



# उत्तर प्रदेश मेट्रो रेल कॉर्पोरेशन लि०

## UTTAR PRADESH METRO RAIL CORPORATION LTD.

(Formerly Known as Lucknow Metro Rail Corporation Ltd.)  
(भारत सरकार एवं उत्तर प्रदेश सरकार का एक संयुक्त उपक्रम)  
(A JOINT VENTURE OF GOVT. OF INDIA & GOVT. OF U.P.)

No. UPMRC/CE Contract/ LKGS-01/2024

Date: 13.09.2024

### ADDENDUM-01

**Tender Title/Name of work: Tender LKGS-01:** Detailed Geo-Technical Survey of East-West Corridor (Charbagh to Vasantkunj) including Depot at Hardoi Road for Lucknow Metro Rail Project Phase 1B.

Replies to pre-bid queries along with Addendum-01 for above tender is being issued and uploaded on CPP Portal.

For any further modifications/changes (if any), bidders are advised to stay updated on e-tendering portal (<https://etenders.gov.in/e procure/app>) for information please.



(AN ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Company)

Administrative Building, Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal, Vipin Khand, Gomti Nagar, Lucknow 226010

Tel: +91 522 2304014 | Fax: +91 522 2304013

Reply to queries : Tender LKGS-01				
LKGS-01: Detailed Geo-Technical Survey of East-West Corridor (Charbagh to Vasantkunj) including Depot at Hardoi Road for Lucknow Metro Rail Project Phase 1B.				
Sr. No.	Reference Volume/Clause	Existing Criteria	Proposed Criteria	UPMRC's Reply
1	Clause no. 3.5 Laboratory Testing Section-2 Scope of work Page no. 89	3.5 All tests shall be performed as per IS:2720 (relevant parts) and as per the directions of the Engineer-in-Charge. All lab tests should be conducted at Delhi.	Soil & Rock testing shall be conducted by bidder in-house testing laboratory holding <b>valid NABL accreditation under ISO 17025:2017 covering minimum 90% testing parameters of soil &amp; rock along with SPT (in-situ) mentioned in BOQ.</b> Calibration of all the instruments and their accessories shall be done carefully and precisely.	Please refer Annexure-01 of Addendum No. 1
2	Clause no. 1.1 Soil Investigation Section-2, Scope of work Page no. 83	1.1 SOIL INVESTIGATION	Bidder shall have ownership of minimum 10 nos. in-house Hydraulic/Rotary drilling rigs & 10 nos. power winch/shell & auger rigs.	As per Tender Condition.
3	Section-2 Scope of work, Page no. 83	There are no dimensions mentioned for utility identification in the NIT.	Please Clarify	As per Tender Condition.
4	Section-2 Scope of work Page no. 83	No labour accomodation space or location mentioned in the NIT.	Please Clarify	As per clause 6.6 of GCC of Tender document.
5	Section-2 Scope of work Page no. 83	There is no design specified for barricading in the NIT.	Please Clarify	Please refer Annexure-02 of Addendum No. 1
6	Section-2 Scope of work, Page no. 83	The approach and permissions will be on contractor side or on UPMRCL.	Please Clarify	As per Tender Condition.
7	Perform the testing at our NABL accredited laboratory situated in Vadodra.			Please refer Annexure-01 of Addendum No. 1
8	Whether the co-ordinates of the boreholes can be taken with the help of GPS or the whole survey wall shall be done.			As per Tender Condition.

**Summary Sheet of Addendum No.01: LKGS-01**

**LKGS-01: Detailed Geo-Technical Survey of East-West Corridor (Charbagh to Vasantkunj) including Depot at Hardoi Road for Lucknow Metro Rail Project Phase 1B.**

