CIN: U60300UP2013SGC060836

UPMRC

उत्तर प्रदेश मेट्रो रेल कॉरपोरेशन लि0

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/ AGCC-07/2023-24 Date: 07.02.2024

ADDENDUM-4

Name of work: AGCC-07: Design and Construction of Main Line Elevated Viaduct from Agra Cantt. Metro Station to Kalindi Vihar Metro Station [Chainage (-77m to 15016m] including Viaduct Connection with Ramp (Chainage 0.00m to 2610m) from (nearby) Sadar Bazar Metro Station to existing Corridor-1 Depot at PAC ground & Corridor-2 Depot Entry/Exit lines Viaduct with Ramp (Chainage 0.00m to 530m) and 14 nos. of Elevated Stations i.e., Agra Cantt, Sadar Bazar, Pratap Pura, Collectorate, Agra College, Hariparvat Chauraha, Sanjay Place, M.G. Road, Sultanganj crossing, Kamla Nagar, Ram Bagh, Foundary Nagar, Agra Mandi & Kalindi Vihar metro stations including Civil, Associated Ancillary Structures, Architectural Finishes, Water Supply, Sanitary Installation, Drainage, External Development, Fire Fighting, Fire Detection, E&M works and PEB structures in Corridor-2 of Agra Metro at Agra, Uttar Pradesh, India.

Ref: - Bid published on the e-tender portal: 01.12.2023.

Addendum-04 along with replies to pre-bid queries and excel file of BOQ is being uploaded on CPP Portal. Further, submission end date of tender ie 29.02.2024 upto 1500 Hrs shall remain unchanged.

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

07/02/24

CE/Contract

Reply to Pre-bid queries : Tender AGCC-07				
Sl. No.	**Reference Volume / Clause**	**Existing Clause**	**Queries**	**UPMRC's Reply**
1	Dwg.	Subhash Park - Future Stations	For Subhash Park, future station is indicated, please let us know if piers have to be designed for carrying loads from concourse and entry/exit.	Provision for Future station are to be kept in foundation, substructure & superstructure. Kindly refer to **Annexure-1** of **Addendum.**
2	21 / 2.1A (vii) (i) (e), Vol. 03	Design, Construction and erection of special spans	The span arrangement stipulated in employer's requirement for Yamuna Bridge (34+7x45+34) differs with the plan & profile drawings made available (6x45.72+47.320). Kindly clarify.	Kindly refer to **Annexure-2** of **Addendum** .
3	25 / 2.1.A.1,Vol. 03	There is possibility of some of the items not getting mentioned in the above list of works of viaduct. Contractors are requested to go through the tender drawings also in details as the works listed in 2.1.A	Tender drawings are asked to be referred in regard to the works that is included in the scope (if not mentioned in the Clause 2.1.A). In view of this, we request you to kindly provide the complete set of tender drawings in Autocad format.	AutoCad version of all drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender shall prevail.
4	25/2.1.A.3,Vol. 03	Though Alignment plans (both vertical and horizontal) and pier locations are provided by the Employer to the Contractor. Contractor would however design the span configuration (only) based upon his proposal subject to obligatory requirements.	Contractor is required to modify the span configurations if required so as to suit the local utility authorities' requirements. In view of this, you are requested to provide the details of utilities to work out the price correctly. In absence of these details impact of the same on price to be quoted can not be worked out.	As per tender condition.
5	33 / 2.1.B.8, Vol. 03	Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station. Refer Tender Drawing.	Kindly let us know if interconnection work regarding integration of Agra Cantt. Metro and Agra Cantt. Railway station is included in scope of work of this contract. If yes, please provide details.	As per tender condition. Kindly refer to **Annexure-5 of Addendum** .
6	6.5.3, Vol. 04	Outline Design Specification	It is stipulated in the tender document that LWR forces of 1.6t/m are to be considered irrespective of number of spans. Moreover, RSI analysis is also suggested to be performed to validate the LWR forces. Kindly allow us to consider LWR forces arrived by RSI analysis. This wil save cost to Client as bidders can submit more economical bid.	As per tender condition.
7	General	Outline Design Specification	Kindly let us know the percentage of compression reinforcement in top of pile cap.	As per Relevant code in line with ODS.
8	Outline Design Specification for viaduct 21 / 6.14, Vol. 04	Rules specifying the loads for design of superstructure and sub-structure of bridges and for assessment of the strength of existing bridges should be done as per IRS: Bridge Rules	Vehicle collision loads are to be considered 50% of their actual values if piers are protected by pier protection as per IRC:6. We understand that piers and foundations are to be designed considering 50% of collision loads. Kindly confirm.	As per Relevant code in line with ODS.
9	Tender Drawing, Vol. 06		Arch type Girders are proposed in Depot lines at few locations. Kindly let us know, if these are mandatory or contractor can provide alternative type of superstructure. If Arch type of girders are mandatory at the location, kindly provide the drawings and details.	Kindly refer to Annexure-2 of Addendum.
10	Clause 5.7, Vol. 04	Outline Design Specification	" Clause no. 5.7 SOIL PARAMETERS " stipulates that lower values of horizontal and vertical capacity from two boreholes to be considered for the design. Kindly clarify which two boreholes are being referred to and allow us to consider the vertical and horizontal capacities as per boreholes taken by us.	As per Tender Condition
11	Geotechnical works,Vol. 04	Outline Design Specification & Outline Design Criteria	All the boreholes have been terminated at 30m below ground level as per RFP. We anticipate that actual pile length may be more than or equal to 30.0m. Please advise what properties of soil to be used below 30m.	As per tender conditions. Kindly refer clause 17 of ER/Construction/ Vol-3 of tender documet.
12	Yamuna River Foundation,Vol. 04		We presume that, there is no fix criteria for foundation of bridge over Yamuna and contractor is free to adopt any type of foundation as per ease of construction. Kindly clarify.	For the structure over river Yamuna, well foundation shall be used as sub - structure. Kindly refer **Annexure-3 of Addendum .**

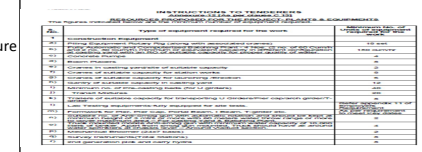
Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
13	10 (c), 5 Preamble	Changes in rail level :- "In case of ant increase/decrease in rail level up to 300 mm, the associated cost of structures for such changes in rail level as shown in the tender drawing shall be part of lump sum price and no cost adjustment on either side shall be applicable.	This clause may be deleted as the bidders will tend to include in their price, rise in rail level upto 300 mm even it may not be required.	As per tender condition.
14	Dwg.,Vol. 06	Span arrangement	Kindly allow us to change the span arrangement to achieve more economical design.	As per tender condition.
15	Piling		Only 18 boreholes are provided for a length of about 18 km. These are grossly insufficient. This will lead to speculative bidding. To avoid this, piling depth (founding level) may be specified in tender documents based on which bidders shall frame their bid as practised by Metro organizations like MMRDA Mumbai Metro, CIDCO etc. Any variation in this depth to be reimbursed / recovered accordingly. Please note that as per Bare Act, point no. 29, Chapter II page no.2 bidders can not be expected to consider in their price cost of which can not be determined certainly.	As per tender condition. Kindly refer clause 17 of ER/construction/volume 3 of tender document.
16	ER - 24, Vol. 03	Pile foundation shall be of minimum of 1000mm dia with or without permanent liners with hydraulic rotary piling rigs.	We hereby request you to kindly allow use of steel piling. It is already being used inetrnationally and in India.	As per tender Condition
17	ER - 38, Vol. 03	Super structure shall be suitably designed Pre-stressed Concrete bridge Girder or Composite Steel Bridge Girder for complete bridge.	We hereby request you to kindly allow use of Ultra High Performance Fibre Reinforced Concrete as practised by NHAI.	As per tender Condition.
18	ER - 38, Vol. 03	Super structure shall be suitably designed Pre-stressed Concrete bridge Girder or Composite Steel Bridge Girder for complete bridge.	We hereby request you to kindly allow use of Hybrid Composite beams as practised by NHAI.	Kindly refer to **Annexure-3** of **Addendum** .
19	Schedule C, BOQ, Vol. 05	Summary of part schedule - C1,C2,C3	We request you to kindly consider rate for item from DSR 2023 lieu of DSR 2021 to avoid higher gap between Estimate and Quoted price.	As per tender Condition.
20	ER - 23, Vol. 03	Permissions and clearances - Necessary permission/ NOC from the Railway/ Road/ municipal corporation and other concerned regulatory authorities for block and working in such locations is in the scope of contractor. Subject to compliance with the aforementioned act, arrangements for permission from Forest Department for tree felling/transplantation shall be done by the contractor.	We request that the responsibility of obtaining permissions and clearances be taken by Employer.	As per tender Condition.
21	BOQ - Schedule B1,Vol. 05	Shifting/ Rearranging of Utilities, Tree Cutting and Ttransplantation	In order to arrive at a percentage over a particular schedule, we need quantities of all items. Kindly provide the same. Please note that as per Bare Act, point no. 29, Chapter II page no.2 bidders can not be expected to consider in their price cost of which can not be determined certainly.	As per Tender Condition.
22	GCC - 15,Vol. 02	Validity of insurance policies - Till 06 (Six) Months beyond the expiry of DLP	Validity of the insurance policies may be accepted till completion period for original scope only as no work will be executed in DLP.	As per tender conditions.
23	General Conditions Of Contracts,Vol. 02	Establishment of Labour Camps, Store Offices, Batching Plant, Casting yard	A large piece of land admeasuring about 15 hectares is required to establish a casting yard. It is very difficult to find such large area within viscinty of project site. Further, even though if such an area is found, it will be very costly to rent. This amount will be in turn charged to project causing quoted prices to go up. GST will also be levied on this amount. Therefore, in order to reduce the quoted price and GST burden, suitable land may be provided by Client at free of cost.	As per tender conditions.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
24	ITT - 73,Vol. 01	Equipment required for work 1. Minimum no. of Pre-casting beds (for U girders) - 40 2. Cranes of suitable capacity for launching /Erection - 6 3. Boom Placers - 8 4. Concrete Pumps - 4 5. Fully Automatic and Computerized Batching Plant - 4 Nos. (2 no. of 60 Cum/h and 2 no. 30 Cum/h) 6. Survey Instruments(Total Stations) - 8 7. Gantry of suitable capacity in casting yard - 12	Requirement of equipment seems to be on higher side. We request you to reduce the Nos of equipment as follows or same may be kept open as per descretion and requirement calculation by contractor. In case of additional resources requirement for a brief period, outsourcing from approved vendors may be allowed. 1. Pre - casting bed (U-Girder) 20 instead of 40 2. Cranes of suitable capacity for launching/Erection 4 instead 6. 3. Boom Placer - 3 Nos 4. Concrete pump - 1 No 5. Batching Plant - 60 cum - 1 , 30 cum - 1 6. Total Stations - 3 7. Gantry - 6	As per tender conditions.
25	GCC - 16, Vol. 02	Professional indemnity insurance - 6% of the Accepted Contract Amount	We request you to reduce the limit of professional indemnity insurance to 3% of contract price as practised by other Metro organizations like MMRDA. Also period for maintenance of this insurance may be kept till completion of the project. Requirement to maintain this insurance for longer period will add to the cost of the project.	As per tender conditions.
26	General Conditions Of Contracts, Vol. 02	Bonus/Incentive	We hereby request you to kindly incoroporate an equitable clause for incentive for early completion of work & not only L.D. clause.	As per tender conditions.
27	SCC - 83,Vol. 02	No adjustment in the contract price on account of inflation shall be done for E & M works.	Kindly Provide escalation for E and M work also as metal prices are at the lower levels and are likely to increase substantially. This will have major effect on E&M Works.	As per tender conditions.
28	GCC - 44, Vol. 02	Mobilisation Advance shall be generally limited to 5% of Original Contract Value payable in two equal instalments.	We request you to kindly pay 10 % of contract value interest free mobilization advance.	As per tender conditions.
29	General Conditions Of Contracts, Vol. 02	Delay Payment	Kindly incorporate clause for Bank rate + 3 % of interest payment in case of delay in payments beyond schedule.	As per tender conditions.
30	NIT, Vol. 01	Completion Period - 24 Months	Considering quantum and complexity of the work involved, completion period of 24 Months sounds insufficient. It is requested that it may be considered as 42 Months.	Kindly refer **Annexure-9** of **Addendum** .
31	NIT, Vol. 01	Date of Tender Submission - 10.01.2024 at 11.00 Hrs. to 18.01.2024 upto 15.00 Hrs.	In view of the quantum and complexity of the work involved, we hereby request you to kindly extend the due date of submission of bid to atleast 6 weeks after issue of prebid clarifications.	Please refer Addendum for extesion of bid submission uploaded on CPP Portal.
32	Volume-3 clause 2.1.A (iv),Page-20	Design and construction of non-standard spans, **Pre-stressed T-Girder spans,** spans at crossover location and spans in sharper curvature, pier caps, etc. wherever necessary or instructed by engineer except as detailed in para (iii).	Since it is EPC tender, we consider that bidder is free to design any type of superstructure for non standard spans and mentioned type of Pre-stressed T- girder is not mandatory. Please confirm. Similarly, Special spans are mentioned as composite steel Girder span for 45m. please confirm design flexibility for the bidder.	As per tender conditions.

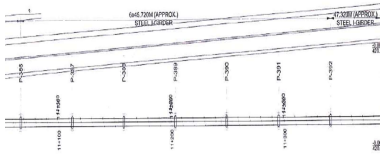
Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
33	Volume-3 clause 2.1.D.(i),Page-35	Bridge across Yamuna river	1) Since it is EPC tender, we consider that bidder is free to design any type of foundations and superstructure type, for Yamuna river spans. Please confirm. 2) Please provide design discharge , Silt factor and scour level depth to be considered in design of the foundation for the Yamuna bridge river crossing. 3) Please provide mandatory levels for well cap top and pr dimensions for Yamuna river spans. 4) Please confirm that contractor is allowed to do temporary filling in Yamuna river Bridge for execution of foundations. (Filling will be removed after completion of construction).	1.For the structure over river Yamuna, well foundation shall be used as sub - structure. Kindly refer **Annexure-3 of Addendum .** 2. As per tender condition. Please refer to Clause A7 of ITT also for further clarity. 3. As per tender condition. Please refer to Clause A7 of ITT also for further clarity. 4. As per tender conditions.
34	Volume-3 clause 2.1.A (XXVii),Page-23	Demolition/dismantling/Restoration of any structure (Utility)	Please share any surveys done for identification of utilities in DPR stage.	As per tender condition. Please also refer to Clause A7 of ITT .
35	Vol.6-Drawing 2, Page-41	Typical elevated Station (Double pier cross section)	Double Pier Station viaduct are shown with single U girder type supporting system Bidder understand that bidder are free to change the superstructure type. please confirm	As per tender condition.
36	Vol.6-Drawing 2	Drawings are provided in PDF formats.	Request to please provide all drawings in AutoCAD. Please provide KMZ file of alignment.	AutoCad version & KMZ file of all drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender shall prevail.
37	Volume-3 clause 2.5.1, Page-53	Reference to the Standard codes of practice	Only code names and numbers are mentioned in ER. publication years is not mentioned. Please provide Publication year of all reference codes.	As per tender condition.
38	Design basis report	Tender design basis report is not shared	Please provide tender design basis report	Please refer to ODS, Vol-4 of this tender document.
39	Volume-3/ 2.1.A (XXXI), Page 29	Dynamic Integrity test on 100% piles and cross hole sonic integrity test on 25% of piles as per Outline Construction Specifications for Civil Work	Kindly confirm Dynamic Integrity test refers to Low strain pile Integrity as per ASTM D5882. If Dynamic Integrity test on 100% piles refers to High Strain Dynamic pile load then pile built up and concrete strength regain required for testing. These tests will have schedule impact. Kindly confirm whether cross hole sonic logging pipes are to be installed on all 100% piles or only 25% of the pile where the testing is to be done.	Cross hole sonic logging pipes are to be installed on all 100% working piles. Testing shall be as per tender condition. **Refer annexure-1 of addendum.**
40	Vol.6-Drawing 1	KNPAGDDC-01-TDR-ELV-VDC-DWG-09021	At Ch 1700, can bidder change obligatory Span of 45m into standard spans with additional pier in between? Please confirm.	As per tender condition.
41	Vol.6-Drawing 1	KNPAGDDC-01-TDR-ELV-VDC-DWG-09026	For both railway spans, we need additional space near spans for temporary assembly of steel superstructure. We request authority to please provide approx. 200 m X 50 m space near these spans.	As per tender condition.
42	Volume-3 Part-1	Topographic survey & alignment Drawing	Please provide topographic survey and horizontal and vertical alignment drawing in CAD format.	AutoCad version of all drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender will prevail.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
43	8.5 of GCC, Appendix-1 to Form of Tender, 39 of Vol-2 & 82 of Vol-1	The total ceiling limit of LD is 15% of the Contract value including Liquidated Damages levied under the provision of Appendix 1 to the Form of Tender	As per Appendix-1, FOT ceiling of LD mentioned is : b] Maximum limit of LDs shall be 10% of the Total Contract Value. C] Total maximum limit of LD including sums payable by the employer to designated contractors is 15% as mentioned in GCC. We request to confirm Limit of LD is 10% of Contract Value also, please elaborate term 'sums payable by the employer to designated contractors'.	As per tender conditions.
44	SCC	Issue of Performance Certificate. Time line of issuance is not clear.	Not mentioned in the Document, request to let us know the Time lines.	As per tender conditions.
45	Vol-2/PCC/ Sr.no.4, Pg.no 68	Access to Site : Site access schedule will be consistent with the resettlement plan for the section.	Project overall duration is 24months, which involves, construction in congested areas, utility, drains & traffic diversion. To complete work on time, multiple fronts will be required to be taken up, which requires elaborate planning in order to ascertain resources to be deployed, hence access to site is vital information required. We request authority to provide detailed chainage wise schedule of Access to Site including details of structures to be demolished.	The required land/area shall be made available in accordance with clause 2.2 of GCC.
46	Vol-2/PCC/ Sr.no.4, Pg.no 68	Access to Site : Site access schedule will be consistent with the resettlement plan for the section.	We request to please share present status of Resettlement plan being carried out by client.	As per tender condition. Please refer to Clause A7 of ITT .
47	SCC	Construction period is given as 24 months, with stringent milestones.	Given construction period of 24 months is not practical. Looking at the dense quantum of utilities, initial 7 to 9 months are required for utility diversion. We request to please revise the Total Duration to minimum 40 months.	Kindly refer **Annexure- 9** of **Addendum** .
48	Vol-2/GCC/ Cl.no.2.2, Pg.no 12	Damages for delay in handing over the Site : If the Contractor suffers delay in possession of site, Contractor shall be entitled to only a Extension of Time and no monetary claims whatsoever shall be paid.	Please provide cost compensation to contractor, for delay in Handing over of site by client.	As per tender conditions.
49	SCC	Key Dates : KD 8 : Start of launching of U-Girder in 5.8months KD 9.1 : Partial access of the Corridor-II viaduct [min. 4.5km in one stretch in 11.5 months	Initial period of Work will involve Mobilization of Manpower, Equipment, Geotechnical Investigation, Detailed Design, Drainage & Utility shifting which will take away 4-5 months minimum. Hence request to please have relook to these Key Dates and revise the same. Please confirm.	Kindly refer **Annexure- 8** of **Addendum** .
50	Vol-6/ Drawings	Alignment of service road	Alignment is passing close to existing structures from Rambaug station to Kalindi Kunj station. Please confirm status of land acquisition for this stretch. Also please provide AutoCAD drawing explaining structures, falling inside ROW.	Required area/Land shall be made available in accordance with Clause 2.2 of GCC. AutoCad version of all drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender will prevail.
51	Vol-6/ Drawings	Intersection with Underground metro.	There is intersection of Underground metro alignment with Proposed Elevated metro alignment near Agra college station. Please provide details of underground station building lines, to enable us planning our works. Also please provide cross section drawing showing clearance between tunnel tubes and piles of proposed elevated metro foundations.	Kindly refer **Annexure- 20** of **Addendum** .
52	Vol-1/NIT/Cl.no. 1.2, Pg.no 68	Date & time of Submission of Tender online : 18.01.2024 upto 1500 hrs	This being EPC Tender, with lot of complexities will require elaborate Planning and Design of structural components at such a huge quantum. Hence we request to please grant minimum 8 weeks extension from present bid due date.	Please refer Addendum for extesion of bid submission uploaded on CPP Portal.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
53	NIT, Clause 1.2 Page No. 3	Project Duration=24 Months	The scope of work includes design & construction of approx. 18km viaduct including major bridge over Yamuna, multiple obligatory spans, 14nos. of stations including MEP & Architectural works, to be executed in a busy road. The stipulated duration of 24 months is not adequate. Except Kanpur elevated metro, KNPCC-02 (Scope-Length-9km & 9 stations), no where in India metros are completed in 24 months. In view of above, we request you to revise the project duration from 24 months to 36 months and revise the KDs accordingly. Kindly refer annexure-1 for proposed KD.	Kindly refer **Annexure- 8 & 9** of **Addendum.**
54	NIT, Clause 1.2 Page No. 3	Rs. 1529.29 Crores (Including GST)	Request to allow bidders to quote Contract price excluding GST, so that PBG/ABG requirement will be less.	Bidder has to quote their rates in excel BOQ exclusive of GST in accordance with para 11.1.1 of SCC.
55	NIT, Clause 1.2 Page No. 3	Rs. 30.58 Crore	Request to revise the EMD amount for 1% of CV excluding GST.	As per tender conditions.
56	Tender Drawings	Title:- U-Girder (Type-1) Concrete Outline-Cross Section. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-1306.	The shape of U-girder proposed in the tender drawing is compulsory or bidder is free to change the shape. **Kindly confirm.**	As per tender conditions.
57	Tender Drawings	Title:- Well Foundation, Pier & Pier Cap at Yamuna Bridge General Arrangement Drawing. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-12079.	Whether well cap bottom shall be kept above LWL for Yamuna bridge. **Please confirm.**	Relevant code and ODS to be followed.
58	Vol-3, Employer's Requirements/Functional/ 2.1D Pg No.37	The contractor shall take into account that the work area is in river Yamuna shall be subjected to flooding due to rain/ water from upstream and shall take necessary measures. The contractor has to schedule the work accordingly and no extra time or any remuneration will be given for such time period;	As mentioned in tender document Yamuna river is prone to flooding and bidder require more hydrology data scour depth, design discharge, velocity, LWL etc. other than HFL. These datas are required for design of foundation & evolving the scheme for construction of foundation.	As per Tender conditions. Please also refer to Clause A7 of ITT .
59	Vol-3, Employer's Requirements/Functional/ 2.1D xxvii Pg No.38 Vol-3, Employer's Requirements/Functional/ 2.1D Pg No.35	The tender concept is schematic and the Tenderer is free to propose his own scheme and quote based on his design keeping following parameters unchanged: • Outline Design Specifications (ODS) • Codal Requirements • IRS Bridge Code • Loading requirements • Foundation is proposed with 1800 mm dia (minimum) piles • Span Configuration is fixed • Super structure shall be suitably designed Pre-stressed Concrete bridge Girder or Composite Steel Bridge Girder for complete bridge.	In clause 2.1D. of Employer Requirement-Functional (Vol.3), Foundation mentioned for bridge across Yamuna river is Well foundation but in clause 2.1D. (Xxvii)of Employer Requirement-Functional (Vol.3),Pile foundation with dia. 1.8m is proposed. Whether bidder is free to adopt well or pile foundation, **please clarify.**	Well foundation shall be used as sub - structure over Yamuna river. Kindly refer **Annexure 3 of Addendum** .
60	Vol-3, Employer's Requirements/Functional/ Clause 2.1d Page No.35	Design & Construction of Civil Engineering works of Bridge having spans of configuration (34m + 7*45m + 34m) across river Yamuna on Corridor-II of Agra Metro Rail Project as shown in the GAD of Yamuna Bridge- Total length of the Bridge is 383mtr. which is to be constructed on downstream of existing bridge on NH-19. The scope of work consists of design and construction of well foundations, sub-structures and super structure with railing on both sides and arrangements for fixing of Signal Poles, providing shear connectors for track plinth casting etc. which includes:	If any studies for proposed bridge has been carried out by CWPRS? If yes, **please provide** the report.	As per Tender Condition.
61	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 12. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09032. 	From pier no. CP-300 (Ch. 8+630) to CP-308 (Ch. 8+820) alignment is going from side of the road to center of the road and during site visit it is observed the alignment can continue to go from side of the road for pier no. CP300 to CP308. **Please confirm & provide revised alignment drawing**.	As per Tender Condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
62	Vol-6, Tender Drawings	Title:- Agra Cantt Station Ground Level Plan. Drawing No.:- KNPAGDDC-01-TDR-ACT-ARC-PLN-48052.	For Station location entry/exit structure is coming inside Police Thana. The structure to be constructed after dismantling of compund wall. **Please provide** drawing for restoration of compound wall location.	As per Tender Condition.
63	Vol-6, Tender Drawings	Title:- Agra Cantt Station Ground Level Plan. Drawing No.:- KNPAGDDC-01-TDR-ACT-ARC-PLN-48052.	**Kindly indicate** the usage & details of Lift shown at left most corner of a corridor in Ground Level Plan of Agra Cantt Station drawing.	Kindly Refer **Annexure- 16 of Addendum**.
	Vol-6, Tender Drawings	Title:- Agra Cantt Station Ground Level Plan. Drawing No.:- KNPAGDDC-01-TDR-ACT-ARC-PLN-48052.	**Please clarify** dotted line structure shown on left most side in Ground Level Plan of Agra Cantt Station.	It is the proposed walkway under platform level of Agra Cantt Metro Station. Kindly Refer **Annexure - 16 of Addendum.**
64	Vol-6, Tender Drawings	Title:- Hari Parwat Station Insertion Plan. Drawing No.:- KNPAGDDC-01-TDR-HPC-ARC-PLN-53051.	In Insertion Plan Drawing of Station Boundary & Entries are shown twice. **Please confirm** that only left one will be applicable.	Kindly refer A**nnexure - 17** of **Addendum** .
65	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 1 to 21 Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09021.	**Please confirm** that Contractor is free to change the Span Arrangement from those given in Tender Drawings.	As per Tender Condition
	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 12. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09032.	At Pier CP284, GAIL gas pipeline is interfering with Pile Cap. **Please confirm** that shifting of GAIL Pipeline will be allowed. If not, please confirm the minimum safe distance from GAIL Pipeline to do the Pile.	As per Tender Condition Please refer to Clause A7 of ITT also.
66	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 12 to 21 Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09032.	Along the NH, many of the Pier are coming over the drain along side of the highway & less space for launching of girder. **Please confirm** that at these locations, drain will be restored adjacent to Pier & additional width of ROW will be available for the same.	As per Tender Condition
67	Volume-1 ITT Annexure 12, Page No. 73	The figures indicated below are the minimum number of equipment required. 	Considering the scope cope of work the resources proposed are much on higher side than the normal requirement. There will be huge idling cost in cse there is delay due to various reasons. The resource will be deployed as per the requirement and approved schedule, also the min. number of pre-casting beds proposed are 40 (for U-girder) & this number is much higher for u-girder, 40 nos. beds includes U-girder, I-girder & segment? **Please confirm.**	As per tender conditions.
68	Vol-3, Employer's Requirement, Appendix 2A Works Areas, Page No. 97	For casting yard, batching plant and other activities a plot of land of **approx. 15 hectares** or as required for timely completion of work has to be **arranged by the contractor at his own cost**. The cost of the same is included in lump sum price of Schedule-A. This land shall be made good for such offsite activities as needed by the Contractor at no extra cost to the employer.	Considering the scope cope of work and very tight schedule completion, the time required to find land and establish casting yard & other setups will be time consuming, it may not be possible to achive the KD of casting of U girder in 18 months. **Kindly provide land of approx. 20 acres for free of cost** for smooth completion of project with in the schedule.	As per tender conditions.
69	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 1 Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09021.	After station the alignment is going through Railway property & private property, **please provide** the land acquisition status.	As per Tender Condition The required land/area shall be made available in accordance with clause 2.2 of GCC.
70	-	Schedule handing over of ROW not provided.	Provision for land handing over schedule with specific time limit has not been made available in the Contract, it is requested to provide the access schedule with appropriate timeline stating the handing over of each Work Area. Department like NHAI, MORTH, NCRTC, BMRC etc. provide schedule of land handing over.	As per Tender Condition The required land/area shall be made available in accordance with clause 2.2 of GCC.
71	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 12 to 21. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09032.	From Ch. Km 8+260 (After MG Road Station) to Km 15+016 alignment is going parallel to the drain, we presume that the drain will be shifted by other agency. **Please confirm**.	As per Tender Condition

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
72	Vol-6, Tender Drawings	Title:- Span Arrangement-Agra Corridor Sheet 13. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09033.	Sultanganj station is passing over nallah, we presume that cost of diversion/reconstruction of nallah is payable separately, **kindly confirm.**	As per Tender Condition
73	Volume 3, Employers Requirements-Functional, Cl. 2.1.A.3, Pg. 25-26	The shifting of the utility(ies) would be undertaken only in exceptional circumstances where in the opinion of the Engineer no other option is available. Shifting/diversion cost of all the charted utilities is included in Lump Sum price of Schedule-A.	We request you to **provide the drawings** indicating Location and details of the charted utilities in the subject clause.	As per Tender Condition
74	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.A (i), Page No. 20	Construction of super structure of standard U-Girder span (28m) and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier cap, Bearing (Elastomeric) & crash barrier as per tender drawing. The design of standard span U Girder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal & crash barrier for these spans shall be provided by UPMRC. Also, the reinforcement in the U-Girder, standard Pier Cap & bearing pedestal shown in tender drawing is the minimum reinforcement to be provided. However, in case the contractor assesses that the reinforcement has to be increased then the same shall be provided after approval of UPMRC without any extra cost.	As per our underrstanding Design of standard span U Girder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal & crash barrier are not in contractor's scope, based on this understanding kindly clarify the clause of reinforcement. Kindly clarify U girder with sharper radius upto span GAD and drawings have 23m span curve R=215m.	As per Tender Condition. Kindly refer A**nnexure - 7** of **Addendum also**.
75	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.A(iii), Page No. 20	Construction of super structure of standard U-Girder span (28m) and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier cap, Bearing (Elastomeric) & crash barrier as per tender drawing. The design of standard span UGirder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal & crash barrier for these spans shall be provided by UPMRC. Also, the reinforcement in the U-Girder, standard Pier Cap & bearing pedestal shown in tender drawing is the minimum reinforcement to be provided. However, in case the contractor assesses that the reinforcement has to be increased then the same shall be provided after approval of UPMRC without any extra cost.	**Please clarify** whether Bearing will be elastomeric or POT / Spherical type for non standard span U Girder curves sharper than 300m radius, Cross over span.	As per Tender condition.
76	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.A(ix), Page No. 21	All Piers location, span arrangement for special/ obligatory spans have been shown in the alignment GAD drawings. These special spans / obligatory span lengths may have to be changed as per requirements of the concerned authorities.	Can Contractor propose alternative option of obligatory span, & please clarify span length can modify for obligatory location.	As per tender condition.
77	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 4, Page No. 57	The Contractor is permitted to propose minor deviations in alignment to suit his construction proposals, but he must demonstrate that any such deviations shall comply with good design practice and the alignment requirement of the Design Criteria. Such deviations shall require prior approval of the Employer subject to following conditions: - (a) There is no extra cost to the employer (b) Changes proposed are essentially required to suit the contractor's specific design (c) There is no change at the contract boundaries or if there is any, the same is agreed by the contractor of the adjoining section without any extra cost to the employer	It is understood that the drawings provided are tentative in nature and can modify the details during its design and execution phase in case of requirement. **Kindly confirm.**	As per Tender condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
78	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.D (v) & (xxvii) (c, d), Page No. 35, 37 & 38	(v) Provision of suitably designed well foundations for piers in accordance with actual soil parameters as obtained from detailed sub surface exploration as required or as directed. Foundation is proposed with 1800 mm dia (minimum) piles. (c) The tender concept is schematic and the Tenderer is free to propose his own scheme and quote based on his design keeping following parameters unchanged. (d) Foundation is proposed with 1800 mm dia (minimum) piles.	Bidder is free to propose pile foundation in Yamuna bridge?	Well foundation shall be used as sub - structure over Yamuna river. Kindly refer **Annexure 3 of Addendum.**
79	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.D (x) & (xxvii)(c) , Page No. 35 & 38	(x) The superstructure is conceptualized to be constructed with suitably designed Composite steel of configuration (34m +7 x 45m + 34m) for the complete length of the bridge, as required or as directed (No other type of superstructure is acceptable). This shall include provision of shear connectors in the deck as per tender drawing to suit installation of Ballast less track, later by Track contractor. (xxvii,c) Super structure shall be suitably designed Pre-stressed Concrete bridge Girder or Composite Steel Bridge Girder for complete bridge.	Both the clause are contradictory . As per the clause 2.1.1D (xxvii,c) superstructure Concrete can be Pre-stressed. **Please clarify**	Kindly refer **Annexure- 3 of Addendum** .
80	Vol-6, Tender Drawings & Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1A (vii, e), Page No. 21	Title:- Span Arrangement-Agra Corridor Sheet 16. Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09036. Steel I Girder Span-6X45.720M (Approx) + 47.32M  Special Span – 34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge)	Total length of Steel I girder span over Yamuna river is different in tender drawing (322M-6X45.72M+47.32M) & Emplyers requirement (383M-34M+7x45M+34M). **Please clarify** the correct length of spcial span to be constructed over Yamuna river.	Kindly refer **Annexure-2 & 3 of Addendum** .
81	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.C (e), Page No. 33	Provision of suitably designed pile foundations for piers in accordance with actual soil parameters as obtained from detailed sub surface exploration as required or as directed. All foundation shall be on piles of minimum 1000 mm dia. with minimum 8mm thick permanent MS liners as per requirements, for complete pile length above hard/ rocky strata duly anchored as per Codal provisions. All piles shall be cast-in-situ piles bored by hydraulic rotary rig only;	Bidder understands that permanent liner is not mandatory to be provided only at location wherever required.Please confirm.	Kindly refer clause 17 of ER/ Construction/ Vol-3 of tender document. Provision of permanent liner shall be as per site/ geotechnical requirements.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
82	Vol-3, Employer's Requirements/SectionB/ Functional Part-1, Clause 2.1.A(vii) (ii), Page No. 21	(ii) **Design, Construction & Erection of connecting line viaduct:** • Design and construction of Viaduct connection with Arch girder from Sadar Bazar Metro station to corridor-2 Depot at Mall Road along with all the necessary arrangement for interconnection of corridor -2 depot with Existing Corridor-1 depot at PAC ground as per tender drawing. • Design and construction of Viaduct with ramp for interconnection of corridor - 2 depot with Existing Corridor-1 depot at PAC ground with Arch girder from corridor-2 Depot at Mall Road to chainage 2610 Mtr. (Inside existing corridor-1 depot premises at PAC ground) & Corridor-2 Depot Entry/Exit lines Viaduct with Ramp (Chainage 0.00m to 530m) as per tender drawing. • To facilitate the train interchange facility within the connecting viaduct, needful cross-overs, turnout etc. will be constructed as per tender drawing. Civil works for such arrangements are part of **Lump Sum scope** of this contract.	Bidder is free to propose alternate type of structure in place of Arch girder, drawing is not clear. **Please confirm**.	Kindly refer to Annexure-2 of Addendum.
83	Vol-4, OCS/Civil works for Viaduct & Station, Clause 8.1.6.3, Page No. 106	For splicing of any structural member wherever required HSFG bolts and nuts of property class-8.8 conforming to IS:3757 and IS:6623 (2004) respectively shall be used. Unless specified otherwise, the bolts shall be hexagonal. All anchor bolts shall be of property class of 8.8 and nuts shall conform to IS:1363 (2002), IS:1364 (2002) and IS:1367, as applicable, and unless specified otherwise, shall be hexagonal. All nuts shall conform to property class compatible with the property class of the bolt used.	Can we use higher grade HSFG and anchor bolts wherever necessary?	**YES**, if complying relevant codal provision and without any additional financial implication to the employer.
84	-	-	Please confirm whether there is any restriction on distance between Track Centre Line & Pier Centre Line in Cantilever Piers	As per Tender condition
85	Vol-3, Employer's Requirements/General/ Clause 10.2 (b) Page No.6	(b) Contractor shall be required to produce, update and present to UPMRC on a fortnightly basis an integrated 3D BIM model incorporating rail track (Viaduct), topography, architecture, structure, plumbing and all other building services and system wide requirements in design review meetings based upon inputs from DDC appointed separately. These models shall be 3D rendered and shall help in design visualization and clash detection of elements as well as finalization of design.	**Please confirm** that initial BIM model (Str/Arc/MEP) shall be provided by DDC appointed by UPMRC. Also, every update of Architectural model will be provided by DDC of UPMRC to Contractor.	BIM model (Arc/MEP) shall be provided by **DDC appointed by the contractor**. Structure model preparation and final coordinated model (STR-ARCH-MEP) including changes at siteshall be done by the contractor.
86	Vol-3, Employer's Requirements/General/ Clause 10.2 (c) Page No.6	(c) Final coordinated all GFC drawings (GAD's and other drawings) of all disciplines shall only be generated from the BIM model.	**Please confirm** that submissions upto CRD level will be in 2D & only GFC will be generated from 3D BIM model.	CRD also shall be generated from 3D BIM Model as the BIM implementation shall be from start of work. Further, kindly refer to Clause no. 10.2 of ER, General,Volume -3 of Tender Document.
87	Vol-3, Employer's Requirements/General/ Clause 10.2 (c) Page No.6	(c) Final coordinated all GFC drawings (GAD's and other drawings) of all disciplines shall only be generated from the BIM model.	**Please specify** apart from GAD and framing, which other drawings are to be extracted from BIM model.	As Per tender condition.
88	Vol-3, Employer's Requirements/General/ Clause 10.2 (c) Page No.6	(c) Final coordinated all GFC drawings (GAD's and other drawings) of all disciplines shall only be generated from the BIM model.	We understand that r/f drawing will not be required to be extracted from BIM model. **Please confirm**.	As Per tender condition.
89	Vol-4, Outline Design Specifications for Viaduct, Clause 5.7, Page No. 10 of 78	<u>Soil Parameters</u> The borehole, which provide lesser vertical & Horizontal capacity of pile or lesser SBC in case of open/Well foundation, shall be referred in design among 1 & 2 as referred below. For Pile foundation, in case one bore hole provide lesser Horizontal capacity and other provide lesser vertical capacity then lesser values of horizontal & vertical capacity obtained from two boreholes shall be referred.	We request that bore holes as carried out by contractor duly witnessed by client should be the governing parameter. Same shall be corroborated by carrying out pile load tests (initial and routine). Insisting on lower of two indicates lack of trust on either of two data. **Please confirm.**	As Per tender condition. Kindly Refer to Clause no. 17 of ER (Constrcution), Vol. 3 of tender Document.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
90	Clause - 2.2 of GCC, Pg. no. 12	The Employer shall grant the Contractor right of access to, and / or possession of, the Site progressively for the completion of Works. Such right and possession may not be exclusive to the Contractor. The Contractor will draw/modify the schedule for completion of Works according to progressive possession/right of such sites. If the Contractor suffers delay from failure on the part of the Employer to grant right of access to, or possession of the Site, the Contractor shall give notice to the Engineer in a period of 28 days of such occurrence. After receipt of such notice the Engineer shall proceed to determine any extension of time to which the Contractor is entitled and shall notify the Contractor accordingly. For any such delay in handing over of site, Contractors will be entitled to only reasonable extension of time and no monetary claims whatsoever shall be paid or entertained on this account.	As per the stated provision, in the event of delay in handing over the Site, Contractor will be entitled to only reasonable extension of the time and no monetary claim. It is requested to amend the clause so as to provide reasonable compensation in the event of delay in handing over of the site by the Employer.	As Per tender condition.
91	Clause -2.2 of SCC, Pg. no. 68	In addition to the provision in Clause 2.2 of GCC. Site access schedule will be consistent with the resettlement plan for the section.	The handing over of Site by the Employer may get affected on account of delay in resettlement hence it is requested to kindly clarifiy the role and responsibility of the Contractor in connection with: "Resettlement plan for the section and its consistency with Site access schedule. Also, it is requested to suitably compensate the Contractor in terms of time and cost, in case of any delay in handing over of Site on account resettlement issues.	As Per tender condition.
92	Clause - 4.9 of SCC, Pg. no. 71	Following is added to Clause 4.9 of GCC: The Geotechnical and other related data provided by the Employer are based on the investigation conducted by employer and are for reference purposes only. The Tenderer should satisfy himself with the data furnished and make his own investigations if required for submitting his offer. Any change in design or construction methodology later during execution on account of change of Geotechnical Data will be the responsibility of the Contractor and no addition cost or time shall be allowed. The Contractor shall not be relieved from any risk or obligation imposed on or undertaken by him under the Contract on any such ground or on the ground that he did not or could not foresee any matter which may affect or have affected the execution of the Works, or compliance with his other obligations under the Contract.	The Employer is requested to delete such arbitrary provision in order to avoid speculatve bidding and any increase in Contract Price.	As Per tender condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
93	Clause 4.11 of SCC, Pg. no. 71	Following is added to Clause 4.11 of GCC: All operations for the execution of the Works shall be carried out so as not to interfere unnecessarily with the convenience of the public or the access to public or private roads or footpaths or properties owned by the Employer or by any other person. The Contractor shall select routes, choose and use vehicles so that movement of Contractor's Equipment, Plant and Materials from and to the Site is limited so that traffic is not delayed and damage to highways and bridges is prevented. If there is any delay or damage or injury, the cost of rectification or reconstruction of highways or bridges shall be borne by the Contractor. The Contractor shall indemnify the Employer in respect of all claims, demands, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any such matters. If during the execution of the Works the Contractor shall receive any claim arising out of the execution of the Works in respect of damage to highways or bridges, he shall immediately report the facts to the Engineer. The Contractor shall negotiate a settlement in respect of such claims and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses in relation thereto.	In city area mostly alternate routes are not available and thus Contractor is bound to use public or private roads. The execution of works may cause inconvenience to public,delay in traffic and wear and tear to highway and bridges used in connection with execution of the project. Request to kindly make suitable provision in the Contract for rectification of such works separately in order to avoid cost loading/extra cost to the Employer in Bid Price for such unforeseen items.	As Per tender condition.
94	Clause - 8.3 of GCC, Pg. no. 37	In case of delay on the part of the Contractor, the Contractor shall be liable to pay liquidated damages and any other compensation for the damages suffered by the Employer as per clause 8.5. This is without prejudice to the right of the Employer to rescind the Contract. Failure or delay by the Employer or the Engineer, to hand over to the Contractor the Site necessary for execution of Works, or any part of the Works, or to give necessary notice to commence the Works, or to provide necessary Drawings or instructions or clarifications or to supply any material, plant or machinery, which under the Contract, is the responsibility of the Employer, shall in no way affect or vitiate the Contract or alter the character thereof; or entitle the Contractor to damages or compensation thereof but in any such case, the Engineer shall extend the time period for the completion of the Contract, as in his opinion is / are reasonable. However, If the Engineer's instruction on commencement of Works is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract.	It is requested to modify the referred Clause as given below so as to entitle the Contractor for the lossess/damages/additional cost incurred on account of delays attributable to the Employer: In case of delay on the part of the Contractor, the Contractor shall be liable to pay liquidated damages and any other compensation for the damages suffered by the Employer as per Clause 8.5. This is without prejudice to the right of the Employer to rescind the Contract. Failure or delay by the Employer or the Engineer, to hand over to the Contractor the Site necessary for execution of Works, or any part of the Works, or to give necessary notice to commence the Works, or to provide necessary Drawings or instructions or clarifications or to supply any material, plant or machinery, which under the Contract, is the responsibility of the Employer, shall entitle the Contractor to damages or compensation thereof and also in any such case, the Engineer shall extend the time period for the completion of the Contract, as in his opinion is / are reasonable. However, If the Engineer's instruction on commencement of Works is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract.	As Per tender condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
95	Clause 11.2.5 of GCC Page no. 45	Should there be delay in the progress and completion of Work, as a result of which it is not possible to recover the Advances and interest thereon, before the date of completion stipulated in the Contract, then the interest to be charged from the Contractor on the remaining portion of the Advances beyond the original completion date specified in the Contract, shall be equal to State Bank of India's Marginal Cost of fund based Lending Rate (MCLR) applicable for the tenure of 01 year prevailing on the original completion date specified in the Contract plus 3% Penal Interest per annum.	The works may get delayed for reasons attributable to the Employer and beyond the control of the contractor. In such an eventuality the contractor should not be unnecessarily penalised by way of increased burden of interest for no defaults on its part. Accordingly, we seek the **modification as stated.** In case there is a delay in progress and completion of work on account of delays attributable to the Contractor which is to be established by the Employer in terms of the contract, as a result of which it is not possible to recover the advance before the original date of completion stipulated in the contract then interest to be charged from the contractor on the remaining portion of the advance beyond the original completion date specified in the Contract shall be equal to state bank of India's Marginal Cost of fund based lending rate (MCLR) applicable for the tenure of 01 year prevailing on the original completion date specified in the Contract plus 3% penal interest per annum. In case where the contractor is entitled to extension of time for completion pursuant to Clause 8.4.1, which shall not be unreasonably with held by the Employer, the recovery of advances shall be made without levy of any interest in the extended period.	As Per tender condition.
96	GCC Clause 13.3.2, Pg. no. 55	The Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 56 days after the expiry of the time stated in Sub-Clause 11.6, within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days' prior notice to the Employer, with a copy to the Engineer, suspend work or reduce the rate of work. If the Contractor suspends work or reduces the rate of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs costs the Engineer shall, after due consultation with the Employer and the Contractor, determine: a. any extension of time to which the Contractor is entitled under sub-clause-8.4, and b. the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.	In the event of default by the Employer, additional remedy shall be provided under Clause 13.3.2 of GCC i.e. Interest should be paid to the Contractor in case of delay caused by the Employer in releasing Payment due against Interim Payment Certificate. Modify Clause 13.3.2 GCC Contractor's Entitlement to Suspend the Work: If the Contractor suspends work or reduces the rate of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs costs the Engineer shall, after due consultation with the Employer and the Contractor, determine: a. Any extension of time to which the Contractor is entitled under sub-clause-8.4 and b. the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer. In case there is a delay in payment to the Contractor within the time period prescribed in Clause 11.6 of GCC, then: a. Interest shall be charged on the outstanding amount at the rate of State Bank of India (MCLR) + 3% per annum. b. Interest shall be calculated from the next day on which amount against interim payment certificate is due.	As Per tender condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
97	GCC Clause 17.9.2(ii), Pg. no. 63	Procedure for Appointment of Arbitrators: The Arbitrators shall be appointed as per following procedure: ii. In case of 3 Arbitrators: a) Within 60 days from the day when a written and valid demand for Arbitration is received by MD/UPMRC, the Employer will forward a panel of 5 names to the Contractor. The Contractor will then give his consent for any one name out of the panel to be appointed as one of the Arbitrators within 30 days of dispatch of the request by the Employer. b) Employer will decide the second Arbitrator. MD/UPMRC shall appoint the two Arbitrators, including the name of one Arbitrator for whom consent was given by the Contractor, within 30 days from the receipt of the consent for one name of the Arbitrator from the Contractor. In case the Contractor fails to give his consent within 30 days of dispatch of the request of the Employer then MD/UPMRC shall nominate both the Arbitrators from the panel. c) The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties out of the panel of 05 Arbitrators provided to Contractor or from the larger panel of Arbitrators to be provided to them by Employer at the request of two appointed Arbitrators (if so desired by them) and who shall act as Presiding Arbitrator. In case of failure of the two appointed Arbitrators to reach upon consensus within a period of 30 days from their appointment date, then, upon the request of either or both Parties, the Presiding Arbitrator shall be appointed by the Managing Director / UPMRC, Lucknow.	The Bidder requests to amend the provision to the extent that the Arbitrators are appointed in terms of Arbitration and Conciliation Act, 1996 (as amended) whereby the Employer & the Contractor shall appoint their own Arbitrator each. Such appointed arbitrators shall then jointly appoint the third arbitrator (Presiding Arbitrator).	As Per tender condition.
98	-	No clause regarding any pending lititgation.	Bidder understands that any delay to project works on account of pending litigation (if any) or a litigation arising in future due to unsettled dispute between Employer & other party in relation to subject Works, shall be treated in terms of contract for compensation towards time and cost.	As per tender conditions. Kindly refer to Clause 8.3 of GCC of tender Document.
99	-	-	Request to provide 3 days extension i.e., upto 22nd December 2023 for submission of prebid queries.	Not applicable/relevant as on date.
100	General	-	KMZ File: Please provide Keyhole Markup Language (KMZ) file or any relevant geospatial data pertaining to the project site. This information will aid our technical team in conducting a thorough site analysis, allowing us to incorporate precise geographical data into our bid.	KMZ and AutoCad version of drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender shall prevail.
101	General	-	Detailed Drawings: Kindly request to provide comprehensive and detailed drawings related to captioned tender. Having access to these drawings will significantly contribute to our understanding of the project scope and enable us to formulate a more precise bid proposal.	As per Tender conditions.
102	General	-	Request you to arrange a site visit for better understanding of the section.	Advance request through e-mail or letter addressed to UPMRCL shall be entertained.
103	General	-	Kindly provide the AutoCAD file & KMZ file for the alignment.	KMZ and AutoCad version of drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender shall prevail.
104	General	-	Kindly clarify whether Tree cutting is in Contract scope or not.	**YES**, cutting of Trees is in the scope of Contract.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
105	General	-	There is a lot of liaisoning scope for tree, utility shifting, local management etc. for the contractor. Please clarify in which of these, clients will assist the contractor and for which client contractor is fully responsible.	As per tender condition
106	General	-	Request you to change the PBG as 5 % (as per case before COVID) instead of 10 %.	As per Tender Conditions.
107	General	-	Completion Period is too less, kindly extend the time period for completion of project.	Kindly refer to **Annexure- 9** of **Addendum .**
108	Vol-3, Employers Requirement (Functional part-1)		Whether there is any preference for the casting yard by client or client will provide any assistance to the contractor in land for casting yard.	As per tender condition.
109	Vol-3, Employers Requirement/ construction		It is mentioned that employers site accommodation to be provided by contractor till completion of the project, please clarify whether it is upto the Defect Liability period or not.	As per tender condition.
110	Vol-1 NIT		In the scope of work, contractor is to construct a ramp from CH: 0 to CH: 530 but in drawing details of ground levels are given only upto CH:430 m, kindly clarify/provide full drawing.	Kindly refer to **Annexure- 18** of **Addendum .**
111	1.4.2 Minimum Eligibility Criteria: A. Work Experience: (i)	"Similar Work/s" for this tender shall be "Construction of Viaduct (which may include station along with viaduct /Bridge /FIyover (excluding approaches & embankments) having a pre/post-stressed concrete super-structure"	In the similar work definition,pre/post-stressed concrete super-structure" means, as per our under- standing at least one pre/post- stressed concrete super-structure span should be there in the construction of viaduct /Bridge/FIyover work. Kindly clarify.	As per Tender Conditions.
112	1.4.2 Minimum Eligibility Criteria: A. Work Experience: Notes: (b)	For completed works, value of work done shall be updated from date of completion to last day of the month previous to the month of tender submission end date price level assuming $^{o/}$ inflation for Indian Rupees every year and 2% for foreign currency portions per year. The exchange rate of foreign currency shall be applicable 28 days before the submission end date of tender.	We request the authority to amend the percentage inflation from 5% to 7%, as it has been previously allowed in various tenders mentioned below: Ref 1. UPMRCL AGCC-06 tender. Ref 2. KMRL (Kochi Metro) KBC3 tender. Ref 3. K-RIDE tender Ref 4. RLDA Tender	As per Tender Conditions.
113	Clause 1.2, NIT, Page 4	Last date of Seeking Clarification: 19.12.2023 upto 18:00 hrs. Bidder requests to accept pre-bid queries till 26 Dec 2023	Bidder requests to accept pre-bid queries till 26 Dec 2023.	Not applicable/relevant as on date.
114	Clause 1.4.2 A(i), NIT, Page 8	Similar Work/s" for this tender shall be "Construction of Viaduct(which may include station along with viaduct /Bridge /Flyover(excluding approaches & embankments) having a pre/poststressed	Bidder requests to consider experience of 'Metro Station' also as Similar works. Kindly confirm.	As per Tender Conditions.
115	General		As per other Metro Contract (copy of NITs enclosed for your reference), Bidder request to incorporate Make India provision as under: In case of Joint venture / Consortium, full value of the work, if done by the same joint venture shall be considered. If the qualifying work(s) were done by them in JV/Consortium having different constituents (consist of other than Indian Contractor or consist of Indian contractor with less than 40% share), then the value of work as per their percentage participation in such JV/Consortium shall be considered, but in case if the qualifying work(s) were done by them in JV/consortium having different constituents (consist of Indian contractor with 40% or more participation), then the value of work as per Indian contractor percentage participation in such JV/consortium shall be taken two times subject to the maximum of 100% for the consideration of value of the work for work experience. Kindly Accept and Amend.	As per Tender Conditions.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
116		Date & time of Submission of Tender online Tender submission start date: 10.01.2024 (11:00 hrs). Tender submission end date: 18.01.2024 (15:00 hrs).	Bidder requests to extend the bid submission date allowing at least 6 weeks' time from date of issue reply to pre-bid queries, enabling bidder optimally Design, Estimate and Submit comprehensive and competitive bid.	Please refer Addendum for extesion of bid submission uploaded on CPP Portal.
117	Volume — NIT Cl. 1.2 Page No. 3	Completion period of work 24 months	Completion Period of Work 36 months The Scope of work includes design and construction of around 700 viaduct spans involving over 20 different type of spans having PSC U girders, non U girdem, composite steel girder steel Box Girders, Arch girders etc, besides 14 stations buildings, one bridge across Yamuna River. The construction period of 24 months is not sufficient for both the Design Phase and construction phase of the Project. as such we request you to kindly increase the construction period to minimum 36 months.	Kindly refer to **Annexure- 9** of **Addendum .**
118	Volume — 2 GCC Cl. 11.2.1 Mobilisation Advance Page No. 44 of 66	(a) Mobilisation Advance shall be generally limited to 5% of Original Contract Value payable in two equal instalments or as mentioned in the Special Conditions of Contract. The first instalment shall be paid after mobilization has started and next instalment shall be paid after satisfactory utilization of earlier instalment.	(a) Mobilisation advance shall be limited to 10% of original contract value payable in two equal instalments or as mentioned in the Special Conditions of Contract. The first instalment shall be paid after mobilization has started and next instalment shall be paid after satisfactory utilization of earlier instalment. The Project will involve huge initial expenses towards mobilisation as such we request for 10% mobilisation advance.	As per Tender Conditions.
119	Volume — 3 employed, requirement Cl. 2.1.A Special Spans Page No. 20		GA Drawings of special spans and 383m long Yamuna River Bridge (34m+7x45m+34m) Please be furnished. Also provide hydraulic data such as HFL, LWL, scour levels, minimum founding level, SBC etc for Yamuna Bridge.	Kindly refer to **Annexure- 2 & 3 of Addendum .**
120	Drawing, Vol. 06	—	Please provide typical Cross section and elevation for viaduct and types of statlon.	As per Tender Conditions.
121	2.1.A(VII)(ii), Vol-03	—	Any possibility of changing Uh gtrder into PSC Segmental Box girders	As per Tender Conditions.
122	Vd_03_ER	—	Please mention maxlmum allowable size and shape of station pier If there Is any limit.	As per tender condition
123	Vd_03_ER/2.1.D	—	Please provide Hydrok›glcal Data of Yamuna brldge. We assume that no Hydrobglcal atudy is to be can1ed out by	As per Tender conditions. Please refer to Clause A7 of ITT .
124			Future Station work refered to Subhash perk mentioned In GAD from P191A TO 191D. Please share the detalB and loads if any to be connsidered In viaduct **design.**	Provision for Future station are to be kept in foundation, substructure & superstructure. Kindly refer to **Annexure-1 of Addendum.** As per tender condition.
125	Vol_03_ER/2.1.B.8		Detailed Scope of work at Agra Cantt.	As per tender condition
126	VoI_03_ER/2.1.B.7		Detailed Scope of work at Agra College Interchange station may be glven.	As per tender conditions.
127	VoI_6_Drawlng_MEP _PART1/		Whether the E/Es layout has been fixed or it may very during execution.	As per Tender conditions.
128	Vd_03_ER/Z.1.B.1(II)	—	Please explore possibility of Changing the Cross section of Kallndi Vihar Station to	Kindly refer to **Annexure- 24** of **Addendum**.
129	Vol-II,GCC and SCC 16 of 111 4.2.1 Performance security Amount	Performance Security for an amount of 10% of Contract value	Ministry of Finance, Department of Expenditure has issued office memorandum no. F.No: G-20016/01/2020-TF-II dated 17.11.2020 for reduction of Performance Security to 3% for all existing/forthcoming projects for facilitation of construction agencies. Employer is hereby requested to amend the relevant clause, accordingly.	As per Tender Conditions.

