1 | 61 min | 15.8 min | | |
| Number of Users (Persons/ year) * 2 | - | 46,077,504 | | |
| Cargo Volume (tons/ year) * 3 | - | 13,511,759 | | |

*1 Section on Sewri – Chirle

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

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

3.5 Monitoring Plan for the indicators

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

Original: (*P/M and PCR*)

Monitoring Organization

PIU shall be In-Charge of Monitoring activities for the Project.

Submission of QPR and PCR

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

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

Actual: (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

This QPR No. 11 is submitted for a period of 1st October to 31st December 2019.

3.6 Achievement of the Project Objective

(PCR)

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

4.1 O&M and Management

- Organization Chart of O&M

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

Original: (P/M)

Operation & Maintenance, Toll Management and ITS

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

Actual: (PCR)

4.2 O&M Cost and Budget

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

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

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

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

(PCR)

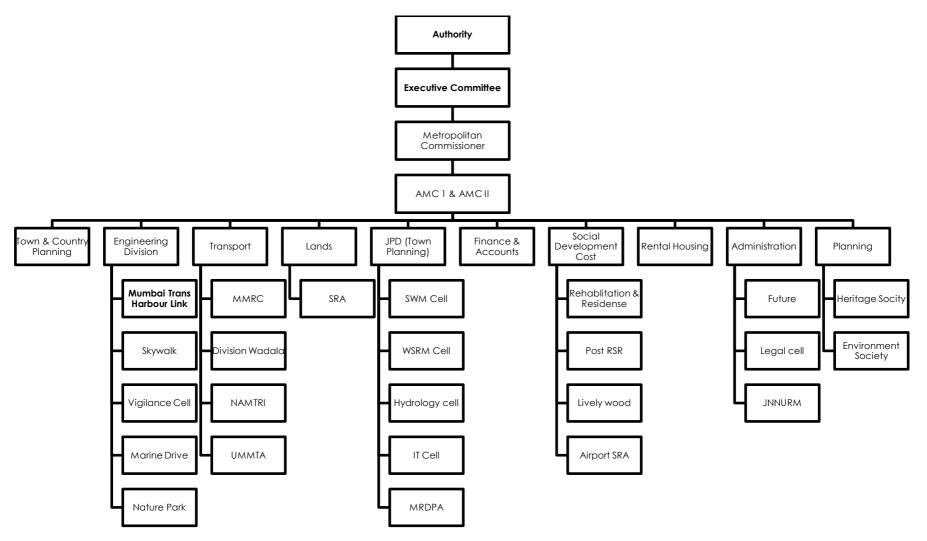
5.3 Lessons Learnt and Recommendations

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

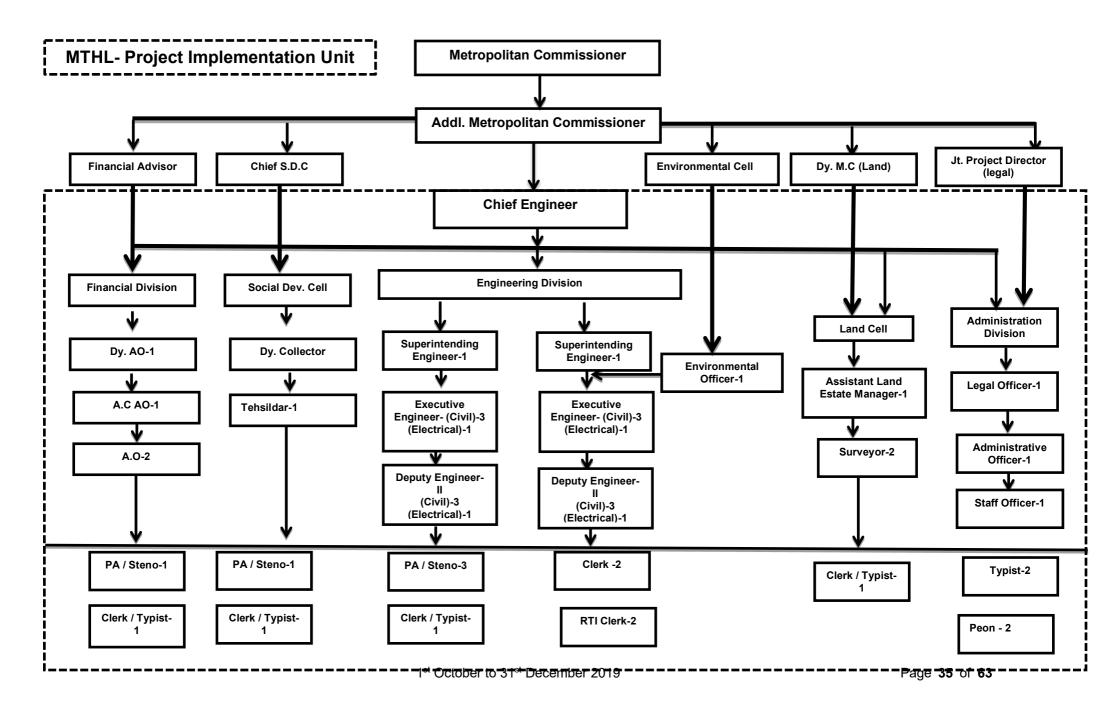
(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart



Mumbai Trans Harbour Link Project - Quarterly Progress Report No. 11(Oct-Dec 2019)



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 |
|-----------|-----|----------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------|------------------|------------------|------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 1 | Air pollution | SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} , O ₃ , CO, (6 ltems) | 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 | | | | | | SO₂: 80 / 80µg/m³ | P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement. |
| | | | | | | | | | | | | NO₂: 80 / 80µg/m³ РМ₁₀: 100 / 100µg/m³ РМ₂₅: 60 / 60µg/m³ | P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of biding. Later modifications suggested by GC were not accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequecy would change after obtaining CTE. |
| | 2 | Water pollution | pH, BOD, DO, | IS / AWWA | 1. Sewri & Sewri bay area | Quarterly | 810,000 | 2,400,000 | 810,000 | 0 | 3,210,000 | O₃: 180 / 180µg/m³ CO: 0.4 / 0.4mg/m³ Marine water quality Standards – Class SW-IV Harbour | Water Pollution not |
| | | | Turbidity and O&G | | for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II | 4 Times / Year | | | | | | Waters (MPCB) • pH : 6.5-9 | applicable for Pkg. 3 |
| п | | | | | 3. Gavhan & Chirle for package III | Not applicable | | | | | | D0: 3 mg/l Turbidity: 30 NTU BOD: 5 mg/l 0 & G: 10 mg/l | - |
| Pollution | 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. |

Attachmemt 2-3

| 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 |
|----------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------|------------------|------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III | 4 Times / Year Once site clearing work/execution part of work start. | | | | | | Municipal Soild Waste Management Rules, 2013 Generated waste shall be reused or disposed at designated site. Sites have been identified and the location for Pkg. 1 is at Bhayandar Pada in Thane. For Pkg. 2 & 3 is in Navi Mumbai at Pushpak Node nera "Teen Taki Junction" along the Amar Marg. | P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be |
| | 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 | Sewri & Sewri bay area for package I Nhava temporary bridge & casting yard in Gavhan for package II | 1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year | 150,000 | 1,500,000 | 150,000 | 100,000 | 1,750,000 | Soil Pollution Standard in India (MOEF) Cd: 0.01mg/l | |
| | | | | | | *If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon | | | | | | Lead: 0.01mg/l Chromium (VI): 0.05mg/l Arsenic: 0.01mg/l T-Mercury: 0.0005mg/l Copper: 125mg/kg (some items shall be selected from totally 25 standards items) | |
| - | 5 | Noise and vibration | Ambient and road side noise $(dB(A)L_{Aeq})$ | IS Standard | Sewri & Sewri bay area for package I Nhava temporary bridge & casting yard in Gavhan for package II | at Storage area only Fortnightly 2 Times / Year | 150,000 | 54,000 | 150,000 | 369,000 | 573,000 | -Construction Noise; 85dB(A) -Ambient Noise Standards in India (dB (A) Leq) | - |
| | | | | | package III | Fortnightly | 75 000 | | PF 000 | | 100 000 | 1.Industrial AreaDay 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 ZoneDay Time: 50 (6-22hr)Night Time: 50 (6-22hr)Night Time: 50 (6-22hr)Night Time: 50 (6-22hr)Night Time: 50 (6-22hr) | |
| | | | Vibration (dB L10 or mm/sec) | | 1 Location Gavan area for package III | Half yearly | 75,000 | 0 | 75,000 | 400,000 | 475,000 | - Construction vibration 75dB -Vibration Standards roadside 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr) | Not applicable for Pkg. 1 |
| | /Ecosystem mu incl 2 Cu tra 3 | | 1.Monitoring of mudflat conditions including fauna-flora | Ocular inspection and quantitative survey | Along MTHL alignment and mangrove replant area for Package I | Quarterly during the construction Period | 6,500,000 | 7,200,000 | 6,500,000 | 0 | 13,700,000 | | Not applicable for Pkg. 3 |
| | | 2. Monitoring of Cutting Tree and replantation/ transplanting area 3.Monitoring of Mangrove Plantation | 1-1. Fauna-Flora Line-Point census and record number | Along MTHL alignment and mangrove replant area for package II Not applicable for Package III | 4 Times / Year | | | | | | Significant impacts are not caused by the project Note) | | |
| | | | area appointed by MoEF | and appeared species | | | | | | | | | |

| Category | No. | Impacted Item on JICA Guidelines | Parameter | Method | Location | Frequency a year | Cost (INR) | Cost Pkg.1 (INR) | Cost Pkg.2 (INR) | Cost Pkg.3 (INR) | Total Cost (INR) | Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF) | Remarks |
|-----------------------|-----|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------|----------------|------------------|------------------|------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Natural environment (| | | 4. Monitoring of sedimentation soil and ecological parameter (18items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1)Netprimary productivitye, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO ₂) | 1-2: Mangrove density and community survey | | | | | | | | Detailed monitoring plan will be setup during basic design stage | |
| ž | | | | 1-3: Benthos Survey | | | - | | | | | | |
| | | | | 2-1: Cutting trees | | | - | | | | | Standard for Soil; Supplemental EIA Table 6.1.15 | |
| | | | | confirmation 3-1: Mangrove | | | | | | | | Standard for Ecological Parameter: | |
| | | | | survey in the replanted area | | | - | | | | | Netprimary Productivity | |
| | | | | | | | | | | | | <1,500 mgC/m3/day at surface | |
| | | | | | | | - | | | | | · Chlorophyll-a <4mg/m3 | |
| | | | | | | | | | | | | • Phosphate: 0.1-90µg/l | |
| | | | | | | | - | | | | | Nitrate: 1.0-500µg/l Nitrite: <125µg/l | |
| | | | | | | | | | | | | Particulate Organic Carbon: 10-100mg/m ³ | |
| | 11 | Hydrology | Flooding situation | Flood level | Not applicable for Package I | | 350,000 | 0 | 350,000 | 0 | 350,000 | SiO2: 10-5,000μg/l Project activities and structures does not cause flooding | Not applicable for Pkg 1 & 3 |
| | 11 | nyurology | Flooting situation | measurement during high precipitation periods | | | 330,000 | U | 330,000 | U | 330,000 | and impacts on tidal conditions | Not applicable for Fig. 1 & 5 |
| | | | | | 2 Locations (CRZ at Sewri and Shivaji Nagar) for | 4 Times / Year | | | | | | | |
| | | | | | Package II Not applicable for Package | | | | | | <u> </u> | | |
| | 12 | Topography and | Conditions in embankment area | | III 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 |
| | | Geology | embankment area | Stability of embankment | Interchange in Shivaji Nagar for Package II | 4 Times / Year | | | | | | anu tidiks | |
| \vdash | 13 | Local economy | | | Not applicable for Package Affected area | | As per Actuals | | | | | | |
| | 15 | such as employment and livelihood | | | initia alta | | | | | | | | |
| ment | 14 | Local conflict of interests | Construction worker's township | Confirmation of workers list from | Sewri and Shivaji Nagar) for | 2 Times / Year | 125,000 | 0 | 125,000 | 0 | 125,000 | Employment opportunity shall be provided fairly | |
| viron | 15 | Infectious | Number of infected | contractor Confirmation of | | 4 times / year x 4.5 | 525,000 | 0 | 525,000 | 0 | 525,000 | Infection disease rate shall not be caused by the project | |
| Social environment | | diseases such as HIV/AIDS | patient | health check list from contractor | | years | | | | | | | |
| Soc | 16 | Labour Environment | Construction worker's condition | Confirmation of safety devices and conditions via interviews | 2 Location (camp site in Sewri and Shivaji Nagar) for Package II | 2 times / year | 500,000 | 0 | 500,000 | 0 | 500,000 | "Building And Other Construction Workers (Regulation of Emloyment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions" | |
| Other | 17 | Accidents | Number of accidents | Confirmation of accidents list from local government and State Traffic Police Department | 2 Locations (camp site in Sewri and Shivaji Nagar) for Package II | 4 Times / Year | 400,000 | 0 | 400,000 | 0 | 400,000 | Any accidents are not caused by construction | |
| | | | | Total | | | 8140500 | 325,354,000 | 12,000,000 | 2,211,500 | 339,565,500 | | |

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

This form is prepared for re required parameters are in Monitoring Period - October to December 2019

| | | onstruction for 4.5 years | | | | | Monitoring Re | sult | | Remark |
|-----|-------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------|
| No. | Item | Parameter | Location | Frequency a year | Item and Stanadard | Location 1- Pkg 1 | Location 2 | Location 3- Pkg 3 | Location 4 | - reasons why the data is exceeding standard - counter measures when the data is exceeding |
| | | | 1. Sewri & Sewri bay area for package I | Quarterly monitoring is conducted at all locations. | National Ambient Air Quality Standards (NAAQS) | Sewri | Shivaji Nagar | Chirle | | |
| 1 | Air pollution | SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} | Nhava temporary bridge casting yard in Gavhan for package II | 4 Times / Year | (Standard for 24hrs: Industrial and Residential) | - | | | | |
| | | | 3. Gavhan & Chirle for | From march -2019 onwards monitoring is conducted quarterly as per MOEF and | ³ 1. SO ₂ : 80µg/m ³ | BDL (DL=5) | BDL | 17 | | BDL- Below Detectable Limit |
| | | | package III | | 2. NO ₂ : 80µg/m ³ | 17 | 36 | 34 | | |
| | | | | CPCB norms | 3. PM ₁₀ : 100µg/m ³ | 150 | 127 | 87 | | |
| | | | | | 4. PM _{2.5} : 60μg/m ³ | 46 | 23 | 31 | | |
| | | | | | 5.CO:02mg/m3 | 1.2 | 1 | 0.38 | | |
| | | | 1. Sewri & Sewri bay area | Querterly | 6.VOCs | 1.3 | 2 | 3.3 | | Benzene is analysed in ambient air |
| | | | for package I | | Marine water quality Standards – Class SW-IV Harbour Waters (MPCB) | Zone I | Zone II | Zone III | | |
| 2 | Water pollution | pH, BOD, DO, Turbidity | Nhava temporary bridge casting yard in Gavhan for package II | 4 Times / Year | 1. pH : 6.5-9 | 7.4 | 8 | Not applicable | | |
| 2 | mail ponution | and O&G | 3. Gavhan & Chirle for package III | Not applicable | 2. DO: 3 mg/l | 4.9 | 6 | Not applicable | | |
| | | | package III | | 3. Turbidity: 30 NTU | 11.7 | 18 | Not applicable | | |
| | | | | | 4. BOD: 5 mg/l | 3 | BDL | Not applicable | | |
| | | | | | 5. O & G: 10 mg/l | BDL (DL =2) | | Not applicable | | |
| | | | 1 Comi & Comi have a | D. l. | 6.COD | 20 | 20 | Not applicable | | |
| | | | Sewri & Sewri bay area for package I Nhava temporary bridge | Daily | Municipal Soild Waste Management Rules, 2013 | Sewri Camp Site | Shivaji Nagar Camp Site | Chirle Camp Site | | |
| | | | Nhava temporary bridge & casting yard in Gavhan for package II | 4 Times / Year | Generated waste soil (t) total | <u>27105.51 m3</u> | <u>Total 2000 CuM Collected in</u> jumbo bags and Disposed off in EBB Location and Casting Yard | Nil | | |
| 3 | Waste | Volume of waste soil, cutting tree and domestic garbage | 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 | 20 trees are cut | permission in process from both CIDCO and Forest dep Tree cutting so far is nil. | t. | |
| | | | | | Generated domestic waste (t/month) total | 3.58 T for the quarter | <u>3 T for the quarter</u> | 325 KG/quarter is disposed through Gram panchayat. | | |
| | | | | | Confirmation of adequate disposal (visualt survey) | | | | | |
| | | | 1. Sewri & Sewri bay area for package I | 1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year | Soil Pollution Standard in India (MOEF) | Not applicable | Not applicable | Not applicable | | Frequency is Once in a year. If any minor or maj- incident has not occure at storage area. |
| | | | 2. Nhava temporary bridge | | 1. Cadmium: 0.01mg/l | | | | | |
| | | | & casting vard in Gavhan 3. Gavhan & Chirle for | *If any spillage/ leakage | 2. total cyanide : not detected | | | | | |
| | | | package III | take place from chemical, | 3. organic phosphorus: not detected | | | | | |
| | | | | fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at | 4. lead: 0.01mg/l | | | | | |
| - | | | | Storage area only | 5. chromium (VI): 0.05mg/l | | | 1 | | |
| | | | | | 6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil) | | | | | |
| | | | | | 7. total mercury: 0.005mg/l | | | | | |
| | a 1 | | | | 8. alkyl mercury: not detected | | | | | ntation, some items shall be selected from the |
| 4 | Soil Contamination/s | Heavy Metals & Oil & | | | 9. PCBs: not detected | | | 25 stand | ards items during the Detaile | d Design. Only the selected items shall be rep |
| 4 | entation | Grease | | | 10. copper: 125mg/kg (only paddy field soil) 11. dichloromethane: 0.02mg/l | | | JICA, and | the rest of items shall be de | leted from this form. |
| | | | | | 12. carbon tetrachloride: 0.002mg/l | | | + | | |
| | | | | | 13. 1,2-dichloroethane: 0.004mg/l | 1 | | | | |
| | | | | | 14. 1,1-dichloroethylene: 0.02mg/l | | | | | |
| | | | | | 15. cis-1,2-dichloroethylene: 0.04mg/l | | | | | |
| | | | | | 16. 1,1,1-trichloroethane: 1mg/l | | | | | |
| | | | | | 17. 1,1,2-trichloroethane: 0.006 mg/l | | | | | |
| | | | | | 18. trichloroethylene: 0.03mg/l 19. tetrachloroethylene: 0.01mg/l | | | | | |
| | | | | | 20. 1,3-dichloropropene: 0.002mg/l | 1 | | 1 | | |
| I | I | I | I | I | 20. 1,5 diemotopropene. 0.002mg/f | | I | 1 | | |

| Attachment 2-4 eporting the monitoring results to JICA India Office. Only minimum neluded in this form, and not all perameters in EMOP are covered. Remark - reasons why the data is exceeding standard - counter measures when the data is exceeding BDL- Below Detectable Limit BDL- Below Detectable Limit Benzene is analysed in ambient air Benzene is analysed in ambient air | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--|--|--|--|--|--|--|
| | | | | | | | | |
| ncluded in this for | m, and not all perameters in EMoP are covered. | | | | | | | |
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| ocation 4 | | | | | | | | |
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| | BDL- Below Detectable Limit | | | | | | | |
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| | Benzene is analysed in ambient air | | | | | | | |
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| | Frequency is Once in a year. If any minor or major | | | | | | | |
| | incident has not occure at storage area. | | | | | | | |
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The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - October to December 2019

This form is prepared for re required parameters are in

| ental Mor | nitoring during Const | truction for 4.5 years | | | | | | | |
|-----------|-----------------------|-----------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------|------------------------------|
| | | • | | | 21. thiuram: 0.006mg/l | | | | |
| | | | | | 22. simazine: 0.003mg/l | | | | |
| | | | | | 23. thiobencarb: 0.02mg/l | | | | |
| | | | | | 24. benzene: 0.01mg/l | | | | |
| | | | | | 25. selenium: 0.01mg/l | | | | |
| | | | 1. Sewri & Sewri bay area I for package I | Fortnightly | Construction area Standard 85 dB(A) daytime (Japan standard) Not constuction area : Ambient Noise Standard in India (dB(A) Laeq) | Sewri (ST 200-500) (Industrial area) | Sea Section (ST5000-5500) Migratory Bird Area(no standard on sea section) | Shivaji Nagar (Commercial area) | |
| | | | 2. Nhava temporary bridge 2 & casting yard in Gavhan for package II | 2 Times / Year | Day time : 6-22 hr (continious) dB(A) | 64.9 | 71.3 | 1.6 | |
| | | | 3. Gavhan & Chirle for | Fortnightly | Night time: 22-6 hr (continious) dB(A) | 56.9 | 64.2 | 0.2 | |
| | | Ambient and road side | package III | | (only sea section) | | | | |
| | | noise (dB(A)LAeq) | | | Day time : 6-22 hr (10 min during 9-17 hrs) | | | | |
| | | noise (us(i))si req) | | | Night time: 22-6 hr (10 min 22-24 hr) | | | | |
| | | | | | | | | | |
| | | | | | Note (standard values in Not construction area) | | | | |
| | | | | | 1.Industrial Area | | | | |
| 5 | Noise and vibration | | | | Day Time: 75 (6-22hr) | | | | |
| | | | | | Night Time: 70 (22-6hr) | | | | |
| | | | | | 2.Commercial Area: | | | | |
| | | | | | Day Time: 65 (6-22hr) | | | | |
| | | | | | Night Time: 55 (22-6hr) | | | | |
| | | | 1 Location Gavan area for | Half yearly | Construction area Standard 75 dB daytime (Japan | | | | |
| | | | package III | riari yeariy | standard) | Sewri (ST 200-500) | Shivaji Nagar | ~ ~ ~ ~ | |
| | | | puenage III | | Not constuction area : Vibration Standard (Japan | (Industrial area) | (Commercial area) | Chirle | |
| | | | | | Standard along the road) | × , | , , , , , , , , , , , , , , , , , , , | | |
| | | Vibration | | | Day time : 6-22 hr (continious) | Not applicable | Not applicable | Not applicable | |
| | | (dB) shall be converted from | | | Night time: 22-6 hr (continious) | | | - | |
| | | mm/s to dB | | | Note (standard values in Not construction area) | | | Regarding pro | tected area (CR |
| | | | | | 1. Commercial /Industrial Area | | | | ng plan will be |
| | | | | | Day Time: 70 (7-20hr) | | | | rm shall be upd |
| | | | | | Night Time: 65 (20-7hr) | | | monitoring for | |
| | | | and mangrove replant area | 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) | Mangorov area appo Gov |
| | | | Along MTHL alignment and mangrove replant area for package II | t Times / Year | 1-1. Fauna-Flora (number of species and quantity | | | N/A | N/A |
| | | 1.Monitoring of mudflat | | | (1) Number of species of bird | | | | |
| | | conditions including fauna- | | | (2) Number of species of fish | | | | |
| | | flora | | | (3) Estimated number of Flamingo | | | | |
| | | 2. Monitoring of Cutting | | | (c) Estimated nameer of Findingo | | | | |
| | | Tree and replantation/transplation area | | | 1-2: Mangrove density and community survey | | not required | | |

| Attachment | 2-4 |
|------------|-----|
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| | Attachment 2-4 |
|-------------------|------------------------------------------------------------------------------------------------------|
| | itoring results to JICA India Office. Only minimum m, and not all perameters in EMoP are covered. |
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| R7 and Important | Bird Area) and ecosystem, detailed long- |
| | |
| extablished durin | ng baseline survay of birds. This tentative |
| dated based on th | e detailed long-term monitoring plan. |
| | |
| ve Replantation | |
| ointed by State | |
| wernment | |
| vernment | |
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The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction Attachment 2-4

| ironm | ental Mon | itoring during Cons | truction for 4.5 years | | | | | | | | |
|-------|-----------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---|--|
| | | Protected Area | Plantation area appointed | | | (1) Number of species of mangorve | | not required | | | |
| | 6 | Flotected Area | by MoEF 4. Monitoring of | | | (2) Density of mangrove (xx trees/10m x 10m) | | not required | | | |
| | | | sedimentation soil and | | | 1-3: Benthos Survey | | not required | | | |
| | | | ecological parameter (25 | | | (1) Number of species and quantity by species | 470 Species and 232 No/m2 | not required | | | |
| | | | items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll- | | | 2-1: Cutting tree confirmation | Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting NIL | not required | Nil | | |
| | | | a, 3)Phosphate, 4)Nitrate, | a, 3)Phosphate, 4)Nitrate, | | | (1) Number of cutting tree and species | | not required | | |
| | | | 5)Nitrite, 6)Particulate | | | 3-1: Mangrove survey in the replant area | | not required | Nil | | |
| | | | Organic Carbon, 7) SiO2) | | | (1) Number of species of mangorve | | not required | | | |
| | | | | | | (2) Density of mangrove (xx trees/10m x 10m) | | not required | | _ | |
| | | | | | | 4. Ecologial Parameter (1) Net primary Productivity : <1,500 mgC/m3/day at | | | | | |
| | | | | | | surface | 300 | | | | |
| | | | | | | (2) Chlorophyll-a: <4mg/m3 | 4.1 | | | | |
| | | | | | | (3) Phosphate: 0.1-90µg/l | 285 | | | | |
| | | | | | | (4) Nitrate: 1.0-500µg/l | 732 | | | | |
| | | | | | | (5) Nitrite: <125µg/l | | | | _ | |
| | | | _ | | | (6) Particulate Organic Carbon: 10-100mg/m ³ | | | | _ | |
| | | Ecosystem | | | | (7) SiO2: 10-5,000µg/l | 5993 | | | _ | |
| | 7 | Hadadaan | Til - din - iteration | Not applicable for Package I | | Criteria for evaluation Project activities and structures does not cause flooding and impacts on tidal conditions | Sewri | Shivaji Nagar | | | |
| | 7 | Hydrology | Flooding situation | 2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II | 4 Times / Year | Monitoring of flooding situation | No Flooding | No Flooding | No Flooding | | |
| | | | | Not applicable for Package III | | | | | | | |
| | | | | 2 Locations (1. Embankment of Inter | | Criteria for evaluation Embankment shall be stabilized without any landslide and cracks | Shivaji Nagar | Chilre | Chirle | - | |
| | 8 | Topography and Geology | Conditions in embankment area | Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle) | 4 times / year x 4.5 years | Monitoring of embankment | | | | | |
| | 9 | Local conflict of | Construction worker's township | 2 Locations (major camp | 4 times / year x 4.5 years | Criteria for evaluation Employment opportunity shall be provided fairly | Sewri Camp Site | Shivaji Nagar Camp Site | Chirle | | |
| | 9 | interests | | site in Sewri and Shivaji Nagar) | | Number of hired workers by community | 30-40 unskilled labours | 125-150 | Skilled labours; 270 (from | | |
| | | | | (ugu) | | Criteria for evaluation Infection disease rate shall not be caused by the | Sewri Camp Site | Shivaji Nagar Camp Site | outside) | | |
| | 10 | Infectious diseases such as HIV/AIDS | | 2 Locations (major camp site in Sewri and Shivaji Nagar) | 4 times / year x 4.5 years | project Confirmation of health check record and inspect project site | Health Checkup conducted by Doctors at Site. HIV AIDS awareness and detection program conducted on 24th December 2019.195 no's of workmen were screened by Maharashtra State AIDS CONTROL SOCIETY (MSACS). Mumbai. | Health Checks carried out but HIV/AIDS parameter is not there. | Conforming with BOCW Act 1996. In the month of December Maleria antidot tablet (vaccination)is provided to all Labours | t | |
| 11 | 11 | Labour Environment | Construction worker's condi | 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 | 1 | |
| | 12 | Accident | Number of or side at | 2 Locations (major camp site in Sewri and Shivaji | 4 times / year x 4.5 years | Criteria for evaluation Any accidents are not caused by construction | Sewri Camp Site | Shivaji Nagar Camp Site | Other area | 1 | |
| | | LACTOPH | Number of accidents | ISING III SEWELAND SHIVAII | $i \rightarrow iiiiies / vear x 4 a vears$ | | | | 1 | 1 | |

Monitoring Period - October to December 2019

| eporting the monitoring results to JICA India Office. Only minimum |
|--------------------------------------------------------------------|
| ncluded in this form, and not all perameters in EMoP are covered. |

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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 January 2020.

| - | Land Required in ha | | Land 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 | 31/01/2020 | | 1. The payment status to the land owners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same. |
| | otal 8.09 | 98.75 | 3.24 | 6.10 | | | |

*Portions of Private Land

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

Attachment 2-8

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

1. General Information

- a. RAP Implementation Monitoring Results:
- b. Date of Preparing This form
- c. Person Preparing This form

Progress Status Report (PSR) of 4th quarter of 2019

31.12.2019

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 | Titleholders: 0 persons |
| | (194 persons) * | Non-titleholders:66 (194 persons) * |
| Commercial PAPs who do not need relocation | 0 persons | Titleholders: 0 persons |
| | | Non-titleholders: 0 persons |

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

2.2 Structures

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

2.3 Fishery

| Categories of Fisher-folks | Identifi | Total | | Remarks | |
|--------------------------------|-------------|------------------|-----|---------|-------------------|
| | Mumbai side | Navi Mumbai side | | | |
| C1: Fishing stakes and nets in | 199 | 52 | 251 | 1. | Funds being |
| RoW (250 m.) | | | | | transferred to |
| | | | | | Commissioner of |
| | | | | | Fisheries for |
| | | | | | payment to the |
| | | | | | beneficiaries. |
| | | | | 2. | Compensation to |
| | | | | | C2 Category is |
| | | | | | already disbursed |
| | | | | | through Fisheries |
| | | | | | Dept. |

| | | | | 3. Out of 3831 Nos. of Beneficiaries, |
|-----------------------------------|------------------|---------------------|------|------------------------------------------|
| | | | | Compensation to |
| | | | | 1695 Nos. of |
| | | | | Beneficiaries has |
| | | | | been already |
| | | | | disbursed through |
| | | | | Fisheries Dept. |
| | | | | MMRDA is |
| | | | | transferring the fund to Fisheries |
| | | | | Dept. for |
| | | | | Compensation to |
| | | | | the balance 2136 |
| | | | | Nos. of |
| | | | | Beneficiaries. |
| C2: Fishing Stakes and Nets | 749 | 126 | 875 | |
| within 500 m. of RoW (Southern | | | | |
| side) | | | | |
| C3: Hand-pickers | 507 | 3324 | 3831 | |
| C4: Commercial and Artisanal | Will be observed | Will be observed | | Nil |
| Fisher-folks | during | during construction | | |
| (Loss of Time and Increased | construction | period | | |
| Operating Costs) | period | | | |
| C5: Fisher-folks with Loss due to | Will be observed | Will be observed | | Nil |
| Turbidity | during | during construction | | |
| | construction | period | | |
| | period | | | |
| C6: Fisher-folks with Damages | Will be observed | Will be observed | | Nil |
| due to Accidents | during | during construction | | |
| | construction | period | | |
| | period | | | |

2.4 Land Acquisition / Transfer

| Location | Land Ree H | - | 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 | 62% | |
| | No. of Residential PAHs given possession of Alternate Tenements | 231 | 137 | 0 | 137 | 60% | |
| | 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 | 17 | 0 | 17 | 26% | |
| | No. of Occupants of MbPT Leased Plots provided Compensation | 6 | 5 | 0 | 5 | 84% | |
| | No. of Religious properties Relocated / Removed | 6 | 1 | 0 | 1 | 17% | 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 | | | | | | |

| 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 |
|----------------------|-----------------------------------------------------------|--------------|-------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------------------|-----------------|
| Grievance Redress | No. of Grievances Received by FLGRC | 4 | | | | | |
| Redress | No. of Grievances Disposed by FLGRC | 0 | | | | | |
| | No. of Grievances Received by SLGRC | 0 | | | | | |
| | No. of Grievances Disposed by SLGRC | 0 | | | | | |
| Post Resettlement | No. of CHSs Registration helped | | | | | | |
| Assistance | No. of CHSs provided Tenements for Social Amenities | | | | | | |
| | No. of CHSs' Maintenance Fund Invested | | | | | | |
| | 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 | 199 | 52 | 251 | |
| RoW (250 m.) | | | | 1. Funds being |
| | | | | transferred to |
| | | | | Commissioner of |
| | | | | Fisheries for |
| | | | | payment to the |
| | | | | beneficiaries. |
| | | | | 2. Compensation to |
| | | | | C2 Category is |
| | | | | already disbursed |
| | | | | through Fisheries |
| | | | | Dept. |
| | | | | 3. Out of 3831 Nos. |
| | | | | of Beneficiaries, |
| | | | | Compensation to |
| | | | | 1695 Nos. of |
| | | | | Beneficiaries has |
| | | | | been already |

| | | | | · · · · · · · · · · · · · · · · · · · |
|-----------------------------------|------------------|---------------------|------|------------------------------------------|
| | | | | disbursed |
| | | | | through Fisheries |
| | | | | Dept. MMRDA |
| | | | | is transferring the |
| | | | | fund to Fisheries |
| | | | | Dept. for |
| | | | | Compensation to |
| | | | | the balance 2136 |
| | | | | Nos. of |
| | | | | Beneficiaries. |
| C2: Fishing Stakes and Nets | 749 | 126 | 875 | An amount of about |
| within 500 m. of RoW (Southern | | | | 49 crores has been deposited with the |
| side) | | | | Fisheries Department |
| C3: Hand-pickers | 507 | 3324 | 3831 | towards disbursement |
| - 1 | | | | of compensation to 2564 Nos. of |
| | | | | beneficiaries. |
| | | | | |
| | | | | Further, the Fisheries Department has |
| | | | | started disbursing the |
| | | | | amount to the |
| | | | | individual PAPs on |
| | | | | following due procedure. |
| | | | | ^ |
| | | | | The scrutiny of the |
| | | | | balance Nos. of applications of |
| | | | | fisherfolk is in the |
| | | | | process of scrutiny for |
| | | | | deciding their eligibility for the |
| | | | | compensation. |
| C4: Commercial and Artisanal | Will be observed | Will be observed | | Nil |
| Fisher-folks | during | during construction | | |
| (Loss of Time and Increased | construction | period | | |
| Operating Costs) | period | * | | |
| C5: Fisher-folks with Loss due to | Will be observed | Will be observed | | Nil |
| Turbidity | during | during construction | | |
| ž | construction | period | | |
| | period | T | | |
| C6: Fisher-folks with Damages | Will be observed | Will be observed | | Nil |
| due to Accidents | during | during construction | | |
| | construction | period | | |
| | period | Period | | |
| | periou | | l | |

| Sr. | Village name | Total No of family units | No of eligible family | | | | | | | |
|-------------|--------------------------|--------------------------|-----------------------|--|--|--|--|--|--|--|
| No | | surveyed | units | | | | | | | |
| Mumbai side | | | | | | | | | | |
| 1 | 1. Mahul & Sewri 336 336 | | | | | | | | | |
| | 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 | Morave 190 | | | | | | | | |
| 8. | Morave | | | | | | | | | |
| 9. | Kopar | | | | | | | | | |
| 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 | | | | | | | |
| | Vahal | 119 | 3 | | | | | | | |
| 17. | Navakhadi | 673 | 326 | | | | | | | |
| | Moha | 222 | 146 | | | | | | | |
| | Kombadbhuja | 134 | 92 | | | | | | | |
| T | otal Navi Mumbai side | 3060 | 1399 | | | | | | | |
| | Total | | | | | | | | | |
| (Mu | mbai side + Navi Mumbai | 4225 | 2564 | | | | | | | |
| | side) | | | | | | | | | |

List as per C2 & C3 category

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 | Fisher-folks Compensation | 08-10-2015 | 23-12-2015 |
| | Policy | Committee (FCC) | | |
| 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 & | 23-12-2015 | 1. Total up to date applications scrutinized = 5881 nos |
| | | disbursement is finalized by the | | 2. Eligible = 2564 nos |
| | | Fisheries Department. | | 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 | 23-12-2015 | 1. Approval to the Fisher-folk PAP list obtained from Fisheries |
| | | Committee (FCC) | | Department for Fisherfolk from Sewri, Mahul & Trombay |
| | | | | (Mumbai side) – 12th September 2017 and 20th November |
| | | | | 2018 for C-2 & C3 Category only. |
| | | | 23-12-2015 | Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on 25th April 2018. 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 |

| | Land Required 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 | 31/01/2020 | | CIDCO is the land acquisition authority for land acquisition for Navi Mumbai MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 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 | | | | |

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

| Implementation Schedule for SIA (Sewri Section) | | | | | | | |
|-------------------------------------------------|--|---|---|--|--|--|--|
| | | • | • | | | | |

| | 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 | March 2020 | | | | | | |
| 2.6 | Notice of PAPs for shifting (Sewri Section) | December 2018 | March 2020 | | | | | | |
| 2.7 | Allotment of dwelling units to PAP's | September 2016 | March 2020 | | | | | | |
| 2.8 | Shifting of PAPs to resettlement Colony | December 2018 | March 2020 | | | | | | |
| 2.9 | Transfer of compensation / allowance/ assistance to PAPs | December 2018 | March 2020 | | | | | | |
| 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 Cor | ncurrence |
|----------------------|-----------|
|----------------------|-----------|

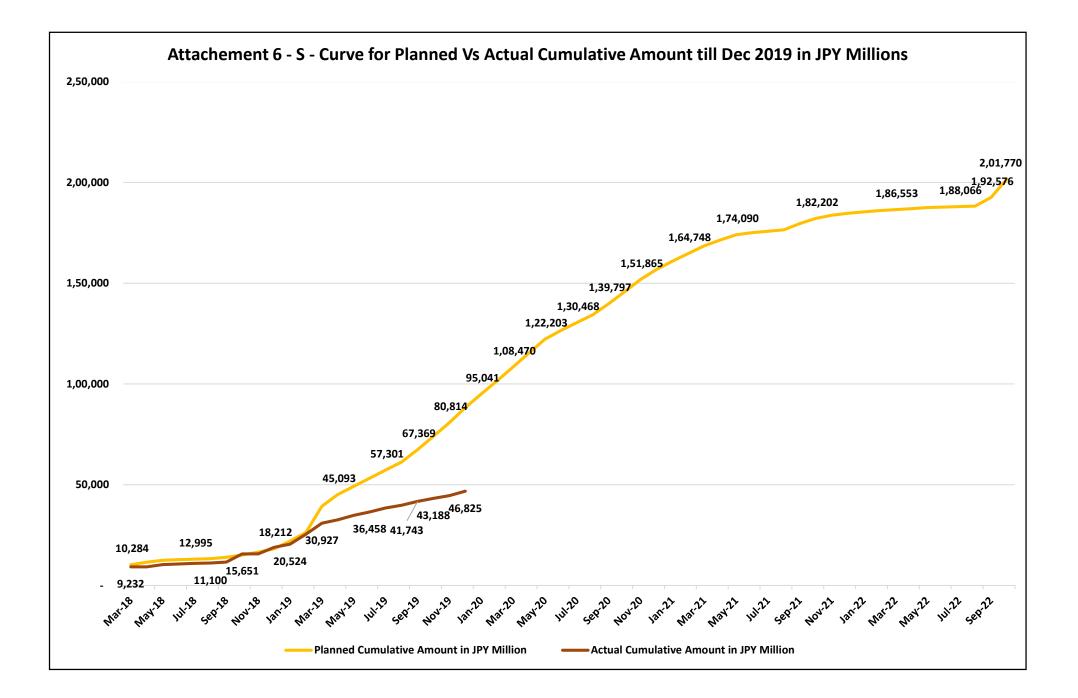
| | | | Bid Cost | | JICA's Concurrence on | | | | | |
|------------|-----------------------------------------------------|-----------------------|-------------------------------|------------------|------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| SI. No. | Brief description | Procurement procedure | 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 - 22 nd Dec 2016 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 12 th Sep 2017 | JICA's Concurrence - 12 th Oct 2017 | JICA's Concurrence – 15 th Feb 2018 |
| 2. | Package-2 (CH 10+380 km to CH18+187 km) | ICB with PQ (2P) | 5612.61 | 5612.61 | JICA's Concurrence - 9 th May 2016 | JICA's Concurrence - 22 nd Dec 2016 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 12 th Sep 2017 | JICA's Concurrence - 12 th Oct 2017 | JICA's Concurrence – 15 th Feb 2018 |
| 3. | Package-3 (CH18+187 to CH21+800) | ICB with PQ (2P) | 1013.79 | 1013.79 | JICA's Concurrence - 9 th May 2016 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 15 th Sep 2017 | JICA's Concurrence - 12 th Oct 2017 | JICA's Concurrence – 15 th Feb 2018 |
| 4. | Package-4 Intelligent Transport System | ICB with PQ (2P) | 181.49 | 181.49 | JICA's Concurrence - 23 rd August 2019 | - | - | - | - | - |

Attachment 4- Project Procurement and Financial Status till 31st December 2019

| Туре | 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 December 2019 | % of Overall Financial Progress (Including Mobilization Advance & Price Adjustment) till 31 st December 2019 |
|-------|--------------------------------------------------|----------------------------------------------------|-------------------|-----------------------|---------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| | Package-1 (CH 0+000 km to CH 10+380 km) | 7637.30 | Awarded | L&T-IHI Consortium | March 2018 | Sep 2022 | 19.19% | 17.60% |
| CIVIL | Package-2 (CH 10+380 km to CH18+187 km) | 5612.61 | Awarded | DAEWOO- TPL JV | March 2018 | Sep 2022 | 15.57% | 14.51% |
| | Package-3 (CH18+187 to CH21+800) | 1013.79 | Awarded | L&T | March 2018 | Sep 2021 | 17.82% | 17.07% |
| | Package-4 Intelligent Transport System | 181.49 (Estimated) | Design Stage | | Jul 2020 (Estimated) | Sep 2022 | NA | NA |

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st DECEMBER 2019

Attachment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million



Attachment 6- Package-1's Construction Programme Updated as on 25th December 2019



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



| | Duration | | Duration | | Complete | Complete | | n Date | Float A M J J A S O N D J F M A M J J A S O N | DJFMAMJJASO | NDJFMAMJJA | SONDJFMA | ΜͿͿΑSΟΝΓ | DJFN |
|-----------------------------------------------------------------------|---------------------------------------|-----------|------------------|---------------------------------------|----------|----------|------|--------|-----------------------------------------------|------------------------------------------------|------------|----------|----------|-----------------------|
| 21 MTHL P1 - Dec'19 Month Progress | 1062 23-Mar-18 | <u> </u> | 1445 23-Mar-18 A | 06-Sep-23 | 33.89% | 19.19% | | -294 | -295 | | | | | |
| R21.1 Mumbai Trans Harbour Link - Package 1 | 1062 23-Mar-18 | 22-Sep-22 | 1445 23-Mar-18 A | 06-Sep-23 | 33.89% | 19.19% | 0 | -294 | -295 | | | | | |
| /10000 Commencement Date | 0 23-Mar-18 | | 0 23-Mar-18 A | | 100% | 100% | 0 | 0 | | | | | | |
| IPR21.1.1 Key Milestones | 1464 19-Sep-18 | | 1628 15-Feb-19 A | | 0% | 0% | -148 | -349 | -350 | | | | | |
| IPR21.1.2 Contractual Interface | 1243 09-Oct-18 | | 1243 09-Oct-18 A | | 0% | 0% | 0 | 0 | 200 | | | | | |
| IPR21.1.3 Access to Site | 165 23-Mar-18 | · · · | 165 23-Mar-18 A | | 0% | 0% | 0 | -477 | -211 | | | | | |
| IPR21.1.4 Document Submittals | 180 23-Mar-18 | · · · | 180 23-Mar-18 A | | 0% | 0% | 0 | -446 | | ′ <u></u> | | | | |
| APR21.1.5 Survey | 73 23-Mar-18 | | 73 23-Mar-18 A | | 0% | 0% | 0 | 0 | | | | | | |
| IPR21.1.6 Geotechnical Investigation | 165 23-Mar-18 | | 165 23-Mar-18 A | | 0% | 0% | 0 | -322 | | | | | | |
| MPR21.1.6.1 Phase 1 | 60 23-Mar-18 | | 60 23-Mar-18 A | | 0% | 0% | 0 | 0 | | | | | | |
| MPR21.1.6.2 Phase 2 | 25 22-May-18 | | 25 22-May-18 A | | 0% | 0% | 0 | 0 | | | | | | |
| MPR21.1.6.3 Phase 3 | 50 16-Jun-18 | | 50 16-Jun-18 A | _ | + | 0% | | -147 | | | | | | |
| MPR21.1.6.4 Phase 4 | 45 21-Jul-18 | | 45 05-Oct-18 A | | 0% | 0% | | -322 | | | | | | |
| APR21.1.7 Infrasturcture Facilities | 188 23-Mar-18 | | 376 23-Mar-18 A | | 0% | 0% | 0 | -218 | 656 <u></u> | | | | | |
| MPR21.1.7.1 Project Site Office Construction (Contractor + Employer + | · · · · · · · · · · · · · · · · · · · | | 120 04-Apr-18 A | | | 0% | 0 | 2 | | <u> </u> | | | | |
| MPR21.1.7.2 Casting Yard | 164 20-Apr-18 | | 355 20-Apr-18 A | | 0% | 0% | | -218 | -109 | | | | | |
| MPR21.1.7.3 Fabrication Yard | 133 23-Mar-18 | | 133 23-Mar-18 A | · · · | 0% | 0% | | -122 | | | | | | |
| MPR21.1.7.4 Rebar Yard | 133 23-Mar-18 | | 376 23-Mar-18 A | | 0% | 0% | 0 | -251 | <u>-87</u> | | | | | |
| MPR21.1.7.5 Batching Plant Installation - CP30 & CP60 | 164 20-Apr-18 | | 164 08-Sep-18 A | | 0% | 0% | -47 | 49 | V | | | | | |
| MPR21.1.8 Procurement Plan | 1618 04-Apr-18 | | 2088 04-Apr-18 A | | 0% | 0% | 0 | -330 | -316 | | | | | |
| MPR21.1.8.1 Plant & Machinery Deployment Plan | 1618 04-Apr-18 | | 2088 04-Apr-18 A | | 0% | 0% | 0 | -330 | -316 | | | | | |
| MPR21.1.8.4 Bulk Material Procurement Plan | 1412 01-Sep-18 | | 1679 31-Aug-18 A | | 0% | 0% | 0 | -351 | -352 | | | | | : : : |
| MPR21.1.9 Design & Engineering (Civil) | 302 23-Mar-18 | · | 525 23-Mar-18 A | | 0% | 0% | 0 | -223 | -152 | | | | | |
| MPR21.1.9.1 Initial Design (General & Preliminary Design, DBR) | 79 23-Mar-18 | | 79 23-Mar-18 A | _ | | 0% | 0 | -172 | | | | | | |
| MPR21.1.9.2 Finalization of Alignment | 88 23-Mar-18 | | 88 23-Mar-18 A | · · · · · · · · · · · · · · · · · · · | 0% | 0% | 0 | -83 | | | | | | |
| MPR21.1.9.3 Detailed Design and Construction Design | 269 01-May-18 | | 525 01-May-18 A | | 0% | 0% | | -223 | -152 | | | | | |
| MPR21.1.9.3.1 GIR | 133 22-May-18 | | 193 22-May-18 A | | 0% | 0% | | -433 | | <u>′ : : : : : : : : : : : : : : : : : : :</u> | | | | |
| MPR21.1.9.3.2 Test Pile | 113 01-May-18 | | 391 01-May-18 A | | 0% | 0% | 0 | -258 | -188 | | | | | |
| MPR21.1.9.3.3 Design Phase -1 (Accelerated Design of Initial Items) | 137 19-Jun-18 | | 137 27-Jun-18 A | | 0% | 0% | -8 | -418 | -363 | | | | | |
| MPR21.1.9.3.4 Design Phase -2 (Accelerated Design of Initial Items) | 163 04-Jul-18 | | 163 26-Jul-18 A | | 0% | 0% | | -399 | -330 | | | | | |
| MPR21.1.9.3.5 Design Phase -3 | 221 19-Jun-18 | | 144 25-Aug-18 A | | 0% | 0% | | | -317 | | | | | |
| MPR21.1.9.3.6 Design Phase -4 | 220 07-Jul-18 | | 220 05-Oct-18 A | | 0% | 0% | | | -294 | | | | | |
| MPR21.1.9.3.7 Design Phase -5 | 242 07-Jul-18 | | 579 19-Dec-18 A | | 0% | 0% | | | -253 | | | | | |
| MPR21.1.9.3.8 Design Phase -6 | 221 26-Aug-18 | 03-Apr-19 | 719 24-Dec-18 A | 31-Mar-20 | 0% | 0% | -120 | -363 | -351 | | | | | |
| MPR21.1.9.3.9 Design Phase -7 | 272 26-Aug-18 | | 753 11-Jan-19 A | | 0% | 0% | | | -149 | | | | | |
| MPR21.1.9.3.10 Design Phase -8 | 355 02-Oct-18 | 21-Sep-19 | 389 08-Feb-19 A | | 0% | 0% | | -297 | -211 | - | | | | |
| MPR21.1.10 Design, Engineering & Material Procurement (OSD) | 697 23-Mar-18 | | 1050 23-Mar-18 A | | 0% | 0% | 0 | -353 | -113 | | | | | |
| MPR21.1.10.1 Initial Design | 53 23-Mar-18 | | 53 23-Mar-18 A | | | 0% | 0 | -198 | | | | | | |
| MPR21.1.10.3 Aerodynamic Analysis | 145 23-Mar-18 | | 145 23-Mar-18 A | | 0% | 0% | | -349 | | | | | | |
| MPR21.1.10.4 Technical Design | 311 15-May-18 | | 717 15-May-18 A | | 0% | 0% | | -353 | -203 | | | | | |
| MPR21.1.10.4.1 OS01NS/SS | 150 15-May-18 | | 150 15-May-18 A | · · · · · · · · · · · · · · · · · · · | 0% | 0% | | -332 | | | | | | |
| MPR21.1.10.4.2 OS02NS/SS | 164 26-Jun-18 | | 530 26-Jun-18 A | | 0% | 0% | | -386 | -374 | | | | | |
| MPR21.1.10.4.3 OS03NS/SS | 164 14-Aug-18 | | 626 04-Nov-18 A | | 0% | 0% | | -409 | -353 | | | | | |
| MPR21.1.10.4.4 OS04NS/SS | 164 09-Oct-18 | | 425 06-Feb-19 A | | 0% | 0% | | -281 | -170 | | | | | |
| MPR21.1.10.5 Construction Design | 344 12-Oct-18 | | 879 02-Feb-19 A | - | 0% | 0% | | -353 | | | | | | |
| MPR21.1.10.5.1 OS01NS/SS | 201 12-Oct-18 | | 700 02-Feb-19 A | | 0% | 0% | | -317 | | | | | | |
| MPR21.1.10.5.2 OS02NS/SS | 231 07-Dec-18 | | 276 01-Oct-19 A | | 0% | 0% | | | -374 | | | | | |
| MPR21.1.10.5.3 OS03NS/SS | 183 25-Jan-19 | | 183 09-Mar-20 | · · · | 0% | 0% | | | -353 | | | | | |
| MPR21.1.10.5.4 OS04NS/SS | 183 22-Mar-19 | | 207 01-Oct-19 A | | 0% | 0% | | -257 | -1/0 | | | | | |
| MPR21.1.10.6 Material Procurement (1st Lot) | 353 02-Mar-19 | | 416 15-Mar-19 A | | 0% | 0% | | -353 | -113 | | | | | · · · · · · · · · · · |
| MPR21.1.10.6.1 OS01NS/SS | 210 02-Mar-19 | | 287 15-Mar-19 A | | 0% | 0% | -13 | -41 | | | <u> </u> | | | |
| MPR21.1.10.6.2 OS02NS/SS | 210 27-May-19 | | 226 11-Nov-19 A | | 0% | 0% | | -374 | -3/4 | | | | | |
| MPR21.1.10.6.3 OS03NS/SS | 210 28-May-19 | | 210 10-Jul-20 | | 0% | 0% | | -409 | -353 | | | | | |
| MPR21.1.10.6.4 OS04NS/SS | 210 23-Jul-19 | | 183 28-Oct-19 A | - | 0% | 0% | | -224 | 16 | | | | | |
| MPR21.1.11 Tree Cutting and Transplantation | 225 23-Mar-18 | | 774 23-Mar-18 A | - | 0% | 0% | | -549 | -431 | | | | | |
| MPR21.1.12 Utility Diversion | 210 19-Jun-18 | | 783 01-Oct-18 A | | 0% | 0% | -104 | -485 | -1/3 | | | | | |
| MPR21.1.13 Construction | 919 11-Jun-18 | | 1317 11-Jun-18 A | | 28.11% | 12.19% | 0 | -331 | -256 | | | | | |
| MPR21.1.13.1 Sewri Interchange Section | 779 03-Nov-18 | | 1164 29-Mar-19 A | · · · | 28.73% | 9.28% | | -346 | | | | | | |
| MPR21.1.13.1.1 Sewri Interchnage - Work Front - 1 | 779 03-Nov-18 | | 1116 18-May-19 A | | 29.96% | 7.55% | | -298 | | | | | | |
| MPR21.1.13.1.1.1 Sewri Interchange - Work Front - 1 - Piling | | | 704 18-May-19 A | | | | | -175 | -24 | | | | | |
| MPR21.1.13.1.1.1 Piling - Land Viaduct | 54 13-Apr-19 | | 298 25-Jun-19 A | | 100% | 90% | | -211 | -168 | | | | | |
| MPR21.1.13.1.1.1.2 Piling - Ramp A | 442 03-Nov-18 | | 698 18-May-19 A | y | 55.67% | 28.5% | -163 | -175 | -72 | | | | | |
| MPR21.1.13.1.1.1.3 Piling - Ramp E | 36 20-Oct-20 | | 36 17-May-21 | · · · · | 0% | 0% | | -175 | -54 | | V | • | | |
| MPR21.1.13.1.1.1.4 Piling - Ramp F | 12 02-Dec-20 | | 12 30-Sep-21 | 14-Oct-21 | 0% | 0% | -175 | -175 | -24 | | | ₩ | | |
| MPR21.1.13.1.1.2 Sewri Interchange - Work Front - 1 - Pile Cap | 560 19-Nov-18 | | 789 21-Jun-19 A | - | 45.62% | 9.68% | -175 | -246 | -106 | | | | | |
| MPR21.1.13.1.1.2.1 Pile Cap - Land Viaduct | 68 25-Apr-19 | 15-Oct-19 | 110 06-Sep-19 A | 10-Dec-20 | 100% | 50% | -43 | -274 | -231 | | | | | |
| | | | | | | | | | | | | | | |