Sr.No.	Reference Clause/ Page No.	Clause in Existing Tender Document	Revised Clause	Revised Clause placed as Annexure/ Pg. No.
1	Volume 1, Chapter 4 (ER & OS), Clause 3.5, Page 89	3.5 All tests shall be performed as per IS:2720 (relevant parts) and as per the directions of the Engineer-in-Charge. All lab tests should be conducted at Delhi.	3.5 All tests shall be performed as per IS:2720 (relevant parts) and as per the directions of the Engineer-in-Charge. <b><u>The bidder will bear all expenses for sampling, witnessing and testing, whether at the manufacturer's premises at source, at site or at any testing laboratory or institution as directed by Engineer at his own cost. All soil &amp; rock testing shall be conducted by bidder at his own cost in NABL approved lab having valid accreditation under ISO 17025:2017. All lab tests should be conducted in the state of Uttar Pradesh.</u></b>	Please refer Annexure -01, UPMRC/LKGC-01/Vol-1/ER & OS Page no. 89R & 90R.
2	Volume 1, Chapter 4 (ER & OS), Clause 3.7.5, Page 90	3.7.5 At least 5% soil testing as directed by Engineer shall be conducted by Laboratory holding current accreditation under International Standard Organisation/Bureau of Indian Standards.	<del>3.7.5 At least 5% soil testing as directed by Engineer shall be conducted by Laboratory holding current accreditation under International Standard Organisation/Bureau of Indian Standards.</del>	Please refer Annexure -01, UPMRC/LKGC-01/Vol-1/ER & OS Page no. 90R
3	Volume 1, Chapter 5 (Tender Drawings)	Volume 1, Chapter 5 (Tender Drawings)	2 No's of additional drawings "Detail of temporary barricading 2M HT" & "Detail of temporary barricading - 1M HT" are provided as Page 1 & Page 2 of Annexure-02.	Please refer Annexure -02, UPMRC/LKGS-01/Volume-1/Tender Drawings

plastic channel section. Core shall be taken to maintain the direction of extrusion of sample same as while coring.

Immediately after withdrawal from the core barrel, the cores shall be placed in a tray and transferred to boxes specially prepared for the purpose. The boxes with a sturdy cover shall be made from seasoned timber or any other suitable material and shall be indexed on top of the lid as per IS:4078. The cores shall be numbered serially and arranged in the boxes in a sequential order. The description of the core samples shall be recorded as per IS: 4464. Where no core is recovered, it shall be recorded as specified in the standard and the engineer should be informed so that remedial measures can be implemented . Continuous record of core recovery and POD to be mentioned in the log as per IS: 1315, Part-II. All core boxes shall be transported and handed over to the Engineer on completion of each bore hole. All core boxes shall be photographed and the photos attached to the Report. The photographs shall show the rock core box clearly labelled indicating project name, borehole number, depth stored in the core box and the serial number of the box for the borehole (e.g. box 2 of n).

### **3.0 LABORATORY TESTING**

- 3.1 At the completion of the borehole the field log should be transmitted to the engineer within 24 hours. The engineer will assign a laboratory test programme for the samples of that borehole within 3 working days after receipt of the field log.
- 3.2 These boreholes are to be conducted for confirmation of data available and for finding out the depth of rock profile at certain locations. As such the testing of samples has to be carried out in a meticulous manner. Availability of testing facilities as directed is a must and a visit to the laboratory may be made by GC representative before accepting any offer given by any Tenderer.
- 3.3 The Engineer may visit to observe tests of soil as well as rock in the laboratory.
- 3.4 Necessary laboratory tests shall be conducted on selected samples in consultation with the Engineer-in-Charge. For this purpose, all undisturbed samples shall be entered on the proforma shown in Annexure-4 Codes and submitted, in triplicate, to the Engineer with records of the field bore logs.
- 3.5 All tests shall be performed as per IS: 2720 (relevant parts) and as per the directions of the Engineer-in-Charge. **The bidder will bear all expenses for**

**sampling, witnessing and testing, whether at the manufacturer's premises at source, at site or at any testing laboratory or institution as directed by Engineer at his own cost. All soil & rock testing shall be conducted by bidder at his own cost in NABL approved lab having valid accreditation under ISO 17025:2017. All lab tests should be conducted in the state of Uttar Pradesh.**

**3.6 Testing of Rock Samples :** Selected core samples shall be tested in the laboratory for hardness/crushing and shear strength, test samples shall be chosen so as to include joints, fissures etc. as far as possible.

**3.7 Laboratory Tests**

3.7.1 Tests as indicated in this specification and as called for by the Engineer, shall be conducted as per the Schedule of Quantity.

3.7.2 Direct shear and triaxial tests shall both be conducted at same depth for same material obtained from one sampler at least at two locations in each bore hole to find out the values of cohesion and the angle of shearing resistance. The tests shall be carried out for all conditions and their specific engineering significance should be maintained. However, condition of test i.e., unconsolidated undrained consolidated drained etc. shall be as per specific instructions from Engineer.