<table>
<tr><th>Sl. No.</th><th>Reference Volume / Clause</th><th>Existing Clause</th><th>Queries</th><th>UPMRC's Reply</th></tr>
<tr><td>130</td><td>Vol 01 ITT F4.1 51 of 102
Performance Security validity</td><td>Up to 6 months beyond the Defect Liability Period</td><td>We request to modify this term to state the validity of Performance Guarantee till the expiry of Defect Liability Period.</td><td>As per Tender Conditions.</td></tr>
<tr><td>131</td><td>NIT
Key Details Pg 3</td><td>Completion period of the work: 24 Months</td><td>Considering the magnitude of project, we request you to increase the duration of time for completion to 30 months as well as the time period for the intermittent Key Dates as follows:
(i) FOR VIADUCT
<table>
<tr><th>Key Dates</th><th>Time to achieve (in weeks from date of commencement)</th><th>Proposed time to achieve</th></tr>
<tr><td>Key Date 1</td><td>4</td><td>4</td></tr>
<tr><td>Key Date 2</td><td>9</td><td>13</td></tr>
<tr><td>Key Date 3</td><td>12</td><td>16</td></tr>
<tr><td>Key Date 4</td><td>8</td><td>14</td></tr>
<tr><td>Key Date 5</td><td>15</td><td>15</td></tr>
<tr><td>Key Date 6</td><td>9</td><td>9</td></tr>
<tr><td>Key Date 7</td><td>18</td><td>20</td></tr>
<tr><td>Key Date 8</td><td>25</td><td>31</td></tr>
<tr><td>Key Date 9</td><td></td><td></td></tr>
<tr><td>Key Date 9.1</td><td>50</td><td>56</td></tr>
<tr><td>Key Date 9.2</td><td>54</td><td>62</td></tr>
<tr><td>Key Date 10</td><td></td><td></td></tr>
<tr><td>Key Date 10.1</td><td>65</td><td>71</td></tr>
<tr><td>Key Date 10.2</td><td>70</td><td>76</td></tr>
<tr><td>Key Date 11</td><td>75</td><td>83</td></tr>
<tr><td>Key Date 12</td><td>55</td><td>63</td></tr>
<tr><td>Key Date 13</td><td>60</td><td>68</td></tr>
<tr><td>Key Date 14</td><td>65</td><td>83</td></tr>
<tr><td>Key Date 15</td><td>80</td><td>94</td></tr>
<tr><td>Key Date 16</td><td>90</td><td>114</td></tr>
</table></td><td>Kindly refer to Annexure- 8 of Addendum.</td></tr>
<tr><td></td><td></td><td></td><td>(ii) FOR STATIONS:
<table>
<tr><th>Key Dates</th><th>Time to achieve (in weeks from date of commencement)</th><th>Proposed time to achieve</th></tr>
<tr><td>Key Date 1</td><td>10</td><td>14</td></tr>
<tr><td>Key Date 2</td><td></td><td></td></tr>
<tr><td>Key Date 2.1</td><td>40</td><td>58</td></tr>
<tr><td>Key Date 2.2</td><td>55</td><td>73</td></tr>
<tr><td>Key Date 3</td><td></td><td></td></tr>
<tr><td>Key Date 3.1</td><td>50</td><td>68</td></tr>
<tr><td>Key Date 3.2</td><td>70</td><td>88</td></tr>
<tr><td>Key Date 4</td><td></td><td></td></tr>
<tr><td>Key Date 4.1</td><td>60</td><td>78</td></tr>
<tr><td>Key Date 4.2</td><td>70</td><td>88</td></tr>
<tr><td>Key Date 5</td><td></td><td></td></tr>
<tr><td>Key Date 5.1</td><td>65</td><td>83</td></tr>
<tr><td>Key Date 5.2</td><td>80</td><td>98</td></tr>
<tr><td>Key Date 6</td><td></td><td></td></tr>
<tr><td>Key Date 6.1</td><td>65</td><td>83</td></tr>
<tr><td>Key Date 6.2</td><td>80</td><td>98</td></tr>
<tr><td>Key Date 7</td><td>90</td><td>108</td></tr>
</table></td><td>Kindly refer to Annexure- 8 of Addendum.</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Reference Volume / Clause</th><th>Existing Clause</th><th>Queries</th><th>UPMRC's Reply</th></tr>
<tr><td></td><td></td><td></td><td>(iii) FOR ARCHITECURAL and E&M WORKS:
<table>
<tr><th>Key Dates</th><th>Time to achieve (in weeks from date of commencement)</th><th>Proposed time to achieve</th></tr>
<tr><td>Key Date 1</td><td>25</td><td>33</td></tr>
<tr><td>Key Date 2</td><td></td><td></td></tr>
<tr><td>Key Date 2.1</td><td>35</td><td>47</td></tr>
<tr><td>Key Date 2.2</td><td>40</td><td>52</td></tr>
<tr><td>Key Date 3</td><td></td><td></td></tr>
<tr><td>Key Date 3.1</td><td>65</td><td>83</td></tr>
<tr><td>Key Date 3.2</td><td>80</td><td>98</td></tr>
<tr><td>Key Date 4</td><td></td><td></td></tr>
<tr><td>Key Date 4.1</td><td>80</td><td>98</td></tr>
<tr><td>Key Date 4.2</td><td>90</td><td>108</td></tr>
<tr><td>Key Date 5</td><td></td><td></td></tr>
<tr><td>Key Date 5.1</td><td>65</td><td>83</td></tr>
<tr><td>Key Date 5.2</td><td>80</td><td>98</td></tr>
<tr><td>Key Date 6</td><td></td><td></td></tr>
<tr><td>Key Date 6.1</td><td>80</td><td>98</td></tr>
<tr><td>Key Date 6.2</td><td>90</td><td>108</td></tr>
<tr><td>Key Date 6.3</td><td>95</td><td>113</td></tr>
<tr><td>Key Date 7</td><td></td><td></td></tr>
<tr><td>Key Date 7.1</td><td>85</td><td>103</td></tr>
<tr><td>Key Date 7.2</td><td>100</td><td>118</td></tr>
<tr><td>Key Date 8</td><td>86</td><td>98</td></tr>
<tr><td>Key Date 9</td><td>86</td><td>98</td></tr>
<tr><td>Key Date 10</td><td></td><td></td></tr>
<tr><td>Key Date 10.1</td><td>86</td><td>98</td></tr>
<tr><td>Key 10.2 Date</td><td>96</td><td>108</td></tr>
<tr><td>Key Date 11</td><td>96</td><td>98</td></tr>
<tr><td>Key Date 12</td><td>100</td><td>112</td></tr>
<tr><td>Key Date 13</td><td>104</td><td>116</td></tr>
</table></td><td>Kindly refer to Annexure- 8 of Addendum.</td></tr>
<tr><td>132</td><td>ITT, Annexure-12</td><td>RESOURCES PROPOSED FOR THE PROJECT- PLANTS & EQUIPMENTS</td><td>The minimum equipment required for work is much more than the optimal requirement.
Please consider the minimal number for the following equipment as follows:
<table>
<tr><th>Construction Equipment</th><th>Minimum requirement as per tender</th><th>Proposed minimum requirement</th></tr>
<tr><td>Piling Equipment Rotary Rig (along with associated cranes)</td><td>18 Set</td><td>14 Set</td></tr>
<tr><td>Boom Placers</td><td>8</td><td>6</td></tr>
<tr><td>Cranes of suitable capacity</td><td>8</td><td>6</td></tr>
<tr><td>Gantry of suitable capacity in casting yard</td><td>12</td><td>10</td></tr>
<tr><td>Minimum no. of Pre-casting beds (for U girders)</td><td>40</td><td>25</td></tr>
<tr><td>Suitable no. of Anti-Smog gun with automatic rotation and should be kept at minimum height of 3 mtrs or more with 60 meters water throw range or more to cover maximum area – For casting Yard & Batching Plant.</td><td>2</td><td>1</td></tr>
<tr><td>Truck mounted mobile Anti-smog gun with minimum water capacity of 10,000 liters of tanker. Apart from smog gun mounted,Truck should have all around water sprinklers at chassis level – Around Viaduct section.</td><td>4</td><td>2</td></tr>
</table></td><td>As Per Tender Conditions.</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Reference Volume / Clause</th><th>Existing Clause</th><th>Queries</th><th>UPMRC's Reply</th></tr>
<tr><td>133</td><td>BOQ_190314</td><td>Summary Head 'A2'</td><td>Bidder request Employer, to amend price components proposed in BOQ of as follows:
<table>
<tr><th>Sub Head</th><th>Item description</th><th>% breakup of each sub- head</th><th>Proposed % breakup of each sub head</th></tr>
<tr><td>A2.10</td><td>Completion of the work in all respects including railing, cable, manholes, ground water recharging etc.</td><td>3%</td><td>1.5%</td></tr>
<tr><td>A2.12</td><td>Clearing of all the site in all respects and handing over to system contractor for working</td><td>2%</td><td>1%</td></tr>
<tr><td>A2.14</td><td>All other balance works as per the ER</td><td>4%</td><td>2%</td></tr>
<tr><td>A-3.17</td><td>Clearing of all the site in all respects and handing over to system contractor for working</td><td>2.10%</td><td>1%</td></tr>
<tr><td>A-3.19</td><td>All other balance works as per the ER</td><td>1.5%</td><td>0.75%</td></tr>
</table></td><td>As per Tender Conditions.</td></tr>
<tr><td>134</td><td>GCC and SCC 13 of 111 2.2 Access to and Possession of the site</td><td>For any such delay in handing over of site, Contractors will be entitled to only reasonable extension of time and no monetary claims, whatsoever shall be paid or entertained on this account.</td><td>Bidder request the Employer for both time and cost compensation in case of delay in access to site.</td><td>As per Tender Conditions.</td></tr>
<tr><td>135</td><td>GCC and SCC 19 of 111</td><td>g. If the Contractor suffer delay by reasons of failure by any Designated Contractor to meet the specified installation interfacing and co-ordination, completion dates and if such delay has been caused otherwise than the fault of the Contractor, or, if compliance with Sub-clause (f) herein shall involve the Contractor in delay beyond that which could be reasonably foreseen by an experienced Contractor at the time of Tender, then the Engineer shall take such delay into account in determining any extension of time to which the Contractor is entitled under the Contract.</td><td>We request to provide both time and cost compensation for delay due to designated contractor.</td><td>As per Tender Conditions.</td></tr>
<tr><td>136</td><td>GCC and SCC 22 of 111</td><td>The Employer will acquire and provide land for Permanent Works and right of way (within UPMRC's land) for access thereto over routes established by the Contractor. The Contractor shall bear all cost and charges for special or temporary rights of way which he may require including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facility outside the Site which he may require for the purpose of the Works.</td><td>Bidder request the Employer to provide the additional facility at the free of cost to the Contractor.</td><td>As per Tender Conditions.</td></tr>
<tr><td>137</td><td>GCC and SCC 24 of 111 4.23 Unforeseeable Physical Conditions</td><td>If, during the execution of the Works, the Contractor shall encounter physical conditions, which, in his opinion, could not have been reasonably foreseen by an experienced Contractor, the Contractor shall forthwith give written notice thereof to the Engineer and if, in the opinion of the Engineer, such conditions could not have been reasonably foreseen by an experienced Contractor, then the Engineer may certify and the Employer may pay reasonable additional cost to which the Contractor shall have been put by reason</td><td>Bidder request the Employer to provide both time and cost for any delay in progress due to such unforeseeable physical conditions.</td><td>As per Tender Conditions.</td></tr>
<tr><td>138</td><td>GCC and SCC 36 of 111 Cost if Employer's Attendance Including travel</td><td>The cost of attendance including travel by the Employer, Engineer or his Representative for the purpose of Sub-clause 7.6 shall be borne by the Contractor.</td><td>Bidder understand that cost for only domestic travel by the Employer shall be borne by the Contractor.
Kindly confirm.</td><td>As per Tender Conditions.</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Reference Volume / Clause</th><th>Existing Clause</th><th>Queries</th><th>UPMRC's Reply</th></tr>
<tr><td>139</td><td>GCC and SCC 38 of 111
8.3 Delay</td><td>Failure or delay by the Employer or the Engineer, to hand over to the Contractor the Site necessary for execution of Works, or any part of the Works, or to give necessary notice to commence the Works, or to provide necessary Drawings or instructions or clarifications or to supply any material, Plant or Machinery, which under the Contract, is the responsibility of the Employer, shall in no way affect or vitiate the Contract or alter the character thereof; or entitle the Contractor to damages or compensation thereof but in any such case, the Engineer shall extend the time period for the completion of the Contract, as in his opinion is/are reasonable.</td><td>Bidder request the employer to provide both time and cost compensation for delay due to Employer.</td><td>As per Tender Conditions.</td></tr>
<tr><td>140</td><td>GCC and SCC 38 of 111
8.4 Extension of time</td><td>However, the Contractor shall not be entitled to any extension of time where the instructions or acts of the Employer or the Engineer are necessitated by or intended to cure any default of or breach of Contract by the Contractor or where any delay is due to
a) the failure of Sub-contractor, to commence or to carry out Work in due time,
b) non-availability, or shortage of Contractor’s equipment, labour,
utility services, Plant and Materials,
c) inclement weather conditions</td><td>We request that in case of
(i) Unforeseeable shortages in the availability of personnel or Goods due to epidemic or pandemic.
(ii) Exceptionally adverse climatic conditions
Contractor shall be entitled for extension of time and cost compensation.</td><td>As per Tender Conditions.</td></tr>
<tr><td>141</td><td>GCC and SCC 39 of 111
8.5 Liquidated damages for Delay</td><td>The aforesaid Liquidated Damages do not, however, include the sums payable by the Employer to Designated Contractors on account of delay caused by the Contractor to Designated Contractors. Such sums shall be recoverable from the Contractor in addition to any Liquidated Damages payable under this clause, the total ceiling limit of which is 15% of the Contract value including Liquidated Damages levied under the provision of Appendix 1 to the Form of Tender.</td><td>We request the Employer, the total ceiling limit shall be 5% of the contract value irrespective of any account of Damages.</td><td>As per Tender Conditions.</td></tr>
<tr><td>142</td><td>GCC and SCC 41 of 111
8.8 Consequences of Suspension</td><td><table><tr><th>Suspension Period</th><th>Extension of Time</th><th>Compensation for the suspension period</th><th>Remarks</th></tr><tr><td>Upto 14 days</td><td>No</td><td>No</td><td>Engineer may, at his sole discretion, give extension of time in exceptional circumstances.</td></tr><tr><td>15-30 days</td><td>Yes</td><td>No</td><td>Extension of time as considered proper by the Engineer</td></tr></table></td><td>We request to amend the table as follows:<table><tr><th>Suspension Period</th><th>EOT</th><th>Compensation for the Suspension Period</th></tr><tr><td>Upto 14 Days</td><td>Yes</td><td>Yes</td></tr><tr><td>15-30Days</td><td>Yes</td><td>Yes</td></tr></table></td><td>As per Tender Conditions.</td></tr>
<tr><td>143</td><td>GCC and SCC 43 of 111
10.9 Performance Certificate</td><td>Notwithstanding anything contained herein the Contractor would continue to remain liable to the Employer for any cost, loss, damage or compensation which arises from hidden or latent defect in the work executed by the Contractor under the Contract, even if such hidden and latent defects arise after the expiry of Defect Liability period or grant of Performance Certificate by the Employer under
the Contract to the Contractor.</td><td>Bidder seeks deletion of this clause</td><td>As per Tender Conditions.</td></tr>
<tr><td>144</td><td>GCC and SCC 44 of 111
11.2 Advances</td><td>(b) Mobilisation Advance shall be paid interest free against acceptable Bank Guarantee from a scheduled commercial bank in India. The value of Bank Guarantee taken towards security of “Mobilisation Advance” shall be 110% of the Advance taken by the
Contractor.</td><td>We request to reduce the Advance bank guarantee to 100% of the Advance amount.</td><td>As per Tender Conditions.</td></tr>
<tr><td>145</td><td>GCC and SCC 44 of 111
11.2 Advances</td><td>The value of Bank Guarantee taken towards Security of "Plant & Machinery Advance shall be 110% of the Advance taken by the Contractor.</td><td>We request to reduce the Advance bank guarantee to 100% of the Advance amount.</td><td>As per Tender Conditions.</td></tr>
<tr><td>146</td><td>GCC and SCC 44 of 111
11.2 Advances</td><td>The Advance will be given only if the Plant/Machinery has been purchased for this Contract and not for those which are already in the books of the Contractor.</td><td>Bidder request to delete the portion of the clause</td><td>As per Tender Conditions.</td></tr>
</table>