AECOM PADECO daral-handasah

General Consultant for Mumbai Trans Harbour Link Project



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



| | Duration | BL1 Finish | Original Start Duration | Finish | Schedule % Complete | Complete | Variance - BL1 Start Date | Variance - BL1 Finish Date | Total Float | al 2018 2019 2020 2021 2022 ^{at} A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M |
|----------------------------------------------------------------------------------------|-----------------------------------|--------------------------|-----------------------------------|---------------------------------------|------------------------|------------------|------------------------------|-------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPR21.1.13.1.1.2.2 Pile Cap - Ramp A | 504 19-Nov-1 | | 753 21-Jun-19 A | | 42.47% | 4.84% | -175 | -266 | -217 | _ <u></u> |
| MPR21.1.13.1.1.2.3 Pile Cap - Ramp E | 44 07-Jan-21 | | 67 25-Jan-22 | 15-Apr-22 | 0% | 0% | -243 | -266 | -106 | 6 · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.1.1.2.4 Pile Cap - Ramp F | 20 01-Mar-2 | | | 02-Apr-22 | 0% | 0% | -235 | -235 | -146 | " : : : : : : : : : : : : : : : : : : : |
| MPR21.1.13.1.1.3 Sewri Interchange - Work Front | | | | 29-Jun-22 | 30.37% | 6.53% | -155 | -262 | -105 | [™] |
| MPR21.1.13.1.1.3.1 Pier - Land Viaduct | 52 29-May-1 | | 36 21-Oct-19 A | 15-Jan-21 | 100% | 26.67% | -43 | -291 | -234 | |
| MPR21.1.13.1.1.3.2 Pier - Ramp A MPR21.1.13.1.1.3.3 Pier - Ramp E | 504 12-Dec-1 96 27-Jan-21 | | 454 30-Jul-19 A 84 31-Jul-19 A | 06-Apr-22 29-Jun-22 | 37.26% 0% | 2.42% 13.64% | -155 337 | -274 -262 | -225 | |
| MPR21.1.13.1.1.3.4 Pier - Ramp F | 96 27-Jan-21 83 23-Dec-2 | | 84 31-Jul-19 A 83 31-Dec-21 | 29-Jun-22 11-Apr-22 | 0% | 13.64% | -235 | -262 -235 | - 158 | |
| MPR21.1.13.1.1.4 Sewri Interchange - Work Front - | | • | 537 28-Apr-20 | 04-Aug-22 | 27.07% | 0% | -233 | -235 | -37 | 8 |
| MPR21.1.13.1.1.4.1 Pier Cap - Land Viaduct | 49 16-Sep-19 | | · | 03-Feb-21 | 100% | 0% | -295 | -294 | -237 | 7 |
| MPR21.1.13.1.1.4.2 Pier Cap - Ramp A | 499 05-Jan-19 | | 449 28-Apr-20 | 23-Apr-22 | 31.61% | 0% | -323 | -274 | -225 | <mark>.</mark> |
| MPR21.1.13.1.1.4.3 Pier Cap - Ramp E | 100 13-Feb-2 | | 100 09-Apr-22 | 04-Aug-22 | 0% | | -274 | -274 | 38 | 8 |
| MPR21.1.13.1.1.4.4 Pier Cap - Ramp F | 86 31-Dec-2 |) 13-Apr-21 | 91 10-Jan-22 | 28-Apr-22 | 0% | 0% | -235 | -240 | -26 | 6 |
| MPR21.1.13.1.1.5 Sewri Interchange - Embankmen | Works - Ramp 90 14-Apr-21 | 01-Nov-21 | 90 22-Apr-22 | 05-Aug-22 | 0% | 0% | -235 | -235 | -86 | 6 |
| MPR21.1.13.1.1.6 Sewri Interchange - Work Front - | - Super Struc 628 04-May-1 | 9 28-Feb-22 | 606 23-Nov-20 | 17-Feb-23 | 15.32% | 0% | -319 | -298 | -256 | 6 · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.1.1.6.1 Erection - Land Viaduct | 96 19-Nov-1 | 9 11-Mar-20 | 96 08-Feb-21 | 02-Jun-21 | 1.11% | 0% | -295 | -295 | -281 | 1 |
| MPR21.1.13.1.1.6.2 Erection - Ramp A | 486 04-May-1 | 9 09-Apr-21 | 415 23-Nov-20 | 03-Jun-22 | 26.84% | 0% | -370 | -300 | -260 | o <mark>o</mark> |
| MPR21.1.13.1.1.6.3 Erection - Ramp E | 146 10-Apr-21 | 02-Dec-21 | 146 03-Jun-22 | 24-Nov-22 | 0% | 0% | -300 | -300 | -260 | |
| MPR21.1.13.1.1.6.4 Erection - Ramp F | | 28-Feb-22 | 52 19-Dec-22 | 17-Feb-23 | 0% | 0% | -300 | -300 | -258 | 8 |
| MPR21.1.13.1.2 Sewri Interchange - Work Front - 2 | 765 03-Nov-1 | | | 17-Apr-23 | 35.44% | 13.76% | -121 | -360 | | 8 |
| MPR21.1.13.1.2.1 Sewri Interchange - Work Front - | | | | | 53.42% | 39.63% | -121 | | | <mark>.</mark> |
| MPR21.1.13.1.2.1.1 Piling - Ramp C2 | 325 03-Nov-1 | | 586 29-Mar-19 A | | 67.78% | 95.92% | -121 | -190 | -137 | <mark>.</mark> |
| MPR21.1.13.1.2.1.2 Piling - Ramp C1 | 140 03-Apr-19 | | | | 100% | 8.57% | -108 | -243 | -137 | <mark>.</mark> |
| MPR21.1.13.1.2.1.3 Piling - Ramp B | | 0 01-Mar-21 | | | 0% | 8.32% | 227 | -183 | -137 | |
| MPR21.1.13.1.2.2 Sewri Interchange - Work Front - | | · · | 828 05-May-19 A | | 46.25% | 13.66% | -140 | -187 | -125 | |
| MPR21.1.13.1.2.2.1 Pile Cap - Ramp C2 | 361 19-Nov-1 | | 655 05-May-19 A | | 57.46% | 61.19% | -140 | -244 | -156 | 6 |
| MPR21.1.13.1.2.2.2 Pile Cap - Ramp C1 | 172 12-Apr-19 | | 177 14-Dec-19 A | | 83.28% | 0.33% | -128 | -272 | -1/6 | |
| MPR21.1.13.1.2.2.3 Pile Cap - Ramp B | 131 25-Nov-2 | | 131 08-Oct-21 | 15-Mar-22 | 0% | 0% | -187 | -187 | -125 | |
| MPR21.1.13.1.2.3 Sewri Interchange - Work Front - MPR21.1.13.1.2.3.1 Pier - Ramp C2 | 353 12-Dec-1 | 3 21-May-21 | | · · | 39.94% 58.09% | 26.12% 59.87% | -155 -155 | -185 -244 | -156 | |
| MPR21.1.13.1.2.3.2 Pier - Ramp C2 | 194 01-Apr-19 | | · | | 77.04% | 15.3% | - 155 -64 | -244 -272 | -170 | <mark>.</mark> |
| MPR21.1.13.1.2.3.3 Pier - Ramp B | 248 25-Apr-20 | | | · · · | 0% | 22.95% | -04 | -272 | -170 | |
| MPR21.1.13.1.2.4 Sewri Interchange - Work Front - | | | | · · · · · · · · · · · · · · · · · · · | 36.48% | 0.05% | -206 | -217 | -33 | 3 |
| MPR21.1.13.1.2.4.1 Pier Cap - Ramp C2 | 356 26-Dec-1 | | | | 57.93% | 0.3% | -206 | -244 | -156 | 6 |
| MPR21.1.13.1.2.4.2 Pier Cap - Ramp C1 | 198 18-Apr-19 | | | 07-May-21 | 67.59% | 0% | -287 | -272 | -174 | |
| MPR21.1.13.1.2.4.3 Pier Cap - Ramp B | 235 19-May-2 | | · | 17-May-22 | 0% | | -247 | -217 | -33 | 3 · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.1.2.5 Sewri Interchange - Embankmen | | 9 02-Nov-19 | | 26-Dec-20 | 0% | 0% | -273 | -273 | 283 | 3 · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.1.2.6 Sewri Interchange - Work Front - | 2 - Super Struc 654 18-Mar-1 | 9 11-Feb-22 | 702 26-Sep-20 | 17-Apr-23 | 20.55% | 0% | -312 | -360 | -288 | 8 |
| MPR21.1.13.1.2.6.1 Erection - Ramp C2 | 343 18-Mar-1 | 9 02-Nov-20 | 368 26-Sep-20 | 16-Mar-22 | 52.94% | 0% | -312 | -337 | -265 | 5 <mark>5</mark> |
| MPR21.1.13.1.2.6.2 Erection - Ramp C1 | 194 08-Oct-19 | 26-May-20 | 194 16-Feb-21 | 07-Dec-21 | 34.39% | 0% | -363 | -363 | -291 | 1 |
| MPR21.1.13.1.2.6.3 Erection - Ramp B | 316 28-Nov-2 | | 316 09-Apr-22 | 17-Apr-23 | 0% | | -363 | -363 | -291 | 1 |
| MPR21.1.13.1.3 Sewri Interchange - Work Front - 3 (C | | | | 15-Sep-22 | 0% | 0% | -190 | | | <u>4</u> |
| MPR21.1.13.1.3.1 Sewri Interchange - Work Front - | | | | 08-Oct-21 | 0% | | -190 | | | |
| MPR21.1.13.1.3.1.1 Piling - Ramp B | | 02-May-20 | | 22-Mar-21 | 0% | | -190 | -190 | -137 | |
| MPR21.1.13.1.3.1.2 Piling - Ramp E | | 0 07-Oct-20 | 54 22-Mar-21 | 25-May-21 | 0% | | -190 | -190 | -137 | |
| MPR21.1.13.1.3.1.3 Piling - Ramp C1 | | 20-Nov-20 | , | 08-Oct-21 | 0% | | -190 | -190 | -137 | |
| MPR21.1.13.1.3.2 Sewri Interchange - Work Front - | | | | 03-Nov-21 | 0% | | -190 | -190 | 21 | |
| MPR21.1.13.1.3.2.1 Pile Cap - Ramp B MPR21.1.13.1.3.2.2 Pile Cap - Ramp E | 81 07-Mar-2 | | 81 22-Jan-21 81 29-Mar-21 | 29-Apr-21 05-Oct-21 | 0% | | -190 -190 | -190 -190 | -21 | |
| MPR21.1.13.1.3.2.2 Pile Cap - Ramp E MPR21.1.13.1.3.2.3 Pile Cap - Ramp C1 | | 0 17-Nov-20 15-Dec-20 | | 05-0ct-21 03-Nov-21 | 0% 0% | | - 190 - 190 | - 190 -190 | 40 | |
| MPR21.1.13.1.3.3 Sewri Interchange - Work Front - | | | | 20-Jan-22 | 0% | | -190 | - 190 - 190 | -30 | |
| MPR21.1.13.1.3.3.1 Pier - Ramp B | 135 18-Mar-2 | | | 15-Oct-21 | 0% | | -190 | -190 | -69 | 9 |
| MPR21.1.13.1.3.3.2 Pier - Ramp E | 135 18-Mar-2 135 21-May-2 | | 135 08-Apr-21 | 13-Dec-21 | 0% | | -190 | -190 | -3 | 3 · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.1.3.3.3 Pier - Ramp C1 | | 0 05-Mar-21 | | 20-Jan-22 | 0% | | -190 | -190 | -41 | <mark>1</mark> : : : : : : : : : : : : : : : : : : : |
| MPR21.1.13.1.3.4 Sewri Interchange - Work Front - | | | | 04-Feb-22 | 0% | | -190 | -190 | -30 | 0 |
| MPR21.1.13.1.3.4.1 Pier Cap - Ramp B | 115 24-Apr-20 | | | 30-Oct-21 | 0% | | -190 | -190 | -69 | 9 |
| MPR21.1.13.1.3.4.2 Pier Cap - Ramp E | 132 08-Jun-20 | 15-Feb-21 | 132 26-Apr-21 | 03-Jan-22 | 0% | 0% | -190 | -190 | -3 | 3 · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.1.3.4.3 Pier Cap - Ramp C1 | 77 17-Dec-2 |) 19-Mar-21 | 77 04-Nov-21 | 04-Feb-22 | 0% | 0% | -190 | -190 | -41 | 1 <mark>1</mark> |
| MPR21.1.13.1.3.5 Sewri Interchange - Work Front - | - Super Struc 360 23-May-2 | 0 01-Feb-22 | 360 10-Apr-21 | 15-Sep-22 | 0% | 0% | -190 | -190 | -94 | 4 |
| MPR21.1.13.1.3.5.1 Super Structure - Ramp B | 132 23-May-2 | | | 17-Dec-21 | 0% | 0% | -190 | -190 | -80 | 0 |
| MPR21.1.13.1.3.5.2 Super Structure - Ramp E | 132 16-Jan-21 | | 132 03-Dec-21 | 10-May-22 | 0% | | -190 | -190 | -80 | |
| MPR21.1.13.1.3.5.3 Super Structure - Ramp C1 | 120 09-Jun-21 | | | 15-Sep-22 | 0% | | -190 | -190 | -94 | |
| PR21.1.13.2 Intertidal Section | 715 11-Jun-18 | | | | 37.82% | 34.65% | 0 | -262 | -235 | |
| MPR21.1.13.2.1 Intertidal - Temporary Access Bridge | | · | | | 0% | | 0 | 69 | · · · | |
| MPR21.1.13.2.1.1 Access Bridge | 457 11-Jun-18 | | 455 11-Jun-18 A | | 0% | | 0 | 69 | | |
| MPR21.1.13.2.1.1.1 Access Bridge - Piling | 451 11-Jun-18 | | 407 11-Jun-18 A | | 0% | | 0 | 129 | 297 | |
| MPR21.1.13.2.1.1.2 Access Bridge - Decking | 437 06-Oct-18 | 12-Jun-20 | 455 14-Jul-18 A | 23-1Vlar-20 | 0% | 0% | 16 | 69 | 232 | ∠ · · · · · · · · · · · · · · · · · · · |
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MUMBAI TRANS HARBOUR LINK PACKAGE 1, UPDATED BASELINE PROGRAMME FOR DECEMBER 2019



| | Activity Name | BL1 BL1 Start Duration | BL1 Finish | Original Start Duration | Finish | Schedule % Complete | Performance % Complete | Variance - BL1 \ Start Date | /ariance - BL1 Finish Date | Total Float | 2018 A M J J A S O N D J | 2019 FMAMJJA | | 2020 MAMJJAS | | 2021 1 J J A S O | NDJFMA | 2022 M J J A S O | 2 N D J F M A |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------|---------------------------------------|--------------------------|----------------------------------------|---------------------------|--------------------------------|-------------------------------|----------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------|-----------|---------------------|----------------------------------------|----------------------------------------|------------------|
| | MPR21.1.13.2.1.2 Fingers | 441 13-Oct-18 | · | 465 26-Sep-18 A | | 0% | 0% | 16 | 69 | 232 | | | | | | | | | |
| | MPR21.1.13.2.1.2.1 Fingers - Piling | 437 13-Oct-18 | | 461 26-Sep-18 A | | 0% | 0% | 16 | 69 | 232 | | | | | | | | | |
| | MPR21.1.13.2.1.2.2 Fingers - Decking MPR21.1.13.2.2 Intertidal - Main Bridge Work | 426 01-Nov-18 638 14-Dec-18 | · · · | 465 06-Oct-18 A 979 14-Nov-18 A | · · · | 0% | 0% 34.65% | 22 | 69 -262 | 232 | | | | | | | | | |
| | MPR21.1.13.2.2.1 Intertidal - Main Bridge Work - Piling | 531 14-Dec-18 | | 691 14-Nov-18 A | | 37.82% 55.08% | 72.88% | 26 26 | -202 | -235 -47 | v | | | | | | | | |
| | MPR21.1.13.2.2.2 Intertidal - Main Bridge Work - Pile Cap | 536 29-Dec-18 | | 794 17-Jan-19 A | · · · | 44.64% | 44.04% | -15 | -166 | -137 | | | | | | · · · · · · · | | | |
| | MPR21.1.13.2.2.3 Intertidal - Main Bridge Work - Pier | 562 17-Jan-19 | · · | 822 29-Mar-19 A | 26-Feb-22 | 41.42% | 28.67% | -59 | -153 | -126 | | · · · · · · · · · | | | | | | | |
| | MPR21.1.13.2.2.4 Intertidal - Main Bridge Work - Pier Cap | 562 30-Jan-19 | 05-Jun-21 | 571 10-Aug-19 A | 11-Mar-22 | 38.14% | 10.81% | -115 | -153 | -126 | | V | | | | | | | |
| | MPR21.1.13.2.2.5 Intertidal - Main Bridge Work - Super Structure E | 534 18-Apr-19 | 23-Oct-21 | | 30-Aug-22 | 7.78% | 0% | -204 | -262 | -235 | | | | V | | | | | |
| | MPR21.1.13.2.3 Intertidal - Finger Removal & Reuse | 400 07-Mar-19 | | 363 20-Jun-19 A | | 0% | 0% | -85 | -117 | | | | | | | 7 | | | |
| | PR21.1.13.3 Marine Section | 911 18-Sep-18 | | 1204 14-Dec-18 A | | 29.74% | 11.43% | -73 | -262 | | | | | | | | | | |
| | MPR21.1.13.3.1 Temporary Access Bridge Work -2 (MP70 to MP51- 2 MPR21.1.13.3.2 Marine - Main Bridge | 911 18-Sep-18 775 03-Nov-18 | | 864 14-Nov-19 A 1107 14-Dec-18 A | <u> </u> | 29.74% | 0% 11.43% | -274 -34 | -262 -262 | | · · · · · · · · · · · · · · · · · · · | | | | | | | | |
| | MPR21.1.13.3.2.1 Marine - Piling | 564 03-Nov-18 | | 825 14-Dec-18 A | | 44.27% | 29.96% | -34 | -202 | | · · · · · · · · · · · · · · · · · · · | | | | | | | | |
| | MPR21.1.13.3.2.1.1 Piling - Stretch - 1 - OSD-1 MP51 to MP53 (32 | | | | 26-Apr-21 | 76.92% | 0% | -306 | -306 | -170 | | | | | | | | | |
| | MPR21.1.13.3.2.1.2 Piling - Stretch - 2 - Marine - MP54 to MP68 (8 | | | | 17-Jan-22 | 40% | 0% | -306 | -306 | -121 | | | | • | | | | | |
| | MPR21.1.13.3.2.1.3 Piling - Stretch - 3 - OSD-2&3 MP69 to MP80 (| 521 10-Dec-18 | 26-Feb-21 | 419 13-Mar-20 | 01-Feb-22 | 38.91% | 0% | -306 | -204 | -126 | | | | • | | | | | |
| | MPR21.1.13.3.2.1.4 Piling - Stretch - 4 - Marine MP81 to MP123 (2 | | 21-Apr-20 | 489 14-Dec-18 A | 20-May-20 | 72.06% | 79.11% | -34 | -24 | 79 | | | | | | | | | |
| | MPR21.1.13.3.2.1.5 Piling - Stretch - 5 - OSD-4 MP124 to MP128 (| | | · · · · · · · · · · · · · · · · · · · | 21-Jan-21 | 0% | 0% | -3 | -3 | 105 | | | | | | | | | |
| | MPR21.1.13.3.2.1.6 Piling - Stretch - 6 - Marine MP129 to MP148 | | | 234 06-Dec-19 A | | 5% | 5% | -85 | -43 | 75 | _ | | | | | | | | |
| | MPR21.1.13.3.2.3 Marine - Pile Cap MPR21.1.13.3.2.3.1 Pile Cap - Stretch - 1 - OSD-1 MP51 to MP53 (| 572 23-Nov-18 75 25-Dec-19 | · · | | 25-Apr-22 28-Sep-21 | 29.98% 0% | 10.35% 0% | -43 -306 | -238 -306 | -122 | | | | | | | | | |
| | MPR21.1.13.3.2.3.2 Pile Cap - Stretch - 2 - Marine - MP54 to MP54 | | | | 28-Sep-21 25-Apr-22 | 40% | 0% | -306 | -306 | -190 | | | | | | • • • • • | ····· | | |
| | MPR21.1.13.3.2.3.3 Pile Cap - Stretch - 3 - OSD-2&3 MP69 to MP8 | | | · · · · · · · · · · · · · · · · · · · | 01-Mar-22 | 28.13% | 0% | -306 | -204 | -126 | | | | • | | · · · · · · | | | |
| | MPR21.1.13.3.2.3.4 Pile Cap - Stretch - 4 - Marine MP81 to MP12 | | | · · · · · · · · · · · · · · · · · · · | 20-Apr-21 | 43.88% | 23.29% | -43 | -135 | -83 | | | | | | | | | |
| | MPR21.1.13.3.2.3.5 Pile Cap - Stretch - 5 - OSD-4 MP124 to MP12 | 125 11-Nov-20 | 08-Apr-21 | 125 05-Apr-21 | 03-Dec-21 | 0% | 0% | -121 | -121 | -56 | | | | | · · · · · | | ◄ | | |
| | MPR21.1.13.3.2.3.6 Pile Cap - Stretch - 6 - Marine MP 129 to MP 1 | 407 08-Jun-19 | 12-Apr-21 | 246 11-May-20 | 02-Jun-21 | 5% | 0% | -204 | -43 | 73 | | | | | | ▼ | | | |
| | MPR21.1.13.3.2.4 Marine - Pier | 590 22-Dec-18 | | 639 12-Sep-19 A | | 26.97% | 1.73% | -146 | -249 | -163 | | | | | | | | | |
| | MPR21.1.13.3.2.4.1 Pier - Stretch - 1 - OSD-1 MP51 to MP53 (320) | | · · · · · | · | 28-Oct-21 | 0% | 0% | -306 | -306 | -186 | | | | | | | | | |
| | MPR21.1.13.3.2.4.2 Pier - Stretch - 2 - Marine - MP54 to MP68 (85 MPR21.1.13.3.2.4.3 Pier - Stretch - 3 - OSD-2&3 MP69 to MP80 (1 | | | | 27-Jun-22 | 33.33% | 0% | -306 | -306 | -189 | | | | | | | | | |
| | MPR21.1.13.3.2.4.3 Pier - Stretch - 3 - OSD-2&3 MP69 to MP60 (1 MPR21.1.13.3.2.4.4 Pier - Stretch - 4 - Marine MP81 to MP123 (2.6 | | | 402 29-May-20 414 12-Sep-19 A | 30-Mar-22 | 25% 40.43% | 0% 3.93% | -306 -146 | -204 -142 | -126 | | | | | | | | | |
| | MPR21.1.13.3.2.4.5 Pier - Stretch - 5 - OSD-4 MP124 to MP128 (6) | | | · · · · · · · · · · · · · · · · · · · | 01-Mar-22 | 0% | 0% | -140 | -148 | -111 | | | | • • • • • • • • • • • • • • • • • • • • | | | | | |
| | MPR21.1.13.3.2.4.6 Pier - Stretch - 6 - Marine MP129 to MP148 (1 | | | | 04-Sep-21 | 5% | 0% | -204 | -43 | 84 | | | | • | | | | | |
| | MPR21.1.13.3.2.2 Marine - Pier Cap | 576 21-Jan-19 | 14-Jun-21 | 608 08-Jan-20 | 08-Jul-22 | 25.76% | 0% | -217 | -249 | -125 | | | | | | | | | |
| | MPR21.1.13.3.2.2.1 Pier Cap - Stretch - 1 - OSD-1 MP51 to MP53 | 87 04-Feb-20 | 16-May-20 | 87 10-May-21 | 22-Nov-21 | 0% | 0% | -306 | -306 | -86 | | | | | • | | ▼ | | |
| | MPR21.1.13.3.2.2.2 Pier Cap - Stretch - 2 - Marine - MP54 to MP6 | | | | 08-Jul-22 | 27.33% | 0% | -306 | -306 | -189 | | | | | • | | | | |
| | MPR21.1.13.3.2.2.3 Pier Cap - Stretch - 3 - OSD-2&3 MP69 to MP | | | · · · · · · · · · · · · · · · · · · · | 20-Apr-22 | 17.06% | 0% | -306 | -204 | -126 | | | | | | | | | |
| | MPR21.1.13.3.2.2.4 Pier Cap - Stretch - 4 - Marine MP81 to MP12 MPR21.1.13.3.2.2.5 Pier Cap - Stretch - 5 - OSD(4) MP124 to MP1 | | | 383 08-Jan-20 124 15-Oct-21 | 14-Oct-21 14-Mar-22 | 38.83% 0% | 0% 0% | -217 -127 | -142 -148 | -41 111 | | | | | | | | | |
| | MPR21.1.13.3.2.2.6 Pier Cap - Stretch - 6 - Marine MP129 to MP1 | | | 230 12-Jun-20 | 14-1viai-22 18-Sep-21 | 12.54% | 0% | -204 | - 148 - 31 | 122 | | | | | | | | | |
| | MPR21.1.13.3.2.5 Marine - Super Structure Erection | 636 19-Apr-19 | | | 31-Dec-22 | 11.07% | 0% | -209 | -262 | | | | | • | | | | | |
| | MPR21.1.13.3.2.5.1 Erection - Main Concrete Viaduct | 636 19-Apr-19 | | | 31-Dec-22 | 11.26% | 0% | -209 | -262 | | | | | | | · · · · · · · · · | ······································ | ······································ | |
| | MPR21.1.13.3.2.5.2 Rescue Span (MP98 to MP99) | 120 07-Mar-20 | 29-Oct-20 | 120 15-Feb-21 | 09-Oct-21 | 0% | 0% | -209 | -209 | 112 | | | | | | | | | |
| | PR21.1.13.4 Precast Segments | 778 06-Feb-19 | | 819 07-Aug-19 A | | 32.73% | 2.8% | -154 | -303 | | | | | | | | | | |
| | MPR21.1.13.4.1 Precast Segement - Sewri Interchange | 701 06-Feb-19 | | | 07-May-22 | 42.19% | 0% | -301 | -293 | | | | | | | | | | |
| | MPR21.1.13.4.2 Precast Segement - Intertidal MPR21.1.13.4.3 Precast Segement - Marine | 753 28-Feb-19 759 28-Feb-19 | | 753 18-Oct-19 A 819 07-Aug-19 A | | 35.44% | 6.13% 1.54% | -194 -135 | -302 -303 | | | | | | | | | | |
| | PR21.1.13.4.3 Precast Segement - Marine PR21.1.13.5 Orthotropic Steel Deck (OSD) - Fabrication, Shipping, As | | | 771 23-Sep-19 A | | 0% | 1.54% 0% | - 130 | -303 | | | • • • • • • • • | | | | | | | |
| | MPR21.1.13.5.1 OSD - Fabrication | 746 28-Sep-19 | | 954 23-Sep-19 A | | 0% | 0% | 5 | -374 | | | | V | | | · · · · · · · | | | |
| | MPR21.1.13.5.1.1 Fabrication - Factory A | 720 28-Sep-19 | | 930 23-Sep-19 A | | 0% | 0% | 5 | -376 | | | | V | | | | | | |
| | MPR21.1.13.5.1.1.1 OSD 01 - RHS Fabrication - MP50 to MP53 (3 | | - | 300 23-Sep-19 A | · · | 0% | 0% | 5 | -137 | 15 | | | | | | | | | |
| | MPR21.1.13.5.1.1.2 OSD 03 - RHS Fabrication - MP75 to MP81 (7 | | · · · · · · · · · · · · · · · · · · · | | 01-May-22 | 0% | 0% | -376 | -376 | -271 | | | | | X | | | | |
| | MPR21.1.13.5.1.1.3 OSD 04 - RHS Fabrication - MP124 to MP128 | | - | | 28-Sep-22 | 0% | 0% | -376 | -376 | -353 | | | | | | | | | |
| | MPR21.1.13.5.1.2 Fabrication - Factory B | 720 28-Sep-19 | · · | · · · · | 23-Aug-22 | 0% | 0% | 5 | -340 | -276 | | | | | | | | | |
| | MPR21.1.13.5.1.2.1 OSD 01 - LHS Fabrication - MP50 to MP53 (3: MPR21.1.13.5.1.2.2 OSD 02 - RHS Fabrication - MP69 to MP75 (6 | • • • • • • • • • • • • • • • • • | | · · · · · · · · · · · · · · · · · · · | 06-Jan-21 26-Mar-22 | 0% 0% | 0% 0% | -340 | -137 -340 | - / -259 | | | | | • | | | | |
| | MPR21.1.13.5.1.2.3 OSD 02 - KHS Fabrication - MP09 to MP75 (6 MPR21.1.13.5.1.2.3 OSD 04 - LHS Fabrication - MP124 to MP128 | | | | 23-Aug-22 | 0% | 0% | -340 | -340 -340 | -239 | | | | | | | · · · · · · · · | | |
| | MPR21.1.13.5.1.3 Fabrication - Factory C | 660 23-Dec-19 | | | 22-Oct-22 | 0% | 0% | -374 | -374 | | | | | | • | | | | |
| | MPR21.1.13.5.1.3.1 OSD 02 - LHS Fabrication - MP69 to MP75 (6 | | | | 24-Feb-22 | 0% | 0% | -374 | -374 | -239 | | | | | • | | | | |
| | MPR21.1.13.5.1.3.2 OSD 03 - LHS Fabrication - MP75 to MP81 (7 | | | 420 28-Aug-21 | | 0% | 0% | -374 | -374 | -316 | | | | | | | | | |
| N | MPR21.1.13.5.2 OSD - Shipping | 536 24-Jun-20 | | | 21-Dec-22 | 0% | 0% | | -374 | | | | | | | | | · · · · · · · | |
| | MPR21.1.13.5.2.1 Shipping - Factory A | 510 24-Jun-20 | | 750 07-Nov-20 | | 0% | 0% | -137 | -376 | -173 | | | | | | | | | - |
| | MPR21.1.13.5.2.1.1 OSD 01 - RHS Shipping - MP50 to MP53 (320 | | | | 07-Mar-21 | 0% | 0% | -137 | -137 | 15 | | | | | V | | | <u> </u> | |
| | MPR21.1.13.5.2.1.2 OSD 03 - RHS Shipping - MP75 to MP81 (770 | | | | 30-Jun-22 | 0% | 0% | -376 | -376 | | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | | | |
| | MPR21.1.13.5.2.1.3 OSD 04 - RHS Shipping - MP124 to MP128 (5 MPR21.1.13.5.2.2 Shipping - Factory B | 180 20-May-21 510 24-Jun-20 | | 180 31-May-22 714 07-Nov-20 | 27-Nov-22 | 0% | 0% | -376 -137 | -376 -340 | -173 -276 | | | | | | | | | |
| _ | | | | | | | 0% | | | | | | | | | | | | |
| | Level of Effort Remaining Work Milestone Work Critical Remaining Work Summary | | Page 3 of 4 | | | Monthly Rolling ractor's eligibilit | | | n the actual pro | ogress a | nd will not match withim | pacted schedule su | ubmitted with th | e EOT-02 | | | | | © Oracle (|
| Actual V | | 1 | | DIODOS2 | me confi | | | | | | | | | | | | | | |

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General Consultant for Mumbai Trans Harbour Link Project





| — IHI мимв | AI TRANS HARBOUR | | CKAGE 1, UPDA DECEMBER 2019 | | ELINE PROGRAM | ІМЕ | M | | IRDA | | AECOM PADECO Caral-handasah General Consultant for Mumbai Trans Harbour Link Project |
|-----------------------------------------------------------------------------|--------------------------------|------------|--------------------------------|-----------|---------------|------------------------------------|-----------|-------------|-------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------|
| Activity Name | BL1 BL1 Start Duration | BL1 Finish | Original Start Duration | Finish | | ance % Variance - omplete Start | | | Total 2018 2019 Total 2018 2019 | | 2021 2022 24 N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A |
| MPR21.1.13.5.2.2.1 OSD 01 - LHS Shipping - MP50 to MP5 | 3 (320 120 24-Jun-20 | 21-Oct-20 | 120 07-Nov-20 | 07-Mar-21 | 0% | | .137 -137 | | 182 | | |
| MPR21.1.13.5.2.2.2 OSD 02 - RHS Shipping - MP69 to MP7 | | | 240 27-Oct-21 | 24-Jun-22 | 0% | | -340 -340 | | 289 | | ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ |
| MPR21.1.13.5.2.2.3 OSD 04 - LHS Shipping - MP124 to MP | | | | 22-Oct-22 | 0% | | -340 -340 | | 276 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.2.3 Shipping - Factory C | 450 18-Sep-20 | | 450 27-Sep-21 | 21-Dec-22 | 0% | | -374 -374 | | 292 | | |
| MPR21.1.13.5.2.3.1 OSD 02 - LHS Shipping - MP69 to MP7 | | | 210 27-Sep-21 | 25-Apr-22 | 0% | | | 1 -2 | 210 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.2.3.2 OSD 03 - LHS Shipping - MP75 to MP8 | | | 210 25-May-22 | · · · | 0% | 0% | -374 -374 | 1 -2 | 292 | | |
| MPR21.1.13.5.3 OSD - Custom Clearance and Inland Transpor | | | 720 21-Jan-21 | 11-Jan-23 | 0% | 0% - | -137 -374 | -1 | 197 | | |
| MPR21.1.13.5.3.1 OSD 1 - MP50 to MP53 (320m) | 75 07-Sep-20 | 20-Nov-20 | 75 21-Jan-21 | 06-Apr-21 | 0% | 0% | -137 -137 | 7 1 | 182 | | |
| MPR21.1.13.5.3.2 OSD 2 - MP69 to MP75 (683m) | 274 17-Nov-20 | | | 24-Jul-22 | 0% | 0% | -374 -340 |) -2 | 270 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.3.3 OSD 3 - MP75 to MP81 (770m) | 377 21-Dec-20 | 01-Jan-22 | 375 01-Jan-22 | 11-Jan-23 | 0% | 0% | -376 -374 | 4 -2 | 292 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.3.4 OSD 4 - MP124 to MP128 (560m) | 141 19-Jul-21 | 06-Dec-21 | 177 24-Jun-22 | 18-Dec-22 | 0% | 0% | -340 -376 | 5 -1 | 173 | | |
| MPR21.1.13.5.4 OSD - Assembly | 337 07-Oct-20 | 16-Feb-22 | 537 20-Feb-21 | 24-Feb-23 | 0% | 0% | -114 -313 | 3 -1 | 152 | | |
| MPR21.1.13.5.4.1 OSD 1 - MP50 to MP53 (320m) | 80 07-Oct-20 | | 80 20-Feb-21 | 27-May-21 | 0% | 0% | -114 -114 | 1 | 74 | | |
| MPR21.1.13.5.4.2 OSD 2 - MP69 to MP75 (683m) | 252 17-Dec-20 | | 224 27-Dec-21 | 20-Sep-22 | 0% | 0% | -314 -286 | | 216 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.4.3 OSD 3 - MP75 to MP81 (770m) | 329 20-Jan-21 | 16-Feb-22 | 328 31-Jan-22 | 24-Feb-23 | 0% | 0% | -314 -313 | 3 -2 | 265 | | ∀ |
| MPR21.1.13.5.4.4 OSD 4 - MP124 to MP128 (560m) | 142 18-Aug-21 | | 171 25-Jul-22 | 14-Feb-23 | 0% | | | 5 -1 | | | ▼ ▼ |
| MPR21.1.13.5.5 OSD - Erection | 608 11-Jun-19 | | | 24-Mar-23 | 0% | - 0% | | 5 -1 | 155 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.5.1 OSD 1 - MP50 to MP53 (320m) | 157 21-May-20 | | 95 26-Nov-21 | 19-Mar-22 | 0% | - 0% | -306 -244 | | -75 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.5.5.2 OSD 2 - MP69 to MP75 (683m) | 542 11-Jun-19 | | 482 15-Dec-20 | 14-Oct-22 | 0% | | -306 -246 | | 196 | | |
| MPR21.1.13.5.5.3 OSD 3 - MP75 to MP81 (770m) | 279 07-Jan-21 | | | 18-Mar-23 | 0% | | -204 -313 | | | | |
| MPR21.1.13.5.5.4 OSD 4 - MP124 to MP128 (560m) | 185 05-May-21 | | | 24-Mar-23 | 0% | | | 5 -1 | | | |
| MPR21.1.13.6 Post Erection Segmental Stitch Concrete (incl. Bea | | | | 25-Apr-23 | 0% | | | 5 -1 | 181 | | |
| MPR21.1.13.6.1 Stitch Concrete - Sewri Interchange | 644 24-Apr-19 | | | | 0% | | -312 -345 | | 181 | Y | |
| MPR21.1.13.6.2 Stitch Concrete - Intertidal | 475 29-Nov-19 | | (1) 00 0 00 | 17-Oct-22 | 0% | 001 | -204 -249 | | 243 | | |
| MPR21.1.13.6.3 Stitch Concrete - Marine MPR21.1.13.7 Crash Barrier Works | 563 21-Oct-19 585 05-Oct-19 | | | | 0% | | | 2 - 1 -1 | | ······································ | |
| MPR21.1.13.7.1 Crash Barrier - Sewri Interchange | 585 05-Oct-19 | | | 08-May-23 | 0% | | -354 | | 101 | | |
| MPR21.1.13.7.2 Crash Barrier - Intertidal | 470 17-Dec-19 | | 516 18-Nov-20 | | 0% | | -204 -249 | | ¹⁷ | | |
| MPR21.1.13.7.3 Crash Barrier - Marine | 541 26-Nov-19 | | | | 0% | | -204 -242 | | 101 | • | ······································ |
| MPR21.1.13.7.4 Crash Barrier - Orthotropic Steel Deck | 291 23-Dec-20 | | | 17-Mar-23 | 0% | | -207 -202 | | 153 | | V |
| MPR21.1.13.8 Bridge Deck (Superstructure) Water Proofing | 581 15-Oct-19 | | | | 0% | | | 5 -1 | | | V |
| MPR21.1.13.8.1 Water Proofing - Sewri Interchange | 579 15-Oct-19 | | | 13-May-23 | 0% | | -312 -357 | | 196 | | |
| MPR21.1.13.8.2 Water Proofing - Intertidal | 465 28-Dec-19 | | 511 30-Nov-20 | | 0% | | -204 -249 | | -36 | | \checkmark |
| MPR21.1.13.8.3 Water Proofing - Marine | 526 18-Dec-19 | | 579 26-Nov-20 | | 0% | | -209 -262 | | 101 | | |
| MPR21.1.13.8.4 Water Proofing - Orthotropic Steel Deck | 281 11-Jan-21 | 16-Mar-22 | 343 08-Feb-22 | 23-Mar-23 | 0% | - 0% | -250 -312 | 2 -1 | 153 | | v |
| MPR21.1.13.9 Stone Mastic Asphalt Pavement | 74 23-Dec-21 | 22-Mar-22 | 225 22-Aug-22 | 18-May-23 | 0% | | -204 -354 | 1 -2 | <mark>256</mark> | | |
| MPR21.1.13.9.1 Sewri Interchange | 70 27-Dec-21 | 21-Mar-22 | 130 14-Dec-22 | 18-May-23 | 0% | 0% | -295 -355 | 5 -2 | 256 | | |
| MPR21.1.13.9.2 Main Bridge | 74 23-Dec-21 | 22-Mar-22 | 182 22-Aug-22 | 28-Mar-23 | 0% | 0% · | -204 -31 | I -2 | 271 | | |
| MPR21.1.13.10 Bridge Anclilaries and Misc. Works | 575 31-Jan-20 | 22-Jun-22 | 703 02-Jan-21 | 22-Jul-23 | 0% | 0% | -204 -33 | -2 | 256 | | |
| MPR21.1.13.10.1 Bridge Ancillaries | 575 31-Jan-20 | | 703 02-Jan-21 | 22-Jul-23 | 0% | 0% | -204 -33 | l -2 | 256 | | |
| MPR21.1.13.10.1.1 Noise Barrier, View Barrier and Safety Fe | | | | 10-May-23 | 0% | 0% | -204 -29 | | 193 | | |
| MPR21.1.13.10.1.1.1 Noise Barrier | 546 31-Jan-20 | | | 28-Mar-23 | 0% | 0% | -204 -262 | | 158 | | |
| MPR21.1.13.10.1.1.2 View Barrier | 416 13-Oct-20 | | · | 10-May-23 | 0% | | -209 -29 | | 281 | | · · · · · · · · · · · · · · · · · · · |
| MPR21.1.13.10.1.1.3 Safety Fence | 105 27-Oct-21 | | 184 02-Aug-22 | 10-Mar-23 | 0% | | -236 -315 | | 231 | | |
| MPR21.1.13.10.1.2 Traffic Signages and Marking | 84 17-Mar-22 | | 121 01-Mar-23 | 22-Jul-23 | 0% | | -294 -33 | | 256 | | |
| MPR21.1.13.10.1.2.1 Traffic Signages and Marking - Sewri | | - | | | 0% | | -354 -354 | | 256 | | |
| MPR21.1.13.10.1.2.2 Traffic Signages and Marking - Main | | | 95 01-Mar-23 | | 0% | | -294 -305 | | 288 · · · · · · · · · · · · · · · · · · | | |
| MPR21.1.15 Handing Over | 148 31-Mar-22 | | 148 16-Mar-23 | 06-Sep-23 | 0% | | -294 -294 | | 295 | | |
| MPR21.1.14 Invoice Schedule (Shows the Invoice items which are | 1062 1062 23-Mar-18 | 22-Sep-22 | 1356 23-Mar-18 A | 06-Sep-23 | 38.04% | 24.21% | 0 -294 | 1 -2 | 295 · · · · · · · · · · · · · · · · · · · | | |

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Attachment 7- Package-2's Construction Programme Updated as on 25th December 2019

