



# CHENNAI METRO RAIL NEWS LETTER

Volume-I

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## Areal View CMRL Depot

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## Progress of Depot work

The progress of Depot works as on 31.10.2011 is given below:

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Sl. No.	Description	Unit	Qty
1	Earth filling	Cum	1,42,787
2	Installation of Prefabricated Vertical Drain(PVD)	RMT	10,07,217
3	Surcharge filling	Cum	68,111
4	Admn. Building ( work pile)	No	226
5	Infrastructure Shed (work pile)	No.	7



## Safety at Elevated Construction Sites

**SAFETY:** At Chennai metro rail project work sites, at most importance is given to safety. Positive approach towards safety by the contractor has been evident by conducting external trainings like ‘working at height’, ‘Public road safety awareness training’, ‘Fire Extinguisher training Programme’, ‘AIDS awareness programme’, Internal trainings like ‘Material Handling’, Awareness training for occupational Health Risk’, ‘Method statement briefing for all works’, Monthly safety meetings etc. Also safety for pedestrian is given at most care and sand or dust deposited along the barricade is frequently removed/cleaned to avoid two wheeler accidents by skidding.

When you know a thing, to hold that you know it, and when you do not know a thing, to allow that you do not know it - this is knowledge.

Confucius



Height work training



Fire extinguisher training

Blinkers are provided over barricading structure so that vehicle moving in night will take care of boundary of road surface. The reflectors and signage board are erected with sufficient height, so that the driver from required/readable distance can access and control driving in day as well as in night.

A specific Project Quality has been approved and followed for ECV 02 & 03 Elevated package works. Required Quality control team to ensure Quality of work has been engaged by contractor and General Consultants. An independent audit wing of general consultants also been established to audit the Quality of works.



Public road safety awareness



Awareness posters



## Quality Control at Elevated Construction Sites

### Geotechnical Investigation works:

As per the Scope of the work, contractor has to undertake Geotechnical investigation, which involve Water table level, Quality of Water, Atterberg limits of Soil, SPT Value, RQD, Core crushing strength etc to provide basis to evolve design. Confirmatory testing thereafter is done by doing Initial Pile Load test & Plate Load Test.

Around 60% of total foundations are pile foundation and balance is open foundation. Pile foundation is of 1.2m Dia, bored by using Hydraulic Boring machine which has least vibratory impact on the surrounding.

Pier and Piercap up to Height of 12m is poured in single casting so as to avoid multiple construction joint and to improve work Progress.

Superstructure: It is planned with precast segments, which are launched to their position with launching Girder and Viaduct portion in station is constructed with In-Situ Slab with 60mm Dia Void Formers.

All temporary and permanent work activities are based upon Method Statement, which elaborates Resource deployment, Sequence of work activity, Safety and Quality Checks.

### Quality Assurance & Quality Control:

**Inspection Test Plan:** It lays down acceptance criteria and Frequency of testing of any material put in to use for Permanent works. In addition to that Prior Vendor approval is also accorded.

**Tests broadly done** are,

**Cement** – Consistency, Fineness, Initial & Final setting time etc...

**Aggregate** – Sieve analysis, Specific Gravity, Fineness modulus, Water absorption etc...

**Water** – PH value, organic matters, inorganic matters, suspended Chloride content, Sulphate content etc...

**Reinforcement** – Tensile strength, ultimate Breaking Strength, Percentage of Elongation etc...

**Concrete** – Slump check, Temperature check, Cube Compression test, Permeability check etc...

Bearing pad test



HPDE pipe test



Progress lies not in enhancing what is, but in advancing toward what will be.

**Khalil Gibran**

Cement test



Permeability test



Concrete Compressive test





## Progress of civil works in Elevated Sections

### Progress from Koyembedu to Ashok Nagar

as on 31 October, 2011

Item	Total Nos	Completed Nos
Piles	1083	916
Pile caps	244	180
Piers	249	147
Spans Erected	150	77

### Piling work near CMBT



### Progress from Ashok Nagar to St.Thomas Mount

as on 31 October, 2011

Item	Total Nos	Completed Nos
Piles	350	252
Pile caps	87	57
Open foundations	91	50
Piers	178	82
Spans Erected	136	38

### Segment launching near CMBT



You will never do anything in this world without courage.

It is the greatest quality of the mind next to honour.