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
147	GCC and SCC Provisional Payment Against Material at Site	A provisional payment on account of main constriction materials required for the Permanent Works, shall be paid on request of the Contractor after these materials are brought to Site, against an Indemnity Bond in a form acceptable to Employer is duly executed. The payment shall be limited to 80% of the actual value or assessed value of these materials and the total of such provisional payment on account of construction materials at a time shall be limited to three percent of Original Contract Value or likely average consumption, of such materials for three months whichever is less and at any time the total outstanding provisional payment against material at site shall not exceed four percent of the Original Contract Value. The valuation of the average consumption of such main construction materials shall be approved by the Engineer, whose decision shall be final.	Bidder request the maximum ceiling value of Material Advance amount at any point of time during execution of the Contract is 5% of the Contract Price and recovery should be on the basis of pro rata percentage	As per Tender Conditions.
148	GCC and SCC 47 of 111 11.4 Application for	The Contractor shall be entitled to submit to the Engineer requests for interim payments only upon the achievement of one or more of the Milestones described in the Cost Centre.	We request that the bills be submitted end of each month irrespective of milestones.	As per Tender Conditions.
149	GCC and SCC 48 of 111 11.5 Issue of Interim Payment Certificates	a. After preliminary scrutiny and certification by the Engineer, payment of 80% of the certified interim amount shall be made by the Employer within 07 days. The amount certified shall account for all deductions, including statutory deductions, recoveries for Advances and any amounts due from the Contractor. The balance 20% shall be paid within 28 days, from the date of the preliminary	Bidder request to carry out Preliminary scrutiny within 3 Days. Also, in case of Delayed payment Contractor shall be entitled for interest applicable at a rate SBI (MCLR) plus 3%.	As per Tender Conditions.
150	GCC and SCC 52 of 111 12.2.5 Contractor's Acceptance and Payment	The Contractor shall either accept or reject any proposed amendment/ communication in writing executed by the Engineer pursuant to this section within 5 working days of its receipt date from the Employer. If the Contractor does not reject the same in the period stipulated above, the amendments /communication in writing shall be deemed to be accepted by the Contractor and shall become a Variation to the Contract. The Contractor's acceptance shall be unconditional and the Contract value / price shall be adjusted by the amount of saving due to the Variation.	Bidder request for 21 working days to accept or reject the proposed amendment.	As per Tender Conditions.
151	GCC and SCC 57 of 111 13.3.4 Payment on Termination	a. The value of approved materials actually brought to the site and reasonably required to execute the Works during next three months, as per approved Programme, and b. Value of Work completed up to date by the Contractor at rates specified in the Contract, after taking into account any deductions, retentions, setoff, damages, compensation, loss payable to Employer etc. c. In addition, a sum not exceeding 2% (two percent) of the value of the work remaining incomplete on the date of Termination notice taking effect. The payment as above shall be the full compensation for termination under this Clause and the Contractor shall have no claim for damages or other entitlements whether under the Contract or otherwise.	We request that the Contractor shall be eligible for cost plus profit.	As per Tender Conditions.
152	GCC and SCC 58 of 111	14.3 Employer's risks	Bidder request to include epidemic and pandemic.	As per Tender Conditions.
153	GCC and SCC 63 of 111 17.7 Conciliation Procedure	There will be no objection if Conciliator so nominated is a serving employee of UPMRC who would be Deputy HOD level officer and above.	Bidder request that the Conciliator should be jointly nominated by both the parties [The Employer and the Contractor].	As per Tender Conditions.
154	GCC and SCC 73 of 111 4.9 Site data	Any change in design or construction methodology later during execution on account of change of Geotechnical Data will be the responsibility of the Contractor and no addition cost or time shall be allowed.	We request to provide reasonable time and cost.	As per Tender Conditions.
155	GCC and SCC 85 of 111 11.1.3 Adjust in Contract price	(i) No adjustment in the contract price on account of inflation shall Be done for E & M works	We request for Price adjustment for E&M works.	As per Tender Conditions.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
156	GCC and SCC 88 of 111 11.1.3 Adjust in Contract price	The price adjustment shall be applicable only beyond 2 percentage of variation of the contract price i.e. where the resultant increase is lower than two per cent of the contract price, no price adjustment will be made in favour of the contractor.	Bidder request that the price adjustment shall be at actuals.	As per Tender Conditions.
157	GCC and SCC 89 of 111 11.1.4 Change in taxes/Duty	Change in the rate of Good and Services Tax (GST) on Composite Works Contracts applicable on Metro Project as per GST Act.	Bidder request to include royalties and custom charges as these are not in the control of contractor	As per Tender Conditions.
158	Employer's requirements 17 of 145 13 Climatic Conditions	The work site experiences extreme climatic conditions and tenderers must acquaint themselves about the same before submitting the tender. The Employer shall in no way be responsible on this account.	Bidder request for time and cost compensation in case of extreme weather conditions.	As per Tender Conditions.
159	Employer's requirements 24 of 145	1.4 1.4 The Contractor shall be responsible for obtaining all necessary approvals from the relevant Public/Government/Local/Statutory or any agencies in the design and construction of the works.	Bidder requests Employer to provide approvals as most of the agencies are Government bodies.	As per Tender Conditions.
160	Volume 4 4 of 940	1.2.4 b The contractor shall liaise with Local authorities like Forest Department, National Highway Authority of India, CPWD, PWD, forest department, Water, Electricity and Telephone service providers etc. regarding cutting/ transplantation of trees, dismantling of roads, shifting of utilities/ supporting of utilities and Traffic Police regarding traffic management during launching and getting all necessary permissions and clearances.	Bidder requests Employer to provide approvals as most of the agencies are Government bodies.	As per Tender Conditions.
161	Vol 2, Pg 19	Any breach of Sub-clauses 4.5 to 4.6 shall entitle the Employer to rescind the Contract under Clause 13.2 of these conditions and also render the Contractor liable for loss or damage arising due to such cancellation.	We seek deletion of the extracted portion of this clause. Employer shall only invoke termination for significant material breach by Contractor.	As per Tender Conditions.
162	**Vol 2, Pg 23** GCC 4.19	On completion of the Works, the Contractor shall hand over the unused balance of the Tools, Plants and Equipments to the Employer in good order and repair, fair wear and tear expected, and shall be responsible for any failure to account for the same or any damage done thereto. The decision of the Engineer as to the amount recoverable from the Contractor on this account shall be final and binding.	We understand that damage resulting out of fair wear and tear is excepted during the calculation of amount recoverable as per this provision. Kindly confirm Also we seek the Condition that decision of Engineer shall be final and binding shall be deleted.	As per Tender Conditions.
163	**Vol 2, Pg 28** GCC 5.3	If the Engineer instructs that further Construction and/or Manufacture Documents are necessary for carrying out the Works, the Contractor shall promptly and at Contractor's cost prepare such documents,	The Contractor shall be entitled to adequate extension of time and costs incurred due to such instruction. Kindly confirm.	As per Tender Conditions.
164	**Vol 2, Pg 44** GCC 11.1.4	The Contract Price shall not be adjusted to take into account any increase or decrease in cost resulting from any change in taxes, duties, levies from the last date of submission of the Tender to the completion date including the date of the extended period of Contract unless a contrary provision exists in Special Conditions of Contract.	We seek that the Contract Price shall be adjusted to take into account any increase/decrease in cost resulting from change in taxes, duties, levies from the last date of submission of the Tender to the completion date. Kindly confirm	As per Tender Conditions.
165	Vol 2, 49 GCC 11.17	Withholding and Lien for Sums Claimed	We seek deletion of this Clause. Employer shall not have such lien over any amount that has become due and payable to the Contractor or the Performance Security.	As per Tender Conditions.
166	Vol 3 ER, Viaduct & Stations	Obtaining NOC & Approval of Diversion scheme of Utilities from the concerned regulatory / statutory / Local Authority is the responsibility of the Contractor and nothing extra is payable on this account.	Bidder request Employer to arrange necessary approvals from concerned utility owning agencies as most of them are Government bodies	As per Tender Conditions.
167	Vol 3 ER Pg 54	For casting yard, batching plant and other activities a plot of land of approx. 15 hectares or as required for timely completion of work has to be arranged by the contractor at his own cost.	We requesting to provide Casting yard, batching plant land at free of cost	As per Tender Conditions.
168	Vol 3 ER Pg 54	Tree cutting and (or) transplantation along the alignment after getting permission from forest department/nodal agency. **Permission for cutting /transplantation** will be arranged by UPMRC.	Kindly confirm the status of permission for tree cutting activities	Permission available. Kindly refer Para (xxiv) of Clause no.2.1.A.3 of ER , Functional , Part -1, Vol.- 3 of Tender Document.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
169	Vol-3; 25/145 2.1.A Viaduct & Viaduct in Stations	(i) Design, Construction and erection of special spans: (b) Composite Steel Girder - 1 x 45mtr. span – One near Jeet Singh Stadium (Defence Ground)	It is observed that the proposed special bridge is located above the existing buildings. Kindly provide the height of the buildings between Ch.1700m to Ch.1750m.	As per Tender conditions. Please refer to Clause A7 of ITT .
170	Vol-3; 25/145 2.1.A Viaduct & Viaduct in Stations	(i) Design, Construction and erection of special spans: (d) Composite Steel Spans - Over NHAI Flyover on NH-19 between M.G. Road Metro station & Sultan Ganj Crossings Metro Station (Total Length- 37.875 mtrs. + 27 mtrs.)	Kindly provide the structure details (including foundation details) of the NHAI Flyover on NH-19 at the crossing of Viaduct.	As per Tender conditions. Please refer to Clause A7 of ITT .
171	Vol-3; 27/145 2.1.A Viaduct & Viaduct in Stations	(xxi) The general arrangement of Rain water harvesting system (minimum size) is shown in the Tender drawing, however, the size of RWH pit & depth of bore may increase as per the guidelines of Central Ground Water Authority (for which nothing extra shall be paid), and the details shall be submitted to UPMRC for approval before execution	Tender drawings are missing. Kindly provide.	kindly refer drawing no. KNPAGDDC-01-TDR-ELV-HPS-DET-63353, vol-6 of tender document.
172	Vol-3; 28/145 2.1.A Viaduct & Stations	(xxvii) c. The pile cap level shall have to be kept below the drain wherever the same is fouling with drain and the drain demolished shall have to be restored back with similar specifications after casting the pile cap, till such time	Kindly provide drain locations and their elevations.	As per Tender conditions. Please refer to Clause A7 of ITT .
173	Vol-3; 29/145 2.1.A Viaduct & Stations	(xxxi) Dynamic Integrity test on 100% piles and cross hole sonic integrity test on 25% of piles as per Outline Construction Specifications for Civil Works.	Kindly clarify the provision of piles required to conduct the CHSLT i.e., whether the sonic tubes shall be installed in 100 percent piles or only 25 percent piles.	Cross hole sonic logging pipes are to be installed on all 100% working piles. Testing shall be as per tender condition. **Refer annexure-1 of addendum.**
174	Vol-3; 30/145 2.1.A.1 Viaduct & Stations	Some of the major utilities cannot be diverted. The pile cap top level shall be fixed at the bottom of the utilities without any extra cost.	Kindly provide the list of utilities that cannot be diverted.	As per Tender conditions. Please refer to Clause A7 of ITT .
175	Vol-3; 31/145 2.1.A.3 Viaduct & Stations	(iv) Conducting initial and routine load test on piles as per frequency given in Outline Construction Specifications for Civil Works as per IS-2911-Part IV	Kindly confirm whether Bi-directional static load test can be conducted on the piles instead of kentledge or reaction pile method for both initial and routine load tests.	As per tender Condition.
176	Vol-3; 31/145 2.1.A.3 Viaduct & Stations	(xii) The total working space within the barricading along the viaduct shall not be more than 8mt.	The mentioned working space along the viaduct is 8m. However, considering the obligatory span, cantilever span and portal pier location, the provided working space of 8m may not be sufficient. Hence, kindly provide the ROW along the alignment.	As per tender Condition.
177	Vol-3; 33/145 2.1.A.3 Viaduct & Stations	(xxiv) The Contractor needs to map (for base line reading) and monitor historic monuments effectively on real time basis. For this purpose, the Contractor shall install monitoring equipment on all protected monuments along the proposed route capable of measuring vibrations and structural impacts when the construction activities are going on	Kindly provide the list of historical monuments located along the alignment that needs to be monitored.	Historical Monuments are Roman Catholic Cemetery near M.G.Road Metro Station, Lal Masjid Near Water Works & Adjacent to Kamla Nagar Metro Station and Ram bagh near Ram Bagh Metro Station. Please refer to Clause A7 of ITT also.
178	Vol-3; 35/145 2.1.B Scope of Work Under Lump Sum Price - Stations	(xvii) Line from bore wells to the underground water tanks as approved by Engineer. Minimum depth of tubewell shall be 400 m.	Kindly re-confirm the minimum depth of tubewell.	Kindly refer A**nnexure -4 of Addendum**
179	Vol-3; 35/145 2.1.B Scope of Work Under Lump Sum Price - Stations	(xxvii) Provision of structural steel arrangement below U-girders as per drawing no. KNPAGDDC-01-TDR-TYP-STR-CRS-15010_R0	The mentioned drawing is missing. Kindly provide.	Kindly refer drawing no. KNPAGDDC-01-TDR-TYP-STR-CRS-15023, R1, vol-6 of tender document. Conceptual arrangement in drawing, Contractor has to design accordinly. Also Refer **Annexure -4** of **Addendum.**
180	Vol-3; 37/145 2.1.B Scope of Work Under Lump Sum Price - Stations	2.1.B.7 Rest of the works required for integration with underground Metro station at Agra College interchange station shall be within the scope of this work. Cost is included in lump sum price.	Kindly specify/clarify the “rest of works” mentioned in the statement. Kindly provide tunnel alignment details of corridor 1 and its distance from the proposed obligatory span pier locations.	As per Tender Condition.
181	Vol-3; 38/145 2.1.B Scope of Work Under Lump Sum Price - Stations	2.1.B.8 Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station.	Kindly provide the details of works to be carried out for integration with the Re-development work of Agra Cantt railway station.	As per tender condition. Also Refer **Annexure - 5** of **Addendum**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
182	Vol-3; 38/145 2.1.C Scope of Work Under Lump Sum Price - (Composite Steel Girder)	e) All foundation shall be on piles of minimum 1000 mm dia. with minimum 8mm thick permanent MS liners as per requirements, for complete pile length above hard/ rocky strata duly anchored as per Codal provisions.	It is mentioned that permanent liner shall be provided up to the depth of hard/rocky strata. Kindly confirm. Furthermore, please clarify "hard strata", is it meant to have SPT >30 for cohesive soil?	As per tender condition.
183	Vol-3; 40/145 2.1.D Bridge Across River Yamuna	Design & Construction of Civil Engineering works of Bridge having spans of configuration (34m + 7*45m + 34m) across river Yamuna on Corridor-II of Agra Metro Rail Project as shown in the GAD of Yamuna Bridge- Total length of the Bridge is 383mtr. which is to be constructed on downstream of existing bridge on NH-19. (xxvii) DESIGN CRITERIA (c) The tender concept is schematic and the Tenderer is free to propose his own scheme and quote based on his design keeping following parameters unchanged: Span Configuration is fixed	The span lengths for the Yamuna bridge provided in the Employer Requirement Vol.3 Cl.2.1. D is not matching with the tender drawing (KNPAGDDC-01-TDR-ELV-VDC-DWG-09036). As it is mentioned that the span configuration is fixed, kindly confirm the correct span lengths. Additionally, kindly provide the geotechnical data as well as foundation details of the existing bridge.	Kindly refer to **Annexure- 2 & 3 of Addendum.** Please refer to Clause A7 of ITT also.
184	Vol-3; 41/145 2.1.D Bridge Across River Yamuna	(xix) Drainage system is to be provided as per tender drawing or as directed by the Engineer	Drainage system drawings are missing. Kindly provide.	Refer **Annexure - 3 of Addendum .**
185	Vol-3; 42/145 2.1.D Bridge Across River Yamuna	(xxvii) Design criteria The HFL data of Yamuna River at Polyaghat site is provided by CWC is 156.450 m	The Polyghat site is nearly 6km away from the present bridge location. Kindly provide the Hydraulic data (i.e., discharge, HFL) at the proposed bridge location.	As per tender condition. Please refer to Clause A7 of ITT also.
186	Vol-4; 41/940 3.2.4 Backfill to structures	Unless otherwise directed, the backfill material shall be sand, thoroughly compacted in layers not exceeding 200 mm deep to achieve a density of at least 95% of the maximum dry density.	Kindly provide the required relative density of the sand to be used as backfill material. Further, in Vol.4, Pg.no.285/940, it is specified that "In the foundation the backfilling will be done in layers not more than 150mm thick", which is contradictory to 200mm thickness of fill material. Kindly confirm the minimum thickness. In general, the backfill material (sand) is compacted using water jetting, in such case, is it required to follow the 200mm thickness or the layer thickness can be increased. Please clarify.	As Per tender Condition. Relevant Codal provision shall prevail.
187	Vol-4; 43/940 3.3.2 Materials for Top Layer of Fill	In addition to the general requirements for fill material, the material in the top layer shall not exceed the following test values:	Please indicate the thickness of the top layer, as well as the maximum thickness for each lift of top layer allowed during the compaction process.	As Per tender Condition. Relevant Codal provision shall prevail.
188	Vol-4; 144/940 9.4 Cast in-situ Piles	**9.4.1 General** A minimum of 8m length of top of of bore or as directed by Engineer shall invariably be provided with casing to ensure against loose soil falling into the bore. **9.4.2** Boring Use of liner for top 4 to 6 metres from ground level or more depth, to protect loose soil falling in bore hole) as directed by engineer, is essential.	The mentioned two statements are contradicting. Kindly confirm.	Kindly refer clause 17 of ER/ Construction/ Vol-3 of tender document. Provision of permanent liner shall be as per site/ geotechnical requirements.
189	Vol-4; 818/940 5.5 Design Ground Water Table	The Ground water table (Base value) shall be considered as maximum (in terms of RL) of Ground water table data published by (a) Central Ground water board (CGWB) of past 20 years, (b) Ground water table reported in Geotechnical report provided by UPMRC in tender documents, (c) Ground water table reported in Geotechnical report provided by Design & Build contractor.	Kindly provide the latest CGWB report for the project location to consider the GWT.	As per tender condition. Please refer to Clause A7 of ITT also.
190	Vol-4; 839/940 12.4.1 Pile foundation	(o) In case of foundations near railway crossing effect of railway live load surcharge shall be considered if applicable.	Two railway crossings and one railway station are located near to the alignment. Kindly provide the railway surcharge loads to be considered for the foundation.	As per tender condition and relevant codal provision. Please refer to Clause A7 of ITT also.
191	Vol-6 KNPAGDDC-01-TDR-ELV-VDC- DWG-09047	Span Arrangement-Agra Corridor	The alignment details for Ch. 430m to Ch.530m in the mentioned drawing are missing. Kindly provide. Further, kindly provide the co-ordinates of pier located at Ramp wall in drawing (KNPAGDDC-01-TDR-ELV-VDC-DWG-09056).	Kindly refer to **Annexure- 18 of Addendum .**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
192	Vol-6 Alignment Drawings	Foot Over Bridge (FOB)	As per the Alignment, three existing Foot Over Bridge (FOBs) are located across the alignment. Kindly provide the structure and foundation details.	As per tender condition. Please refer to Clause A7 of ITT.
193	Vol-6 Alignment drawings	Non-U girder, Obligatory spans & Ramp	Kindly provide the cross-section details of Non-U girder spans, Obligatory spans and Ramp location.	As per tender condition.
194	Vol-6 AGCC07-TDR-UTILITY SHEET-01 to AGCC07-TDR-UTILITY SHEET-17	Utility drawing (Corridor 2)	Please provide the depth of utilities along the alignment.	As per tender condition. Please refer to Clause A7 of ITT also.
195	Vol-6 KNPAGDDC-01-TDR-TYP-STR-LGS- 15024	Longitudinal Section-Pile Foundation	The pile nos. provided in drawing KNPAGDDC-01-TDR-ACL-ARC-PLN-15020 is not matching with the pile nos. provided in KNPAGDDC-01-TDR-ACL-ARC-PLN-15024. Kindly confirm.	As per tender condition. Please refer to Clause no. 2.1.A.1 of ER (Functional Part-1) of tender Document also.
196	Vol-6 Station Architectural Drawings	FOBs (Foot Over Bridges)	Kindly provide the column locations of proposed FOBs connected to the station.	As per tender condition. Please refer to Clause A7 of ITT also.
197	Vol-8 Geotechnical Report	Field Bore logs	Kindly provide the missing field bore logs (BH-D-1, BH-D-2 of Depot area) data.	Not relevant to this tender.
198	Vol-8 Geotechnical Report	Field Bore logs	Kindly specify the hammer type and efficiency used for carrying out the geotechnical investigation.	As Per tender Condition.
199	General	General	Kindly provide the geotechnical investigation data for the existing Corridor-1 alignment as well as the available boreholes (if any) near to the proposed Corridor-2 alignment.	Kindly refer to Volume -8 Geotechnical reports.
200	General	General	Kindly provide the typical cross-section details of the ramp locations.	Kindly refer to **Annexure- 19 of Addendum** .
201	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	**Right of Ways and Facilities:** The Employer will acquire and provide land for Permanent Works and right of way (within UPMRC's land) for access thereto over routes established by the Contractor. The Contractor shall bear all cost and charges for special or temporary rights of way which he may require including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facility outside the Site which he may require for the purpose of the Works. The Employer reserves the right to make use of these service roads/rights of way for itself or for other Contractors working in the area, as and when necessary without any payment to the Contractor.	Kindly provide the ROW details in drawing for the Viaduct and stations, clearly indicating the boundary / pockets of land that is made available by UPMRC.	Required land/area shall be made available in accordance with Clause 2.2 of GCC. Kindly Refer Clause A7 of ITT also.
202	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	General	Please confirm ROW in the Agra Cantt-Police Thana grounds for the Agra Cantt. Station and adjacent Viaduct from P01 to P10 construction activities, due to close proximity of Viaduct to the Divisional Railway Manager Office.	Required land/area shall be made available in accordance with Clause 2.2 of GCC. Kindly Refer Clause A7 of ITT also.
203	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	General	Please confirm whether UPMRC will provide ROW at P05 & P06, which lies near Primary School Nagla Chhaua based on the construction requirement for Span erection.	Required land/area shall be made available in accordance with Clause 2.2 of GCC. Kindly Refer Clause A7 of ITT also.
204	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	General	Please confirm ROW at P56 to P64, where the alignment is taking the curve and entering the adjacent lands away from Road alignment.	Alignment falls on defence land and the work shall be exeecuted within barricaded area. Kindly Refer Clause A7 of ITT also.
205	Vol-03- ER / Clause 2.1.A (vii) / Page no.20	General	Please clarify whether the span arrangement and superstructure drawings proposed for Railway crossings are approved with Railways as per the GAD.	In **principle approval** available. GAD shall be shared before execution of work.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
206	Vol-03- ER / Clause 2.1.A (xxix) / Page no.23	Necessary permission/ NOC from the Railway/ Road/ municipal corporation and other concerned regulatory authorities for block and working in such locations is in the scope of contractor. Contractor has to plan their works in advance so that reasonable time can be available to obtain the approval from concern authorities. UPMRC will facilitate for getting them permission from concerned regulatory authorities for working in such locations. However, no claim as regards to delay in getting permission /NOC from these agencies will be entertain. Necessary charges required for permission by railway shall be paid by UPMRC.	Due to the stringent timeline of the project, UPMCR shall co-ordinate with Railways and arrange for faster design and construction approvals and early access for obligatory spans construction. **Kindly confirm**.	As per tender condition.
207	Vol-06- Drawing 1	General	Please provide the Hydrological details of the Yamuna River crossing at P-386 to P-392 respectively.	As per tender condition. Please refer to Clause A7 of ITT also.
208	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	-	Please clarify the ROW details for the area adjacent to the river Yamuna, for the sub-structure and superstructure construction activities along with the steel girder erection activities on or along the river.	As per tender condition. Please refer to Clause A7 of ITT.
209	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	-	Please clarify the ROW details for the construction of Station 15-Kalindi Vihar station at Agra Road junction due to the existence of petrol pump in the vicinity.	As per tender condition. Kindly Refer Clause A7 of ITT also.
210	Vol-06- Drawing 1/ Page No. 08	General	Please confirm the scope of construction of Subhash Park station, which has been identified as a Future Station in the Drawings.	Provision for Future station are to be kept in foundation, substructure & superstructure. Kindly refer to **Annexure-1 of Addendum.**
211	Vol-02-GCC-SCC /Clause 4.12/ Page No. 21	-	Please confirm if UPMRC will provide access in the Agra Club premises for the construction activities of Viaduct towards the Corridor-1 Depot from PP-83 to DPP-05. Please provide ROW details of the same.	As per Tender Conditions.
212	Vol-03- ER	General	Please provide the minimum vertical clearance & minimum lane of traffic requirement during station construction.	As per Tender Conditions.
213	Vol-03-ER	General	Please provide the traffic block time allowed to carry out the major erection works at site during night hours.	As per Tender Condiion.
214	Vol-03-ER / Cl2.1.A.3/ Page No.25	The total working space within the barricading along the viaduct shall not be more than 8mt.	Working space of 10mt is required within the barricading to carry out the substructure and superstructure construction works in a safe manner.	As per Tender Condiion.
215	Vol-06- Drawing 1&2	General	Please confirm whether two tier stacking is considered for Pier Cap at casting yard.	Confirmed.
216	Vol-06- Drawing 1&2	General	Please confirm whether three tier stacking is considered for U-Girder at casting yard.	Confirmed.
217	General	General	Please confirm that employer shall handover the entire ROW free of any encumbrance during the start of the project.	Required land/area shall be made available in accordance with Clause 2.2 of GCC. Kindly Refer Clause A7 of ITT also.
218	Vol-03- ER / Clause 2.1.A.3 (xxiv) / Page no.28	The Contractor needs to map (for base line reading) and monitor historic monuments effectively on real time basis.	Provide the list of Historic monuments to be monitored in the alignment.	Historical Monuments are Roman Catholic Cemetery near M.G.Road Metro Station, Lal Masjid Near Water Works & Adjacent to Kamla Nagar Metro Station and Ram bagh near Ram Bagh Metro Station. Kindly refer Clause no A7 of ITT also in this regard.
219	Vol-03- ER / Clause Notes (Viaduct & Stations) (6) / Page no.24	In some stretches placing of heavy cranes for erection of U-Girders may not be possible and launcher is to be used in such locations. Launcher and cranes are to be used for erection depending upon site conditions.	Please clarify, whether U girders and pier caps has been designed for Launching girder loads.	Kindly refer to **Annexure-1** of Addendum.
220	General	General	Kindly provide AutoCAD and kmz files of alignment for our workings.	AutoCad version and KMZ files are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender will prevail.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
221	Vol-3, EMPLOYER'S REQUIREMENTS – FUNCTIONAL, 2.1.A (xxix)	Construction of 06 no. of new residential accommodations (equal to existing built-up area) for Defence families (i.e., Veer Naris) at land provided by Local Military Authority in Agra, provision of 500 Mtr. Of Noise Barrier/View cutter (as per tender drawing and as per direction of Employer) along the alignment for security of Military installations & shifting of 01 (30 mtr.) /02 (60 Mtr.) row of solar panel near jeet Singh stadium as required by Defence Authority/UPMRCL shall be included in Lump Sum Price of contract	Request to provide the specifications including space matrix for residential building. As per tender clause it is understood that Employer's will provide the drawings and facilities details. Kindly provide the same.	As per tender condition. Kindly refer Clause no A7 of ITT in this regard.
222	Vol-3, EMPLOYER'S REQUIREMENTS – FUNCTIONAL, 2.1.A (vii, i (e))	Special Span – 34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge)	The same is shown in Vol -6 Span arrangement drawings as (6 x 45.720m + 47.320m) = 32.64 m Kindly confirm the final arrangement.	Kindly refer to **Annexure- 2** of **Addendum**
223	Vol-3, EMPLOYER'S REQUIREMENTS – FUNCTIONAL, NOTES (VIADUCT & STATIONS) (3)	It is obligatory for the contractor to provide a single pier structure in the viaduct of maximum dia 2.1 m (including crash barrier) and the dimensions of station pier across the alignment not more than 2.1 mt (including crash barrier.)	Assuming 0.25m thick crash barrier (Design by client & drawings not received), the pier diameter is restricted small. Kindly confirm whether the 2.1m is excluding crash barrier or allow to use rectangular piers for viaduct.	As per tender condition.
224	Vol-4, Outline Construction Specifications, Section 14	Technical specification for anti-carbonation paint	The painting was not included in the scope of works document. Kindly confirm.	As per tedner document.
225	Vol-4, Outline Design Specifications for viaduct, Section 6.5.3	Minimum (unfactored) LWR force of 1.6t/m of span length shall be considered for design irrespective of number of tracks.	The reduced value can be taken from Rail-Structure Interaction study, if in case. Kindly confirm	As per tender condition.
226	Vol-4, Outline Design Specifications for viaduct, Section 6.4.1	The length of car = 22.1m & Number of cars =6	Kindly confirm the number of cars as the length of stations in the stretch is 69m only.	Kindly refer to **Annexure-25** of **Addendum.**
227	Vol-4, Outline Design Specifications for viaduct, Section 5.4	Structural Steel	Can structural steel of higher grades can be used in the design? Please confirm	May be adoped in agreement with Employer, without any extra financial implication to the Employer.
228	Vol-6, Span Arrangement drawings	Pier positions of piers CP67 to P73, P92& P93	The piers are placed on the middle road and not in the median. Kindly confirm.	As Per Tender Conditions. Kindly refer to Claiuse no. A7 of ITT also.
229	Vol-6, Span Arrangement drawings	Span between P89-P90	The span is mentioned as Non U girder, The span is in straight and no crossover location. Kindly confirm the requirement.	As per tender Condition.
230	Vol-6, Span Arrangement drawings	Span between P113-P114	The span is mentioned as U girder, and both the adjacent spans are Non-U span. Can the type of spans be changed? Kindly confirm	As per tender Condition.
231	Vol-6, Span Arrangement drawings	Flyover crossing at Ch:8.15 km	Kindly provide the road levels of flyover and the ramps details.	As per tender Condition. Kindly refer to Claiuse no. A7 of ITT.
232	Vol-6, Span Arrangement drawings	Arch Girder in Depot line	Kindly confirm whether arch girders be replaced with U / I girders in the depot line.	Kindly refer to Annexure-2 of Addendum.
233	Vol-6, Span Arrangement drawings	Depot line (2)	Can there be new piers after DP-6A and length of ramp be reduced? Kindly confirm	As per tender Condition.
234	Vol-6, Span Arrangement drawings	Depot line (2)	The details of Rail level, Ground level, ramp length, etc. at the location is not shown after 0+430m chainage. Kindly confirm the end of scope for the depot line.	Kindly refer to **Annexure- 19 of Addendum.**
235	Vol-6, Concrete outlines of crash barrier & parapet	Typical cross section of parapet	Can a different cross section be followed? Kindly confirm	As per tender Conditions.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
236	Vol-6, Concrete outlines of crash barrier & parapet	Typical cross section of crash barrier	It is noted that the crash barrier is designed by the employer as per Vol-3. Kindly provide the details like thickness & reinforcements for the same.	Crash Barrier shall be designed by Contractor. Please refer A**nnexure - 7 Addendum.**
237	Vol-6, well foundation, pier and piercap at Yamuna bridge	General	Can pile foundations be used instead of well foundation at the location?	Well foundation shall be used as sub - structure over Yamuna river. Kindly refer **Annexure - 3 Addendum.**
238	Vol-6, Arch girder spans, Steel composite span	General	It is inferred that all steel spans and arch spans have parapets at the end and I/T girder spans have parapets. Kindly confirm the understanding.	**Confirmed.**
239	Vol-6, U girder drawings	General	The PT and reinforcement drawings of Type-2 U girder is missing. Kindly provide the same.	As per tender Condition.
240	Vol_6_Drawing_1: Drawing No.– KNPAGDDC-01-TDR-ELV-VDC- DWG-09047(SHEET:27 OF 61)	"Alignment Plan & Longitudinal profile"	In Alignment plan, the location of Pier mark DPP-53 & DPP-52 is not available. Kindly provide the locations	As per tender Condition. Kindly refer Drg. No. KNPAGDDC-01-TDR-ELV-VDC-DWG-09044 of Tender Document.
241	Vol_6_Drawing_1: Drawing No. – KNPAGDDC-01-TDR-ELV-VDC- DWG-09044(SHEET:24 OF 61)	"Alignment Plan & Longitudinal profile"	The commencement of the Corridor-2 Depot Entry/Exit Viaduct at Chainage 0+000 occurs between DP-51 and DPP-52. However, it is essential to note that the alignment for the Corridor-2 Depot Entry/Exit originates from DP-51. The distance between DP-51 and the initiation point of the Corridor-2 Depot Entry/Exit Viaduct line is approximately 20 meters. Consequently, it is imperative to verify the length of the Corridor-2 Depot Entry/Exit Viaduct and ramp to ensure accuracy	As per tender Condition. Kindly refer Drg. No. KNPAGDDC-01-TDR-ELV-VDC-DWG-09044 of Tender Document.
242	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.A xxii (SHEET:27 OF 145)	"Shape, profile, and construction methodology of Piers including Cantilever piers, portal piers and portal beams is to be as per tender drawings."	Kindly verify if this provision is applicable to special spans as well.	Alternative solution may be used after getting confirmation from Employer and without any financial implication to the Employer.
243	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.A Clause-xxiv (SHEET:27 OF 145)	"Design & Construction of inspection platform at Piers/Portals for viaduct"	Request to provide the required locations for Inspection platform.	As per tender Condition.
244	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.A Note 14 (SHEET:30 OF 145)	"Any change in rail level up to +/- 300mm from the tender drawing……"	Request you specify the possible locations or probable length.	As per tender document.
245	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.B.1 Clause-iv (SHEET:34 OF 145)	"The necessary provisions of load imposed in design of stations for connecting of proposed FOBs in stations as shown in the tender drawings… "	Request to provide the Load details of FOB.	As per tender document. Kindly refer to Clause A7 of ITT.
246	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.B.1 Clause-xxvii (SHEET:35 OF 145)	KNPAGDDC-01-TDR-TYP-STR-CRS-15010_R0	Corresponding drawings are not available. Request you to provide the same.	Kindly refer drawing no. KNPAGDDC-01-TDR-TYP-STR-CRS-15023, R1, vol-6 of tender document. Conceptual arrangement in drawing, Contractor has to design accordinly. Also Refer **Annexure -4** of **Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
247	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.B.7 Clause-xxvii (SHEET:37 OF 145)	"Rest of the works required for integration with underground Metro station at Agra College interchange station shall be within the scope of this work "	Request to specify the connection in details between the Underground station & elevated station. Also please share the underground Agra College Metro Station in AGCC-02 dwgs.	As per tender conditions. Kindly refer to **Annexure- 20 of Addendum.**
248	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.D (V) (SHEET:40 OF 145)	"Provision of suitably designed well foundations for piers in accordance… "	Whether the bidder can change the foundation type to Pile foundation. Kindly confirm	Well foundation shall be used as sub - structure over Yamuna river. Kindly refer **Annexure - 3 Addendum.**
249	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.D Clause-ix (SHEET:41 OF 145)	"Provision of suitably designed spherical bearings "	Whether the bidder can change the Bearing type. Kindly confirm	As per tender Conditions.
250	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.D Clause-x (SHEET:41 OF 145) Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.D Clause-xvi(SHEET:41 OF 145)	"The superstructure is conceptualized to be constructed with suitably designed Composite steel of configuration…… (No other type of superstructure is acceptable)." "Suitable provision to be made for inspection of expansion joints and PSC Girders for inspection at a later date after completion of the bridge……."	As per Cl:2.1.D (X), the super structure type should be composite steel girder. But in Cl:2.1.D (XVi) the super structure type mentioned as PSC Girder. Please confirm.	As per tender Drawing. Kindly refer **Annexure - 3 of Addendum**
251	Vol_03_Employer's Requirement (Function) Part-1: Clause-2.1.D Clause-VXi (SHEET:41 OF 145)	"……Manholes to be provided with M.S. covers with epoxy painting and locking arrangement."	Proposed super structure type is "composite steel girder", where all the girder surfaces are exposed. Hence manholes are not required. Please confirm.	As per tender condition, It shall be based on requirement of inspection provisions.
252	Vol-3, EMPLOYER'S REQUIREMENTS – FUNCTIONAL, 2.1. Notes	"Pile foundation shall be of minimum of 1000mm dia with or without permanent liners with hydraulic rotary piling rigs."	Kindly confirm the Entry structures also required 1000mm dia pile or the contractor allow to reduce the pile dia for Entry Exit structure locations.	As per Tender Condition.
253	Vol-3, EMPLOYER'S REQUIREMENTS – FUNCTIONAL, 2.1. Notes	It is obligatory for the contractor to provide a single pier structure in the viaduct of maximum dia 2.1 m (including crash barrier) and the dimensions of station pier across the alignment not more than 2.1 mt (including crash barrier.)	The minimum Crash barrier requirement will be 100mm thick and the 25mm gap between the pier, Based on the condition the pier size will be minimum of 1850mm only. Will contractor allow to change the pier dimension based on the design requirements? Kindly clarify	As per tender Condition.
254	General	Alignment	As per alignment drawings Subash park mentioned as future station. Any provisions to be provided by contractor or normal span arrangements can be followed. Kindly clarify	Provision for Future station are to be kept in foundation, substructure & superstructure. Kindly refer to **Annexure-1** of **Addendum.**
255	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 2.1.B Scope of work under lump sum price – stations	Design and construction of all station building, all floors within station premises,Ground, Concourse, Platform, floor above platform, entry/exit structures, connecting corridor, connecting passage, ancillary building i.e. Underground & surface water tanks, Pump room & DG room, Lift shafts, escalator pits and all staircases as shown in tender drawings is covered in Lump sum schedule. The cost of design and construction of requisite precast components such as π/T (pi/T shaped) girders, cross arms, I-girders, etc. including transportation and erection of the same for the station building is also included in lump-sum price.	1. Please clarify whether Preparation of architectural design and Detail drawings and construction drawings are part of contractor scope because this schedule is % rate as per BOQ. We understand the same is provided by Employer. Kindly Confirm. 2. Please clarify whether the finishes for Underground & surface water tanks, Pump room & DG room, Lift shafts, escalator pits and all staircases and roof sheetings are included in Schedule-B (or) bidder to include in schedule- A lump-sum price.	1. Architectural Drawing & Detailed Architectural Drawings will be provided by Employer. Production of Architectural Shop Drawings shall be in the scope of Contractor. 2. It is included in Schedule-B

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
256	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 ,2.1.B Scope of work under lump sum price – stations	Design & Construction of man holes, sumps, drain, buttle flanges, sleeves as required for automation-based water supply scheme in Ancillary Building for E&M works & finishing works	Please clarify whether Preparation of Detail drawings and construction drawings for MEP are a part of contractor scope because this schedule is % rate as per BOQ. We understand the same is provided by Employer. Kindly Confirm.	As per tender condition
257	Vol-3/ Employer's Requirements 3.1.4	3.1.4 Scope of E&M Works	Please provide Concourse and platform levels (From MSL)of each stations from street levels. Which will help bidder to finalise the entry structures planning and detailing.	As per Tender Drawing.
258		General	Please clarify Entry structures architectural finishes are part of Schedule –B & C (or) part of Schedule-A lump sum.	As per Tender conditions. Architectural Finishes are part of Schedule-B & C.
259	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 2.1.B.8 Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station. Refer Tender Drawing.	Design and construction of Agra Cantt Metro Station including multi model integration with Agra Cantt railway station is Part of Lump Sum schedule under this work.	Tender Drawings are not clear about the multi model connectivity. Please provide relevant required drawings with more inputs.	As per Tender Condition.Refer **Annexure-16 of addendum.**
260	Vol-3/Employer's Requirements/Section-B/Functional/ Part-2	3.1.2. Scope of Architectural Works and Site Development	Bidder understand that the employer will provide architectural detail design drawings for execution of Finishing works. Please clarify.	Architectural Drawing & Detailed Architectural Drawings will be provided by Employer. Production of Architectural Shop Drawings/WRD model shall be in the scope of Contractor.
261	Vol-3/Employer's Requirements/Section-B/Functional/Part-2 5. preliminary drawings	i. Preliminary drawings as listed in Volume 6 represent Employer's proposal based on preliminary design. Detailed working drawings will be given for construction of work subsequently.	Bidder understand that the employer will provide architectural detail design drawings and construction drawings for Finishing works and execution. Please clarify.	Architectural Drawing & Detailed Architectural Drawings will be provided by Employer. Production of Architectural Shop Drawings/WRD model shall be in the scope of Contractor.
262	Volume 4 Outline Design Specifications - Viaduct - 12.4.1 (b) PG 30	Minimum 1.0m diameter (unless specified otherwise in tender drawing) bored cast-in-situ vertical piles in soil/rock have been contemplated for the foundation of piers. Minimum number of piles in each pile cap shall not be less than 4.	Minimum No of Pile in Pile cap to be not less than 3 Kindly clarify	As per tender Document.
263	Volume 4 Outline Design Specifications - Viaduct 12.4.1 (c) PG 30	Open foundation has been contemplated for the pier location with rocky strata at shallow depth.	How much depth from GL shall be considered as Shallow Depth? Kindly clarify	As per tender Document.
264	Volume 4 Outline Design Specifications - Elevated Stations- 2.7.3 PG 41		Live load for UPS Room/ ASS room & other Technical Rooms are not specified. Kindly clarify	As per tender Document.
265	Dwg No KNPAGDDC-01-TDR-TYP- STR-CRS-15023, 15024, 15028, 15029, 15033, 15034 KNPAGDDC-01-TDR-KLV-ARC-CRS- 61071 & Volume 3 ER - Functional Part-1 Civil (Notes 4, PG 24)		In the drawings it has been mentioned 5.6m while in the documents it is mentioned as 5.5m Kindly clarify	Kindly Refer ODS of Tender Document.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
266	DWG NO. KNPAGDDC-01-TDR-ACL-ARC-PLC- 52052		Corridor 1 structure and the proposed entry of the elevated stations on both sides shall be separated by Expansion Joint or it has to be combined. If combined, pl. share the Structural details of the Corridor 1 Structure for UG Station	Expansion Joints shall be provided as per design Requirement and as per tender condition.
267	Volume 4 ODS Elevated Stations 2.10.2(i) 12.4.1(i) PG 47	Co-efficient of earth pressure "K" shall be taken as 1.0.	As per IS 2911_1 _2 (2010), for ø (phi), varying between 30 and 40 degrees, K values can range from 1 to 1.5. Please clarify	As per tender Document.
268	General	General	Pl. provide the Typical Drawings of Inspection Platform & Locations.	As per tender Document.
269	General	General	Pl. confirm that all the required Railway Approvals for construction of obligatory span over existing railway line will be obtained by UPMRC	In principle approval available. GAD shall be shared before execution of work.
270	General	General	Pl. provide the levels of Existing Rail Line	As per Tender Condition. Kindly refer to Clause no. A7 of ITT.
271	General	General	Pl. provide the Hydrological Data for the Nalla & River Crossing the Alignment.	As per Tender Condition. Kindly refer to Clause no. A7 of ITT.
272	General	General	Pl. confirm whether contractor can change the Structural arrangement of stations for ease of construction.	Kindly refer to para (iii) of Clause no. 2.1.B.1 of ER (Functional Part-1), Vol. 3 of Tender Document.
273	General	General	No details of PSD is provided.	As per Tender Condition.
274	General	General	Pl. provide standard Drawings for Noise Barriers.	As per tender Drawing. Refer tender drawing no. KNPAGDDC-01-TDR-ELE-VDC-DWG-12053.
275	General	General	Pl. provide Solar Panel details required to be considered for Shifting.	As per Tender Condition. Kindly refer to Clause no. A7 of ITT.
276	General	General	Pl. provide Transverse Section Along PD development in Agra Cantt Station.	As per Tender Condition. Kindly Refer to **Annexure- 16 of Addendum.**
277	General	General	Pl. share the Multi Model Integration details proposed for Agra Cantt Station with Railway Station	As per Tender Condition.
278	General	General	For Supporting FOBs intermediate support is required. (MG Road, Kamla Nagar, Foundary Nagar, Agra Mandi, Kalindi Vihar)	As per Tender Condition.
279	Alignment Drawings KNPAGDDC- 01-TDR-ELV-VDC-DWG-09036	General	The span written in Alignment Drawings is different from what is proposed in ER 2.1.A Point vii (i)e	Kindly Refer to **Annexure- 2 & 3 of Addendum.**
280	Drawings for Arch. Girders	General	Please provide Typical Drawings for Arch. Girders	Kindly refer to Annexure-2 of Addendum.
281	Volume 3 ER - Functional Part-1 Civil 2.1.D Bridge Across River Yamuna Point (X)	The superstructure is conceptualized to be constructed with suitably designed Composite steel of configuration (34m +7 x 45m + 34m) for the complete length of the bridge, as required or as directed (No other type of superstructure is acceptable). This shall include provision of shear connectors in the deck as per tender drawing to suit installation of Ballast less track, later by Track contractor.	This contradicts with Point No (xxvii) Point C wherein Pre Stressed Concrete Bridge Girder is also mentioned as a possible superstructure solution. Kindly clarify	Superstructure over Yamuna River shall be designed as Composite Steel Girder. Kindly Refer to **Annexure- 2 & 3** of **Addendum.**
282	Volume 3 ER - Functional Part-1 Civil2.1.D Bridge Across River Yamuna, Point (v)	Provision of suitably designed well foundations for piers in accordance with actual soil parameters as obtained from detailed sub surface exploration as required or as directed.	Can Piles as per Point No (xxvii) Point C be adopted or Well foundations as substructure are mandatory Kindly confirm	Well foundation shall be used as Sub - Structure over Yamuna river. Kindly refer **Annexure- 3 of Addendum** .