3.7.3 Type and location of other tests shall be decided by the Engineer. It shall be the duty of the contractor to obtain details of locations and type of tests from the Engineer before starting boring for a particular borehole. The Engineer shall however be free to change these locations if so warranted by site conditions.

3.7.4 The analysis of above data shall include calculation for self standing height, de-watering requirements including capacity of pumps and number of pumps and shall be included in report in detail.

~~3.7.5 At least 5% soil testing as directed by Engineer shall be conducted by Laboratory holding current accreditation under International Standard Organisation/Bureau of Indian Standards.~~

**4.0 REPORT**

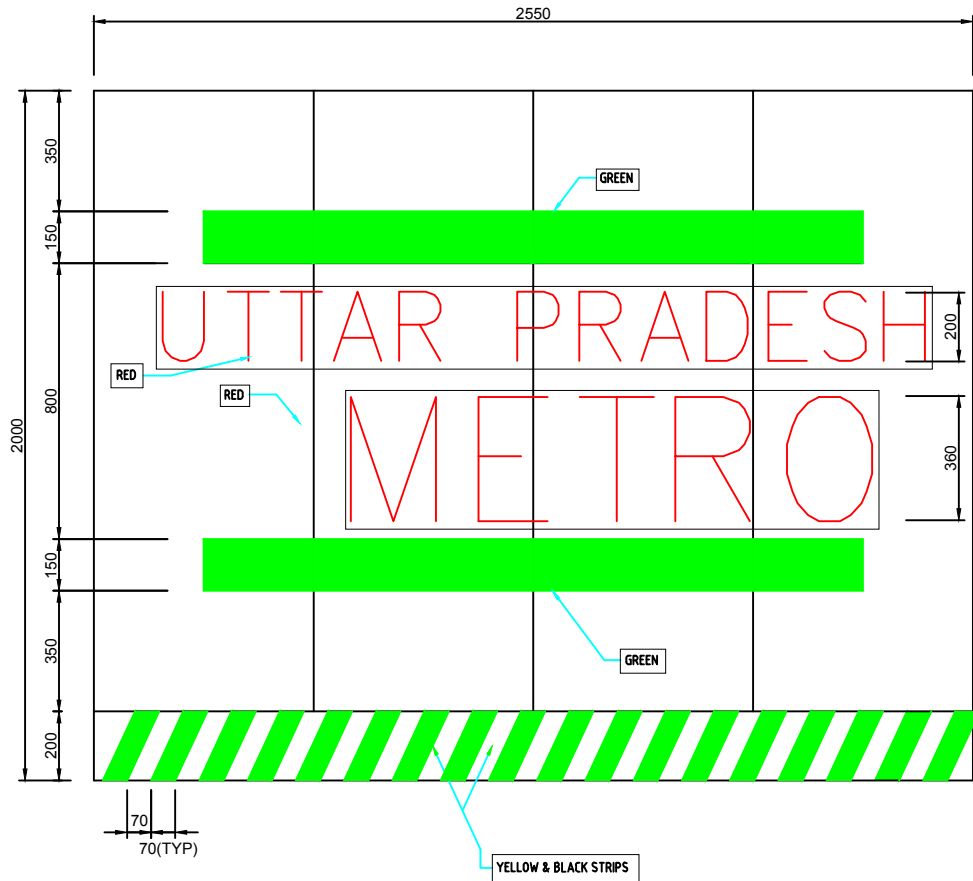
On completion of field and laboratory work, for every km, a draft factual report in triplicate, shall be submitted in suplicate incorporating the following:

4.1 A complete description of the soils and rocks encountered, along with in situ test results and the sample type and depths.