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

ANNEXURE-5 CONSTRUCTION UPDATED PROGRAMME

| # | Activity ID | Activity Name | Origina Duratio | ו BL Project Star ו | BL Project Finish | Actual Start | Actual Finish | Schedule % Complete | Performance %Complete | 2018 DJFAJJA 234567891 | 201 VS NDJF A JJ 1111111122 | |
|----------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------|----------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1 | MTHL-PKG2-DETA | ILED WORK PROGRAMME_25122019_APP | ROVED_MPR.2 ^{, 2904.2} | 5 17-Nov-17 | 21-Sep-24 | 17-Nov-17 | | 31.24% | 15.57% | | | |
| 2 | PROJECT PRE-CO | MMENCEMENT ACTIVITY | 126.0 |) 17-Nov-17 | 22-Mar-18 | 17-Nov-17 | 16-Mar-18 | 0% | 0% | | | |
| 3 | PRE-COMMENCEN | IENT ACTIVITY | 55.0 |) 15-Dec-17 | 07-Feb-18 | 15-Dec-17 | 20-Mar-18 | 0% | 0% | 20-Mar-1 | 8 A, PRE-COMMENCEN | /IENTACH |
| 4 | PROJECT EVENT I | MILESTONE | 2228.6 | 3 23-Mar-18 | 21-Mar-23 | 23-Mar-18 | | 0% | 0% | | | |
| 5 | PROJECT KEY MILEST | | | 3 23-Mar-18 | 22-Sep-22 | 23-Mar-18 | | 0% | | | | y 1411031011 |
| 6 7 | | | | 3 19-Apr-18 3 18-Sep-18 | 21-Mar-23 22-Jun-22 | 03-Apr-18 31-Aug-18 | | 0% | | | | |
| 8 | CONSTRUCTION KEY | AND INTERFACE DATE_ADD2-ATTACHMENT 25 | | 3 03-Sep-18 | 06-Jul-22 | 25-Oct-18 | | 0% | | | | |
| 9 | MANAGEMENT | | |) 20-Jan-18 | 18-Aug-18 | 12-Jan-18 | 22-Aug-19 | 0% | | V | | 🔫 22-Au |
| 10 | SITE ORGANISATION | | 35.0 | 20-Jan-18 | 23-Feb-18 | 07-Mar-18 | 07-Mar-18 | 0% | 0% | 07-Mar-18 | A, SITE ORGANISATIO | NN I |
| 11 | DEVELOPMENT OF M | ANAGEMENT SYSTEM | 613.0 | 20-Jan-18 | 27-May-18 | 20-Jan-18 | 22-Aug-19 | 0% | 0% | | | 22-A |
| 12 | | UMENT CONTROL SYSTEM | | 3 20-Jan-18 | 10-May-18 | 20-Jan-18 | 24-Oct-18 | 0% | | | Experimentation | |
| 13 14 | | ND MANAGEMENT SYSTEM IVIRONMENTAL MANAGEMENT SYSTEM | |) 23-Mar-18) 23-Mar-18 | 10-May-18 10-May-18 | 23-Mar-18 23-Mar-18 | 24-Oct-18 22-Aug-19 | 0% 0% | | | C national a de la particular de la part | |
| 15 | | | |) 23-Mar-18 | 10-May-18 | 23-Mar-18 | 24-Oct-18 | 0% | | | 24 Address Addres | ERBACEN |
| 16 17 | RISK MANAGEMENT PLA | | |) 23-Mar-18 | 27-May-18 | 23-Mar-18 | 24-Oct-18 | 0% | | | 21-Sep-18A, DEVE | |
| 17 | DEVELOPMENT OF W | | | 23-Mar-18 | 24-May-18 24-May-18 | 23-Mar-18 23-Mar-18 | 21-Sep-18 21-Sep-18 | 0% 0% | | | 21-Sep-18A, CONT | |
| 19 | OTHER CONTRACTUA | | |) 24-Mar-18 | 20-Apr-18 | 24-Mar-18 | 23-Apr-18 | 0% | | 🕎 23-Apr | +18A, OTHER CONTRA | |
| 20 | PERMIT & APPROVAL | | 389.0 | 20-Jan-18 | 18-Aug-18 | 12-Jan-18 | 03-Aug-19 | 0% | 0% | • | | 🕈 03-Aug |
| 21 | | | | 20-Jan-18 | 23-Feb-18 | 12-Jan-18 | 09-Feb-18 | 0% | | | SURVEYING & GEOTI 18A, CUTTING OF MAI | |
| 22 23 | CUTTING OF MANGROVE | | |) 20-Jan-18) 06-Apr-18 | 30-Mar-18 18-Aug-18 | 25-Jan-18 06-Apr-18 | 23-Apr-18 28-Nov-18 | 0% 0% | | | 28-Nov-18A,S | |
| 24 | PC YARD & CAMP | | | 04-May-18 | 01-Jun-18 | 21-Mar-18 | 01-Oct-18 | 0% | | | 👿 01-Oct-18A, PC YA | ARD & CAM |
| 25 | CONNECTION FOR ELEC | TRICITY & WATER | |) 18-May-18 | 20-Jul-18 | 06-Apr-18 | 03-Aug-19 | 0% | | | 02-Aug-18A, CUTTING | |
| 26 27 | CUTTING OF TREES | CES FOR EQUIPMENTS & GOODS | |) 23-Mar-18) 23-Mar-18 | 26-Apr-18 31-May-18 | 10-May-18 15-May-18 | 02-Aug-18 31-May-18 | 0% 0% | | | May-18A, MPORT PER | |
| 28 | | ITIES TO BE USED AT SITE | |) 23-Mar-18 | 31-May-18 | 16-Aug-18 | 28-Nov-18 | 0% | | | 28-Nov-18A, N | NOC FOR F |
| 29 | | DAD FOR MAIN BRIDGE & INTERCHANGE | |) 23-Mar-18 | 19-May-18 | 23-Mar-18 | 28-Jul-18 | 0% | | | 28-Jul-18A, TEMPORA | RYACCES |
| 30 | DESIGN | | | 3 20-Jan-18 | 04-Sep-19 | 01-Jan-18 | | 100% | | | | |
| 31 32 | INDEPENDENT DESIGN | I WORK / INFORMATION COLLECTION | | 3 20-Jan-18) 20-Jan-18 | 17-Jul-18 23-Feb-18 | 01-Jan-18 20-Jan-18 | 12-Nov-19 13-Apr-18 | 100% 0% | | 13- Apr- | 18A, INDEPENDENT D | ESIGN CH |
| 33 | TOPOGRAPHIC SURVEY | | | 3 20-Jan-18 | 16-May-18 | 01-Jan-18 | 20-Apr-18 | 0% | | 20-Apr | -18A, TOPOGRAPHICS | SURVEY |
| 34 | BATHYMETRIC SURVEY | | |) 20-Jan-18 | 04-Apr-18 | 25-Jan-18 | 20-Mar-18 | 0% | | 20-Mar-1 | 8A, BATHYMETRIC SUI | |
| 85 86 | GEOTECHNICAL INVEST | NGC & BPCL PHYSCIAL VERIFICATION | <u> </u> |) 3 20-Jan-18 | 17-Jul-18 | 21-Mar-18 12-Jan-18 | 05-Aug-19 25-Jun-19 | 0% 100% | | | | 25-Jun-19 |
| 37 | | R DESIGN INITIATION OF STEEL MODULE 1 | 63.0 | | | 26-Jun-19 | 12-Nov-19 | 0% | | | • | |
| 8 | TEMPORARYWORK | | | 7 22-Jan-18 | 01-Nov-18 | 20-Jan-18 | | 100% | | | | |
| 89 10 | PROJECT OFFICE LAYOU CASTING YARD LAYOUT | Л | | 3 04-May-18 3 22-Jan-18 | 02-Jun-18 04-Apr-18 | 04-May-18 20-Jan-18 | 17-Jul-18 09-Oct-18 | 0% 0% | | | 17-Jul-18A, PROJECT (09-Oct-18A, CAST | |
| 1 | TEMPORARY BRIDGE | | | 3 26-Feb-18 | 31-May-18 | 24-Feb-18 | 30-Aug-18 | 100% | | | 30-Aug-18A, TEMPC | |
| 2 | | | | 3 10-May-18 | 10-Aug-18 | 20-Mar-18 | 20-Nov-18 | 0% | | | ⊇── ▼ 20-Nov-18A,C | ASTING Y |
| 13 14 | STEEL BRIDGE FABRICA CONCRETE MIX DESIG | | | 7 20-Jul-18 3 23-Mar-18 | 01-Nov-18 31-Aug-18 | 11-Nov-19 12-May-18 | 15-Nov-18 | 0% | | | 15-Nov-18A, C | |
| 5 | JFE DESIGN PROGRAM | | | 1 01-May-18 | 04-Sep-19 | 09-Apr-18 | | 100% | 20.42% | | | |
| 46 | PROCUREMENT, M | ANUFACTURING AND LOGISTICS | 1327.3 | 3 20-Jan-18 | 23-Aug-20 | 22-Dec-17 | | 100% | 72.5% | | 3.3.3.3.3.3.3.1.1.1.1.1.1.1.1.1.1.1.1.1 | |
| 47 | SURVEY & INVESTIGA | TION | 72.3 | 3 20-Jan-18 | 02-Apr-18 | 22-Dec-17 | 04-Apr-18 | 0% | 0% | •••••••••••••••••••••••••••••••••••••• | 18A, SURVEY& INVES | TIGATION |
| 8 | TEMPORARYWORK | | | 3 20-Jan-18 | 20-Oct-18 | 20-Jan-18 | | 0% | 0% | | | |
| 49 | MAIN WORK_SUBCON | TRACT WORK | | 23-Mar-18 | 20-Jul-19 | 23-Mar-18 | | 0% | | | | |
| 50 51 | EQUIPMENTS BATCHING PLANT | | | 23-Mar-18 | 12-Sep-19 31-Jul-18 | 23-Mar-18 23-Mar-18 | 23-Mar-19 | 100% 0% | | | 23-Ma | ar-19A.BA |
| 52 | RCD MACHINE | | |) 23-Mar-18 | 11-Nov-18 | 23-Mar-18 | 24-Aug-19 | 0% | | | | |
| 53 | GANTRYCRANE | | |) 23-Mar-18 | 08-Feb-19 | 23-Mar-18 | | 100% | | | | |
| 54 55 | SEGMENT LAUNCHER PRECAST MOULD AND | SYSTEM FORM | | 1 24-Jul-18 1 07-Aug-18 | 12-Sep-19 24-Mar-19 | 24-Jul-18 04-Sep-18 | | 0% 100% | | | | |
| 55 56 | PRECAST MOULD AND PRECAST MOULD_CAST | | | 20-Aug-18 | 24-Mar-19 | 04-Sep-18 03-Jun-19 | | 100% | | | | |
| 57 | SYSTEMFORM | | 446.9 | 1 07-Aug-18 | 04-Mar-19 | 04-Sep-18 | | 0% | 0% | | | |
| 58 | MATERIAL SUPPLIERS | 3 | 760.3 | 3 02-Jun-18 | 15-Oct-19 | 20-Apr-18 | | 0% | 0% | | | |
| | ProjectBaseline Bar Actual Work Remaining Work | Critical Remaining Work Summa Milestone % Complete | · | | I REGION DEV | ELOPMENT | AUTHORITY | | <u>ractor:</u> WOO - T | PL JV | 25-Dec-1 | Pate 19 |

| | | 1 of 3 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| | | |
| 2020 DJFAJJA3 22222333333333 | | 022 JJA 55555 |
| zanes dagtishity | | |
| ZTIVITY | | |
| | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td></td> | |
| 22 Y Ch | | |
| | | General |
| Aug-19A, MANAGEMENT | | |
| | FOF MANAGEMENT SYSTEM | |
| NED GREEKEN WELTER BUILDER BUILD Bedigin 1.000 Builder Bu | yyrai dysnafi ten B ianh Frisia (Frisia) | BHATSPY297(|
| SÆLØIÐJSÆTIÐ LANProject Risl | | |
| NT OF WORK PROGRAM R'S WORK PROGRAMME | ME | |
| SUBMITTALS .ug-19A, PERMIT & APPR | УИА́L | |
| AL INVESTIGATION ES | | |
| UP BATCHING PLANT MIP | | |
| έs | DRELECTRICITY&WATER | |
| XENCES FOR EQUIPMEN PLANT & FACILITIES TO ESS ROAD FOR MAIN BRI | BE USEDAT SITE | |
| | 05-Ndv-20, DESIGN | |
| 12-Nov-19A, EARLYST HECKER APPROVAL | AGE DESIGN WORK/INFORMATION (| OLLECT |
| | EFOR ONG¢& BPCL PHÝSCIAL VERI | |
| 19A, GEOTECHNICAL IN | | |
| | MPORARYWORK | |
| RDLAYOUT | | |
| YARD STRUCTURE | EEL BRIDGE FABRICATION YARD | |
| rë MIX DESIGN | V 05-Nov-20, JFE DESIGN PROGRAM | MĖ |
| N. | ₩ 08-Sep-21, PF | |
| 10-Feb-20, TEM | | |
| 🗸 23-Jun | 20, MAIN WORK_\$UBCONTRACT WO 20, EQUIPMENTS | γ κ κ |
| ATCHING PLANT Aug-19A, RCD MACHINE | | |
| 23-Jun |), GANTRY CRANE 20, SEGMENT LAUNCHER 20, PRÉCAST MOULDAND SYSTEM F | |
| | 20, PRECAST MOULD_CASTING BED | |
| | ±MFORM 20,MATERIAL SUPPLIERS | |
| Revision R0 | Checked Appro | oved |
| | | |

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

ANNEXURE-5 CONSTRUCTION UPDATED PROGRAMME

| # | Activity ID | Activity Name | Original Duration | BL Project Start | BL Project Finish | Actual Start | Actual Finish | Schedule % Complete | Performance % Complete | I DJF | 201 A JJ | 8 A S N D | 20 [J]F] [A] [J] |)19 JA S [|
|------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------|------------------------|------------------------|------------------------|---------------|------------------------|---------------------------|--------------|-----------------|-----------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------|
| 59 | MATERIAL PROCUREMENT | | 0.00 | | | 08-Aug-18 | | 0% | 0% | 234 | 56789 | | 111112 | 222222 |
| 60 | TEMPORARY BRIDGE | | 0.00 | | | 08-Aug-18 | | 0% | 0% | | | X | | |
| 61 | PERMANENT WORKS | | 0.00 | | | 25-Mar-19 | | 0% | | | | | | |
| 62 | PROCUREMENT OF STEEL (| | | 07-May-19 | | 17-Oct-19 | | 0% | 0% | | | | | |
| 63 64 | STEEL PLATE FOR (RHS.STEEL STEEL PLATE FOR (LHS.STEEL | - / | | 04-Jun-19 07-May-19 | 13-Jul-20 16-Apr-20 | 17-Oct-19 17-Oct-19 | | 0% 0% | 0% 0% | | | | | |
| 65 | STEEL PLATE FOR (RHS.STEEL | | | 01-Jul-19 | 10-May-20 | | | 0% | | | | | | |
| 66 | STEEL PLATE FOR (LHS.STEEL | | | 04-Jun-19 | 14-Apr-20 | | | 0% | 0% | | | | | |
| 67 | STEEL PLATE FOR (RHS.STEEL STEEL PLATE FOR (LHS.STEEL | | | 30-Jul-19 | 23-Aug-20 | | | 0% | | | | | | |
| 68 69 | CONSTRUCTION | MOUDLE-1_MP176-MP171) | | 02-Jul-19 02-Apr-18 | 26-Jul-20 21-Jun-22 | 02-Apr-18 | | 0% 28.38% | 0% 13.12% | | | | | |
| 70 | TEMPORARYWORK | | | 02-Apr-18 | 21-Jun-22 | 02-Apr-18 | | 97.95% | 94.08% | | **** | | | |
| 71 | PREPARATION WORK | | | 02-Apr-18 | 16-Jan-19 | 02-Apr-10 | 25-Jul-19 | 0% | | | V | | | 📕 25-Jul-1 |
| 72 | ESTABLISHMENT OF EMPOLYE | R & CONTRACTOR OFFICE | 194.04 | 20-Jun-18 | 27-Nov-18 | 27-Jun-18 | 18-Jan-19 | 100% | 100% | | 1 | | 📕 18-Jan-19 | |
| 73 | | | | 20-Jun-18 | 05-Apr-19 | 03-Jul-18 | 04-Apr-19 | 0% | 0% | | | | 04-A | Apr-19A,E\$ |
| 74 75 | ESTABLISHMENT OF CONCRET | | | 04-May-18 02-Nov-18 | 25-Apr-19 06-Mar-20 | 14-Jun-18 01-Nov-19 | | 100% 0% | <u>97.44%</u> 0% | | | | | |
| 76 | TEMPORARY BRIDGE | | | 20-May-18 | 21-Jun-22 | 27-Jul-18 | | 96.49% | 91.67% | · · · · · | | · · · · · · · · · | | |
| 77 | A13700 | Removal of Temporary Bridge & Casting Yard | | 21-Jun-21 | 21-Jun-22 | | | 0% | 0% | | | | | |
| 78 | | | | 20-May-18 | | 27-Jul-18 | 25-Apr-19 | 0% | 0% | | | | 25 | 5-Apr-19A, TE |
| 79 80 | | FROM MP226(16+010) - MP249(17 +320) FROM MP207(14+870) - MP226(16+010) | | 04-Jun-18 24-Jul-18 | 17-Aug-19 12-Sep-19 | 08-Aug-18 16-Nov-18 | 23-Dec-19 | 100% 100% | 100% 96.16% | | - | | | |
| 81 | MATERIAL LOADING JETTY | | | 31-Aug-18 | 08-Aug-19 | 08-Mar-19 | | 100% | 56.7% | | | | | |
| 82 | PERMANENT WORK | | | 03-Sep-18 | 24-May-22 | 08-Dec-18 | | 19.28% | 2.54% | | | | | |
| 83 | PRE-FABRICATION AND ASSEM | | | 18-Apr-19 | 19-Feb-22 | 06-Nov-19 | | 4.67% | 0.09% | | | | | |
| 84 85 | CONCRETE PRE-FABRICATION | THE CASTING TARD | | 18-Apr-19 02-Jun-19 | 15-Sep-21 24-Jan-22 | 06-Nov-19 | | 27.52% 0% | <u>0.51%</u> 0% | | | | | |
| 86 | | THE CONTRACTOR'S ASSEMBLY YARD | | 05-Sep-20 | 17-Feb-22 | | | 0% | 0% | 1 | | | | |
| 87 | | ANSPORTING TO THE ERECTION AREA | | 30-Sep-20 | 19-Feb-22 | 00.0 | | 0% | 0% | | | | | |
| 88 89 | MAIN BRIDGE MAIN BRIDGE FOUNDATION | | | 03-Sep-18 03-Sep-18 | 24-May-22 23-Mar-21 | 08-Dec-18 08-Dec-18 | | 27.45% 47.71% | <u>5.96%</u> 18.25% | | | , i i i i i i i i i i i i i i i i i i i | | |
| 90 | MAIN BRIDGE PILE FOUNDATIO | N | | 03-Sep-18 | 23-Jan-21 | 08-Dec-18 | | 57.99% | 27.8% | | | | | |
| 91 | PILE LOAD TEST | | | 03-Sep-18 | 19-Nov-18 | 08-Dec-18 | 11-Nov-19 | 100% | 100% | | | - - | | |
| 92 93 | | ION_LAND 17+414~18+187 FROM MP250 TO MP266 ION_CRZ15+890~17+414 FROM MP226 TO MP250 | | 30-Nov-18 20-Dec-18 | 15-May-19 27-Nov-19 | 17-Jan-19 12-Jun-19 | | 100% 100% | 49.69% 70.14% | | | | | |
| 94 | | ION_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225 | | 27-Feb-19 | 06-Jun-20 | 15-Oct-19 | | 44.88% | 19.66% | | | | | |
| 95 | | ION_MARINE 13+610~14+800 FROM MP187 TO MP205 | | 12-Dec-19 | 28-Nov-20 | 01-Oct-19 | | 1.88% | 4.79% | | | | | |
| 96 97 | | ION_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 ION_MARINE 10+380~11+880 FROM MP146 TO MP170 | | 27-Nov-19 24-Nov-18 | 23-Jan-21 28-Dec-19 | 19-Feb-19 | | 3.96% 99.09% | 0% 24.82% | | | | | |
| 98 | MAIN BRIDGE PILE CAP INSTA | | | 22-Dec-18 | 23-Mar-21 | 01-May-19 | | 36.98% | 8.27% | | | | | |
| 99 | MAIN BRIDGE PILE CAP BOT | | | 22-Dec-18 | 17-Feb-21 | 19-Aug-19 | | 0% | 0% | | | | | |
| 100 101 | | TOM SLAB_CRZ 15+890~17+414 FROM MP226 TO MP250 TOM SLAB_INTERTIDAL14+800~15+890 FROM MP206 TO MP225 | | 17-Jan-19 06-Apr-19 | 12-Dec-19 18-Jul-20 | 19-Aug-19 | | 0% | 0% 0% | | | | | |
| 101 | | TOM SLAB_MARINE 13+610~14+800 FROM MP187 TO MP205 | | 21-Jan-20 | 10-Dec-20 | 16-Nov-19 | | 0% | 0% | | | | | |
| 103 | | CAST SHELL_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 | 377.00 | 08-Jan-20 | 17-Feb-21 | | | 0% | 0% | | | | | |
| 104 105 | MAIN BRIDGE PILE CAP BOT MAIN BRIDGE PILE CAP INST | TOM SLAB_MARINE 10+380~11+880 FROM MP146 TO MP170 | | 22-Dec-18 27-Dec-18 | 21-Jan-20 23-Mar-21 | 01-May-19 | | 0% 36.98% | 0% 8.27% | | | | | |
| 106 | | ND 17+414~18+188 FROM MP251 TO MP266 | | 27-Dec-18 | 13-Jun-19 | 01-May-19 | | 100% | 42.42% | | | | | |
| 107 | | Z15+890~17+414 FROM MP226 TO MP250 | 145.00 | 04-Mar-19 | 08-Jan-20 | 28-Aug-19 | | 94.17% | 33.33% | | | | : , , , , , , , , , , , , , , , , , , , | |
| 108 109 | | ERTIDAL 14+800~15+890 FROM MP206 TO MP225 | | 18-Apr-19 | 05-Sep-20 | | | 30.4% 0% | 0% 0% | | | | | |
| 110 | | RINE 13+610~14+800 FROM MP187 TO MP205 RINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 | | 01-Feb-20 20-Jan-20 | 06-Jan-21 23-Mar-21 | | | 0% | 0% | | | | | 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| 111 | | RINE 10+380~11+880 FROM MP146 TO MP170 | | 03-Jan-19 | 17-Feb-20 | | | 87.92% | 0% | | | | | +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+- |
| 112 | MAIN BRIDGE SUB-STRUCTURI | | | 09-Jan-19 | 24-Sep-21 | 04-Nov-19 | | 46.16% | 0.83% | | | | | |
| 113 114 | MAIN BRIDGE PIER INSTALLAT | ION +414~18+188 FROM MB251 TO MB266 | | 09-Jan-19 09-Jan-19 | 28-Jul-21 08-Nov-19 | 04-Nov-19 06-Nov-19 | | 49.81% 100% | 1.52% 1.97% | | | | | |
| 115 | | 890~17+414 FROM MB226 TO MB250 | | 26-Mar-19 | 06-Feb-20 | 04-Nov-19 | | 83% | 6.67% | | | | | |
| 116 | | AL 14+800~15+890 FROM MB206 TO MB225 | | 11-May-19 | 16-Oct-20 | | | 25.49% | 0% | | | | | |
| 117 118 | | 13+610~14+800 FROM MB187 TO MB205 (STEEL) 11+880~13+610 FROM MB1 71 TO MB186 | | 19-Mar-20 17-Feb-20 | 18-Feb-21 28-Jul-21 | | | 0% 0% | 0% 0% | | | | | |
| 119 | | 10+380~11+880 FROM MB146 TO MB170 | | 07-Feb-19 | 13-Mar-20 | | | 79.46% | 0% | | | | | |
| 120 | MAIN BRIDGE PIER CAP INSTA | LLATION | 635.25 | 08-Feb-19 | 27-Aug-21 | | | 46.32% | 0% | | | | | |
| | Project Baseline Bar | Critical Remaining Work | EMPLOYER: | | | | | CONT | RACTOR: | | | | <u> </u> | Date |
| | | ♦ Milestone | | ROPOLITAN | REGION DEV | ELOPMENT | AUTHORITY | | <u>kaciok:</u> WOO - T | рт т | V | | 25-Dec-1 | 19 |
| | _ | | (MMRDA) | | | | | | w00-1 | гLЈ | v | | | |
| | Remaining Work | ■ % Complete | - / | | | | | | | | | | | |
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| | | | LATE FOR (RHS.STEEL |
| | | 09-Nov-20, STEEL PLA | TE FOR (LHS.STEELMO Aug-21, STEEL PLATE |
| | | | 8-Sep-21, STEEL PLATE |
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MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED PROGRAMME

| Actual Work | , | Activity ID Activity Name | Original Duration | | BL Project Finish | Actual Start | Actual Finish | Schedule % Complete | Performance % Complete | NDJ | FA | 2018 | AS | ND. | IF I | A J | 019 JJA 1000 | s |
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| 2 MANDERGE FERCE AND STORED ************************************ | 1 | MAIN BRIDGE PIER CAP LAND 17+414~18+188 FROM MB251 TO MB266 | 223.25 | 08-Feb-19 | 23-Nov-19 | | | 100% | 0% | | 456 | 789 | 1 1 1 | | | 112 | 222 | 222 |
| Image: Construction of the set o | 2 | | 227.00 | 19-Apr-19 | 25-Feb-20 | | | 74.3% | 0% | | | | : : | | | | | |
| MNNERCE FERCE/ MARE ITSLIM-INFORMATION TO BINE 4200 30-500 77.49-31 79 81 MARKED CENCE / MARE ITSLIM-INFORMATION TO BINE 4200 30-500 77.49-31 70 81 MARKED CENCE / MARE ITSLIM-INFORMATION TO BINE 4200 30-500 77.49-31 70 81 MARKED CENCER (ADD FARST MARKED TO BINE FERSI MARS TO BINE 705 81 550 61 MARKED CENCER (ADD FARST MARKED TO BINE FERSI MARS TO BINE FERSI MARS TO BINE 705 81 550 61 MARKED ENDER (ADD FARST MARKED TO BINE FERSI MARS TO BINE FERSI MARS TO BINE 705 61 11111 MARKED ENDER (ADD FARST MARKED TO BINE FERSI MARS TO BINE FERSI MARS TO BINE 705 61 11111 MARKED ENDER (ADD FARST MARKED TO BINE FERSI MARS TO BINE FERSI MARS TO BINE 705 61 11111 100 61 11111 100 61 11111 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 | 3 | MAIN BRIDGE PIER CAP_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225 | 376.00 | 06-Jun-19 | 05-Nov-20 | | | 22.73% | 0% | | | | | | | _ | ÷÷ | ÷÷÷ |
| Processes Processes <t< td=""><td></td><td>MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB187 TO MB205</td><td>214.00</td><td>23-Apr-20</td><td>10-Mar-21</td><td></td><td></td><td>0%</td><td>0%</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB187 TO MB205 | 214.00 | 23-Apr-20 | 10-Mar-21 | | | 0% | 0% | | | | | | | | | |
| Image: constraint of the second barrier of | | MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186 | 442.00 | 30-Apr-20 | 27-Aug-21 | | | 0% | 0% | | | | | | | | | |
| Image: Direct Intercent Autom IBADI (SAMP) IBADI (SAMP) <thibadi (samp)<="" th=""> IBADI (SAMP)</thibadi> | | | | | | | | | | | | | | | - | +++ | ÷÷÷ | ÷÷÷ |
| Image: Concert in other and the second sec | _ | | | | · | | | _ | | | | | : : | | - | ++++ | | |
| MANIERDE PC GEREL, AUD 1440-1744, MONARY 21 TO RESID 19/30 1226 2/16/20 4/39% 00 MANIESCE PRECAT CORE, PC 2540-0744 (TRANSPART TO RESID 10/20 124-20 2/38-20 0.8 0.0 MANIESCE PRECAT CORE, PC 2540-0744 (TRANSPART TO RESID 10/20 124-20 2/38-20 0.8 0.0 MANIESCE PRECAT CORE, PC 2540-0744 (TRANSPART TO RESID 10/20 124-20 2/38-20 0.8 0.0 MANIESCE PRECAT CORE, PC 2440-0744 (TRANSPART TO RESID 0.600 04/20 01/86-22 0.8 0.0 MANIESCE PRECAT CORE, PC 2440-0744 (TRANSPART TO RESID 0.600 04/20 01/86-22 0.8 0.0 MANIESCE PRECAT CORE, PC 2440-0744 (TRANSPART TO RESIDENT) 0.600 04/20 01/86-22 0.8 0.0 MANIESCE PRECAT CORE, PC 2440-0744 (TRANSPART TO RESIDENT) 0.600 04/20 01/86-22 0.8 0.0 MANIESCE PRECAT CORE, PC 2440-0744 (TRANSPART TO RESIDENT) 0.200 04/20 01/86-22 0.8 0.0 MANIESCE PRECAT CORE, PC 2440-0744 0.400 04/20 0.400-07 0.400-07 0.400-07 0.400-07 0.400-07 0.400-07 0.400-07 0.400-07 0.400-07 0.400-0 | | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | | | | | |
| MNINEDED RECONTINUEL (1995-1996) 11722 (1996-20) 2558-00 0% 0% 0% MNINEDED RECONT GREEK, MARKET 1996 (1997) 11722 (1996-20) 2558-00 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% <td< td=""><td>_</td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | _ | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | | | | | |
| MNINDEG REGAT DECK, MARCEN, MEETELLA, 1-480-1-480 FRAMMETS TO W225 90.20 1 (34.92-0) 21.83-21 0.8 0.0 MNINDEG RECAT DECK, MARK 1-14-0-1-480 FRAMMETS TO W225 90.20 1 (34.92-0) 90.40 1 (34.92-0) 90.8 0.0 MNINDEG RECAT DECK, MARK 1-14-0-1-480 FRAMMETS TO W225 90.20 1 (34.92-0) 90.8 0.0 MNINDEG RECAT DECK, MARK 1-14-08 FRAMMETS TO W225 90.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 | _ | - | | | | | | | | tion is no | · ÷ ÷ - i | | | | | | | |
| MAN NUMBER FREAST GREEK LANNEL: 154-1540 FROM PLY TO MEDIA URL 2011 0% 0% MAN NUMBER FREAST GREEK LANNEL: 1540-1540 FROM PLY TO MEDIA GREEK GREEK GREEK LANNEL: 1540-1540 FROM PLY TO MEDIA GREEK GREEK GREEK LANNEL: 1540-1540 FROM PLY TO MEDIA GREEK GREEK GREEK GREEK LANNEL: 1540-1540 FROM PLY TO MEDIA GREEK GRE | _ | | | | | | | | | | | | | | | | | |
| Wildsbode PRECAST GREEK MARKE 19-39-91-4888 FRAME 14 TO MP 17 19:000 04-Junc 1 00:4-0-21 00:5 00:5 STITCLANC CATING 6:26:86 07-06-92 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 0:5 | ┨ | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | | | | | |
| Bit Dicklow CASTNO 6288.8 (726-19 912-63.2 95 05 MANKROG STEEL GREER NET LACKON, MARE 11-80-1540 FRAME*171 TORP #8 4500 (502-03) 0144-52 05 05 STEEL DOCK NET LACKON, MARE 11-80-1540 FRAME*171 TORP #8 4500 (502-03) 0144-52 05 05 05 STEEL DOCK NET LACKON, MARE 11-80-1540 FRAME*171 TORP #8 4500 (502-03) 0144-52 05 05 05 STEEL DOCK NET LACKON, MARE 11-80-1540 FRAME*171 TORP #8 4500 (502-03) 0144-52 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 05 </td <td></td> | | | | | | | | | | | | | | | | | | |
| Multiproce Strell, CREAR REF MULTION 44500 00.0x20 01.4x22 0% 0% THE NORLE 0, JEFTS, SHITT, BETHL JONG 4400 07.0x21 01.4x22 0% 0% THE NORLE 0, JEFTS, SHITT, BETHL JONG 4400 07.0x21 01.4x22 0% 0% THE NORLE 0, JEFTS, SHITT, BETHL JONG 4000 07.0x21 01.4x22 0% 0% THE NORLE 0, JEFTS, SHITT, BETHL JONG 07.0x21 01.0x22 02.0x21 01.0x14 THE NORLE 0, JEFTS, JEFTS, BETHL JONG 07.0x11 14.0x61 02.0x15 07.0x14 THE NORLE 0, JEFTS, J | | | | | | | | | | | | | : : | | | | | |
| Interchance Rear PLE Co. 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0.06 0 | | | | | | | | | | | | | | | | · + - + - + | +-+-+- | -+-+ |
| Dist Description Page 00 State Concern 1 Official official set of the state of | | MAN BRIDGE STEEL GIRDER INSTALLATION_MARINE 11+880~13+610 FROM MP171 TO | MP 186 455.00 | 03-Oct-20 | 01-Mar-22 | | | 0% | 0% | | | | | | | | | |
| TELE MODLE 00. P1916 - P1918 (PETALLATON) 7203 350-92-1 0% 0% 0% MOBELL MODES 17233 340-913 243-92 200319 3158-1 197 MITERIONADES 17233 340-016 240-02 200419 1886-1 197 MITERIONADES RAW PELETIN, MA 1920 240-016 240-02 200419 1886-1 225 MITERIONADE RAW PLETIN, MA 19100 53.01-0 100% 0% 0% 0% MITERIONADE RAW PLETIN, MA 19100 53.01-0 100% 0% 0% 0% 0% MITERIONADE RAW PLETIN, MA 19100 53.01-0 100% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% | | | | | 01-Mar-22 | | | 0% | 0% | | | | | | | | | |
| MERCLANCOL & FARSHOW KORG 170/131 154/bit Vol 24/bit Vol | ۱ | | 240.00 | 03-Oct-20 | 30-Sep-21 | | | 0% | 0% | | | | | | | | | |
| INTERCIANCE 12233 240-51 240-52 250-51 120-52 INTERCIANCE FORMETION 10000 120-53 240-52 250-51 1000 9505 INTERCIANCE FORMETION 10000 120-51 240-50 050-51 9505 9505 INTERCIANCE FORMETION 1000 100-51 050-51 9505 9505 9505 INTERCIANCE FORMETION 11000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 | ١ | STEEL MODULE-03_MP186 - MP183 (INSTALLATION) | 72.00 | 30-Sep-21 | 07-Dec-21 | | | 0% | 0% | | | | | | | | | |
| Intercensive 9003 24 0001 8 220030 20 0301 0 7001 0001 0001 0001 0001 0001 0001 0001 | I | | 707.13 | 16-May-19 | 24-May-22 | | | 2.15% | 0% | | | | | | | | | |
| MERCHANGE RAMP FLE FOUNDATION 32000 2420x16 0540x00 0540x00 0540x00 0540x00 0540x00 0540x00 0540x00 0550x00 | | | 1232.33 | 24-Dec-18 | 28-Apr-22 | 25-Oct-19 | | 51.59% | 1.99% | | | | | | | | | |
| NTRECHANGE RAMP PLETON MA 9100 05-00-19 03-00-20 9100 05-00-19 9100 55-00-19 9100 55-00-19 9100 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 9000 50-00-19 90000 90000 90000 90000 90000 90000 90000 90000 900000 900000 900000 900000 900000 900000 900000 900000 9000000 9000000000000000000000000000000000000 | | | | | | | | | | | | | | | | | | |
| NERCONNER RAMP PLE FOR JAC 9100 01 0-0-0-10 570.419 577.84 455.55 NERCONNER RAMP PLE FOR JAC 1560.00 03-Jan-19 05-Jay-19 100% 01% NERCONNER RAMP PLE FOR JAC 1560.00 03-Jan-19 05-Jay-19 100% 01% NERCONNER RAMP PLE FOR JAC 1500.00 04-Jay-19 27-Jay-19 100% 01% NERCONNER RAMP PLE COP JAC 131.75 06-Dat-19 27-Jay-19 100% 01% NERCONNER RAMP PLE COP JAC 131.75 06-Dat-19 27-Jay-19 10% 01% 01% NERCONNER RAMP PLE COP JAC 131.75 06-Dat-19 27-Jay-19 01% 01% 01% NERCONNER RAMP PLE COP JAC 131.75 06-Dat-19 72-Jay-19 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01% 01%< | | | | | | | | | | | | | | | | | | |
| NTRECHAGE RAMP PLE FIN. MU 1950.00 0.319 05.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 01.019 | | | | | | | | | | • | | | | | | - + - + - + | ¦.,†≑ | + |
| NTERCHANGE RAMP PLE FIN, M 19000 03-Min 9 0-Oxis 0 0-Oxis 0 0.00% 7.11% NTERCHANGE RAMP PLE FIN, AN 13000 24-Min 9 0-Oxis 0 0.337% 0% 0.337% 0% NTERCHANGE RAMP PLE CAP, AN 13000 24-Min 9 0-Oxis 0 9.937% 83.33% 0% NTERCHANCE RAMP PLE CAP, AC 11020 22-Dxis 0 02-Nxis 0 9.937% 83.33% 0% NTERCHANCE RAMP PLE CAP, AC 11027 05-Dxis 0 1107% 0% 05 0% 0% NTERCHANCE RAMP PLE CAP, AC 11027 05-Dxis 0 100% 0% 0% 0% 0% 0% 0% NTERCHANCE RAMP PLE CAP, AC 1000 0%-Dxis 0 0.00% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% | | | | | | 25-Oct-19 | | | | | | | | | | | | |
| NERCHANGE RAMP PLE FORLAM 15500 24-bit 327-bit 40 83.75% 0% NERCHANGE RAMP PLE FORLAM 15000 24-bit 327-bit 40 90.43% 83.35% NERCHANGE RAMP PLE CAP MSTALLATON 144000 08-bit 375 02-bit 30 20-bit 30 | | | | | • | 04 Dec 10 | | | | | | | | | iii | 111 | | |
| INTERCHANCE RAMP PLE CPA_MA 1300 2400-18 27449-18 0056 055 INTERCHANCE RAMP PLE CPA_MA 13175 00-00-19 15449/30 21-00-19 112156 33356 INTERCHANCE RAMP PLE CPA_AC 13175 00-00-19 15449/30 21-00-19 112156 33356 INTERCHANCE RAMP PLE CPA_AC 13175 00-00-19 10056 056 506 INTERCHANCE RAMP PLE CPA_AC 20400 05-00-19 10056 056 INTERCHANCE RAMP PLE CPA_AC 20400 05-00-19 10056 056 INTERCHANCE RAMP PLE CPA_AC 20400 05-00-19 10056 056 INTERCHANCE RAMP PLE CPA_AC 20400 15-00-19 105-00-19 10056 056 INTERCHANCE RAMP PLE CPA_ | | | | | | 04-Dec-19 | | | | | | | | - | <u>++++</u> | | | |
| INTERCHANGE RAMP PLE CAP_MA 14020 00 20-Nex-19 90435 8.335 INTERCHANGE RAMP PLE CAP_MA 1317 00 Dex-19 1121% 3.135 INTERCHANGE RAMP PLE CAP_AC 14022 50-000 00-Nox-19 100% 50% INTERCHANGE RAMP PLE CAP_MA 220-030 00-Nox-19 100% 50% INTERCHANGE RAMP PLE CAP_MA 2237 51-Nam-20 10-Dox-19 2212% 127% INTERCHANGE RAMP PLE CAP_CA 200400 15-0419 2005% 00% 0% INTERCHANGE RAMP PLE CAP_CA 200400 15-0419 220.55% 0% 00% 0% INTERCHANGE RAMP PLE CAP_CA 20000 15-0419 27.4m-20 10.05% 0% 0% 0% INTERCHANGE RAMP PLE CAP_AM 00000 02-Nam-19 15-0419 21.55% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% | | | | | | | | | | | | | | | | | | |
| NTERCHANGE RAMP FEL CAP_AC 1317.9 210ex19 1121% 3135 NTERCHANGE RAMP FEL CAP_AC 1402.5 1548.20 220x30 100.5 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 555 5555 555 555 55 | | | | | | 02-Nov-19 | | | | ÷ | · | | | | | | $\frac{1}{1} - \frac{1}{1} - \frac{1}{1} \cdot$ | - |
| INTERCHANGE RAMP FLE CAP_UM 2020 15 Junn 19 00% 50% INTERCHANGE RAMP FLE CAP_UM 22370 15 Junn 19 15 Junn 20 22212% 1775 INTERCHANGE RAMP FLE CAP_UM 22370 15 Junn 19 15 Junn 20 16 Junn 20 22212% 1775 INTERCHANGE RAMP FLE CAP_UM 22370 15 Junn 19 15 Junn 20 2212% 1775 1 1 INTERCHANGE RAMP FLE CAP_UM 22370 15 Junn 19 15 Junn 20 2212% 1775 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | | | | | | | | | | | | | | |
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| INTERCHANGE RAMP PLE CAP, CA 221/un-20 22.55% 00 INTERCHANGE RAMP PLE CAP, CA 1000 00-44/min 9 (50-019) 1000 00-44/min 9 (50-019) 11000 00-44/min 9 (50-019) INTERCHANGE RAMP PER, NA 66500 22/shn-18 21/4/sh23 41/52% 04 INTERCHANGE RAMP PER, NA 66500 22/shn-18 21/4/sh23 04 04 INTERCHANGE RAMP PER, NA 62000 16/4/sh23 20/6/sh23 06 04 INTERCHANGE RAMP PER, NA 02000 16/4/sh23 21/4/sh23 06 04 04 INTERCHANGE RAMP PER, MA 02000 16/4/sh23 21/4/sh23 06 04 04 INTERCHANGE RAMP PER, MA 30000 08-fb-19 16/4/sh23 03/5/6/5 05 04 06 06 INTERCHANGE RAMP PER, MA 302000 08-fb-19 16/4/sh23 06/5 05 07 06 06 INTERCHANGE RAMP PER, MA 22000 16/6/sh23 05/5 06 06 07 07 06 06 07 06 06 07 06 06 06 07 06 | | | | | | | | | | | | | | 1 I I, | ÷ ; ; | <u></u> | | |
| Preck-hance RAMP PLE CAP_AM 10000 00% 00% 00% NTERCHANGE RAMP PLE ABLEMING 66500 29-Jan-19 27/Apr-21 4152% 05% NTERCHANGE RAMP PLER NA 20000 18-Mar-20 27/Apr-21 4152% 05% NTERCHANGE RAMP PLER AG 20000 18-Mar-20 29/Apr-21 05% 05% NTERCHANGE RAMP PLER AG 20000 18-Mar-20 27/Apr-21 05% 05% NTERCHANGE RAMP PLER AG 20000 18-Mar-20 74.66% 05% 05% NTERCHANGE RAMP PLER AG 30000 06-Feb-19 18-Mar-20 74.66% 05% NTERCHANGE RAMP PLER AG 30000 06-Jam-19 07% 05% 05% NTERCHANGE RAMP PLER MA 22000 24-Mar-19 31-Mar-21 05% 05% 05% NTERCHANGE RAMP PLER AG 22000 24-Mar-19 31-Mar-21 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% 05% | | | 233.75 | 18-Jan-19 | 15-Jan-20 | 16-Dec-19 | | 92.12% | 1.79% | | | | | :::, | ÷÷÷ | ┿┿┙ | ++++ | |
| NTERCHANGE SLASTINGTURE & BEAMING 053001 (22-Jan:19) 214.369-21 415.22% 055 NTERCHANGE RAMP PER MA 20000 18.46e-20 2930e-20 0% 0% 0% NTERCHANGE RAMP PER MA 20000 18.46e-20 27.4pc 21 0% 0% 0% NTERCHANGE RAMP PER, MA 20000 18.46e-20 27.4pc 21 0% 0% 0% NTERCHANGE RAMP PER, MA 30000 06-ball 18.46e-20 7.456% 0% 0% 0% NTERCHANGE RAMP PER, MA 30000 06-ball 18.46e-20 7.456% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% | | INTERCHANGE RAMP PILE CAP_CA | 204.00 | 15-Oct-19 | 27-Jun-20 | | | 28.55% | 0% | | | | | 1-1-1- | 1 1 1 | · † - † - † | †-†-†- | |
| MTERCHANGE RAMP PER NSTALLATION 66500 29-Jan-19 27.4p-21 4152% 0% MTERCHANGE RAMP PER, MA 20000 1944nc20 27.4p-21 0% 0% 0% MTERCHANGE RAMP PER, JAC 25000 1944nc20 27.4p-21 0% 0% 0% MTERCHANGE RAMP PER, JAC 30000 08-fab-19 184ar-20 74.66% 0% 0% MTERCHANGE RAMP PER, JAC 30000 08-fab-19 164ab-21 0% 0% 0% MTERCHANGE RAMP PER, MA 22500 23-ban-19 084an-20 164-fab-21 0% 0% 0% NTERCHANGE BANK PER, MA 22500 23-ban-19 03.4m/20 048-ban-20 0% 0% NTERCHANGE BANK PER, MA 22500 23-ban-19 03.4m/20 049% 0% 0% NTERCHANGE BANK STALLATON 66330 27-fab-21 0% 0% 0% 0% NTERCHANGE BOX GROCE NSTALLATON JAC 27678 27-fab-21 0% 0% 0% NTERCHANGE BOX GROCE NSTALLATON JAC 28000 114-0c19 19.4u/20 1667% 0% 0% NTERCHANGE BOX GROCE NSTALLATON JAC | | INTERCHANGE RAMP PILE CAP_AM | 170.00 | 08-Jan-19 | 15-Oct-19 | | | 100% | 0% | | | | | - | ÷÷÷ | | <u></u> | ÷ : |
| Prieckawce Raw PPER, Ma 20000 194Mar/20 22000/20 0% 0% 0% NTERCHAWGE RAW PPER, AC 25000 194Mar/20 27.4p/21 0% 0% 0% NTERCHAWGE RAW PPER, JM 30000 08-fe0-19 194Mar/20 74665 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% | | INTERCHANGE SUBSTRUCTURE & BEARING | 693.00 | 29-Jan-19 | 31-May-21 | | | 41.52% | 0% | | | | | | | | | |
| NTERCHANGE RAMP PIER_JM 25000 164/bay/20 274/pr21 0% 0% NTERCHANGE RAMP PIER_JM 30000 0676b-19 164/bar/20 74.66% 0% NTERCHANGE RAMP PIER_LA 33000 0676b-19 164/bar/20 63.47% 0% 0% NTERCHANGE RAMP PIER_CA 30000 063/bar/20 165-b2.1 0% 0% 0% NTERCHANGE RAMP PIER_AM 225000 25/ban-19 05/abr/20 94.49% 0% 0% 0% NTERCHANGE BUPERSTRUCTURE INSTALLATION 66800 27.Fbb-19 314/bay/21 0% 0% 0% NTERCHANGE BOX GREEN INSTALLATION MA 225000 05/aan-22 0% 0% 0% 0% NTERCHANGE BOX GREEN INSTALLATION MA 22500 00 11/abr/20 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% < | | INTERCHANGE RAMP PIER INSTALLATION | 665.00 | 29-Jan-19 | 27-Apr-21 | | | 41.52% | | | | | | | | | | |
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| ProjectBaseline Bar Critical Remaining Work ✓ Summary Actual Work ♦ Milestone MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY | l | · · · · · · · · · · · · · · · · · · · | | · · · · | | 23 Mar 19 | | | | | | | | : : : | : : : | : : : | : : : | : : : |
| Actual Work MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY DAEWOO - TPL JV | | | 2228.25 | 20-11/20-10 | 21-11/23 | 23-11/21-10 | | 51.1% | 33.39% | ' | | | | | | | | |
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Remaining Work % Complete