Aristotle

### Progress from Little Mount to O T A

as on 31 October, 2011

Item	Total Nos	Completed Nos
Piles	276	144
Pile caps	71	22
Open foundations	197	86
Piers	263	76
Spans Erected	75	7

### Parapet launching





## Progress of works in Under Ground Sections

Name of Work	Status
<b>UAA 01</b> Washermanpet, Mannadi, High Court, Chennai Central and Egmore UG stations, May Day Park as an Emergency escape and Ventilation Shaft and Associated Tunnels.	<ul style="list-style-type: none"> <li>* 99% of soil investigation works have been completed.</li> <li>* Utility shifting work is in progress in all the stations.</li> <li>* Twenty Diaphragm wall panels casted at MayDay Park.</li> <li>* Seventeen Diaphragm wall panels casted at Washermanpet.</li> <li>* Guide wall work in progress at Mannadi and Central.</li> <li>* Egmore station box work areas taken over, leveled and secured.</li> </ul>
<b>UAA 02</b> Government Estate, LIC Building and Thousand Lights UG stations and Associated Tunnels	<ul style="list-style-type: none"> <li>* Storm water and water line diversion work completed at Govt Estate station except final connection.</li> <li>* Trail trench for utilities investigation is under progress at LIC and Thousand light stations.</li> </ul>
<b>UAA 03</b> New Gemini, Teynampet, Chamiers Road and Saidapet UG stations and Associated Tunnels	<ul style="list-style-type: none"> <li>* 90 % of Storm water diversion works, LV cable diversion works and Sheet piling works were completed at Saidapet ramp.</li> <li>* Guide wall excavation commenced at Saidapet ramp.</li> <li>* Construction of TNHB water sump at Institute area and Construction work of PWD sump at Tod Hunter Nagar is in progress.</li> <li>* Trail trench for utility identification have been completed at Chamiers road, Teynampet and Gemini stations.</li> <li>* Diversion work for 600 mm dia water main commenced at Chamiers road.</li> </ul>
<b>UAA 04</b> Nehru Park, Kilpauk Medical College and Pachaiaappa's College UG stations and Associated Tunnels	<ul style="list-style-type: none"> <li>* Shifting utilities –Phase I has been completed in Nehru Park and KMC stations.</li> <li>* Thirty three panels have been completed for Station Diaphragm wall construction in Nehru Park.</li> <li>* Guide wall has been completed for 98 m in KMC.</li> <li>* Traffic diversion work at KMC completed.</li> </ul>
<b>UAA 05</b> Shenoy Nagar, Anna Nagar East, Anna Nagar Tower and Thirumangalam UG stations and Associated Tunnels	<ul style="list-style-type: none"> <li>* Construction of 22 panels of diaphragm wall has been completed in Shenoy Nagar station.</li> <li>* 13 nos. of contiguous bored piles were completed at the junction of top down and bottom up construction in Shenoy Nagar station.</li> <li>* 339m length of guide wall has been completed in Shenoy Nagar station.</li> <li>* Utility identification and diversion work is in progress.</li> </ul>

Cage lowering work at Shenoy nagar



Work in progress at Egmore



Guide Wall Work at mannadi



The  
mind is  
everything.  
What you  
think you  
become.

**Buddha**





## Plantation of trees in Government premises by CMRL

CMRL's continuous efforts in implementation of environmental protection measures in Chennai Metro Rail Project by way of taking up compensatory afforestation for the trees which had to be felled to accommodate the construction of viaducts/stations /movement of construction equipments etc, is in progress. In this context, the contractors engaged in the project are made to take up tree sapling plantation at various locations in and around Chennai.

As part of implementing the environmental protection measures, M/s Af-cons-Transtunnelstory joint venture, contractors for UAA 01 package (Construction of Washermanpet, Mannadi, High Court, Chennai Central and Egmore underground stations and associated tunnels) undertaken plantation of 300 numbers of tree sapling in Royapuram Railway Police Quarters. Superintendent of Railway Police, planted the first plant and started the plantation work.



M/s Consolidated Construction Consortium Limited (CCCL) contractor for EAS 06 package (Construction of Saint Thomas Mount elevated station) undertaken plantation of 200 numbers of tree saplings in Saint Thomas Mount CB CID quarters area. Superintendent of Police (Piracy) and Superintendent of Police C B C I D planted the trees and started the plantation work in CB CID quarters. This efforts of the contractor is highly appreciated as the saplings plantation was voluntarily taken up without felling any tree in the project site so far by them.



Tree Guard

Preparation before plantation