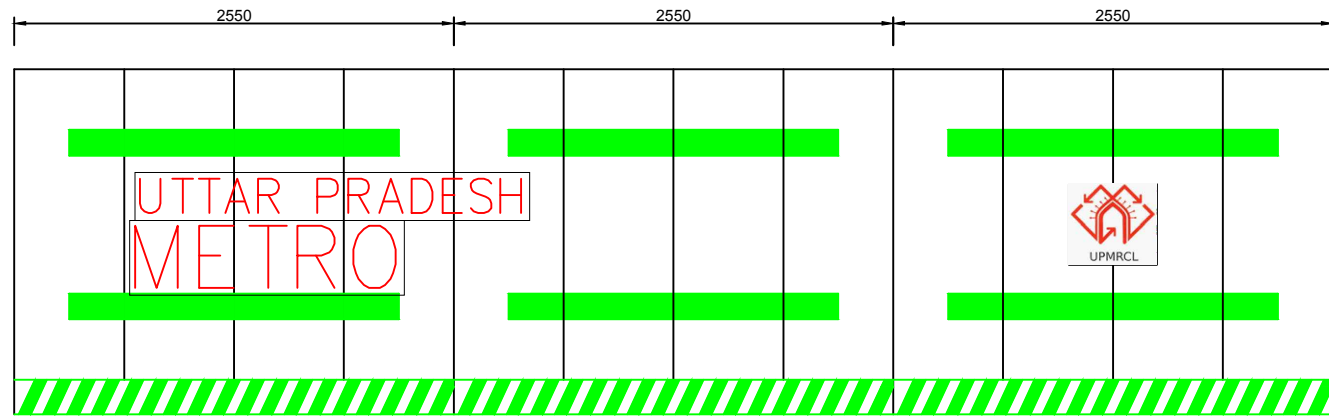
4.2 Procedure of investigation employed.

4.3 Detailed borehole logs, laboratory and field test results, both in tabular as well as in graphical form, and a plan showing locations and reduced levels of bore holes and other tests shall be submitted in soft copy in excel work sheet and hard copy.

4.4 Soil classification curves including Table indicated D<sub>10</sub>, D<sub>30</sub>, D<sub>60</sub> size uniformity coefficient etc. These figures should be made on Auto CAD and submitted.



ELEVATION OF ONE SET OF TEMPORARY BARRICADING

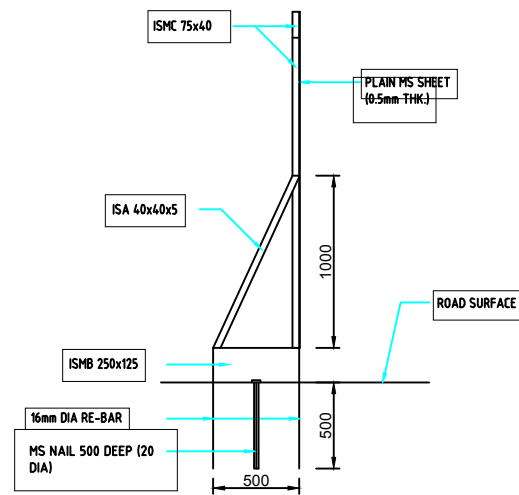


ELEVATION OF ONE UNIT OF TEMPORARY BARRICADING

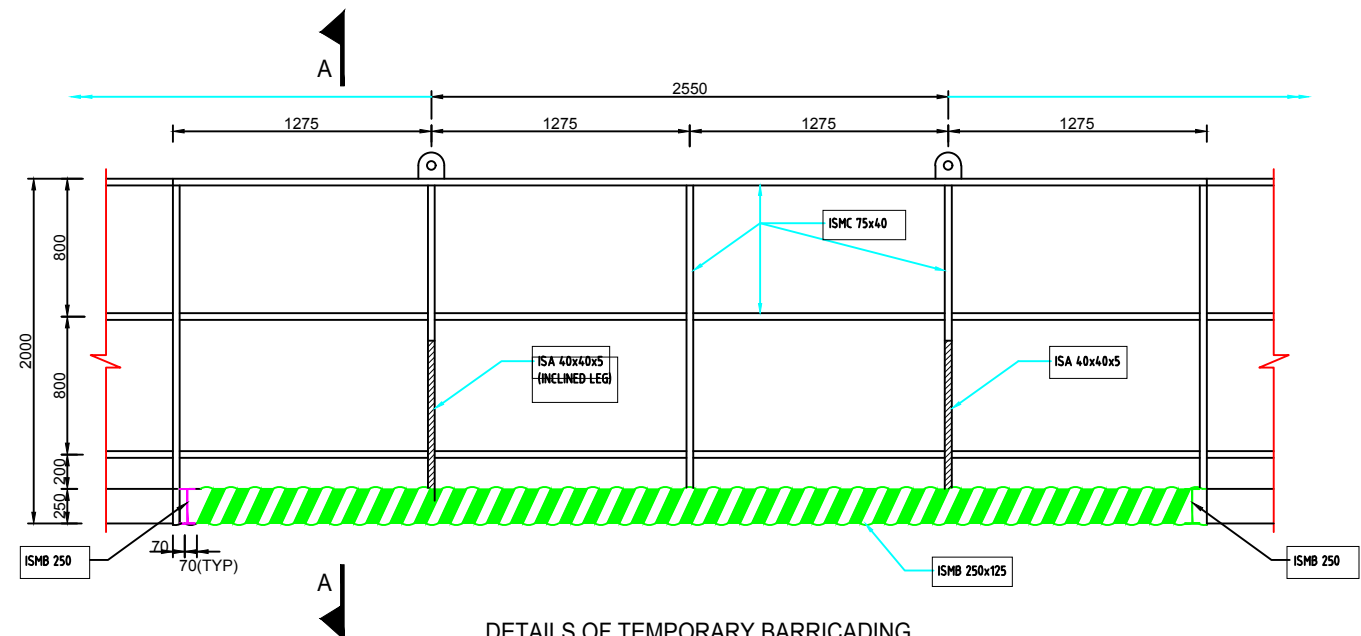
ALL DIMENSIONS ARE TENTATIVE & LIKELY TO CHANGE DURING DETAIL DESIGN.