Milestone

MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

DAEWOO - TPL JV

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Attachment 8- Package-3's Construction Programme Updated as on 25th December 2019

| i i E i i kg | 3_Construction Schedule Dec'19 | Origina | BL1 Start | BL1 Finish | Start | Finish | Activity % | Schedule % | Performance % | Budgeted Total Cost | Actual Total Cost | Schedule Performance | Cost Performance | Planned Value Cost | Dec-19 1 |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------|------------------------|----------------------------|--------------------------|------------|------------------|------------------|----------------------------------|---------------------------------|----------------------|------------------|---------------------------------|-------------------------|
| | | Duration | | DETTINAT | Gran | T IIII AT | Complete | Complete | Complete | Dugetou Total Cost | Actual Iotal Oost | Index | Index | Tialined value cost | Lanou value |
| IL Pkg 3_ | Construction Schedule Dec'19 | 1326 | 23-Mar-18 | 21-Sep-21 | 23-Mar-18 A | 13-Nov-22 | 1 1 | 65.2% | 17.82% | Rs10,137,901,022 | Rs1,710,413,671 | 0.27 | 1.09 | Rs6,805,519,618 | Rs1,860,033 |
| ocuremen | nt of Mumbai Trans Harbour Link Project (Package-3)-(| 1326 | 23-Mar-18 | 21-Sep-21 | 23-Mar-18 A | 13-Nov-22 | | 65.2% | 17.82% | Rs10,137,901,022 | Rs1,710,413,671 | 0.27 | 1.09 | Rs6,805,519,618 | Rs1,860,033 |
| 2 | Commencement Date (CD) | C | 23-Mar-18 | | 23-Mar-18 A | | 100% | 100% | 100% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| Physical Mile | estones | 996 | 18-Sep-18 | 21-Sep-21 | 21-Feb-20 | 13-Nov-22 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| KD1001 | KD1 [Construction programme, completion of Soil Investigation, Submit final | | 18-Sep-18 | 18-Sep-18 | 21-Feb-20 | 21-Feb-20 | 0% | 100% | 0% | Rs0 | Rs0 | | 0.00 | Rs0 | |
| KD1002 | KD 2 [NOC for technical design doc & drawing for foundation, Sub & Super | - | 17-Dec-18 | 17-Dec-18 | 26-Apr-20 | 26-Apr-20 | 0% | 100% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| KD1003 KD1004 | KD 3 [NOC for Good for construction drawing for foundation, Sub structure, KD 4 [Substantial completion of foundation, piles (if applicable), piers, abutm | | 15-Jun-19 21-Mar-20 | 15-Jun-19 21-Mar-20 | 19-Sep-20 14-Mar-21 | 19-Sep-20 14-Mar-21 | 0% | 100% 0% | 0% 0% | Rs0 Rs0 | Rs0 Rs0 | 0.00 | 0.00 | Rs0 Rs0 | |
| KD1004 | KD 4 [Substantial completion of roundation, piles (il applicable), piers, abutmin KD 5 [Substantial completion of pile caps (if applicable), piers, abutments, piles (il applicable). | | 19-Sep-20 | 21-Mar-20 19-Sep-20 | 26-Sep-21 | 26-Sep-21 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| KD1006 | KD 6 [Substantial completion superstructure (PC/CIS/SS) & asphalt paveme | | 20-Mar-21 | 20-Mar-21 | 28-Apr-22 | 28-Apr-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| KD1007 | KD 7 [Substantial completion of kerb/traffic signs, Marking & noise barrier, Re | | 24-Jul-21 | 24-Jul-21 | 06-Oct-22 | 06-Oct-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| KD1008 | KD 8 [Final completion & handing over] | C | 21-Sep-21 | 21-Sep-21 | 13-Nov-22 | 13-Nov-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| Financial Mil | | | 18-Sep-18 | 21-Sep-21 | 23-Mar-18 A | 21-Sep-21 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| Interface Mile | | | 17-Dec-18 | 06-Mar-21 | 25-Dec-19 | 28-Apr-22 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| Document S | ubmittals Dbligation / Land Handover | | 23-Mar-18 19-Apr-18 | 06-May-18 18-Sep-18 | 06-Apr-18 A 23-Mar-18 A | 25-Dec-19 29-Dec-19 | | 100% 0% | 80% 0% | Rs74,992,895 Rs0 | Rs59,994,316 Rs0 | 0.80 0.00 | 1.00 0.00 | Rs74,992,895 Rs0 | Rs59,994 |
| | a [CD+180 days] | | 19-Apr-18 | 18-Sep-18 | 23-Mar-18 A | 29-Dec-19 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| E Ob100 | | | 19-Apr-18 | 19-Apr-18 | 23-Mar-18 A | 29-Dec-19 | 90% | 100% | 90% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| E Ob100 | , , , | | 16-May-18 | 16-May-18 | 23-Mar-18 A | 25-Dec-19 | 65% | 100% | 65% | Rs0 | Rs0 | | 0.00 | Rs0 | |
| E Ob100 | 2 ROW [51 Ha, unencumbered (Part 2) from ch 18+930 to 20+170] At-grade | | 18-Sep-18 | 18-Sep-18 | 23-Mar-18 A | 29-Dec-19 | 97% | 100% | 97% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| | rd 9.16 Ha [CD+120 days] | | 20-Jul-18 | 20-Jul-18 | 20-Dec-18 A | 21-Dec-18 A | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| | fice (Sch 01- General Item) | | 20-Aug-18 | 16-Sep-21 11-Dec-18 | 25-Jan-19 A 30-May-19 A | 21-Oct-21 31-Oct-19 A | | 86.61% | 86.5% | Rs142,351,965 Rs112 791 965 | Rs123,137,965 Rs112 791 965 | 1.00 | 1.00 1.00 | Rs123,288,811 Rs112,791,965 | Rs123,137 Rs112.791 |
| Constructio | on of Employer office | | 20-Aug-18 12-Dec-18 | 11-Dec-18 16-Sep-21 | 30-May-19 A 25-Jan-19 A | 31-Oct-19 A 21-Oct-21 | | 100% 35.51% | 100% 35% | Rs112,791,965 Rs29,560,000 | Rs112,791,965 Rs10,346,000 | 1.00 0.99 | 1.00 | Rs112,791,965 Rs10,496,846 | Rs112,791 Rs10,346 |
| | otechnical Investigation Works | | 12-Dec-18 | 22-Oct-18 | 19-Apr-18 A | 21-0d-21 21-Feb-20 | | 100% | 95,75% | Rs29,560,000 Rs242,300,773 | R\$10,346,000 R\$181,725,579 | 0.99 | 1.00 | R\$10,496,846 R\$242,300,945 | R\$10,340 R\$232.003 |
| Topographi | | | 19-Apr-18 | 22-Oct-18 | 19-Apr-18 A | 25-Dec-19 | | 100% | 99.85% | Rs0 | Rs0 | 1.00 | 0.00 | Rs109 | R |
| | cal Investigation work | | 17-May-18 | 17-Sep-18 | 10-Sep-18 A | 21-Feb-20 | | 100% | 95.75% | Rs242,300,773 | Rs181,725,579 | 0.96 | 1.28 | Rs242,300,836 | Rs232,003 |
| Design Work | | 462 | 07-May-18 | 14-Jun-19 | 25-Apr-18 A | 19-Sep-20 | | 100% | 60.32% | Rs159,122,500 | Rs78,391,635 | 0.60 | 1.22 | Rs159,123,270 | Rs95,989 |
| Design Bas | | | 07-May-18 | 30-Jun-18 | 25-Apr-18 A | 08-Dec-18 A | | 100% | 100% | Rs0 | Rs0 | 1.00 | 0.00 | Rs51 | F |
| Preliminary | | | 02-Jul-18 | 25-Aug-18 | 26-Jul-18 A | 25-Dec-19 | | 100% | 80% | Rs286,875 | Rs286,875 | 0.80 | 0.80 | Rs286,875 | Rs229 |
| Geotechnic | cal Interpretative Report Submission & GC Approval (NONO) | 24 | 11-Sep-18 | 08-Oct-18 | 07-Dec-18 A | 25-Feb-20 | | 100% | 91% 80% | Rs0 Rs0 | Rs0 | 0.91 | 0.00 | Rs42 Rs102 | |
| | ture Design | | 16-Aug-18 | 26-Feb-19 | 05-Mar-19 A | 03-Jan-20 | | 100% | 44 66% | Rs85.075.000 | Rs37.992.885 | 0.80 | 1.00 | Rs85 075 144 | Rs37.992 |
| Foundation | | | 05-Oct-18 | 14-Jun-19 | 06-Nov-18 A | 19-Sep-20 | | 100% | 67.2% | Rs28,434,375 | Rs12,791,250 | 0.67 | 1.49 | Rs28,434,435 | Rs19,106 |
| Abutment 8 | k Foundation | 255 | 15-Oct-18 | 16-Jan-19 | 31-Dec-18 A | 31-Mar-20 | | 100% | 67.41% | Rs0 | Rs0 | 0.67 | 0.00 | Rs81 | |
| Pier Cap | | | 24-Oct-18 | 10-May-19 | 11-Jan-19 A | 16-Sep-20 | | 100% | 33.22% | Rs0 | Rs0 | 0.33 | 0.00 | Rs290 | |
| Bearings & | | | 17-Nov-18 | 03-Apr-19 | 21-Jan-19 A | 08-Aug-20 | | 100% | 62.98% | Rs18,005,625 | Rs0 | 0.63 | 0.00 | Rs18,005,625 | Rs11,340 |
| Pavement I | | | 01-Jul-18 12-Sep-18 | 27-Aug-18 | 15-Oct-18 A | 18-Feb-19 A | | 100% 90.17% | 100% | Rs27,320,625 Rs1 387 160 466 | Rs27,320,625 Rs5 089 147 | 1.00 | 1.00 | Rs27,320,625 | Rs27,320 Rs25,445 |
| For Main B | | | 12-Sep-18 | 08-Jun-21 | 15-Feb-19 A | 10-Sep-22 | | 81.13% | 2.9% | Rs1,387,160,466 Rs877,933,218 | Rs5,089,147 Rs5,089,147 | 0.02 | 5.00 | Rs712,281,063 | Rs25,445 Rs25,445 |
| For Road W | | | 04-Apr-19 | 13-Jan-21 | 01-Mar-19 A | 25-Jan-22 | | 46.9% | 8.29% | Rs0 | Rs0 | 0.18 | 0.00 | Rs197 | 11020,1110 |
| Imported Pi | | | 22-Jan-19 | 10-Aug-19 | 04-May-20 | 20-Nov-20 | | 100% | 0% | Rs509,227,248 | Rs0 | 0.00 | 0.00 | Rs807,190,926 | |
| | I Fabrication & Manufracturing Works | | 27-Sep-18 | 10-Feb-20 | 21-Feb-19 A | 29-May-21 | | 97.01% | 0% | Rs390,605,953 | Rs0 | | 0.00 | Rs378,916,770 | R |
| | Works fabrication | | 27-Sep-18 | 06-Jan-20 | 21-Feb-19 A | 23-Apr-21 | | 97.01% | 0% | Rs390,605,953 | Rs0 | | 0.00 | Rs378,916,270 | R |
| | Works Assembly | | 22-Oct-18 | 10-Feb-20 23-Jul-21 | 25-Feb-19 A 26-Sep-18 A | 29-May-21 06-Oct-22 | | 92.59% 55.33% | 30.56% 18.44% | Rs0 Rs7,063,465,446 | Rs0 Rs1,242,075,029 | | 0.00 | Rs500 Rs3,908,087,313 | R Rs1,302,709 |
| Construction | 1 Works | | 20-Jul-18 | 23-Jul-21 01-Jul-19 | 26-Sep-18 A 26-Sep-18 A | 28-Aug-20 | | 55.33% | 18.44% | Rs7,063,465,446 Rs0 | R\$1,242,075,029 R\$0 | | 0.00 | R\$3,908,087,313 R\$565 | R\$1,302,709 |
| | ures (Open Foundation, Pier ,Pier Cap) | | 08-Dec-18 | 07-Nov-20 | 30-Sep-18 A | 25-Nov-21 | | 58.08% | 31.57% | Rs3,392,806,949 | Rs1,065,510,244 | | 1.01 | Rs1,970,423,939 | Rs1,071,248 |
| | rriageway | | 08-Dec-18 | 24-Jan-20 | 05-Dec-18 A | 27-Apr-21 | | 98.95% | 29.83% | Rs1,821,401,625 | Rs537,543,963 | 0.30 | 1.01 | Rs1,802,300,511 | Rs543,282 |
| SH 54 R | | | 27-Feb-19 | 06-Mar-20 | 25-Apr-19 A | 29-Apr-21 | | 41.65% | 54.39% | Rs232,139,423 | Rs126,257,103 | 1.31 | 1.00 | Rs96,695,913 | Rs126,257 |
| | H 4B Ramps | | 20-May-19 | 05-Sep-20 | 30-Sep-18 A | 21-Oct-21 | | 4.08% | 24.92% | Rs874,987,055 | Rs218,070,697 | 6.11 | 1.00 | Rs35,713,757 | Rs218,070 |
| | H4B Loops | | 09-Sep-19 | 07-Nov-20 | 21-Aug-19 A | 25-Nov-21 | | 7.69% | 39.55% | Rs464,278,846 | Rs183,638,481 | 5.14 | 1.00 | Rs35,713,757 | Rs183,638 |
| Super Struc | ts Precasting | | 27-Feb-19 30-Mar-19 | 12-Apr-21 09-Nov-20 | 11-Sep-19 A 11-Sep-19 A | 20-May-22 23-Sep-21 | | 34.87% 40.31% | 0.84% | Rs1,408,927,165 Rs760,156,099 | Rs11,877,439 Rs11,877,439 | 0.02 | 1.00 1.00 | Rs491,330,801 Rs306,438,812 | Rs11,877 Rs11,877 |
| | ts Precasung | | 26-Aug-19 | 20-Jan-21 | 02-Dec-20 | 23-Sep-21 28-Apr-22 | | 29.37% | 0% | Rs70,699,410 | RS11,677,439 Rs0 | 0.04 | 0.00 | R\$306,438,812 R\$20,767,952 | RS11,677 |
| Cast In S | | | 27-Feb-19 | 12-Apr-21 | 17-Mar-20 | 20-May-22 | | 25.85% | 0% | Rs464,334,354 | Rs0 | | 0.00 | Rs120,012,348 | |
| Steel Str | | 390 | 10-May-19 | 17-Nov-20 | 16-Sep-20 | 25-Jan-22 | | 38.78% | 0% | Rs113,737,302 | Rs0 | | 0.00 | Rs44,111,689 | |
| | Expansion Joints | | 03-Aug-20 | 12-Apr-21 | 09-Dec-21 | 11-Aug-22 | | 0% | 0% | Rs10,454,697 | Rs0 | 0.00 | 0.00 | Rs0 | |
| | illaries & Miscellaneous Item | | 12-Aug-20 | 23-Jul-21 | 21-Sep-21 | 06-Oct-22 | | 0% | 0% | Rs180,921,987 | Rs0 | 0.00 | 0.00 | Rs0 | |
| RE Wall | | | 27-Feb-19 | 18-Feb-21 | 11-May-20 | 01-Mar-22 | | 54.08% | 0% | Rs461,687,248 | Rs0 | 0.00 | 0.00 | Rs249,665,816 | 0.000 |
| Road Work | of Interface Activity | | 20-Apr-19 19-Sep-20 | 18-May-21 06-Mar-21 | 16-Feb-19 A 19-Sep-20 | 25-Jul-22 28-Apr-22 | | 74.39% | 13.65% 0% | Rs1,608,667,400 | Rs164,687,346 | 0.18 | 1.33 | Rs1,196,666,191 Rs0 | Rs219,583 |
| Provisional S | · · · · · · · · · · · · · · · · · · · | | 19-Sep-20 23-Apr-18 | 23-Aug-21 | 30-Nov-18 A | 28-Apr-22 27-Sep-22 | | 58,76% | 3.05% | Rs677,901,024 | Rs20,000,000 | 0.00 | 1.04 | Rs399,337,429 | Rs20,752 |
| | mmissioning Works | | 26-Jul-21 | 20-Sep-21 | 06-Oct-22 | 13-Nov-22 | | 0% | 0% | Rs0 Rs0 | Rs20,000,000 Rs0 | 0.00 | 0.00 | R\$399,337,429 R\$0 | |
| ToC1000 | Testing & Commissioning Works | | 26-Jul-21 | 11-Sep-21 | 06-Oct-22 | 04-Nov-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| ToC1001 | Safety Test & Auditing | 6 | 13-Sep-21 | 18-Sep-21 | 04-Nov-22 | 11-Nov-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |
| ToC1002 | TOC | 2 | 19-Sep-21 | 20-Sep-21 | 11-Nov-22 | 13-Nov-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | |

|--|

Attachment 9- Project Progress Photos



Package 1- Site Progress Photos

Photo No. 1: View along TAB at MP-23 seeing towards Mumbai

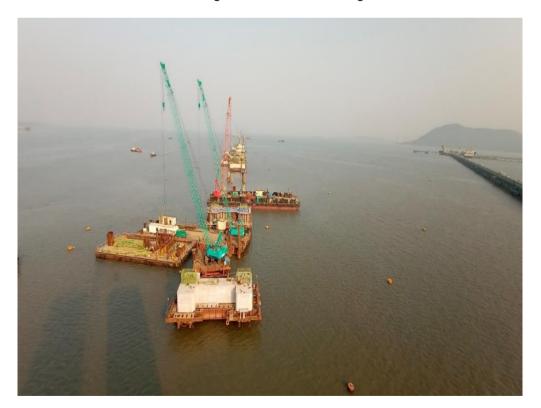


Photo No. 2: Work in Progress between MP83 & MP148

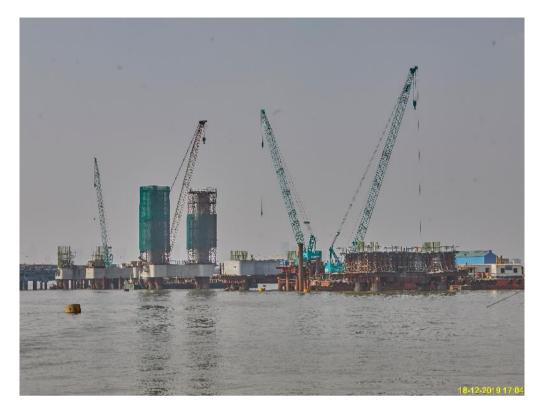


Photo No. 3: Work in Progress between MP81 & MP85



Photo No. 4: MP15 Pier cap works - Intertidal is in progress



Photo No. 5: 4. Launching Girder Erection works - Intertidal is in progress



Photo No. 6: Pile boring works at Interchange area



Photo No. 7: Precast Yard - Segment casting in BAY-2 is in progress



Photo No. 8: Pier Works at BP44 & BP45 - Interchange is in progress



Photo No. 9: Pier Works at BP41 & BP44 - Interchange is in progress



Photo No. 10: Site visit by MMRDA Officials and GC Team at the Structural Steel Manufacturing Plant Ms. Najing Iron & Steel Co. Ltd. China



Photo No. 11: Site visit by MMRDA Officials and GC Team at the Structural Steel Manufacturing Plant Ms. Najing Iron & Steel Co. Ltd. China



Photo No. 12: Segment assembly for OSD Girder Fabrication OS01-NG (lot1) -IIA, Vietnam



Package 2 – Site Progress Photos

Photo No. 1: Precast Slab erection works at TAB in progress

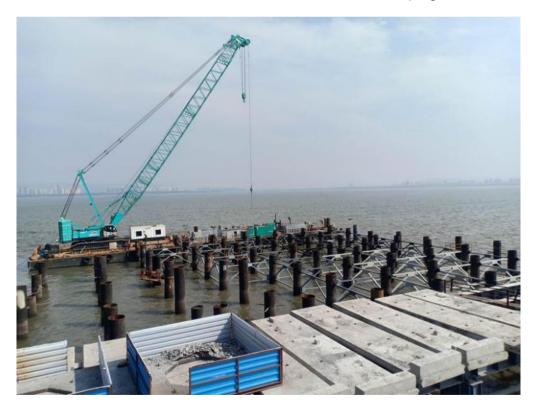


Photo No. 2: Material Platform bracing welding works in progress



Photo No. 3: Pile Cap bottom formwork and Pile head chipping in progress at MP 206 LHS and RHS in progress



Photo No. 4: Pile concreting at MP 232/02 LHS in progress



Photo No. 5: Preparatory works at MP 209 LHS location in progress



Photo No. 6: Segment lifting and stacking at Bay-3 in progress



Photo No. 7: Segment Concreting works at Bay-2 in progress



Photo No. 8: Pile reinforcement cage checking in progress



Photo No. 9: Open foundation concreting at MP 243 LHS in progress



Photo No. 10: Coal Tar epoxy application at Open foundation MP 245 LHS in progress



Photo No. 11: Open foundation concreting at ACP 03 in progress



Photo No. 12: Pier reinforcement tying at MP 245 LHS location in progress



Package 3 – Site Progress Photos

Photo No. 1: Foundation casting completed at LP 01 RHS Chirle location



Photo No. 2: Foundation casting completed at LP 31 Chirle location



Photo No. 3: Foundation Reinforcement Works at RMP 280 is in progress



Photo No. 4: Pier casting works at Pier location LMP 280 in progress

Mumbai Trans Harbour Link Project - Quarterly Progress Report No. 11(Oct–Dec 2019)



Photo No. 5: Pier casting completed at LMP 269 location



Photo No. 6: Pier reinforcement and shuttering at RMP 269 is in progress

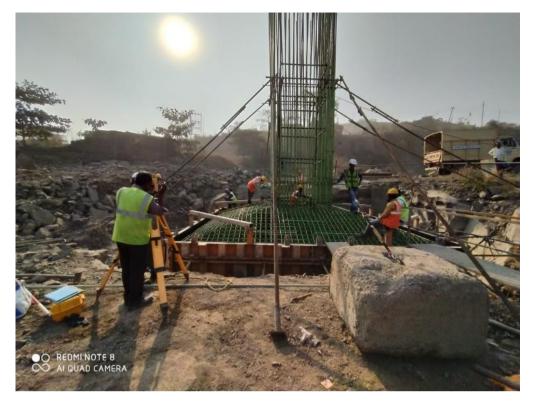


Photo No. 7: Foundation co-ordinates checking at Jasai area is in progress



Photo No. 8: PCC Pre-pour checking at LMP 279 P1



Photo No. 9: PCC Concrete pouring at LMP 279 LHS



Photo No. 10: Segment Casting is in progress

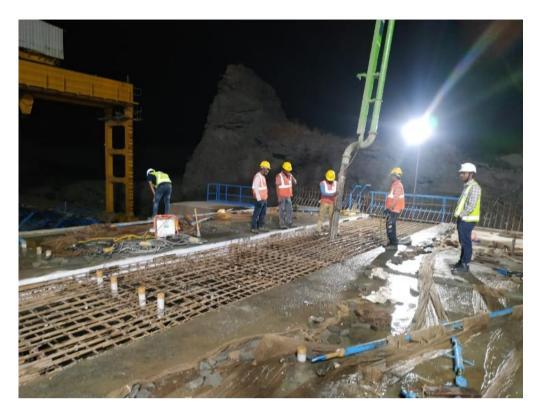


Photo No. 11: Segment Casting at PC yard is in progress



Photo No. 12: Excavated material shifting at At-grade area Ch @ 19+720



ADECO





General Consultant for Mumbai Trans Harbour Link Project

dar

Ref No: MTHL/GC/MMRDA/LT/QPR-1854/2021

22nd January 2021

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 -Re-submission of the Quarterly Progress Report No. 12 (January-March 2020)

Ref:

- 1. MTHL/GC/MMRDA/LT/QPR 1559/ 2020 dated 17th September 2020
- 2. MTHL/GC/MMRDA/LT/QPR-1729/2020 dated 30th November 2020

Dear Sir,

With reference to the above-mentioned subject, we are recalling the earlier submitted QPR No.12 (January-March 2020) vide Letter No. 1729 dated 30th November 2020. We have recently identified an error in Section 2.3 - Table 2.3.1.b.(ii) Actually Incurred Cost BY YEAR, Page No. 14 of the report on Tranche-I amount for the financial year 2019.

The correct Tranche-I JICA disbursement for the financial year 2019 should read as JPY 31014 million instead of reported JPY 15690 million.

The total disbursement for the financial year 2019 is JPY 40410 million which included MMRDA portion of expense of JPY 9396 million.

We are submitting to you the revised QPR No. 12 for your review/ approval. You are requested to recall the earlier submitted report to JICA and re-submit the corrected report to JICA, India at your earliest convenience.

Thanking you, Yours faithfully,

m man

22 January 2021 Dr. S H Robin Sham, CBE (BSc, PhD, DIC, FCGI, FRSA, CEng, FICE, FIStructE, FHKIE) The Engineer General Consultant (MTHL)

Encl: 1 Copy of the corrected QPR No.12 (January-March 2020)

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

By Email



Mumbai Trans Harbour Link Project Quarterly Progress Report No. 12 1st January 2020 to 31st March 2020 Loan Agreement No. ID-P255 (Tranche–I)

ORGANIZATION INFORMATION

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

| | JICA ODA Loan | 238,572 million Japanese YEN (JPY) | | | | | |
|--------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------|--|--|--|--|--|
| Source of | Portion: | | | | | | |
| Finance | Tranche I: 144,795 million Japanese YEN (JPY) | | | | | | |
| (Loan Agreement signed on 31 st March 2017) | | | | | | | |
| | Tranche-II: | 66,909 Million Japanese YEN (JPY) | | | | | |
| | Tranche-II. | (Loan Agreement signed on 27 th March 2020) | | | | | |
| Terms and | Interest | 0.10000% (LIBOR (-0.04817%) + SPREAD RATE | | | | | |
| Conditions | Rate: | (0.10000%)) from 20 th September 2019 to 19 th March 2020. | | | | | |
| of JICA ODA Loan (Tranche-1) | Repayment Period: | 30 years, including 10 years of grace period. | | | | | |

| PROJ | ECT NAME | Mumbai Trans Harbour Link Project | | | | | |
|------------|------------------|-------------------------------------------------|----------------|-------------------------------|-----------|------------------|--|
| DOC | NO. | 12 | DATE O | F ISSUE | 25/ | /11/2020 | |
| DOC | FITLE | Quarterly Progress Report No. 12 | | | | | |
| REV No. | DATE OF ISSUE | DESCRIPTION | PREPARED BY | CHECKED BY | | APPROVED BY | |
| R0 | 05/07/2017 | Quarterly Progress Report No. 1 (Apr-Jun 17) | J Senthil | Dr T K Sundai | ram | Dr Robin Sham | |
| R0 | 05/10/2017 | Quarterly Progress Report No. 2 (Jul-Sep 17) | J Senthil | Dr T K Sundai | ram | Dr Robin Sham | |
| R0 | 05/01/2018 | Quarterly Progress Report No. 3 (Oct-Dec 17) | J Senthil | Dr T K Sundai | ram | Dr Robin Sham | |
| R0 | 05/04/2018 | Quarterly Progress Report No. 4 (Jan-Mar 18) | J Senthil | Dr T K Sundai | ram | Dr Robin Sham | |
| R0 | 24/07/2018 | Quarterly Progress Report No. 5 (Apr-Jun 18) | Prashant B | Dr T K Sundai | ram | Dr Robin Sham | |
| R0 | 10/10/2018 | Quarterly Progress Report No. 6 (Jul-Sep 18) | Prashant B | Dr T K Sundai | ram | 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 | J Senthil | | |
| 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 | |
| R0 | 11/02/2020 | Quarterly Progress Report No.11 (Oct-Dec 19) | Prashant B | Mr. Som Gho | sh | Dr Robin Sham | |
| R0 | 25/11/2020 | Quarterly Progress Report No.12 (Jan-Mar 20) | Prashant B | Mr. Som Gho | sh | Dr Robin Sham | |
| | | | | | | | |
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| 3.0 Bl 3.1 3.2 3.3 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts | 24 24 24 26 |
| 3.0 Bl 3.1 3.2 3.3 3.4 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators | 24 24 24 26 29 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators | 24 24 26 29 30 |
| 3.0 Bl 3.1 3.2 3.3 3.4 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective | 24 24 26 29 30 30 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) | 24 24 26 29 30 30 31 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management | 24 24 26 29 30 30 31 31 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) | 24 24 26 29 30 30 30 31 31 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget | 24 24 26 29 30 30 31 31 31 31 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation | 24 24 26 29 30 30 31 31 31 31 31 31 32 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS). Precautional and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention). Precautions (Measures To Be Adopted/ Points Which Require Special Attention). Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective Precention AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. Performance. | 24 24 26 29 30 30 31 31 31 31 31 32 32 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Atta | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations achment 1- MMRDA & PIU Organization Chart | 24 24 26 29 30 30 31 31 31 31 31 32 32 33 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Atta Atta | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations achment 1- MMRDA & PIU Organization Chart achment 2- Environmental & Social Impacts Attachments | 24 24 26 29 30 30 31 31 31 31 32 33 33 36 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Atta Atta Atta | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations achment 1- MMRDA & PIU Organization Chart achment 2- Environmental & Social Impacts Attachments achment 4- Project Procurement and Financial Status till 31st March 2020 | 24 24 26 29 30 31 31 31 31 32 33 36 37 39 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2 5.0 EV 5.1 5.2 5.3 Atta Atta Atta Atta | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. achment 1- MMRDA & PIU Organization Chart. achment 2- Environmental & Social Impacts Attachments achment 3- JICA's Concurrence Status achment 4- Project Procurement and Financial Status till 31st March 2020 achment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million | 24 24 26 29 30 31 31 31 31 31 32 33 36 37 39 41 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Atta Atta Atta Atta | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts. Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. achment 1- MMRDA & PIU Organization Chart achment 2- Environmental & Social Impacts Attachments achment 4- Project Procurement and Financial Status till 31st March 2020 achment 4- Project Procurement and Financial Status till 31st March 2020 achment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million | 24 24 26 29 30 31 31 31 31 32 33 36 37 39 41 42 |
| 3.0 Bl 3.1 3.2 3.3 3.4 3.5 3.6 4.0 4.1 4.2 5.0 EV 5.1 5.2 5.3 Atta Atta Atta Atta Atta | ENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS) Operational and Physical Condition Precautions (Measures To Be Adopted/ Points Which Require Special Attention) Environmental and Social Impacts Qualitative and Quantitative Data of Monitoring Indicators Monitoring Plan for the indicators Achievement of the Project Objective OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY) O&M and Management O&M Cost and Budget /ALUATION JICA and Borrower / Executing Agency performance. Overall Evaluation Lessons Learnt and Recommendations. achment 1- MMRDA & PIU Organization Chart. achment 2- Environmental & Social Impacts Attachments achment 3- JICA's Concurrence Status achment 4- Project Procurement and Financial Status till 31st March 2020 achment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million | 24 24 26 29 30 31 31 31 31 31 32 33 36 37 39 41 42 43 |

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

- Although the urbanization in India has been rapidly progressing, infrastructure development in the urban areas has not caught up its progress. Particularly, the traffic congestion in the urban areas due to a lack of road network hinders the economic development. Thus, Government of India (GOI) places transport and connectivity as one of the "Growth Enablers" and plans to enhance road network in the "Three Year Acton Agenda 2017-2018 to 2019-20 (NITI Aayog)".
- 2. Mumbai Metropolitan Region, which includes Mumbai and Navi Mumbai, has about 18.4 million people in population as of 2011 (Census 2011) and the population density reaches 20,694 people per square km in the center of Mumbai, which is one of the most overpopulated and high-density cities in the world.
- 3. Mumbai, the narrow stretch of land that has traditionally been the epicentre of India's commerce, has seen a steady increase in population in the last three decades despite obvious spatial constraints. Thus, the development of Navi Mumbai has been identified as an urgent requirement for broad development in Mumbai Metropolitan Region.

- 4. The Government of Maharashtra (GoM), of which Mumbai Metropolitan Region is under jurisdiction, has been facilitating various development plans particularly in Navi Mumbai area, which stands at the opposite site of Mumbai across the Mumbai Bay and still has spacious area for development, such as a new international airport, Special Economic Zone (SEZ) and expansion of Jawaharlal Nehru Port in order to promote the sustainable economic development in Mumbai Metropolitan Region.
- 5. Furthermore, a lack of connectivity in Mumbai has stunted its growth. The GoM has given importance to construct the faster connection with Mumbai to Navi Mumbai International Airport, Jawaharlal Nehru Port, Mumbai-Pune expressway and main hinterland.
- 6. Accordingly, the Mumbai Trans Harbour Link (MTHL) has been identified as the important infrastructure to improve the connectivity between Mumbai and Navi Mumbai and continue economic development in Mumbai Metropolitan Region.

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

- 7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.
- 8. Necessity of the Project: To promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL.

Actual (P/R, PCR)

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

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

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

| Vehicle Type | | Sewri Interc ar Interchange | hange and | Between Shivaji Nagar 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 | |

Table 1.3.1 Demand Projections Over the Period

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

- 2. At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.
- 3. 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

- 4. The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.
- 5. As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.
- 6. When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).
- 7. The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.
- 8. The major portion of MTHL structure is on sea and partly towards ends is on land with

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

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

| 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 |

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

Intelligent Transport Systems (ITS) and Toll Management System (TMS)

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

Traffic management System

- 14. Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifier (ATCC) and Meteorological Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
- 15. CCTV Cameras shall be installed at around three places per 1 km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information.
- 16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual (P/R, PCR)

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

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

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

Table 2.1.1 Comparison of Original and Actual location

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

Table 2.1.2 Comparison of Original and Actual Scope

| Items | Original | Actual |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Construction | work: 6-lane Marine Bridge Road (21.8 km) | |
| Package-1 Ch 0+000- 10+380 (10.380 km) | 1 Interchange (Sewri) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) | (P/R and PCR) |
| Package-2 Ch 10+380- 18+187 (7.80 km) | 1 Interchange (Shivaji Nagar) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) | (P/R and PCR) Actual: No View Barriers |
| Package-3 Ch 18+187- 21+800 (3.61 km) | 2 Interchanges (State Highway-54, National Highway-4B) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Cutting Section (6-lane with Slope Protection) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) | (P/R and PCR) Actual: No Noise Barriers & View Barriers |

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| Items | Original | Actual |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Package-4 ITS (Intelligent Transport System) | Administrative Buildings Toll Booths (1 for main alignment and each on and off rumps for 3 interchanges) Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-cum-Classifier (ATCC), Variable Message Sign (VMS)) Highway Lighting (Whole sections Low-positioned lighting for some sections) Electrical Powering System including HV/ LV Ring Network across the Bridge. | (P/R and PCR) |
| Consulting Services | Tender Assistance Construction Supervision Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP). | (P/R and PCR) |

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

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

| | Table 2-2-1 Comparison of Original and Actual Schedule | | | | | | | | |
|----|-----------------------------------------------------------|-----------------------------------|------------------------------------------------------------------|--|--|--|--|--|--|
| | Items | Original | Status <i>(P/R and PCR)</i> as on 31 st March 2020 | | | | | | |
| 1) | Completion of Land Acquisition and Resettlement | March 2019 | June 2020 | | | | | | |
| 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 | | | | | | | | |
| Pa | ckage-1, Package-2 & Package-3 | 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 | | | | | | |
| Pa | ackage-4 (ITS) | | | | | | | | |
| | a) Pre-Qualification Process | January 2019 – May 2019 | January 2020 – April 2020 | | | | | | |
| | b) Main Bidding | June 2019 – September 2020 | May 2020 – September 2020 | | | | | | |
| 4) | Civil Construction | | | | | | | | |
| Pa | ckage-1 and Package-2 | March 2018 – September 2022 | March 2018 – September 2022 | | | | | | |
| Pa | ackage-3 | March 2018 – September 2021 | March 2018 – September 2021 | | | | | | |
| Pa | ackage-4 | October 2020 – September 2022 | September 2020 – September 2022 | | | | | | |
| 5) | Defect Liability Period | | | | | | | | |
| | nckage-1, Package-2 and nckage-4 | October 2022 – September 2024 | October 2022 – September 2024 | | | | | | |
| Pa | ackage-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 6, 7 & 8: Package wise construction schedules updated at the end of fourth quarter (January-March 2020).

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

| | Foreign | Currency | Portion | Local Currency Portion | | | Total | | |
|----------------------------------------------|-----------------------|---------------------------------|------------------------|------------------------|------------------------------|---------------------|--------------------|------------------------------|------------------------|
| Cost Breakdown | 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.

| | Foreign | Currency | Portion | Local Currency Portion | | | Total | | |
|----------------------------------------------|-----------------------|---------------------------------|------------------------|------------------------|------------------------------|---------------------|-----------------------|---------------------------------|------------------------|
| Cost Breakdown | 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 | 5,618 | 5,618 | - | 17,446 | 17,446 | | 32,653 | 32,653 | |
| Package-2 | 5,417 | 5,417 | - | 12,299 | 12,299 | | 23,427 | 23,427 | |
| Package-3 | 72 | 72 | - | 3,185 | 3,185 | | 4,950 | 4,950 | |
| 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 | | 362 | 362 | | 905 | 905 | |
| Land Acquisition* | - | | | 5,391 | | 5,391 | 8,464 | | 8,464 |
| Administration Cost | - | | | 2,268 | | 2,268 | 3,561 | | 3,561 |
| GST | - | | | 4,260 | | 4,260 | 6,688 | | 6,688 |
| Import Tax | - | | | - | | | - | | - |
| Interest during construction | - | | | - | | | - | | - |
| Front End Fee | - | | | - | | | - | | - |
| Total | 11,360 | 11,360 | - | 45,411 | 33,295 | 12,115 | 80,962 | 61,941 | 19,020 |

| Table 2.3.1.a.(ii) Actual | y Incurred Cost BY ITEM |
|---------------------------|-------------------------|
|---------------------------|-------------------------|

(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 | Total | | Others (MMRDA | | | |
|-----------|---------|-----------|------------------|-------------|-----------|----------|
| Breakdown | Total | Tranche I | Tranche II | Tranche III | Sub Total | Portion) |
| 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 | Total | | JICA Po | ortion | | Others (MMRDA |
|-----------|--------|-----------|------------|-------------|-----------|------------------|
| Breakdown | Total | 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 | 40,410 | 31,014 | - | - | 31,014 | 9,396 |
| FY 2020 | | | | | | |
| FY 2021 | | | | | | |
| FY 2022 | | | | | | |
| FY 2023 | | | | | | |
| FY 2024 | | | | | | |
| Total | 80,961 | 61,941 | - | - | 61,941 | 19,020 |

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

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

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

(P/R and PCR)

There is no major gap between the original and actual cost.

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

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

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

Organization's Role

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc. Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

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

Procurement

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

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

Actual, if changed: (*P/R and PCR*)

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

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

2.4.2.1 Procurement & Consultant

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

| Contract | Selection Method | | | | | |
|--------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------|--|--|--|
| Package | 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 | Package-4: To install ITS (Toll Management System and Highway Traffic Management System) | International Competitive Bidding Process (With PQ, Single stage with two envelopes) | No Change | | | |
| 5 | Package-5: To conduct the geotechnical investigation | Local Competitive Bidding Process | No Change | | | |
| Consulting | y Services | | | | | |
| 1 | Consulting Service for Supervision | Short List Method (QCBS) | No Change | | | |

2.4.2.2 Performance

Consultant's Progress:

January 2020:

- 1 GC conducted Monthly Progress Review Meeting with the Package-1 Contractor on 16th January 2020 and with the Package-2 & the Package-3 Contractors on 17th January 2020 to review the status of Design and Physical progress of the project.
- 2 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-022 & IPC-023 (80% ad-hoc) and IPC-021 (detailed verification)
 - ii) Package-2: IPC-018 (80% ad-hoc) and IPC-017 (detailed verification)
 - iii) Package-3: IPC-013 (80% ad-hoc) and IPC-012 (detailed verification)
- 3 GC has prepared and submitted a total reimbursement claim of 7069.47 Million JPY to MMRDA / JICA in January 2020.
- 4 GC has deployed adequate number of staff at MTHL Project sites for the construction supervision works. Also, they are rigorously monitoring the quality, health & safety and environmental aspects of the project.

February 2020:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-024 (80% ad-hoc) and IPC-022 & IPC-023 (detailed verification)
 - ii) Package-2: IPC-019 & IPC-020 (80% ad-hoc) and IPC-018 (detailed verification)
 - iii) Package-3: IPC-014 (80% ad-hoc) and IPC-013 (detailed verification)
- 2 GC has prepared and submitted a total reimbursement claim of 6192.32 Million JPY to MMRDA / JICA in February 2020.
- 3 GC has deployed adequate number of staff at MTHL Project sites for supervision of the construction works. Also, they are rigorously monitoring the quality, health & safety and environmental aspects of the project.

March 2020:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-025 (80% ad-hoc) and IPC-024 (detailed verification) Mobilization Advance Recovery done for INR and EURO.
 - ii) Package-2: IPC-021, IPC-022 & IPC-023 (80% ad-hoc) and IPC-020 (detailed verification)
 - iii) Package-3: IPC-015 (80% ad-hoc) and IPC-014 (detailed verification) Mobilization Advance Recovery done for INR
- 2 3 GC has prepared and submitted a total reimbursement claim of 2255 Million JPY to MMRDA / JICA in March 2020.
- 3 Approximately 91% of the Technical Design Modules have been submitted by the Contractors across all the 3 Packages; out of which 77% of the modules have been reviewed and approved by GC.
- 4 From 23rd March 2020, countrywide lockdown implemented following the Corona Virus Pandemic situation across the globe forcing all the construction activities to be completely stopped.

Contractor's Progress:

Package-1 Physical Progress till 31st March 2020

| S. No | Activity | Total Scope | Unit | Cumulative Achieved Works | % of Work done Against the Total Scope | Remarks |
|----------|-----------------------------|----------------|----------|---------------------------------|-------------------------------------------------|---------|
| 1 | Temporary Access Bridge | | | | | |
| 1.1 | Bridge Deck | 2953 | Rmt | 2953 | 100% | |
| 2 | Test Pile | | | | | |
| 2.1 | Test Piles | 5 | No. | 4 | 80% | |
| 3 | Permanent Bridge Works - L | and/ Inte | rchange | Zone | | |
| 3.1 | Piles | 524 | No. | 246 | 47% | |
| 3.2 | Pile Caps | 158 | No. | 42 | 27% | |
| 3.3 | Piers | 228 | No. | 77 | 34% | |
| 3.4 | Pier Caps | 215 | No. | 0 | 0% | |
| 4 | Permanent Bridge Works - Ir | tertidal Z | Zone | | | |
| 4.1 | Piles | 316 | No. | 202 | 64% | |
| 4.2 | Pile Caps | 76 | No. | 40 | 53% | |
| 4.3 | Piers | 148 | No. | 76 | 51% | |
| 4.4 | Pier Caps | 148 | No. | 39 | 26% | |
| 5 | Permanent Bridge Works - M | larine Zo | ne | | I | L |
| 5.1 | Piles | 399 | No. | 266 | 67% | |
| 5.2 | Pile Caps | 79 | No. | 22 | 28% | |
| 5.3 | Piers | 160 | No. | 4 | 3% | |
| 5.4 | Pier Caps | 160 | No. | 2 | 1% | |
| 6 | Permanent Bridge Works - T | otal | | | | |
| 6.1 | Piles | 1239 | No. | 714 | 58% | |
| 6.2 | Pile Caps | 313 | No. | 104 | 33% | |
| 6.3 | Piers | 536 | No. | 157 | 29% | |
| 6.4 | Pier Caps | 523 | No. | 41 | 8% | |
| 7 | Precast Segments | <u> </u> | <u> </u> | | | |
| 7.1 | Segment Casting | 6713 | No. | 408 | 6% | |
| 7.2 | Segment Erection | 446 | Spans | 1 | 0.2% | |

Note: Please note that the scope of works has been little changed due to the design amendment.

| Pack | Package-2 Physical Progress till 31 st March 2020 | | | | | | |
|----------|--------------------------------------------------------------|----------------|----------|---------------------------------|----------------------------------------------------|---------|--|
| S. No | Activity | Total Scope | Unit | Cumulative Achieved Works | % of Work done Against the Total Scope | Remarks | |
| 1 | Temporary Access Bridge | | | | | | |
| 1.1 | Bridge Deck | 2682 | Rmt | 2677 | 99% | | |
| 2 | Test Pile | | | | | | |
| 2.1 | Test Piles | 2 | No. | 2 | 100% | | |
| 3 | Permanent Bridge Works - | Land/ Int | erchange | Zone | | | |
| 3.1 | Open Foundation | 113 | No. | 58 | 51% | | |
| 3.3 | Piers | 119 | No. | 16 | 13% | | |
| 3.3 | Pier Caps | 104 | No. | 0 | 0% | | |
| 3.4 | Portal Beams- Land | 6 | No. | 0 | 0% | | |
| 3.5 | Pier Head Segments -Land | 42 | No. | 0 | 0% | | |
| 4 | Permanent Bridge Works - | Intertidal | & CRZ Zo | one | | | |
| 4.1 | Piles | 290 | No. | 251 | 87% | | |
| 4.2 | Pile Caps | 70 | No. | 32 | 46% | | |
| 4.3 | Piers | 70 | No. | 9 | 13% | | |
| 4.4 | Pier Caps | 18 | No. | 0 | 0% | | |
| 4.5 | Pier Head Segments | 52 | No. | 0 | 0% | | |
| 5 | Permanent Bridge Works - | Marine Z | one | | | | |
| 5.1 | Piles | 514 | No. | 66 | 13% | | |
| 5.2 | Pile Caps | 122 | No. | 0 | 0% | | |
| 5.3 | Piers | 122 | No. | 0 | 0% | | |
| 5.4 | Pier Caps | 48 | No. | 0 | 0% | | |
| 5.5 | Pier Head Segments | 74 | No. | 0 | 0% | | |
| 6 | Permanent Bridge Works - | Total | | | | | |
| 6.1 | Open Foundation | 113 | No. | 58 | 51% | | |
| 6.2 | Piles | 804 | No. | 317 | 39% | | |
| 6.3 | Pile Caps | 192 | No. | 32 | 17% | | |
| 6.4 | Piers | 311 | No. | 25 | 8% | | |
| 6.5 | Pier Caps | 170 | No. | 0 | 0% | | |
| 6.6 | Portal Beams | 6 | No. | 0 | 0% | | |
| 6.7 | Pier Head Segments | 168 | No. | 0 | 0% | | |
| 7 | Precast Segments | | | | | | |
| 7.1 | Segment Casting | 3142 | No. | 135 | 4.3% | | |
| 7.2 | Segment Erection | 271 | Spans | 0 | 0% | | |

Note: Please note that the scope of works has been little changed due to the design amendment.

| Package-3 Physical Progress till 31 st March 2020 | | | | | | |
|--------------------------------------------------------------|------------------------|----------------|------|---------------------------------|-------------------------------------------------------|---------|
| S. No | Activity | Total Scope | Unit | Cumulative Achieved Works | % of Work done Against the Total Scope | Remarks |
| 1 | Permanent Bridge Works | | | | | |
| 1.1 | Open Foundations | 195 | No. | 126 | 65% | |
| 1.2 | Piers | 195 | No. | 63 | 32% | |
| 1.3 | Pier Caps | 189 | No. | 21 | 11% | |
| 1.4 | Segment Casting | 750 | No. | 78 | 9% | |
| 1.5 | Segment Erection | 53 | Span | 0 | 0% | |

Package-4 (ITS)

Pre-Qualification (PQ) process is on-going. Also, preparation of Bid Documents for ITS system is in progress. GC is resolving the queries raised by the prospective bidders.

Health & Safety and Environment (HSE)

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

Package-1 Safety Report

| Sr. No | Description | From January to March 2020 | Cumulative |
|--------|----------------------------------------------------------------------|-------------------------------|------------|
| 1 | Total Man Hours Since Inception | 3,803,304 | 14,677,548 |
| 2 | Number of Man-Hours (Accident Free Man-Hours) | 3,538,320 | 2,167,560 |
| 3 | Number of Man-Days | 475,413 | 1,834,693 |
| 4 | Number of Reportable Fatal Accidents | 1 | 2 |
| 5 | Number of Non-Fatal Accidents | 0 | 1 |
| 6 | Number of Near Miss Incidents | 16 | 44 |
| 7 | Number of First Aid Cases | 16 | 98 |
| 8 | Number of Dangerous Occurrences | 0 | 1 |
| 9 | Number of Reportable Sick Cases | 0 | 0 |
| 10 | Number of Man-Hours Lost | 48,000 | 96,448 |
| 11 | Number of Man-Days Lost | 6,000 | 12,058 |
| 12 | Number of Reportable Accidents per 100,000 Man-Hours Worked | 1 | 3 |
| 13 | Number of Inspections done for Offices & Sites | 46 | 243 |
| 14 | Number of Training/ Induction done for Offices & Sites | 51 | 210 |
| 15 | Daily Average Manpower (Including all Workmen & Staff) for the Month | 10,673 | 1,702 |
| 16 | Details of Safety Committee meetings | 2 | 21 |
| 17 | No. of toolbox talks | 8,630 | 26,295 |
| 18 | No. of critical excavations. | 8 | 16 |
| 19 | Pre-employment Medical check-up | 1,925 | 13,990 |
| 20 | No. of Safety Walk down | 12 | 119 |
| 21 | No. of Safety Inductions completed | 4,304 | 13,990 |

Package-2 Safety Report

| Sr. No | Description | From January to March 2020 | Cumulative |
|--------|----------------------------------------------------------------------|-------------------------------|------------|
| 1 | Total Man Hours Since Inception | 1,796,751 | 6,618,885 |
| 2 | Number of Man-Hours (Accident Free Man-Hours) | 1,253,901 | 1,51,470 |
| 3 | Number of Man-Days | 163,348 | 6,03,100 |
| 4 | Number of Reportable Fatal Accidents | 0 | 0 |
| 5 | Number of Non-Fatal Accidents | 1 | 3 |
| 6 | Number of Near Miss Incidents | 7 | 33 |
| 7 | Number of First Aid Cases | 8 | 54 |
| 8 | Number of Dangerous Occurrences | 0 | 4 |
| 9 | Number of Reportable Sick Cases | 1 | 1 |
| 10 | Number of Man-Hours Lost | 88 | 924 |
| 11 | Number of Man-Days Lost | 8 | 97 |
| 12 | Number of Reportable Accidents per 100,000 Man-Hours Worked | 1 | 3 |
| 13 | Number of Inspections done for Offices & Sites | 77 | 567 |
| 14 | Number of Training/ Induction done for Offices & Sites | 34 | 434 |
| 15 | Daily Average Manpower (Including all Workmen & Staff) for the Month | 5,774 | 870 |
| 16 | Details of Safety Committee meetings | 2 | 22 |
| 17 | No. of toolbox talks | 488 | 3,078 |
| 18 | No. of critical excavations. | 0 | 0 |
| 19 | Pre-employment Medical check-up | 1,595 | 6,389 |
| 20 | No. of Safety Walk down | 10 | 69 |
| 21 | No. of Safety Inductions completed | 1,622 | 6,411 |

Package-3 Safety Report

| Sr. No | Description | From January to March 2020 | Cumulative |
|--------|----------------------------------------------------------------------|----------------------------|------------|
| 1 | Total Man Hours Since Inception | 365,618 | 1,191,474 |
| 2 | Number of Man-Hours (Accident Free Man-Hours) | 365,618 | 1,191,474 |
| 3 | Number of Man-Days | 45,703 | 148,934 |
| 4 | Number of Reportable Fatal Accidents | 0 | 0 |
| 5 | Number of Non-Fatal Accidents | 0 | 0 |
| 6 | Number of Near Miss Incidents | 2 | 7 |
| 7 | Number of First Aid Cases | 6 | 39 |
| 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 | 41 | 181 |
| 14 | Number of Training/ Induction done for Offices & Sites | 14 | 120 |
| 15 | Daily Average Manpower (Including all Workmen & Staff) for the Month | 1,095 | 3678 |
| 16 | Details of Safety Committee meetings | 2 | 19 |
| 17 | No. of toolbox talks | 586 | 2,714 |
| 18 | No. of critical excavations. | 0 | 3 |
| 19 | Pre-employment Medical check-up | 693 | 2825 |
| 20 | No. of Safety Walk down | 11 | 76 |
| 21 | No. of Safety Inductions completed | 693 | 2825 |

Please refer Attachment 9 - Site Progress Photos for the development of the project.