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
283	Vol-6_ Drawing_MEP_Part1 & Part 2	Drawing no: KNPAGDDC-01-TDR-ACT-ARC-PLN-48052 & 48054	At Grid F & 1 Only staircase, escalator and lift shown in ground level plan of Agra cantt station. But the connectivity at roof levels are not clear in the tender drawings. Lifts shown in ground levels are infringing with centreline of track and the same is not shown in platform level.Kindly clarify	Kindly Refer to **Annexure- 16 of Addendum.**
284	Vol-6_ & Part 2	Drawing_MEP_Part1	Bidder requires Concourse and platform level plan, elevations and sections for following stations: 1. SADAR BAZAR 2. MG ROAD 3. SULTANGANJ CROSSING Kindly Provide	As per tender documents
285	Vol-6_ & Part 2	Drawing_MEP_Part1	SULTANGANJ CROSSING concourse and plat form level plan and elevations and sections are required as the same is not similar to other stations.Kindly clarify	As per tender documents
286	Vol-6_ Drawing_MEP_Part1 & Part 2	Drawing no: KNPAGDDC-01-TDR-ACT-ARC-PLN-53051	Hariparvat insertion plan station box profile mismatch with ground level plan. Which one to be followed. Kindly clarify	kindly refer to **Annexure- 17** of **Addendum .**
287	General	General	Bidder requires a Space matrix for concourse and platform levels of each rooms and areas. Kindly clarify	As per Tender Condition.
288	General	General	Bidder requires a Finishing Matrix for all stations, different levels, individual rooms, paid area, unpaid areas and entry structures and external areas. Kindly clarify	kindly refer to **Annexure- 10** of **Addendum .**
289	General	General	Number of lifts, escalators and staircases required in each stations are not mentioned in any documents and drawings. Please provide details and clarity.	As per Tender Condition.
290	General	General	Please clarify Loading/unloading Deck to have roof on top.	As per tender document. Kindly refer ODS of tender document.
291	Vol-6_ Drawing_MEP_Part1 & Part 2	Drawing no: KNPAGDDC-01-TDR-TYP-ARC-ELE-62077	Bidder understand from the elevation that only in the center of concourse area is having aluminium perforated panel. If completely closed with aluminium panel please provide the area required for ventilation. Kindly clarify	As per Tender Condition.
292	Vol-6_ Drawing_MEP_Part1 &	Drawing no: KNPAGDDC-01-TDR-KLV-ARC-PLN-61053,	Connectivity from paid area to platform is provided in one side only. Kindly clarify.	Refer **Annexure - 24 of Addendum**
293	Vol-6_ Drawing_MEP_Part1 &	Drawing no: KNPAGDDC-01-TDR-KLV-ARC-PLN-61054,	Platform width between Grid 1&2 looks inadequate and staircase provided in unpaid area. Kindly clarify.	Refer **Annexure - 24 of Addendum**
294	General	General	Please clarify about the furniture requirement in each level and clarify comes under whose scope. if bidder to provide furniture in each level, please provide the required details.	As per Tender Condition.
295	General	General	Please clarify that entry structures finishing items are covered in Schedule –B (or) bidder to consider in Schedule-A lump sum. If bidder to consider in Lump sum please provide the finishing matrix for the same.	As per Tender Condition. Entry /Exit structure's finishing items are covered under Schedule –B.
296	VOL_6_Drawing_MEP_Part3/Page No 58	Main schematic diagram for panels	UPS feeder details is mentioned in SLD, whereas UPS is not available in BOQ and Tender specification. Please clarify.	UPS is not in scope of this tender.
297	VOL_4_OCS_ODS_SOD/ Clause 8.6.1/Page No 263	The bus bar and interconnections shall be of electrolytic tinned copper.	Electrolytic tinned copper busbar is mentioned in specification, whereas Aluminium busbar is mentioned in BOQ and SLD. Please clarify.	The Bus Bar shall be Aluminium. Pleaae refer **Annexure 11 of Addendum**
298	BOQ_190314/Schedule-D (E&M items)/Item no.E.10 – 7.1a)	Variation in Prices for Installing/Erection, Testing & Commissioning including Integrated Testing & commissioning, with all systems for the DG sets for DG set to be provided Outside the DG room along with all accessories as given in Detailed BOQ for the following Capacity DG sets	Kindly clarify the requirement of this item.	Contractor to quote as per BOQ.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
299	BOQ_190314/Schedule-D (E&M items)/Item no.F.01 – A -1.0 & 2.0	3.0 Supply, installation, testing and commissioning of 4 Loop Addressable Fire Alarm Panel….. 4.0 Supply, installation, testing and commissioning of Repeater panel…..	Price indicated in the BOQ for addressable fire alarm panel and repeater panel seems very less. Please confirm.	Contractor to quote as per BOQ.
300	BOQ_190314/Schedule-B	1.1kV PVC 3.5x70 sq.mm /metre/ INR 56218.22	Price indicated for 3.5x70 sq.mm cables seems to be too high.Please check and confirm	Please refer the revised excel sheet of BOQ uploaded on CPP Portal.
301	BOQ_190314/Schedule-D (E&M items)/Item no.F.01 – A) Fire Alarm system	Supply, installation, testing, commissioning of very early smoke detector and Alarm system based…… The SITC shall have provision og minimum 4 infects.	1. Please clarify the statement “Minimum 4 infects”. Since no. of rooms are not clearly mentioned in the BOQ description & item value is high we request to provide the quantity for the item or remove this item.	The statement shall be read as"minimum 4 inputs in place of minimum 4 infects"
302	BOQ_190314/Schedule-D (E&M items)/ Item no.F.02 – 1.1) Fire Hydrant Pump	1.1a) Capacity: 2280 lpm (1 Working + 1 Standby)	Kindly clarify whether 1 set means “1 working + 1 standby” or 1 single pump.	Contractor to quote as per BOQ.
303	BOQ_190314/Schedule-D (E&M items)/Item no.S.02 -	Building Management System	BMS technical specification and I/O summary is not available in tender document. Please provide the same.	Please refer A**nnexure 13 of Addendum**
304	Clause 2.2 , GCC& SCC	GCC- The Employer shall grant the Contractor right of access to, and / or possession of, the Site progressively for the completion of Works. SCC- Site access schedule will be consistent with the resettlement plan for the section	Please specify the timelines within which the site shall be handed over. Apart from this also provide resettlement plan.	Required area/Land shall be made available in accordance with **Clause 2.2 of GCC.** Kindly Refer to Clause A7 of ITT.
305	Clause 11.1.3 of SCC , Page 83	(i) No adjustment in the contract price on account of inflation shall be done for E & M works.	It is not possible to forecast the market fluctuations in MEP material rates at this stage. Pertinently, the metal prices are highly volatile. In view of this fact, Bidder request Employer to allow Price Adjustment/ Escalation for E&M works.	As per tender conditions.
306	Clause 11.1.3 (ii) c of SCC,Page 86	The price adjustment shall be applicable only beyond 2 percentage of variation of the contract price i.e. where the resultant increase is lower than two per cent of the contract price, no price adjustment will be made in favour of the contractor. However, in case the resultant increase is more than 2 percent of the contract price, then full price adjustment shall be payable.	Bidder request Employer to delete this provision for competitive bidding.	As per tender conditions.
307	Clause 11.1.3 (ii) d of SCC,Page 87	(d) The price adjustment shall be generally limited to 25 per cent of contract value (including variations in BOQ items). However, higher percentage may be considered on case to case basis.	Bidder request Employer to specify in which case price adjustment will be limited to 25% of Contract Value. Limiting the price variation will lead to the speculative bidding and Employer may not receive lowest competitive offer. Bidder request Employer to not to imposed any upper limit for Price adjustment.	As per tender conditions.
308	Clause 11.1.4 of SCC,Page 87	a) “Change in Taxes/Duties/Levies” means the occurrence or coming into force of the following, at any time after the date of submission of tender. (i) Any new tax which is imposed on Composite Works Contracts applicable on Metro Project. (ii)Change in the rate of Good and Services Tax (GST) on Composite Works Contracts applicable on Metro Project as per GST Act.	Request you to provide for adjustment in Contract Price on account of change in rate of existing taxes and introduction of new taxes, i.e. on both work contract and materials.	As per tender conditions.
309	Clause 12.2.1 of GCC,Page 50	The Contractor shall provide his Variation proposal in a time limit prescribed by the Engineer. The Engineer’s decision in this regard shall be communicated to the Contractor within a reasonable period of time. If by any reason, the time limit specified by the Engineer is exceeded, the proposal may not be considered. The decision of the Engineer in this regard shall be final and binding.	Bidder request Employer to specify the reasonable period of time taken by the Engineer to communicate its decisions regarding variation proposal.	As per tender conditions.
310	Clause 12.2.3 of SCC, Page 50	The Employer may in his sole discretion, accept or reject the Contractor’s Variation or any part thereof and determine the estimated net saving in the Construction cost. The Employer shall not be liable for delays or damages to the Contractor due to any failure of the Employer to accept or act upon any such Variation proposal submitted pursuant to this Clause.	Bidder request Employer to specify the time limit within which he will communicate its decision.	As per tender conditions.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
311	Clause 12.3 of SCC- -"Employer's Variation",Page 89	(b)The Engineer shall determine the amount which should be added to or deducted from the fixed lump sum price as a result of the Variation and get it approved by the Employer.	Employer is requested to specify the time limit within which Engineer shall determine the variation amount and get it approved from Employer.	As per tender condition
312	-	-	Bidder request Authority to introduce bonus clause. In the event the Project Completion Date occurs prior to the Scheduled Completion Date, the Contractor shall be entitled to receive a payment of bonus upto 5% of contract price.	As per tender condition
313	Clause 4.2.1 of GCC-Form of Tender-Appendix A1- NIT,Page 82	Amount of Performance Security- 10% of the Contract Price in types and proportions of currencies in which the Contract price is payable. In the event of variations during the execution of the contract which result in payments to the Contractor over and above the contract price, the Performance Security shall be adjusted in accordance with clause 4.2.1 of SCC.	Bidder request Employer to reduce the amount of Performance Security to 3% of the Contract Price as per the standard practice in construction industry and as allowed by UPMRC in other metro Projects.	As per tender condition
314	EMPLOYER'S REQUIREMENTS – FUNCTIONAL- Part 1: Civil, Page 19	1.4 The Contractor shall be responsible for obtaining all necessary approvals from the Relevant Public / Government / Local / Statutory or any agencies in the design and construction of the works.	UPMRCL being the government Authority are in better position to take approval from Public/Government/Local/Statutory or any agencies. Bidder requests Employer to obtain all necessary approvals from the relevant Public/Government/Local/Statutory or any agencies to avoid delays.	As per tender condition
315	EMPLOYER'S REQUIREMENTS APPENDIX 2A WORKS AREAS ,Page 97	For casting yard, batching plant and other activities a plot of land of approx. 15 hectares or as required for timely completion of work has to be arranged by the contractor at his own cost.	Bidder request Employer to provide Land for casting yard, batching plant and other activities as provided by UPMRCL in other Metro Projects.	As per tender conditions.
316	Employer's Requirement (Functional Part -1) URBAN PLANNING FUNCTIONAL REQUIREMENTS , Page 59	The Station Site Plans are based on the urban planning design carried out by the Employer and specific land acquisition plans have been submitted to the concerned govt. authority and to the concerned land-owning agencies of Govt. of India/ UP govt., for approval. The land acquisition initiated to date is therefore based on the entrance, ventilation shafts, ancillary buildings and redevelopment of the site areas as shown on the site plans. The Contractor must therefore, if revising the tender drawings for any reason, develop his layouts to suit the available land provided for the metro works.	Please provide the status of land acquisition for the project.	Required area/Land shall be made available in accordance with **Clause 2.2 of GCC.**
317	General	-	Please confirm, whether the GAD for the railway span is approved from railway Authority.	In principle approval available.
318	1.2, NIT, Page 4	Date Extension	We request you to provide minimum 3 weeks of time for bid submission after final release of pre-bid clarifications and addendums if any.	Please refer Addendum for extesion of bid submission uploaded on CPP Portal.
319	Cl. 1.4.2 (v) Vol 1, Page No. 8		We understand that the minimum experience of having constructed a total of minimum 8 km length of Metro Viaduct/bridge/fly over (excluding approach embankment) having pre/post-stressed concrete super structure, with or without elevated metro station can be met through multiple contracts i.e. more than one, and in case of Joint Venture either of the partners can meet this criterion individually or Jointly from more than one contract. Kindly clarify.	As per tender condition
320	NIT, Page No. 3		Completion period of the Work - The projects scope having 17+Km of viaduct, 14 stations and having multiple special spans including bridge on Yamuna River with well foundation, the construction period of 24 Months including monsoon is not practicable considering quantum of works to be executed, we therefore request to increase the completion period from 24 months to 36 months.	Kindly refer **Annexure -9 of Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
321	Vol_6_Drawing_1 and Vol_6_Drawing_2 and MEP Drawings		PDF file of Survey and Alignment and Structural Drawings Bidder requests to share the topo survey and alignment of the proposed project in editable CAD format on actual geo-coordinates and other Structural drawings in CAD format	AutoCad version of drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender shall prevail.
322	General		DPR Not Provided Bidder requests authority to provide DPR	DPR copy shall be downloaded from the official website of UPMRCL.
323	General		Kmz file on actual coordinates Bidder requests authority to provide KMZ file on actual coordinates	KMZ file are being provided on CPP Portal for reference purpose. However, in case of any discrepancy, drawings attached with tender shall prevail.
324	General		Approval of ROB spans Please clarify whether the Railway approval of ROB Obligatory spans is in the contractor's scope or Authority shall provide the approved GAD. It is presumed that the proposed alignemnet has been approved by railways principaly . Bidder request confirmation on the same	In **principle approval** available. GAD shall be shared before execution of work.
325	GAD Drawing		Structural arrangement - Concourse and Platform girders Bidder requests to allow typical structural arrangement to be changed to other types like Rectangular girders, Pi girders, RCC/PSC T girders, L-girders,I-girders etc. to suit best erection possibility as per site conditions. Kindly confirm	Confirmed. Without any additionl financial implication to the employer and shall be allowed after approval of employer, if found suitable.
326	General		Hydrological Data - Only High Flood Level is given by Employer Please provide the hydrological data for Yamuna River bed area. Please provide HWL, LWL,LFL, Discharge, velocity, scour depth and tidal variation data available with authority.	As per tender condition. Please refer to Clause A7 of ITT.
327	Vol-1/NIT Clause 1.2 Pg 3		Completion period of the Work is 24 months The tender scope of works involves major civil structural and associated works in Viaduct and Station including Civil, Associated Ancillary Structures, Architectural Finishes, Water Supply, Sanitary Installation, Drainage, External Development, Fire Fighting, Fire Detection, E&M works and PEB structures. The total length of the project is also significantly large with 14 Metro Stations. Analysing the vast scope of works, the proposed timeline of 24 months by Employer is considerably less to complete the project effectively by Contractor time, quality and costwise. Hence, it is requested to the Authority to increase the timeline by another 12 months i.e total project duration = 36 months and provide revised key dates accordingly.	Kindly refer **Annexure -8 & 9 of Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
328	Vol-3/ Employer's Requirements/Section-B/Functional Part-1, Clause 2.1.A (iii) Pg 20		Construction of super structure of standard U-Girder span (28m) and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier cap, Bearing (Elastomeric) & crash barrier as per tender drawing. The design of standard span UGirder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal & crash barrier for these spans shall be provided by UPMRC. Also, the reinforcement in the U-Girder, standard Pier Cap & bearing pedestal shown in tender drawing is the minimum reinforcement to be provided. However, in case the contractor assesses that the reinforcement has to be increased then the same shall be provided after approval of UPMRC without any extra cost. The Clause states that the contractor has to adopt Standard Span of 28m U-girder as provided in tender drawings for Construction of Viaduct and Station. Can bidder adopt any other span arrangement type such as PSC box-girder, Pre-stressed I-Girder, T-girders etc. for Viaduct and Station Superstructure construction keeping the span length of obligatory spans, Railway spans, crossover spans same. Kindly clarify the same to keep all the bidders with common understanding of span configuration and superstructure arrangement.	As Per Tender Condition.
329	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.A 3) Pg 24		It is obligatory for the contractor to provide a single pier structure in the viaduct of maximum dia 2.1 m (including crash barrier) and the dimensions of station pier across the alignment not more than 2.1 mt (including crash barrier.) Max. dimension is restricted to 2.1 m (including crash barrier) for concentric type for viaduct. Request authority to revisit this statement. For tall piers around 15 to 18m of pier height encountering in this project seems not possible to fit in 2.1 m dia. pier dia., upto 2.3m dia (including crash barrier) shall be required to ensure that tall piers are not slender.please clarify	As Per Tender Condition.
330	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.A 6) Pg 24		In some stretches placing of heavy cranes for erection of U-girders may not be possible and launcher is to be used in such locations. Launcher and cranes are to be used for erection depending upon site conditions. Bidder requests authority to provide location of these areas where U-girder erection by Cranes is not possible. Bidder may allowed to use alternative superstructure type such as Pre-stressed T girder , I girder for which smaller capacity of used for erection of elements. If this case encounters in majority of the alignment, then bidder requests authority to change the Superstructure type to Box girders, Presress T-girders etc. for better possibility and effectiveness of erection by Launchers instead of U-girder Launchers	As per tender condition. Please refer to Clause A7 of ITT.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
331	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.A (xxix) Pg 23		Railway charges, if any imposed by North Central Railway (NCR) /Agra Division of NCR while execution of work (except land for permanent structures) shall be borne by contractor and the same shall be reimbursed by the Employer/Engineer on submission of authenticated documents. From the clause, bidder understands that all the railway charges including Railway Block charges which will be required for construction/erection activities will be reimbursed to the contractor. Please confirm that the bidders understanding is correct.	As Per Tender Condition.
332	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.D (xxvii) c Pg 37		(c) The tender concept is schematic and the Tenderer is free to propose his own scheme and quote based on his design keeping following parameters unchanged: • Outline Design Specifications (ODS) • Codal Requirements • IRS Bridge Code • Loading requirements • Foundation is proposed with 1800 mm dia (minimum) piles • Span Configuration is fixed • Super structure shall be suitably designed Pre-stressed Concrete bridge Girder or Composite Steel Bridge Girder for complete bridge The clauses referred are contradictary as Clause 2.1.D (xxvii) c states that the bidder is free to propose either Composite Steel Bridge Girder or Prestressed Concrete Bridge girder for Yamuna River bridge. However, the Clause 2.1.D (x) states that the superstructure is conceptualized to be constructed with suitably designed Composite steel of configuration and No other type of superstructure is acceptable. Kindly Clarify.	Please Refer **Annexure- 3** of **Addendum .**
333	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.D (x) Pg 36		The superstructure is conceptualized to be constructed with suitably designed Composite steel of configuration (34m +7 x 45m + 34m) for the complete length of the bridge, as required or as directed **(No other type of superstructure is acceptable**). This shall include provision of shear connectors in the deck as per tender drawing to suit installation of Ballast less track, later by Track contractor.	Please Refer **Annexure-2 & 3** of **Addendum .**
334	Vol-3/Employer's Requirements/Section-B/Design Clause 1 (iii) Pg 67		The Contractor shall engage the Designer who shall undertake and prepare the design of the Permanent Works and Temporary Works. The Contractor shall establish an office for his core design team at the Site in Agra. The core design team shall function from this office and all meetings and discussions relating to design shall be held in this office. The bidder requests authority to delete this Clause as the designer will be operating with his staff from his Main office which might be located outside Agra and for meetings Designer's staff will be coming at Agra in Main Contractor's office. Also, the designer shall deploy a competent structural engineer cum design coordinator at project office for proper coordination with Bidders team, GC and designer team.	As Per Tender Condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
335	Vol. 3/ Employer's Requirement (Functional Part -1) Clause 2.8, Pg 54		For casting yard, batching plant and other activities a plot of land of approx. 15 hectares or as required for timely completion of work has to be arranged by the contractor at his own cost. The cost of the same is included in lumpsum price of Schedule-A. Development of casting yard by providing internal CC road for movement of vehicle, construction of drains for proper drainage arrangement and construction/maintenance of approach road to casting yard in included in Lump Sum price in Schedule-A. Contractor has to take approval of lay out of casting yard development from Employer. Since, the project is located In urban area of Agra, it is very difficult to get such huge area of 15 hectares for Casting yard land in the nearby vicinity at one place due to maximum private land owners . Hence, it is requested to authority to arrange and provide Government land for Casting yard at nominal rates to Contractor. Also, it is requested that if the Contractor gets Casting yard land beyond 25km from alignment, the Contractor will get reimbursement for lead charges to and from Launching Site if the land provided by Client is more than 25 kms leads.	As Per tender Condition.
336	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.A (vii) e) & Volume 6 Drawing Sheet 16, Pg 20		Design, Construction and erection of special spans: (e) Special Span – 34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge) Clause 2.1.A (vii) e) states the span arrangement as 34mtr + 34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge). However, the span arrangement in Volume 6 drawing GAD states the configuration as 6 x 45.720m + 47.32m = 321.64 m (Steel I- girders). The bidders needs clarificarion which span length arrangement needs to be followed. Also, is the bidder free to change the span length confirguation for Yamuna River Bridge.	Please Refer **Annexure- 2 & 3** of **Addendum .**
337	Vol 3 Employer Requirement and GAD		Not specified Please specify the level at which pile cap will be cast in Yamuna River bridge location	Well foundation shall be provided, please Refer **Annexure- 3 of Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
338	Vol 3 - Employer Requirement Clause 2.1.A (xxix) Pg 23		Necessary permission/ NOC from the Railway/ Road/ municipal corporation and other concerned regulatory authorities for block and working in such locations is in the scope of contractor. Contractor has to plan their works in advance so that reasonable time can be available to obtain the approval from concern authorities. UPMRC will facilitate for getting them permission from concerned regulatory authorities for working in such locations. However, no claim as regards to delay in getting permission / NOC from these agencies will be entertain. Necessary charges required for permission by railway shall be paid by UPMRC. However, if these charges are being paid by contractor, same shall be reimbursed by UPMRC. Necessary permission/ NOC from the Railway/ Road/ municipal corporation and other concerned regulatory authorities is a time taking process, so bidder requests that it should be in the scope of UPMRC in which all necessary correspondence and paper work to be in the scope of UPMRC as it is better if government bodies coordinates with each other to pursue permission in a fast manner. If it is in the scope of Contractor, then it will be much time taking process due to which delays will occur and project construction duration might extend.	As Per tender Condition.
339	Vol 3 - Employer Requirement Clause 2.1.A (xxix) Pg 24		Construction of 06 no. of new residential accommodations (equal to existing built-up area) for Defence families (i.e., Veer Naris) at land provided by Local Military Authority in Agra, provision of 500 Mtr. Of Noise Barrier/View cutter (as per tender drawing and as per direction of Employer) along the alignment for security of Military installations & shifting of 01 (30 mtr.) /02 (60 Mtr.) row of solar panel near jeet Singh stadium as required by Defence Authority/UPMRCL shall be included in Lump Sum Price of contract Bidder requests UPMRC to Provide detailed Architech Drg and RCC Structural drgs of these new residential accomodation to be constructed by contractor. Permission & NOC & Approval. Any taxes, statutory and land Charges to be in scope of UPMRC and its status to be informed by Authority to bidder. Also, In tender GAD, location to be marked along with tentative size for this new residential accomodations. Also, please share the exact location where noise barrier/view cutter of 500 mtr is to be provided in Tender GAD with techincal/construction specifications	As per tender condition. Please refer to Clause A7 of ITT.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
340	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1. A (xxvii) Pg 23		(b) Demolition/dismantling & restoration/relocation of existing FOB's, Bus Shelters, Signages & traffic signals, buildings, offices or any other structure infringing in the work area as per requirement of owning agency/UPMRC. The damaged/unused original material shall be replaced by new material as per design requirement within the lump sum price. The damaged/unusable material shall be property of contractor. Wherever no restoration/relocation is required by owning agency/UPMRC, the material shall be handed over as per para xxvii (a) and no deduction shall be made from the contractor. **Bidder requests authority to Provide details such KMZ File or Autocad Drgs to identify the Structure in ROW which are to be demolished and restored for competetive bidding**.	AutoCad version of drawings are being provided on CPP Portal. However, in case of any discrepancy between soft copy and hard copy, hard copy attached with tender shall prevail.
341	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2. SCOPE OF WORKS Pg 19 & Volume 6_ Drawings GAD Sheet 26		The total length of Corridor-2 viaduct including Bridge across river Yamuna and Viaduct portions in Station but excluding Connecting Viaduct to Depot is 15093.00 Mtr (i.e., from chainage -77 mtr to 15016 mtr.), total length of 2610 Mtr. Viaduct Connection with Ramp (Chainage 0.00m to 2610m) from (nearby) Sadar Bazar Metro Station to existing Corridor-1 Depot at PAC ground & total length of 530 Mtr. Corridor-2 Depot Entry/Exit lines Viaduct with Ramp (Chainage 0.00m to 530m). Please clarify that Solid Ramp approaches at PAC ground for Corridor 1 which starts from Ch. 2500 to Ch. 2610 and for Corridor 2 Depot which starts from Ch. 355 to Ch. 530, please clarify that its design and construction will be in scope of AGCC07 Contractor or Contractor constructing Maintainance depot. Also, the GAD for depot Sheet 27 is incomplete profile upto Ch. 430., please provide upto Ch. 530	Design and Construction shall be part of Lump Sum Schedule. Kindly Refer **Annexure - 18 & 19 of Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
342	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.A (vii) (i) Pg 20 & Volume 6_Drawings 1 Sheet 8, 17		Design and construction of structure to facilitate the train interchange facility on main line i.e., Corridor-II works and interconnecting viaduct to Depots, provisions of Scissors & Cross – Overs as per tender Drawings will be constructed. Civil works of such arrangement is a part of Lump Sum scope of this contract. (i) Design, Construction and erection of special spans: (a) Composite Steel Girder – 1 x 45 Mtr. - Near Rawli Railway crossing between Pratap – Pura & Collectorate metro Station as shown in GAD. (b) Composite Steel Girder - 1 x 45mtr. span – One near Jeet Singh Stadium (Defence Ground) (c) Composite Steel Girder – 1 x 60 mtr. - Near St. Johns college (Rly. Crossing) as shown in GAD. (d) Composite Steel Spans - Over NHAI Flyover on NH-19 between M.G. Road Metro station & Sultan Ganj Crossings Metro Station (Total Length - 37.875 mtrs. + 27 mtrs.) From the Employers requirements, it is observed that there are 4 Obligatory Structural Steel spans to be designed, constructed and erected in scope of Contractor. However, from Tender GAD there are 2 additional Obligatory Spans as mentioned below except the 4 obligatory spans mentioned in Volume 3 Cl. Clause 2.1.A (vii) (i) 1. At Corridor 1 Crossing - 1 x 39 mtr 2. At Highway Road crossing after Yamuna Bridge - 1 x 45 mtr Please clarify whether these 2 spans are also to be be designed, constructed and erected as a composite steel girder spans in scope of Contractor as obligatory spans. Bidder also needs to be clarified whether In-principal approval of	Confirmed. It shall be part of Lump-Sum Schedule.
343	Vol. 3/ Employer's Requirement (Functional Part -1) Clause 2.8 Pg 55		C&D Waste generated from construction depot, viaduct, station during construction to be transported to any other processing plant or designated area by Municipality and cost of the same is also included in lump sum cost of schedule A. Bidder requests authority to provide details of such nearby C&D waste plants operational in vicinity of alignment. Also, it is requested authority to provide dumping area as the project is in core city and dumping area on such large scale will be difficult to find without the help of Government body.	As per tender condition. Please refer to Clause A7 of ITT.
344	Vol. 3/ Employer's Requirement (Functional Part -1), Pg 24		The supervision charges require by the owning agencies such Torrent, DVVNL, Jal Nigam etc for uncharted utilities shall be paid by UPMRC. The supervision charges require for chartered utilities shall be borne by contractor. The Authority is requested to pay the actual supervision charges and other stautory official charges for Charted as well as uncharted utilities involved in the project.	As per tender condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
345	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Pg 25-26		2.1.A.3 The work content against the lumpsum component of the work shall also include but not limited to the following: (i) Though Alignment plans (both vertical and horizontal) and pier locations are provided by the Employer to the Contractor. Contractor would however design the span configuration (only) based upon his proposal subject to obligatory requirements. Utility identification at all the foundation locations will be done by the Contractor before starting piling/excavationand in case utility(s) is encountered or obligatory requirements of Local Authorities are to be met out, the Contractor would modify the span configuration at such locations to save the utility(s) or to meet out the obligatory requirements within the accepted price. The shifting of the utility(ies) would be undertaken only in exceptional circumstances where in the opinion of the Engineer no other option is available. Shifting/diversion cost of all the charted utilities is included in Lump Sum price of Schedule-A. The maintenance of diverted/supported utilities shall be from the start of construction till handing over it to concerned owning agency and cost of the same is included in Lump sum price Schedule- A. The carriage of excavated earth involved in utility diversion is covered under lump-sum quoted price. No claim as regard to delay on account of execution of utility diversion will be entertained. All temporary diversion of any utilities done to facilitate the construction activity shall also be the part of the lump sum quoted price. No payment shall however be made for supporting the utilities, carriage of excavated earth during execution of work. As per the mention Clause, it is understood that the Contractor the charted utilities in	As per tender condition. Please refer to Clause A7 of ITT.
346	General		Not specified As there are presence of numerous Street lightning poles, high masts and its cable in centre of alignment which will be required to be removed for construction activities. Bidder requests authority to confirm the relocation location confirmation whether the street lights has to be restored to it original position at centre or on both end sides of road. Similarly, there are advertisement hoarding infringing with the alignment which needs to be removed and restored, location for the same to be provided by Authority. Bidder understands that the charges for removing and restoration of mentioned utilities will be paid by Employer on SOR basis. Please confirm	As per tender condition. Please refer to Clause A7 of ITT.
347	General		Not specified During the Site visit it was observed that there are HT lines crossing and infringing with alignment just before Yamuna River Bridge Crossing which will be required to be shifted for construction activities. Bidder requests authority to keep the scope of this shifting and relocation in employer's scope. If in case the same has to be done by Contractor, Bidder understands that the charges for removing and restoration of HT lines will be paid by Employer on SOR basis. Please confirm	As per tender condition. Please refer to clause A7 of ITT.
348	General		Not specified During the Site visit it was observed that there is presence of Box drain from Agra Mandi Station to Foundary Nagar Station infringing with Pier locations which needs to be shifted. Bidder requests authority to provide relocation plan for the same from the local authority.	Please refer to Clause A7 of ITT. Kindly refer to **Annexure-23 of Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
349	General		Not specified During the Site visit it was observed that there is presence of large nursery infringing with alignment and access routes to be prepared for this area, hence this nursery needs to be shifted and large nos of tree cutting to be done in this area. Bidder requests authority to provide relocation plan for the same from the local authority/Forest Authority. Also, please confirm the permission status initiated by the Employer for the same if any.	The required land/area shall be made available in accordance with **Clause 2.2 of GCC**. Kindly Refer to Clause A7 of ITT.
350	Vol-3/Employer's requirment/2.1.B.2/ Page 31		Some of the major utilities cannot be diverted. Contractor shall take into consideration the existence of these utilities and design the foundations at these locations accordingly, if required, the pile cap top level shall be fixed at the bottom of the utilities without any extra cost Bidder requests authority to specifically provide the list of utilities which cannot be diverted so as to consider the same for prebid design of span arrangement.	As per tender condition. Please refer to Clause A7 of ITT.
351	INSTRUCTIONS TO TENDERERS Annexure-12 [As per clause C 13] Pg 73		a) Piling Equipment Rotary Rig (along with associated cranes) - 18 set b) Fully Automatic and Computerized Batching Plant - 4 Nos. (2 no. of 60 Cum/h and 2 no. 30 Cum/h) minimum or equivalent capacity in different configuration at casting yard with an RO of suitable capacity for proper quality of water. - Total 180 cum/hr c) Concrete Pumps - 4 nos d) Boom Placers - 8 nos e) Cranes in casting yard/site of suitable capacity - 2 nos f) Cranes of suitable capacity for station works - 8 nos g) Cranes of suitable capacity for launching /Erection - 6 nos h) Gantry of suitable capacity in casting yard - 12 nos i) Minimum no. of Pre-casting beds (for U girders) - 40 nos j) Transit Mixtures - 20 nos k) Trailers of suitable capacity for transporting U Girders/Pier cap/arch girder/Tgirder - nos l) Lab Testing equipments-fully equipped for site tests. - Refer appendix 11 of Employers Requirement m) Formwork for Pier, Pier Cap, Portal Beam, I Beam, T-girder etc. - As per requirement to meet Key dates The proposed minimum machinery requriements is very much higher side with respect to quantum of work. Bidder request you to reduce the minimum machinery requirement to moderate so as to qualify sufficient bidders for considerable numbers of competetive quotes.	As per tender condition.

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
352	Vol-4/OCS/Civil works for Viaduct& Station Clause 9.4.1 (b) Pg 143		Bored cast-in-situ piles which are stable may often be installed with only a small casing length at the top. A minimum of 8m length of top of of bore or as directed by Engineer shall invariably be provided with casing to ensure against loose soil falling into the bore. In cases in which the side soil can fall into the hole, it is necessary to stabilize the side of the bore hole with drilling mud (Polymer) or a suitable temporary steel casing. Nothing shall be paid extra on account of temporary liner. In case of marine clay or soft or soil having aggressive material, permanent steel liner of sufficient length shall be provided up to full length of such strata. The minimum thickness of steel liner shall be 6 mm for piles upto 1.2 m dia, 8 mm for piles upto 1.5 m dia. No extra payment shall be made for the permanent liner. Please confirm whether minimum 6mm thickness or 8mm thickness permanent liner needs to be provided for pile diameter of 1m to 1.2m as per requirement of Codal Provisions.	Kindly refer clause 17 of ER/ Construction/ Vol-3 of tender document. Provision of permanent liner shall be as per site/ geotechnical requirements.
353	Vol-3/ Employer's Requirements/Section-B/Functional Part-1 Clause 2.1.C e), Pg 33		Provision of suitably designed pile foundations for piers in accordance with actual soil parameters as obtained from detailed sub surface exploration as required or as directed. All foundation shall be on piles of minimum 1000 mm dia. with minimum 8mm thick permanent MS liners as per requirements, for complete pile length above hard/ rocky strata duly anchored as per Codal provisions. All piles shall be cast-in-situ piles bored by hydraulic rotary rig only;	As per tender condition.
354	Arch Girder Span Pg 30		Arch Girder spans drawings concrete outline provided Please provide clear drawings as the outline drawings of arch girder is unclear. Also, please confirm whether the contractor can propose any another superstructure like I-girder, T-girder, U-girder instead of Arch girder in Depot Line.	Kindly refer to Annexure 2 of Addendum..
355	Vol-4/OCS/Civil works for Viaduct& Station Clause 4.6, Pg 48		Cement Content Cement content (excluding mineral admixture) in concrete shall not be less than 400 kg/ cum for RCC work and 430 kg/ cum for PSC work under severe exposure as per IRS-CBC Table 4(c), Clause 5.4.5. In case of piling work minimum cement content shall be as specified under Pile Foundations. However, this shall be limited to 540 kg/ cum of concrete. Bidder requests to consider the minimum cement content for exposure conditions as moderate instead of Severe exposure. Also, the maximum cement content requirement of 540kg/cum to be reduced to 500kg/cum, in most metro projects the same is considered.	As per tender condition.
356	Vol-4/OCS/Civil works for Viaduct& Station, Clause 4.6 Pg 48		Not specified Considering the sustainability and economics for the project and mix design as per IRS-CBC, bidder request to allow Contractor for use of Flyash and GGBS in mix design of Ready mix concrete for all grades.	As per tender condition.
357	Volume 6 Drawing Sheet 8		Not specified From the Alignment GAD drawing, it is undertsood that there is future provision of Subhash Park Station from P191 A to P191 D. The employer is requested to confirm application of additional load and necessary changes arising in Pier caps/Cross arms to be considered for Future Station work refered to Subhash park mentioned in GAD from P191A TO 191D.	Provision for Future station are to be kept in foundation, substructure & superstructure. Kindly refer to **Annexure-1** of **Addendum.**

Sl. No.	Reference Volume / Clause	Existing Clause	Queries	UPMRC's Reply
358	Volume 6 Drawing Sheet 17 to 21		From P 415 to P516, 102 nos spans are shown with U/T girder arrangement Bidder requests authority to Confirm whether these 102 nos spans can also be provided with Standard PSC I-girder spans considering limited space for placement of cranes for launching.	Confirmed after approval of Employer/Engineer.
359	Volume 6 Drawing MEP		Kalindi Vihar Station Structural Arrangement The Kalindi Vihar Station Structural Arranement shown in Tender drawings is of irregular shape on 2 piers station. Bidder requests authority to confirm whether the Bidder can change the structural arrangement to Single Pier Station.	Kindly Refer to **Annexure - 24** of **Addendum**
360	Volume 6 Drawing_2		Applicability of Type 1 &Type 2 U-Girder along varying radii spans. Further modification in shape of Type -2 U girder may be allowed subjected to SOD compliance and approval from authority.	**Confirmed**. Without any financial implication to the Employer
361	Volume_03_ER/2.1.B.7		Agra College is the interchange location for underground Agra College Metro Station in Corridor-I and Elevated Agra College Metro Station in Corridor-II. Scope of Interchange in Agra College station may please be shared	As per tender condition. Please refer **Annexure - 20 of Addendum .**
362	Volume_03_ER/2.1.B.8		Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station During the Site visit, it was observed that the Agra Cant Station and certain viaduct upto Pier P12 is lying in DRM office campus which is still operational. **Bidder needs to be clarified the land aquisition status of the Railway land. Detailed Scope of redevelopent in Agra Cantt. Metro/Rly Station i.e FOB if any may be shared.**	The required land/area shall be made available in accordance with clause 2.2 of GCC. Kindly refer to Clause A7 of ITT.
363	Volume_03_ER/2.8		The contractor depending upon site requirements/constraints may propose single pier or three piers type of station supporting scheme based on the merit of the case at no additional cost to the Employer and adhering with the time schedule. The employer/Engineer decision on change of scheme will be final. The employer is requested to confirm possibility of Change in Typical Cross section of Kalindi Vihar Station to single pier.	Kindly Refer to **Annexure - 24** of **Addendum.**

Summary Sheet of Addendum-4 : Tender AGCC-07

Tender AGCC-07: Design and Construction of Main Line Elevated Viaduct from Agra Cantt. Metro Station to Kalindi Vihar Metro Station [Chainage (-77m) to 15016m] including Viaduct Connection with Ramp (Chainage 0.00m to 2610m) from (nearby) Sadar Bazar Metro Station to existing Corridor-1 Depot at PAC ground & Corridor-2 Depot Entry/Exit lines Viaduct with Ramp (Chainage 0.00m to 530m) and 14 nos. of Elevated Stations i.e., Agra Cantt, Sadar Bazar, Pratap Pura, Collectorate, Agra College, Hariparvat Chauraha, Sanjay Place, M.G. Road, Sultanganj crossing, Kamla Nagar, Ram Bagh, Foundary Nagar, Agra Mandi & Kalindi Vihar metro stations including Civil, Associated Ancillary Structures, Architectural Finishes, Water Supply, Sanitary Installation, Drainage, External Development, Fire Fighting, Fire Detection, E&M works and PEB structures in Corridor 2 of Agra Metro at Agra, Uttar Pradesh, India.

Sl. No.	Existing Clause no.	Clause in Existing Tender Document	Revised Clause	Revised Clause places as annexure/Pg No
1	Clause 2.1.A of ER functional Part 1, Notes (Viaduct & Stations)	(XXXI) (Dynamic Integrity test on 100% piles and cross hole sonic integrity test on 25% of piles as per Outline Construction Specifications for Civil Works. 6) In some stretches placing of heavy cranes for erection of U-girders may not be possible and launcher is to be used in such locations. Launcher and cranes are to be used for erection depending upon site conditions. -	(XXXI) (Dynamic Integrity test on 100% piles and cross hole sonic integrity test on 25% of piles as per Outline Construction Specifications for Civil Works. **However Sonic tubes will be installed on 100% working piles.** 6) In some stretches placing of heavy cranes for erection of U-girders may not be possible and launcher is to be used in such locations. Launcher and cranes are to be used for erection depending upon site conditions. **In case of using other erection schemes (such as Launcher or any other) causing impact on structure, any additional design/design checking shall be done by contractor, and without any financial implication to Employer.** **17) Subhas Park Metro station is a future station, however all the necessary arrangement as shown in drawings to make this station functional in future shall be included in Lump Sum.**	Please refer Annexure-01. UPMRC/AGCC-07/Vol-3/ Employer's quirements/Section-B/Functional Part-1. Page no. - 24R & 25R
2	Clause 2.1.A para (vii) of (i) (e) of ER functional Part 1, Notes (Viaduct & Stations)	(e) Special Span – 34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge).	(e) Special Span – ~~34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge)~~ (20 Mtr. + 6 x 45.720 mtr. + 47.320 Mtr. + 18.4 Mtr.)	Please refer Annexure-02. UPMRC/AGCC-07/Vol-3/ Employer's Requirements/Section-B/Functional Part-1. Page no. - 21R
3	Clause 2.1.D of ER functional Part 1, Notes (Viaduct &	2.1.D BRIDGE ACROSS RIVER YAMUNA Design & Construction of Civil Engineering works of Bridge having spans of configuration (34m + 7*45m + 34m) across river Yamuna on Corridor-II of Agra Metro Rail Project as shown in the GAD of Yamuna Bridge- Total length of the Bridge is 383mtr. which is to be constructed on downstream of existing bridge on NH-19. (i) Conducting detailed subsurface exploration and taking at least one number bore hole at every foundation location, including analysis, interpretation and reporting of results thereof in accordance with IRC 78 (Standard Specifications and Code of practice of Road Bridges – Section VII Foundations and Substructure) and IS 2911 required for preparations of design of foundations. The depth of soil exploration shall be as per codal provisions, required for pile/well foundation; (x) The superstructure is conceptualized to be constructed with suitably designed Composite teel of configuration (34m +7 x 45m + 34m) for the complete length of the bridge, as required or as directed (No other type of superstructure is acceptable). This shall include provision of shear	2.1.D BRIDGE ACROSS RIVER YAMUNA Design & Construction of Civil Engineering works of Bridge having spans of configuration ~~(34m + 7*45m + 34m)~~ (20 Mtr. + 6 x 45.720 mtr. + 47.320 Mtr. + 18.4 Mtr) across river Yamuna on Corridor-II of Agra Metro Rail Project as shown in the GAD of Yamuna Bridge- ~~Total length of the Bridge is 383mt~~r. which is to be constructed on downstream of existing bridge on NH-19. (i) Conducting detailed subsurface exploration and taking at least one number bore hole at every foundation location, including analysis, interpretation and reporting of results thereof in accordance with IRC 78 (Standard Specifications and Code of practice of Road Bridges – Section VII Foundations and Substructure) and IS 2911 required for preparations of design of foundations. The depth of soil exploration shall be as per codal provisions, required for ~~pile~~/well foundation; The superstructure is conceptualized to be constructed with suitably designed Composite teel of configuration ~~(34m +7 x 45m + 34m)~~ (20 Mtr. + 6 x 45.720 mtr. + 47.320 Mtr. + 18.4 Mtr) for the complete length of the bridge, as	Please refer Annexure-03. UPMRC/AGCC-07/Vol-3/ Employer's Requirements/Section-B/Functional Part-1. Page no. - 35R Please refer Annexure-03. UPMRC/AGCC-07/Vol-3/ Employer's Requirements/Section-B/Functional Part-1. Page no. - 36R Please refer Annexure-03. UPMRC/AGCC-07/Vol-3/ Employer's

	Stations)	connectors in the deck as per tender drawing to suit installation of Ballast less track, later by Track contractor. (xi) Providing suitably designed railing on both side of deck arrangement, expansion joints, drainages spouts /spreaders, inspection ladder along with suitably located manholes. Providing holding down bolts for fixing signaling Masts etc. at the location and spacing as required by traction contractor as per tender drawing. Strengthening at signaling Mast locations. A potential bidder may explore the possibility of pile foundation subject to employer's approval without extra cost, saving if any shall be pass-on to the employer. (xvi) Suitable provision to be made for inspection of expansion joints and PSC Girders for inspection at a later date after completion of the bridge. Manholes to be provided with M.S. covers with epoxy painting and locking arrangement.	required or as directed (No other type of superstructure is acceptable). This shall include provision of shear connectors in the deck as per tender drawing to suit installation of Ballast less track, later by Track contractor. (xi) Providing suitably designed railing on both side of deck arrangement, expansion joints, drainages spouts /spreaders, inspection ladder along with suitably located manholes. Providing holding down bolts for fixing signaling Masts etc. at the location and spacing as required by traction contractor as per tender drawing. Strengthening at signaling Mast locations. ~~A potential bidder may explore the possibility of pile foundation subject to employer's approval without extra cost, saving if any shall be pass-on to the employer.~~ (xvi) Suitable provision to be made for inspection of expansion joints ~~and PSC Girders~~ for inspection at a later date after completion of the bridge. Manholes to be provided with M.S. covers with epoxy painting and locking arrangement.	Requirements/Section-B/Functional Part-1. Page no. - 35R Please refer Annexure-03. UPMRC/AGCC-07/Vol-3/ Employer's Requirements/Section-B/Functional Part-1. Page no. - 36R Please refer Annexure-03. UPMRC/AGCC-07/Vol-3/ Employer's Requirements/Section-B/Functional Part-1. Page no. - 37R
4	Clause 2.1.B of ER functional Part 1,	2.1.B Scope of Work Under Lump Sum Price - Stations (xxvii) Provision of structural steel arrangement below U-girders as per drawing no. KNPAGDDC-01-TDR-TYP-STR-CRS-15010_R0 (XVII) Bore wells 1 No. (capacity 5-6 cum/hour) with submersible pumps of required capacity, cables, starter and necessary connection in main panel at each station and connection with suitable dia. of G.I. Line from bore wells to the underground water tanks as approved by Engineer. Minimum depth of tubewell shall be 400 m. Contractor has to arrange one number of water connection at each station from concerned local authorities. UPMRCL will facilitate the contractor in this connection. The cost of same is included in Lump Sum price Schedule-A.	(xxvii) Provision of structural steel arrangement below U-girders as per drawing no. ~~KNPAGDDC-01-TDR-TYP-STR-CRS-15010_R0~~ **KNPAGDDC-01-TDR-TYP-STR-CRS-15023, R1** (xvii) Bore wells 1 No. (capacity 5-6 cum/hour) with submersible pumps of required capacity, cables, starter and necessary connection in main panel at each station and connection with suitable dia. of G.I. Line from bore wells to the underground water tanks as approved by Engineer. Minimum depth of tubewell shall be ~~400~~ ~~m~~ **200** **m**. Contractor has to arrange one number of water connection at each station from concerned local authorities. UPMRCL will facilitate the contractor in this connection. The cost of same is included in Lump Sum price Schedule-A.	Clause 2.1.B of ER functional Part 1, Pg. -30R Please refer Annexure-04. Clause 2.1.B of ER functional Part 1, Pg. -30R Please refer Annexure-04.
5	Clause 2.1.B.8 of ER functional Part 1,	Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station. Refer Tender Drawing. - Re-development work of Agra Cantt. Railway Station is not in the scope of this tender. - All co-ordination, Integration of the Agra Cantt Metro Station with Re development work of Agra Cantt. Railway Station. - Design and construction of Agra Cantt Metro Station including multi model integration with Agra Cantt railway station is Part of Lump Sum schedule under this work.	Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station as planned by Indian Railways. . Refer Tender Drawing. - Re-development ~~work~~ plan of Agra Cantt. Railway Station is not in the scope of this tender. - All co-ordination for Integration of Agra Cantt Metro Station. ~~with Re development work of Agra Cantt. Railway Station.~~ - Design and construction of Agra Cantt Metro Station including multi model integration ~~with Agra Cantt railway station~~ is Part of Lump Sum schedule under this work.	please refer to Annexure- 5 Clause 2.1.B.8 of ER functional Part 1, Pg. -33R

6	Clause 2.1.B.8 of ER functional Part 1	-	(xxxi) Necessary permission/ NOC from the Railway/ Road/ municipal corporation and other concerned regulatory authorities for block and working in such locations is in the scope of contractor. Contractor has to plan their works in advance so that reasonable time can be available to obtain the approval from concern authorities. UPMRC will facilitate for getting them permission from concerned regulatory authorities for working in such locations. However, no claim as regards to delay in getting permission / NOC from these agencies will be entertain. Necessary charges required for permission by railway shall be paid by UPMRC. However, if these charges are being paid by contractor, same shall be reimbursed by UPMRC. Railway charges, if any imposed by North Central Railway (NCR) /Agra Division of NCR while execution of work (except land for permanent structures) shall be borne by contractor and the same shall be reimbursed by the Employer/Engineer on submission of authenticated documents. Road charges, if any imposed by NHAI while execution of work (except land for permanent structures) shall be borne by contractor and the same shall be reimbursed by the Employer/Engineer on submission of authenticated documents.	please refer to Annexure- 6 Clause 2.1.B.8 of ER functional Part 1, Pg. -31R & 32R

7	Clause 2.1.D of ER functional Part 1, Notes (Viaduct & Stations)	(i) Construction of super structure of standard U-Girder span (28m) and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier cap, Bearing (Elastomeric) & crash barrier as per tender drawing. The design of standard span U-Girder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal & crash barrier for these spans shall be provided by UPMRC. Also, the reinforcement in the U-Girder, standard Pier Cap & bearing pedestal shown in tender drawing is the minimum reinforcement to be provided. However, in case the contractor assesses that the reinforcement has to be increased then the same shall be provided after approval of UPMRC without any extra cost.	(i) Construction of super structure of standard U-Girder span (28m) and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier cap, Bearing (Elastomeric) ~~& crash barrier~~ as per tender drawing. The design of standard span U-Girder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal ~~& crash barrier~~ for these spans shall be provided by UPMRC. Also, the reinforcement in the U-Girder, standard Pier Cap & bearing pedestal shown in tender drawing is the minimum reinforcement to be provided. However, in case the contractor assesses that the reinforcement has to be increased then the same shall be provided after approval of UPMRC without any extra cost.	please refer to Annexure- 7 Clause 2.1.A of ER functional Part 1, Pg. -20R
8	UPMRC/AGCC-07/Vol. 3/ Employer's Requirement (Appendices)	Key dates	Key dates	Please refer to Annexure- 8. UPMRC/AGCC-07/Vol. 3/ Employer's Requirement (Appendices), page- 98R to 102R
9	UPMRC/AGCC-07/Vol-1/NIT	Complition period of work 24 months	Complition period of work ~~24 months~~ **30 months**	please refer to Annexure- 9 NIT 1,2, Page 3R
10	Volume -6	-	Finishing Schedule Drawing no. : KNPAGDDX01-TDR-TYP-ARC-SCH-62100	please refer to Annexure- 10
11	Vol_04_OCS_ODS_SOD /E.00 Electrical works-General /3.2 Switchboards sub clause 3.2.3 /E.01 MV Switchgear /8.6 Switch board bus bars/sub clause 8.6.1 / sub clause 8.6.9/8.8 Instrument accommodation/sub clause 8.8.1/8.14.2	3.2.3 All bus bars shall be electrolytic copper with purity of 99.9% and rated for the incoming switch or breaker rating. Current density shall be 1.4 amp/sq. mm up to 500 amp and 1.2 amp/sqmm beyond 500 amp. The Bus Bar temperature rise over ambient shall be as per IS/IEC standards. The calculations for temperature rise should be furnished for approval 8.6.1 The bus bar and interconnections shall be electrolytic tinned copper and of rectangular cross sections suitable for full load current for phase bus bars and full rated current for neutral bus bar as specified in BOQ and shown on drawings and rated for a temperature rise over the ambient temperature specified as per IEC 61439 standard. Bus bar supporting system shall be suitable to withstand the stresses as per standard to sustain symmetrical fault level at 415 volts side for 1 second or as per schedule of quantities. 8.6.9 Feeder connections shall be solid copper bars duly insulated with bimetallic clamps wherever required. 8.8.1 Instruments and indicating lamps shall not be mounted on the Circuit Breaker Compartment door. The current transformers for metering and for protection shall be mounted on the solid copper busbars with proper supports. 8.14.2 A main earth bar of copper shall be provided throughout the full length of the Switch Board to earth all switchgears with a provision to make connections to the sub-station earth's on both sides with double bi- metallic washers.	3.2.3 All bus bars shall be electrolytic ~~copper~~ **aluminium** with purity of 99.9% and rated for the incoming switch or breaker rating. Current density shall be 1.4 amp/sq. mm up to 500 amp and 1.2 amp/sqmm beyond 500 amp. The Bus Bar temperature rise over ambient shall be as per IS/IEC standards. The calculations for temperature rise should be furnished for approval 8.6.1 The bus bar and interconnections shall be ~~electrolytic tinned copper~~ **aluminum** and of rectangular cross sections suitable for full load current for phase bus bars and full rated current for neutral bus bar as specified in BOQ and shown on drawings and rated for a temperature rise over the ambient temperature specified as per IEC 61439 standard. Bus bar supporting system shall be suitable to withstand the stresses as per standard to sustain symmetrical fault level at 415 volts side for 1 second or as per schedule of quantities. 8.6.9 Feeder connections shall be solid ~~copper~~ **aluminum** bars duly insulated with bimetallic clamps wherever required. 8.8.1 Instruments and indicating lamps shall not be mounted on the Circuit Breaker Compartment door. The current transformers for metering and for protection shall be mounted on the solid ~~copper~~ **aluminum** busbars with proper supports. 8.14.2 A main earth bar of ~~copper~~ **aluminum** shall be provided throughout the full length of the Switch Board to earth all switchgears with a provision to make connections to the sub-station earth's on both sides with double bi-metallic washers.	Please refer Annexure- 11 . Clause 8.6.1, UPMRC/AGCC-07/Vol.-04/Technical Specifications/E&M, Page -242R, 263R, 264R,265R,267R