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
3. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE EXECUTION OF WORK AT SITE.
4. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL, PLUMBING & FIRE FIGHTING, ELECTRICAL AND TRAFFIC MANAGEMENT DRAWINGS.



SECTION A-A



DETAILS OF TEMPORARY BARRICADING

NOTICE OF 'NO OBJECTIONS' FROM EMPLOYER			
NOTICE OF NO OBJECTION FROM EMPLOYER IS BEING ACCORDED FOR DESIGN PRINCIPLES HOWEVER THE OVERALL RESPONSIBILITY FOR THE DESIGN ACCURACY LIES WITH THE DETAIL DESIGN CONSULTANT .			
REMARKS	DATE	SIGNATURE	
CA UPMRC	REVIEWED & NO OBJECTION MAY BE CONVEYED TO THE CONTRACTOR		
CEE UPMRC	BASED ON STAMPED ABOVE THE NO OBJECTION IS ISSUED FOR EXECUTION PURPOSE		
CPM UPMRC			

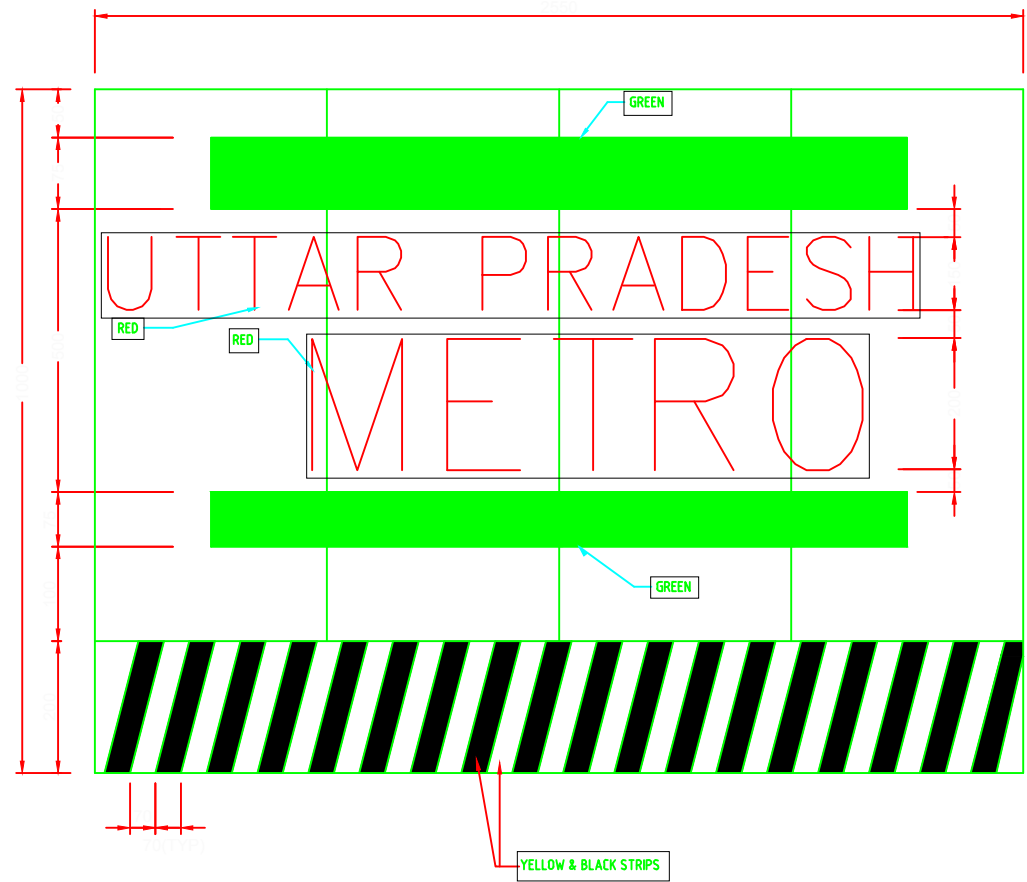
UTTAR PRADESH METRO RAIL CORPORATION LTD.			
DETAIL OF TEMPORARY BARRICADING- 2M HT			
REV.	SCALE	STATUS	TENDER DRAWING
DATE			DATE/PATE