3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

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

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

3.2 Precautions (Measures To Be Adopted/ Points Which Require Special Attention)

| Original Issues and Countermeasure(s) | Actual Issues and Countermeasure(s) |
|---------------------------------------------|-----------------------------------------------------|
| 3.2.1 General Issues | (P/R and PCR) |
| 1. Toll Arrangement/ Toll Rate | |
| Fixed toll rate as per the type of vehicle | Appropriate Tolling Policy/ Rates will be finalized |
| will be levied for the road users after the | by December 2021. |
| completion of the Project. An appropriate | |
| tolling policy/ rates will be finalized in | |
| consultation with the state government | |
| prior to the completion of Civil works. | |
| 2. Operation and Maintenance | |
| MMRDA proposes to appoint separate | |
| agencies for Operation & Maintenance of | Single Operation and Maintenance Contractor |
| the bridge and for Toll Management | will be appointed by December 2021. |
| 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. | |
| 3.2.2 Environmental and Social | (P/R and PCR) |
| Consideration | • MMRDA has disclosed Supplemental EIA & |
| a. CRZ Clearance | SIA on MMRDA website. |
| i. Supplemental EIA has been approved | • The renewed CRZ clearance was granted on |
| by MMRDA and disclosed on the | 25/1/2016 from MoEF&CC and the approval |
| website of JICA. Supplemental EIA | conditions have been imposed on the |
| report has been disclosed also on the | Contractors as the Employer's requirements. |
| website of MMRDA. | MMRDA has actively monitored the |
| ii. Furthermore, renewed CRZ Clearance | compliances of the approval conditions and |
| has been obtained in January 2016. | maintains throughout the construction phase. |
| iii. In accordance with the conditions for | MMRDA appointed Mangroves & Marine |

| Biodiversity Foundation for bird monitoring |
|-----------------------------------------------|
| and implementation of Flamingos and bird |
| monitoring program for the MTHL project |
| during the construction as well as the long- |
| term monitoring after the construction. |
| • Rs 91.42 Crore has been transferred to |
| Mangroves & Marine Biodiversity |
| Foundation, Mumbai for the development & |
| conservation of mangrove area and its |
| afforestation. Such funds will be managed by |
| the Mangrove Foundation of Maharashtra |
| State. |
| • As per the renewed CRZ clearance |
| condition, IIT Mumbai has been appointed for |
| the DPR study to develop a Mahul creek |
| Effluent Treatment Plant (ETP). Rs 4.98 |
| Crore was secured for IIT services. The Draft |
| DPR has been reviewed and approved. |
| |

b. Required Permits

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

| 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 /Transplantati on | Respective Tree Authorities | Contractor for respective Packages | - | Pkg-1:TreeCutting/Transplantation permission is awaited from the TreeAuthority.Pkg-2:TreeCutting/Transplantation permission obtained & completed.Pkg-3:Forest Department has issued a concurrence on 19/05/2019.19/05/2019.CIDCO's permission for Tree Cutting/ Transplantation obtained on 25th November 2019. |
| 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 | |

Table 3.2.2 Present Status of some Important Permits

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 | | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| | 10000(0) | remaining problem(s) | | | | |
| 1. | Establishment of Effective | Cell is established by MMRDA | | | | |
| | Environmental and Social Cell in PIU | (Annexure III, Organization chart) | | | | |
| | MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up. | | | | | |
| 2. | Rehabilitation and Land Acquisition | Sewri: Involuntary resettlement in Sewri section | | | | |
| | lssues | has been further validated by Social Development | | | | |
| a. | Affected Area and Population Due to the Project, 1282 non- | Cell of MMRDA. Out of 297 Project Affected Households (PAHs) have given consents as follows: | | | | |
| | titleholders will be involuntary resettled, | | | | | |
| | and 108.09 ha of land will be handed | 164 PAHs Kanjurmarg for residential | | | | |
| | over by CIDCO. | 25 PAHs Kanjurmarg for commercial | | | | |
| | | 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial | | | | |
| | | 1 PAHs (commercial to residential) for Bhakti Park | | | | |
| | | 100 PAHs HDIL Kurla for residential | | | | |
| | | Navi Mumbai: CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 106.345 ha has been handed over by CIDCO to MMRDA. CIDCO is going to acquire the balance 1.745 Ha with the help of Collector, Raigad. | | | | |
| b. | Entitlement Policy | | | | | |
| | MMRDA prepared the entitlement matrix for resettlement of non-title holders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010) | There have been no changes during the enforcement. As per the Attachment 2-5 of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy. | | | | |

| Issue(s) | Action or countermeasure(s) taken and |
|----------------------------------------------------------------------------|-------------------------------------------------------|
| | remaining problem(s) |
| ("Guidelines") (Attachment 2-5). | |
| c. Compensation to Project affected | |
| Fishermen | Updated Attachments 2-8 and 2-10 are enclosed |
| Detailed baseline survey will be | in the report. |
| 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. | |
| d. Implementation Schedule | |
| - | Updated Attachment 2-10 is enclosed in the |
| The Implementation schedule for land | report. |
| acquisition, resettlement and | |
| rehabilitation is attached as per | |
| Attachment 2-10. e. Grievance Redressal Mechanism | |
| | Sewri: FLGRC (Field Level Grievance Redressal |
| Grievance Redressal Committee | Committee) and SLGRC (Senior Level Grievance |
| ("GRC") set under MMRDA will deal | Redressal Committee) were set as per the RAP |
| with grievances raised by PAPs in Sewri and fishermen to be affected by | and in operation. |
| the Project. Any grievances raised by | Compensation Committee has been constituted to |
| PAPs whose land is acquired by | address the issues of Compensation to Lease |
| CIDCO shall be resolved by CIDCO. | Holders at Sewri. |
| , | Fishermen: GRC for resolving grievances of the |
| | fisherfolk was set up as per the compensation |
| f. Internal Monitoring | policy and is in operation. |
| | Internal Monitoring updates are mentioned in |
| Internal Monitoring of the Resettlement | Attachment 2-8. |
| 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. | |

| Issue(s) | Action or countermeasure(s) taken and | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| | remaining problem(s) | | | | | |
| g. Qualitative Independent Evaluation | | | | | | |
| An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner. | Updated Attachment 2-10 is enclosed in the report. | | | | | |
| h. RAP Implementation Budget | | | | | | |
| The amount of estimated resettlement and compensation budget is Rs.906.26 Cr MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation. | As updated in MOD dated 03/09/2019 for MTHL- II, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr. | | | | | |
| i. Environmental Management Plan | | | | | | |
| ("EMP") The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary. | EMP will be updated, if required, in due course of construction activities/progress. | | | | | |
| j. Environmental Monitoring Plan | | | | | | |
| ("EMoP") MMRDA takes overall responsibility for implementation of EMoP. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis | Updated Environmental Monitoring Plan with package wise updated cost is reported in Attachment 2-3 . Environmental Monitoring Results during the construction phase are reported in Attachment 2- 4 . | | | | | |

| Issue(s) | Action or countermeasure(s) taken and remaining problem(s) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Monitoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA. | |
| k. Long Term Bird Monitoring MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society. | MMRDA has entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai for periodical disbursement to BNHS. |

3.4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and/ or FIRR

Supporting data for Computing EIRR and/ or FIRR

| Indicators | Original (Year 2015) | Target (Year 2024) 2 Years After Commercial Operation |
|--------------------------------------------|-------------------------|-------------------------------------------------------------|
| Average Annual Daily Traffic (PCU/ day) | - | 47,400 |
| Daily Average Travel Time (min) * 1 | 61 min | 15.8 min |
| Number of Users (Persons/ year) * 2 | - | 46,077,504 |
| Cargo Volume (tons/ year) * 3 | - | 13,511,759 |

*1 Section on Sewri – Chirle

*3 Assumptions: the maximum capacity of respective vehicle (LCV: 1 ton, HCV and MAV: 15 tons) is used for estimation.

^{*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.

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

3.5 Monitoring Plan for the indicators

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

Original: (*P/M and PCR*)

Monitoring Organization

PIU shall be In-Charge of Monitoring activities for the Project.

Submission of QPR and PCR

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

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

Actual: (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

This QPR No. 12 is submitted for a period of 1st January to 31st March 2020.

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)

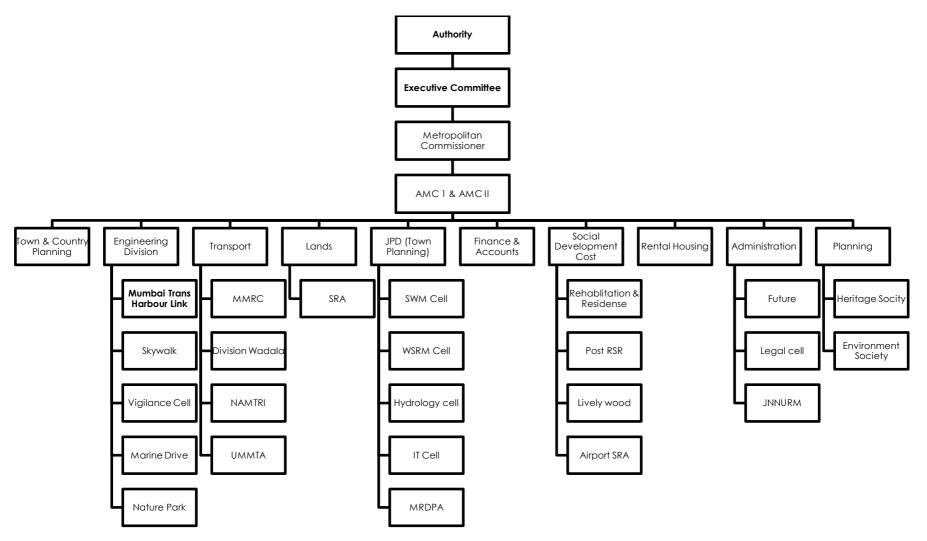
5.3 Lessons Learnt and Recommendations

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.

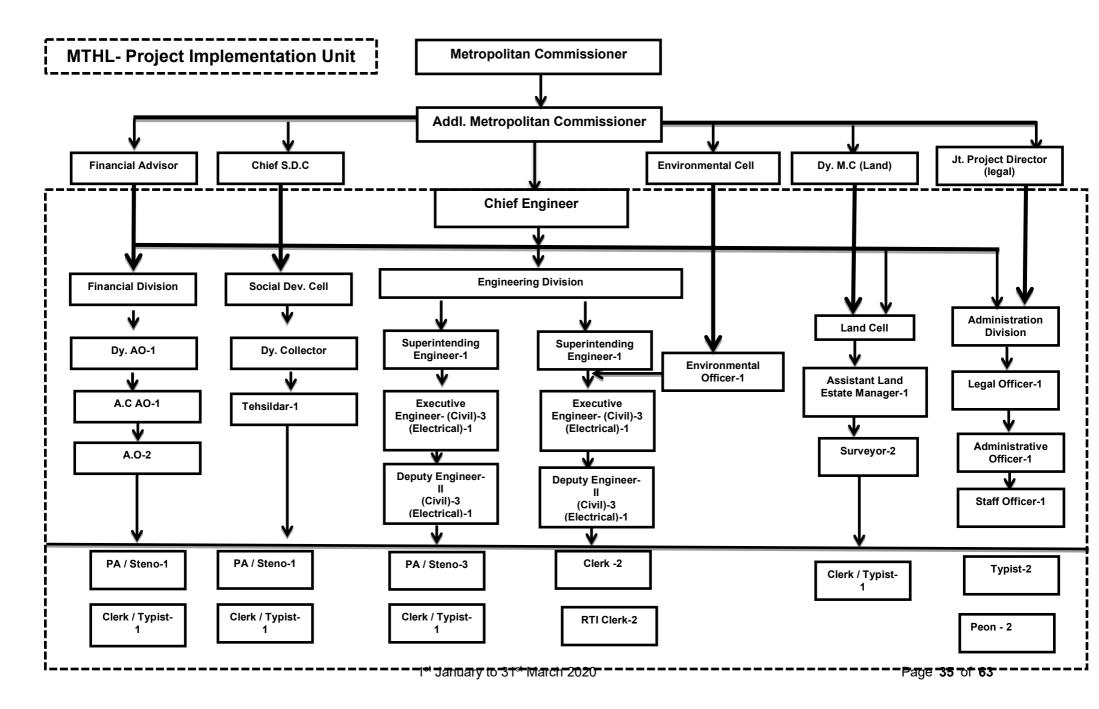
(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart



Mumbai Trans Harbour Link Project - Quarterly Progress Report No. 12(Jan-Mar 2020)



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 |
|-----------|-----|----------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------|------------------|------------------|------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 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 | | | | | | SO₂: 80 / 80µg/m³ | P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement. |
| | | | | | | | | | | | | NO₂: 80 / 80µg/m³ РМ₁₀: 100 / 100µg/m³ РМ₂₅: 60 / 60µg/m³ | P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of biding. Later modifications suggested by GC were not accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequecy would change after obtaining CTE. |
| | 2 | Water pollution | pH, BOD, DO, | IS / AWWA | 1. Sewri & Sewri bay area | Quarterly | 810,000 | 2,400,000 | 810,000 | 0 | 3,210,000 | O₃: 180 / 180µg/m³ CO: 0.4 / 0.4mg/m³ Marine water quality Standards – Class SW-IV Harbour | Water Pollution not |
| | | | Turbidity and O&G | | for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II | 4 Times / Year | | | | | | Waters (MPCB) - pH : 6.5-9 | applicable for Pkg. 3 |
| u. | | | | | 3. Gavhan & Chirle for package III | Not applicable | | | | | | D0: 3 mg/l Turbidity: 30 NTU BOD: 5 mg/l 0 & G: 10 mg/l | - |
| Pollution | 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. |

Attachmemt 2-3

| 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 |
|----------|----------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------|------------------|------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III | 4 Times / Year Once site clearing work/execution part of work start. | | | | | | Municipal Soild Waste Management Rules, 2013 Generated waste shall be reused or disposed at designated site. Sites have been identified and the location for Pkg. 1 is at Bhayandar Pada in Thane. For Pkg. 2 & 3 is in Navi Mumbai at Pushpak Node nera "Teen Taki Junction" along the Amar Marg. | P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be |
| | 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 | Sewri & Sewri bay area for package I Nhava temporary bridge & casting yard in Gavhan for package II | 1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year | 150,000 | 1,500,000 | 150,000 | 100,000 | 1,750,000 | Soil Pollution Standard in India (MOEF) Cd: 0.01mg/l | |
| | | | | | | *If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon | | | | | | Lead: 0.01mg/l Chromium (VI): 0.05mg/l Arsenic: 0.01mg/l T-Mercury: 0.0005mg/l Copper: 125mg/kg (some items shall be selected from totally 25 standards items) | |
| - | 5 | Noise and vibration | Ambient and road side noise $(dB(A)L_{Aeq})$ | IS Standard | Sewri & Sewri bay area for package I Nhava temporary bridge & casting yard in Gavhan for package II | at Storage area only Fortnightly 2 Times / Year | 150,000 | 54,000 | 150,000 | 369,000 | 573,000 | -Construction Noise; 85dB(A) -Ambient Noise Standards in India (dB (A) Leq) | - |
| | | | | | package III | Fortnightly | 75.000 | | PF 000 | | 100 000 | 1.Industrial AreaDay 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 ZoneDay Time: 50 (6-22hr)Night Time: 50 (6-22hr)Night Time: 50 (6-22hr)Night Time: 50 (6-22hr)Night Time: 50 (6-22hr) | |
| | | | Vibration (dB L10 or mm/sec) | | 1 Location Gavan area for package III | Half yearly | 75,000 | 0 | 75,000 | 400,000 | 475,000 | - Construction vibration 75dB -Vibration Standards roadside 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr) | Not applicable for Pkg. 1 |
| | 9 and 10 | Protected Area /Ecosystem | 1.Monitoring of mudflat conditions including fauna-flora | Ocular inspection and quantitative survey | Along MTHL alignment and mangrove replant area for Package I | Quarterly during the construction Period | 6,500,000 | 7,200,000 | 6,500,000 | 0 | 13,700,000 | | Not applicable for Pkg. 3 |
| | | | 2. Monitoring of Cutting Tree and replantation/ transplanting area 3.Monitoring of Mangrove Plantation | 1-1. Fauna-Flora Line-Point census and record number | Along MTHL alignment and mangrove replant area for package II Not applicable for Package III | 4 Times / Year | | | | | | Significant impacts are not caused by the project Note) | |
| | | | area appointed by MoEF | and appeared species | | | | | | | | | |

| Category | No. | Impacted Item on JICA Guidelines | Parameter | Method | Location | Frequency a year | Cost (INR) | Cost Pkg.1 (INR) | Cost Pkg.2 (INR) | Cost Pkg.3 (INR) | Total Cost (INR) | Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF) | Remarks |
|-----------------------|-----|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------|----------------|------------------|------------------|------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Natural environment (| | | 4. Monitoring of sedimentation soil and ecological parameter (18items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1)Netprimary productivitye, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO ₂) | 1-2: Mangrove density and community survey | | | | | | | | Detailed monitoring plan will be setup during basic design stage | |
| ž | | | | 1-3: Benthos Survey | | | - | | | | | | |
| | | | | 2-1: Cutting trees | | | - | | | | | Standard for Soil; Supplemental EIA Table 6.1.15 | |
| | | | | confirmation 3-1: Mangrove | | | | | | | | Standard for Ecological Parameter: | |
| | | | | survey in the replanted area | | | - | | | | | Netprimary Productivity | |
| | | | | | | | | | | | | <1,500 mgC/m3/day at surface | |
| | | | | | | | - | | | | | · Chlorophyll-a <4mg/m3 | |
| | | | | | | | | | | | | • Phosphate: 0.1-90µg/l | |
| | | | | | | | - | | | | | Nitrate: 1.0-500µg/l Nitrite: <125µg/l | |
| | | | | | | | | | | | | Particulate Organic Carbon: 10-100mg/m ³ | |
| | 11 | Hydrology | Flooding situation | Flood level | Not applicable for Package I | | 350,000 | 0 | 350,000 | 0 | 350,000 | SiO2: 10-5,000μg/l Project activities and structures does not cause flooding | Not applicable for Pkg 1 & 3 |
| | 11 | nyurology | Probling situation | measurement during high precipitation periods | | | 330,000 | U | 330,000 | U | 330,000 | and impacts on tidal conditions | Not applicable for Fig. 1 & 5 |
| | | | | | 2 Locations (CRZ at Sewri and Shivaji Nagar) for | 4 Times / Year | | | | | | | |
| | | | | | Package II Not applicable for Package | | | | | | <u> </u> | | |
| | 12 | Topography and | Conditions in embankment area | | III 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 |
| | | Geology | embankment area | Stability of embankment | Interchange in Shivaji Nagar for Package II | 4 Times / Year | | | | | | anu tidiks | |
| \vdash | 13 | Local economy | | | Not applicable for Package Affected area | | As per Actuals | | | | | | |
| | 15 | such as employment and livelihood | | | initia alta | | | | | | | | |
| ment | 14 | Local conflict of interests | Construction worker's township | Confirmation of workers list from | Sewri and Shivaji Nagar) for | 2 Times / Year | 125,000 | 0 | 125,000 | 0 | 125,000 | Employment opportunity shall be provided fairly | |
| viron | 15 | Infectious | Number of infected | contractor Confirmation of | | 4 times / year x 4.5 | 525,000 | 0 | 525,000 | 0 | 525,000 | Infection disease rate shall not be caused by the project | |
| Social environment | | diseases such as HIV/AIDS | patient | health check list from contractor | | years | | | | | | | |
| Soc | 16 | Labour Environment | Construction worker's condition | Confirmation of safety devices and conditions via interviews | 2 Location (camp site in Sewri and Shivaji Nagar) for Package II | 2 times / year | 500,000 | 0 | 500,000 | 0 | 500,000 | "Building And Other Construction Workers (Regulation of Emloyment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions" | |
| Other | 17 | Accidents | Number of accidents | Confirmation of accidents list from local government and State Traffic Police Department | 2 Locations (camp site in Sewri and Shivaji Nagar) for Package II | 4 Times / Year | 400,000 | 0 | 400,000 | 0 | 400,000 | Any accidents are not caused by construction | |
| | | | | Total | | | 8140500 | 325,354,000 | 12,000,000 | 2,211,500 | 339,565,500 | | |

The Project for Construction of Mumbai Trans Harbour Link Reporting Form of Environmental Monitoring during Construction Attachment 2-4

Monitoring Period - January 2020 to March 2020

| | ent 2-4 | | | | | Nomeoring Peri | ou - January 2020 to March 2020 | | | _ |
|-----------|------------|---------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------|
| . Enviro | onmental] | Monitoring during | Construction for 4.5 | years | 1 | 1 | I | Manitorino Da | | |
| a | | | | | | | | Monitoring Re | esuit | Г |
| Area | No. | Item | Parameter | Location | Frequency a year | Item and Stanadard | Location 1- Pkg 1 | Location 2- Pkg-2 | Location 3- Pkg 3 | |
| | | | | 1. Sewri & Sewri bay area for package I | Quarterly monitoring ia conducted at all locations. | National Ambient Air Quality Standards (NAAQS) | Sewri | Shivaji Nagar | Chirle | |
| | | | | 2. Nhava temporary bridge & casting yard in | 4 Times / Year | (Standard for 24hrs: Industrial and Residential) | | | | |
| | | | | 3. Gavhan & Chirle for | From march -2019 | 1. SO ₂ : 80µg/m ³ | BDL (DL=5) | BDL | 16 | — |
| | 1 | Air pollution | SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} | package III | onwards monitoring is | 2. NO ₂ : 80μg/m ³ | 21 | 16 | 39 | — |
| | | | | | conducted quarterly as per MOEF and CPCB norms | 3. PM ₁₀ : 100µg/m ³ | 175 | 87 | 86 | |
| | | | | | | 4. PM _{2.5} .: 60µg/m ³ | 55 | 37 | 41 | |
| | | | | | | 5.CO:02mg/m3 | 1.3 | 1.3 | 0.66 | Γ |
| | | | | | | 6.VOCs | 1.3 | 1.8 | 2.9 | |
| | | | | 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 | Water pollution | pH, BOD, DO, Turbidity | bridge & casting yard in Gayhan for package II | 4 Times / Year | 1. pH : 6.5-9 | 7.6 | 7.9 | Regarding soil contamination/s 25 standards items during the E | |
| | _ | in aller pollution | and O&G | 3. Gavhan & Chirle for | Not applicable | 2. DO: 3 mg/l | 4.7 | 5.5 | JICA, and the rest of items shall | |
| | | | | package III | | 3. Turbidity: 30 NTU | 11.7 | 11.8 | Not applicable | |
| | | | | | | 4. BOD: 5 mg/l | BDL (DL =2) | BDL | Not applicable | F |
| | | | | | | 5. O & G: 10 mg/l | BDL (DL=2) | BDL | Not applicable | |
| | | | | | | 6.COD | 21 | 32 | Not applicable | Г |
| | | | | 1. Sewri & Sewri bay area for package I | Daily | Municipal Soild Waste Management Rules, 2016 | Sewri Camp Site | Shivaji Nagar Camp Site | Chirle Camp Site | |
| | | | Volume of waste soil, cutting tree and domestic garbage | 2. Nhava temporary bridge & casting yard in Gavhan for package II | 4 Times / Year | Generated waste soil (t) total | <u>27105.51 m3</u> | App. 3000 CuM Collected in jumbo bags and Disposed off in EBB (named by MbPT)Location and Casting Yard | NIL | |
| | 3 | Waste | | 3. Gavhan & Chirle for package III | Once site clearing work/execution part of work start. | Generated cutting tree (ha) total | Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting so far NIL | Not Applicable | Permission from both CIDCO and Forest dept. Tree cutting so far is nil. | |
| | | | | | | Generated domestic waste (t/month) total | 3.58 T for the quarter | 3 T per quarter is disposed by | 1.5 T quarter is disposed through | F |
| | | | | | | | <u>3.38 1 for the quarter</u> | CIDCO | Gram panchayat. | L |
| | | | | 1. Sewri & Sewri bay area for package I | 1. Muck: 1 Time / Year 2. Sediments: 4 Times / | Confirmation of adequate disposal (visualt survey) Soil Pollution Standard in India (MOEF) | | Testing Done on september 2019 and Reports submitted to GC. | Not applicable | |
| | | | | 2. Nhava temporary bridge & casting yard in Gavhan for package II | Year | 1. Cadmium: 0.01mg/l | | | | |
| | | | | package III | fuel storage area. | 2. total cyanide : not detected | Refer Remark | | | |
| | | | | | *One time grab sample to | 3. organic phosphorus: not detected | | | | 1 |
| Pollution | | | | be Bri *Pr | be collected during Bridge Construction *Pre & Post Monsoon at Storage area only | 4. lead: 0.01mg/l | | | Not applicable for package- 3 | |
| | | | | | | 5. chromium (VI): 0.05mg/1 | | | | Γ |
| | | | | | | 6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil) | | | | Γ |
| | | Soil | Harry March 6 01 0 | | | 7. total mercury: 0.005mg/l | | | | |
| | 4 | Contamination/sedim | Heavy Metals & Oil & Grease | | | 8. alkyl mercury: not detected | | | | Ē |
| | | entation | Grease | | | 9. PCBs: not detected | | | | 1 |
| | | | | | | 10. copper: 125mg/kg (only paddy field soil) | 1 | | | ⊢ |
| | | | | | | 11. dichloromethane: 0.02mg/l | l | | | 1 |
| i | | | | | | 12. carbon tetrachloride: 0.002mg/l 13. 1,2-dichloroethane: 0.004mg/l | | | | ⊢ |
| | | | | | | 14. 1,1-dichloroethylene: 0.02mg/l | | | | 1 |
| | 1 | I | I | 1 | 1 | 17. 1,1-dicilioroculyiche: 0.02ilig/1 | 1 | | 1 | 1 |

Attachment 2-4

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

| | | Remark |
|------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| | Location 4 | reasons why the data is exceeding standard counter measures when the data is exceeding |
| | | - counter measures when the data is exceeding |
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| | | BDL- Below Detectable Limit |
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| | | Ponzono io onalvood in ambient air |
| | | Benzene is analysed in ambient air |
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| . /- | | I he cale shed from the tot-I |
| | edimentation, some items shal | |
| | Detailed Design. Only the select be deleted from this form. | |
| | | NOT applicable For MTHL Package-03 |
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| | | Encourance is Ones in a way If any is a set of the |
| | | Frequency is Once in a year. If any minor or major incident has not occure at storage area. |
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| | | |
| | | Muck analysis for package-I was conducted in April |
| | | 2019, and report is already submitted to GC. |
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The Pro Reporti Attachme

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

| ing Forr | m of Environme | ntal Monitoring du | arbour Link ring Construction | | | | | This form |
|----------|---------------------|--------------------------------------|------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------|----------------|
| nt 2-4 | | | | | Monitoring Per | iod - January 2020 to March 2020 | | required |
| onmental | Monitoring during | g Construction for 4.5 | years | | | | | |
| | | | | | 15. cis-1,2-dichloroethylene: 0.04mg/l | | | |
| | | | | | 16. 1,1,1-trichloroethane: 1mg/l | | | |
| | | | | | 17. 1,1,2-trichloroethane: 0.006 mg/l | | | |
| | | | | | 18. trichloroethylene: 0.03mg/l | | | |
| | | | | | 19. tetrachloroethylene: 0.01mg/l | | | |
| | | | | | 20. 1,3-dichloropropene: 0.002mg/l | | | |
| | | | | | 21. thiuram: 0.006mg/l | | | |
| | | | | | 22. simazine: 0.003mg/l | | | |
| | | | | | 23. thiobencarb: 0.02mg/l | | | |
| | | | | | 24. benzene: 0.01mg/l | | | |
| | | | | | 25. selenium: 0.01mg/l | | | |
| | | | 1. Sewri & Sewri bay | Fortnightly | Construction area Standard 85 dB(A) daytime (Japan | | | |
| | | | area for package I | | standard) | Sewri (ST 200-500) | Sea Section (ST5000-5500) | Shivaji Nag |
| | | | | | Not constuction area : Ambient Noise Standard in India | (Industrial area) | Migratory Bird Area(no standard on sea | (Commercial a |
| | | | | | (dB(A) Laeq) | (| section) | (|
| | | | 2. Nhava temporary | 2 Times / Year | | | | |
| | | | bridge & casting yard in | 2 miles / rear | | (5.2) | 72.0 | |
| | | | Gavhan for package II | | Day time : 6-22 hr (continious) dB(A) | 65.2 | 72.8 | 66.8 |
| | | | | | | | | |
| | | | 3. Gavhan & Chirle for | Fortnightly | Night time: 22-6 hr (continious) dB(A) | 59.1 | 65.5 | 65.3 |
| | | Ambient and road side | package III | | (only sea section) | | | |
| | | noise (dB(A)LAeq) | | | Day time : 6-22 hr (10 min during 9-17 hrs) | | | Regard |
| | | noise (ab(ri)zirieq) | | | Night time: 22-6 hr (10 min 22-24 hr) | | | term m |
| | | | | | | | | monito |
| | | | | | Note (standard values in Not construction area) | | | |
| | | | | | 1.Industrial Area | | | |
| | | | | | Day Time: 75 (6-22hr) | Not Applicable | Not Applicable | Not Applicab |
| | | | | | Night Time: 70 (22-6hr) | Not Applicable | Not Applicable | Not Applicab |
| 5 | Noise and vibration | | | | 2.Commercial Area: | | | |
| | | | | | Day Time: 65 (6-22hr) | Not Applicable | Not Applicable | Not Applicab |
| | | | | | Night Time: 55 (22-6hr) | Not Applicable | Not Applicable | Not Applicab |
| | | | 1 Location Gavan area | Half yearly | Construction area Standard 75 dB daytime (Japan | Not Applicable | Not Applicable | Not Applicat |
| | | | for package III | fian yearly | standard) | Sewri (ST 200-500) | Shivaji Nagar | |
| | | | for puckage in | | Not constuction area : Vibration Standard (Japan | (Industrial area) | (Commercial area) | Chirle |
| | | | | | Standard along the road) | (| | |
| | | | | | | | | |
| | | Vihastian | | | | | N (A 17 11 | |
| | | Vibration (dB) | | | Day time : 6-22 hr (continious) | Refer Remark | Not Applicable | Not applicab |
| | | (dB) shall be converted from | | | | | | |
| | | mm/s to dB | | | | | | |
| | | min's to up | | | Night time: 22-6 hr (continious) | | | |
| | | | | | Note (standard values in Not construction area) | | | |
| | | | | | 1. Commercial /Industrial Area | | Not Applicable | |
| | | | | | Day Time: 70 (7-20hr) | | Not Applicable | 1.6 |
| | | | | | Night Time: 65 (20-7hr) | | | 0.2 |
| | | | Alene MTHL alimonation | Ossentanla | Night Time: 65 (20-7hr) | | | 0.2 |
| | | | Along MTHL alignment and mangrove replant | Quarterly during the | | | | |
| | | | area for Package I | construction | Standard is not existing, but quantity and quality should | Sewri side | Sea Section | Shivaji Nagar |
| | | | | | not be worsen | (ST500-5500) | (ST5500-16000) | (app. ST16000- |
| | | | area for rackage r | Period | | (51500-5500) | | |
| | | | urea for rachage r | Period | | (31300-3300) | | |
| | | | | Period | | (31300-3300) | | |
| | | | Along MTHL | | | (31300-3300) | | |
| | | | | Period 4 Times / Year | 1-1. Fauna-Flora (number of species and quantity | (31300-3300) | | N/A |
| | | | Along MTHL alignment and mangrove replant | | | | | N/A |
| | | | Along MTHL alignment and | | | | | N/A |
| | | | Along MTHL alignment and mangrove replant | | 1-1. Fauna-Flora (number of species and quantity | | | N/A |
| | | | Along MTHL alignment and mangrove replant | | | 9715 (Jan-Feb 2020) (refer remark) | 7142(Jan-Feb 2020) (refer remark) | N/A |
| | | | Along MTHL alignment and mangrove replant | | 1-1. Fauna-Flora (number of species and quantity | | 7142(Jan-Feb 2020) (refer remark) | N/A |
| | | | Along MTHL alignment and mangrove replant | | 1-1. Fauna-Flora (number of species and quantity (1) Number of species of bird | | 7142(Jan-Feb 2020) (refer remark) | N/A |
| | | | Along MTHL alignment and mangrove replant | | 1-1. Fauna-Flora (number of species and quantity | | 7142(Jan-Feb 2020) (refer remark) | N/A |
| | | | Along MTHL alignment and mangrove replant | | 1-1. Fauna-Flora (number of species and quantity (1) Number of species of bird (2) Number of species of fish | 9715 (Jan-Feb 2020) (refer remark) | | N/A |
| | | 1.Monitoring of mudflat | Along MTHL alignment and mangrove replant area for package II | | 1-1. Fauna-Flora (number of species and quantity (1) Number of species of bird | 9715 (Jan-Feb 2020) (refer remark) 287 (Greater Flamingo), 8841 (Lesser | 1500 (Greater Flamingo), 25 (Lesser | N/A |
| | | conditions including fauna- | Along MTHL alignment and mangrove replant area for package II | | 1-1. Fauna-Flora (number of species and quantity (1) Number of species of bird (2) Number of species of fish | 9715 (Jan-Feb 2020) (refer remark) | | N/A |
| | | conditions including fauna- flora | Along MTHL alignment and mangrove replant area for package II | | 1-1. Fauna-Flora (number of species and quantity (1) Number of species of bird (2) Number of species of fish | 9715 (Jan-Feb 2020) (refer remark) 287 (Greater Flamingo), 8841 (Lesser | 1500 (Greater Flamingo), 25 (Lesser | N/A |
| | | conditions including fauna- | Along MTHL alignment and mangrove replant area for package II | | 1-1. Fauna-Flora (number of species and quantity (1) Number of species of bird (2) Number of species of fish | 9715 (Jan-Feb 2020) (refer remark) 287 (Greater Flamingo), 8841 (Lesser | 1500 (Greater Flamingo), 25 (Lesser | N/A |

2. Monitoring of Cutting Tree and replantation/transplation

Attachment 2-4

| hivaji Nagar mmercial area) | | |
|-----------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 66.8 | | |
| 65.3 | | |
| | | |
| term monitoring pl | an will be extablished during b | d Area) and ecosystem, detailed long- aseline survay of birds. This tentative etailed long-term monitoring plan. |
| | | |
| Not Applicable | | |
| | | |
| Not Applicable | | |
| | | |
| Not Applicable | | |
| Not Applicable | | |
| Chirle | | |
| ot applicable | | There is no reference standard in India for Vibration monitoring in marine area. GC has confirmed that vibration monitoring is not required for the project. (Package-1) |
| | | |
| | | |
| | | |
| | | |
| 1.6 | | |
| | | |
| 0.2 | | |
| vaji Nagar side ST16000-19000) | Mangrove Replantation agency appointed by State Government | |
| N/A | N/A | |
| | | BNHS report (October 2019- March 2020) |
| | | |

The Project for Construction of Mumbai Trans Harbour Link Reporting Form of Environmental Monitoring during Construction Attachment 2-4

Monitoring Period - January 2020 to March 2020

| | itai iv | Tomtoring during | area | ycai 5 | | (1) Number of groups of monorma | | | |
|----|---------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| | | | 3. Monitoring of Mangrove | | | (1) Number of species of mangorve | | | |
| | | | Plantation area appointed by MoEF | | | (2) Density of mangrove (xx trees/10m x 10m) | | | |
| 6 | 6 | Protected Area | 4. Monitoring of | | | 1-3: Benthos Survey | 502 Section of 1200 No. (102 Confer | | |
| | | | sedimentation soil and | | | (1) Number of species and quantity by species | 503 Species and 289 No/m2 (refer remark) | | |
| | | | 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) | | | 2-1: Cutting tree confirmation | Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting NIL | All the tree cutting and mangrove cutting had been carried Out as per approval received from GC and MMRDA and job was completed in 2018 itself and after that no trees and mangroves have been cut till date | Nil |
| | | | | | | (1) Number of cutting tree and species | | Nil | |
| | | | | | | 3-1: Mangrove survey in the replant area | | | Nil |
| | | | | | | (1) Number of species of mangorve | | | |
| | | | | | | (2) Density of mangrove (xx trees/10m x 10m) | | | |
| | | | | | | 4. Ecologial Parameter | | | |
| | | | | | | (1) Net primary Productivity : <1,500 mgC/m3/day at surface | 600 (refer remark) | | |
| | | | | | | (2) Chlorophyll-a: <4mg/m3 | 4.4 (refer remark) | | |
| | | | | | | (3) Phosphate: 0.1-90µg/l | 278 (refer remark) | | |
| | | | | | | (4) Nitrate: 1.0-500µg/l | 740 (refer remark) | | |
| | | | | | | (5) Nitrite: <125µg/l | | | |
| | | | | | | (6) Particulate Organic Carbon: 10-100mg/m ³ | Done as a part of Soil analysis once in a year | | |
| | | Ecosystem | | | | (7) SiO2: 10-5,000µg/l | 6561 | | |
| 7 | 7 | Hydrology | Flooding situation | Not applicable for Package I | | Criteria for evaluation Project activities and structures does not cause flooding and impacts on tidal conditions | Sewri | Shivaji Nagar | Chirle |
| | | | | 2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II | 4 Times / Year | Monitoring of flooding situation | No Flooding | No flooding | No Flooding |
| | | | | Not applicable for | | | | | |
| 8 | 8 | Topography and Geology | Conditions in embankment area | 2 Locations (1. Embankment of Inter Change in Shivaji Nagar | 4 times / year x 4.5 years | Criteria for evaluation Embankment shall be stabilized without any landslide and cracks | Shivaji Nagar | Chilre | Chirle |
| | | | | and 2 Cutting area at toll gate in Chirle) | | Monitoring of embankment | NA | NA | NA |
| 9 | | Local conflict of | Construction worker's | 2 Locations (major camp site in Sewri and Shivaji | 4 times / year x 4.5 years | Criteria for evaluation Employment opportunity shall be provided fairly | Sewri Camp Site | Shivaji Nagar Camp Site | Chirle |
| | | interests | township | Nagar) | | Number of hired workers by community | 360 (refer remark) | 125-150 (refer remark) | Skilled labours; 270 (from outside) (refer remark) |
| | | | | | | Criteria for evaluation Infection disease rate shall not be caused by the project | Sewri Camp Site | Shivaji Nagar Camp Site | Chirle |
| 10 | .0 | 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 | Confirmation of health check record and inspect project site | Doctors conduct regular health checkup of all workers at site. | Doctors conduct regular health checkup of all workers at site. | Doctors conduct regular health checkup of all workers at site. |
| 1 | 1 | Labour Environment | Construction worker's cond | 2 Locations (major camp isite 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 |
| | | | | 2 Leasting (minutes) | | Site Visual Inspection | All provisions as per BOCW | Conforming with BOCW Act 1996 | Conforming with BOCW Act 1996 as per IM -26A checklist |
| 1 | 2 | Accident | Number of accidents | 2 Locations (major camp site in Sewri and Shivaji | 4 times / year x 4.5 years | Criteria for evaluation Any accidents are not caused by construction | Sewri Camp Site | Shivaji Nagar Camp Site | Other area |
| 1. | | | | | | Number of recorded accident | 2 | NIL | NIL |

Attachment 2-4

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

| | Environmental monitoring reports (Pkg-1) |
|-------|--------------------------------------------------------------------------------------|
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| | Environmental monitoring reports (Pkg-1) |
| | Environmental monitoring reports (Pkg-1) Environmental monitoring reports (Pkg-1) |
| | Environmental monitoring reports (Pkg-1) |
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| m | Data from the log book and attendence register of respective Packages |
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| Act | |
| klist | |
| | |

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha Land in possession in MMRDA – 106.5 ha Balance land acquisition- 1.59 ha

Note: The acquisition of 1.59 ha is in progress by CIDCO. The balance acquisition would be likely completed by the end of September 2020.

| | Required 1 ha | 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 | 7.595 | 1.745 | 30-09-2020 | | The payment status to the land owners are awaited from CIDCO. The same would be communicated to JICA on receipt of the same. |
| | otal 8.09 | 98.75 | 7.595 | 1.745 | | | |

*Portions of Private Land

| Sr. No. | Name of Village | Area (Hectare) | Acquired | Non-acquired |
|------------|-----------------|----------------|----------|--------------|
| 1 | Gavhan | 0.15 | 0.15 | 0.00 |
| 2 | Jasai | 8.72 | 7.306 | 1.414 |
| 3 | Chirle | 0.47 | 0.139 | 0.331 |
| Total Area | | 9.34 | 7.595 | 1.745 |

Attachment 2-8

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

1. General Information

- a. RAP Implementation Monitoring Results:
- b. Date of Preparing This form
- c. Person Preparing This form

Progress Status Report (PSR) of 1st quarter of 2020

31-03-2020

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 | Titleholders: 0 persons |
| | (194 persons) * | Non-titleholders:66 (194 persons) * |
| Commercial PAPs who do not need relocation | 0 persons | Titleholders: 0 persons |
| | | Non-titleholders: 0 persons |

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

2.2 Structures

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

2.3 Fishery

| Categories of Fisher-folks | Identifi | ed Number | Total | Remarks |
|--------------------------------|-------------|------------------|-------|-------------------------|
| | Mumbai side | Navi Mumbai side | | |
| C1: Fishing stakes and nets in | 178 | 52 | 230 | Funds for 230 nos C1 |
| RoW (250 m.) | | | | category fishermen are |
| | | | | transferred to |
| | | | | Commissioner of |
| | | | | Fisheries on 17.03.2020 |
| | | | | for payment to the |
| | | | | beneficiaries. |

Attachment 2-8 – QPR No.12 (Jan-Mar 2020)

| C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side) | 430 | 552 | 982 | Funds for 496 nos C2 category fishermen are transferred to Commissioner of Fisheries in the 2017-18. The list of balance 440 Nos. of C2 category fishermen are submitted to ACF Raigad, ACF Thane and ACF Mumbai suburban for their verifications. |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C3: Hand Pickers | 1453 | 3691 | 5144 | Funds for 4205 nos of C3 category fishermen are already transferred to Commissioner of Fisheries and balance 939 Nos. of C3 category fishermen are in process of transfer to Commissioner of Fisheries. |
| 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 Red 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 | 7.595 | 1.745 | |
| Total | 118. | 179 | 108.839 | 7.595 | 1.745 | |

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 | 62% | |
| | No. of Residential PAHs given possession of Alternate Tenements | 231 | 139 | 0 | 139 | 60% | |
| | No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements | 66 | 21 | 0 | 21 | 30% | |
| | No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements | 66 | 20 | 0 | 20 | 26% | |
| | No. of Occupants of MbPT Leased Plots provided Compensation | 6 | 5 | 0 | 5 | 84% | |
| | No. of Religious properties Relocated / Removed | 6 | 1 | 0 | 1 | 17% | 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 | | | | | | |

| 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 |
|----------------------|-----------------------------------------------------------|--------------|-------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------------------|-----------------|
| Grievance Redress | No. of Grievances Received by FLGRC | 4 | | | | | |
| Keuress | No. of Grievances Disposed by FLGRC | 1 | | | | | |
| | No. of Grievances Received by SLGRC | 0 | | | | | |
| | No. of Grievances Disposed by SLGRC | 0 | | | | | |
| Post Resettlement | No. of CHSs Registration helped | | | | | | |
| Assistance | No. of CHSs provided Tenements for Social Amenities | | | | | | |
| | No. of CHSs' Maintenance Fund Invested | | | | | | |
| | No. of CHSs' Office Bearers provided training | | | | | | |

| 30 | MMARY OF FISHER F | Up to 31 | | | nuence | Lone of | 25 villagesj |
|------------|----------------------------|--------------------------------|-----|--------------------|--------|---------|--------------------------|
| | | Total | | al appro family | No. of | | |
| Sr. No. | Village Name | number of forms Received | C1 | C2 | С3 | Total | Rejected Applications |
| 1 | 2 | 3 | 6 | 7 | 8 | 10 | 11 |
| 1 | Bamandongri | 273 | 1 | 0 | 25 | 26 | 230 |
| 2 | Belapur | 110 | 0 | 5 | 14 | 19 | 86 |
| 3 | Belpada | 1185 | 0 | 7 | 473 | 480 | 476 |
| 4 | Diwale | 455 | 10 | 236 | 12 | 258 | 132 |
| 5 | Ganeshpuri | 276 | 0 | 33 | 32 | 65 | 164 |
| 6 | Gavhan | 2167 | 0 | 14 | 1305 | 1319 | 575 |
| 7 | Jasai | 926 | 0 | 0 | 18 | 18 | 908 |
| 8 | Jawale | 51 | 0 | 1 | 0 | 1 | 50 |
| 9 | Kombadbhuja | 413 | 1 | 24 | 126 | 151 | 219 |
| 10 | Kopar | 994 | 2 | 5 | 230 | 237 | 551 |
| 11 | Mahul | 1198 | 129 | 170 | 600 | 899 | 190 |
| 12 | Moha | 475 | 22 | 34 | 134 | 190 | 212 |
| 13 | Mora | 466 | 0 | 75 | 213 | 288 | 175 |
| 14 | Morave | 539 | 14 | 17 | 79 | 110 | 301 |
| 15 | Nhava | 1646 | 0 | 32 | 304 | 336 | 1009 |
| 16 | Sarsole | 266 | 0 | 30 | 83 | 113 | 135 |
| 17 | Sewri | 305 | 0 | 1 | 70 | 71 | 234 |
| 18 | Shelghar | 241 | 0 | 0 | 15 | 15 | 214 |
| 19 | Shivajinagar | 200 | 1 | 4 | 61 | 66 | 133 |
| 20 | Trombay | 1253 | 49 | 259 | 783 | 1091 | 121 |
| 21 | Ulwa | 218 | 1 | 4 | 12 | 17 | 173 |
| 22 | Uran & Hanuman Koliwada | 685 | 0 | 29 | 554 | 583 | 87 |
| 23 | Vahal | 411 | 0 | 2 | 1 | 3 | 367 |
| | Total | 14753 | 230 | 982 | 5144 | 6356 | 6742 |
| | | | | | | | |
| | Total applications | | | 14753 | | | |
| | Duplicate/Repeated | Application | | | | | 1655 |
| | Net Applications | | | | | | 13098 |
| | Approved application | ons | | | | | 6356 |
| | Rejected application | 1 | | | | | 6742 |

| | SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Out of Influence Zone of 21 villages) | | | | | | | | | |
|-----|-----------------------------------------------------------------------------------|--------------------------|----|--------------------|----------------------|-----------------|--|--|--|--|
| Sr. | | Total number of | | approv family ι | ed eligible inits | No. of Rejected | | | | |
| No. | Village Name | Applications Received | C1 | C2 | Total | Applications | | | | |
| 1 | 2 | 3 | 6 | 7 | 10 | 11 | | | | |
| 1 | Airoli | 76 | 0 | 29 | 29 | 47 | | | | |
| 2 | Dhutun | 398 | 0 | 1 | 1 | 395 | | | | |
| 3 | Dighode | 708 | 0 | 17 | 17 | 662 | | | | |
| 4 | Diwa-Koliwada | 122 | 0 | 12 | 12 | 107 | | | | |
| 5 | Fanaspada | 4 | 0 | 1 | 1 | 3 | | | | |
| 6 | Ghansoli | 340 | 0 | 30 | 30 | 310 | | | | |
| 7 | Gharapuri | 261 | 0 | 17 | 17 | 222 | | | | |
| 8 | Juhugaon | 201 | 0 | 7 | 7 | 171 | | | | |
| 9 | Karave | 178 | 0 | 44 | 44 | 126 | | | | |
| 10 | Kelavane | 105 | 0 | 2 | 2 | 102 | | | | |
| 11 | Kopar Khairane | 245 | 0 | 5 | 5 | 236 | | | | |
| 12 | Koproli | 70 | 0 | 4 | 4 | 66 | | | | |
| 13 | Kundegaon | 548 | 0 | 33 | 33 | 323 | | | | |
| 14 | Nerul | 5 | 0 | 1 | 1 | 4 | | | | |
| 15 | Shahabaj | 6 | 0 | 1 | 1 | 5 | | | | |
| 16 | Takigaon | 21 | 0 | 1 | 1 | 20 | | | | |
| 17 | Talvali | 54 | 0 | 2 | 2 | 51 | | | | |
| 18 | Targhar | 110 | 0 | 2 | 2 | 85 | | | | |
| 19 | Vashigaon | 257 | 0 | 51 | 51 | 176 | | | | |
| 20 | Vindhane | 12 | 0 | 2 | 2 | 10 | | | | |
| 21 | Waghivali | 112 | 0 | 4 | 4 | 104 | | | | |
| | 398Total | 3833 | 0 | 0 | | 3225 | | | | |

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

| No. of Cases referred to GRC | No. of Cases | | No. of Cases No. of Cases Rejected | |
|---------------------------------|--------------|---------------------------|------------------------------------|-----|
| | Allowed | 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 | Fisher-folks Compensation | 08-10-2015 | 23-12-2015 |
| | Policy | Committee (FCC) | | |
| 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 | 1. Detailed list of Fisher-folk PAP | 23-12-2015 | Up to 31.03.2020 |
| | | upto list 1 (1165 Nos) & 2 (1399 | | 1. Total up to date applications scrutinized = 13098 Nos. |
| | | Nos) are finalized by the | | 2. Eligible = 6356 nos |
| | | Fisheries Department. | | 3. Rejected = 6742 nos |
| | | 2. From 2018, FEVC committee | | |
| | | is the approval authority of PAF | | |
| | | and approved C1- 230 Nos; | | |
| | | C2-440 Nos and C3- 2580 Nos | | |
| | | are approved. | | |
| 5 | Validation of compensation plan | Fisher-folks Compensation | 23-12-2015 | 1. Approval to the Fisher-folk PAP list obtained from Fisheries |
| | | Committee (FCC) | | 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 | Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on 25th April 2018. 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 | 09-03-2021 |

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

| | quired in la. | Land Acq | uired 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 | 7.595 | 1.745 | 30-09-2020 | | CIDCO is the land acquisition authority for land acquisition for Navi Mumbai MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 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 | 106 | 6.345 | 1.745 | | | |

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| Implementation Schedule for 3 | 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 | Dec. 2020 |
| 2.3 | Staff Deployment Public Relation | June 2016 | June 2016 |
| 2.4 | Hiring of Independent Evaluation Agency | November 2018 | November 2020 |
| 2.5 | Preparation and issue of allotment letters to PAPs | June 2018 | Dec. 2020* |
| 2.6 | Notice of PAPs for shifting (Sewri Section) | December 2018 | Dec. 2020 |
| 2.7 | Allotment of dwelling units to PAP's | September 2016 | Dec. 2020 |
| 2.8 | Shifting of PAPs to resettlement Colony | December 2018 | Dec. 2020 |
| 2.9 | Transfer of compensation / allowance/ assistance to PAPs | December 2018 | Dec. 2020 |
| 2.10 | Creation of Community Revolving fund (within 3 months post handing over) | April 2019 | Feb. 2021 |
| 2.11 | Assessment of economic rehabilitation needs by individual household (within 6 months after handing over | September 2019 | June 2021 |
| 2.12 | Registration of Co-operative housing societies, transfer of maintenance funds. (6 months period) | December 2019 | June 2021 |
| 2.13 | Signing of Civil Contract | | January 2018 |
| 2.14 | Notice of Civil works to proceed | | March 2018 |
| 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 | June 2020 |
| | End Term | November 2019 | March 2021 |

*Subject to open the lockdown upto September 2020 and get the Occupation certificate of Kurla Bhandari R&R site from SRA department upto Jan. 2021.