12	Volume -04 OCS, ODS	BOD<30 mg/l	BOD<~~30 mg/l~~ **20 mg/l**	please refer to Annexure- 12 UPMRC/AGCC-07/Vol-4/OCS/Part-2/Architectural & Plumbing clause 23.3 page 168R
13	BOQ - Schedule D - Part E: BUILDING MANAGEMENT SYSTEM FOR STATION	-	Technical specification for BMS.	Please refer Annexure- 13 for BMS Technical specification..
14	-	-	Surge Protection Devices (SPD)	Please refer Annexure- 14 for BMS Technical specification..
15	Clause 1.4.2B UPMRC/AGCC-07/Vol-1/NIT, Page 9 & 10	(i) T1 – Liquidity:The tenderer must have liquidity of at least Rs. 109.24 Crores. (ii)T2 - Net Worth: Net Worth of tenderer during last audited financial year should be > INR 152.93 Crore. (iii) T3 - Annual Turnover: The average annual financial turnover of the bidder during the last five years ending 31st March of the previous Financial Years should be >INR 611.72 Crore.	(i) T1 – Liquidity:The tenderer must have liquidity of at least Rs. ~~109.24~~ **87.39 Crores**. (ii)T2 - Net Worth: Net Worth of tenderer during last audited financial year should be > INR ~~152.93~~ **122.34 Crore.** (iii) T3 - Annual Turnover: The average annual financial turnover of the bidder during the last five years ending 31st March of the previous Financial Years should be >INR ~~611.72~~ **489.37 Crore.**	please refer to Annexure- 15,Page 9R & 10R of NIT
16	Vol-6, Tender Drawings	Drawing No.:- KNPAGDDC-01-TDR-ACT-ARC-PLN-48052.		Please refer Annexure-16
17	Vol-6, Tender Drawings	Drawing No.:- KNPAGDDC-01-TDR-HPC-ARC-PLN-53051,R3 KNPAGDDC-01-TDR-HPC-ARC-PLN-53052,R3	Drawing No.:- KNPAGDDC-01-TDR-HPC-ARC-PLN-53051,R4 KNPAGDDC-01-TDR-HPC-ARC-PLN-53052,R4	Please refer Annexure-17
18	Vol-6, Tender Drawings	Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09047.	Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-09046, KNPAGDDC-01-TDR-ELV-VDC-DWG-09047.	Please refer Annexure-18
19	Vol-6, Tender Drawings	Typical c/s of ramp location	Drawing No.:- KNPAGDDC-01-TDR-ELV-VDC-DWG-13090	Please refer Annexure-19
20	Vol-6, Tender Drawings	Drawing No.:- KNPAGDDC-01-TDR-ACL-ARC-PLN-52051, R3 KNPAGDDC-01-TDR-ACL-ARC-PLN-52052,R3	Drawing No.:- KNPAGDDC-01-TDR-ACL-ARC-PLN-52051,R4 KNPAGDDC-01-TDR-ACL-ARC-PLN-52052,R4	Please refer Annexure-20
21	Volume -06 MEP Drawings DRG. NO. KNPAGDDC-01-TDR-TYP-BMS-VEW-63403	DRG. NO. KNPAGDDC-01-TDR-TYP-BMS-VEW-63403	AGCC05-11718A-TDR-GKT-IC-BMS-41201	Please refer Annexure-21
22	Volume -06 MEP Drawings	Volume -06 MEP Drawings	Drawing of 33KV YAMUNA RIVER CROSSING AT WATER WORKS	please refer to Annexure- 22
23	Volume -06 Drawings	GAD	Span Arrangement - Agra Corridor KNPAGDDC-01-TDR-ELV-VDC-DWG-09028 KNPAGDDC-01-TDR-ELV-VDC-DWG-09031 KNPAGDDC-01-TDR-ELV-VDC-DWG-09032 KNPAGDDC-01-TDR-ELV-VDC-DWG-09033 KNPAGDDC-01-TDR-ELV-VDC-DWG-09034 KNPAGDDC-01-TDR-ELV-VDC-DWG-09035 KNPAGDDC-01-TDR-ELV-VDC-DWG-09036 KNPAGDDC-01-TDR-ELV-VDC-DWG-09037 KNPAGDDC-01-TDR-ELV-VDC-DWG-09038 KNPAGDDC-01-TDR-ELV-VDC-DWG-09039 KNPAGDDC-01-TDR-ELV-VDC-DWG-09040 KNPAGDDC-01-TDR-ELV-VDC-DWG-09041	please refer to Annexure- 23

24	Volume -06 Drawings	Kalindi Vihar Metro station Drawings	KNPAGDDC-01-TDR-KLV-ARC-PLN-61051,R1 KNPAGDDC-01-TDR-KLV-ARC-PLN-61052,R1 KNPAGDDC-01-TDR-KLV-ARC-PLN-61053,R1 KNPAGDDC-01-TDR-KLV-ARC-PLN-61054,R1 KNPAGDDC-01-TDR-KLV-ARC-CRS-61071,R1 KNPAGDDC-01-TDR-KLV-ARC-LGS-61072,R0	please refer to Annexure- 24
25	Volume 4 OCS &ODS	No. of Cars = 6	No. of Cars = ~~6~~ **3**	please refer to Annexure- 25, ODS Page -12R of 78
26	Volume -06 Drawings	Pier Center Co-ordinates- Agra Metro Corridor-2 KNPAGDDC-01-TDR-ELV-VDC-DWG-09052,R0 KNPAGDDC-01-TDR-ELV-VDC-DWG-09053,R0 KNPAGDDC-01-TDR-ELV-VDC-DWG-09054,R0 KNPAGDDC-01-TDR-ELV-VDC-DWG-09055,R0 KNPAGDDC-01-TDR-ELV-VDC-DWG-09056,R0	Pier Center Co-ordinates- Agra Metro Corridor-2 KNPAGDDC-01-TDR-ELV-VDC-DWG-09052,R1 KNPAGDDC-01-TDR-ELV-VDC-DWG-09053,R1 KNPAGDDC-01-TDR-ELV-VDC-DWG-09054,R1 KNPAGDDC-01-TDR-ELV-VDC-DWG-09055,R1 KNPAGDDC-01-TDR-ELV-VDC-DWG-09056,R1	please refer to Annexure- 26
27	Volume -06 Drawings	Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-54051, Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-54052,	Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-54051,R5 Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-54052,R5	please refer to Annexure- 27
28	Volume -06 Drawings	Drawing No.:- KNPAGDDC-01-TDR-MGR-ARC-PLN-55051, Drawing No.:- KNPAGDDC-01-TDR-MGR-ARC-PLN-55052,	Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-55051,R4 Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-55052,R4	please refer to Annexure- 28
29	Volume -06 Drawings	Drawing No.:- KNPAGDDC-01-TDR-RMB-ARC-PLN-58051, Drawing No.:- KNPAGDDC-01-TDR-RMB-ARC-PLN-58052,	Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-58051,R2 Drawing No.:- KNPAGDDC-01-TDR-SPL-ARC-PLN-58052,R2	please refer to Annexure- 29
30	Volume -06 Drawings	Drawing No.: - AGCC07-TDR-UTILITY SHEET -01, AGCC07-TDR-UTILITY SHEET -02 AGCC07-TDR-UTILITY SHEET -03 AGCC07-TDR-UTILITY SHEET -11	Drawing No.: - AGCC07-TDR-UTILITY SHEET -01,R1 AGCC07-TDR-UTILITY SHEET -02,R1 AGCC07-TDR-UTILITY SHEET -03,R1 AGCC07-TDR-UTILITY SHEET -11,R1	please refer to Annexure- 30
31	Volume -06 Drawings	Drawing No.:- KNPAGDDC-01-TDR-KLN-ARC-PLN-57051, Drawing No.:- KNPAGDDC-01-TDR-KLN-ARC-PLN-57052,	Drawing No.:- KNPAGDDC-01-TDR-KLN-ARC-PLN-57051,R2 Drawing No.:- KNPAGDDC-01-TDR-KLN-ARC-PLN-57052,R2	please refer to Annexure- 31
32	Volume -06 Drawings	Drawing No.:- KNPAGDDC-01-TDR-FDN-ARC-PLN-59051, Drawing No.:- KNPAGDDC-01-TDR-FDN-ARC-PLN-59052,	Drawing No.:- KNPAGDDC-01-TDR-FDN-ARC-PLN-59051,R2 Drawing No.:- KNPAGDDC-01-TDR-FDN-ARC-PLN-59052,R2	please refer to Annexure- 32
33	Volume -06 Drawings	Drawing No.:- KNPAGDDC-01-TDR-AGM-ARC-PLN-60051, Drawing No.:- KNPAGDDC-01-TDR-AGM-ARC-PLN-60052,	Drawing No.:- KNPAGDDC-01-TDR-AGM-ARC-PLN-60051,R1 Drawing No.:- KNPAGDDC-01-TDR-AGM-ARC-PLN-60052,R1	please refer to Annexure- 33
34	Revised excel sheet of BOQ is being uploaded.			

- Construction of 06 no. of new residential accommodations (equal to existing built-up area) for Defence families (i.e., Veer Naris) at land provided by Local Military Authority in Agra, provision of 500 Mtr. Of Noise Barrier/View cutter (as per tender drawing and as per direction of Employer) along the alignment for security of Military installations & shifting of 01 (30 mtr.) /02 (60 Mtr.) row of solar panel near jeet Singh stadium as required by Defence Authority/UPMRCL shall be included in Lump Sum Price of contract.
- Rented accommodation in Agra, if needed, for 06 no. of Defence families (i.e., Veer Naris at Shaheed Bhawan near Sadar Bazar Metro Station) to facilitate construction activities and till permanent shifting of these defence families (06 nos.) to newly constructed accommodation in Agra shall be part of Lump Sum price of Schedule – 'A'.

(xxx) Making access to site at any location in alignment to facilitate movement of vehicles, cranes, machineries etc. and preparation of area for positioning of cranes and any other machinery to facilitate construction & execution including removal of any construction material and restoration of area to its original condition.

(xxxi) Dynamic Integrity test on 100% piles and cross hole sonic integrity test on 25% of piles as per Outline Construction Specifications for Civil Works. **However Sonic tubes will be installed on 100% working piles.**

(xxxii) Design & Construction of temporary structures/ construction methodology and getting it approved from third party.

(xxxiii) To facilitate the train interchange facility within the corridor, 3 nos. of scissors, 05 no. cross-overs, 02 no. of Turn outs on main line i.e., from Agra Cantt to Kalindi Vihar and 01 no. of Cross over & 02 no. of Turn outs on depot connection line shall be constructed as per tender drawing. Structural work of such arrangement is part of Lump Sum scope of this contract.

NOTES (VIADUCT & STATIONS) :-

1) Pile foundation shall be of minimum of 1000mm dia with or without permanent liners with hydraulic rotary piling rigs.

2) Earth filling of pile cap area falling off the road to be done with proper compaction with good earth wherever required. For the area falling on the road, backfilling shall be done with sand as per Outline Construction Specifications

3) It is obligatory for the contractor to provide a single pier structure in the viaduct of maximum dia 2.1 m (including crash barrier) and the dimensions of station pier across the alignment not more than 2.1 mt (including crash barrier.)

4) Contractor has to maintain a minimum vertical clearance of 5.5m from road surface to bottom of any structure.

5) The location of piers should be decided in such a way that they do not disturb the road geometry and also should not obstruct the traffic flow for which the decision of UPMRC shall be final. The accuracy of alignment and interface with adjoining contractor shall also be responsibility of the contractor.

6) In some stretches placing of heavy cranes for erection of U-girders may not be possible and launcher is to be used in such locations. Launcher and cranes are to be used for erection depending upon site conditions. **In case of using other erection schemes (such as Launcher or any other) causing impact on structure, any additional design/design checking shall be done by contractor, and without any financial implication to Employer.**

7) The good earth received from the excavation work in the project shall be utilized for backfilling work in the project and surplus earth shall be disposed off at designated area.

8) Obtaining NOC & Approval of Diversion scheme of Utilities from the concerned regulatory / statutory / Local Authority is the responsibility of the Contractor and nothing extra is payable on this account.

9) The supervision charges require by the owning agencies such Torrent, DVVNL, Jal Nigam etc for uncharted utilities shall be paid by UPMRC. The supervision charges require for

chartered utilities shall be borne by contractor.

10) The pile cap level shall have to be kept below the drain wherever the same is fouling with drain and the demolished drain shall have to be restored back with similar specifications after casting the pile cap, till such time arrangement of temporary drainage shall also be made to ensure proper drainage of water.

11) Erection of all member required for construction of work such as erection of U-Girders, I-Girders, T-Girders, Arch Girders, Pier Caps, Cross Arms, Portals, Parapets, Steel structures, PEB etc.

12) Closer of gap between two U-girders inner webs and deck slab junctions (deck slab on I Girders/arch girders etc.) by RCC/steel plates profiled to required shape, inserts, plates with welded hold fasts, insert plates with welded hold-fasts, internal threaded sleeves including HSFG bolts etc. complete.

13) Street light arrangement on pier caps including providing and fixing GI pipes as per tender drawings.

14) Any change in rail level up to +/- 300mm from the tender drawing subject to fulfilment of the other tender conditions will be part of lump sum price and nothing will be paid/deducted for this variation.

15) Cleaning of pier cap top surface & drainage pipe hole, pedestal, wedge plates etc. to remove all types of debris, dirt, loose materials using manual or mechanical means without damage to the structures. Finishing the exposed surface of pedestals to remove all irregularities.

16) Earthing and stray current measuring arrangement on piers to be provided as per tender drawings.

17) <u>Subhas Park Metro station is a future station, however all the necessary arrangement as shown in drawings to make this station functional in future shall be included in Lump Sum.</u>

2.1.A.1 There is possibility of some of the items not getting mentioned in the above list of works of viaduct. Contractors are requested to go through the tender drawings also in details as the works listed in 2.1.A above as well as indicated in the tender drawings would be considered inclusive in the scope of work under lump sum quoted price. Employer decision shall be final in this regard in case of dispute. Some of the major utilities cannot be diverted. Contractor shall take into consideration the existence of these utilities and design the foundations at these locations accordingly, if required, the pile cap top level shall be fixed at the bottom of the utilities without any extra cost. No payment shall however be made for supporting the utilities during course of work. However, if neither the utility(ies) can be diverted/shifted nor the pier location be altered then the substructure will be designed by accommodating the utility(ies) and the extra cost incurred on this account shall be paid. This difference shall be calculated by working out the difference between the cost of actual substructure work executed vis-a-vis the assessed cost of substructure that would have been constructed at this location as per tender requirements and conditions. No additional payment shall be made for re-designing of any structures due to utilities/underground structures etc.

2.1.A.2 The Detail Design Consultant(s) for structural designs for sub structure/super structure of viaduct shall be engaged by the contractor subject to having executed similar one work in last 7 years and their concerned structural engineer having minimum 15 years relevant experience of designing viaduct structures. All documentation pertaining to the DDC having the relevant experience shall be submitted to UPMRC for approval prior to engagement. The work is to be designed, constructed and maintained as per relevant codes, Outline Design Specifications, Outline construction Specifications and drawings and/or as directed by the Engineer.

2.1.A.3 The work content against the lumpsum component of the work shall also include but not limited to the following:

(i) Though Alignment plans (both vertical and horizontal) and pier locations are provided by the Employer to the Contractor. Contractor would however design the span configuration

An alternative arrangement for type and span of structure for these special spans (between Agra Cantt. and Kalindi Vihar Metro Station) may be proposed

by the contractor without any extra cost to Employer/Engineer. This includes all temporary works such as nosing arrangement, trussells, staging and any other related works. Design and scheme of work shall be approved by Employer/Engineer prior to execution of work.

(e) Special Span – ~~34 Mtr. + 7 x 45 mtr. + 34 Mtr. – (383 Mtr. Yamuna River Bridge)~~ (20 Mtr. + 6 x 45.720 mtr. + 47.320 Mtr. + 18.4 Mtr.)

Apart from above special spans indicated in GAD, there may be requirement of additional special spans (which may include I-Girder/T-Girder etc. of larger span) as per the site conditions /Employer or Civic requirement. Any such additional special spans shall be designed and constructed by the contractor without any extra cost to Employer/Engineer.

(ii) **Design, Construction & Erection of connecting line viaduct:**

- Design and construction of Viaduct connection with Arch girder/**T-girder** from Sadar Bazar Metro station to corridor-2 Depot at Mall Road along with all the necessary arrangement for interconnection of corridor -2 depot with Existing Corridor-1 depot at PAC ground as per tender drawing.
- Design and construction of Viaduct with ramp for interconnection of corridor - 2 depot with Existing Corridor-1 depot at PAC ground with Arch girder/**T-girder** from corridor-2 Depot at Mall Road to chainage 2610 Mtr. (Inside existing corridor- 1 depot premises at PAC ground) & Corridor-2 Depot Entry/Exit lines Viaduct with Ramp (Chainage 0.00m to 530m) as per tender drawing.
- To facilitate the train interchange facility within the connecting viaduct, needful cross-overs, turnout etc. will be constructed as per tender drawing. Civil works for such arrangements are part of **Lump Sum scope** of this contract.

(viii) The method of construction shall be approved by UPMRC prior to execution of work. This includes all temporary works such as Nosing arrangement, trussel, staging, any other related works. Apart from special spans indicated in GAD or para (vii) above, there may be requirement of additional special spans (i.e. span more than 37 m) as per the site conditions / UPMRC or civic requirement. Any such additional special spans shall be designed and constructed by the contractor, the same will be paid extra after deducting the cost of normal viaduct shown in GAD.

(ix) All Piers location, span arrangement for special/ obligatory spans have been shown in the alignment GAD drawings. These special spans / obligatory span lengths may have to be changed as per requirements of the concerned authorities.

(x) Standard spans for viaduct shall be 28 m Twin U-Girder Spans except obligatory spans/ special spans shown in GAD, However, in case of sharper radius (less than 300m), the span configuration shall be as per tender drawing and wide U-Girder may have to be used without any extra cost. The Span arrangements of Viaduct & viaducts in station have to be decided in such a way that pier locations do not disturb the road geometry, ROW, clear carriage width of roads, flow of nallah, utilities and traffic flow. The max. Cantilever permissible is 2.5m. In all other cases where the cantilever is more than 2.5 mts. portal shall be provided.

(xi) All foundation shall be on piles of minimum 1000 mm dia. with or without permanent liners as per site requirements except at location met with hard/rocky strata with adequate bearing capacity in which open / raft foundation may be provided duly anchored in rock. All piles shall be bored cast in-situ concrete driven by hydraulic rotary rig only. Use of bentonite is prohibited.

(xii) Permanent liners, if required at any location.

r) Provision for cut-outs in the viaducts for services (if required), in coordination with various system contractors or as directed by Engineer.

s) Drainage system is to be provided as per tender drawing or as directed by the Engineer.

t) Making access to site to facilitate movement of vehicles and preparation of area for positioning of cranes and any other machinery for construction etc. These areas shall be checked for desired load carrying capacity & ensure safety of any underground/ adjacent structures, utilities for which nothing extra will be payable. Employer/Engineer shall be kept indemnified against any damage/ loss which may occur during such operation, at no additional cost;

u) The contractor shall take into account that the work over Railway track at two locations shall be subjected to trains movement/Railway Interface and hence plan the work accordingly.

v) Design, Fabrication and erection of Composite/Open Web Girders for all Obligatory span, including over Railway crossings, shall be according to RDSO standards.

w) Results of the sub surface investigations conducted at the project site are part of the tender document. The information about the soil and sub soil water conditions is being made available to the contractor in good faith and the contractor shall have to obtain the details of sub-soil investigation independently as may be considered necessary by him before quoting rates in the tender. No claims whatsoever on account of any discrepancy between the sub-surface conditions that may be actually encountered at the time of execution of work and those given in these tender documents shall be admissible to the contractor under any circumstances.

x) Any other item of work as may be required to be carried out for completing the bridge in all respect in accordance with the provision of the contract and / or to ensure the structural stability and safety of the bridge during and after construction.

y) There is possibility of some of the items not getting mentioned in the above list of works. Tenderers are requested to go through the tender drawings also in details as the works mentioned above as well as indicated in the tender drawings would be considered inclusive in the scope of work under lump sum quoted price. Employer decision shall be final and binding in this regard in case of dispute.

2.1.D BRIDGE ACROSS RIVER YAMUNA

Design & Construction of Civil Engineering works of Bridge having spans of configuration ~~(34m + 7*45m + 34m)~~ **(20 Mtr. + 6 x 45.720 mtr. + 47.320 Mtr. + 18.4 Mtr)** across river Yamuna on Corridor-II of Agra Metro Rail Project as shown in the GAD of Yamuna Bridge- ~~Total length of the Bridge is 383mtr~~. which is to be constructed on downstream of existing bridge on NH-19. The scope of work consists of design and construction of well foundations, sub-structures and super structure with railing on both sides and arrangements for fixing of Signal Poles, providing shear connectors for track plinth casting etc. which includes:

(i) Conducting detailed subsurface exploration and taking at least one number bore hole at everyfoundation location, including analysis, interpretation and reporting of results thereof in accordance with IRC 78 (Standard Specifications and Code of practice of Road Bridges – Section VII Foundations and Substructure) and IS 2911 required for preparations of design offoundations. The depth of soil exploration shall be as per codal provisions, required for ~~pile~~/well foundation;

(ii) Preparation of detailed design, general arrangement drawings, specifications and working drawings for various components of the works and obtaining approval in

respect thereof from the Engineer inclusive of incorporation of all modifications, alterations, changes etc. that may be required to be carried as directed;

(iii) Site clearance and dismantling of obstructions, construction of approaches, temporary bridge (if required), filling etc. before commencement of work as required or as directed;

(iv) True and proper setting out and layout of the work, bench marks and provision of all necessary labour, instruments and appliances in connection therewith as required or as directed;

(v) Provision of suitably designed well foundations for piers in accordance with actual soil parameters as obtained from detailed sub surface exploration as required or as directed.

(vi) Well caps resting at any depth depending upon the site condition shall include excavation, levelling course, PCC, dewatering, sheet pilling/ soldier pilling & wooden lagging, if required. Backfilling shall be done as per Outline Construction Specification (OCS).

(vii) Provision of suitably designed piers as required or as directed. Each pier shall be suitably painted with gauge markings to indicate flood level;

(viii) Provision of Pier Cap with suitable size platform along with steel ladder to facilitate inspectionof all bearings;

(ix) Provision of suitably designed spherical bearings including bearing pedestals, seismic devices, shear key restrainers, vertical stoppers and testing of bearings as required or directed.

(x) The superstructure is conceptualized to be constructed with suitably designed Composite teel of configuration ~~(34m +7 x 45m + 34m)~~ (20 Mtr. + 6 x 45.720 mtr. + 47.320 Mtr. + 18.4 Mtr) for the complete length of the bridge, as required or as directed (**No other type of superstructure is acceptable**). This shall include provision of shear connectors in the deck as per tender drawing to suit installation of Ballast less track, later by Track contractor.

(xi) Providing suitably designed railing on both side of deck arrangement, expansion joints, drainages spouts /spreaders, inspection ladder along with suitably located manholes. Providing holding down bolts for fixing signaling Masts etc. at the location and spacing as required by traction contractor as per tender drawing. Strengthening at signaling Mast locations.

~~A potential bidder may explore the possibility of pile foundation subject to employer's approval without extra cost, saving if any shall be pass-on to the employer.~~

(xii) Earthing arrangements of individual elements as per tender drawing like railings, pier-cap, piers etc. complete in all respect. Drainage system, inserts/ anchor bolts for signaling masts at required location.

(xiii) MS railing as per tender drawing including epoxy painting (as per Outline Construction Specifications (OCS)) on MS railing. UP Metro logo of required shape & size shall be provided at designated places as decided by Engineer-in-charge, without any extra cost to Employer/Engineer.

(xiv) Providing and fixing GI brackets on steel railings on both sides of deck for electrical cables & signaling, as per tender drawings or as instructed by Engineer;

(xv) Expansion joint (compression seal type) as per tender drawings and Outline Construction Specifications (OCS);

(xvi) Suitable provision to be made for inspection of expansion joints and ~~PSC~~ Girders for

inspection at a later date after completion of the bridge. Manholes to be provided with M.S. covers with epoxy painting and locking arrangement.

(xvii) The contractor has to make necessary provisions in the pier caps (at both end of bridge) to accommodate resting arrangement of adjoining span as required or directed.

(xviii) Provision for cut-outs in the viaducts for services (if required), in coordination with various system contractors or as directed by Engineer.

(xix) Design and Construction of Drainage system is in the scope of contractor ~~to be provided as per tender drawing or~~ as directed by the Engineer;

(xx) Conducting initial load test of pile/well as per IS-2911- Part IV;

(xxi) Conducting load test on one longest span super structure as per IRC-SP-37/51;

(xxii) Making access to site to facilitate movement of vehicles and preparation of area for positioning of cranes and any other machinery for construction etc. These areas shall be checked for desired load carrying capacity & ensure safety of any underground/ adjacent structures, utilities for which nothing extra will be payable. Employer/Engineer shall be kept indemnified against any damage/ loss which may occur during such operation, at no additional cost;

(xxiii) The contractor shall take into account that the work area is in river Yamuna shall be subjected to flooding due to rain/ water from upstream and shall take necessary measures. The contractor has to schedule the work accordingly and no extra time or any remuneration will be given for such time period;

(xxiv) Results of the sub surface investigations conducted at the project site are enclosed with the tender document. The information about the soil and sub soil water conditions is being made available to the contractor in good faith and the contractor shall have to obtain the details of sub-soil investigation independently as may be considered necessary by him before quoting rates in the tender. Provisions made in Outline Design Specifications will prevail in case of difference in results of two reports. No claims whatsoever on account of any discrepancy between the sub surface conditions that may be actually encountered at the time of execution of work and those given in these tender documents shall be admissible to the contractor under any circumstances.

(xxv) Any other item of work as may be required to be carried out for completing the bridge in all respect in accordance with the provision of the contract and / or to ensure the structural stability and safety of the bridge during and after construction.

There is possibility of some of the items not getting mentioned in the above list of works. Tenderers are requested to go through the tender drawings also in details as the works mentioned above as well as indicated in the tender drawings would be considered inclusive inthe scope of work under lump sum quoted price. Employer decision shall be final and binding in this regard in case of dispute.

(xxvi) **BRIDGE STRUCTURE**

The bridge piers will have to be planned in such a manner that the flow downstream through the proposed bridge shall be smooth and well distributed.

(xxvii) **DESIGN CRITERIA**

(a) Design criteria shall be as per Outline Design Specification (ODS) and recommendations of Central water and Power Research Station (CWPRS)/ Pune.

Results of the sub surface investigations are enclosed with the tender document. The information about the soil and sub soil water conditions is being made available to the contractor in good faith and the contractor is advised to obtain results independently

as may be considered necessary by him before quoting rates in the tender & condition given in ODS will prevail in case of difference in results of two reports.

No claims whatsoever on account of any discrepancy between the sub surface conditions thatmay be actually encountered at the time of execution of work and those given in these tenderdocuments shall be admissible to the contractor under any circumstances whatsoever.

The design methodology for foundation design shall be as per guidelines and provision given in Outline Design Specifications (ODS).

The design should cover all the items such as “Foundation”, “Sub-Structure, Super Structure with the provision for Ballast less track”, “Protection works”, etc.

The HFL data of Yamuna River at Polyaghat site is provided by CWC is 156.450 m.

(b) The dimensions shown in GAD of Yamuna Bridge are mandatory to be followed.

(c) The tender concept is schematic and the Tenderer is free to propose his own scheme and quote based on his design keeping following parameters unchanged:

- Outline Design Specifications (ODS)
- Codal Requirements
- IRS Bridge Code
- Loading requirements
- ~~Foundation is proposed with 1800 mm dia (minimum) piles~~
- Span Configuration is fixed
- Super structure shall be ~~suitably designed Pre-stressed Concrete bridge Girder or~~ Composite Steel Bridge Girder for complete bridge.

(ii) **Foundation**

Layout / conceptual drawings for the main bridge is provided with foundation of Well with minimum for complete Well above hard/rocky strata and duly anchored/ socketed as per tender drawing. All piles shall be bored cast-in-situ by hydraulic rotary rig only. Pile-cap shall be design & constructed as per Outline Design Specifications (ODS) & Outline Construction Specifications (OCS).

(iii) **Substructure and Superstructure**

a) Main Bridge – Substructure

The bridge piers will have to be planned in such a manner that the flow through the proposed bridge is smooth and well distributed. The pier-cap shall be constructed above the H.F.L with free board.

b) Main Bridge – Superstructure.

(i) The mandatory dimensions of super structure are shown in tender drawings. The super structure for the main bridge is with Composite Steel Girder. Dimensions of the super strutures should ensure that the minimum clearances as indicated in conceptual drawings or as required as per IRC Codes, are provided;

(ii) The structure will have arrangements at each pier cap, for jacking up when necessary for changing of bearings etc. The deck width and profile shall be adopted as shown in conceptual drawings in all cases. The Third rail and signaling structures themselves are excluded from the scope of the tender, but civil works required for fixing the structures is included, and shall be done in coordination with the system wide contractor/Engineer. The necessary arrangements shall form part of the total work. The deck floor shall be finished rough to provide adequate bond to the concrete to be poured later for housing the ballast less track. In other area, the deck shall be finished smooth with cross slope and longitudinal grading as directed by the Engineer;

(iii) The Contractor shall himself formulate a practical and viable scheme for

(xv) Design of drainage arrangement of station, construction of manholes, sump and outlet sump including connection to existing Municipal drainage line as required. (Providing and fixing pipes will be paid separately as actual measurement in schedule B).

(xvi) Design and construction of storm water drainage system including drainage of the roof and railway tracks consisting of vertical rain water pipes and open / underground drainage system.

(xvii) Bore wells 1 No. (capacity 5-6 cum/hour) with submersible pumps of required capacity, cables, starter and necessary connection in main panel at each station and connection with suitable dia. of G.I. Line from bore wells to the underground water tanks as approved by Engineer. Minimum depth of tubewell shall be ~~400 m~~ **200 m**. Contractor has to arrange one number of water connection at each station from concerned local authorities. UPMRCL will facilitate the contractor in this connection. The cost of same is included in Lump Sum price Schedule-A.

(xviii) Water proofing in the underground structures, water tanks, lift pit, escalator pit etc. with injection grouting & water proofing plaster and finishing of water tanks with ceramic tiles. Providing and fixing of MS Manhole duly painted covers along with necessary locking arrangement in water tanks at all stations.

(xix) Design & Construction of man holes, sumps, drain, buttle flanges, sleeves as required for automation-based water supply scheme in Ancillary Building for E&M works & finishing works

(xx) Earth filling with compaction with good earth wherever required. For the area falling on the road, backfilling shall be done with sand as per Outline Construction Specifications

(xxi) Foundations for the system equipment (water supply pumps, firefighting pumps, DG, Panels & AC Outdoor/ VRF units) in co-ordination with various service/ system contractors/ finishing contractors engaged by UPMRC.

(xxii) Design & Construction of ground water recharging /Rain water harvesting systems two nos. at each station to cater all the station as per guidelines of Central Ground Water Authority for rain water harvesting. The general arrangement of Rain water harvesting system (minimum size) is shown in the Tender drawing, However, the size of RWH pit & depth of bore may increase as per the guidelines of Central Ground Water Authority, the design shall be submitted to UPMRC for approval before execution.

(xxiii) Construction of Crash barriers as per tender drawing.

(xxiv) Inserts / dowels for track plinth (Track plinth is not in the scope of this work) as per tender drawing.

(xxv) Earthing and stray current control arrangement for station & ancillary building as per requirement of system contractor. Earthing work such as earth mat, etc not embedded in concrete shall be paid under E&M schedule.

(xxvi) Provision for cutouts in the stations required for services in coordination with various system contractors & finishing contractor.

(xxvii) Provision of structural steel arrangement below U-girders as per drawing no. ~~KNPAGDDC-01-TDR-TYP-STR-CRS-15010_R0~~ **KNPAGDDC-01-TDR-TYP-STR-CRS-15023, R1**

(xxviii) For stations located over road, temporary arrangement is to be made for providing working platform at suitable height so that traffic run below it unhindered and safety of road user is ensured. This arrangement shall be maintained till completion of work. The working platform has to be covered with suitable material so that nothing falls on the road. A detailed scheme is to be submitted for approval before start of work.

(xxix) Design & Construction of temporary structures/ construction methodology and getting it approved from third party.

and routine load tests on piles of viaduct, stations, entry-exit and corridor as per frequency given in Outline Construction as per BIS-2911- Part IV.

2.1.B.7 Agra College is the interchange location for underground Agra College Metro Station in Corridor-I and Elevated Agra College Metro Station in Corridor-II. The scope of work of M/s AFCON – Sam (India) Consortium i.e., the agency engaged for Contract AGCC-02 of Agra Metro Rail Project includes design and construction of all works in the portion marked as 'A' in the architectural Plan/GAD of Agra College Metro Station.

- Rest of the works required for integration with underground Metro station at Agra College interchange station shall be within the scope of this work. Cost is included in lump sum price.
- Scope of work includes staircase at one side of Entry and Stairs & Escalators at the other side of the entry.
- All the connections to the two concourse pockets at Ground level & Concourse level shall be part of this contract.

2.1.B.8 Agra Cantt. Metro Station will have to be integrated with Re-development work of Agra Cantt. Railway Station **as planned by Indian Railways**. Refer Tender Drawing.

- Re-development ~~work~~ of Agra Cantt. Railway Station is not in the scope of this tender.
- All co-ordination **for** Integration of the Agra Cantt Metro Station ~~with Re-development work of Agra Cantt. Railway Station.~~
- Design and construction of Agra Cantt Metro Station including multi model integration ~~with Agra Cantt railway station~~ is Part of Lump Sum schedule under this work.

2.1.C SCOPE OF WORK UNDER LUMP SUM PRICE – (COMPOSITE STEEL GIRDER) :

Design & Construction of Civil Engineering works of Composite steel spans of configuration 45 mtr. over railway track near Rawli between Pratap Pura & Collectorate Metro Station, Composite steel span of configuration 60 Mtr near St. Johns College and composite steel spans of configuration (length - 37.875 mtrs. +27 mtrs.) over NHAI Flyover on NH-19 between M.G. Road Metro station & Sultan Ganj Crossings Metro Station as shown in the GAD. The scope of work consists of design and construction of pile foundations, sub-structures and super structure with railing on both sides and providing shear connectors for track plinth casting etc. which includes:

a) Conducting detailed subsurface exploration and taking at least one number bore hole at everyfoundation location, including analysis, interpretation and reporting of results thereof in accordance with IRC 78 (Standard Specifications and Code of practice of Road Bridges – Section VII Foundations and Substructure) and IS 2911 required for preparations of design offoundations. The depth of soil exploration shall be as per Codal provisions, required for pile foundation;

b) Preparation of detailed design, general arrangement drawings, specifications and working drawings for various components of the works and obtaining approval in respect thereof from the Engineer inclusive of incorporation of all modifications, alterations, changes etc. that may be required to be carried as directed;

c) Site clearance and dismantling of obstructions, construction of approaches, temporary bridge (if required), filling etc. before commencement of work as required or as directed;

(xxx) PEB Work:

a) Designing, providing, fabricating, transporting, erecting and securing in position prefabricated structural steel roof work for Elevated stations building/Entry Exits complete-as per specifications, approved shop drawings. Work under this item would generally cover all structural steel work for roof in the stations, including roof portals, Purlins, runners gutters etc. in the station steel roof structure, down take pipes up to ground level along with provision for attachment Structural Supports for all fixing E&M and Signalling / Telecommunications equipment in the steel roof structure. Work to include all intermediate stages of activities not defined herein, but otherwise implied for total completion of work. Cost to include but not be limited to, all materials including wastage, all consumables, fasteners of all types for both temporary and permanent stages of work, all temporary stays, labour, temporary works including staging, scaffolding, tools, plant and equipment, and additional costs of all incidentals and necessary testing of material, workmanship etc. including cost of painting as per specifications. PEB height/span may very +/- 0.5 mts from the tender drawing. This variation including variation in sheeting will also be the part of lump sum scope and nothing will be paid / deducted for this variation

b) Providing and fixing single skin Hi-Rib (Crimp curved) profiled sheeting 1000-1020 mm cover width, 28-30 mm crests @200-250 mm c/c manufactured out of 0.50 mm TCT (Total coated thickness) Hi- tensile galvalume steel. The sheets shall have wide pans with 2-3 nos. stiffening ribs for effective water shedding and special male/female ends with full return legs on side laps for purlins support and anti- capillary flute in side lap. The sheets shall have a hot-dip metallic coating of ZINC and Aluminium (150 gms /sq. m. zinc/alum. Coating mass total on both sides. AZ-150 as per AS 1397), 330Mpa to 550Mpa yield stress, providing PVDF coating of approved colour of total thickness of 35 microns comprising of 20 microns exterior coat of PVDF over 5 microns PU back coat over 5-micron primer coats on both surfaces including side and end laps and using 8mm galvalume hex self- drilling. Item to include curved sheets and crimping also. Rate shall include providing fasteners on each crest of sheets for connection with purlins and seam bolts etc.

c) Providing, supplying, erecting and fixing in position 3mm thick corrugated clear Polycarbonate sheets of approved make texture and colour for Sky light. The corrugation Profile shall match with the profile of roof sheets as listed out in item (b) above, including capping and fixing to roof sheets and steel girts by same fasteners as used by roof sheeting, minimum end laps of 200 mm sealing of laps with silicon sealant, water tight complete in all respects.

d) Provisioning in PEB structure for required hanger arrangement for E&M and Signalling / Telecommunications equipment. The supply of hangers and its fixing shall be done by the respective system contractors. However, supplying and fixing the hanging arrangement required for signage is in the scope of this contract. Work to include all intermediate stages of activities not defined herein, but otherwise implied for total completion of work.

(xxxi) Necessary permission/ NOC from the Railway/ Road/ municipal corporation and other concerned regulatory authorities for block and working in such locations is in the scope of contractor. Contractor has to plan their works in advance so that reasonable time can be available to obtain the approval from concern authorities. UPMRC will facilitate for getting them permission from concerned regulatory authorities for working in such locations. However, no claim as regards to delay in getting permission / NOC from these agencies will be entertain. Necessary charges required for permission by railway shall be paid by UPMRC. However, if these charges are being paid by contractor, same shall be reimbursed by UPMRC.

- Railway charges, if any imposed by North Central Railway (NCR) /Agra Division of NCR while execution of work (except land for permanent structures) shall be borne by contractor and the same shall be reimbursed by

the Employer/Engineer on submission of authenticated documents.

- Road charges, if any imposed by NHAI while execution of work (except land for permanent structures) shall be borne by contractor and the same shall be reimbursed by the Employer/Engineer on submission of authenticated documents.

2.1.B.2 There is possibility of some of the items not getting mentioned in the above list of works of station. Contractors are requested to go through the tender drawings also in details as the works mentioned above as well as indicated in the tender drawings would be considered inclusive in the scope of work under lump sum quoted price. Employer decision shall be final in this regard in case of dispute. Some of the major utilities cannot be diverted. Contractor shall take into consideration the existence of these utilities and design the foundations at these locations accordingly, if required, the pile cap top level shall be fixed at the bottom of the utilities without any extra cost. However, if neither the utility(ies) can be diverted/shifted nor the pier location be altered then the substructure will be designed by accommodating the utility(ies) and the extra cost incurred on this account shall be paid. This difference shall be calculated by working out the difference between the cost of actual substructure work executed vis-a-vis the assessed cost of substructure that would have been constructed at this location as per tender requirements and conditions. No additional payment shall be made for re-designing of any structures due to utilities/underground structures etc.

2.1.B.3 Any other item of work as may be required to be carried out for completing the construction of station building with all necessary interfaces works with station finishing contractor and system Contractors in all respects in accordance with the provisions of the Contract and to ensure the structural stability and safety during and after construction.

2.1.B.4 The shifting of the utility(s) would be undertaken only in exceptional circumstances where in the opinion of the Employer no other option is available. The utilities are to be diverted with proper liaising and approval of the utility owning agencies. Shifting/diversion cost of all the charted utilities is included in Lump Sum price of Schedule-A. The maintenance of diverted/supported utilities shall be from the start of construction till handing over it to concerned owning agency and cost of the same is included in Lump sum price Schedule-A For the utilities which are not to be diverted proper supporting shall be done to prevent any damage. No payment shall however be made for supporting and protecting the utilities during execution of the work. Cost of such utility shifting (i.e., permanent diversion) unless otherwise specified will be paid separately under relevant item of BOQ. No claim on account of delay in execution of utility diversion will be entertained. All temporary diversion of any utilities done to facilitate the construction activity shall be the part of the lump sum quoted price. No payment shall however be made for supporting the utilities, , carriage of excavated earth during execution of work.

2.1.B.5 Supply of Inserts/bolts/Supports/Hangers for finishing contractor and all system contractor's like Signalling etc. (except the supply and fixing of inserts and bolts required to be embedded in concrete at the time of casting for cable hanger and PEB base respectively) are excluded from the lump sum scope of the work, but civil works required for fixing inserts/bolts/supports/hangers such as strengthening of structures at these locations including fixing of inserts, bolts, supports, hangers are included in lump sum price. These shall be finalized and provided in co-ordination with the system Contractor & finishing contractor and the Engineer. The necessary coordination with system contractors, finishing contractor and engineer shall form a part of the work.

2.1.B.6 All aspects of quality assurance, including testing of materials and other components of the work, as specified or as directed. Arranging & performance dynamic Integrity test on 100% piles and cross hole sonic integrity test on 25% of piles. Conducting initial

annexure thereto. Entire scope of work for Viaduct section and Viaduct in stations as shown in General Arrangement Drawing/ General Alignment Drawing (GAD), all structural works of stations as shown in tender drawing shall be included in Lump Sum price (Schedule A of BOQ) The detailed scope of work of Viaduct, Stations, Spans over River Yamuna and other Structures included in Lump Sum shall be as described at clauses 2.1.A, 2.1.B, 2.1.C, 2.1.D respectively.

The Scope of work 2.1 to 2.9 including Notes 1) to 7) (applicable for viaduct & stations) & 3 to 14 unless otherwise specified shall be included in Lump sum quoted Price of contract i.e., Schedule-A of BOQ.

2.1.A VIADUCT & VIADUCT IN STATION, SPECIAL SPANS AND INTERCONNECTING VIADUCT FOR DEPOT AS SHOWN IN GENERAL ARRANGEMENT DRAWING/ GENERAL ALIGNMENT DRAWING (GAD)

(i) Detailed survey of alignment for execution of work and optimising span configuration avoiding shifting of utilities as per contractor's design subject to the obligatory requirements as shown in the GAD.

(ii) Design & construction of Pile foundation, Pile cap, Pier, all type of Piers including Cantilever & Portals, Pedestals, Cross Arm, Extended Pier cap, Cantilever Pier cap, Table top Pier cap, Portal Beams and other structures

(iii) Construction of super structure of standard U-Girder span (28m) and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier cap, Bearing (Elastomeric) ~~& crash barrier~~ as per tender drawing. The design of standard span U-Girder and all other spans upto 28 m for straight and for curves more than 300m radius, standard Pier Cap, bearing (Elastomeric), bearing pedestal ~~& crash barrier~~ for these spans shall be provided by UPMRC. Also, the reinforcement in the U-Girder, standard Pier Cap & bearing pedestal shown in tender drawing is the minimum reinforcement to be provided. However, in case the contractor assesses that the reinforcement has to be increased then the same shall be provided after approval of UPMRC without any extra cost.

(iv) Design and construction of non-standard spans, **Pre-stressed T-Girder spans**, spans at crossover location and spans in sharper curvature, pier caps, etc wherever necessary or instructed by engineer except as detailed in para (iii).

(v) Design and construction of POT/PTFE bearings/ Spherical bearings/Elastomeric bearing/seismic restrainers etc. including vertical stoppers as per design requirement except as detailed in para (iii). The bearing installed should be properly numbered and Photographs of same should be submitted to UPMRC whenever directed or required.

(vi) Design and construction of parapets. The shape shall be as per tender drawings.

(vii) Design and construction of structure to facilitate the train interchange facility on main line i.e., Corridor-II works and interconnecting viaduct to Depots, provisions of Scissors & Cross – Overs as per tender Drawings will be constructed. Civil works of such arrangement is a part of **Lump Sum** scope of this contract.

(i) **Design, Construction and erection of special spans:**

(a) Composite Steel Girder – 1 x 45 Mtr. - Near Rawli Railway crossing between Pratap – Pura & Collectorate metro Station as shown in GAD.

(b) Composite Steel Girder - 1 x 45mtr. span – One near Jeet Singh Stadium (Defence Ground)

(c) Composite Steel Girder – 1 x 60 mtr. - Near St. Johns college (Rly. Crossing) as shown in GAD.

(d) Composite Steel Spans - Over NHAI Flyover on NH-19 between M.G. Road Metro station & Sultan Ganj Crossings Metro Station (Total Length- 37.875 mtrs. + 27 mtrs.)