REV.	PARTICULARS	DRN.	CHD.	VER.	DATE

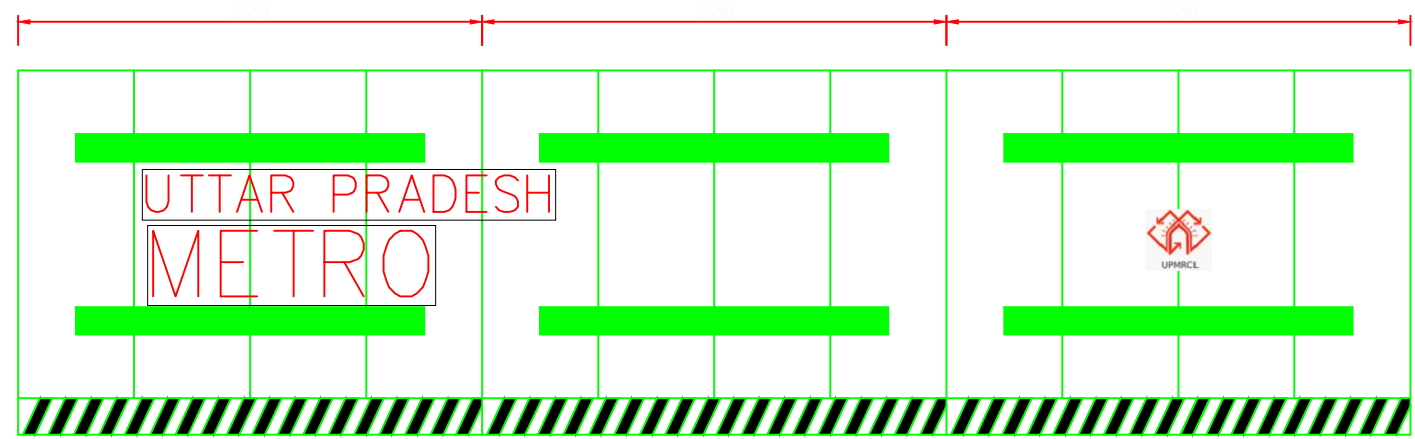


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GC - REVIEW	DATE	SIGNATURE	APP. STATUS	UPMRC-SIGN OFF	DATE	SIGNATURE	VERIFIED BY	
CHIEF STRUCTURAL EXPERT - GC			<input type="checkbox"/> NOC	DY.CE DESIGN - UPMRCL			DATE	
			<input type="checkbox"/> NOWC	CE DESIGN - UPMRCL				