Attachment 3- JICA's Concurrence Status

| Status of JICA'S Cor | ncurrence |
|----------------------|-----------|
|----------------------|-----------|

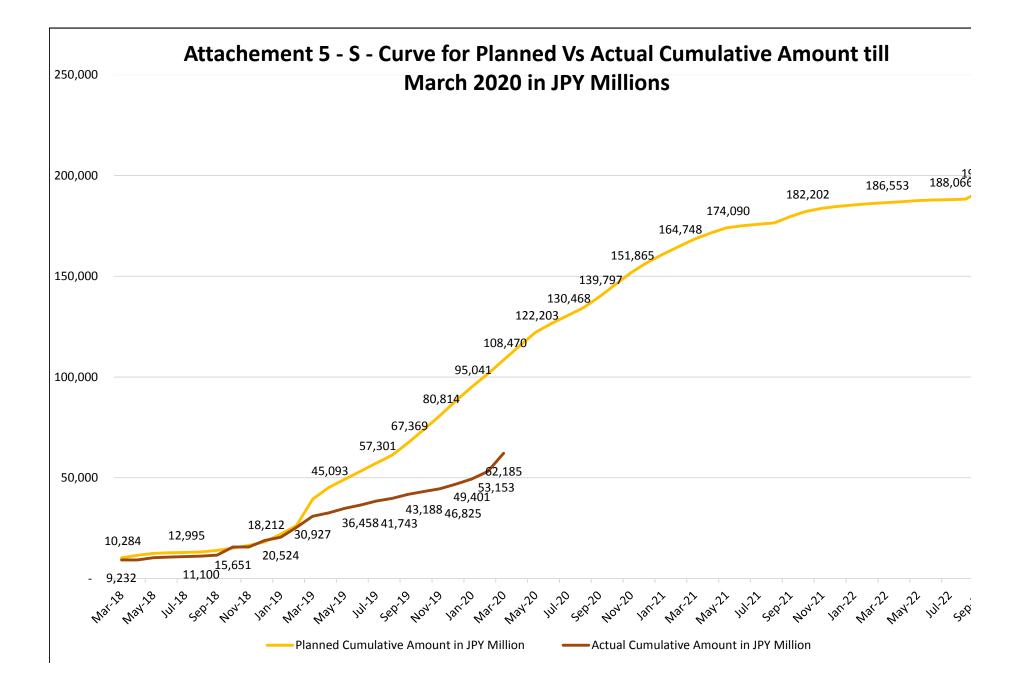
| | | | Bid C | ost | | | | | | |
|----------|-----------------------------------------------------|-----------------------|-------------------------------|------------------|------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| SI No | | Procurement procedure | 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 - 22 nd Dec 2016 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 12 th Sep 2017 | JICA's Concurrence - 12 th Oct 2017 | JICA's Concurrence – 15 th Feb 2018 |
| 2 | Package-2 (CH 10+380 km to CH18+187 km) | ICB with PQ (2P) | 5612.61 | 5612.61 | JICA's Concurrence - 9 th May 2016 | JICA's Concurrence - 22 nd Dec 2016 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 12 th Sep 2017 | JICA's Concurrence - 12 th Oct 2017 | JICA's Concurrence – 15 th Feb 2018 |
| 3 | Package-3 (CH18+187 to CH21+800) | ICB with PQ (2P) | 1013.79 | 1013.79 | JICA's Concurrence - 9 th May 2016 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 4 th Jan 2017 | JICA's Concurrence - 15 th Sep 2017 | JICA's Concurrence - 12 th Oct 2017 | JICA's Concurrence – 15 th Feb 2018 |
| 4 | Package-4 Intelligent Transport System | ICB with PQ (2P) | 181.49 | 181.49 | JICA's Concurrence - 23 rd August 2019 | - | - | - | - | - |

Attachment 4- Project Procurement and Financial Status till 31st March 2020

| Туре | 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 March 2020 | % of Overall Financial Progress ((Including Mobilization Advance & Price Adjustment) till 31 st March 2020 |
|-------|--------------------------------------------------|----------------------------------------------------|-------------------|-----------------------|---------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| | Package-1 (CH 0+000 km to CH 10+380 km) | 7637.30 | Awarded | L&T-IHI Consortium | March 2018 | Sep 2022 | 25.59% | 34.54% |
| CIVIL | Package-2 (CH 10+380 km to CH18+187 km) | 5612.61 | Awarded | DAEWOO- TPL JV | March 2018 | Sep 2022 | 19.05% | 35.20% |
| | Package-3 (CH18+187 to CH21+800) | 1013.79 | Awarded | L&T | March 2018 | Sep 2021 | 27.38% | 43.45% |
| | Package-4 Intelligent Transport System | 181.49 (Estimated) | Design Stage | | Jul 2020 (Estimated) | Sep 2022 | NA | NA |

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st March 2020

Attachment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million

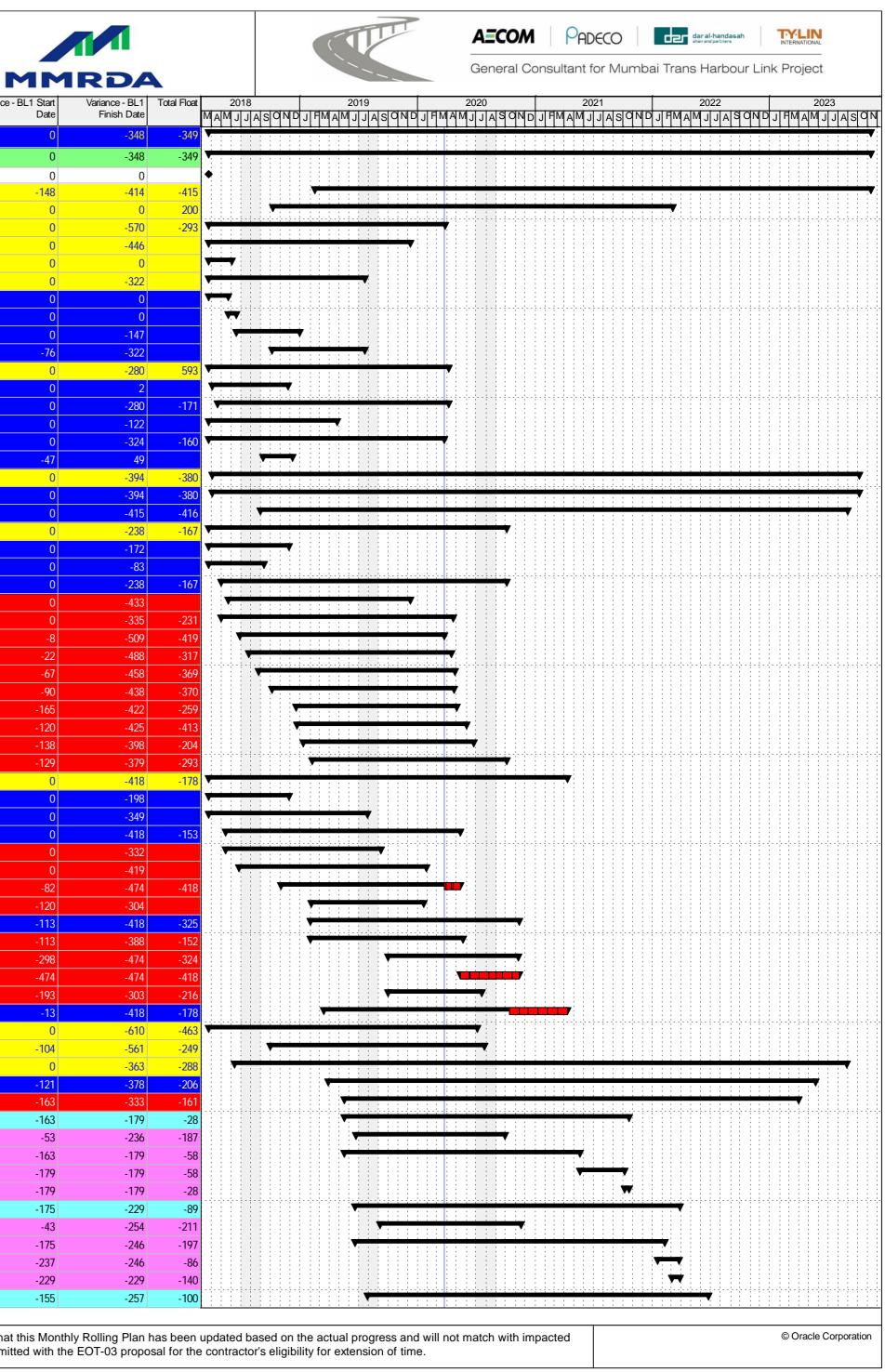


Attachment 6- Package-1's Construction Programme Updated as on 25th March 2020

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|---------|
|---------|

MUMBAI TRANS HARBOUR LINK PACKAGE 1, UPDATED BASELINE PROGRAMME FOR MARCH 2020

| D Activity Name | Duration | BL1 Start | BL1 Finish | Original Start Duration | Finish | Schedule % Complete | Performance % Complete | Variance - BL1 S |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------|------------------------|-------------------------------------------------------------|---------------------------------------|------------------------|---------------------------|------------------|
| MPR24 MTHL P1 - Mar'20 Month Progress MPR24.1 Mumbai Trans Harbour Link - Package 1 | | 23-Mar-18 23-Mar-18 | 22-Sep-22 22-Sep-22 | 1445 23-Mar-18 A 1445 23-Mar-18 A | 10-Nov-23 10-Nov-23 | 42.96% 42.96% | 25.59% 25.59% | |
| M10000 Commencement Date | | 23-Mar-18 | | 0 23-Mar-18 A | | 100% | 100% | |
| MPR24.1.1 Key Milestones | | 19-Sep-18 | 22-Sep-22 | 1693 15-Feb-19 A | 10-Nov-23 | 0% | 0% | - |
| MPR24.1.2 Contractual Interface MPR24.1.3 Access to Site | | 09-Oct-18 23-Mar-18 | 05-Mar-22 03-Sep-18 | 1243 09-Oct-18 A 165 23-Mar-18 A | 05-Mar-22 26-Mar-20 | 0% 0% | 0% 0% | |
| MPR24.1.3 Access to site MPR24.1.4 Document Submittals | | 23-Mar-18 | 18-Sep-18 | 180 23-Mar-18 A | 09-Dec-19 A | 0% | 0% | |
| MPR24.1.5 Survey | | 23-Mar-18 | 03-Jun-18 | 73 23-Mar-18 A | 03-Jun-18 A | 0% | 0% | |
| MPR24.1.6 Geotechnical Investigation | 165 | 23-Mar-18 | 03-Sep-18 | 165 23-Mar-18 A | 23-Jul-19 A | 0% | 0% | |
| MPR24.1.6.1 Phase 1 | 60 | 23-Mar-18 | 21-May-18 | 60 23-Mar-18 A | 21-May-18 A | 0% | 0% | |
| MPR24.1.6.2 Phase 2 | | 22-May-18 | | , | 15-Jun-18 A | 0% | 0% | |
| MPR24.1.6.3 Phase 3 | | 16-Jun-18 | 04-Aug-18 | 50 16-Jun-18 A | 30-Dec-18 A | 0% | 0% | |
| MPR24.1.6.4 Phase 4 | | 21-Jul-18 | 03-Sep-18 | 45 05-Oct-18 A | 23-Jul-19 A | 0% | 0% | |
| MPR24.1.7 Infrasturcture Facilities | | 23-Mar-18 | 05-Feb-19 27-Nov-18 | | 07-Apr-20 25-Nov-18 A | 0% | 0% | |
| MPR24.1.7.1 Project Site Office Construction (Contractor + Employer + (MPR24.1.7.2 Casting Yard | | 04-Apr-18 20-Apr-18 | 05-Feb-19 | 120 04-Apr-18 A 355 20-Apr-18 A | 07-Apr-20 | 0% 0% | 0% 0% | |
| MPR24.1.7.2 Casting Tard MPR24.1.7.3 Fabrication Yard | | 23-Mar-18 | 30-Nov-18 | · · · · · · · · · · · · · · · · · · · | 26-Apr-19 A | 0% | 0% | |
| MPR24.1.7.4 Rebar Yard | | 23-Mar-18 | 30-Nov-18 | 376 23-Mar-18 A | · · · | 0% | 0% | |
| MPR24.1.7.5 Batching Plant Installation - CP30 & CP60 | | 20-Apr-18 | 05-Feb-19 | 164 08-Sep-18 A | 08-Dec-18 A | 0% | 0% | |
| MPR24.1.8 Procurement Plan | | 04-Apr-18 | 07-Sep-22 | 2088 04-Apr-18 A | 06-Oct-23 | 0% | 0% | |
| MPR24.1.8.1 Plant & Machinery Deployment Plan | 1618 | 04-Apr-18 | 07-Sep-22 | 2088 04-Apr-18 A | 06-Oct-23 | 0% | 0% | |
| MPR24.1.8.4 Bulk Material Procurement Plan | 1412 | 01-Sep-18 | 13-Jul-22 | 1679 31-Aug-18 A | 01-Sep-23 | 0% | 0% | |
| PR24.1.9 Design & Engineering (Civil) | | 23-Mar-18 | 21-Sep-19 | 525 23-Mar-18 A | 05-Oct-20 | 0% | 0% | |
| MPR24.1.9.1 Initial Design (General & Preliminary Design, DBR) | | 23-Mar-18 | | | 29-Nov-18 A | 0% | 0% | |
| MPR24.1.9.2 Finalization of Alignment | | 23-Mar-18 | | 88 23-Mar-18 A | · · · | 0% | 0% | |
| MPR24.1.9.3 Detailed Design and Construction Design | | 01-May-18 | | 525 01-May-18 A | 05-Oct-20 | 0% | 0% | |
| MPR24.1.9.3.1 GIR | | 22-May-18 | 01-Oct-18 | 193 22-May-18 A | 09-Dec-19 A | 0% | 0% | |
| MPR24.1.9.3.2 Test Pile | | 01-May-18 | | 468 01-May-18 A | · · · · · · · · · · · · · · · · · · · | 0% 0% | 0% 0% | |
| MPR24.1.9.3.3 Design Phase -1 (Accelerated Design of Initial Items) MPR24.1.9.3.4 Design Phase -2 (Accelerated Design of Initial Items) | | 19-Jun-18 04-Jul-18 | 02-Nov-18 13-Dec-18 | 137 27-Jun-18 A 163 26-Jul-18 A | 15-Apr-20 | 0% | 0% | |
| MPR24.1.9.3.5 Design Phase -3 | | 19-Jun-18 | 25-Jan-19 | 144 25-Aug-18 A | 28-Apr-20 | 0% | 0% | |
| MPR24.1.9.3.6 Design Phase -4 | | 07-Jul-18 | 11-Feb-19 | 220 05-Oct-18 A | 24-Apr-20 | 0% | 0% | |
| MPR24.1.9.3.7 Design Phase -5 | | 07-Jul-18 | 05-Mar-19 | 579 19-Dec-18 A | 01-May-20 | 0% | 0% | - |
| MPR24.1.9.3.8 Design Phase -6 | 221 | 26-Aug-18 | 03-Apr-19 | 799 24-Dec-18 A | 02-Jun-20 | 0% | 0% | - |
| MPR24.1.9.3.9 Design Phase -7 | 272 | 26-Aug-18 | 24-May-19 | 806 11-Jan-19 A | 25-Jun-20 | 0% | 0% | - |
| MPR24.1.9.3.10 Design Phase -8 | 355 | 02-Oct-18 | 21-Sep-19 | 399 08-Feb-19 A | 05-Oct-20 | 0% | 0% | - |
| PR24.1.10 Design, Engineering & Material Procurement (OSD) | | 23-Mar-18 | 17-Feb-20 | | 10-Apr-21 | 0% | 0% | |
| MPR24.1.10.1 Initial Design | | 23-Mar-18 | | 53 23-Mar-18 A | | 0% | 0% | |
| MPR24.1.10.3 Aerodynamic Analysis | | 23-Mar-18 | | 145 23-Mar-18 A | | 0% | 0% | |
| MPR24.1.10.4 Technical Design MPR24.1.10.4.1 OS01NS/SS | | 15-May-18 | | 782 15-May-18 A 150 15-May-18 A | | 0% 0% | <mark>0%</mark> 0% | |
| MPR24.1.10.4.2 OS02NS/SS | | 15-May-18 26-Jun-18 | 06-Dec-18 | 530 26-Jun-18 A | 09-Sep-19 A 30-Jan-20 A | 0% | 0% | |
| MPR24.1.10.4.3 OS03NS/SS | | 14-Aug-18 | 24-Jan-19 | 691 04-Nov-18 A | 12-May-20 | 0% | 0% | |
| MPR24.1.10.4.4 OS04NS/SS | | 09-Oct-18 | 21-Mar-19 | 425 06-Feb-19 A | 20-Jan-20 A | 0% | 0% | |
| MPR24.1.10.5 Construction Design | | 12-Oct-18 | 20-Sep-19 | 944 02-Feb-19 A | 11-Nov-20 | 0% | 0% | - |
| MPR24.1.10.5.1 OS01NS/SS | | 12-Oct-18 | 30-Apr-19 | 731 02-Feb-19 A | 22-May-20 | 0% | 0% | - |
| MPR24.1.10.5.2 OS02NS/SS | | 07-Dec-18 | 25-Jul-19 | 367 01-Oct-19 A | 10-Nov-20 | 0% | 0% | - |
| MPR24.1.10.5.3 OS03NS/SS | 183 | 25-Jan-19 | 26-Jul-19 | 183 13-May-20 | 11-Nov-20 | 0% | 0% | -1 |
| MPR24.1.10.5.4 OS04NS/SS | 183 | 22-Mar-19 | 20-Sep-19 | 253 01-Oct-19 A | 19-Jul-20 | 0% | 0% | - |
| MPR24.1.10.6 Material Procurement (1st Lot) | | 02-Mar-19 | 17-Feb-20 | 481 15-Mar-19 A | 10-Apr-21 | 0% | 0% | |
| MPR24.1.11 Tree Cutting and Transplantation | | 23-Mar-18 | 02-Nov-18 | 835 23-Mar-18 A | 04-Jul-20 | 0% | 0% | |
| IPR24.1.12 Utility Diversion | | 19-Jun-18 | 14-Jan-19 | 859 01-Oct-18 A | 28-Jul-20 | 0% | 0% | -1 |
| IPR24.1.13 Construction | | 11-Jun-18 | 22-Jun-22 | 1349 11-Jun-18 A | 29-Aug-23 | 39.54% | 20.58% | |
| MPR24.1.13.1 Sewri Interchange Section | | 03-Nov-18 | | | 24-May-23 | 40.73% | 13.27% | - |
| MPR24.1.13.1.1 Sewri Interchnage - Work Front - 1 MPR24.1.13.1.1.1 Sewri Interchange - Work Front - 1 - Piling | | 03-Nov-18 | 28-Feb-22 | | 01-Apr-23 | 44.46% | 12.46% | - |
| MPR24.1.13.1.1.1 Sewin interchange - work Front - 1 - Pling MPR24.1.13.1.1.1 Piling - Land Viaduct | | 03-Nov-18 13-Apr-19 | 15-Dec-20 16-Sep-19 | 708 18-May-19 A 298 25-Jun-19 A | 20-Oct-21 28-Sep-20 | 71.98% | 43.73% 90% | - |
| MPR24.1.13.1.1.1.2 Piling - Canto Viaduct MPR24.1.13.1.1.1.2 Piling - Ramp A | | 03-Nov-18 | 10-3ep-19 17-Oct-20 | 698 18-May-19 A | 20-3ep-20 21-May-21 | 75.26% | 41.65% | |
| MPR24.1.13.1.1.1.3 Piling - Ramp E | | 20-Oct-20 | 01-Dec-20 | 36 21-May-21 | 05-Oct-21 | 0% | 41.03% | |
| MPR24.1.13.1.1.1.4 Piling - Ramp F | | 02-Dec-20 | 15-Dec-20 | 12 05-Oct-21 | 20-Oct-21 | 0% | 0% | - |
| MPR24.1.13.1.1.2 Sewri Interchange - Work Front - 1 -Pile Cap | | 19-Nov-18 | 24-Mar-21 | 772 21-Jun-19 A | 26-Mar-22 | 61.97% | 20.85% | - |
| MPR24.1.13.1.1.2.1 Pile Cap - Land Viaduct | | 25-Apr-19 | 15-Oct-19 | 110 06-Sep-19 A | 18-Nov-20 | 100% | 77.78% | |
| MPR24.1.13.1.1.2.2 Pile Cap - Ramp A | 504 | 19-Nov-18 | 15-Jan-21 | 745 21-Jun-19 A | 09-Feb-22 | 62.9% | 14.76% | - |
| MPR24.1.13.1.1.2.3 Pile Cap - Ramp E | 44 | 07-Jan-21 | 27-Feb-21 | 54 18-Jan-22 | 24-Mar-22 | 0% | 0% | -2 |
| MPR24.1.13.1.1.2.4 Pile Cap - Ramp F | | 01-Mar-21 | 24-Mar-21 | 20 03-Mar-22 | 26-Mar-22 | 0% | 0% | -2 |
| MPR24.1.13.1.1.3 Sewri Interchange - Work Front - 1 - Pier | 588 | 12-Dec-18 | 20-May-21 | 494 30-Jul-19 A | 24-Jun-22 | 41.15% | 15.29% | _ |
| | | | | | | | 1 | |
| ctual Level of Effort Remaining Work Milestone | | | | Page | 1 of 4 | | | ote that this N |
| Actual Work Critical Remaining Work Summary | | | | | | | schedule | e submitte |
| | | | | | | | | |



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|----|-----|
|----|-----|

MUMBAI TRANS HARBOUR LINK PACKAGE 1, UPDATED BASELINE PROGRAMME FOR MARCH 2020



| | | DIAC | | [Firefact | O-Later of | Defermente of Later | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------|------------------------------------|------------------------|------------------------|---------------------------------|--------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity Name | BL1 BL1 Start Duration | BL1 Finish | Original Start Duration | Finish | Schedule % Complete | Performance % Varia Complete | ance - BL1 Start Date | Variance - BL1 To Finish Date | Total Float 2018 2019 2020 2021 2022 M A M J J A S O N D J FM A M J J A S O N D J FM A M J J A S O N D J FM A M J J A S O N D J FM A M J J A S O N D J F 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </th |
| MPR24.1.13.1.1.3.1 Pier - Land Viaduct | 52 29-May-19 | 30-Oct-19 | 35 21-Oct-19 A | 04-Jan-21 | 100% | 77.78% | -43 | -281 | -224 |
| MPR24.1.13.1.1.3.2 Pier - Ramp A | 504 12-Dec-18 | 09-Feb-21 | 422 30-Jul-19 A | 01-Apr-22 | 55.65% | 6.71% | -155 | -269 | -220 |
| MPR24.1.13.1.1.3.3 Pier - Ramp E | 96 27-Jan-21 | 20-May-21 | 93 31-Jul-19 A | 24-Jun-22 | 0% | 22.73% | 337 | -257 | -153 |
| MPR24.1.13.1.1.3.4 Pier - Ramp F | 83 23-Dec-20 | 01-Apr-21 | 63 18-Jan-22 | 04-Apr-22 | 0% | 0% | -249 | -229 | -31 |
| MPR24.1.13.1.1.4 Sewri Interchange - Work Front - 1 - Pier Cap | 587 05-Jan-19 | 11-Jun-21 | 481 25-Sep-20 | 25-Jul-22 | 38.62% | 0% | -370 | -264 | 48 |
| MPR24.1.13.1.1.4.1 Pier Cap - Land Viaduct | 49 16-Sep-19 | 14-Nov-19 | 52 05-Jan-21 | 09-Mar-21 | 100% | 0% | -319 | -322 | -265 |
| MPR24.1.13.1.1.4.2 Pier Cap - Ramp A | 499 05-Jan-19 | 26-Feb-21 | 398 25-Sep-20 | 19-Apr-22 | 51.29% | 0% | -370 | -269 | -220 |
| MPR24.1.13.1.1.4.3 Pier Cap - Ramp E | 100 13-Feb-21 | 11-Jun-21 | 104 25-Mar-22 | 25-Jul-22 | 0% | 0% | -260 | -264 | 48 |
| MPR24.1.13.1.1.4.4 Pier Cap - Ramp F | 86 31-Dec-20 | 13-Apr-21 | 66 27-Jan-22 | 15-Apr-22 | 0% | 0% | -249 | -229 | -15 |
| MPR24.1.13.1.1.5 Sewri Interchange - Embankment Works - Ramp F | 90 14-Apr-21 | 01-Nov-21 | 90 15-Apr-22 | 29-Jul-22 | 0% | 0% | -229 | -229 | -80 |
| MPR24.1.13.1.1.6 Sewri Interchange - Work Front - 1 - Super Structu | 628 04-May-19 | 28-Feb-22 | 595 18-Jan-21 | 01-Apr-23 | 31.41% | 0% | -366 | -333 | -291 |
| MPR24.1.13.1.1.6.1 Erection - Land Viaduct | 96 19-Nov-19 | 11-Mar-20 | 96 08-Mar-21 | 01-Oct-21 | 100% | 0% | -318 | -318 | -304 |
| MPR24.1.13.1.1.6.2 Erection - Ramp A | 486 04-May-19 | 09-Apr-21 | 405 18-Jan-21 | 16-Jul-22 | 40.11% | 0% | -417 | -336 | -296 |
| MPR24.1.13.1.1.6.3 Erection - Ramp E | 146 10-Apr-21 | 02-Dec-21 | 146 16-Jul-22 | 06-Jan-23 | 0% | 0% | -336 | -336 | -296 |
| MPR24.1.13.1.1.6.4 Erection - Ramp F | 52 28-Dec-21 | 28-Feb-22 | 52 31-Jan-23 | 01-Apr-23 | 0% | 0% | -336 | -336 | -294 |
| IPR24.1.13.1.2 Sewri Interchange - Work Front - 2 | 765 03-Nov-18 | 11-Feb-22 | 1196 29-Mar-19 A | | 46.95% | 17.88% | -121 | -392 | -320 |
| MPR24.1.13.1.2.1 Sewri Interchange - Work Front - 2 - Piling | 553 03-Nov-18 | 01-Mar-21 | 810 29-Mar-19 A | 18-Feb-22 | 64.91% | 39.63% | -121 | -218 | -172 |
| MPR24.1.13.1.2.1.1 Piling - Ramp C2 | 325 03-Nov-18 | 27-Feb-20 | 586 29-Mar-19 A | | 100% | 95.92% | -121 | -225 | -172 |
| MPR24.1.13.1.2.1.2 Piling - Ramp C1 | 140 03-Apr-19 | 18-Dec-19 | 151 12-Nov-19 A | | 100% | 8.57% | -108 | -278 | -172 |
| MPR24.1.13.1.2.1.3 Piling - Ramp B | 84 21-Nov-20 | 01-Mar-21 | 108 22-Nov-19 A | | 0% | 8.32% | 227 | -218 | -172 |
| MPR24.1.13.1.2.2 Sewri Interchange - Work Front - 2 - Pile Cap | 591 19-Nov-18 | 29-Apr-21 | 855 05-May-19 A | · | 59.3% | 23.44% | -140 | -214 | -152 |
| MPR24.1.13.1.2.2.1 Pile Cap - Ramp C2 | 361 19-Nov-18 | 24-Apr-20 | 649 05-May-19 A | | 86.02% | 81.77% | -140 | -238 | -150 |
| MPR24.1.13.1.2.2.2 Pile Cap - Ramp C1 | 172 12-Apr-19 | 04-Feb-20 | 179 14-Dec-19 A | | 100% | 6.67% | -128 | -274 | -172 |
| MPR24.1.13.1.2.2.3 Pile Cap - Ramp B | 131 25-Nov-20 | 29-Apr-21 | 158 16-Jan-20 A | • | 0% | 7.14% | 184 | -214 | -152 |
| MPR24.1.13.1.2.3 Sewri Interchange - Work Front - 2 - Pier | 589 12-Dec-18 | 21-May-21 | 503 04-Sep-19 A | | 52.04% | 38.74% | -155 | -211 | -28 |
| MPR24.1.13.1.2.3.1 Pier - Ramp C2 | 353 12-Dec-18 | 09-May-20 | 294 04-Sep-19 A | | 76.55% | 82.04% | -155 | -238 | -150 |
| MPR24.1.13.1.2.3.2 Pier - Ramp C1 | 194 01-Apr-19 | 18-Feb-20 | 223 10-Sep-19 A | | 100% | 25.51% | -64 | -274 | -172 |
| MPR24.1.13.1.2.3.3 Pier - Ramp B | 248 25-Apr-20 | 21-May-21 | 221 08-Oct-19 A | | 0% | 34.09% | 168 | -211 | -28 |
| MPR24.1.13.1.2.4 Sewri Interchange - Work Front - 2 - Pier Cap | 583 26-Dec-18 | 28-May-21 | 442 02-Dec-19 A | | 51.03% | 0.35% | -206 | -226 | -42 |
| MPR24.1.13.1.2.4.1 Pier Cap - Ramp C2 | 356 26-Dec-18 | 27-May-20 | 249 02-Dec-19 A | | 67.95% | 2.1% | -206 | -259 | -171 |
| MPR24.1.13.1.2.4.2 Pier Cap - Ramp C1 | 198 18-Apr-19 | 12-Mar-20 | 172 06-Nov-20 | 01-Jun-21 | 100% | 0% | -320 | -293 | -195 |
| MPR24.1.13.1.2.4.3 Pier Cap - Ramp B | 235 19-May-20 | 28-May-21 | 200 30-Sep-21 | 26-May-22 | 0% | 0% | -261 | -226 | -42 |
| MPR24.1.13.1.2.5 Sewri Interchange - Embankment Works - Ramp (| 60 23-May-19 | 02-Nov-19 | 60 27-Nov-20 | 08-Feb-21 | 0% | 0% | -307 | -307 | 249 |
| MPR24.1.13.1.2.6 Sewri Interchange - Work Front - 2 - Super Structu | 654 18-Mar-19 | 11-Feb-22 | 701 04-Nov-20 | 24-May-23 | 30.15% | 0% | -345 | -392 | -320 |
| MPR24.1.13.1.2.6.1 Erection - Ramp C2 | 343 18-Mar-19 | 02-Nov-20 | 368 04-Nov-20 | 22-Apr-22 | 52.94% | 0% | -345 | -370 | -298 |
| MPR24.1.13.1.2.6.2 Erection - Ramp C1 MPR24.1.13.1.2.6.3 Erection - Ramp B | 194 08-Oct-19 | 26-May-20 | 194 26-Mar-21 | 14-Jan-22 | 66.05% | 0% | -396 | -396 | -324 |
| IPR24.1.13.1.3 Sewri Interchange - Work Front - 3 (Cast in situ Spans | 316 28-Nov-20 431 28-Feb-20 | 11-Feb-22 01-Feb-22 | 316 17-May-22 431 25-Feb-21 | 24-May-23 26-Oct-22 | 0% 4.08% | 0% 0% | -396 -225 | -396 -225 | -324 |
| MPR24.1.13.1.3.1 Sewri Interchange - Work Front - 3 - Piling | 144 28-Feb-20 | 20-Nov-20 | 144 25-Feb-21 | 18-Nov-21 | 14.58% | 0% | -225 | -225 | -172 |
| MPR24.1.13.1.3.1.1 Piling - Ramp B | 54 28-Feb-20 | 02-May-20 | 54 25-Feb-21 | 30-Apr-21 | 38.89% | 0% | -225 | -225 | -172 |
| MPR24.1.13.1.3.1.2 Piling - Ramp E | 54 04-May-20 | 07-Oct-20 | 54 30-Apr-21 | 06-Oct-21 | 0% | 0% | -225 | -225 | -172 |
| MPR24.1.13.1.3.1.3 Piling - Ramp C1 | 36 08-Oct-20 | 20-Nov-20 | 36 06-Oct-21 | 18-Nov-21 | 0% | 0% | -225 | -225 | -172 |
| MPR24.1.13.1.3.2 Sewri Interchange - Work Front - 3 - Pile Cap | 159 07-Mar-20 | 15-Dec-20 | 159 05-Mar-21 | 13-Dec-21 | 6.94% | 0% | -225 | -225 | -1/ |
| MPR24.1.13.1.3.2.1 Pile Cap - Ramp B | 81 07-Mar-20 | 10-Jun-20 | 81 05-Mar-21 | 09-Jun-21 | 18.52% | 0% | -225 | -225 | -56 |
| MPR24.1.13.1.3.2.2 Pile Cap - Ramp E | 81 11-May-20 | 17-Nov-20 | 81 08-May-21 | 15-Nov-21 | 0% | 0% | -225 | -225 | 10 |
| MPR24.1.13.1.3.2.3 Pile Cap - Ramp C1 | 45 23-Oct-20 | 15-Dec-20 | 45 21-Oct-21 | 13-Dec-21 | 0% | 0% | -225 | -225 | -25 |
| MPR24.1.13.1.3.3 Sewri Interchange - Work Front - 3 - Pier | 216 18-Mar-20 | 05-Mar-21 | 216 16-Mar-21 | 03-Mar-22 | 1.67% | 0% | -225 | -225 | -65 |
| MPR24.1.13.1.3.3.1 Pier - Ramp B | 135 18-Mar-20 | 27-Nov-20 | 135 16-Mar-21 | 25-Nov-21 | 4.44% | 0% | -225 | -225 | -104 |
| MPR24.1.13.1.3.3.2 Pier - Ramp E | 135 18-Mar-20 | 01-Feb-21 | 135 10-May-21 | 29-Jan-22 | 4.44% | 0% | -225 | -225 | -38 |
| MPR24.1.13.1.3.3.3 Pier - Ramp C1 | 90 18-Nov-20 | 05-Mar-21 | 90 15-Nov-21 | 03-Mar-22 | 0% | 0% | -225 | -225 | -76 |
| MPR24.1.13.1.3.4 Sewri Interchange - Work Front - 3 - Pier Cap | 196 24-Apr-20 | 19-Mar-21 | 196 22-Apr-21 | 17-Mar-22 | 0% | 0% | -225 | -225 | -65 |
| MPR24.1.13.1.3.4.1 Pier Cap - Ramp B | 115 24-Apr-20 | 11-Dec-20 | 115 22-Apr-21 | 09-Dec-21 | 0% | 0% | -225 | -225 | -104 |
| MPR24.1.13.1.3.4.2 Pier Cap - Ramp E | 132 08-Jun-20 | 15-Feb-21 | 132 05-Jun-21 | 12-Feb-22 | 0% | 0% | -225 | -225 | -38 |
| MPR24.1.13.1.3.4.3 Pier Cap - Ramp C1 | 77 17-Dec-20 | 19-Mar-21 | 77 14-Dec-21 | 17-Mar-22 | 0% | 0% | -225 | -225 | -76 |
| MPR24.1.13.1.3.5 Sewri Interchange - Work Front - 3 - Super Structu | 360 23-May-20 | 01-Feb-22 | 360 21-May-21 | 26-Oct-22 | 0% | 0% | -225 | -225 | -129 |
| MPR24.1.13.1.3.5.1 Super Structure - Ramp B | 132 23-May-20 | 30-Jan-21 | 132 21-May-21 | 28-Jan-22 | 0% | 0% | -225 | -225 | -115 |
| MPR24.1.13.1.3.5.2 Super Structure - Ramp E | 132 25 May 20 | 24-Sep-21 | 132 13-Jan-22 | 18-Jun-22 | 0% | 0% | -225 | -225 | -115 |
| MPR24.1.13.1.3.5.3 Super Structure - Ramp C1 | 120 09-Jun-21 | 01-Feb-22 | 120 04-Jun-22 | 26-Oct-22 | 0% | 0% | -225 | -225 | -129 |
| R24.1.13.2 Intertidal Section | 715 11-Jun-18 | 23-Oct-21 | 1109 11-Jun-18 A | | 52.55% | 54.65% | 0 | -327 | -300 |
| IPR24.1.13.2.1 Intertidal - Temporary Access Bridge Work | 467 11-Jun-18 | 26-Sep-20 | 486 11-Jun-18 A | | 0% | 0% | 0 | 49 | 212 |
| MPR24.1.13.2.1.1 Access Bridge | 457 11-Jun-18 | 12-Jun-20 | 482 11-Jun-18 A | | 0% | 0% | 0 | 58 | 212 |
| | 441 13-Oct-18 | 26-Sep-20 | 486 26-Sep-18 A | | 0% | 0% | 16 | 49 | 212 |
| MPR24.1.13.2.1.2 Finaers | 638 14-Dec-18 | 23-Oct-21 | 1044 14-Nov-18 A | - | 52.55% | 54.65% | 26 | -327 | -300 |
| | 030114-DPL-18 | | | | 64.99% | 87.54% | 26 | -73 | -39 |
| IPR24.1.13.2.2 Intertidal - Main Bridge Work | | 16-Mar-21 | 683 14-Nov-18 A | 10-Jun-21 | UT. 7770 | | | | |
| MPR24.1.13.2.1.2 Fingers IPR24.1.13.2.2 Intertidal - Main Bridge Work MPR24.1.13.2.2.1 Intertidal - Main Bridge Work - Piling MPR24.1.13.2.2.2 Intertidal - Main Bridge Work - Pile Cap | 531 14-Dec-18 | 16-Mar-21 06-Apr-21 | 683 14-Nov-18 A 829 17-Jan-19 A | | 61.54% | 69.74% | -15 | -201 | -172 |
| IPR24.1.13.2.2 Intertidal - Main Bridge Work | | 06-Apr-21 | | 07-Mar-22 | | | -15 -59 | -201 -188 | -172 -161 |
| PR24.1.13.2.2 Intertidal - Main Bridge Work MPR24.1.13.2.2.1 Intertidal - Main Bridge Work - Piling MPR24.1.13.2.2.2 Intertidal - Main Bridge Work - Pile Cap | 531 14-Dec-18 536 29-Dec-18 | | 829 17-Jan-19 A | 07-Mar-22 08-Apr-22 | 61.54% | 69.74% | | | |

| MRDA | |
|------|--|



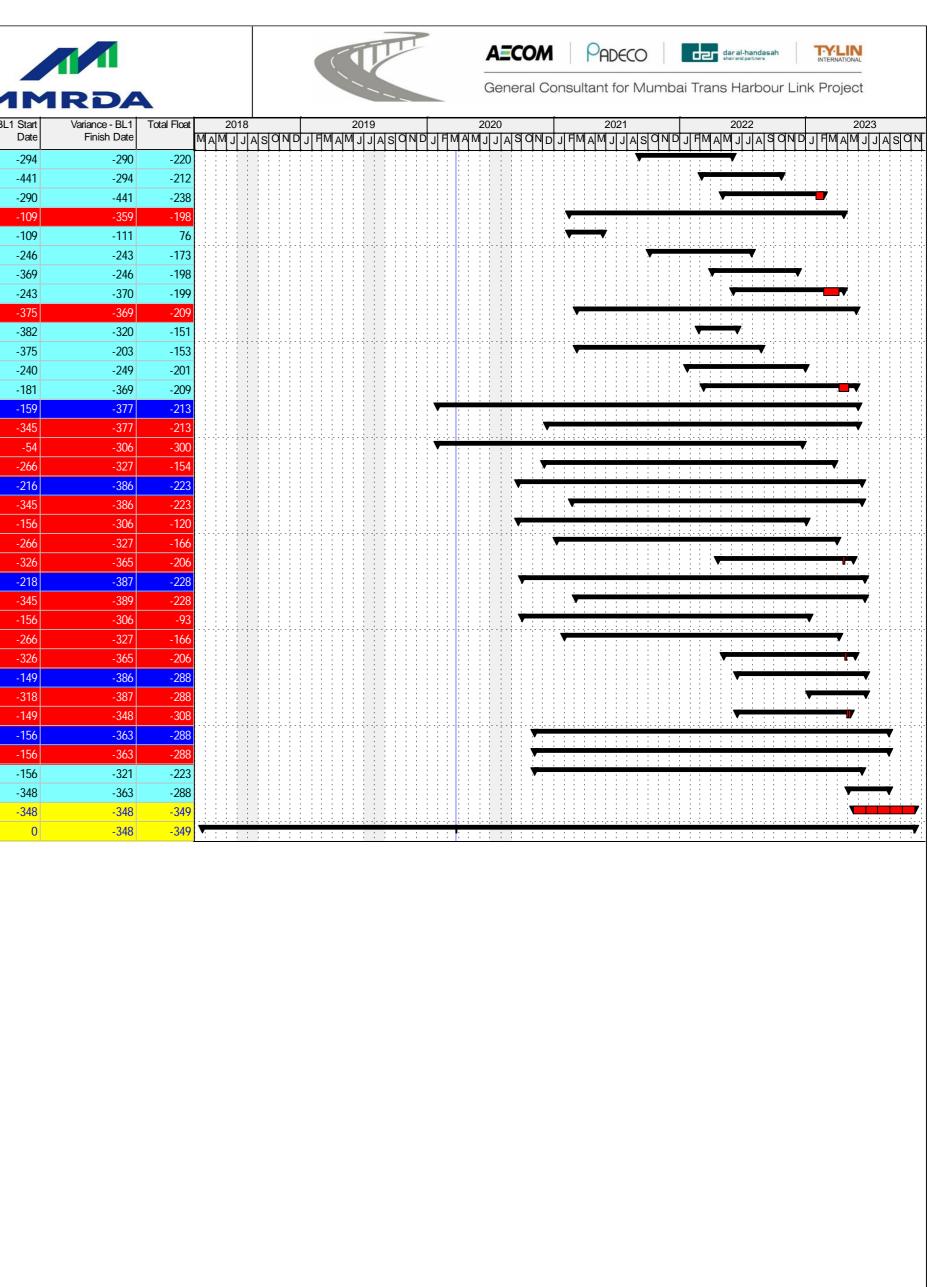
AECOM PADECO dar al-handasah Uniternational