Employer's Requirement - Key Dates,
Appendix-2B
For Complete Viaduct including Viaduct in Station portion:

The Contractor shall prepare and submit his detailed Programme of Work so as to achieve key dates of various activities on time. The Contractor shall complete the work in a phased manner by fixing priorities to different stretches of work to give access to the other interfacing contractors as per the requirement of project from time to time and as per the key dates (Mile stones) indicated below:

(i) FOR VIADUCT: -

Key Dates	Time to achieve (in weeks from date of commencement)	Description of Stage	Liquidated Damages for non-achieving the key dates
Key Date 1	**4**	Submission of Detailed Works programme including finishing and E&M work.	0.01% of Contract value per week of delay for the key date
Key Date 2	**8**	Completion of road widening, Erection of Barricades, dismantling of streetlight from road median and Erection of the temporary streetlight along the barricade for a length of 1 Km (from Agra Cantt. Metro Station side) to start the piling work.	0.01% of Contract value per week of delay for the key date
Key Date 3	**9**	Establishing site office, Commissioning of 1st Batching Plant (production of 1st batch of concrete)	0.01% of Contract value per week of delay for the key date
Key Date 4	**9**	Completion of 1st working pile	0.01% of Contract value per week of delay for the key date
Key Date 5	**13**	Completion of 1st Formwork of U-girder and casting beds for Engineer's approval	0.01% of Contract value per week of delay for the key date
Key Date 6	**15**	Commissioning of 2nd Batching Plant	0.01% of Contract value per week of delay for the key date
Key Date 7	**18**	Casting of 1st U girder	0.01% of Contract value per week of delay for the key date
Key Date 8	**24**	Start of launching of U girder	0.01% of Contract value per week of delay for the key date
Key Date 9		**Completion of U/I/Arch-Girder/All Girder casting:**	
Key Date 9.1	**56**	For first Six (06) Km of Viaduct (i.e., from Agra Cantt. Metro Station to Agra College Metro Station (including Station).	0.01% of Contract value per week of delay for the key date
Key Date 9.2	**56**	For Depot connecting viaduct from Sadar Bazar Metro Station to Existing Depot at PAC Ground for Corridor-1 and Depot at Mall Road for Corridor-2 line	0.01% of Contract value per week of delay for the key date
Key Date 9.3	**85**	For Balance of Viaduct from Agra College Metro Station (excluding Station) to Kalindi Vihar Metro Station.	0.01% of Contract value per week of delay for the key date
Key Date 10		**Completion of U/I/Arch/All Girder Launching including casting of deck slab and Erection of Pre-cast Parapet:**	
Key Date10.1	**60**	For first Six (06) Km of Viaduct (i.e. from Agra Cantt. Metro Station to Agra College Metro Station (including Station)).	0.01% of Contract value per week of delay for the key date
Key Date 10.2	**60**	For Depot connecting viaduct from Sadar Bazar Metro Station to Existing Depot at PAC Ground for Corridor-1 and Depot at Mall Road for Corridor-2 line	0.01% of Contract value per week of delay for the key date
Key Date 10.3	**90**	For Balance of Viaduct from Agra College Metro Station (excluding Station) to Kalindi Vihar Metro Station.	0.01% of Contract value per week of delay for the key date

Key Date 11		**Partial access of the viaduct on Main Corridor:**	
Key dates 11.1	**45**	From Agra Cantt. Metro Station to Pratap-Pura Metro Station) (Minimum 3.0 km in one stretch including both stations) for laying of track	0.01% of Contract value per week of delay for the key date
Key dates 11.2	**64**	From Pratap-Pura Metro Station to Agra College Metro Station (Another 3.0 km in one stretch excluding Pratap Pura Station) for laying of track	0.01% of Contract value per week of delay for the key date
Key dates 11.3	**70**	For another 3.0 km of adjacent stretch for laying of track	0.01% of Contract value per week of delay for the key date
Key dates 11.4	**90**	For another 3.0 km of adjacent stretch for laying of track	0.01% of Contract value per week of delay for the key date
Key dates 11.5	**100**	For Balance works in one stretch for laying of track	0.01% of Contract value per week of delay for the key date
Key Date 12		**Full access of the viaduct for laying of track and hangers for cable:**	
Key Date 12.1	**60**	For interconnecting viaduct from Sadar Bazar Metro station to Corridor-2 Depot at Mall Road and with existing corridor-1 Depot at PAC ground.	0.01% of Contract value per week of delay for the key date
Key Date 12.2	**68**	For first Six (06) Km of Viaduct (i.e. from Agra Cantt. Metro Station to Agra College Metro Station (including Station).	0.01% of Contract value per week of delay for the key date
Key Date 12.3	**104**	For Balance of Viaduct from Agra College Metro Station (excluding Station) to Kalindi Vihar Metro Station.	0.01% of Contract value per week of delay for the key date
Key Date 13		**Completion of Entire Viaduct:**	
Key Date 13.1	**64**	For interconnecting viaduct from Sadar Bazar Metro station to Corridor-2 Depot at Mall Road and with existing corridor-1 Depot at PAC ground.	0.05% of Contract value per day of delay for the key date as mentioned in Appendix-1 of Form of Tender (S. no. xi).
Key Date 13.2	**104**	For first Six (06) Km of Viaduct (i.e. from Agra Cantt. Metro Station to Agra College Metro Station (including Station).	0.05% of Contract value per day of delay for the key date as mentioned in Appendix-1 of Form of Tender (S. no. xi).
Key Date 13.3	**112**	For Balance of Viaduct from Agra College Metro Station (excluding Station) to Kalindi Vihar Metro Station.	0.05% of Contract value per day of delay for the key date as mentioned in Appendix-1 of Form of Tender (S. no. xi).

(ii) FOR STATIONS:

Key Dates	**Time to achieve (in weeks from date of commencement)**	**Description of Stage**	**Liquidated Damages for on achieving the key dates**
Key Date 1	**08**	Completion of road widening, Erection of Barricades, dismantling of the street light from road median and Erection of the temporary street light along the barricade for one station (i.e. From Agra Cantt. Metro Station Side) to start the piling work	0.01% of Contract value per week of delay for the key date
Key Date 2		**Completion of Concourse level structures:**	
Key Date 2.1	**55**	For first Five (05) stations (i.e. from Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of Contract value per week of delay for the key date
Key Date 2.2	**75**	For balance of 09 stations	0.01% of Contract value per week of delay for the key date
Key Date 3		**Track supporting structure including track bed in station area:**	
Key Date 3.1	**70**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of Contract value per week of delay for the key date

Key Date 3.2	**90**	For balance of 09 stations	0.01% of Contract value per week of delay for the key date
Key Date 4		**Structural work of Operational rooms i.e., Signalling room, Telecommunication room, Station Control room, ASS room, TSS room, UPS room, EFO rooms and TOM Room:**	
Key Date 4.1	**74**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of Contract value per week of delay for the key date
Key Date 4.2	**85**	For balance of 09 stations.	0.01% of Contract value per week of delay for the key date
Key Date 5		**Completion of lift shaft & Escalator pit:**	
Key Date 5.1	**80**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of Contract value per week of delay for the key date
Key Date 5.2	**95**	for balance of 09 stations.	0.01% of Contract value per week of delay for the key date
Key Date 6		**Completion of UG Tank, Pump & Generator Room:**	
Key Date 6.1	**85**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of Contract value per week of delay for the key date
Key Date 6.2	**100**	For balance of 09 stations.	0.01% of Contract value per week of delay for the key date
Key Date 7		**Completion of all structural works of stations:**	
Key Date 7.1	**90**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of Contract value per week of delay for the key date
Key Date 7.2	**112**	For balance of 09 stations.	0.01% of Contract value per week of delay for the key date

(iii) FOR ARCHITECTURAL AND E&M WORKS

Key Dates	**Time to achieve (in weeks from date of commencement)**	**Description of Stage**	**Liquidated Damages for on achieving the key dates**
Key Date 1		**Vendor selection and technical submission for E&M Equipment & materials and submission of working drawings for stations.**	
Key Date 1.1	**15**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 1.2	**25**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 2		**Submission of design for roof portals (PEB) for stations:**	
Key Date 2.1	**30**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 2.2	**40**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 3		**Partial Access of operational rooms i.e., Signalling room, Telecommunication room, Station Control room, ASS room, TSS room, UPS room, EFO Room and TOM Room etc. to system contractors:**	
Key Date 3.1	**74**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 3.2	**85**	For balance of 09 stations.	0.01% of contract value per week of delay for the key date
Key Date 4		**Complete handover of operational rooms i.e., Signalling room, Telecommunication room, Station Control room, ASS room, TSS room, UPS room, EFO Room and TOM Room etc to system contractors:**	

Key Date 4.1	**80**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 4.2	**90**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 5		**Delivery of Major E&M equipment like panels, DB, UPS, Cables, VRV etc. at site:**	
Key Date 5.1	**65**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 5.2	**80**	for balance of 09 stations.	0.01% of contract value per week of delay for the key date
Key Date 6		**Complete Access to Lift and escalator Vendor:**	
Key Date 6.1	**70**	For Concourse to Platform for first 05 stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 6.2	**85**	For Concourse to Platform for balance stations & Ground to Concourse for first 05 stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 6.3	**95**	For Ground to Concourse for next 09 stations	0.01% of contract value per week of delay for the key date
Key Date 7		**Completion of Fabrication & erection of roof portal (PEB) work:**	
Key Date 7.1	**85**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 7.2	**120**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 8		**Complete access to pump room and DG room. Completion of Fire tanks for Stations:**	
Key Date 8.1	**82**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 8.2	**108**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 9		**Delivery of DG Set, Fire and plumbing pumps and other related material at site for stations:**	
Key Date 9.1	**86**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 9.2	**112**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 10		**Completion of flooring and cladding works:**	
Key Date 10.1	**82**	For first Five (05) stations (i.e. Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 10.2	**108**	For balance of 09 stations	0.01% of contract value per week of delay for the key date
Key Date 11		**Completion of all fire-fighting and DG installation work, apply to fire authorities for NOC for stations:**	

Key Date 11.1	**86**	For first Five (05) stations (i.e. from Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 11.2	**112**	For balance of Nine (09) Stations.	0.01% of contract value per week of delay for the key date
Key Date 12		**Complete works for stations in all respect (Architectural finishes, roof, E & M works, NOC from fire authority and another local bodies all complete):**	
Key Date 12.1	**94**	For first Five (05) stations (i.e. from Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 12.2	**120**	For balance of Nine (09) Stations.	0.01% of contract value per week of delay for the key date
Key Date 13		**Complete site development works and all miscellaneous works at stations~~,~~ in all respect and handing over of stations to the engineer:**	
Key Date 13.1	**104**	For first Five (05) stations (i.e. from Agra Cantt. Metro Station to Agra College Metro Station)	0.01% of contract value per week of delay for the key date
Key Date 13.2	**130**	For balance of Nine (09) Stations.	0.01% of contract value per week of delay for the key date

Note

1. For each room or area, the level of finishes required shall be finalized with respective designated system contractor to start their activity and the key date will be considered achieved only when the room/area is completed as per their requirement. The requirement finalised with system contractor duly signed by them shall be submitted to Engineer at least two months before the respective key dates.

2. LD for intermediate key dates:

2.1) "In the event that the contractor achieves the final key date/original completion date for the portion of alignment of about 6.00 Km between Agra Cantt Metro station to Agra college Metro Station (Station including), as stipulated in the contract; thereof any penalties or liquidated damages which may be due to the employer by the contractor for the non-achievement of intermediate key dates within the stretch may be waived-off at the sole discretion of the employer's representative.

2.2) "In the event that the contractor achieves the final key date/original completion date for the balance portion of alignment from Agra college Metro Station (Station excluding) to Kalindi Vihar Metro Station, as stipulated in the contract; thereof any penalties or liquidated damages which may be due to the employer by the contractor for the non-achievement of intermediate key dates within the stretch may be waived-off at the sole discretion of the employer's representative.

2.3) "In the event that the contractor achieves the final key date/original completion date for the portion of Depot connection alignment from Sadar Bazar Metro Station to Corridor-2 Depot at Mall road and with existing Depot of corridor-1 at PAC ground, as stipulated in the contract; thereof any penalties or liquidated damages which may be due to the employer by the contractor for the non-achievement of intermediate key dates within the stretch may be waived-off at the sole discretion of the employer's representative.

NOTICE INVITING TENDER (NIT)

1 GENERAL

1.1 Name of Work:

Uttar Pradesh Metro Rail Corporation (UPMRC) Ltd. invites online open e-tenders on International Competitive Basis (ICB) from eligible applicants, who fulfill qualification criteria as stipulated in Clause 1.4 of NIT, for the work, **"Tender AGCC-07 (Funded by EIB): Design and Construction of Main Line Elevated Viaduct from Agra Cantt. Metro Station to Kalindi Vihar Metro Station [Chainage (-77m) to 15016m] including Viaduct Connection with Ramp (Chainage 0.00m to 2610m) from (nearby) Sadar Bazar Metro Station to existing Corridor-1 Depot at PAC ground & Corridor-2 Depot Entry/Exit lines Viaduct with Ramp (Chainage 0.00m to 530m) and 14 nos. of Elevated Stations i.e., Agra Cantt, Sadar Bazar, Pratap Pura, Collectorate, Agra College, Hariparvat Chauraha, Sanjay Place, M.G. Road, Sultanganj crossing, Kamla Nagar, Ram Bagh, Foundary Nagar, Agra Mandi & Kalindi Vihar metro stations including Civil, Associated Ancillary Structures, Architectural Finishes, Water Supply, Sanitary Installation, Drainage, External Development, Fire Fighting, Fire Detection, E&M works and PEB structures in Corridor-2 of Agra Metro at Agra, Uttar Pradesh, India."**

The brief scope of the work and site information is provided in ITT Clause A1 (Volume-1), Employer's Requirements (Volume–3) & Technical Specifications (Volume-4).

1.2 Key details :

Approximate cost of work (NIT Value)	**Rs. 1529.29 Crores (Including GST)**
Tender Reference	**AGCC-07**
Tender Security /EMD	**Rs. 30.58 Crore** The instrument type for payment of tender security/ EMD shall be Demand Draft, Bank Guarantee, RTGS, NEFT & IMPS. No other mode of payment will be accepted. (i) Payment of tender Security as per clause C 18.1.2 (i) of ITT is to be made by RTGS, NEFT & IMPS. The details of bank account of UPMRC are mentioned in succeeding para. The bidders are required to upload scanned copies of transaction of payment of tender security including e-receipt (clearly indicating UTR No. & tender reference must be entered in the remarks at the time of online transaction of payment) in online bid submission, failing which payment may not be considered. (Copy of GST registration no. to be provided along with Tender security/EMD) (ii) Payment of tender security as per clause C 18.1.2 (ii) of ITT is to be made by BG/FDR/Demand Draft. BG/FDR/ Demand Draft shall be submitted in original in a sealed envelope in the office of CE/ Contract within due date and time of submission end date of tender. **Validity of Tender Security/EMD in case of BG** shall remain valid for a period of 45 days beyond the final bid validity period.
Completion period of the Work	~~**24 Months**~~ **30 Months**

3.1.7.6 After approval of all the relevant shop drawings, the contractor shall submit four copies of a comprehensive variation in quantity statement.

3.1.7.7 The contractor should also submit two copies of Catalogues, Manufacturer's drawings, equipment characteristics data, performance chart etc. as required by the Engineer.

3.2 Switchboards

3.2.1 All panels/boards shall be dead front, front operated, dust, vermin proof, extensible, top/bottom cable entry, compartmentalized made of CRCA sheet steel of thickness of 2.0mm & rigid supports for components and with lockable hinged doors

3.2.2 All components like, circuit breakers, switches, hook-up wiring etc. shall be compatible with the short-circuit levels. Bus bar supporting systems shall withstand without deflection or deformation, the short circuit forces due to the stated short circuits. All inter wiring shall be with suitable stranded copper conductor FR insulated wire

3.2.3 All bus bars shall be electrolytic ~~copper~~ **aluminium** with purity of 99.9% and rated for the incoming switch or breaker rating. Current density shall be 1.4 amp/sq. mm up to 500 amp and 1.2 amp/sqmm beyond 500 amp. The Bus Bar temperature rise over ambient shall be as per IS/IEC standards. The calculations for temperature rise should be furnished for approval

3.2.4 Indicating lamps shall be multiple LED/neon type preferably

3.2.5 All CT's & PT's shall be resin cast

3.2.6 All relays, meters & switches shall be flush mounted

3.2.7 All metering equipments shall be digital unless specified otherwise or as approved by the employers' representative

3.3 Cabling

3.3.1 All cables used on this work shall meet the requirements of specifications and standards specified

3.3.2 Cables up to 10-sqmm shall be of copper conductor and be of aluminium for higher cross sections and cables up to size 25-sqmm shall be 4 core type or as specified.

3.3.3 Cables shall be laid in air/ surface/ recess/ pipes/ trench etc as required

3.4 Conduit Wiring

3.4.1 All conduits and all the accessories there with shall be Hot-dip galvanized / or as specified and ISI marked.

3.4.2 Where lighting Bus trunking is specified in BOQ the same shall be of approved makes as specified compliance to latest standards and UL/CE certified to ensure good quality with matching tap off boxes/ end boxes etc

mm. The height of the operating handle, push buttons etc shall be restricted between 300 mm and 1850 mm from finished floor level.

8.5 Switch board compartmentalization - The Switch Board shall be conforming to Form 4B as per IEC. Board shall be divided into distinct separate compartments comprising:

8.5.1 A completely enclosed ventilated dust and vermin proof bus bar compartment for the horizontal and vertical busbars.

8.5.2 Each circuit breaker, switch fuse units and MCCB housed in separate compartments enclosed on all sides.

8.5.3 Sheet steel hinged lockable doors for each separate compartment provided and duly interlocked with the breaker/switch fuse unit in "on" and "off" position.

8.5.4 Separate and adequate compartments for all Circuit Breakers provided for accommodating instruments, indicating lamps, control contactors and control fuses etc. These shall be accessible for testing and maintenance without any danger of accidental contact with live parts of the circuit breaker, busbars and connections.

8.5.5 A horizontal wire way with screwed cover provided at the top to take interconnecting control wiring between vertical sections.

8.5.6 Separate cable compartments running the height of the Switch Board in the case of front access Boards provided for incoming and outgoing cables.

8.5.7 Cable compartments of adequate size for easy termination of all incoming and outgoing cables entering from bottom or top.

8.5.8 Adequate and proper support provided in cable compartments to support cables.

8.5.9 Inter-changeable feeder compartments for all identical feeders of same rating.

8.6 Switch board bus bars

8.6.1 The bus bar and interconnections shall be of ~~electrolytic tinned copper~~ **aluminium** and of rectangular cross sections suitable for full load current for phase bus bars and full rated current for neutral bus bar as specified in BOQ and shown on drawings and rated for a temperature rise over the ambient temperature specified as per IEC standards. based on insulated conductor rating and the maximum current density for copper shall be 1.4 amp per mm^2 for ratings up to 500 Amp and beyond 500 amp maximum current density shall be 1.2 amp per mm^2. Bus bar supporting system shall be suitable to withstand the stresses of a 31 MVA sustained symmetrical fault level at 415 volts for 1 second or as per schedule of quantities.

8.6.2 The bus bars shall be insulated with colour coded or heat shrinkable PVC Sleeves. Accessible bus bar joints shall be shrouded in an approved manner. Minimum clearances between phase to phase and between phases and neutral (including

protruding nuts and bolts if any) shall be 25 mm. Minimum clearance between phases and earth (including protruding nuts and bolts if any) shall be 20 mm.

8.6.3 While providing the bus-bar section, the total load with 25% over load margin may be considered which may be transferred to an individual panel through the inter-connection between panels in the event of failure of incoming supply to the other panels. The diversity factor of various loads shall be taken as 1 for design purposes. The bus bar shall be designed for easy extension in future at either end.

8.6.4 An earthing bus made of Copper as approved shall be provided throughout the switchboard/panel with securely connected earthing bimetallic terminals at both ends and with double bimetallic washers.

8.6.5 Protective earthing shall be related to the incoming feeder as required.

8.6.6 In case of dissimilar materials the Protective Conductor shall be suitably sized for equal conductance.

8.6.7 All internal wiring, busbar metering etc. shall conform to IS: 5578 – 1984 with all amendments.

8.6.8 All bus bar connections in Switch Boards shall be bolted with high tensile strength steel bolts and nuts. Additional cross section of bus bars shall be provided wherever holes are drilled in the bus bars. No insulation tape shall be used in the busbars / interconnections.

8.6.9 Feeder connections shall be solid ~~copper~~ **aluminium bus** bars duly insulated with bimetallic clamps wherever required.

8.6.10 Shrouds for bus bar joints /tapping points shall be FRP only. Bus insulators shall be flame retardant, track resistant type with high creapage surface and non-hygroscopic material such as epoxy/SMC/. Busbars shall be supported and braced to withstand the stress due to max. short circuit current and also the thermal expansion

8.6.11 Maximum remperature rise of bus bars and connections shall be as per IEC 61439.

8.7 Components installed in the assembly

8.7.1 All components shall conform to respective Indian Standards or IEC specifications and shall be suitable for the particular requirements of rated current, voltage, service life, making and breaking capacity and short-circuit withstand strength. Co-ordination of component matching shall be observed. The Employer's Representative shall be empowered to choose compact component/ accessories as deemed fit out of the list of the approved makes.

8.7.2 Separate current transformers shall be provided for each protection device and for instrumentation.

8.7.3 All assemblies of switchgear and control gear shall comply with IEC 61439 or approved equivalent. The clearance in front, back and side of all assemblies of switchgear and control gear shall be not less than 1.2 metres or minimum specified in standards, while switchgear considered in the fully drawn out condition.

8.7.4 All push buttons shall be of the push to actuate type and provided with number of contacts as required.

8.7.5 Control & selector switch - Control & selector switches shall be rotary type having enclosed (in removable cover) contacts, stay put maintenance type, provided with escutcheon plates clearly marked to show the position.

8.7.6 Auxiliary contacts including push button contacts – All main as well as auxiliary contacts should be rated for 10A minimum.

8.8 Instrument accommodation

8.8.1 Instruments and indicating lamps shall not be mounted on the Circuit Breaker Compartment door. The current transformers for metering and for protection shall be mounted on the solid ~~copper~~ **aluminium** busbars with proper supports.

8.8.2 For MCCB's/SFU's**,** instrument, handlesand indicating lamps can be provided on the compartment doors.

8.9 Terminal arrangement

8.9.1 Both incoming and outgoing cables shall have top / bottom entry depending on site requirement.

8.9.2 The marking and arranging of switchgear, bus bars, connections and small wiring shall be clear and comply with an approved international standard. Terminal blocks for low voltage wiring shall be of the rail mounted type moulded from high-grade non-hygroscopic melamine having all live parts fully shrouded and assembled in banks with marking tags to fit into moulded tag slots.

8.9.3 Terminals for final connections for indication, instrumentation and metering circuitry shall have test probe facilities.

8.10 Contactors

8.10.1 Contactors shall comply with IEC 60947-4-1 and shall be of the break type having an uninterrupted rated duty, and utilization category AC 3. The contractors shall be capable of frequent switching & shall operate at 55 deg for AC3 applications

8.10.2 Contactor operating coils shall be AC suitable for the phase to neutral voltage of the supply and shall be protected by means of a low current MCB/cartridge fuse.

8.10.3 Main contactors shall be silver faced.

8.13 **Space heaters** - The Switch Board shall have in each panel thermostatically controlled space heaters adjustable in the range of 30° C to 100° C with a controlling 15 amp 230 volt switch socket outlet to eliminate condensation.

8.14 **Earthing**

8.14.1 All switch panels shall be provided with protective earthing as specified.

8.14.2 A main earth bar of ~~copper~~ **aluminium** shall be provided throughout the full length of the Switch Board to earth all switchgears with a provision to make connections to the sub-station earth's on both sides with double bi- metallic washers.

8.14.3 The frame of the Circuit Breaker shall be positively earthed when racked into the cubicle. Protective earthing of the switch-boards shall be connected to the building earth.

8.15 Sheet steel treatment and painting

8.15.1 Sheet Steel materials used in the construction of these units should have undergone a rigorous rust proofing process comprising of alkaline degreasing, descaling in dilute sulfuric acid and a recognized phosphating process. The steel work shall then receive two dip-coats of oxide filler/ primer before final painting. Castings shall be scrupulously cleaned and fettled before receiving a similar oxide primer coat. The manufacturer is required to have 7 tank treatment facility for this.

8.15.2 All sheet steel shall after metal treatment be powder coated with two coats of shade 692 or as approved to IS 5 on the outside and white on the inside. Each coat of paint shall be properly stoved and the paint thickness shall not be less than 80 microns. The panel manufacturer should have in-house power coating facility.

8.16 **Name plates and labels** - Suitable computerized laminated powder coated name-plates and identification labels of metal for all Switch Boards and Circuits shall be provided. These shall indicate the feeder number and feeder designation.

9.0 **Installation & Foundation (if required)**

9.1 The location of each foundation shall be correctly set out in accordance with the approved foundation layout drawing. Base channels shall be grouted, leveled in cement concrete pad for switchgear and other cubicle panels, etc. with reference to a bench mark in the building. Pedestal type panels and superstructures shall be erected by grouting foundation bolts into the foundation in cured holes left in foundation blocks. For concreting on existing floors, a proper bonding surface shall be made by chipping the floor. The final finish to the surface of the floor shall be given after all equipment has been installed. If floor is broken for installation of equipment, it shall be restored to original finish after completion of installation.

II. Method of Backfilling

Trenches and excavated pits for structures shall be backfilled to original ground level or to such other levels, as the Engineer may direct. All backfilling shall be carried out in orderly manner expeditiously and consistent with good workmanship.

Backfill material put into the trenches/pits for backfilling, shall unless otherwise specified be compacted and built up as to minimize future settlement as much as is reasonably possible. For this, care shall be exercised in selecting backfill material free from large hard clay lumps, especially in cramped areas directly adjoining the walls of structures.

If from the excavated spoil, enough backfill material is not available, imported, selected and approved backfill material from the borrow pits is required to be placed for backfill, on approval of the Engineer. Backfilling of trenches where the excavation is in the rock shall be with the surplus soft soil obtained from borrows pits.

23.2.6 Disposal of Surplus Excavated Material

The excavated material, which is in surplus to the requirements after backfilling, shall be disposed off as directed by the Engineer, with all lead and lift from the site for which no extra payment shall be made.

23.3 Particular Specification of Sewage Treatment Plant

23.3.1 Broad Design Basis

Table 23-1: STP Capacity

Item	Type	Capacity Required
STP	Module/Package	10 cum/day

Table 23-2: Domestic Wastewater Characteristic.

S.No	Parameter	Incoming Flow Characteristic	Recommended after treatment Value
1	PH	6.5-7.5	6.5-7.5
2	Total Suspended Solids	200-250 mg/l	<100 mg/lit
3	Oil & grease	30-50 mg/l	<10 mg/lit
4	BOD_5	200-300 mg/l	~~<30 mg/l~~ **20 mg/l**
5	COD	400-500 mg/l	<100 mg/l

23.3.2 Services to Be Provided by the Contractor

1. The Contractor shall take the responsibility for all the testing and inspection to be conducted in a manner as specified in these specifications.
2. Transportation of all equipments from manufacturers work to the project site inclusive of all insurances, intermediate handling and unloading / storage at site.
3. Supply, erection as per manufacturers recommendations, inspection, testing, start up and running of the equipment during trial run / performance guarantee period at rated capacity and speed.
4. Furnishing all erection and commissioning supervision service. The Contractor shall also arrange for maintenance of equipment during performance guarantee and commissioning period.
5. Application of final paint of approved colour shall be done by the Contractor after

SECTION: E.09

BMS SPECIFCIATION

BMS SPECIFICATION

1. Purpose and Scope

1.1 This Specification describes the minimum standards of the Integrated Station Management System (BMS) for Agra Metro Station elevated stations. The Works to be executed under the Contract include the design, development, manufacture, verification, delivery, installation, testing, commissioning (including integrated testing and commissioning) and technical support for a complete BMS to fully integrate the control, monitoring, and supervision of Ventilation & Air Conditioning , Low Voltage Power & Distribution, Firefighting & Alarm System, Hydraulic System (water pumps & Bore Well Pumps etc.) and other nominated station Services including all DDC Equipment, , Modules, Sub Modules, Power Supplies, Local Control Panels, Local Area Network (LAN), Ethernet Hubs and Switches, Interface with electrical containment and wiring systems, and other components as required whether or not specified necessary to deliver the requirements of this Specification.

1.2 The BMS is to be detailed engineering, designed manufactured, supplied, installed, tested and commissioned by the Contractor and shall meet all performance and functional requirements as defined in the Specification. This specification contains a general description of the system concepts and major components, and sections covering definitions, requirements for interfaces with other contracts, general mechanical and electrical installation design/performance requirements, and testing requirements.

1.3 The emphasis is to explain the requirements of work, interfaces with other contractors for achieving an efficient & safe working system commensurate to the best international standards and practices. Every effort has been made to cite the requirements very clearly, however in this contract, the contractor shall follow acceptable standards & procedures similar to the best available in world Metros where this is not explicitly mentioned.

1.4 In this document the term "provide" shall mean "the detailed covering specifications, calculations, drawings for installations & maintenance, manufacture and factory testing or procurement, delivery, off-loading, installation, testing, commissioning, handover to UPMRC, UPMRC staff training including supply of O&M manuals & as-built drawings, interface and co-ordination with other contractors or arising out of concurrent works and warranties".

1.5 Submittals shall be in the form of reports, drawings, calculation sheets & schedules both in hard copy and on computer diskette. The contractor shall furnish backup materials such as codes / Standards / software programs free of cost for the Engineer use in understanding/evaluation of the submittals. The contractor will furnish a list and format of submittals for each area of work to the Engineer for consent covering the requirements given herein.

2. BMS For Elevated Station

2.1 The contractor shall Detail Engineering, Design, Supply, Installation, Testing and Commissioning of DDC based BMS system for all elevated stations. The system shall be IP (MODBUS/ BACNET etc.) based and Control and Monitor of the following equipment's at each elevated station. The contractor shall ensure that DDC to Main Switching network shall be through MODBUS TCP/IP Communication. Also shall ensure that all associated components as part of DDC system (specified under BOQ) shall be supplied without any variation to the contract.

a) LV Distribution Board
b) Public area Normal Lighting Control.
c) Variable Refrigerant Volume (VRV) Controller and CRC temp control.
d) Fire Alarm Control Panel (FACP)
e) Fire Fighting (Main Electric Pump, Jockey Pump) & Domestic Water Pumps, Water Tank level indication etc.
f) Lift and Escalator RMS
g) DG Sets
h) Other systems as per requirement.

2.2 HARDWARE & SOFTWARE FUNCTION SPECIFICITION

2.2.1 Workstation cum server

Standalone commercial grade industrial compatible Desktop workstation cum server , features Intel core I9 processor (should be latest processor) with 3.0 GHz or higher, 16GB RAM or higher, DVD R/RW, Dual LAN card, Video Accelerator, 2 Serial, 1 parallel, Windows 11 OS or latest based (64 bit) latest Desktop with standard MS office package, complete with one No. USB mouse, 2 Nos. spare USB ports, minimum 4 Nos. High speed parallel ports, one No. 2 TB hard disk drive, 101 keys keyboard having 30 programmable function keys, Latest Norton/MacAfee Anti-virus with lifetime validity vaccine suitable for operation on 230 volts A/C. 50 Hz.

The Dual colour monitor shall be minimum 32" diagonal nonglare flat LED screen high resolution with minimum HDMI resolution of 3840 pixels horizontal, 2160 lines vertical and minimum contrast ratio of 700:1. with minimum 16 based colour as per specifications etc. including dual monitor holder as required. Workstations shall include all accessories needed to comply to UL requirements. 1 Nos. Additional Programming terminal (Laptop) shall be provided to Facilitate O&M activities at each station.

2.3 A4 Colour Printer

i. 02 Nos. full colour A4 page printer, shall be provided for creating paper copies of Workstation screen displays, reports, etc

ii. For Elevated stations & Station level, Report printer (A4) shall be provided. Laser printers shall be like friendly maintenance and eco-friendly savings. Laser printer shall produce both black and white and colour prints.

iii. The minimum requirements for Printer are as follows,

S.NO.	DESCRIPTION	REQUIREMENT
a.	Printer	A4 Color Printer
b.	Functions	Print, Copy, Scan
c.	Resolution	Min. 1200x1200 dpi for Black Upto. 4800x1200 dpi for Color
d.	Print Speed	Color: Min. 20 ppm Black: Min. 20 ppm
e.	Ports	USB & Ethernet
f.	Wireless Connectivity	Wi-Fi and Bluetooth
g.	Network Protocol	Modbus TCP/IP
h.	Duplex Printing	Automatic

2.4 DDC Controller

2.4.1 DDC Controllers shall be IP based and communicate with BMS System. Automation stations must be IP based, intelligent. Automation stations must be freely programmable and feature graphical programming optimized for building automation and control. The following functions must be available: Control, measure, signal at various priorities and by event, monitor, alarm, count, calculate, schedule, save trend values, and log.

2.4.2 At the heart of the DDC system shall be the Microprocessor based modules, which can be individually programmed according to the functional requirements.

2.4.3 The IP DDC controllers shall be selected from either a modular or compact type of unit to suit the most economic inclusion of all the data points specified. To facilitate this controller should come in various configurations to handle at least up to 250 I/O points. Each control module shall be capable of operating on a stand-alone basis without control from a central computer.

2.4.4 The IP DDC Controllers shall have onboard IO points and also shall support flexible I/O expansion modules (both hard points and soft points).

2.4.5 The DDC Controllers support protocols such as BACNet/IP, BACnet/MSTP, Modbus TCP IP, etc.,

2.4.6 The input/output connection to Modular controllers shall be via individual plug-in modules suitable for the particular peripheral device.

2.4.7 The DDC Controllers shall be used for Total Automation application with Trending availability at controller level.

2.4.8 It shall be possible to integrate both types of control module (compact and modular) onto the same BACnet communication network/MODBUS TCP IP network. Each controller performance shall be to 0.5% control accuracy with sample rates of less than one second.

2.4.9 The products used in constructing the BMS management and automation levels shall conform to BACnet protocol / MODBUS TCP/IP protocol for station automation and control networks.

2.4.10 DDC must be UL approved, must have real time clock and be suitable for PID control.

2.4.11 The Distributed direct digital control (DDC) system shall be designed with functions distributed both physically and functionally over the field controller.

2.4.12 The DDC's shall be true autonomous with peer-to-peer communication and shall have minimum the following features.

i. Optional connection to operator terminal, management station and via Web browser with Web server device.
ii. Freely Programmable

iii. Universal inputs, which can be connected to passive and active sensor elements, or to binary volt-free contacts, for signalling functions.
iv. Flash ROM, real time processing and multi tasking
v. 32 bit processor system
vi. Supply voltage AC 240V +/-20% 50/60 Hz
vii. Event driven data transmission
viii. Historical data memory storage
ix. Software application stored in nonvolatile memory
x. The system shall have the facility for a Web server to be added to allow full operation of all automation station control modules connected to the Lon Talk BACnet network via a standard thin client/web browser. Functions to include
xi. Process control & interlock functions.
xii. Alarm transmission via SMS and e-mail
xiii. Operation of all-time schedules, exception calendar and heating curves.
xiv. Reading of trend data with facility to export data to Microsoft Excel.
xv. Multi user level access protection
xvi. Ethernet or Modem connection
xvii. Runtime totalization.
xviii. Trend logging of specific data-points with transmission of the logged values to the management level
xix. Energy calculations

2.5 Communication

2.5.1 Contractor shall share the data communication between the Controller and BMS Server/Workstation through MODBUS TCP IP Communication. All third-party systems integration with BMS System through MOBUS TCP/IP communication only.

2.6 DDC Enclosure

2.6.1 Supply, Installation, Testing & Commissioning of Front operated front/back access cubicle type indoor duty floor/wall/recess/surface mounting, totally enclosed dust and vermin proof (minimum protection IP 54) Industrial type panels with Min 8 Fold Frame ,Colour shade of the panel shall have NONO from employer foamed-in PU gaskets, fabricated from 2mm thick CRCA sheets & gland plate min 3 mm, 7 Inches TFT display, etc. All the panel shall humidity & temp. monitoring facility.

2.6.2 Incorporating IP 54 protection, Free standing DDC enclosure equipment complete with Single ended TBs, SMPS, MCBs, etc including interconnections, labelling, earthing, associated foundation/ masonry work and all cable ducting, control wiring, fixing accessories, LV Power isolation indicator lamps, OFC Converter, LED's, fuses, circuit breakers, terminal rail, terminals, marker ferrules and all accessories as may be called for under the specifications.

i. The Switchboards shall be provided with detachable gland plates for entry of cables from the top/bottom as required.

ii. All accessories and supporting structures such as channels, base frame, mounting brackets, lifting lugs, panel heaters, ventilation arrangement etc as required.

iii. The makes of components and accessories shall be same for panels for uniformity, standardization and replaceability shall be applicable to all panels/boards under the scope of work

iv. Panel shall have additional 30% Space provision for future expansion. I/Os shall have additional 30% Spare provision for future expansion.

2.7 BMS Software

2.7.1 Proprietary software packages shall be used within the System, but it should be 2023-year version or latest version at the time of installation.

2.7.2 The Contractor shall submit the BMS software compactable certificate with DDC hardware.

2.7.3 All software shall be fully proven, including operation at maximum processing load. This feature shall be simulated during the Factory Acceptance Test.

2.7.4 The Operating system shall support multi-tasking, multi user, inter process communication and foreground/background processing with real time capabilities, virtual memory management and at least 32-bit virtual addressing scheme and GUI. It shall conform to standards for Open Systems. It shall also maintain a system activity log which shall be used for system recovery. It shall support all I/O devices used including high speed network protocol, TCP/IP, disk arrays, etc.

2.7.5 The BMS software shall be divided into the following basic functions:

2.7.6 Data base management: Maintenance of the primary database for real time and historical data, signal processing and calculations. The structure of the database shall accommodate easy access of data for use in other proprietary software packages.

2.7.7 Communications management: Support of communications protocols with comprehensive error detection and error correction facilities. Support of operating regimes, which optimize performance and operating costs on communication networks using, either dedicated or shared communications channels where operating costs can be either dependent or independent of traffic loading.

2.7.8 Alarm and event reporting: Detection of alarms and events, support of alarm reporting and acceptance procedures on the Workstations and generation of printed logs.

2.7.9 Peripheral management: Support of operator procedures on the keyboard and mouse units, construction of display page formats and printer page formats.

2.7.10 BMS System Control and Monitoring at operator workstations of equipment connected to the terminal units and manual control from the operator workstations or automatic control by pre-programmed sequences resident either in terminal units or designated operator workstations.

2.7.11 Fault Diagnosis and Maintenance: Self-diagnosis and fault reporting to replaceable module level, notification when software back-ups are due and general housekeeping to maintain optimum operation. 1 Nos. Additional Tablet with preloaded O&M manual shall be provided.

1. In BMS Development below Display Screens to be developed as minimum,
2. Station overview Display screen
3. E&M Overview Display Screen
4. Fire Alarm Display Screen
5. VAC Overview Display Screen
6. L&E Overview Display Screen
7. BMS System Station Architecture Display Screen
8. Energy Reading Display Screen for VAC panels and E&M Panels
9. Energy Dashboard display screen
10. Trends Display screen
11. Events and Alarm Display screen

All station BMS Equipment datasheets, warranty, etc., shall be available at BMS workstation for Operations and Maintenance procedures.

INPUT/OUTPUT SCHEDULE

The BMS Contractor shall refer the Station IO Schedule.