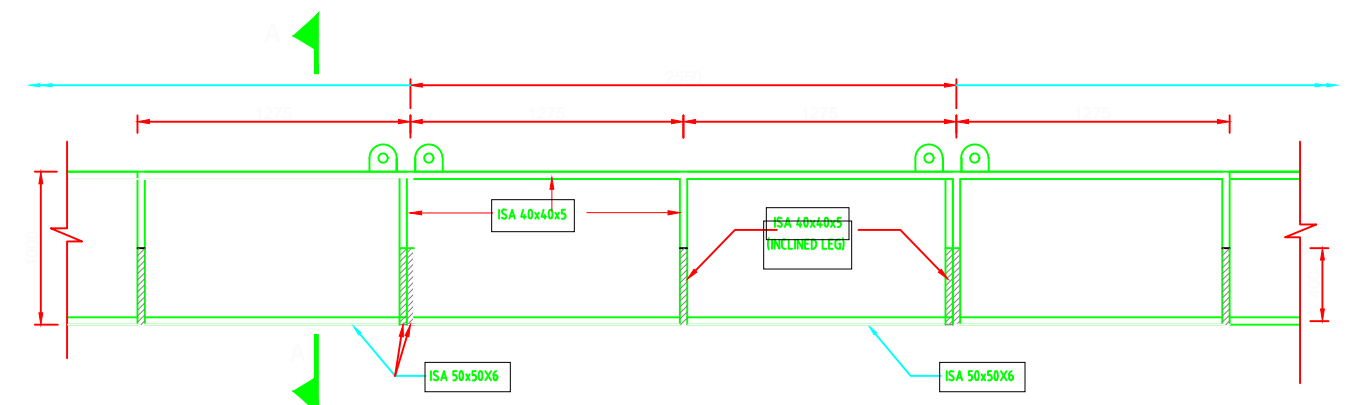
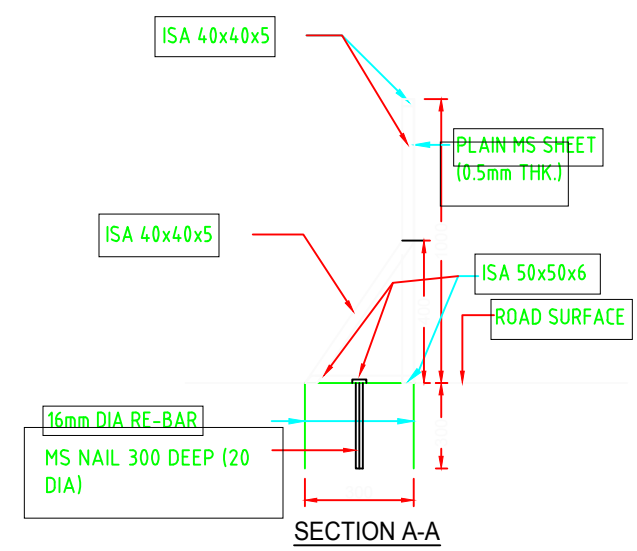
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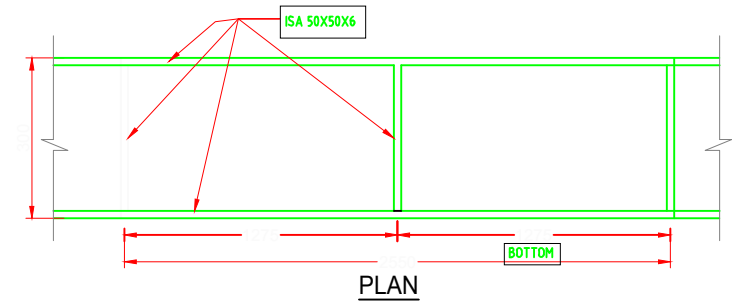
ELEVATION OF ONE SET OF TEMPORARY BARRICADING



ELEVATION OF ONE UNIT OF TEMPORARY BARRICADING



DETAILS OF TEMPORARY BARRICADING

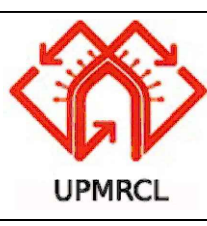


PLAN

NOTICE OF 'NO OBJECTIONS' FROM EMPLOYER			
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CA UPMRC	REVIEWED & NO OBJECTION MAY BE CONVEYED TO THE CONTRACTOR		
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CPM UPMRC			

UTTAR PRADESH METRO RAIL CORPORATION LTD.			
DETAIL OF TEMPORARY BARRICADING- 1M HT			
DRW/NO	REV.	SCALE	STATUS
			TENDER DRAWING
			DATE/UPDATE

REV.	PARTICULARS	DRN.	CHD.	VER.	DATE



NOTICE OF 'NO OBJECTIONS' FROM EMPLOYER						
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GC - REVIEW	DATE	SIGNATURE	APP. STATUS	UPMRC-SIGN OFF	DATE	SIGNATURE
CHIEF STRUCTURAL EXPERT - GC			<input type="checkbox"/> NOC	DY.CE DESIGN - UPMRCL		
			<input type="checkbox"/> NOWC	CE DESIGN - UPMRCL		
DRAWN BY			CHECKED BY			
VERIFIED BY			DATE			

STRUCTURAL