General Consultant for Mumbai Trans Harbour Link Project

| (<u>-</u>) - IHI | MUMBAI TRA UPDATED BASEI | | OUR LINK PACK | • | | | MM | RDA | | AECOM PADECO Image: Consultant for Mumbai Trans Harbour Link Project |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------|---------------------------------------|--------------------------|------------------------|----------------------------------|--------------|-----------------------------------|--------------|----------------------------------------------------------------------------------|
| Activity Name | BL1 BL1 Start Duration | BL1 Finish | Original Start Duration | Finish | Schedule % Complete | Performance % Variar Complete | | Variance - BL1 Tot Finish Date | | 2020 2021 2022 20 EMIAMULUAS ONDURINGAMULUAS ONDURING AMAMULUAS ONDURINGAM |
| MPR24.1.13.2.2.5 Intertidal - Main Bridge Work - Super Structure Er | 534 18-Apr-19 | 23-Oct-21 | 646 29-Nov-19 A | 17-Nov-22 | 22.87% | 1.53% | -110 | -327 | -300 | FMAMJJASQNDJFMAMJJASQNDJFMAMJJASQNDJFMAMJ V |
| MPR24.1.13.2.3 Intertidal - Finger Removal & Reuse | 400 07-Mar-19 | 29-Dec-20 | 360 20-Jun-19 A | | 0% | 0% | -85 | -114 | -29 | |
| MPR24.1.13.3 Marine Section | 911 18-Sep-18 | 17-Jun-22 | 1269 14-Dec-18 A | | 44.15% | 21.9% | -73 | -327 | -306 | |
| MPR24.1.13.3.1 Temporary Access Bridge Work -2 (MP70 to MP51- 21 MPR24.1.13.3.2 Marine - Main Bridge | 911 18-Sep-18 775 03-Nov-18 | 17-Jun-22 23-Feb-22 | 908 14-Nov-19 A 1172 14-Dec-18 A | | <u> </u> | 0% 21.9% | -274 -34 | -327 -327 | -306 | |
| MPR24.1.13.3.2.1 Marine - Piling | 564 03-Nov-18 | 15-Mar-21 | 890 14-Dec-18 A | | 58.88% | 55.36% | -34 | -256 | -138 | |
| MPR24.1.13.3.2.1.1 Piling - Stretch - 1 - OSD-1 MP51 to MP53 (320 | 104 20-Sep-19 | 22-Jan-20 | 104 25-Mar-21 | 28-Oct-21 | 100% | 0% | -382 | -382 | -246 | |
| MPR24.1.13.3.2.1.2 Piling - Stretch - 2 - Marine - MP54 to MP68 (85 | 344 25-Feb-19 | 13-Oct-20 | 344 30-Nov-20 | 18-Apr-22 | 61.67% | 0% | -382 | -382 | -194 | |
| MPR24.1.13.3.2.1.3 Piling - Stretch - 3 - OSD-2&3 MP69 to MP80 (1 MPR24.1.13.3.2.1.4 Piling - Stretch - 4 - Marine MP81 to MP123 (2.) | 521 10-Dec-18 370 03-Nov-18 | 26-Feb-21 21-Apr-20 | 379 11-Jun-20 489 14-Dec-18 A | 15-Mar-22 22-Feb-20 A | 50.89% 94.52% | 0% 100% | -382 -34 | -240 50 | -162 | |
| MPR24.1.13.3.2.1.5 Piling - Stretch - 5 - OSD-4 MP124 to MP128 (6 | 147 22-Apr-20 | 16-Jan-21 | 130 04-Feb-20 A | | 0% | 36.19% | 66 | 8 | 116 | / |
| MPR24.1.13.3.2.1.6 Piling - Stretch - 6 - Marine MP129 to MP148 (1 | 395 25-May-19 | 15-Mar-21 | 148 06-Dec-19 A | 20-Oct-20 | 5% | 92.5% | -85 | 122 | 173 | |
| MPR24.1.13.3.2.3 Marine - Pile Cap | 572 23-Nov-18 | 12-Apr-21 | 947 14-Jan-19 A | | 45.11% | 22.42% | -43 | -314 | -198 | |
| MPR24.1.13.3.2.3.1 Pile Cap - Stretch - 1 - OSD-1 MP51 to MP53 (3 MPR24.1.13.3.2.3.2 Pile Cap - Stretch - 2 - Marine - MP54 to MP68 | 75 25-Dec-19 400 28-Mar-19 | 23-Mar-20 20-Jan-21 | · · · · · · · · · · · · · · · · · · · | 27-Dec-21 22-Jul-22 | 100% 40.27% | 0% 0% | -382 -382 | -382 -382 | -272 -261 | |
| MPR24.1.13.3.2.3.3 Pile Cap - Stretch - 3 - OSD-2&3 MP69 to MP80 | 505 28-Jan-19 | 27-Mar-21 | 363 31-Oct-20 | 12-Apr-22 | 43.4% | 0% | -382 | -240 | -162 | · · · · · · · · · · · · · · · · · · · |
| MPR24.1.13.3.2.3.4 Pile Cap - Stretch - 4 - Marine MP81 to MP123 | 444 23-Nov-18 | 10-Nov-20 | | 27-Feb-21 | 66.83% | 50.44% | -43 | -92 | -40 | |
| MPR24.1.13.3.2.3.5 Pile Cap - Stretch - 5 - OSD-4 MP124 to MP128 | 125 11-Nov-20 | 08-Apr-21 | 125 27-Feb-21 | 29-Oct-21 | 0% | 0% | -92 | -92 | -27 | |
| MPR24.1.13.3.2.3.6 Pile Cap - Stretch - 6 - Marine MP 129 to MP 14 MPR24.1.13.3.2.4 Marine - Pier | 407 08-Jun-19 590 22-Dec-18 | 12-Apr-21 02-Jun-21 | 159 24-Sep-20 715 12-Sep-19 A | 03-Apr-21 27-Sep-22 | 5% 41.35% | 0% 3.19% | -240 -146 | -325 | -239 | |
| MPR24.1.13.3.2.4.1 Pier - Stretch - 1 - OSD-1 MP51 to MP53 (320m | 75 24-Jan-20 | 21-Apr-20 | | 27-Jan-22 | 68% | 0% | -382 | -382 | -262 | • ••• • |
| MPR24.1.13.3.2.4.2 Pier - Stretch - 2 - Marine - MP54 to MP68 (856 | 429 26-Apr-19 | 26-Mar-21 | 429 30-Jan-21 | 27-Sep-22 | 40% | 0% | -382 | -382 | -265 | |
| MPR24.1.13.3.2.4.3 Pier - Stretch - 3 - OSD-2&3 MP69 to MP80 (1.5 | 504 26-Feb-19 | 24-Apr-21 | 362 01-Dec-20 | 10-May-22 | 40.63% | 0% | -382 | -240 | -162 | |
| MPR24.1.13.3.2.4.4 Pier - Stretch - 4 - Marine MP81 to MP123 (2.6 MPR24.1.13.3.2.4.5 Pier - Stretch - 5 - OSD-4 MP124 to MP128 (60(| 472 22-Dec-18 118 13-Jan-21 | 12-Jan-21 02-Jun-21 | 478 12-Sep-19 A 120 19-Nov-21 | 17-Dec-21 11-Apr-22 | 61.74% 0% | 7.25% 0% | -146 -181 | -206 -183 | -105 | |
| MPR24.1.13.3.2.4.6 Pier - Stretch - 6 - Marine MP129 to MP148 (1.2 | 419 27-Sep-19 | 28-Apr-21 | | 08-Jun-21 | 5% | 0% | -253 | - 165 - 33 | 94 | · · · · · · · · · · · · · · · · · · · |
| MPR24.1.13.3.2.2 Marine - Pier Cap | 576 21-Jan-19 | 14-Jun-21 | 651 26-Dec-19 A | | 39.43% | 0.99% | -206 | -325 | -201 | |
| MPR24.1.13.3.2.2.1 Pier Cap - Stretch - 1 - OSD-1 MP51 to MP53 (3 | 87 04-Feb-20 | 16-May-20 | | 21-Feb-22 | 34.92% | 0% | -382 | -382 | -162 | · · · · · · · · · · · · · · · · · · · |
| MPR24.1.13.3.2.2.2 Pier Cap - Stretch - 2 - Marine - MP54 to MP68 | 414 27-May-19 | 07-Apr-21 | | 08-Oct-22 | 40% | 0% | -382 | -382 | -265 | |
| MPR24.1.13.3.2.2.3 Pier Cap - Stretch - 3 - OSD-2&3 MP69 to MP8(MPR24.1.13.3.2.2.4 Pier Cap - Stretch - 4 - Marine MP81 to MP123 | 497 28-Mar-19 458 21-Jan-19 | 17-May-21 23-Jan-21 | 355 30-Dec-20 413 26-Dec-19 A | 31-May-22 | 33.33% 59% | 0% 2.28% | -382 -206 | -240 -206 | -162 -105 | |
| MPR24.1.13.3.2.2.5 Pier Cap - Stretch - 5 - OSD(4) MP124 to MP12 | 103 12-Feb-21 | 14-Jun-21 | | 22-Apr-22 | 0% | 0% | -181 | -183 | -146 | |
| MPR24.1.13.3.2.2.6 Pier Cap - Stretch - 6 - Marine MP129 to MP14 | 403 12-Oct-19 | 11-May-21 | 192 28-Oct-20 | 06-Sep-21 | 12.54% | 0% | -240 | -29 | 124 | · · · · · · · · · · · · · · · · · · · |
| MPR24.1.13.3.2.5 Marine - Super Structure Erection | 636 19-Apr-19 | 23-Feb-22 | | 20-Mar-23 | 24.97% | 0% | -266 | -327 | -306 | · · · · · · · · · · · · · · · · · · · |
| MPR24.1.13.3.2.5.1 Erection - Main Concrete Viaduct MPR24.1.13.3.2.5.2 Rescue Span (MP98 to MP99) | 636 19-Apr-19 120 07-Mar-20 | 23-Feb-22 29-Oct-20 | 697 02-Jun-20 120 22-Apr-21 | 20-Mar-23 15-Dec-21 | 25.18% 12.5% | 0% 0% | -266 -266 | -327 -266 | -306 | |
| MPR24.1.13.4 Precast Segments | 778 06-Feb-19 | 29-001-20 21-Aug-21 | 883 07-Aug-19 A | | 42.37% | 6.67% | -200 | -367 | -37 | |
| MPR24.1.13.4.1 Precast Segement - Sewri Interchange | 701 06-Feb-19 | 24-May-21 | 684 20-Feb-20 A | | 53.23% | 0.78% | -317 | -358 | 50 | v. |
| MPR24.1.13.4.2 Precast Segement - Intertidal | 753 28-Feb-19 | 14-Aug-21 | 672 18-Oct-19 A | | 45.96% | 17.3% | -194 | -284 | -221 | |
| MPR24.1.13.4.3 Precast Segement - Marine MPR24.1.13.5 Orthotropic Steel Deck (OSD) - Fabrication, Shipping, Ass | 759 28-Feb-19 | 21-Aug-21 15-Mar-22 | 883 07-Aug-19 A 808 23-Sep-19 A | | 35.86% | 1.54% | -135 | -367 | -37 | |
| MPR24.1.13.5 Ormotropic Steel Deck (OSD) - Pablication, Shipping, Ass MPR24.1.13.5.1 OSD - Fabrication | 608 11-Jun-19 746 28-Sep-19 | 12-Oct-21 | 975 23-Sep-19 A | | 0% | 0% 0% | -9 | -369 -415 | -357 | |
| MPR24.1.13.5.1.1 Fabrication - Factory A | 720 28-Sep-19 | 16-Sep-21 | 975 23-Sep-19 A | | 0% | 0% | 5 | -441 | -418 | |
| MPR24.1.13.5.1.1.1 OSD 01 - RHS Fabrication - MP50 to MP53 (32 | 330 28-Sep-19 | 22-Aug-20 | 262 23-Sep-19 A | | 0% | 0% | 5 | -118 | 33 | → |
| MPR24.1.13.5.1.1.2 OSD 03 - RHS Fabrication - MP75 to MP81 (77) | 450 26-Jan-20 | 19-Apr-21 | · · · · · · · · · · · · · · · · · · · | 04-Jul-22 | 0% | 0% | -441 | -441 | -336 | |
| MPR24.1.13.5.1.1.3 OSD 04 - RHS Fabrication - MP124 to MP128 (MPR24.1.13.5.1.2 Fabrication - Factory B | 360 22-Sep-20 720 28-Sep-19 | 16-Sep-21 16-Sep-21 | 360 07-Dec-21 794 23-Sep-19 A | 01-Dec-22 03-Jun-22 | 0% 0% | 0% 0% | -441 5 | -441 -260 | -418 -196 | |
| MPR24.1.13.5.1.2.1 OSD 01 - LHS Fabrication - MP50 to MP53 (32) | 330 28-Sep-19 | 22-Aug-20 | 262 23-Sep-19 A | | 0% | 0% | 5 | -118 | 12 | |
| MPR24.1.13.5.1.2.2 OSD 02 - RHS Fabrication - MP69 to MP75 (68 | 450 26-Jan-20 | 19-Apr-21 | 450 11-Nov-20 | | 0% | 0% | -290 | -290 | -209 | |
| MPR24.1.13.5.1.2.3 OSD 04 - LHS Fabrication - MP124 to MP128 (| 360 22-Sep-20 | 16-Sep-21 | 330 24-Jan-20 A | | 0% | 0% | 242 | -260 | -196 | |
| MPR24.1.13.5.1.3 Fabrication - Factory C MPR24.1.13.5.1.3.1 OSD 02 - LHS Fabrication - MP69 to MP75 (68 | 660 23-Dec-19 420 23-Dec-19 | 12-Oct-21 14-Feb-21 | 632 27-Jan-20 A 392 27-Jan-20 A | • | 0% | 0% | -35 -35 | -294 -294 | -236 -159 | |
| MPR24.1.13.5.1.3.2 OSD 03 - LHS Fabrication - MP75 to MP81 (77) | 420 19-Aug-20 | 12-Oct-21 | | 02-Aug-22 | 0% | 0% | -294 | -294 | -236 | |
| MPR24.1.13.5.2 OSD - Shipping | 536 24-Jun-20 | 11-Dec-21 | 819 02-Nov-20 | 30-Jan-23 | 0% | 0% | -132 | -415 | -238 | • |
| MPR24.1.13.5.2.1 Shipping - Factory A | 510 24-Jun-20 | 15-Nov-21 | | 30-Jan-23 | 0% | 0% | -178 | -441 | -238 | |
| MPR24.1.13.5.2.1.1 OSD 01 - RHS Shipping - MP50 to MP53 (320rr MPR24.1.13.5.2.1.2 OSD 03 - RHS Shipping - MP75 to MP81 (770rr | 120 24-Jun-20 240 22-Oct-20 | 21-Oct-20 18-Jun-21 | 75 18-Dec-20 240 06-Jan-22 | 03-Mar-21 02-Sep-22 | 0% 0% | 0% 0% | -178 -441 | -133 -441 | -280 | |
| MPR24.1.13.5.2.1.3 OSD 04 - RHS Shipping - MP124 to MP128 (56 | 180 20-May-21 | 15-Nov-21 | 180 04-Aug-22 | 30-Jan-23 | 0% | 0% | -441 | -441 | -238 | |
| MPR24.1.13.5.2.2 Shipping - Factory B | 510 24-Jun-20 | 15-Nov-21 | Ű | 02-Aug-22 | 0% | 0% | -132 | -260 | -196 | · · · · · · · · · · · · · · · · · · · |
| MPR24.1.13.5.2.2.1 OSD 01 - LHS Shipping - MP50 to MP53 (320m | 120 24-Jun-20 | 21-Oct-20 | 106 02-Nov-20 | 16-Feb-21 | 0% | 0% | -132 | -118 | 200 | |
| MPR24.1.13.5.2.2.2 OSD 02 - RHS Shipping - MP69 to MP75 (683rr MPR24.1.13.5.2.2.3 OSD 04 - LHS Shipping - MP124 to MP128 (56) | 240 21-Nov-20 | 18-Jul-21 | · · · · · · · · · · · · · · · · · · · | 04-May-22 | 0% | 0% | -290 | -290 260 | -239 | |
| MPR24.1.13.5.2.2.3 OSD 04 - LHS Shipping - MP124 to MP128 (56) MPR24.1.13.5.2.3 Shipping - Factory C | 180 20-May-21 450 18-Sep-20 | 15-Nov-21 11-Dec-21 | | 02-Aug-22 01-Oct-22 | 0% | 0% 0% | -290 -294 | -260 -294 | -196 -212 | |
| MPR24.1.13.5.2.3.1 OSD 02 - LHS Shipping - MP69 to MP75 (683m | 210 18-Sep-20 | 15-Apr-21 | 210 09-Jul-21 | 03-Feb-22 | 0% | 0% | -294 | -294 | -130 | |
| MPR24.1.13.5.2.3.2 OSD 03 - LHS Shipping - MP75 to MP81 (770m | 210 16-May-21 | 11-Dec-21 | | 01-Oct-22 | 0% | 0% | -294 | -294 | -212 | |
| MPR24.1.13.5.3 OSD - Custom Clearance and Inland Transport (Last M | 482 07-Sep-20 | 01-Jan-22 | | 20-Feb-23 | 0% | 0% | -132 | -415 | -238 | |
| MPR24.1.13.5.3.1 OSD 1 - MP50 to MP53 (320m) | 75 07-Sep-20 | 20-Nov-20 | 76 16-Jan-21 | 02-Apr-21 | 0% | 0% | -132 | -133 | CDI | |

| | G-IHI | | | INS HARB | | | AGE 1, ARCH 2020 |) | | M |
|-------------|-------------------------------------------------------------------------|-----------------|-----------|------------|----------------------|-------------|---------------------|------------------------|---------------------------|------------------|
| Activity ID | Activity Name | BL1 Duration | BL1 Start | BL1 Finish | Original Duration | Start | Finish | Schedule % Complete | Performance % Complete | Variance - BL1 S |
| | MPR24.1.13.5.3.2 OSD 2 - MP69 to MP75 (683m) | 274 | 17-Nov-20 | 17-Aug-21 | 270 | 07-Sep-21 | 03-Jun-22 | 0% | 0% | -: |
| | MPR24.1.13.5.3.3 OSD 3 - MP75 to MP81 (770m) | 377 | 21-Dec-20 | 01-Jan-22 | 230 | 07-Mar-22 | 22-Oct-22 | 0% | 0% | |
| | MPR24.1.13.5.3.4 OSD 4 - MP124 to MP128 (560m) | 141 | 19-Jul-21 | 06-Dec-21 | 292 | 05-May-22 | 20-Feb-23 | 0% | 0% | -: |
| | MPR24.1.13.5.4 OSD - Assembly | 337 | 07-Oct-20 | 16-Feb-22 | 587 | 15-Feb-21 | 19-Apr-23 | 0% | 0% | - |
| | MPR24.1.13.5.4.1 OSD 1 - MP50 to MP53 (320m) | 80 | 07-Oct-20 | 11-Jan-21 | 82 | 15-Feb-21 | 24-May-21 | 0% | 0% | - |
| | MPR24.1.13.5.4.2 OSD 2 - MP69 to MP75 (683m) | 252 | 17-Dec-20 | 13-Oct-21 | 249 | 07-Oct-21 | 28-Jul-22 | 0% | 0% | -: |
| | MPR24.1.13.5.4.3 OSD 3 - MP75 to MP81 (770m) | 329 | 20-Jan-21 | 16-Feb-22 | 206 | 06-Apr-22 | 07-Dec-22 | 0% | 0% | -; |
| | MPR24.1.13.5.4.4 OSD 4 - MP124 to MP128 (560m) | 142 | 18-Aug-21 | 04-Feb-22 | 269 | 04-Jun-22 | 19-Apr-23 | 0% | 0% | -: |
| | MPR24.1.13.5.5 OSD - Erection | 608 | 11-Jun-19 | 15-Mar-22 | 602 | 09-Mar-21 | 27-May-23 | 0% | 0% | - |
| | MPR24.1.13.5.5.1 OSD 1 - MP50 to MP53 (320m) | 157 | 21-May-20 | 26-Feb-21 | 95 | 25-Feb-22 | 16-Jun-22 | 0% | 0% | -; |
| | MPR24.1.13.5.5.2 OSD 2 - MP69 to MP75 (683m) | 542 | 11-Jun-19 | 24-Dec-21 | 370 | 09-Mar-21 | 23-Aug-22 | 0% | 0% | -; |
| | MPR24.1.13.5.5.3 OSD 3 - MP75 to MP81 (770m) | 279 | 07-Jan-21 | 10-Mar-22 | 288 | 22-Jan-22 | 30-Dec-22 | 0% | 0% | -; |
| | MPR24.1.13.5.5.4 OSD 4 - MP124 to MP128 (560m) | 185 | 05-May-21 | 15-Mar-22 | 373 | 11-Mar-22 | 27-May-23 | 0% | 0% | - |
| | MPR24.1.13.6 Post Erection Segmental Stitch Concrete (incl. Bearing In: | 644 | 24-Apr-19 | 10-Mar-22 | 759 | 01-Feb-20 A | 01-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.6.1 Stitch Concrete - Sewri Interchange | 644 | 24-Apr-19 | 10-Mar-22 | 676 | 12-Dec-20 | 01-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.6.2 Stitch Concrete - Intertidal | 475 | 29-Nov-19 | 22-Dec-21 | 624 | 01-Feb-20 A | 22-Dec-22 | 0% | 0% | |
| | MPR24.1.13.6.3 Stitch Concrete - Marine | 563 | 21-Oct-19 | 26-Feb-22 | 624 | 04-Dec-20 | 23-Mar-23 | 0% | 0% | -: |
| | MPR24.1.13.7 Crash Barrier Works | 585 | 05-Oct-19 | 11-Mar-22 | 754 | 22-Sep-20 | 13-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.7.1 Crash Barrier - Sewri Interchange | 585 | 05-Oct-19 | 11-Mar-22 | 626 | 23-Feb-21 | 13-Jun-23 | 0% | 0% | -: |
| | MPR24.1.13.7.2 Crash Barrier - Intertidal | 470 | 17-Dec-19 | 04-Jan-22 | 619 | 22-Sep-20 | 03-Jan-23 | 0% | 0% | - |
| | MPR24.1.13.7.3 Crash Barrier - Marine | 541 | 26-Nov-19 | 09-Mar-22 | 602 | 09-Jan-21 | 01-Apr-23 | 0% | 0% | -: |
| | MPR24.1.13.7.4 Crash Barrier - Orthotropic Steel Deck | 291 | 23-Dec-20 | 10-Mar-22 | 330 | 21-Apr-22 | 18-May-23 | 0% | 0% | -: |
| | MPR24.1.13.8 Bridge Deck (Superstructure) Water Proofing | 581 | 15-Oct-19 | 16-Mar-22 | 749 | 03-Oct-20 | 19-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.8.1 Water Proofing - Sewri Interchange | 579 | 15-Oct-19 | 14-Mar-22 | 623 | 05-Mar-21 | 19-Jun-23 | 0% | 0% | -: |
| | MPR24.1.13.8.2 Water Proofing - Intertidal | 465 | 28-Dec-19 | 10-Jan-22 | 614 | 03-Oct-20 | 09-Jan-23 | 0% | 0% | - |
| | MPR24.1.13.8.3 Water Proofing - Marine | 526 | 18-Dec-19 | 14-Mar-22 | 587 | 02-Feb-21 | 06-Apr-23 | 0% | 0% | -1 |
| | MPR24.1.13.8.4 Water Proofing - Orthotropic Steel Deck | 281 | 11-Jan-21 | 16-Mar-22 | 320 | 09-May-22 | 24-May-23 | 0% | 0% | -: |
| | MPR24.1.13.9 Stone Mastic Asphalt Pavement | 74 | 23-Dec-21 | 22-Mar-22 | 311 | 17-Jun-22 | 23-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.9.1 Sewri Interchange | 70 | 27-Dec-21 | 21-Mar-22 | 138 | 10-Jan-23 | 23-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.9.2 Main Bridge | 74 | 23-Dec-21 | 22-Mar-22 | 273 | 17-Jun-22 | 10-May-23 | 0% | 0% | |
| | MPR24.1.13.10 Bridge Anclilaries and Misc. Works | 575 | 31-Jan-20 | 22-Jun-22 | 781 | 06-Nov-20 | 29-Aug-23 | 0% | 0% | - |
| | MPR24.1.13.10.1 Bridge Ancillaries | 575 | 31-Jan-20 | 22-Jun-22 | 781 | 06-Nov-20 | 29-Aug-23 | 0% | 0% | - |
| | MPR24.1.13.10.1.1 Noise Barrier, View Barrier and Safety Fence | 552 | 31-Jan-20 | 26-May-22 | 716 | 06-Nov-20 | 13-Jun-23 | 0% | 0% | - |
| | MPR24.1.13.10.1.2 Traffic Signages and Marking | 84 | 17-Mar-22 | 22-Jun-22 | 99 | 05-May-23 | 29-Aug-23 | 0% | 0% | -: |
| | MPR24.1.15 Handing Over | 148 | 31-Mar-22 | 22-Sep-22 | 148 | 19-May-23 | 10-Nov-23 | 0% | 0% | - |
| | MPR24.1.14 Invoice Schedule (Shows the Invoice items which are not cov | 1062 | 23-Mar-18 | 22-Sep-22 | 1410 | 23-Mar-18 A | 10-Nov-23 | 45.42% | 29.19% | |

| Actual Level of Effort Remaining Work Milestone | Page 4 of 4 | Please note that this |
|----------------------------------------------------|-------------|-----------------------|
| Actual Work Critical Remaining Work Summary | | schedule submitted |



Attachment 7- Package-2's Construction Programme Updated as on 25th March 2020

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

ANNEXURE-5 CONSTRUCTION UPDATED PROGRAMME (PACKAGE-2)

| # | Activity ID | Activity Name | Original BL Project Start Duration | BL Project Finish | Actual Start | Actual Finish | Schedule % Complete | Performance % Complete | 2018 DJF AMJJAS 2345678911 | 2019 NDJFMA JJASON 1 1 1 1 1 1 1 2 2 2 2 2 2 2 |
|----------|-----------------------------------------|-----------------------------------------|---------------------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | MTHL-PKG2-DET | AILED WORK PROGRAMME_25032020_APPROVED | _MPR.24 2946.04 17-Nov-17 | 21-Sep-24 | 17-Nov-17 | | 38.06% | 19.05% | | |
| 2 | PROJECT PRE-CO | OMMENCEMENT ACTIVITY | 126.00 17-Nov-17 | 22-Mar-18 | 17-Nov-17 | 16-Mar-18 | 0% | 0% | | |
| 3 | PRE-COMMENCE | MENT ACTIVITY | 55.00 15-Dec-17 | 07-Feb-18 | 15-Dec-17 | 20-Mar-18 | 0% | 0% | 20-Mar-18A | PRE-COMMENCEMENT ACTIVI |
| 4 | PROJECT EVENT | MILESTONE | 2270.13 23-Mar-18 | 21-Mar-23 | 23-Mar-18 | | 0% | 0% | V | |
| 5 | PROJECT KEY MILES | STONE | 2090.13 23-Mar-18 | 22-Sep-22 | 23-Mar-18 | | 0% | 0% | | |
| 6 | INTERFACE MILESTO | DNE_ERG19 | 2242.13 19-Apr-18 | 21-Mar-23 | 03-Apr-18 | | 0% | | | |
| 7 | | S AND INTERFACE DATE_ADD2-ATTACHMENT 25 | 1825.88 18-Sep-18 | 22-Jun-22 | 31-Aug-18 | | 0% | | | |
| 8 9 | CONSTRUCTION KEY | MILESTONES | 947.25 03-Sep-18 613.00 20-Jan-18 | 06-Jul-21 18-Aug-18 | 25-Oct-18 12-Jan-18 | 22-Aug-19 | 0% | 0% 0% | | 22-Au |
| | | | | - | | | | | ▼ 07-Mar-18A | SITE ORGANISATION |
| 10 11 | | ANAGEMENT SYSTEM | 35.00 20-Jan-18 613.00 20-Jan-18 | 23-Feb-18 27-May-18 | 07-Mar-18 20-Jan-18 | 07-Mar-18 22-Aug-19 | 0% 0% | | | |
| 12 | | CUMENT CONTROL SYSTEM | 315.38 20-Jan-18 | 10-May-18 | 20-Jan-18 | 24-Oct-18 | 0% | | | |
| 13 | | AND MANAGEMENT SYSTEM | 254.00 23-Mar-18 | 10-May-18 | 23-Mar-18 | 24-Oct-18 | 0% | 0% | | Nobriaidipedentationalistic |
| 14 | · · · · · · · · · · · · · · · · · · · | ENVIRONMENTAL MANAGEMENT SYSTEM | 551.00 23-Mar-18 | 10-May-18 | 23-Mar-18 | 22-Aug-19 | 0% | | | Lain ing Columpation Onite Objection Dialogica the Administric A device in the Administric Administry of the Administr |
| 15 16 | INTERFACE MANAGEM RISK MANAGEMENT PL | | 49.00 23-Mar-18 66.00 23-Mar-18 | 10-May-18 27-May-18 | 23-Mar-18 23-Mar-18 | 24-Oct-18 24-Oct-18 | 0% 0% | 0% 0% | | |
| 17 | DEVELOPMENT OF V | | 63.00 23-Mar-18 | 24-May-18 | 23-Mar-18 | 21-Sep-18 | 0% | | | 21-Sep-18A, DEVELOPMENT |
| 18 | CONTRACTOR'S WORK | PROGRAMME | 63.00 23-Mar-18 | 24-May-18 | 23-Mar-18 | 21-Sep-18 | 0% | 0% | | 21-Sep-18A, CONTRACTOR'S |
| 19 | OTHER CONTRACTU | | 28.00 24-Mar-18 | 20-Apr-18 | 24-Mar-18 | 23-Apr-18 | 0% | | 23-Apr-18 | A, OTHER CONTRACTUAL SUB |
| 20 | PERMIT & APPROVA | | 389.00 20-Jan-18 | 18-Aug-18 | 12-Jan-18 | 03-Aug-19 | 0% | 0% | 00 Feb 184 SI | JRVEYING & GEOTECHNICAL IN |
| 21 22 | CUTTING OF MANGRO | CHNICAL INVESTIGATION | 35.00 20-Jan-18 70.00 20-Jan-18 | 23-Feb-18 30-Mar-18 | 12-Jan-18 25-Jan-18 | 09-Feb-18 23-Apr-18 | 0% 0% | 0% 0% | 23-Apr-18 | A, CUTTING OF MANGROVES |
| 23 | SETTING UP BATCHING | | 313.00 06-Apr-18 | 18-Aug-18 | 06-Apr-18 | 28-Nov-18 | 0% | 0% | | 28-Nov-18A, SETTING UP |
| 24 | PC YARD & CAMP | | 28.00 04-May-18 | 01-Jun-18 | 21-Mar-18 | 01-Oct-18 | 0% | 0% | | 01-Oct-18A, PC YARD & CAMP |
| 25 | | CTRICITY & WATER | 63.00 18-May-18 | 20-Jul-18 | 06-Apr-18 | 03-Aug-19 | 0% 0% | 0% 0% | 02 | -Aug-18A, OUTTING OF TREES |
| 26 27 | CUTTING OF TREES | NCES FOR EQUIPMENTS & GOODS | 35.00 23-Mar-18 70.00 23-Mar-18 | 26-Apr-18 31-May-18 | 10-May-18 15-May-18 | 02-Aug-18 31-May-18 | 0% | 0% | | -18A, MPORT PERMITS/LICENC |
| 28 | | LITIES TO BE USED AT SITE | 51.00 23-Mar-18 | 31-May-18 | 16-Aug-18 | 28-Nov-18 | 0% | 0% | 1 1 1 1 1 1 1 1 1 1 1 1 1 | 28-Nov-18A, NOC FOR PL |
| 29 | | ROAD FOR MAIN BRIDGE & INTERCHANGE | 58.00 23-Mar-18 | 19-May-18 | 23-Mar-18 | 28-Jul-18 | 0% | 0% | 28 | Jul-18A, TEMPORARYACCESS |
| 30 | DESIGN | | 1087.38 20-Jan-18 | 04-Sep-19 | 01-Jan-18 | | 100% | 82.36% | | |
| 31 | | IN WORK / INFORMATION COLLECTION | 678.38 20-Jan-18 | 17-Jul-18 | 01-Jan-18 | 12-Nov-19 | 100% | 100% | | |
| 32 33 | INDEPENDENT DESIGN | | 35.00 20-Jan-18 116.33 20-Jan-18 | 23-Feb-18 | 20-Jan-18 01-Jan-18 | 13-Apr-18 20-Apr-18 | 0% 0% | | | A, INDEPENDENT DESIGN:CHEC A, TOPOGRAPHIC SURVEY |
| 33 34 | BATHYMETRIC SURVEY | | 75.00 20-Jan-18 | 16-May-18 04-Apr-18 | 25-Jan-18 | 20-Apr-18 | 0% | 0% | | BATHYMETRIC SURVEY |
| 35 | | ONGC & BPCL PHYSCIAL VERIFICATION | 309.00 | | 21-Mar-18 | 05-Aug-19 | 0% | 0% | | 05-Aug- |
| 36 | | | 548.08 20-Jan-18 | 17-Jul-18 | 12-Jan-18 | 25-Jun-19 | 100% | 100% | | 25-Jun-19/ |
| 37 38 | TEMPORARY WORKS FO | OR DESIGN INITIATION OF STEEL MODULE 1 | 63.00 884.17 22-Jan-18 | 01-Nov-18 | 26-Jun-19 20-Jan-18 | 12-Nov-19 | 0% 100% | 0% 100% | V | |
| 39 | PROJECT OFFICE LAY | TUT | 241.13 04-May-18 | 02-Jun-18 | 04-May-18 | 17-Jul-18 | 0% | 0% | 17-, | Jul-18 A, PROJECT OFFICE LAYO |
| 40 | CASTING YARD LAYOU | Т | 72.33 22-Jan-18 | 04-Apr-18 | 20-Jan-18 | 09-Oct-18 | 0% | 0% | | 09-Oct-18A, CASTING YARD L |
| 41 | | | 94.33 26-Feb-18 | 31-May-18 | 24-Feb-18 | 30-Aug-18 | 100% | 100% | | 30-Aug-18A, TEMPORARY BRID |
| 42 43 | CASTING YARD STRUC | | 199.38 10-May-18 212.17 20-Jul-18 | 10-Aug-18 01-Nov-18 | 20-Mar-18 11-Nov-19 | 20-Nov-18 | 0% 0% | 0% 0% | | |
| 44 | CONCRETE MIX DES | | 274.38 23-Mar-18 | 31-Aug-18 | 12-May-18 | 15-Nov-18 | 0% | | | 15-Nov-18A, CONCRETE M |
| 45 | JFE DESIGN PROGR | AMME | 986.04 01-May-18 | 04-Sep-19 | 09-Apr-18 | | 100% | 50.5% | | |
| 46 | PROCUREMENT, | MANUFACTURING AND LOGISTICS | 1394.33 20-Jan-18 | 23-Aug-20 | 22-Dec-17 | | 100% | 91.67% | | |
| 47 | SURVEY & INVESTIG | ATION | 72.33 20-Jan-18 | 02-Apr-18 | 22-Dec-17 | 04-Apr-18 | 0% | 0% | 04-Apr-18A | , SURVEY & INVESTIGATION |
| 48 | TEMPORARYWORK | | 840.33 20-Jan-18 | 20-Oct-18 | 20-Jan-18 | | 0% | | | |
| 49 | MAIN WORK_SUBCO | NTRACT WORK | 742.00 23-Mar-18 | 20-Jul-19 | 23-Mar-18 | | 0% | | | The second second second |
| 50 | EQUIPMENTS BATCHING PLANT | | 893.50 23-Mar-18 | 12-Sep-19 31-Jul-18 | 23-Mar-18 | 22 Mar 10 | 100% | 100% | | 23-Mar-19A, BAT |
| 51 52 | RCD MACHINE | | 437.00 23-Mar-18 514.00 23-Mar-18 | 11-Nov-18 | 23-Mar-18 23-Mar-18 | 23-Mar-19 24-Aug-19 | 0% 0% | 0% 0% | | 24 Au |
| 53 | GANTRY CRANE | | 883.00 23-Mar-18 | 08-Feb-19 | 23-Mar-18 | | 100% | 100% | | |
| 54 | SEGMENT LAUNCHER | | 770.41 24-Jul-18 | 12-Sep-19 | 24-Jul-18 | 09-Mar-20 | 0% | | | · · · · · · · · · · · · · · · · · · · |
| 55 | | | 714.91 07-Aug-18 | 24-Mar-19 24-Mar-19 | 04-Sep-18 | | 100% | 83.33% | | |
| 56 57 | PRECAST MOULD_CAS | | 332.00 20-Aug-18 446.91 07-Aug-18 | 24-Mar-19 04-Mar-19 | 03-Jun-19 04-Sep-18 | | 100% 0% | <u>83.33%</u> 0% | | |
| 58 | MATERIAL SUPPLIER | RS | 851.38 02-Jun-18 | 15-Oct-19 | 20-Apr-18 | | 0% | | | |
| | Project Baseline Bar | Critical Remaining Work Summary | EMPLOYER: MUMBAI METROPOLIT | AN REGION D | EVELOPME | | | NTRACTO | <u>R:</u> - TPL JV | Date 25-Mar-20 |
| | Remaining Work | % Complete | (MMRDA) | | | | | | - 11 L J V | |

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| g-19A, MANAGEMENT | | | | | | | | | - | | |
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| g-19A, DEVELOPMENT OF | MAN | AGEN | /EN | ΓSY | ′SΤΙ | ΞM | | | | | |
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| WORK PROGRAMME | | | | | | · · · | | | | | |
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| -19A, PERMIT & APPROVAL | ∔ ¦ ¦ - | | | | | ; ;- ; | | | | | |
| IVESTIGATION | | | | | | | | | | | |
| BATCHING PLANT | | | | | | | | | | | |
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| -19A, CONNECTION FOR EI | ECT | RICIT | Y&V | VAT | ER | | | | | | |
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| ROAD FOR MAIN BRIDGE 8 | : : : | | 1 1 | E | | · · | | | : | | |
| | ▼ 1 | I-Jan- | 21,[| ĴEŜ | IĞN | | | | | | |
| 12-Nov-19A, EARLYSTAGE | DES | IGN V | /OR | K/I | NFO | RM/ | λTIC | DN C | ÖLL | ECI | ION |
| CKER:APPROVAL | | | | | | | | | | | |
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| -19A, ADDITIONAL TIME FO | | CC & | RDC | | | | 1.1/1 | | | | |
| A, GEOTECHNICAL INVEST | | | | | | | - v, | _(\((| | | • • • • • |
| 12-Nov-19A, ADDITIONAL W | | | | | | ITIA | TIO | NO | FST | EEL | MC |
| 🗸 24-Jun-20, | TEM | PORA | RYV | VOR | ĸ | | | | | | |
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| RD STRUCTURE | | | | | | | | | | | |
| 24-Jun-20, | STEE | LBR | DGE | FA | BRI | CAT | ION | YAF | RD | | |
| /IXDESIGN | | | | | | | | | - | | |
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| 09-May-20, TE | | 1.1 | | 1 1 | ; i ibr | | to. | ACT. | wio | אס | |
| 04-Aug- | | - i - i | i i . | | - i - | | ΠĘΫ | 401 | VVO | ΓŅ | |
| CHING PLANT | | | | | | I | | | - - - | | |
| g-19A, RCDMACHINE | | | | | - | | | | | | |
| 21-Aug | | | | | NĖ | | | | : | | |
| 09-Mar-20A, SEGM | | | | | | | | | - | | |
| ▼ 16-May-20, PF | | 1.1.1 | 1.1.1 | | - i | | 1.1 | | RM | | |
| 16-May-20, PF | | | JULI | <u>י ר</u> | AS | ING | ъВĘ | :Ф | | | |
| 30-5 | | | TER | AL : | SUF | PLI | ĖR | S | - | | |
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| Revision | | Che | ecke | ed | | + | | App | orov | ed | |
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MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR INTERCHANGE UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED PROGRAMME (PACKAGE-2)