Indicative Elevated Station Typical I/O list									
S.No.	**Attribute Description**	**Equipment Location**	**Type**	**Signal Category**	**AI**	**AO**	**DI**	**DO**	**SOFT IO**
1	**Sump pit level sensor**								
	Low level	pump room	HW	VFC			1		
	Midium level		HW	VFC			1		
	High level		HW	VFC			1		
	Sump Pump operation Logic		SW						1
2	**FIRE WATER TANKS LEVELS**								
	Fire Water Tank Low Level Alarm	pump room	HW	VFC			2		
	Fire Water Tank Medium Level		HW	VFC			2		
	Fire Water Tank HighLevel		HW	VFC			2		
	Water Inlet logic		SW						1
3	**Over head WATER TANKS LEVELS**								
	OH Water Tank Low Level Alarm	terrace level	HW	VFC			2		
	Treated Water Tank Medium Level		HW	VFC			2		
	OH Water Tank HighLevel		HW	VFC			2		
	Water Inlet logic		SW						2
4	**FACP**								
	FACP Integration to BMS (to mimic complete FACP on the BMS screen)		SW	**ModBus/RS 485**					120
5	**Centralised remote controller/VRV**								
	CRC integration (to provide complete control to BMS as available with the CRC such as scheduling, unit control, error code display, etc. Approx.Soft points are as follows)	SCR	SW	RS485/TCP-IP					3
	VRV On/Off Command		SW						3
	VRV Running feedback		SW						3
	VRV Local/Remote Position		SW						3
	VRV Current low/High alarm		SW						3
	VRV Trip alrm		SW						3
	VRV Refrigerant pressure Low/High Alarm		SW						3
	VRV Temperature High Alarm		SW						3
	Capacity Limited		SW						3
	Maximum Capacity		SW						3
	Run Enabled		SW						3
	Motor Current		SW						3
	Motor Running KW		SW						3
	COP		SW						3
	IKW/TR		SW						3
	Tonnage		SW						3

S.No.	Attribute Description	Equipment Location	Type	Signal Category	AI	AO	DI	DO	SOFT IO
6	**Lifts**								
	Maintenance mode status		SW	MODBUS TCP/IP					4
	Run/Stop status		SW						4
	Power Available Status		SW						4
	Emergency Alarm Status		SW						4
	Lift Parking Status		SW						4
	Fault status		SW						4
	Homing command (parking/ un-parking)		SW						4
	Fire Mode Stop		SW						4
7	**Escalators (ESC)**								
	Power on/off status		SW	MODBUS TCP/IP					4
	UP & DN direction of travel status		SW						4
	Stop status		SW						4
	Local/Remote Status		SW						4
	Speed of the escalator status		SW						4
	Fault codes of escalator		SW						4
	Escalator fault status		SW						4
	Maintenance mode status		SW						4
	Stop Command		SW						4
	Start (UP) Command		SW						4
	Start (DN) Command		SW						4
	Fault reset command		SW						4
	Override Command		SW						4
8	**Main Distribution Board (MDB)** - Type - 1								
	TRANSFORMER - I INCOMING								
	Auto/Manual status	ASS	HW				1		
	Circuit Breaker Open/Close Status		SW						1
	Circuit Breaker Trip Status		SW						1
	ESPB		HW	VFC			1		
	Control Supply Status		HW	VFC			1		
	TRANSFORMER - II INCOMING								
	Auto/Manual status	ASS	HW				1		
	Circuit Breaker Open/Close Status		SW						1
	Circuit Breaker Trip Status		SW						1
	ESPB		HW	VFC			1		
	Control Supply Status		HW	VFC			1		
	BUS COUPLER & BUSBAR								
	Circuit Breaker Open/Close Status	ASS	SW						1
	Circuit Breaker Trip Status		SW						1
	Auto/Manual status		HW				1		
	Metering (at Busbar)								
	Line Voltage	ASS	SW	RS485					1
	Line Current		SW						1
	KW		SW						1
	KVA		SW						1

S.No.	Attribute Description		Type			AO	DI	DO	SOFT IO
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1
	MDI		SW						1
	Frequency		SW						1
	B1 OUTGOINGS								
	EPP+ESC/PAP + Spare								
	Open/Close status	ASS	SW						5
	Trip status		SW	RS **485**					5
	ACPP+MLP+spare								
	Open/Close status	ASS	SW						2
	Trip status		SW						2
	S&T **UPS**								
	Open/Close status		SW						1
	Line Voltage		SW						1
	Line Current		SW						1
	KW		SW						1
	KVA	ASS	SW	RS **485**					1
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1
	Trip status		SW				1		
	B2 OUTGOINGS								
	EPP+ESC/PAP+Spare								
	Open/Close status	ASS	SW						4
	Trip status		SW						4
	FPP+Spare								
	Open/Close status	ASS	SW						2
	Trip status		SW						2
	ACPP+MLP/ Spare								
	Open/Close status	ASS	SW						2
	Trip status		SW						2
9	**Essential Power Panel (EPP)**								
	INCOMER (Normal supply)								
	Open/Close status	ASS	HW				3		
	Trip status		SW						3
	Auto/manual Status		HW				1		
	ESPB		HW				1		
	BUSBAR								
	Metering (at Busbar)								

S.No.	Attribute Description	Equipment Location	Type	Signal Category	AI	AO	DI	DO	SOFT IO
	Line Voltage	ASS	SW						1
	Line Current		SW						1
	KW		SW						1
	KVA		SW	RS **485**					1
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1
	Lift(4) + ACDB + S&T UPS + Spare								
	Line Voltage		SW						7
	Line Current		SW						7
	KW		SW						7
	KVA		SW						7
	KWHr	ASS	SW	RS **485**					7
	KVAR		SW						7
	PF		SW						7
	Open/Close status		SW						7
	Trip status		SW						7
10	**AC Power Panel +Main lighting panel (ACPP+MLP)**								
	INCOMER								
	Open/Close status		HW				2		
	Trip status	ASS	SW						2
	Auto/manual Status		HW				1		
	ESPB		HW				1		
	Metering (at Busbar)								
	Line Voltage		SW						1
	Line Current		SW						1
	KW		SW						1
	KVA		SW	RS **485**					1
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1
11	**Emergency lighting panel (EMLP)**								
	INCOMER								
	Open/Close status		HW				2		
	Trip status	ASS	SW						2
	Auto/manual Status		HW				1		
	ESPB		HW				1		
	Metering (at Busbar)								
	Line Voltage		SW						1
	Line Current		SW						1
	KW		SW						1
	KVA	ASS	SW	RS **485**					1
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1

S.No.	Attribute Description		Type	Signal Category	AI	AO	DI	DO	SOFT IO
12	**Fire Pump Panel (FPP + WPP)**								
	INCOMER - I from MDB and 2 from DG set								
	Circuit Breaker Open/Close Status	PUMP ROOM	HW				2		
	Trip Status		SW						2
	Auto/manual Status		HW				1		
	ESPB		HW				1		
	Metering (at Busbar)								
	Line Voltage	PUMP ROOM	SW	RS **485**					1
	Line Current		SW						1
	KW		SW						1
	KVA		SW						1
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1
	OUTGOING **(Main + Standby + Spare)**								
	Running Feedback Status	PUMP ROOM	SW						3
	Auto/Manual Status		HW				1		
	Local/Remote Status		HW				3		
	Trip Status		SW						3
	On/OFF Command		SW						3
	Motor Current		SW						3
	Pump Running Hours		SW						3
	Low pressure alarm taken		SW						1
	OUTGOING **(Jockey + Spare)**								
	Running Feedback Status	PUMP ROOM	SW						2
	Local/Remote Status		HW				2		
	EPB Status		HW	VFC			2		
	Trip Status		SW				2		
	Motor Current		SW						2
	Pump Running Hours		SW						2
	2 Nos. Bore well								
	Pump Running Feedback	PUMP ROOM	SW						2
	A/M/R STATUS		HW				2		
	ON/OFF Command		HW					2	
	Pump Current		SW						2
	Pump Running Hours		SW						2
	2 Nos. Domestic + 1 Nos. Booster								
	Pump Running Feedback	PUMP ROOM	SW						3
	A/M/R STATUS		HW				3		
	ON/OFF Command		HW					3	
	Pump Current		SW						3
	Pump Running Hours		SW						3
	2 Nos. Sump Pump								

S.No.	Attribute Description	Equipment Location	Type	Signal Category	AI	AO	DI	DO	SOFT IO
	Pump Running Feedback	PUMP ROOM	SW						2
	A/M/R STATUS		HW				2		
	ON/OFF Command		HW					2	
	Pump Current		SW						2
	Pump Running Hours		SW						2
	2 Nos. Inline Fan								
	Local/Remote Status	PUMP ROOM	HW				2		
	Auto/Manual STATUS		HW				2		
	ON/OFF Command		HW					2	
	Trip status						2		
	On/OFF Status		HW				2		
	Running Hours		SW						2
13	**PAP PANEL**								
	INCOMER								
	Open/Close status	ASS	HW				2		
	Trip status		SW						2
	Auto/manual Status		HW				2		
	ESPB		HW				1		
	BUSBAR								
1	Metering (at Busbar)								
	Line Voltage	ASS	SW	RS **485**					1
	Line Current		SW						1
	KW		SW						1
	KVA		SW						1
	KWHr		SW						1
	KVAR		SW						1
	PF		SW						1
14	DG **AMF PANEL**								
	INCOMER								
	Auto/Manual Status		HW				1		
	Open/Close Status		SW						1
	Trip Status		SW						1
	ESPB		HW				1		
	Outgoing								
	Open/Close Status		SW						3
	Trip Status		SW						3
	AMF-160/200/250KVA DG								
	DG Local/Remote Status	DG ROOM	HW				1		
	DG Set / Engine Start Feedback		HW				1		
	DG common Fault Alarm		SW						1
	DG Battery Voltage		SW						1
	DG Output Voltage		SW						1

S.No.	Attribute Description		Type	Signal Category	AI	AO	DI	DO	SOFT IO
	DG Output Frequency		SW						1
	DG set failed to start or tripped alarm		SW						1
	Hours of operation		SW						1
	Starter battery voltage alarm		SW						1
	DG Canopy open alarm		SW						1
	Low Lube Oil Pressure		SW						1
	High water tem Alarm		SW						1
	ESPB Alarm		HW				1		
	Over cranking alarm		HW						1
	DG radiator low level alarm		SW						1
	Fule consumption		SW						1
	DG fuel level indication		HW						1
	DG not run for 15 days		SW						1
15	LDB								
	Local/Remote status		HW				11		
	R PHASE								
	Open/Close status		HW				11		
	ON/OFF COMMAND		HW					11	
	Y PHASE								
	Open/Close status		HW				11		
	ON/OFF COMMAND		HW					11	
	B PHASE								
	Open/Close status		HW				11		
	ON/OFF COMMAND		HW					11	
16	UDB								
	Local/Remote status		HW				5		
	UPS supply								
	Open/Close status		HW				5		
	ON/OFF COMMAND		HW					5	
					0	0	129	47	486

Concourse ,Platform, DG ROOM, Viaduct

Concourse, Platform and DG Room

Note;- * IO Summary Indicative only. 30 % IO's in addition for spare & Specified IO's scope shall be considered as scope within the contract .

ANNEXURE-02

E 00 Electrical Works – General

3.2 Switchboards

3.2.3 All bus bars shall be electrolytic Aluminum and rated for the incoming switch or breaker rating. Current density shall be as per IEC or relevant standards. The Bus Bar temperature rise over ambient shall be as per IS/IEC standards. The calculations for temperature rise should be furnished for approval.

E.01 MV Switchgear

8.6 Switch board bus bars

8.6.1. The bus bar and interconnections shall be aluminum and of rectangular cross sections suitable for full load current for phase bus bars and full rated current for neutral bus bar as specified in BOQ and shown on drawings and rated for a temperature rise over the ambient temperature specified as per IEC 61439 standard. Bus bar supporting system shall be suitable to withstand the stresses as per standard to sustain symmetrical fault level at 415 volts side for 1 second or as per schedule of quantities.

8.6.9. Feeder connections shall be solid Aluminium bus bars duly insulated with bimetallic clamps wherever required.

8.8Instrument accommodation

8.8.1. Instruments and indicating lamps shall not be mounted on the Circuit Breaker Compartment door. The current transformers for metering and for protection shall be mounted on the solid Aluminum busbars with proper supports.

8.14 Earthing

8.14.2 A main earth bar of Aluminum shall be provided throughout the full length of the Switch Board to earth all switchgears with a provision to make connections to the sub-station earth's on both sides with double bi- metallic washers.

18. Surge Protection Devices (SPD)

18.1 Surge protection Devices shall confirm to IEC 61643-11: 2011 and NBC 2016. SPD shall have mechanical health indication for visual checking and potential free remote monitoring feature. SPD shall be connected on DIN Rail: 35 mm channel. Device must be tested and certified from KEMA / KEUR / VDE / UL / NABL

Type-1 SPD for Entry Point After Transformer (Stage-1) / Main LT Panel		
Sl No.	**Characteristics**	**Parameter**
1	IEC test Classification	Type-1 / Class-1
2	Technology	Metal Encapsulated Spark Gap Technology
3	Certification	KEMA KEUR / VDE and UL as per IEC 61643-11 :2011
4	Pluggability for each pole	Pluggable for Safe and Easy Maintenance
5	Nominal Voltage Un	240 V AC (TN-S) / as per NBC-2016
6	Max. Continuous operating Voltage Uc (L-N / N-PE)	1.1*240 V AC / as per NBC-2016
7	Impulse Discharge Current Iimp (10 / 350µs) (L-N)	25KA or as suitable for design fault level of respective panel.
8	Impulse Discharge Current Iimp (10 / 350µs) (N-PE)	100 kA or as suitable for design fault level of respective panel.
9	Short Circuit Current rating I_{SCCR}	50 kA for L-N & 100A for N-E or as suitable for design fault level of respective panel.
10	Voltage Protection Level Up (L-N)	≤ 1.5 kV
11	Temporary Over Voltage behavior at UT (L-N)	440 V / 120 min-withstand mode
12	Temporary Over Voltage behavior at UT (N-PE)	1200V AC (200ms / withstand mode)

13	Max. length from SPD to Earth Bus bar in panel	0.5 meter
14	Response Time t_A	As per NBC-2016

Type-2 SPD for Sub-Distribution Panel (Stage-2) (Essential Power Panel, Main Lighting, Emergency Lighting, Fire Pump Panel, Water Pump, PAP & All Distribution Boards etc.		
Sl. No.	**Characteristics**	**Parameter**
1	IEC test Classification	II/ T2
2	Technology	L-N: MOV Technology & N-PE: GDT Technology
3	Certification	KEMA KEUR / VDE / NABL tested as per IEC 61643-11 / UL
4	Pluggability	Pluggable for Safe and Easy Maintenance
5	Nominal Voltage Un	240 V AC (TN-S)
6	Nominal Discharge Current In (8 / 20µs) (L-N & N-E)	10 KA(L-N) & 20KA(N-E) or as suitable for design fault level of respective panel.
7	Maximum Discharge Current Imax (8 / 20µs) (L-N & N-E)	20 KA(L-N) & 40KA(N-E) or as suitable for design fault level of respective panel.
8	Short Circuit Current rating I_{SCCR}	25KArms (L-N) & 100Arms (N-E) or as suitable for design fault level of respective panel.
9	Voltage Protection Level Up (L-N)	≤ 1.5 kV
10	Temporary Over Voltage UT (L-N)	335 V AC (5s / Withstand Mode) 440V (120min–safe failure mode)
11	Temporary Over Voltage UT (N-PE)	1200 V AC (200ms / Withstand Mode)
12	Max. length from SPD to Earth bus bar in panel	0.5 meter

13	Response Time t_A	As per NBC 2016

Type-3 (Stage-3) SPD for Sensitive Electrical and Electronic Equipment		
Sl. No.	**Characteristics**	**Parameter**
1	IEC test Classification	T3
2	Certification	KEMA KEUR / VDE / NABL tested as per IEC 61643-11 / UL
3	Pluggability	Pluggable for Safe and Easy Maintenance
4	Nominal Voltage Un	240 V AC (TN-S)
5	Nominal Discharge Current In (8 / 20µs)	3KA or as suitable for design fault level of respective panel
6	Maximum Discharge Current Imax (8 / 20µs)	5KA or as suitable for design fault level of respective panel
7	Voltage Protection Level Up (L-N)	≤ 1.25 kV (L-N)/ ≤ 1.5 kV (N-E)
8	Temporary Over Voltage UT (L-N)	335 V AC (5s / Withstand Mode) 440V (120min–Safe Failure mode)
9	Temporary Over Voltage UT (N-PE)	1200 V AC (200ms / Safe Failure mode)
10	Response Time (tA) (L-N)	As per NBC-2016
11	Short Circuit Current rating I_{SCCR}	6KA or as suitable for design fault level of respective panel.

18.2 SPD shall be with suitable rating of MCCB / MCB in series having the trip indication on Panel. SPD shall be provided for Protection, maintenance etc. SPD shall be tested by KEMA /VDE / NABL to ensure voltage protection level (Up) of 1.5KV to protect the terminal equipment's.

one **Civil work** of minimum **20% of NIT value** in last 07 years ending last day of the month previous to the month of tender submission end date

(v) Tenderer should have minimum experience of having constructed a total of minimum 8 km length of Metro Viaduct/bridge/fly over (excluding approach embankment) having pre/post-stressed concrete super structure, with or without elevated metro station (which may/may not include finishing work and E&M works).

Notes :

a) The tenderer shall submit details of work executed by them in the Performa of **Annexure-1 & 1 A of NIT** for the works to be considered for qualification of work experience criteria**. Prime contractor shall mean a bidder who has executed the works in the capacity of Contractor (and not in the capacity of Project Implementing Agency/ Project Executing Agency/ Employer/ Project Management Consultant (PMC) as defined in Clause 3.1.4 (i) of Manual for Procurement of Works, June 2022). Bidders should also specifically take note of clause no 4.5 of SCC.** Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be submitted. **The offers submitted without this documentary proof shall not be evaluated.** In case the work is executed for private client, copy of work order, bill of quantities, bill wise details of payment received certified by Chartered Accountant (C.A), Tax Deducted at Source (TDS) certificates/ Form 26 AS for all payments received and copy of final/last bill paid by client shall be submitted.

b) For completed works, value of work done shall be updated from date of completion to last day of the month previous to the month of tender submission end date price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year. The exchange rate of foreign currency shall be applicable 28 days before the submission end date of tender.

c) In case of Joint venture / Consortium, full value of the work, if done by the same joint venture shall be considered. If the qualifying work(s) were done by them in JV/Consortium having different constituents, then the value of work as per their percentage participation in such JV/Consortium shall be considered.

d) If the above work(s) i.e. “Similar Work” comprise other works, then client’s certificate clearly indicating the amount of work done in respect of the “similar work” shall be furnished by the tenderer in support of work experience along-with their tender submissions.

e) After opening of financial bids, the work experience credentials (work experience certificate along with other documents if any) of L-1 bidder shall be sent for verification and certification to the concerned client(s**). In case of any concealment or misrepresentation of facts, appropriate action(s) in accordance with Tender Conditions shall be taken as deemed fit.**

f) Tenderer should have experience of executing E&M works similar to scope of work defined in Technical Specification/E&M works for at least one Metro Station / Railway Station / Commercial building etc. In case tenderer doesn’t meet the requisite experience, Contractor may engage sub-contractor having the required experience for E&M works. **The eligibility of the subcontractor shall be evaluated after award of work**. The contractor shall be required to submit confirmation for the same in **Appendix 15 of Form of Tender.**

B. Financial Standing: The tenderers will be qualified only if they have minimum financial capabilities as below:

(i) **T1 – Liquidity:** The tenderer must have liquidity of at least **Rs.** ~~109.24~~ **87.39 Crores**.

a) The liquidity shall be ascertained from Net Working Capital {Current Assets – (current liabilities + provisions)} as per latest audited balance sheet and/or from the Banking reference(s).

b) Banking reference(s) should contain in clear terms the amount that the Bank will be in a position to lend for this work to the applicant/ member of the Joint Venture/Consortium. In case the Net Working Capital (as seen from the Balance Sheet) is negative, only the Banking reference(s) will be considered, otherwise the aggregate of the Net Working Capital and submitted Banking reference(s) will be considered for working out the Liquidity.

c) The Banking references should be from a Scheduled Commercial Bank in India or from an International Bank of repute (in case of foreign vendors) acceptable to Employer as **per standard performa provided in NIT as Annexure 5** and it should not be more than 3 months old as on the date of submission of bids.

d) In Case of JV: - Requirement of working capital is to be distributed between members as per their percentage participation and every member should satisfy the requirement for his portion.

Example: Let member-1 has percentage participation=M and member-2 has percentage participation=N. If minimum working capital required is 'W' then working capital of member-1 ≥ $\frac{W\ M}{100}$ and working capital of member-2 ≥ $\frac{W\ N}{100}$

(e) In case the applicant is a Joint Venture/Consortium and if Banking Reference is issued by the bank in favour of the Joint Venture/Consortium for this contract, then it will be considered for the tenderer and if the Banking reference(s)is issued in favour of any member of JV/Consortium it will be considered only for that member.

ii) **T2 - Net Worth**: Net Worth of tenderer during last audited financial year should be **≥ INR** ~~152.93~~ **122.34 Crore.**

In Case of JV/Consortium- Net worth will be based on the percentage participation of each Member.

***Example*:** Let Member-1 has percentage participation = M and Member-2 has percentage participation =N. Let the Net worth of Member-1 is 'A' and that of Member-2 is 'B', then the Net worth of JV/Consortium will be

$$= \frac{AM+BN}{100}$$

iii) **T3 - Annual Turnover**: The average annual financial turnover of the bidder during the last five years ending 31st March of the previous Financial Years should be ≥**INR** ~~611.72~~ **489.37 Crore**.

In Case of JV/Consortium- Average Annual Turnover will be based on the percentage participation of each Member.

Example: Let Member-1 has percentage participation = M and Member- 2 has = N. Let the average annual turnover of Member-1 is 'A' and that of Member-2 is 'B', then the average annual turnover of JV will be = (AM+BN)/100

iv) T4 - Bid Capacity Criteria:

stress due to friction will be calculated as per Clause-16.8.3 of IRS-CBC.

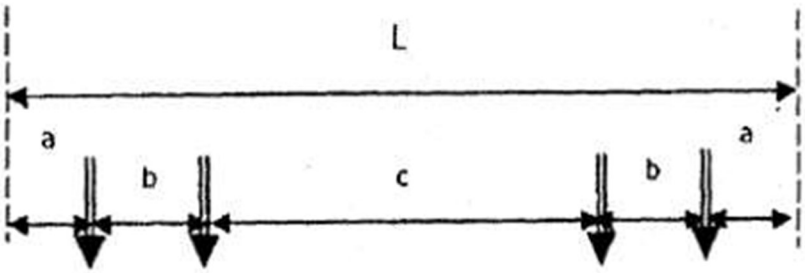
For calculation of long-term effects, the relative humidity to be considered as per Annexure A.7 of IRC 112 shall be (70(max) +47(min))/2 = 58.5%

Provision of emergency cables and future cables in prestressing shall be made as per clause 16.9.9 & 16.9.10 of IRS:CBC.

6.4 LIVE LOAD (LL)

6.4.1 Railway Vehicular Load

Each component of the structure shall be designed / checked for all possible combinations of these loads and forces. They shall resist the effect of the worst combination:



All axle loads = 16 tons

Maximum number of successive cars=~~6~~ 3

Where,

L = 21.400m (Length of a car)

a = 2.200m (overhang)

b = 2.300m (Wheel base in a bogie)

c = 12.400m (Distance between Axle-2 and Axle-3 in the car)

Moving load analysis shall be carried out in order to estimate the maximum longitudinal force, max shear and max BM. The simply supported structures shall be designed for Medium Metro Loading Envelopes as tabulated in Annexure-I of Model DBR of RDSO.

In case of Twin U-Girder, each U-Girder will support only one track.

These superstructures and sub-structures will be checked for one track loaded condition as well as both tracks loaded condition (Single Span as well as Both Spans loaded condition).

However, for any other configuration (Axle load, and Axle spacing) of Modern Rolling stock including maintenance, machinery, crane etc., shall be within the loading envelope of present live load configuration.

6.4.2 Dynamic Augmentation

CDA will be considered as specified in clause 2.4.1.1 of IRS Bridge Rule. No reduction for double track loading will be considered.

6.4.3 Footpath Live Load

Annexure -10 (1/1)

S. No.	Room No.	Room Name/ Spaces	FLOOR Finish	WALL / PARAPET / FASCIA Finish	CEILING/ ROOF Finish	SKIRTING/ COPING Finish (Ht. from FFL.)
	CONCOURSE LEVEL					
1	U01	Unpaid Area	1200X 600X25 MM THK OF JIRAWAL WHITE POLISHED & JET BLACK POLISHED GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR AS PER APPROVED PATTERN + HAZARD & DIRECTIONAL TACTILE	6MM THICK PU COATED HPL (COLOR AS PER LINE COLOR) CLADDING ON WALL + 25 MM THICK POLISHED GRANITE SKIRTING/DADO AS PER APPROVED DRAWINGS WHERE EVER APPLICABLE + GRC JALI 40 mm THK. ON EXTERNAL FACE AS PER DESIGN + TOUGHENED GLASS 13.5MM THK. SIZE AS PER DESIGN + ACP CLADDING ON FRAMEWORK AS PER DESIGN +COMBINATION OF HPL JALI AND/OR GFC JALI	COMBINATION OF 1200X600/ 600x600 1.2mm THICK PERFORATED METAL PANEL & CALCIUM SILICATE. PATTERN AS PER APPROVED DRAWINGS	150 MM HIGH JIRAWAL WHITE POLISHED/JET BLACK POLISHED GRANITE SKIRTING
2	U02	Paid Concourse	1200X 600X25 MM THK OF JIRAWAL WHITE POLISHED & JET BLACK POLISHED GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR AS PER APPROVED PATTERN + HAZARD & DIRECTIONAL TACTILE	6MM THICK PU COATED HPL (COLOR AS PER LINE COLOR) CLADDING ON WALL + 25 MM THICK POLISHED GRANITE SKIRTING/DADO AS PER APPROVED DRAWINGS WHERE EVER APPLICABLE+ GRC JALI 40 mm THK ON EXTERNAL FACE AS PER DESIGN + TOUGHENED GLASS 13.5MM THK. SIZE AS PER DESIGN + ACP CLADDING ON FRAMEWORK AS PER DESIGN +COMBINATION OF HPL JALI AND/OR GFC JALI	COMBINATION OF 1200X600/ 600x600 1.2mm THICK PERFORATED METAL PANEL & CALCIUM SILICATE. PATTERN AS PER APPROVED DRAWINGS	150 MM HIGH JIRAWAL WHITE POLISHED/JET BLACK POLISHED GRANITE SKIRTING
3	U03	SCR	1200X 600X25 MM THK OF JIRAWAL WHITE POLISHED & JET BLACK POLISHED GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR AS PER APPROVED PATTERN	COMBINATION OF LOW VOC ACRYLIC EMULSION PAINT + 30MM THICK JET BLACK GRANITE COUNTER TOP POLISHED +(6+6)MM THICK TOUGHENED LAMINATED GLASS (INCLUDING SPACER) WITH 1.52MM THK. POLYVINYL BUTYRAL LAYER.	600x600 1.2mm THICK PERFORATED METAL PANEL CEILINGS	150 MM HIGH JIRAWAL WHITE POLISHED/JET BLACK POLISHED GRANITE SKIRTING
4	U05	T.O.M.	1200X 600X25 MM THK OF JIRAWAL WHITE POLISHED & JET BLACK POLISHED GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR AS PER APPROVED PATTERN	COMBINATION OF LOW VOC ACRYLIC EMULSION PAINT + 30MM THICK JET BLACK GRANITE COUNTER TOP POLISHED + (6+6)MM THICK TOUGHENED LAMINATED GLASS (INCLUDING SPACER) WITH 1.52MM THK. POLYVINYL BUTYRAL LAYER	600 x 600 1.2mm THICK PERFORATED METAL PANEL CEILINGS	150 MM HIGH JIRAWAL WHITE POLISHED/JET BLACK POLISHED GRANITE SKIRTING
5	U15L	Ladies Toilet	600X600 VITRIFIED TILES AS PER APPROVED PATTERN+ FILLING AS PER BOQ	300x600/ 600X600/1200x600 VITRIFIED TILES PATTERN AS PER APPROVED DRAWINGS	600x600 1.2mm THICK PERFORATED METAL PANEL CEILINGS & CALCIUM SILICATE AS PER APPROVED PATTERN.	150 MM HIGH VITRIFIED TILES SKIRTING
6	U15G	Gents Toilet	600X600 VITRIFIED TILES AS PER APPROVED PATTERN+ FILLING AS PER BOQ	300x600/ 600X600/1200x600 VITRIFIED TILES PATTERN AS PER APPROVED DRAWINGS	600x600 1.2mm THICK PERFORATED METAL PANEL CEILINGS & CALCIUM SILICATE AS PER APPROVED PATTERN.	150 MM HIGH VITRIFIED TILES SKIRTING
7	U22&23	S.E.R.& T.E.R	600X600 ANTISTATIC RAISED ACCESS FLOORING 450MM HIGH FROM TOC	LOW VOC ACRYLIC DISTEMPER+12mm CEMENT PLASTER FINISHED	LOW VOC ACRYLIC DISTEMPER	00 MM HIGH CEMENT SKIRTING
8	U24	UPS Room (S&T)	52 MM THK HARDONITE FLOORING	LOW VOC ACRYLIC DISTEMPER+ 12mm CEMENT PLASTER FINISHED	LOW VOC ACRYLIC DISTEMPER	00 MM HIGH CEMENT SKIRTING
9	U25	ASS Room	52 MM THK HARDONITE FLOORING	LOW VOC ACRYLIC DISTEMPER + 12mm CEMENT PLASTER FINISHED	LOW VOC ACRYLIC DISTEMPER	00 MM HIGH CEMENT SKIRTING
10		PD Areas	1:4:8 CEMENT : SAND : AGGREGATE UNBONDED SCREEDING	LOW VOC ACRYLIC DISTEMPER + 12mm CEMENT PLASTER FINISHED	LOW VOC ACRYLIC DISTEMPER	
11	U15H	DA Toilet	600X600 VITRIFIED TILES AS PER APPROVED PATTERN	300x600/ 600X600/1200x600 VITRIFIED TILES PATTERN AS PER APPROVED DRAWINGS	600 x 600 x 1.2mm THICK PERFORATED METAL PANEL CEILINGS & CALCIUM SILICATE AS PER APPROVED PATTERN	150 MM HIGH VITRIFIED TILES SKIRTING
12		J.C.	600X600 VITRIFIED TILES AS PER APPROVED PATTERN	LOW VOC ACRYLIC DISTEMPER OVER CEMENT PLASTER	6MM THICK PLASTER ON FAIR FINISH RCC CEILINGS LOW VOC OBD	150 MM HIGH VITRIFIED TILES SKIRTING
13		B.O.H Area (Corridor)	1200X 600X25 MM THK LIGHT & DARK COLORED GRANITE(POLISHED) OVER DESIRED SCREED THICKNESS WITH RECOMMENDED CHEMICAL ADHESIVE	COMBINATION OF 1200X 600X25 MM THK LIGHT COLORED GRANITE + LOW VOC ACRYLIC EMULSION PAINT ON CEMENT PLASTER + 25MM THK POLISHED GRANITE COPING	1200X600/ 600x600 (1.2mm THICK) PERFORATED METAL PANEL CEILINGS & CALCIUM SILICATE AS PER APPROVED PATTERN	150 MM HIGH GRANITE SKIRTING
	PLATFORM LEVEL					
1	U21	Platform	1200X 600X25 MM THK JIRAWAL WHITE POLISHED & JET BLACK POLISHED GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR AS PER APPROVED PATTERN + HAZARD & DIRECTIONAL TACTILE +1200X100X15-17MM THK. YELLOW WARNING STRIP MODULE TILE (NDSR:2.10.2) + 1200X600X60 FLAMED GRANITE FLOORING AT PLATFORM EDGE+ SS COVER SAUCER DRAIN AS PER SPECS/BOQ	1200X 600X25 MM JIRAWAL WHITE POLISHED GRANITE +ALUMINIUM PERFORATED SHEET +GLASS (13.52MM THICK) +25MM THK POLISHED GRANITE COPING JET BLACK + STAINLESS STEEL RAILING WITH TOUGHENED GLASS (13.52MM THICK) AS PER DETAIL + STAINLESS STEEL RAILING AS PER DETAIL	ALUMINIUM-ZINC ALLOY COATED SHEET STEEL ROOF GALVALUME SHEET (PEB 2) +POLY-CARBONATE TRANSLUCENT SHEET (PEB 3) AS/APP + GUTTER DETAIL AS PER PEB VENDOR	150MM HIGH GRANITE SKIRTING

	GROUND					
1		Foot Path - Entry/ Exit area pavement	600X600 15-17 MM THK. FULL BODY VITRIFIED TILES + HAZARD & DIRECTIONAL TACTILE + BOLLARDS	MS GRILLE + SS BOLLARDS	LOW VOC ACRYLIC DISTEMPER	
2		Foot Path - Reinstated outdoor areas	600X600 15-17MM THK. FULL BODY VITRIFIED TILES + HAZARD & DIRECTIONAL TACTILE+ BOLLARDS	MS GRILLE + SS BOLLARDS	LOW VOC ACRYLIC DISTEMPER	
3		Lift Lobbies (Entry Structure)	1200X 600X25 MM THK JIRAWAL WHITE POLISHED & JET BLACK POLISHED GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR AS PER APPROVED PATTERN + HAZARD & DIRECTIONAL TACTILE	COMBINATION OF 1200X 600X25 MM THK LIGHT COLORED GRANITE+LOW VOC ACRYLIC EMULSION PAINT ON CEMENT PLASTER + 25MM THK POLISHED GRANITE COPING + STAINLESS STEEL RAILING AS PER DETAIL	LOW VOC ACRYLIC EMULSION PAINT	150MM HIGH GRANITE SKIRTING
4		Ramp to Lift Lobbies	25MM THICK GRANITE LAID OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR + HAZARD & DIRECTIONAL TACTILE	25 MM THK GRANITE CLADDING , SIZE 600X1200 + STAINLESS STEEL RAILING AS PER DETAIL		
5		Space below Stairs (access to water tanks)	52 MM THK HARDONITE FLOORING	LOW VOC ACRYLIC DISTEMPER + 12mm CEMENT PLASTER FINISHED	LOW VOC ACRYLIC DISTEMPER	100 MM HIGH CEMENT SKIRTING
6		Station Entry Canopy	50mm P.C.C + 25mm THICK POLISHED GRANITE COMBINATION OF JIRAWAL WHITE POLISHED, JET BLACK POLISHED AND LAKHA RED AS PER APPROVED PATTERN. SIZE 1200X600 ON 25mm CEMENT MORTAR + TACTILE INDICATOR AS PER BOQ	ALUMINIUM EXTRUSIONS + STAINLESS STEEL RAILING AS PER DETAIL + 25 MM THICK POLISHED GRANITE SKIRTING/DADO AS PER APPROVED DRAWINGS WHERE EVER APPLICABLE+ GRC JALI 40 mm THK. ON EXTERNAL FACE AS PER DESIGN +ACP CLADDING ON FRAMEWORK AS PER DESIGN.	ALUMINIUM-ZINC ALLOY COATED SHEET STEEL ROOF GALVALUME SHEET (PEB 2) +POLY-CARBONATE TRANSLUCENT SHEET (PEB 3) AS/APP.	150MM HIGH GRANITE SKIRTING
7	U45	DG Room	52MM THK. HARDONITE FLOORING	LOW VOC ACRYLIC DISTEMPER + 12mm CEMENT PLASTER FINISHED	LOW VOC ACRYLIC DISTEMPER	100 MM HIGH CEMENT SKIRTING
	OTHERS					
1	ST	Staircase	1200 X 600 X 25 MM THK LIGHT COLORED GRANITE (HONED) ON TREAD & LANDINGS, & 18MM THK. DARK COLORED GRANITE ON RISER OVER DESIRED SCREED THICKNESS WITH 1:4 CEMENT MORTAR+ WARNING TACTILE INDICATOR	ACP CLADDING ON STAIR WELL ON CONC. TO PLATFORM+ STAINLESS STEEL RAILING WITH TOUGHENED GLASS (13.52MM THICK) AS PER DETAIL + STAINLESS STEEL RAILING AS PER DETAIL	LOW VOC ACRYLIC DISTEMPER	150MM HIGH GRANITE SKIRTING
	UNDERGROUND					
1	U43	Pump Room	52 MM THK HARDONITE FLOORING	LOW VOC ACRYLIC DISTEMPER (DSR:13.81) +12mm CEMENT PLASTER FINISHED (DSR: 13.1)	LOW VOC ACRYLIC DISTEMPER	100 MM HIGH CEMENT SKIRTING
2	U44	Water tanks	WATERPROOFING+300X300X8mmTHK. RECTIFID GLAZED CERAMIC FLOOR TILES	WATERPROOFING + 300X300X8mm THK. RECTIFIED GLAZED CERAMIC TILES	12mm CEMENT PLASTER + WATERPROOFING	100 MM HIGH CEMENT SKIRTING

UTTAR PRADESH-INDIA GCS General Consultant Services TYPSA-ITALFERR JV KANPUR & AGRA METRO PROJECTS

NOTES :-

1. FINISHING SCHEDULE HAS BEEN PREPARED INLINE WITH EARLIER BALANCE ELEVATED STATION'S TENDER SUBMISSION.

TENDER DRAWING

GENERAL NOTES:
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REV NO	DATE	DESCRIPTION
R2	26-JUL-2023	As per GC Comments
R1	17-JUL-2023	As per GC Comments
R0	11-JUL-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Kriti Tandon Digitally signed by Kriti Tandon Date: 2023.07.26 13:16:12 +05'30'	Anukrati Srivastava Digitally signed by Anukrati Srivastava Date: 2023.07.26 13:16:27 +05'30'	Bhawana Bajpai Digitally signed by Bhawana Bajpai Date: 2023.07.26 13:16:44 +05'30'	Ashish Kumar Digitally signed by Ashish Kumar Date: 2023.07.26 13:16:55 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐NOC	☐NOWC	☐RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 13TH JANUARY 2024	DATE: 13th JANUARY 2024	DATE: 13th JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: TYPICAL DETAILS
FINISHES SCHEDULE

ARCHITECTURE

SCALE: N.T.S. | DATE: 11-JUL-2023 | STAGE: TENDER

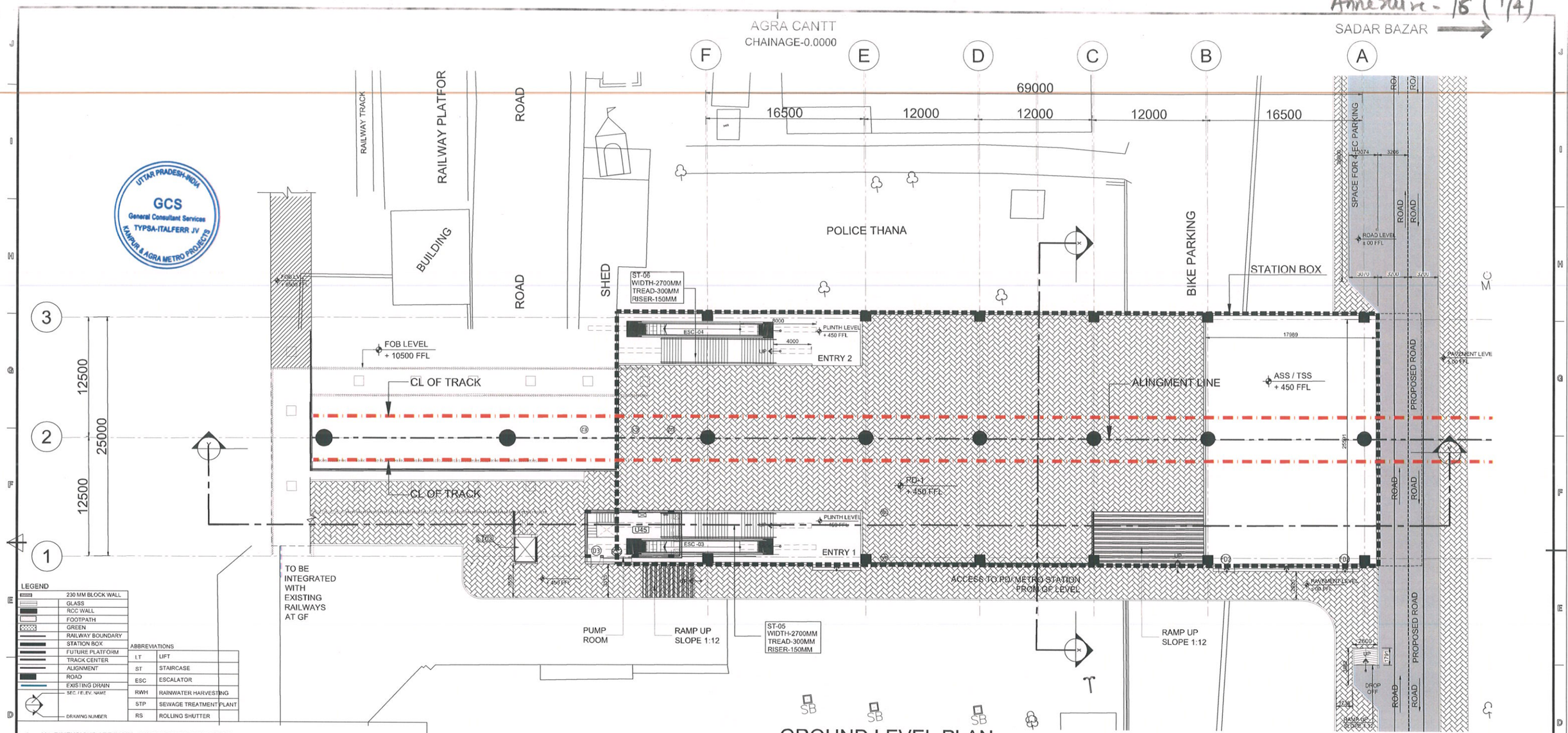
DRG NO: KNPAGDDC01-TDR-TYP-ARC-SCH-62100

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R2

A1 (594x841.7mm)

Annexure - 15 (1/4)



GROUND LEVEL PLAN

SCALE - 1:200

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

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CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U01	UNPAID AREA	389.40
U02	PAID AREA	456.71
U03/07	SCR/EFO- STATION CONTROL ROOM/EXCESS FARE OFFICE	30.36
U05	TOM - TICKET OFFICE MACHINE	8.28
U09	SECURITY ROOM	11.40
U15-L	TOILET - LADIES	11.49
U15-M	TOILET - GENTS	14.35
U22/U23	SER/TER	65.00
U24	UPS ROOM FOR S&T	74.67
U25	ASS/TSS	389.00

CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U46	TOILET - DIFFERENTLY ABLED	5.60
PD-03	PROPERTY DEVELOPMENT	41.19
PD-04	PROPERTY DEVELOPMENT	9.27
LT-01	LIFT	5.48
LT-02	LIFT	5.48
LT-03	LIFT	4.97
LT-04	LIFT	4.97
	JANITOR'S ROOM	0.9
	STAFF ROOM	25.19
	UTILITY ROOM	3.255

CONCOURSE LEVEL DOOR SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
D1	600	100	2105	4
D4	1000	00	2105	2
D6	1200	00	2105	2
D8	750	00	2105	1
D9	600	00	2105	1
SD1	1000	00	2105	1
FD1	1800	00	2405	2
FD2	1800	150	2555	2

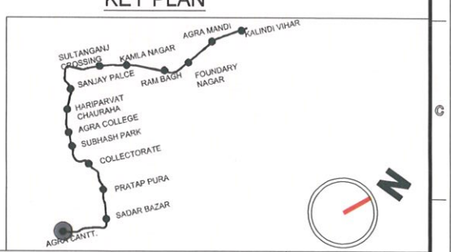
CONCOURSE LEVEL ROLLING SHUTTER SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
RS1	5000	00	3000	02
RS2	3000	00	4000	04

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TENDER DRAWING

KEY PLAN



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REV NO	DATE	DESCRIPTION
R5	17-JAN-2024	Addendum Tender
R4	04-OCT-2023	Fifth Issue
R3	30-MAY-2023	As per GC comments
R2	04-MAY-2023	Third Issue
R1	26-APR-2023	As per GC comments
R0	10-FEB-2023	First Issue

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DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod Kumar (Digitally signed by Pramod Kumar Date: 2024.01.20 12:52:42 +05'30')	Snekha Natarajan (Digitally signed by Snekha Natarajan Date: 2024.01.20 12:52:59 +05'30')	Bhawana Bajpai (Digitally signed by Bhawana Bajpai Date: 2024.01.20 12:53:19 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.20 12:53:37 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
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PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

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☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20th JANUARY 2024	DATE: 20th JANUARY 2024	DATE: 20th JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
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Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA CANTT. STATION
GROUND LEVEL PLAN

SCALE: AS SHOWN | DATE: 10-FEB-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-ACT-ARC-PLN-48052

ARCHITECTURE

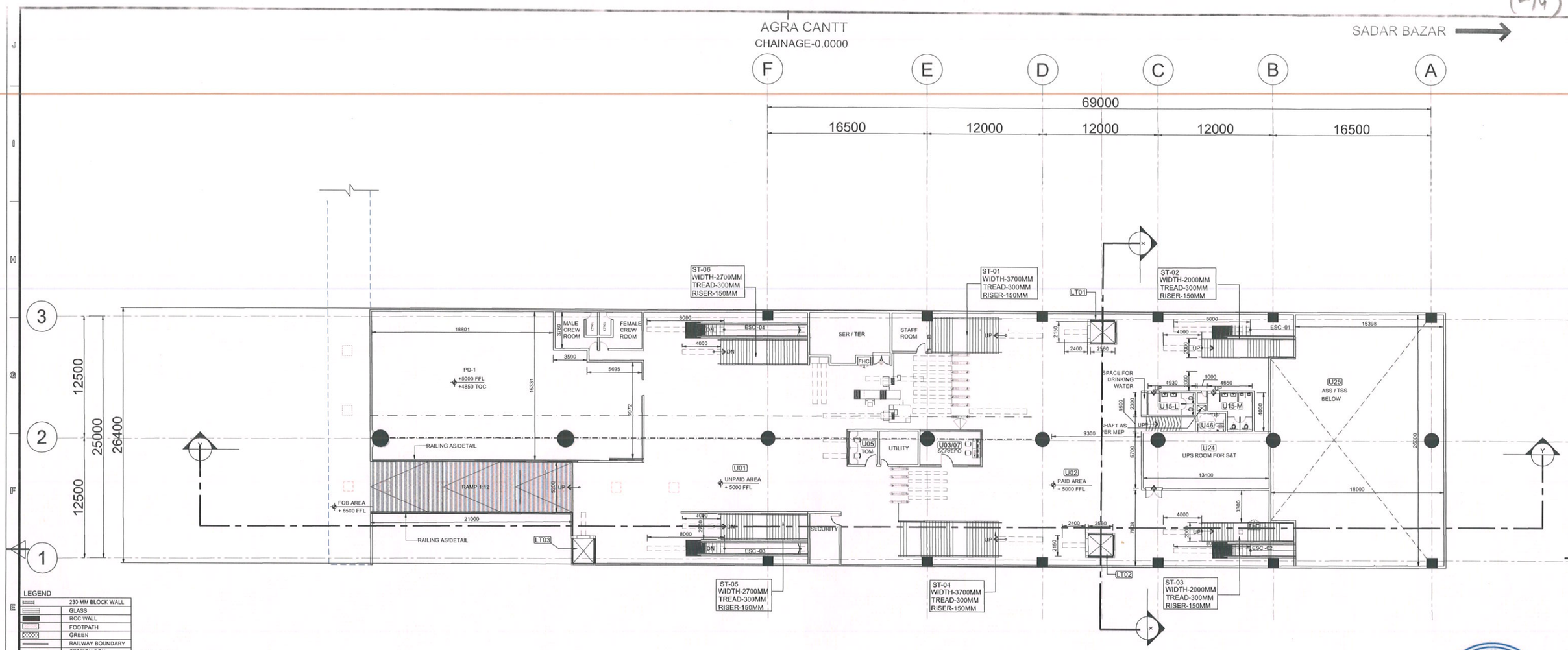
OFFICE OF ORIGIN

REVISION NO: R5

17/24

AGRA CANTT
CHAINAGE-0.0000

SADAR BAZAR



CONCOURSE LEVEL PLAN

SCALE - 1:200

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. MAKE
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ABBREVIATIONS

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CONCOURSE LEVEL ROLLING SHUTTER SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
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RS2	3000	00	4000	04

SPECIAL NOTE:-
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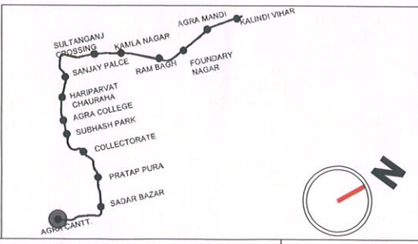
TENDER DRAWING

KEY PLAN



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REV NO	DATE	DESCRIPTION
R3	17-JAN-2024	Addendum Tender
R2	01-JUNE-2023	Third issue
R1	05-MAY-2023	As per discussion
R0	27-APR-2023	First Issued