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|-----|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------|------------------|---------------|------------|--------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| # | Activity ID Activity Name | Original BL Project Start | BL Project Fin | ish Actual Start | Actual Finish | Schedule % | Performance | | 2018 | 2019 |
| | | Duration | | | | Complete | % Complete | | AMJJASIN | DJFMA JJASOND. 1111111222222222 |
| 50 | MATERIAL PROCUREMENT | 0.00 | | 08-Aug-18 | | 0% | 0% | 2345 | | |
| 59 | | | | | | | | | | |
| 60 | | 0.00 | | 08-Aug-18 | | 0% | 0% | p | | |
| 61 | PERMANENT WORKS | 0.00 | | 25-Mar-19 | | 0% | 0% | | | |
| 62 | PROCUREMENT OF STEEL GIRDER | 762.00 07-May-19 | 23-Aug-20 | 01-Aug-19 | | 0% | 0% | μ \pm \pm \pm \pm | | |
| 63 | STEEL PLATE FOR (RHS.STEEL MOUDLE-2_MP177 - MP182) | 513.00 04-Jun-19 | 13-Jul-20 | 08-Aug-19 | | 0% | 0% | p i i i i i | | |
| 64 | STEEL PLATE FOR (LHS.STEEL MOUDLE-2_MP177 - MP182) | 438.00 07-May-19 | 16-Apr-20 | 01-Aug-19 | | 0% | 0% | n i i i i | · I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I | |
| 65 | STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186) | 315.00 01-Jul-19 | 10-May-20 | 01-Nov-19 | | 0% | 0% | | | |
| 66 | STEEL PLATE FOR (LHS.STEEL MOUDLE-3_MP183 - MP186) | 315.00 04-Jun-19 | 14-Apr-20 | 01-Oct-19 | | 0% | 0% | | | |
| 67 | STEEL PLATE FOR (RHS.STEEL MOUDLE-1_MP176 - MP171) | 390.00 30-Jul-19 | 23-Aug-20 | | | 0% | 0% | 1 1 1 1 | | |
| 68 | STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171) | 390.00 02-Jul-19 | 26-Jul-20 | | | 0% | 0% | i | | |
| 69 | CONSTRUCTION | 1995.33 02-Apr-18 | 21-Jun-22 | 02-Apr-18 | | 35.5% | 16.39% | l I I | | |
| 70 | | 1000.01 00.01 00 | 04 has 00 | | | 07.05% | 07.070/ | l i i | | |
| 70 | TEMPORARYWORK | 1908.21 02-Apr-18 | 21-Jun-22 | 02-Apr-18 | | 97.95% | 97.67% | ₿-\$-\$-\$ _{\$} | <u></u> | 25-Jul-19A |
| 71 | PREPARATION WORK | 368.33 02-Apr-18 | 16-Jan-19 | 02-Apr-18 | 25-Jul-19 | 0% | 0% | <u>, 111</u> | | |
| 72 | ESTABLISHMENT OF EMPOLYER & CONTRACTOR OFFICE | 194.04 20-Jun-18 | 27-Nov-18 | 27-Jun-18 | 18-Jan-19 | 100% | 100% | μ | | 18-Jan-19A, ESTABLISH |
| 73 | ESTABLISHMENT OF LABOUR CAMP | 463.92 20-Jun-18 | 05-Apr-19 | 03-Jul-18 | 04-Apr-19 | 0% | 0% | n i i i i | | 04-Apr-19A, ESTAR |
| 74 | ESTABLISHMENT OF CONCRETE CASTING YARD | 945.83 04-May-18 | 25-Apr-19 | 14-Jun-18 | | 100% | 99.33% | | | |
| 75 | ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD | 397.75 02-Nov-18 | 06-Mar-20 | 01-Nov-19 | | 0% | 0% | h | | |
| 76 | TEMPORARY BRIDGE | 1855.88 20-May-18 | 21-Jun-22 | 27-Jul-18 | | 96.49% | 96.49% | <u> </u> | | |
| 77 | A13700 Removal of Temporary Bridge & Casting Yard | 365.00 21-Jun-21 | 21-Jun-22 | | | 0% | 0% | | | |
| 78 | TEMPORARY BRIDGE FACILITY-EQUIPMENT MOBILIZATION | 372.33 20-May-18 | 19-Oct-18 | 27-Jul-18 | 25-Apr-19 | 0% | 0% | \mathbf{E} | | 25-Apr-19A, TEM |
| 79 | TEMPORARY BRDIGE TYPE 1_FROM MP226(16+010) - MP249(17+320) | 467.97 04-Jun-18 | 17-Aug-19 | 08-Aug-18 | 23-Dec-19 | 100% | 100% | | | |
| 80 | TEMPORARY BRDIGE TYPE 3 FROM MP207(14+870) - MP226(16+010) | 566.29 24-Jul-18 | 12-Sep-19 | 16-Nov-18 | 15-Feb-20 | 100% | 100% | | | |
| 81 | | 405.13 31-Aug-18 | 08-Aug-19 | 08-Mar-19 | | 100% | 100% | r-i-i-i-i | | |
| 82 | PERMANENT WORK | 1728.33 03-Sep-18 | 24-May-22 | 08-Dec-18 | | 27.34% | 5.77% | | • • • • • • • • | F |
| 83 | PRE-FABRICATION AND ASSEMBLY | 1170.33 18-Apr-19 | 19-Feb-22 | 16-Oct-19 | | 8.41% | 0.72% | 6 1 1 1 7 | | |
| 84 | CONCRETE PRE-FABRICATIONAT THE CASTING YARD | 612.13 18-Apr-19 | 15-Sep-21 | 06-Nov-19 | | 40.21% | 4.25% | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | |
| 85 | STEEL SPAN FABRICATIONAT THE SUPPLIER'S WORK SHOP INCLUDING LOGISTIC | 1135.38 02-Jun-19 | 24-Jan-22 | 16-Oct-19 | | 1.99% | 420 <i>%</i> | | · I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I | |
| 86 | STEEL GIRDERASSEMBLY AT THE CONTRACTOR'S ASSEMBLY YARD | | | 10-00-19 | | | | | | |
| | | 622.63 05-Sep-20 | 17-Feb-22 | | | 0% | 0% | | | |
| 87 | STEEL SPAN LOADING AND TRANSPORTING TO THE ERECTION AREA | 539.00 30-Sep-20 | 19-Feb-22 | 00.5 40 | | 0% | 0% | | | |
| 88 | | 1728.33 03-Sep-18 | 24-May-22 | 08-Dec-18 | | 38.41% | 12.01% | | | |
| 89 | | 1138.04 03-Sep-18 | 23-Mar-21 | 08-Dec-18 | | 57.93% | 35.16% | | | · |
| 90 | MAIN BRIDGE PILE FOUNDATION | 1044.27 03-Sep-18 | 23-Jan-21 | 08-Dec-18 | | 70.3% | 49.44% | £ | | |
| 91 | PILE LOAD TEST | 259.25 03-Sep-18 | 19-Nov-18 | 08-Dec-18 | 11-Nov-19 | 100% | 100% | \mathbf{i} | · · · · · · · · · · · · · · · · · · · | |
| 92 | MAIN BRIDGE PILE FOUNDATION_LAND 17+414~18+187 FROM MP250 TO MP266 | 231.35 30-Nov-18 | 15-May-19 | 17-Jan-19 | | 100% | 86.41% | | | |
| 93 | MAIN BRIDGE PILE FOUNDATION_CRZ 15+890~17+414 FROM MP226 TO MP250 | 268.00 20-Dec-18 | 27-Nov-19 | 12-Jun-19 | 21-Feb-20 | 100% | 100% | | | |
| 94 | MAIN BRIDGE PILE FOUNDATION_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225 | 317.00 27-Feb-19 | 06-Jun-20 | 15-Oct-19 | | 75.42% | 76.49% | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | |
| 95 | MAIN BRIDGE PILE FOUNDATION_MARINE 13+610~14+800 FROM MP187 TO MP205 | 299.20 12-Dec-19 | 28-Nov-20 | 01-Oct-19 | | 32.14% | 19.5% | | , , , , , , , , , , , , , , , , , , , | |
| 96 | MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 | 319.50 27-Nov-19 | 23-Jan-21 | 17-Mar-20 | | 17.23% | 0.78% | | | |
| 97 | MAIN BRIDGE PILE FOUNDATION_MARINE 10+380~11+880 FROM MP146 TO MP170 | 461.13 24-Nov-18 | 28-Dec-19 | 19-Feb-19 | | 100% | 24.82% | 1 | : | |
| 98 | MAIN BRIDGE PILE CAP INSTALLATION | 662.75 22-Dec-18 | 23-Mar-21 | 01-May-19 | | 45.01% | 20.24% | e i i i ' | | |
| 99 | MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION | 630.25 22-Dec-18 | 17-Feb-21 | 19-Aug-19 | | 0% | 0% | É É É É É | | |
| 100 | MAIN BRIDGE PILE CAP BOTTOM SLAB_CRZ15+890~17+414 FROM MP226 TO MP250 | 204.75 17-Jan-19 | 12-Dec-19 | 19-Aug-19 | | 0% | 0% | | | |
| 101 | MAIN BRIDGE PILE CAP BOTTOM SLAB_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225 | 309.75 06-Apr-19 | 18-Jul-20 | 30-Dec-19 | | 0% | 0% | p i i i i i | | |
| 102 | MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 13+610~14+800 FROM MP187 TO MP205 | 277.00 21-Jan-20 | 10-Dec-20 | 16-Nov-19 | | 0% | 0% | p i i i i i | | |
| 103 | MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 | 308.00 08-Jan-20 | 17-Feb-21 | | | 0% | 0% | | | |
| 104 | MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 10+380~11+880 FROM MP146 TO MP170 | 250.00 22-Dec-18 | 21-Jan-20 | | | 0% | 0% | | | |
| 105 | MAIN BRIDGE PILE CAP INSTALLATION | 652.25 27-Dec-18 | 23-Mar-21 | 01-May-19 | | 45.01% | 20.24% | | | |
| 106 | MAIN BRIDGE PILE CAP_LAND 17+414~18+188 FROM MP251 TO MP266 | 267.50 27-Dec-18 | 13-Jun-19 | 01-May-19 | | 100% | 72.73% | 1 1 1 1 | | decised and contract of the second seco |
| 107 | MAIN BRIDGE PILE CAP_CRZ 15+890~17+414 FROM MP226 TO MP250 | 147.50 04-Mar-19 | 08-Jan-20 | 28-Aug-19 | | 100% | 84.44% | μ | | |
| 108 | MAIN BRIDGE PILE CAP_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225 | 318.00 18-Apr-19 | 05-Sep-20 | 29-Jan-20 | | 58.19% | 17.5% | | | |
| 109 | MAIN BRIDGE PILE CAP_MARINE 13+610~14+800 FROM MP187 TO MP205 | 270.00 01-Feb-20 | 06-Jan-21 | 13-Jan-20 | | 15.02% | 4.76% | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | |
| 110 | MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 | 411.00 20-Jan-20 | 23-Mar-21 | | | 1.62% | 0% | | | |
| 111 | MAIN BRIDGE PILE CAP_MARINE 10+380~11+880 FROM MP146 TO MP170 | 263.00 03-Jan-19 | 17-Feb-20 | | | 100% | 0% | · [| | |
| 112 | MAIN BRIDGE SUB-STRUCTURE | 946.04 09-Jan-19 | 24-Sep-21 | 04-Nov-19 | | 57.51% | 4.01% | | | |
| 113 | MAIN BRIDGE PIER INSTALLATION | 674.50 09-Jan-19 | 28-Jul-21 | 04-Nov-19 | | 61.04% | 7.32% | | | · · · · · · · · · · · · · · · · · · · |
| 114 | MAIN BRIDGE PIER_LAND 17+414~18+188 FROM MB251 TO MB266 | 279.75 09-Jan-19 | 08-Nov-19 | 06-Nov-19 | | 100% | 6.45% | | | |
| 115 | MAIN BRIDGE PIER_CRZ 15+890~17+414 FROM MB226 TO MB250 | 216.80 26-Mar-19 | 06-Feb-20 | 04-Nov-19 | | 100% | 33.22% | | | |
| 116 | MAIN BRDIGE PIER_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225 | 439.00 11-May-19 | 16-Oct-20 | 10-Feb-20 | | 46.82% | 1.14% | | | · · · · · · · · · · · · · · · · · · · |
| 117 | MAIN BRIDGE PIER_MARINE 13+610~14+800 FROM MB187 TO MB205 | 217.00 19-Mar-20 | 18-Feb-21 | | | 0.22% | 0% | μ | | · · · · · · · · · · · · · · · · · · · |
| 118 | MAIN BRIDGE PIER_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB203 | 452.00 17-Feb-20 | 28-Jul-21 | | | 0.22 % | 0% | p i i i i | | |
| 119 | MAIN BRIDGE PIER_MARINE (01212) 11:000 13:010 1 (01101 10 MB171 10 MB100 MAIN BRIDGE PIER_MARINE 10+380~11+880 FROM MB146 TO MB170 | 269.00 07-Feb-19 | 13-Mar-20 | | | 100% | 0% | | | |
| 120 | MAIN BRIDGE PIER_INARINE 107300-117600 PROVINIBING TO WEIT/0 | 596.25 08-Feb-19 | 27-Aug-21 | | | 59.1% | 0% | | | |
| 120 | | 00020 00-760-19 | ZI-Aug-ZI | | | 00.170 | 0.10 | <u></u> | | |
| | Drajact Resoling Rer Oritical Remaining Work Oritical Remaining Work | | | | | 00 | Трастор | | | Date |
| | Project Baseline Bar Critical Remaining Work Summary | EMPLOYER: | | | | | NTRACTOR | _ | | 25-Mar-20 |
| | Actual Work Milestone | MUMBAI METROPOLITA | AN REGION | IDEVELOPME | NI AUTHORITY | r DA | EWOO - | - TPL | JV | |
| | Remaining Work % Complete | (MMRDA) | | | | | | | | |
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| | | | 7-Sep-21, STEEL PLAT |
| | | | 14-Nov-21, STEEL PL |
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| Jul-19 A, | PREPARATION WORK | | |
| ABLISHN | MENTOFEMPOLYER& | CONTRACTOR OFFICE | |
| ,ESTAB | LISHMENT OF LABOUR | | |
| | | 5-Nov-20, ESTABLISHM | |
| | | | 🔰 04-Dec-21,ESTABL |
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| | | RYBRDIGE TYPE 1 FRO | |
| | | RARY BRDIGE TYPE 3 | |
| | | Oct-20, MATERIAL LOAL | |
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| | | | 03-Nov-21, MAIN BRID |
| 1 1-N | IOV-19:A; PILE L'OADTE | \$T | |
| 7 :11-N | | \$T -20, MAIN BRIDGE PILE | 03-Nov-21, MAIN BRID |
| 1 1-N | 21-Feb-20A, MAIN B | -20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIO | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CRZ 15+890~17+4 |
| . | 21-Feb-20A, MAIN B | -20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIN Oct-20, MAIN BRIDGE PI | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CR2 154890~17+4 LE FOUNDATION_INTEI |
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| | 21-Feb-20A, MAIN B | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIN Oct 20, MAIN BRIDGE PI | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CR2 15+890~17+4 LE FOUNDATION_INTEI 03-Nov-21, MAIN BRID 49 21, MAIN BRIDGE PI |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 08- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE P 20, MAIN BRIDGE P 20, Jan-21, MAIN BI 20, Jan-21, MAIN BI AIN BRIDGE PILE CAP F | 03-Nov-21, MAIN BRID FOUNDATION_LAND.17 DN_CR2.154890~17+4; LE FOUNDATION_INTEI 03-Nov-21, MAIN BRID 03-Nov-21, MAIN BRID 03-Nov-21, MAIN BRID 05-Feb-22, MAI V 05-Feb-22, MAI V 28-Dec-21, MAIN E 07TOM SLAB_CR2.15 |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 08- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 30-Jan-21, MAIN BR AIN BRIDGE PILE CAP E | 03-Nov-21, MAIN BRID FOUNDATION_LAND.17 DN_CR2.154890~17+4 LE FOUNDATION_INTEI 03-Nov-21, MAIN BRID 03-Nov-21, MAIN BRID 03-Nov-21, MAIN BRID 04-Nov-21, MAIN BRID 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-21, MAIN E 05-Fob-21, MAIN E 05-Fob-22, MAI 05-Fob-22, MA |
| | 21-Feb-20A, MAINB 21-Feb-20A, MAINB 08- 08- 08- 08- 08- 08- 08- 08- 08- 08- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 20, MAIN BRIDGE PILE 20, Jan-21, MAIN BR AIN BRIDGE PILE CAP B | 03-Nov-21, MAIN BRID FOUNDATION_LAND.17 DN_CR2 154890~1744; LE FOUNDATION_INTEL 03-Nov-21, MAIN BRID 20, MAIN BRIDGE PI RDGE PILE FOUNDATIO 97 05-Feb-22, MAI 97 08-Dec-21, MAIN E DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO |
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| | 21-Feb-20A, MAINB 21-Feb-20A, MAINB 08- 08- 08- 08- 08- 08- 08- 08- 08- 08- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 20, MAIN BRIDGE PILE 20, MAIN BRIDGE PILE CAP B 20, 13, Jan-21, MAIN BR | 03-Nov-21, MAIN BRID FOUNDATION_LAND.17 DN_CR2 154890~17+4; LE FOUNDATION_INTEL 03-Nov-21, MAIN BRIDGE NDGE PILE FOUNDATION V28-Dec-21, MAIN E V38-Dec-21, MAIN E |
| | 21-Féb-20 A, MAINB 221-Féb-20 A, MAINB 221-Féb | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE P 30, Jan-21, MAIN B MIN BRIDGE PILE CAP E 17, 13, Jan-21, MAIN BR 17, 13, Jan-21, MAIN BR | 03-Nov-21, MAIN BRID FOUNDATION, LAND 17 DN_CR2 15+890~17+4 LE FOUNDATION_INTE 03-Nov-21, MAIN BRID 24, MAIN BRIDGE PI RIDGE PILE FOUNDATION 28-Dec-21, MAIN B OTFOM SLAB_CR2 15 DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO MAIN BRIDGE PILE CAP BC |
| | 21-Féb-20 A, MAINB 21-Féb-20 A, MAINB 08- 08- 08- 08- 08- 08- 08- 08- 08- 08- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 20, MAIN BRIDGE PILE 20, MAIN BRIDGE PILE CAP B 20, 13, Jan-21, MAIN BR | 03-Nov-21, MAIN BRID FOUNDATION: LAND 17 DN: CR2 15+890~17+4; LE FOUNDATION _INTEl 03-Nov-21, MAIN BRID 03-Nov-21, MAIN BRID 109-21, MAIN BRID 109-170M SLAB_CR2 15: 109-21, MAIN BRID |
| | 21-Féb-20 A, MAINB 21-Féb-20 A, MAINB 08- 08- 08- 08- 08- 08- 08- 08- 08- 08- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 20, 20, MAIN BRIDGE PILE 20, 20, 20, 20, 20, 20, 20, 20, 20, 20, | 03-Nov-21, MAIN BRID FOUNDATION: LAND 17 DN: CR2 15+890~17+4; LE FOUNDATION _INTEl 03-Nov-21, MAIN BRID 03-Nov-21, MAIN BRID 109-21, MAIN BRID 109-170M SLAB_CR2 15: |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 24-Jéb-20 A, MAIN B 24-Jéb | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 14-9 15-10-11-11-11-11-11 AIN BRIDGE PILE CAP E 10-13-12-1, MAIN BRI 13-12-11, MAIN BRI 13-12-11, MAIN BRIDGE PIL 13-12-11, MAIN BRIDGE PIL MAIN BRIDGE PILE CAP MAIN BRIDGE PILE CAP | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CR2 15+890~17+4 LE FOUNDATION_INTEI 03-Nov-21, MAIN BRIDGE PI 103-Nov-21, MAIN BRIDGE PI 103-Nov-21, MAIN BRIDGE PI 103-Nov-21, MAIN BRIDGE PI 103-Nov-21, MAIN BRIDGE 103-Nov-21, MAIN BRIDGE 1 |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 24-Jéb-20 A, MAIN B 24-Jéb | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 14-7 107 30-Jari-21, MAIN BRI AIN BRIDGE PILE CAP B 13-Jari-21, MAIN BRI 13-Jari-21, MAIN BRI 14-Jari-21, MAIN 14-Jari-21, MAIN 14-Jari | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CR2 15+890~17+4 LE FOUNDATION_INTEI 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 05-Feb-22, MAI V 28-Dec-21, MAINE 05-Feb-22, MAINE V 28-Dec-21, MAINE 05-Feb-22, MAINE V 28-Dec-21, MAINE CAP_LAND 17+414- CR2 15+890-17+414 BRIDGE PILE CAP_INTI V 24-Jan-22, MAINE 05-Feb-22, MAINE V 24-Jan-22, MAINE 05-Feb-22, MAINE V 24-Jan-22, MAINE V 44-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan-24-Jan |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 20- 20- 20- 20- 20- 20- 20- 20- 20- 20- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 14-7 107 30-Jari-21, MAIN BRI AIN BRIDGE PILE CAP B 13-Jari-21, MAIN BRI 13-Jari-21, MAIN BRI 14-Jari-21, MAIN 14-Jari-21, MAIN 14-Jari | 03-Nov-21 MAIN BRID FOUNDATION_LAND 17 DN_CR2 15+890~17+4 LE FOUNDATION_INTEI 03-Nov-21 MAIN BRID 03-Nov-21 MAIN BRID 03-Nov-21 MAIN BRID 03-Nov-21 MAIN BRID 03-Feb-22 MAI V 05-Feb-22 MAI V 28-Dec-21 MAINE 05-Feb-22 MAI 05-Feb-22 MAI E CAP LAND 17+4 14- CR2 15+890-17+414 BRIDGE PILE CAP BC V 24-Jan-22 MAIN 10-Feb-22 MAIN E CAP LAND 17+4 14- 10-Feb-22 MAIN E CAP LAND 17+4 14- 10-Feb-22 MAIN E CAP LAND 17+4 14- 10-Feb-22 MAIN 10-Feb-22 |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 20- 20- 20- 20- 20- 20- 20- 20- 20- 20- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATI Oct-20, MAIN BRIDGE PI 14-7 107 30-Jari-21, MAIN BRI AIN BRIDGE PILE CAP B 13-Jari-21, MAIN BRI 13-Jari-21, MAIN BRI 14-Jari-21, MAIN 14-Jari-21, MAIN 14-Jari | 03-Nov-21 MAIN BRID FOUNDATION_LAND 17 DN_CRZ 15+890~17+4 LE FOUNDATION_INTEI 03-Nov-21 MAIN BRIDGE PIL 03-Nov-21 MAIN BRIDGE PIL 03-Nov-21 MAIN BRIDGE PIL 03-Feb-22 MAI 05-Feb-22 MAI 05-Feb-22 MAI 05-Feb-22 MAI E CAP LAND 17+4 14- CRZ 15+890~17+414 BRIDGE PILE CAP BC 05-Feb-22 MAI E CAP LAND 17+4 14- CRZ 15+890~17+414 BRIDGE PILE CAP INTI 05-Feb-22 MAI 10-Feb-22 MAI 05-Feb-22 MAI 10-Feb-22 MAI 10-Fe |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 20- 20- 20- 20- 20- 20- 20- 20- 20- 20- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIK Oct-20, MAIN BRIDGE PI 14-4 107 30-Jan-21, MAIN BR 17 13-Jan-21, MAIN BR 18 Jan-21, MAIN BR 19 20, MAIN BRIDGE PILE CAP 19 20, MAIN BRIDGE PILE 19 20, MAIN BRIDGE PILE MAIN BRIDGE PILE CAP 19 25-Feb-21, MAIN 19 25-Feb-21, MAIN | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CRZ 15+890~17+4 LE FOUNDATION_INTEL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO 05-Feb-22, MAI E CAP_LAND 17+414- BRIDGE PILE CAP_INTI 10-74-14-14 BRIDGE PILE CAP_INTI 10-74-14-14 BRIDGE PILE CAP_INTI 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 10-74-14 1 |
| | 21-Féb-20 A, MAIN B 21-Féb-20 A, MAIN B 20- 20- 20- 20- 20- 20- 20- 20- 20- 20- | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIK Oct-20, MAIN BRIDGE PI 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 20, MAIN BRIDGE PILE CAP 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CRZ 15+890~17+4 LE FOUNDATION_INTEL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI E CAP_LAND 17+414- BRIDGE PILE CAP_INTI 1000 21, 5+890-17+414- 1000 21, 5+890-17+414- 1000 21, 5-7eb-22, MAI 1000 21, 5-800-17-414- 1000 21, 5-7eb-22, MAI 1000 21, 5-7eb-22, 5-7e |
| | 13-Aug 21-Feb-20A, MAINB <l< td=""><td>20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIK Oct-20, MAIN BRIDGE PI 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 20, MAIN BRIDGE PILE CAP 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN</td><td>03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CRZ 15+890~17+4 LE FOUNDATION_INTEL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO 05-Feb-22, MAI E CAP_LAND 17+414- BRIDGE PILE CAP_INTI 10-7414 BRIDGE PILE CAP_INTI 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-74</td></l<> | 20, MAIN BRIDGE PILE RIDGE PILE FOUNDATIK Oct-20, MAIN BRIDGE PI 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 30-Jan-21, MAIN BR 14-7 20, MAIN BRIDGE PILE CAP 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN 14-7 25-Feb-21, MAIN | 03-Nov-21, MAIN BRID FOUNDATION_LAND 17 DN_CRZ 15+890~17+4 LE FOUNDATION_INTEL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 03-Nov-21, MAIN BRIDGE PIL 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI 05-Feb-22, MAI DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO DGE PILE CAP BOTTO 05-Feb-22, MAI E CAP_LAND 17+414- BRIDGE PILE CAP_INTI 10-7414 BRIDGE PILE CAP_INTI 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-7414 10-74 |
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14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 14-7 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| Ν | IUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LON (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR INTER UNDER IDENTIFICATION NO MMRDA/ENG/000753 | | AN | NEXURE-5 CC | ONSTRUCTION | UPDATED PRO | ROGRAMME (PACKAGE-2) 3 of 3 |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------------|------------------------|---------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| # A | tivity ID Activity Name | Original BL Project Start Duration | BL Project Finis | sh Actual Start | Actual Finish | | Performance 2018 2019 2020 2021 2022 % Complete D JF AMJJAS N D JFMA J JAS OND JFMA J JAS OND JF AMJJAS N D JFMA J JAS |
| 121 | MAIN BRIDGE PIER CAP_LAND 17+414~18+188 FROM MB251 TO MB266 | 183.50 08-Feb-19 | 23-Nov-19 | | | 100% | 23456789111111111112222222222233333334444444444 |
| 122 | MAIN BRDIGE PIER CAP_CRZ 15+890~17+414 FROM MB226 TO MB250 | 211.80 19-Apr-19 | 25-Feb-20 | | | 100% | 0% |
| 123 124 | MAIN BRIDGE PIER CAP_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225 | 434.00 06-Jun-19 | 05-Nov-20 10-Mar-21 | | | 37.44% 0% | |
| 124 | MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB187 TO MB205 MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186 | 203.00 23-Apr-20 421.00 30-Apr-20 | 27-Aug-21 | | | 0% | |
| 126 | MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROMMB146 TO MB170 | 255.00 15-Mar-19 | 01-Apr-20 | | | 98.99% | 0% |
| 127 | MAIN BRIDGE BEARING PAD AND BEARING INSALLATION | 780.25 22-Feb-19 | 24-Sep-21 | | | 8.01% | |
| 128 | MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION | | 01-Mar-22 | | | 18.05% | 0% |
| 129 130 | MAIN BRIDGE CONCRETE GIRDER INSTALLATION MAIN BRIDGE PC GIRDER LAND 15+890~17+414 FROM MP251 TO MP266 | 1005.88 12-Sep-19 268.75 12-Sep-19 | 02-Feb-22 27-Feb-20 | | | 21.15% 100% | 0% 0% |
| 130 | MAIN BRIDGE PECAST GIRDER_CRZ 15+890~17+414 FROM MP226 TO MP260 | 129.75 04-Feb-20 | 25-Sep-20 | | | 25.18% | 0% |
| 132 | MAIN BIDGE PRECAST GIRDER_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225 | 122.63 12-Sep-20 | 23-Jan-21 | | | 0% | 0% |
| 133 | MAIN BRIDGE PRECAST GIRDER_MARINE 13+610~14+800 FROM MP187 TO MP205 | 126.00 12-Jan-21 | 10-Jun-21 | | | 0% | 0% |
| 134 | MAIN BRIDGE PRECAST GIRDER_MARINE 10+380~11+880 FROM MP146 TO MP170 | 156.00 04-Jun-21 | 02-Feb-22 | | | 0% | 0% |
| 135 136 | STITCH JOINT CASTING MAIN BRIDGE STEEL GIRDER INSTALLATION | 639.00 07-Dec-19 545.00 03-Oct-20 | 12-Feb-22 01-Mar-22 | | | 0% 0% | ۵۵۵ میں |
| 130 | MAIN BRIDGE STEEL GIRDER INSTALLATION MARINE 11+880~13+610 FROM MP171 TO MP 186 | 545.00 03-Oct-20 | 01-Mar-22 | | | 0% | |
| 138 | STEEL MODULE-01_MP176 - MP171 (INSTALLATION) | 178.13 07-Dec-21 | 01-Mar-22 | | | 0% | 0% |
| 139 | STEEL MODULE-02_MP182 - MP177 (INSTALLATION) | 180.00 03-Oct-20 | 30-Sep-21 | | | 0% | 0% |
| 140 | STEEL MODULE-03_MP186 - MP183 (INSTALLATION) | 186.88 30-Sep-21 | 07-Dec-21 | | | 0% | |
| 141 142 | MISCELLANEOUS & FINISHING WORKS INTERCHANGE | | 24-May-22 28-Apr-22 | 09-Oct-19 | | 7.05% 67.8% | 0% 6.98% |
| 142 | | | 22-Oct-20 | 09-Oct-19 | | 91.8% | 3048% |
| 144 | INTERCHANGE RAMP PILE FOUNDATION | 274.00 24-Dec-18 | 05-Mar-20 | 09-Oct-19 | | 100% | 32.61% V 18-Mar-21, INTERCHANGE RAMP PIL |
| 145 | INTERCHANGE RAMP PILE FDN_MA | 83.50 05-Aug-19 | 03-Jan-20 | 09-Oct-19 | | 100% | 62.82% |
| 146 | INTERCHANGE RAMP PILE FDN_AC | 117.00 01-Oct-19 | 05-Mar-20 | 25-Oct-19 | | 100% | 69.51% 8.29% |
| 147 148 | INTERCHANGE RAMP PILE FDN_JM INTERCHANGE RAMP PILE FDN_MJ | 143.00 03-Jan-19 132.00 03-Jan-19 | 05-Aug-19 01-Oct-19 | 26-Nov-19 04-Dec-19 | | 100% 100% | 8.29% 43.14% |
| 140 | INTERCHANGE RAMP PILE FDN_CA | 162.85 28-May-19 | 23-Jan-20 | 01-Nov-19 | | 100% | 8.29% |
| 150 | INTERCHANGE RAMP PILE FDN_AM | 111.15 24-Dec-18 | 27-May-19 | 07-Feb-20 | | 100% | 15.09% |
| 151 | INTERCHANGE RAMP PILE CAP INSTALLATION | 377.00 08-Jan-19 | 22-Oct-20 | 22-Oct-19 | | 80.01% | 27.42% |
| 152 | | 98.00 06-Dec-19 | 15-May-20 | 22-Oct-19 | | 67.83% | 75% 70% 26-May-21, INTERCHANGE RAM |
| 153 154 | INTERCHANGE RAMP PILE CAP_AC INTERCHANGE RAMP PILE CAP_JM | 148.00 15-Jan-20 187.00 18-Jan-19 | 22-Oct-20 06-Dec-19 | 02-Nov-19 11-Dec-19 | | 34.26% 100% | 70% 8.33% |
| 155 | INTERCHANGE RAMP PILE CAP MJ | 193.00 18-Jan-19 | 15-Jan-20 | 16-Dec-19 | | 100% | 21,43% 26-Mari-21, INTERCHANGE RAMP PIL |
| 156 | INTERCHANGE RAMP PILE CAP_CA | 193.70 15-Oct-19 | 27-Jun-20 | 02-Dec-19 | | 66.3% | 8.33% |
| 157 | INTERCHANGE RAMP PILE CAP_AM | 168.30 08-Jan-19 | 15-Oct-19 | 15-Feb-20 | | 100% | 1% |
| 158 159 | INTERCHANGE SUBSTRUCTURE & BEARING INTERCHANGE RAMP PIER INSTALLATION | | 31-May-21 27-Apr-21 | 19-Feb-20 19-Feb-20 | | 55.14% 55.14% | 4.83% |
| 160 | INTERCHANGE RAMP PIER MA | 125.00 18-Mar-20 | 29-Dec-20 | 19-Feb-20 | | 0.97% | 40.83% |
| 161 | INTERCHANGE RAMP PIER_AC | 250.00 16-May-20 | 27-Apr-21 | | | 0% | 0% |
| 162 | INTERCHANGE RAMP PIER_JM | 300.00 08-Feb-19 | 18-Mar-20 | | | 100% | |
| 163 | INTERCHANGE RAMP PIER_MJ | 360.25 08-Feb-19 | 16-May-20 | | | 86.55% | 0% 0% |
| 164 165 | INTERCHANGE RAMP PIER_CA INTERCHANGE RAMP PIER_AM | 300.00 08-Jan-20 234.18 29-Jan-19 | 16-Feb-21 08-Jan-20 | | | 16.85% 100% | 0% 0% |
| 166 | INTERCHANGE BEARING INSTALLATION | 661.25 27-Feb-19 | 31-May-21 | | | 0% | |
| 167 | INTERCHANGE SUPERSTRUCTURE INSTALLATION | | 15-Feb-22 | | | 16.15% | 0% |
| 168 | INTERCHANGE BOX GIRDER INSTALLATION_MA | 255.00 09-Jan-21 | 03-Jan-22 | | | 0% | |
| 169 170 | INTERCHANGE BOX GIRDER INSTALLATION_AC INTERCHANGE BOX GIRDER INSTALLATION JM | 266.23 27-Feb-21 250.00 11-Mar-20 | 27-Dec-21 | | | 0% 0% | 0% |
| 170 | INTERCHANGE BOX GIRDER INSTALLATION_JM INTERCHANGE BOX GIRDER INSTALLATION_MJ | 343.38 20-Sep-19 | 26-Feb-21 08-Jan-21 | | | 30.77% | |
| 172 | INTERCHANGE BOX GIRDER INSTALLATION_CA | 285.93 30-Oct-20 | 15-Feb-22 | | | 0% | 0% |
| 173 | INTERCHANGE BOX GIRDER INSTALLATION_AM | 230.00 14-Oct-19 | 19-Aug-20 | | | 63.25% | 0% |
| 174 | | | 06-Nov-20 | | | 80% | |
| 175 176 | MISCELLANEOUS & FINISHING WORKS PROJECT HANDINGOVER | 484.95 19-Aug-20 65.00 24-May-22 | 28-Apr-22 22-Sep-22 | | | 0% 0% | |
| 170 | | 730.00 22-Sep-22 | 22-Sep-22 21-Sep-24 | | | 0% | 0% |
| | DEFECT LIABILITY PERIOD (DLP) | | | 23-Mar-18 | | | |
| 178 | PRICE SCHEDULE | 2270.04 23-Mar-18 | 21-Mar-23 | 20 1141-10 | | 55.47% | 35% |
| | Project Baseline Bar Actual Work Actual Work Milestone Remaining Work % Complete | EMPLOYER: MUMBAI METROPOLITA (MMRDA) | AN REGION | DEVELOPME | NT AUTHORIT | | TRACTOR: Date Revision Checked Approved EWOO - TPL JV 25-Mar-20 R0 |

Attachment 8- Package-3's Construction Programme Updated as on 25th March 2020

| | Activity Name | Original BL1 Start Duration | BL1 Finish | Start | Finish | Activity % Complete | Schedule % Complete | Performance % Complete | Budgeted Total Cost | Actual Total Cost | Schedule Performance Index | Cost Performance Index | Planned Value Cost | Earned Value Cost |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------|----------------------------|--------------------------|------------------------|------------------------|---------------------------|----------------------------------|--------------------------------|-------------------------------|---------------------------|----------------------------------|--------------------------------|
| IL Pkg 3 Constr | uction Schedule Mar'20 | 1403 23-Mar-18 | 21-Sep-21 | 23-Mar-18 A | 11-Feb-23 | | 76.8% | 27.38% | Rs10,137,901,022 | Rs2,519,869,701 | 0.36 | 1.13 | Rs8,015,960,737 | Rs2,857,959,025 |
| <u> </u> | mbai Trans Harbour Link Project (Pack | 1403 23-Mar-18 | 21-Sep-21 | 23-Mar-18 A | 11-Feb-23 | | 76.8% | 27.38% | Rs10,137,901,022 | Rs2,519,869,701 | 0.36 | 1.13 | Rs8,015,960,737 | Rs2,857,959,025 |
| 2 | Commencement Date (CD) | 0 23-Mar-18 | | 23-Mar-18 A | | 100% | 100% | 100% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| Physical Milestones | | 995 18-Sep-18 | 21-Sep-21 | 22-May-20 | 11-Feb-23 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| KD1001 KD1002 | KD1 [Construction programme, completion of Soil Investi KD 2 [NOC for technical design day & drawing for found | 0 18-Sep-18 | 18-Sep-18 | 22-May-20 | 22-May-20 | 0% | 100% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 Rs0 | Rs0 Rs0 |
| KD1002 KD1003 | KD 2 [NOC for technical design doc & drawing for found KD 3 [NOC for Good for construction drawing for foundal | 0 17-Dec-18 0 15-Jun-19 | 17-Dec-18 15-Jun-19 | 24-Jul-20 18-Dec-20 | 24-Jul-20 18-Dec-20 | 0% | 100% | 0% | Rs0 Rs0 | Rs0 Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| KD1004 | KD 4 [Substantial completion of foundation, piles (if appli | 0 21-Mar-20 | 21-Mar-20 | 07-May-21 | 07-May-21 | 0% | 100% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| KD1005 | KD 5 [Substantial completion of pile caps (if applicable), | 0 19-Sep-20 | 19-Sep-20 | 18-Sep-21 | 18-Sep-21 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| KD1006 | KD 6 [Substantial completion superstructure (PC/CIS/SS | 0 20-Mar-21 | | 27-Jul-22 | 27-Jul-22 | 0% | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| KD1007 KD1008 | KD 7 [Substantial completion of kerb/traffic signs, Markin KD 8 [Final completion & handing over] | 0 24-Jul-21 0 21-Sep-21 | 24-Jul-21 21-Sep-21 | 04-Jan-23 11-Feb-23 | 04-Jan-23 11-Feb-23 | 0% | 0% 0% | 0% | Rs0 Rs0 | Rs0 Rs0 | 0.00 | 0.00 | Rs0 Rs0 | Rs0 Rs0 |
| Financial Milestone | · | 758 18-Sep-18 | 21-Sep-21 | 23-Mar-18 A | 21-Sep-21 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| Interface Milestone | | 854 17-Dec-18 | 06-Mar-21 | 25-Mar-20 | 27-Jul-22 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| Document Submittals | | 45 23-Mar-18 | | 06-Apr-18 A | 25-Mar-20 | | 100% | 80% | Rs74,992,895 | Rs59,994,316 | 0.80 | 1.00 | Rs74,992,895 | Rs59,994,316 |
| Employer's Obligation ROW 75 Ha [CD +180 | | 151 19-Apr-18 0 19-Apr-18 | 18-Sep-18 18-Sep-18 | 23-Mar-18 A | 29-Mar-20 29-Mar-20 | | 0% | 0% 0% | Rs0 Rs0 | Rs0 Rs0 | 0.00 0.00 | 0.00 | Rs0 Rs0 | Rs0 |
| Casting Yard 9.16 Ha | | 0 19-Apr-18 0 20-Jul-18 | | | | | 0% | 0% | Rs0 Rs0 | Rs0 Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| Employer Office (Sch | | 801 20-Aug-18 | 16-Sep-21 | 25-Jan-19 A | 21-Dec-21 | | 88.54% | 86.5% | Rs142,351,965 | Rs123,137,965 | 0.98 | 1.00 | Rs126,033,668 | Rs123,137,995 |
| Construction of Emple | | 110 20-Aug-18 | 11-Dec-18 | 30-May-19 A | 31-Oct-19 A | | 100% | 100% | Rs112,791,965 | Rs112,791,965 | 1.00 | 1.00 | Rs112,791,965 | Rs112,791,965 |
| Facility | | 980 12-Dec-18 | | | | | 44.8% | 35% | Rs29,560,000 | Rs10,346,000 | 0.78 | 1.00 | Rs13,241,703 | Rs10,346,030 |
| Survey & Geotechnica Topographical Survey | | 346 19-Apr-18 346 19-Apr-18 | | 19-Apr-18 A | | | 100% 100% | 95.75% 99.85% | Rs242,300,773 Rs0 | Rs181,725,579 Rs0 | 0.96 1.00 | 1.28 | Rs242,300,945 Rs109 | Rs232,003,161 Rs109 |
| Geotechnical Investig | | 93 17-May-18 | _ | · · · | | | 100% | 99.85% | Rs242,300,773 | Rs181,725,579 | 0.96 | 1.28 | Rs242,300,836 | Rs232,003,052 |
| Design Works | | 480 07-May-18 | 14-Jun-19 | 25-Apr-18 A | 18-Dec-20 | | 100% | 67.18% | Rs159,122,500 | Rs91,017,152 | 0.67 | 1.17 | Rs159,123,270 | Rs106,905,207 |
| Design Basis Report | | 48 07-May-18 | | | | | 100% | 100% | Rs0 | Rs0 | 1.00 | 0.00 | Rs51 | Rs51 |
| Preliminary Design | tative Report Submission & GC Approval (NONO) | 47 02-Jul-18 24 11-Sep-18 | 25-Aug-18 08-Oct-18 | 26-Jul-18 A 07-Dec-18 A | 25-Mar-20 26-May-20 | | 100% 100% | 80% 91% | Rs286,875 Rs0 | Rs286,875 Rs0 | 0.80 | 0.80 | Rs286,875 Rs42 | Rs229,500 |
| Plan & Profile Alignm | | 77 06-Jun-18 | 14-Aug-18 | 25-Jun-18 A | 02-Apr-20 | | 100% | 80% | Rs0 Rs0 | Rs0 Rs0 | 0.80 | 0.00 | Rs102 | Rs82 |
| Superstructure Desig | | 368 16-Aug-18 | 26-Feb-19 | 05-Mar-19 A | 07-Sep-20 | | 100% | 46.27% | Rs85,075,000 | Rs34,061,917 | 0.46 | 1.16 | Rs85,075,144 | Rs39,367,734 |
| Foundation & Pier | | 324 05-Oct-18 | 14-Jun-19 | 06-Nov-18 A | 18-Dec-20 | | 100% | 83.66% | Rs28,434,375 | Rs13,147,734 | 0.84 | 1.81 | Rs28,434,435 | Rs23,786,988 |
| Abutment & Foundatio | n | 255 15-Oct-18 374 24-Oct-18 | 16-Jan-19 10-May-19 | 31-Dec-18 A | 13-Jun-20 | | 100% 100% | 81.48% 42.52% | Rs0 Rs0 | Rs0 Rs0 | 0.81 | 0.00 | Rs81 Rs290 | Rs66 Rs123 |
| Bearings & Drainage | | 218 17-Nov-18 | 10-May-19 03-Apr-19 | 11-Jan-19 A 21-Jan-19 A | 15-Dec-20 07-Oct-20 | | 100% | 42.52% | Rs18,005,625 | Rsu Rs16,200,000 | 0.43 | 1.00 | Rs18,005,625 | Rs16,200,000 |
| Pavement Design | | 71 01-Jul-18 | 27-Aug-18 | | | | 100% | 100% | Rs27,320,625 | Rs27,320,625 | 1.00 | 1.00 | Rs27,320,625 | Rs27,320,625 |
| Procurement Works | | | 08-Jun-21 | 15-Feb-19A | 09-Dec-22 | | 90.17% | 9.31% | Rs1,387,160,466 | Rs44,849,209 | 0.10 | 3.50 | Rs1,519,472,262 | Rs156,879,749 |
| For Main Bridge | | 1036 12-Sep-18 | 08-Jun-21 | | 09-Dec-22 | | 81.13% | 6.38% | Rs877,933,218 | Rs27,990,308 | 0.08 | 2.00 | Rs712,281,063 | Rs55,980,814 |
| Launching Girder v Segments Moulds | vith factory testing(Using Underslung) | 180 22-Jan-19 60 12-Dec-18 | 23-Aug-19 21-Feb-19 | 26-Nov-19 A 26-Apr-19 A | 04-Mar-21 02-Jul-19 A | | 100% 100% | 50% 100% | Rs0 | Rs0 | 0.50 | 0.00 | Rs180 Rs60 | Rs90 Rs60 |
| Steel Structure | | 300 08-Dec-18 | | | 17-Jun-21 | | 100% | 0% | Rs203,366,072 | Rs0 | 0.00 | 0.00 | Rs203,366,072 | Rs0 |
| Steel for superstru | cture | 68 16-Oct-18 | | 22-Aug-19 A | | | 100% | 11% | Rs508,914,691 | Rs27,990,308 | 0.11 | 2.00 | Rs508,914,691 | Rs55,980,616 |
| Formwork & stagg | | 104 12-Sep-18 | | | | | 100% | 80% | Rs0 | Rs0 | 0.80 | 0.00 | Rs60 | Rs48 |
| Painting with testin | on joint, Water proofing with factory test | 180 27-Jun-20 141 22-Dec-20 | | | 31-Aug-22 | | 0% 0% | 0% 0% | Rs165,652,455 Rs0 | Rs0 Rs0 | 0.00 | 0.00 | Rs0 Rs0 | Rs0 |
| For Road Works | 9 | 631 04-Apr-19 | | | 00 000 22 | | 65% | 16.57% | Rs0 | Rs0 | 0.25 | 0.00 | Rs273 | Rs70 |
| Imported Procuremen | | 350 22-Jan-19 | 10-Aug-19 | 04-Dec-19 A | 17-Feb-21 | | 100% | 12.5% | Rs509,227,248 | Rs16,858,901 | 0.13 | 5.98 | Rs807,190,926 | Rs100,898,866 |
| | on & Manufracturing Works | 637 27-Sep-18 | | | | | 100% | 0% | Rs390,605,953 | Rs0 | 0.00 | 0.00 | Rs390,606,723 | Rs470 |
| Permanent Works fab Permanent Works As: | | 607 27-Sep-18 | 06-Jan-20 | 21-Feb-19 A | 13-Aug-21 | | 100% 100% | 0% 44.44% | Rs390,605,953 Rs0 | Rs0 Rs0 | 0.00 | 0.00 | Rs390,606,183 Rs540 | Rs230 Rs240 |
| Construction Works | embry | 607 22-Oct-18 1164 20-Jul-18 | 23-Jul-21 | 26-Sep-18 A | 04-Jan-23 | | 72.24% | 44.44% 30.56% | Rs0 Rs7,063,465,446 | Rs1,999,145,479 | 0.44 | 1.08 | Rs5,102,495,823 | Rs2,158,285,390 |
| Preconstruction Activ | ity | 541 20-Jul-18 | 01-Jul-19 | 26-Sep-18 A | 27-Nov-20 | | 100% | 45.31% | Rs0 | Rs0 | 0.45 | 0.00 | Rs565 | Rs256 |
| | Foundation, Pier ,Pier Cap) | 823 08-Dec-18 | | 30-Sep-18 A | | | 73.27% | 48.81% | Rs3,392,806,949 | Rs1,656,074,430 | 0.67 | 1.00 | Rs2,486,041,696 | Rs1,656,074,430 |
| Main Carriageway | | 676 08-Dec-18 245 27-Feb-19 | | 05-Dec-18 A | 11-Jun-21 | | 100% 100% | 41.84% 82.41% | Rs1,821,401,625 Rs232,139,423 | Rs762,039,312 Rs191,316,439 | 0.42 | 1.00 | Rs1,821,401,625 Rs232,139,423 | Rs762,039,312 Rs191,316,439 |
| Chirle NH 4B Ram | 8 | 336 20-May-19 | | | | | 45.35% | 45.33% | Rs232, 139,423 Rs874,987,055 | Rs396,616,894 | 1.00 | 1.00 | R\$232,139,423 R\$396,786,890 | Rs396,616,894 |
| Chirle NH 4B Loop | | 319 09-Sep-19 | 07-Nov-20 | 21-Aug-19 A | 16-Nov-21 | | 7.69% | 65.93% | Rs464,278,846 | Rs306,101,785 | 8.57 | 1.00 | Rs35,713,757 | Rs306,101,785 |
| Super Structures | | 677 27-Feb-19 | | | | | 55.38% | | Rs1,408,927,165 | Rs53,448,476 | 0.08 | 1.18 | Rs780,323,989 | Rs63,044,448 |
| Segments Precast | | 444 30-Mar-19 405 26-Aug-19 | | 11-Sep-19 A | | | 60% 45.31% | 8.25% 0.47% | Rs760,156,099 Rs70.699.410 | Rs53,448,476 Rs0 | 0.14 | 0.00 | Rs456,094,925 Rs32,035,720 | Rs62,713,045 Rs331,403 |
| Segments Erection | | 405 26-Aug-19 593 27-Feb-19 | | 22-May-20 A | 27-Jui-22 23-Jun-22 | | 45.31% | 0.47% | | Rs0 Rs0 | 0.01 | 0.00 | R\$32,035,720 R\$207,160,477 | Rs331,403 Rs0 |
| Steel Structure | | 390 10-May-19 | 17-Nov-20 | 17-Nov-20 | 26-Mar-22 | | 74.76% | 0% | | Rs0 | 0.00 | 0.00 | Rs85,032,867 | Rs0 |
| Bearings & Expansio | Joints | 210 03-Aug-20 | 12-Apr-21 | 09-Mar-22 | 09-Nov-22 | | 0% | 0% | | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| Bridge Ancillaries & I | liscellaneous Item | 400 12-Aug-20 | 23-Jul-21 | 22-Sep-21 | 04-Jan-23 | | 0% | 0% | | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |
| RE Wall Road Work | | 503 27-Feb-19 880 20-Apr-19 | 18-Feb-21 18-May-21 | 17-Aug-20 | 13-May-22 | | 60.6% 96.75% | 0% 27.3% | Rs461,687,248 Rs1.608,667,400 | Rs0 Rs289,622,574 | 0.00 | 0.00 | Rs279,801,250 Rs1,556,328,324 | Rs0 Rs439.166.256 |
| Completion of Interfac | e Activity | 544 19-Sep-20 | 06-Mar-21 | 19-Sep-20 | 22-0d-22 27-Jul-22 | | 90.75% | 27.3% | R\$1,608,667,400 R\$0 | R\$269,622,574 R\$0 | 0.28 | 0.00 | R\$1,556,328,324 R\$0 | R\$439,166,256 R\$0 |
| | | 876 23-Apr-18 | | 30-Nov-18 A | 24-Dec-22 | | 59% | 3.05% | Rs677,901,024 | Rs20,000,000 | 0.05 | 1.04 | Rs400,935,150 | Rs20,752,736 |
| Provisional Sum | | | | 04-Jan-23 | 11-Feb-23 | | 0% | 0% | Rs0 | Rs0 | 0.00 | 0.00 | Rs0 | Rs0 |

Page 1 of 1

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Attachment 9- Project Progress Photos

Package 1- Site Progress Photos

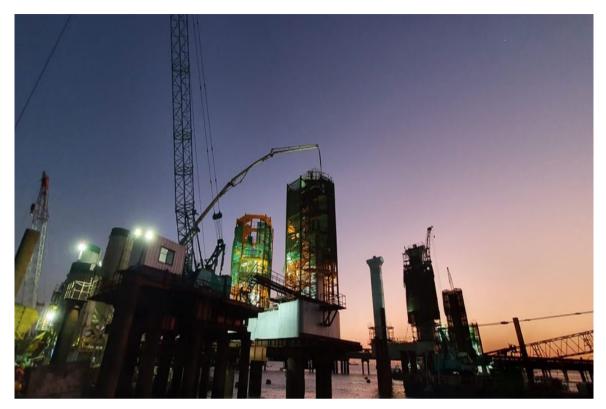


Photo No. 1: MP 84 N Pier Concrete - Marine Area

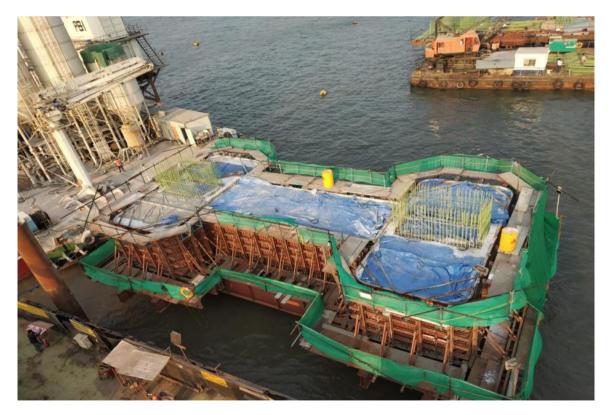


Photo No. 2: MP 104 Pile Cap Concreting- Marine Area



Photo No. 3: MP 104 Pile Concreting- Marine Area

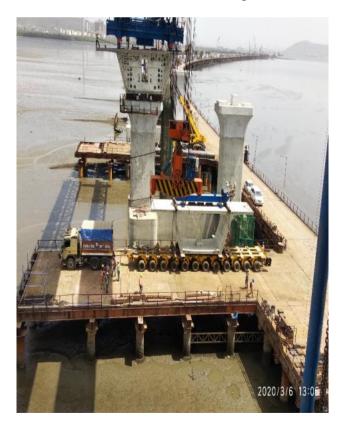


Photo No. 4: Segments Shifting For Erection- Intertidal Area



Photo No. 5: MP 02 Pier Reinforcement Inspection

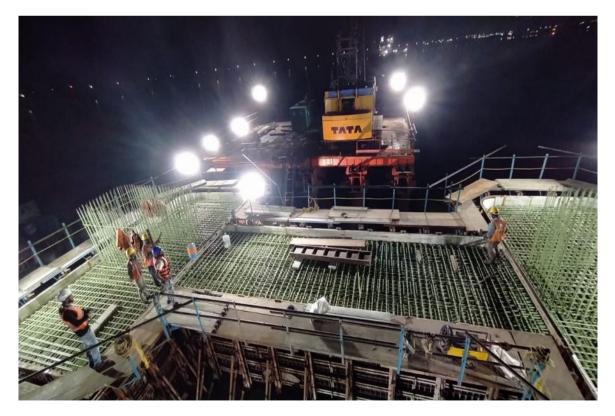


Photo No. 6: MP 93 Pile Cap Pre-pour Inspection- Marine Area

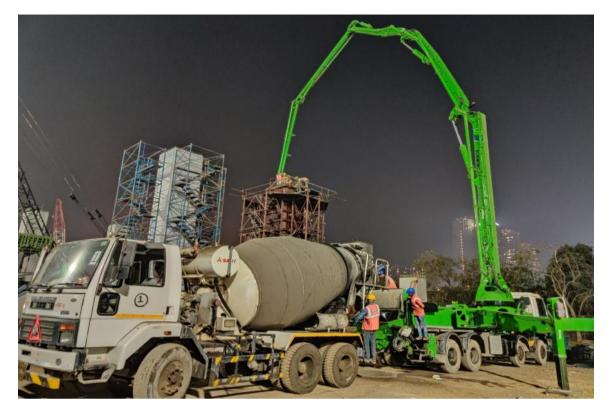


Photo No. 7: Intertidal pier concreting in progress

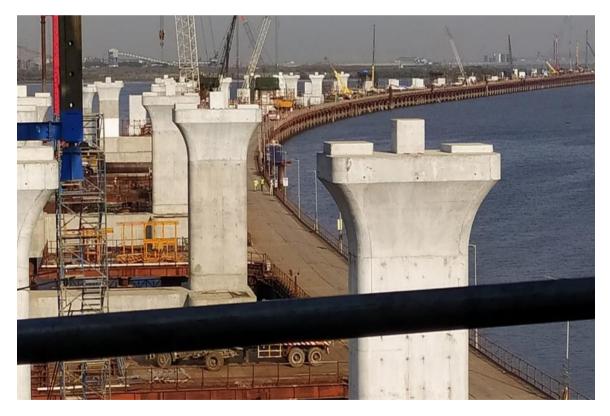


Photo No. 8: A View of Intertidal Area Taken From MP 13 Towards the Sea



Photo No. 9: A View of Pier and Pier Caps at the Interchange Area



Photo No. 10: Segment Erection by LG at MP 14-15 N11- Intertidal Area is in progress



Photo No. 11: MP 14-15 Erection is in progress



Photo No. 12: AP 46 Pier Concreting is in progress



Package 2 – Site Progress Photos

Photo No. 1: Precast Slab erection at TAB/Loading Jetty platform in progress



Photo No. 2: Pile reinforcement cage lowering at MP 223/02 RHS in progress



Photo No. 3: Pile Cap Reinforcement and Pile Head Chipping at MP 207 LHS & RHS in progress



Photo No. 4: High Strain Dynamic Pile Load Test at MP 209/02 LHS in progress



Photo No. 5: Pier 1st and 2nd lift reinforcement tying in progress at MP 206 LHS and RHS



Photo No. 6: Pile cap concreting at MP 228 RHS in progress



Photo No. 7: Pier 2nd lift formwork and 2nd lift reinforcement at MP 231 RHS and LHS in progress



Photo No. 8: Placing of sacrificial slab at MP 238 RHS in progress



Photo No. 9: Scaffolding and Bottom formwork for Portal Beam at MP 245 LHS in progress



Photo No. 10: Bracket fixing for Pier Cap at MP 243 RHS in progress



Photo No. 11: Open foundation concreting at MP 261 RHS in progress



Photo No. 12: Pier final lift formwork inspection at MP 243 LHS in progress



Package 3 – Site Progress Photos

Photo No. 1: Casting of Foundation done at Location JMA1



Photo No. 2: PCC concrete pouring at location JMP09



Photo No. 3: RMP 277 foundation annular filling in progress



Photo No. 4: Pier Reinforcement at location LP31, RP31



Photo No. 5: Pier concrete at location MPP14 in progress

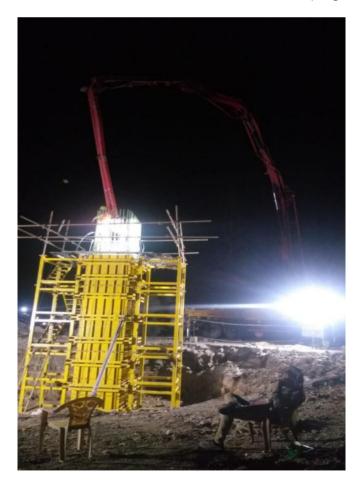


Photo No. 6: Pier Concrete at location JMP20 in progress



Photo No. 7: 1st Segment Erection at RMP267-268 in progress



Photo No. 8: Pier Shuttering at location JMP20 in progress



Photo No. 9: Pier Cap casting at location LMP283 in progress

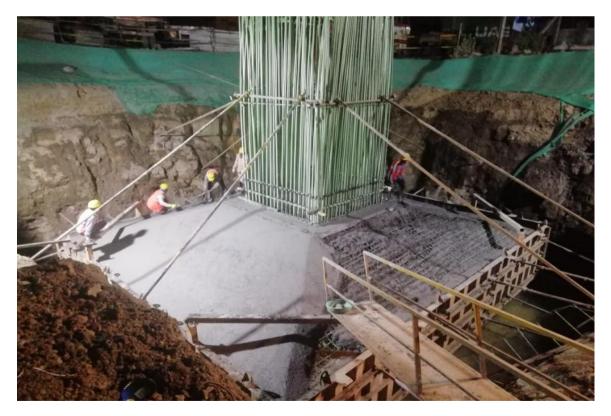


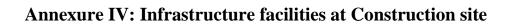
Photo No. 10: Foundation casting at LP21 in progress

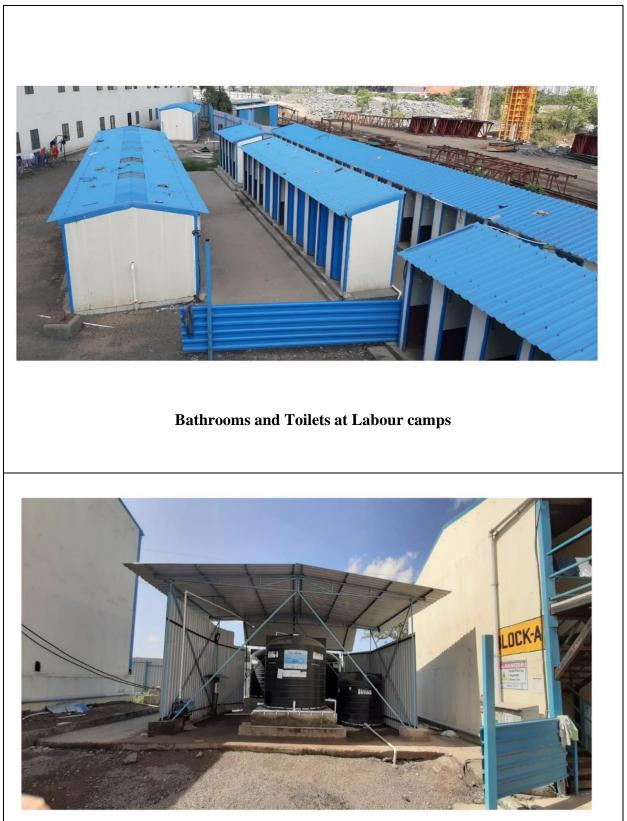


Photo No. 11: Segment erection at span RMP 268-269 in progress



Photo No. 12: Span MJP-07 to 08 (Chirle Ramp) Staging for cast in-situ voided slab in progress





Drinking water facilities at labour camps



Emergency First aid room





Sanitazation facility for the staff



Thermal Scanning for Staffs