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DDC / CONTRACTOR

KRITI TANDON	Snekha NATARAJAN	Bhawana BAJPAI	Amitava DAS
Digitally signed by KRITI TANDON Date: 2024.01.18 14:19:43 +05'30'	Digitally signed by Snekha NATARAJAN Date: 2024.01.18 14:20:01 +05'30'	Digitally signed by Bhawana BAJPAI Date: 2024.01.18 14:20:25 +05'30'	Digitally signed by Amitava DAS Date: 2024.01.18 14:20:42 +05'30'
DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
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☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN:	SIGN:	SIGN:
DATE: 19TH JANUARY 2024	DATE: 19TH JANUARY 2024	DATE: 19TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)
REVIEWED BY	APPROVED BY	VETTED BY

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PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
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ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA CANTT. STATION
CONCOURSE LEVEL

ARCHITECTURE

SCALE: AS SHOWN | DATE: 10-FEB-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-ACT-ARC-PLN-48053

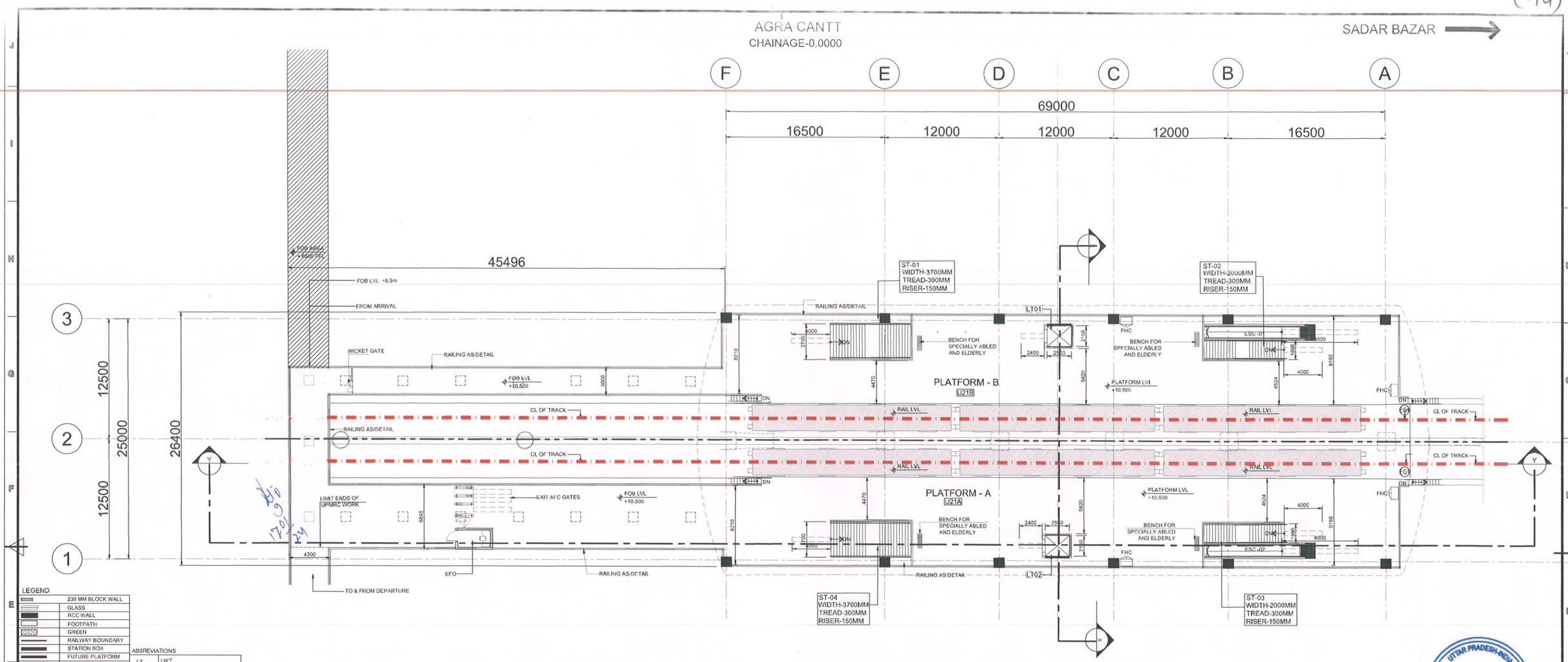
OFFICE OF ORIGIN
SYSTRA

REVISION NO: R3

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

DYCE

A1 (420x841 mm)



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U02	PAID AREA	456.71
U03/07	SCR/EFO- STATION CONTROL ROOM/EXCESS FARE OFFICE	30.36
U05	TOM - TICKET OFFICE MACHINE	8.28
U09	SECURITY ROOM	11.40
U15-L	TOILET - LADIES	11.49
U15-M	TOILET - GENTS	14.35
U22/U23	SER/TER	65.00
U24	UPS ROOM FOR S&T	74.67
U25	ASS/TSS	389.00

CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U46	TOILET - DIFFERENTLY ABLED	5.60
PD-03	PROPERTY DEVELOPMENT	41.19
PD-04	PROPERTY DEVELOPMENT	9.27
LT-01	LIFT	5.48
LT-02	LIFT	5.48
LT-03	LIFT	4.97
LT-04	LIFT	4.97
	JANITOR'S ROOM	0.9
	STAFF ROOM	25.19
	UTILITY ROOM	3.255

CONCOURSE LEVEL DOOR SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
D1	600	100	2105	4
D4	1000	00	2105	2
D6	1200	00	2105	2
D8	750	00	2105	1
D9	600	00	2105	1
SD1	1000	00	2105	1
FD1	1800	00	2405	2
FD2	1800	150	2555	2

CONCOURSE LEVEL ROLLING SHUTTER SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
RS1	5000	00	3000	02
RS2	3000	00	4000	04

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

PLATFORM

SCALE - 1:200

KEY PLAN

TENDER DRAWING

GENERAL NOTES:
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2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO	DATE	DESCRIPTION
R3	17-JAN-2024	Addendum Tender
R2	01-JUNE-2023	Third Issue
R1	05-MAY-2023	As per discussion
R0	04-OCT-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
KRITI TANDON Digitally signed by KRITI TANDON Date: 2024.01.18 13:21:28 +05'30'	Snekha NATARAJAN Digitally signed by Snekha NATARAJAN Date: 2024.01.18 14:21:43 +05'30'	Bhawana BAJPAI Digitally signed by Bhawana BAJPAI Date: 2024.01.18 14:22:02 +05'30'	Amitava DAS Digitally signed by Amitava DAS Date: 2024.01.18 14:22:17 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 19th JANUARY 2024	DATE: 19th JANUARY 2024	DATE: 19th JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA CANTT. STATION
PLATFORM LEVEL PLAN

SCALE: AS SHOWN | DATE: 04-OCT-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-ACT-ARC-PLN-48054

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R3

ARCHITECTURE

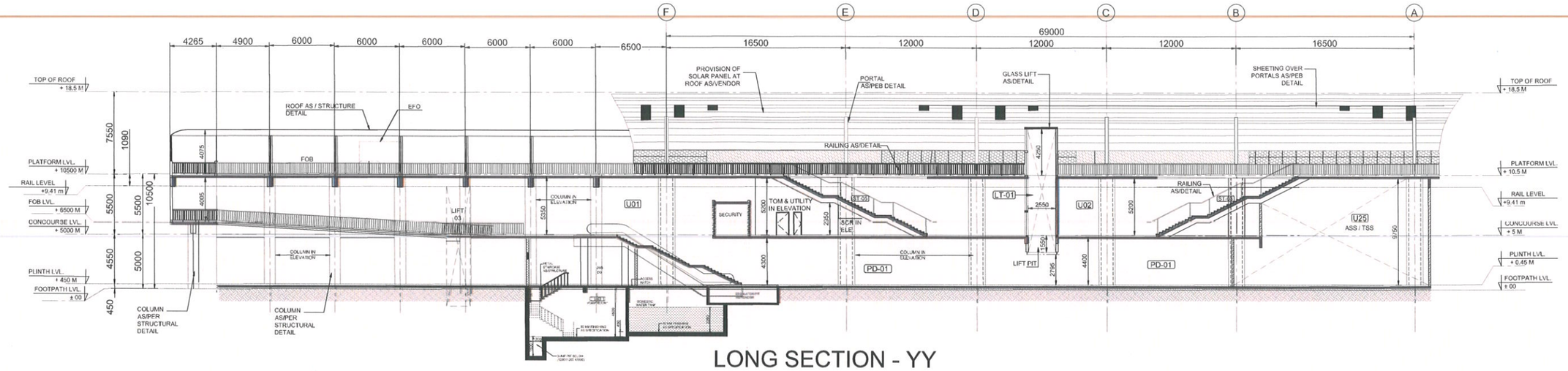
UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

A1 (594x841mm)

(4/4)

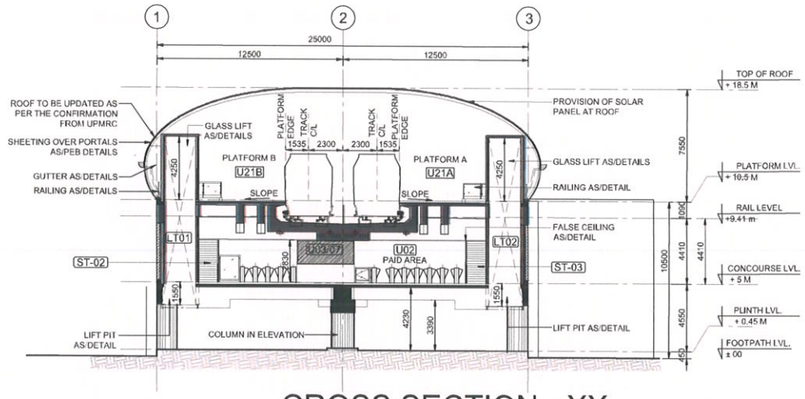
AGRA CANTT
CHAINAGE-0.0000

SADAR BAZAR →



LONG SECTION - YY

SCALE - 1:200



CROSS SECTION - XX

SCALE - 1:200

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
SEC / ELEV. NAME / DRAWING NUMBER	

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

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6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
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11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
12. PIER SIZES/CRASH BARRIER THICKNESS , DG SIZE, COLUMN PROFILE HAVE BEEN TAKEN AS PER STRUCTURE
13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U01	UNPAID AREA	389.40
U02	PAID AREA	456.71
U03/07	SCR/EFO- STATION CONTROL ROOM/EXCESS FARE OFFICE	30.36
U05	TOM - TICKET OFFICE MACHINE	8.28
U09	SECURITY ROOM	11.40
U15-L	TOILET - LADIES	11.49
U15-M	TOILET - GENTS	14.35
U22/U23	SER/TER	65.00
U24	UPS ROOM FOR S&T	74.67
U25	ASS/TSS	389.00

CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)

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PD-04	PROPERTY DEVELOPMENT	9.27
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LT-02	LIFT	5.48
LT-03	LIFT	4.97
LT-04	LIFT	4.97
	JANITOR'S ROOM	0.9
	STAFF ROOM	25.19
	UTILITY ROOM	3.255

CONCOURSE LEVEL DOOR SCHEDULE

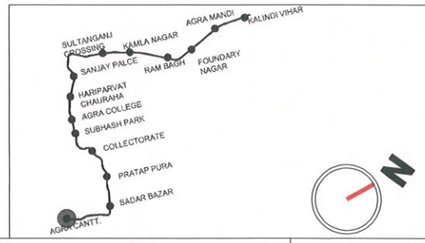
TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
D1	600	100	2105	4
D4	1000	00	2105	2
D6	1200	00	2105	2
D8	750	00	2105	1
D9	600	00	2105	1
SD1	1000	00	2105	1
FD1	1800	00	2405	2
FD2	1800	150	2555	2

CONCOURSE LEVEL ROLLING SHUTTER SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
RS1	5000	00	3000	02
RS2	3000	00	4000	04

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

KEY PLAN



TENDER DRAWING

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REV NO	DATE	DESCRIPTION
R1	17-JAN-2023	Accenture Tender
R0	19-OCT-2023	FIRST ISSUE

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod Kumar Digitally signed by Pramod Kumar Date: 2024.01.20 12:46:58 +05'30'	Snekha Natarajan Digitally signed by Snekha Natarajan Date: 2024.01.20 12:48:33 +05'30'	Bhawana Bajpai Digitally signed by Bhawana Bajpai Date: 2024.01.20 12:49:19 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.20 12:49:47 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts Vibhuti Khand, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

OFFICE OF ORIGIN: SYSTRA

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA CANTT. STATION
LONG & CROSS SECTION

ARCHITECTURE

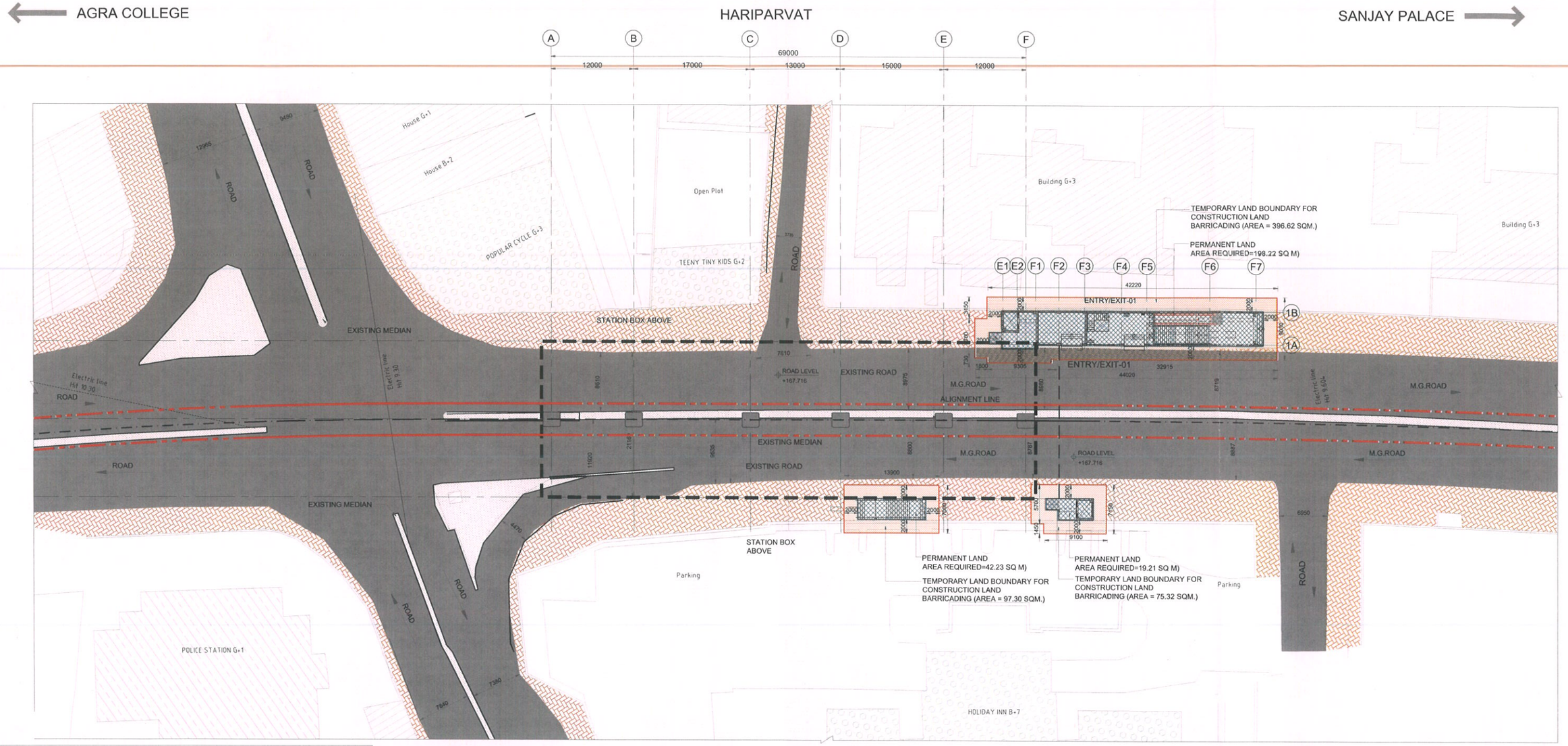
SCALE: AS SHOWN | DATE: 10-FEB-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-ACT-ARC-CRS-48071

REVISION NO: R1

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

Annexure-17 (1/2)



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16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

NOTE:-

THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TEMPORARY LAND	PERMANENT LAND
569.24 SQ M	259.66 SQ M

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

INSERTION PLAN

SCALE - 1:300

LEGEND

	PART OF CORRIDOR 1 STATION
	GOVERNMENT STRUCTURE
	LANDMARK
	TEMPORARY LAND
	PERMANENT LAND

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN AREA
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	ALIGNMENT
	TRACK CENTER
	SEC. / ELEV. NAME
	DRAWING NUMBER

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

KEY PLAN

TENDER DRAWING

GENERAL NOTES:
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REV NO	DATE	DESCRIPTION
R4	10-JAN-2024	TENDER ADDENDUM
R3	05-OCT-2023	Fourth Issue
R2	04-MAY-2023	Third Issue
R1	26-APR-2023	As per GC comments
R0	10-FEB-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das (Digitally signed by Avijit Das Date: 2024.01.10 18:09:38 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee Date: 2024.01.10 18:09:52 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee Date: 2024.01.10 18:10:08 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.10 18:10:21 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. 2 AVENUE POINCARE, PARIS 75016

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
DPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: HARIPARWAT STATION
INSERTION PLAN

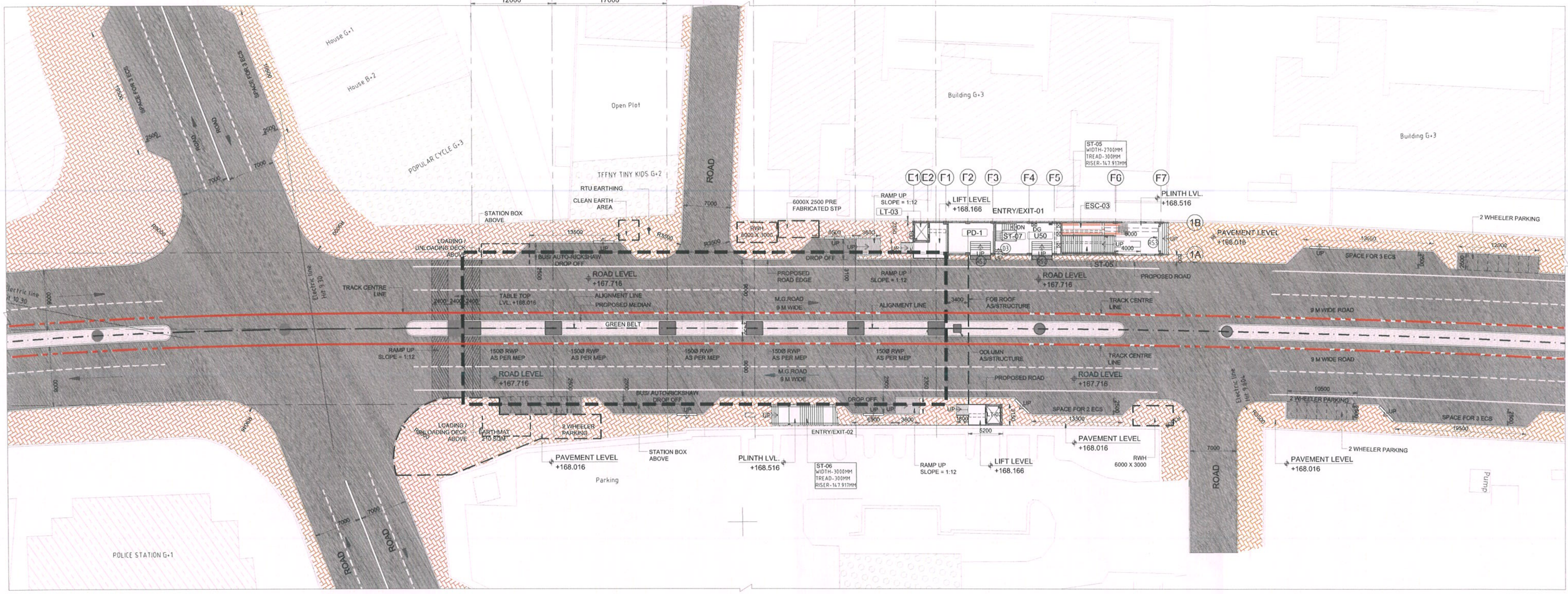
SCALE: AS SHOWN DATE: 10-FEB-2023 STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-HPC-ARC-PLN-4012

ARCHITECTURE

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R4



GROUND LEVEL PLAN

SCALE - 1:300

SPECIAL NOTE:-
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GROUND LEVEL DOOR SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
D3	1050	00	2105	1

GROUND LEVEL ROLLING SHUTTER SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT
RS3	3600	00	3000	01
RS4	2600	00	3000	01
RS5	3000	00	3000	02

GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
PD-01	PROPERTY DEVELOPMENT	47.70
PD-02	PROPERTY DEVELOPMENT	10.11

ANCILLARY BUILDING **LEVEL ROOM SCHEDULE** (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37
U43	PUMP ROOM	38.36

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

NOTE:-
THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

LEGEND

	PART OF CORRIDOR 1 STATION
	GOVERNMENT STRUCTURE
	LANDMARK
	TEMPORARY LAND
	PERMANENT LAND

TENDER DRAWING

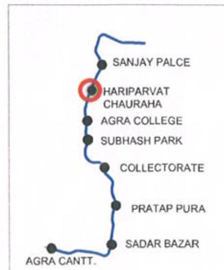
LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN AREA
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	ALIGNMENT
	TRACK CENTER
	SEC. / ELEV. NAME DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN



GCS General Consultant Services TYPSA-ITALFERR JV UTTAR PRADESH-INDIA KANPUR & AGRA METRO PROJECTS

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO.	DATE	DESCRIPTION
R5	10-JAN-2024	TENDER ADDENDUM
R4	05-OCT-2023	Fourth Issue
R3	30-MAY-2023	As per GC comments
R2	04-MAY-2023	Third Issue
R1	2[illegible]-APR-2023	As per GC comments
[illegible]	[illegible]-FEB-2023	[illegible]

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das (Digitally signed by Avijit Das Date: 2024.01.10 18:11:19 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee Date: 2024.01.10 18:11:32 +05'30')	Sudipta Chakraborty (Digitally signed by Sudipta Chakraborty)	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.10 18:12:02 +05'30')

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

	REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	[signature]	[signature]	[signature]
DATE:	13TH JANUARY 2024	13TH JANUARY 2024	13TH JANUARY 2024
NAME:	VIJAY S CHANDEL	ASHWANI MATHUR	ASHOK GHODESHWAR
DESIGNATION:	Architect (K3)	Senior Ar. (K2)	CA_GC / Arch. (K1)

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		[signature] 17/01/24

DETAIL DESIGN CONSULTANT

SYSTRA

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH. 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights, Vibhuti Khand, Gomti Nagar, Lucknow

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2

UPMRCL

UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: HARIPARWAT STATION
GROUND LEVEL PLAN

ARCHITECTURE

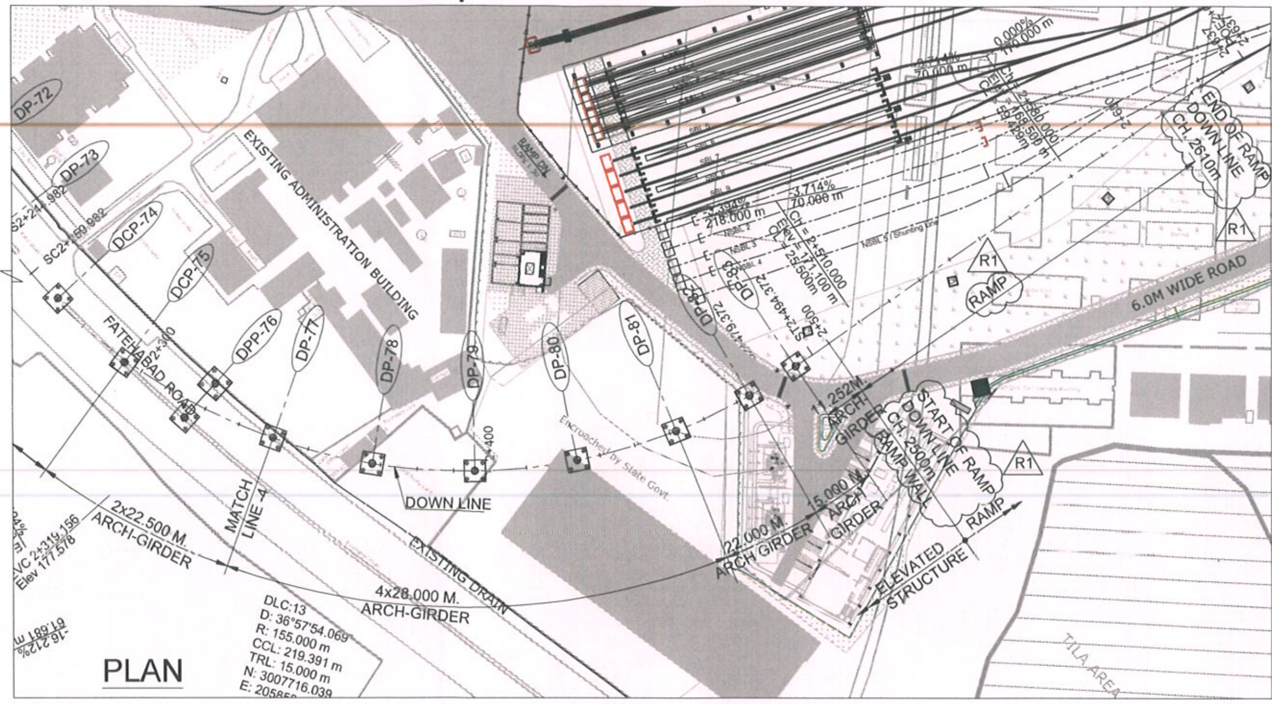
SCALE: AS SHOWN DATE 10-FEB-2023 STAGE: TENDER

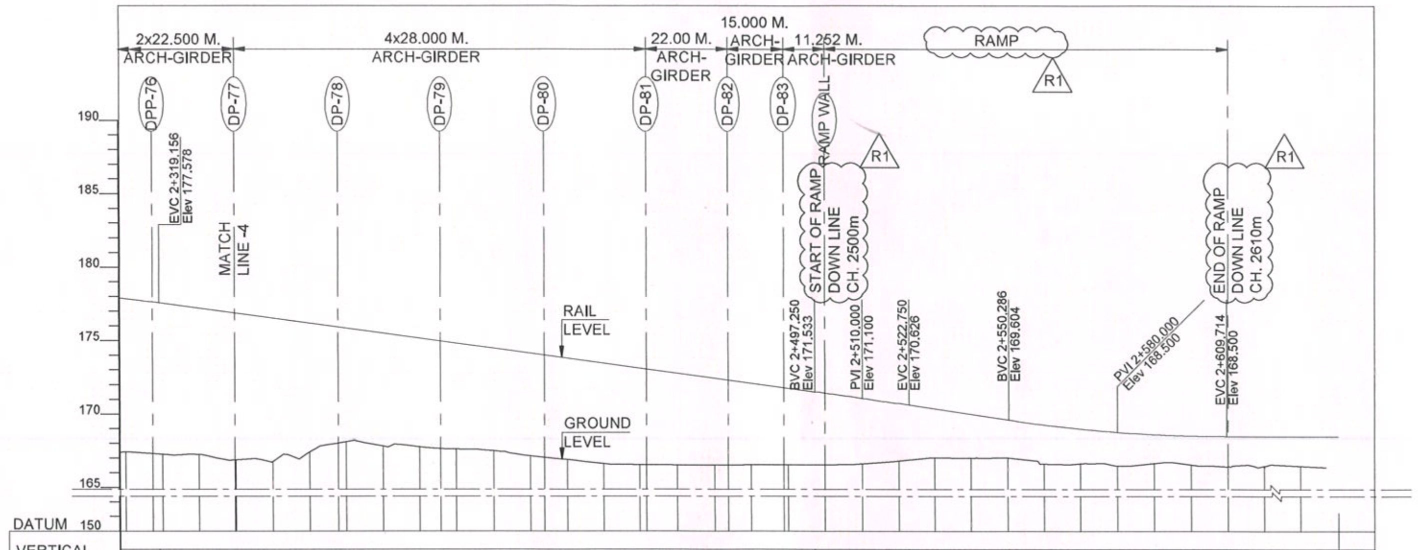
DRG NO

OFFICE OF ORIGIN SYSTRA

REVISION NO: R5

Annexure - 18 (1/2)





CHAINAGES (DEPOT DOWN LINE) (M)	RAIL LEVELS (M)	GROUND LEVELS (M)	DIFF. IN ELEVATION (M)
2310.000	177.863	167.402	10.461
2320.000	177.550	167.251	10.299
2330.000	177.210	167.249	9.961
2340.000	176.871	166.874	9.997
2350.000	176.531	166.743	9.788
2360.000	176.192	167.386	8.806
2370.000	175.852	168.104	7.748
2380.000	175.513	167.810	7.703
2390.000	175.173	167.771	7.402
2400.000	174.834	167.596	7.238
2410.000	174.494	167.485	7.009
2420.000	174.155	167.146	7.009
2430.000	173.816	166.883	6.933
2440.000	173.476	166.610	6.866
2450.000	173.137	166.549	6.588
2460.000	172.797	166.529	6.268
2470.000	172.458	166.520	5.938
2480.000	172.118	166.535	5.583
2490.000	171.779	166.539	5.240
2500.000	171.439	166.539	4.900
2510.000	171.090	166.605	4.485
2520.000	170.728	166.791	3.937
2530.000	170.357	167.026	3.331
2540.000	169.986	167.013	2.973
2550.000	169.614	167.027	2.587
2560.000	169.272	166.606	2.666
2570.000	168.993	166.621	2.372
2580.000	168.776	166.479	2.297
2590.000	168.621	166.638	1.983
2600.000	168.529	166.548	1.981
2610.000	168.500	166.429	2.071
2620.000	168.500	166.447	2.053
2630.000	168.500	166.464	2.036
2640.000	168.500		

LEGEND:
DP/DPP - DEPOT PIER

ELEVATION

SPECIAL NOTES:-
1. **PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.**
2. **FOUNDATION DETAILS ARE INDICATIVE.**

SPECIAL NOTES:-
3. **THIS DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPAN ARRANGEMENT DRAWING NO. KNPAGDDC-01-TDR-ELV-VDC-DWG-09045 AND GENERAL ARRANGEMENT DRAWING NO. KNPAGDDC-01-TDR-ELV-VDC-DWG-13090.** R1

TENDER DESIGN DRAWING

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

REV. NO.	DATE	DESCRIPTION
P1	08-Jan-24	Ramp Part Updated
P0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Vikram Singh — Digitally signed by Vikram Singh Date: 2024.01.08 18:51:02 +05'30'	Divyanshu Tripathi — Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:55:05 +05'30'	Jitendra Rastogi — Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:58:39 +05'30'	Amitava Das — Digitally signed by Amitava Das Date: 2024.01.08 19:02:42 +05'30'

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

	REVIEWED BY	APPROVED BY	VETTED BY
SIGN	(signature)	(signature)	(signature)
DATE	10-01-24	10-01-2024	11-01-24
NAME	AR	M-S-J.	BKS
DESIGNATION	SE	S.S.E.	CSE

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/01/24	

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar
Lucknow-226010

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UPMRCL
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 26

STRUCTURE

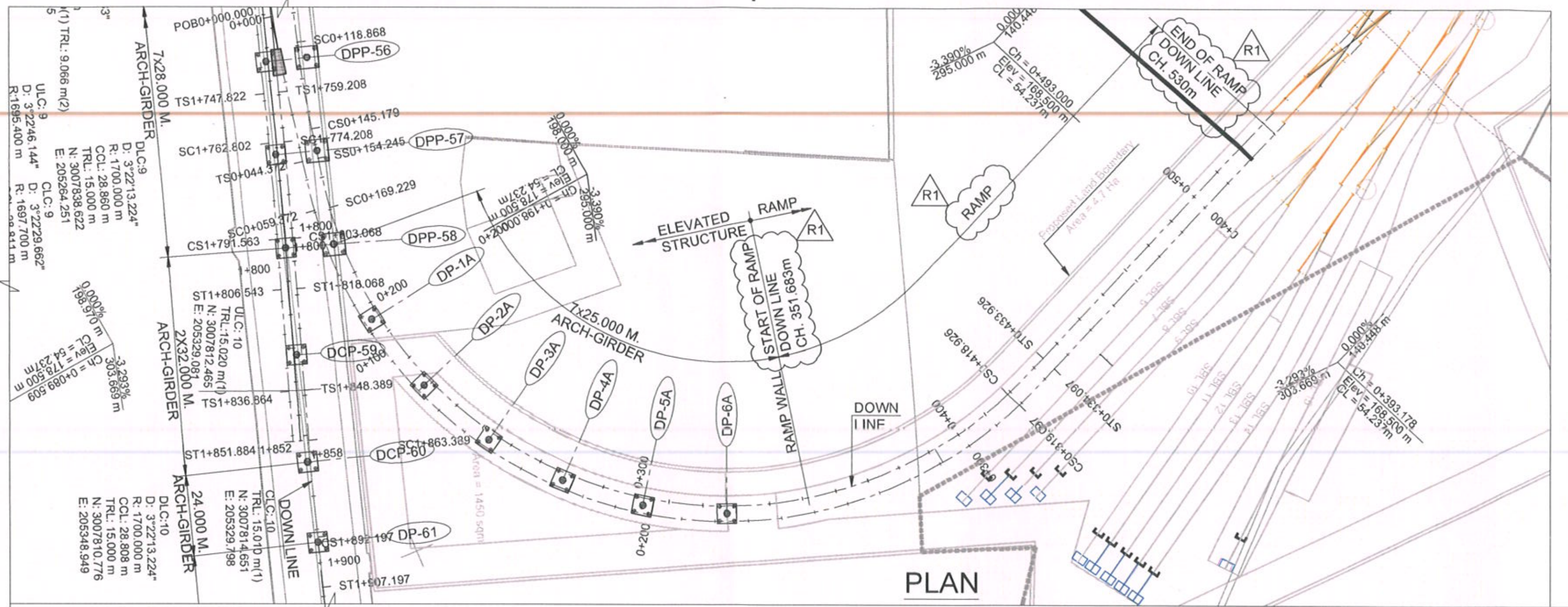
OFFICE OF ORIGIN: SYSTRA

SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

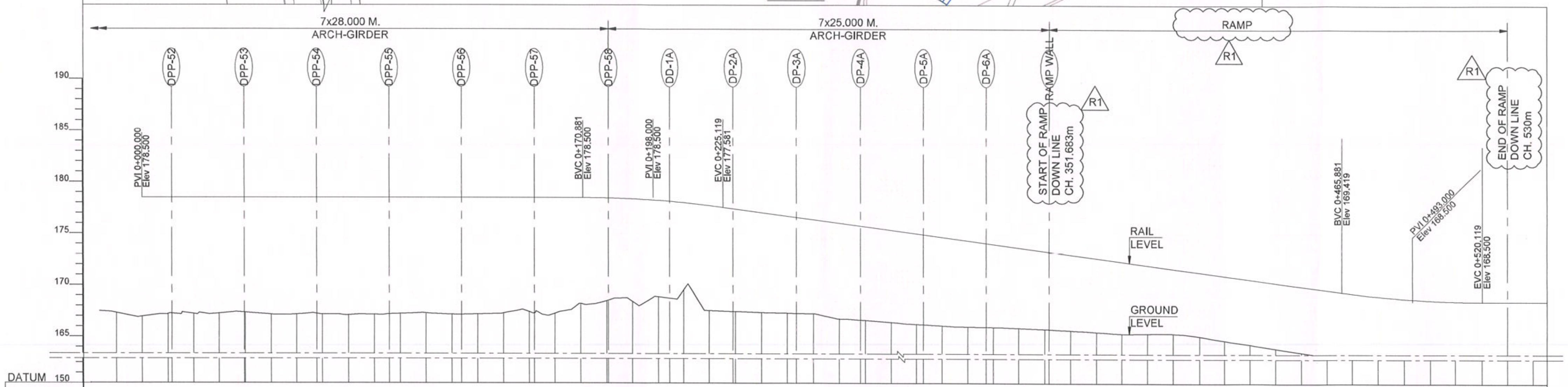
REVISION NO: R1

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09046

(2|2)



PLAN



VERTICAL ALIGNMENT: L=170.881m G=0.000% | L=54.237m R=1600.000m | L=240.763m G=-3.390% | L=54.237m R=1600.000m

HORIZONTAL ALIGNMENT: SL=33.20m | TL=15.00m | R =370.00m L=25.529m | TL=15.00m | SL=27.38m | TL=15.00m | R =-350.08m L=26.311m | TL=9.07m | TL=14.98m | R =-121.40m L=249.697m | TL=15.00m

CHAINAGES (DEPOT DOWN LINE) (M)	GROUND LEVELS (M)	RAIL LEVELS (M)	DIFF. IN ELEVATION (M)
-20.000			
-10.000	167.316		
0.000	166.953	178.500	11.547
10.000	167.192	178.500	11.308
20.000	167.225	178.500	11.275
30.000	167.254	178.500	11.246
40.000	167.339	178.500	11.161
50.000	167.159	178.500	11.341
60.000	167.171	178.500	11.329
70.000	167.176	178.500	11.324
80.000	167.106	178.500	11.394
90.000	167.152	178.500	11.348
100.000	167.231	178.500	11.269
110.000	167.286	178.500	11.214
120.000	167.172	178.500	11.328
130.000	167.191	178.500	11.309
140.000	167.289	178.500	11.211
150.000	167.421	178.500	11.079
160.000	167.258	178.500	11.242
170.000	168.216	178.500	10.284
180.000	168.493	178.474	9.981
190.000	168.416	178.386	9.970
200.000	168.877	178.235	9.358
210.000	169.527	178.022	8.495
220.000	167.546	177.746	10.200
230.000	167.449	177.415	9.966
240.000	167.368	177.076	9.708
250.000	167.304	176.737	9.433
260.000	167.259	176.398	9.139
270.000	166.760	176.059	9.299
280.000	166.601	175.720	9.119
290.000	166.412	175.381	8.969
300.000	166.234	175.042	8.808
310.000	166.101	174.703	8.602
320.000	166.000	174.364	8.364
330.000	165.946	174.025	8.079
340.000	165.868	173.686	7.818
350.000	165.769	173.347	7.578
360.000	165.647	173.008	7.361
370.000	165.505	172.669	7.164
380.000	165.344	172.331	6.987
390.000	165.370	171.992	6.622
400.000	165.365	171.653	6.288
410.000	165.086	171.314	6.228
420.000	164.691	170.975	6.284
430.000	164.306	170.636	6.330
440.000	163.924	170.297	6.373
450.000	163.543	169.958	6.415
460.000	163.272	169.619	6.347
470.000	163.255	169.285	6.030
480.000	163.237	169.003	5.766
490.000	163.220	168.783	5.563
500.000	163.203	168.626	5.423
510.000	163.186	168.532	5.346
520.000	162.936	168.500	5.564
530.000	162.536	168.500	5.964
540.000	162.136	168.500	6.364

ELEVATION

LEGEND:
DP/DPP - DEPOT PIER

SPECIAL NOTES:-
1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. THIS DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPAN ARRANGEMENT DRAWING NO. KNPAGDDC-01-TDR-ELV-VDC-DWG-09045 AND GENERAL ARRANGEMENT DRAWING NO. KNPAGDDC-01-TDR-ELV-VDC-DWG-13090. (R1)

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REV NO	DATE	DESCRIPTION
R1	08-Jan-24	Ramp Part Updated
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Vikram Singh — Digitally signed by Vikram Singh Date: 2024.01.08 18:51:25 +05'30'	Divyanshu Tripathi — Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:55:22 +05'30'	Jitendra Rastogi — Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:58:54 +05'30'	Amitava Das — Digitally signed by Amitava Das Date: 2024.01.08 19:02:59 +05'30'

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN: [signature] DATE: 10-01-24 NAME: AR DESIGNATION: SE	SIGN: [signature] DATE: 10-01-2024 NAME: M-S J. DESIGNATION: S.S.E.	SIGN: [signature] DATE: 11.01.24 NAME: BKS DESIGNATION: CSE

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/01/24	[signature]

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

TENDER DESIGN DRAWING

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UPMRCL
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMTI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 27

STRUCTURE

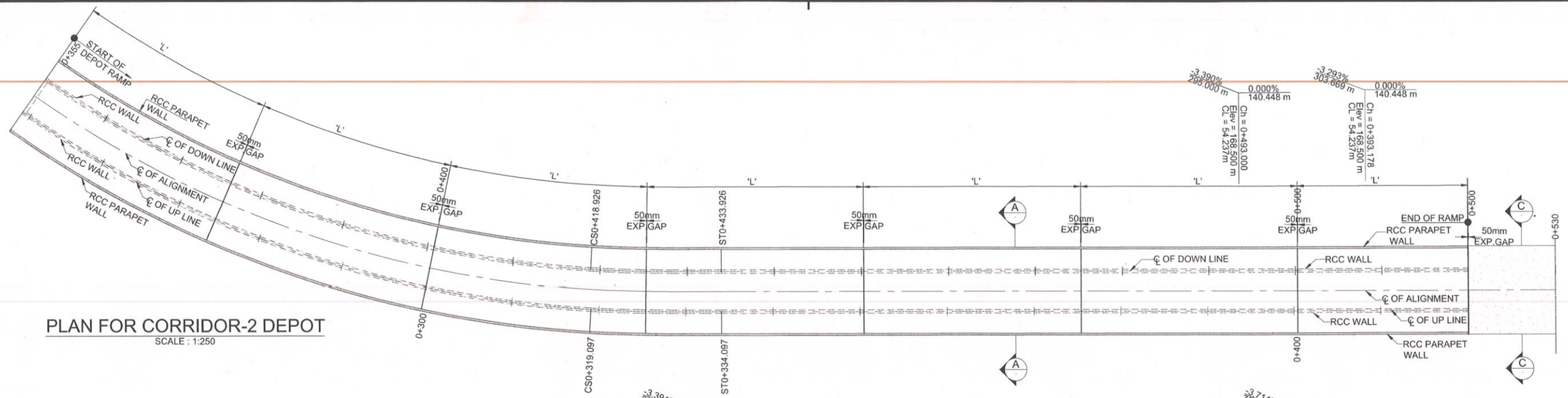
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09047

OFFICE OF ORIGIN: SYSTRA

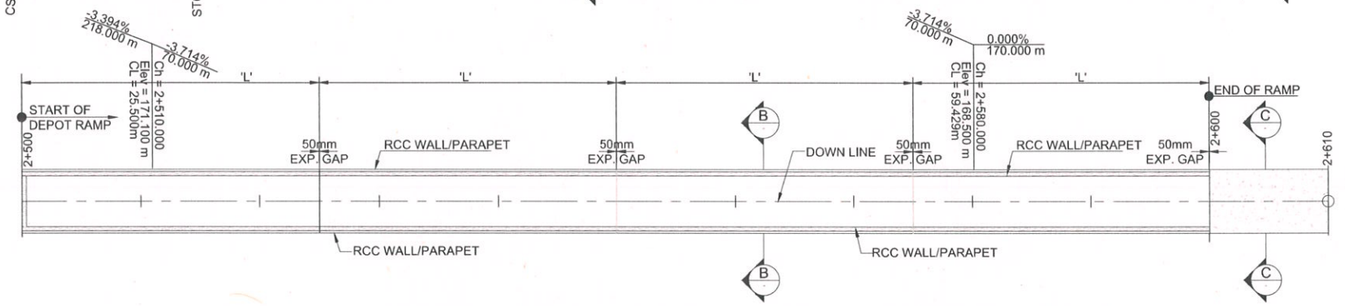
REVISION NO: R1

Annexure-15(1/1)



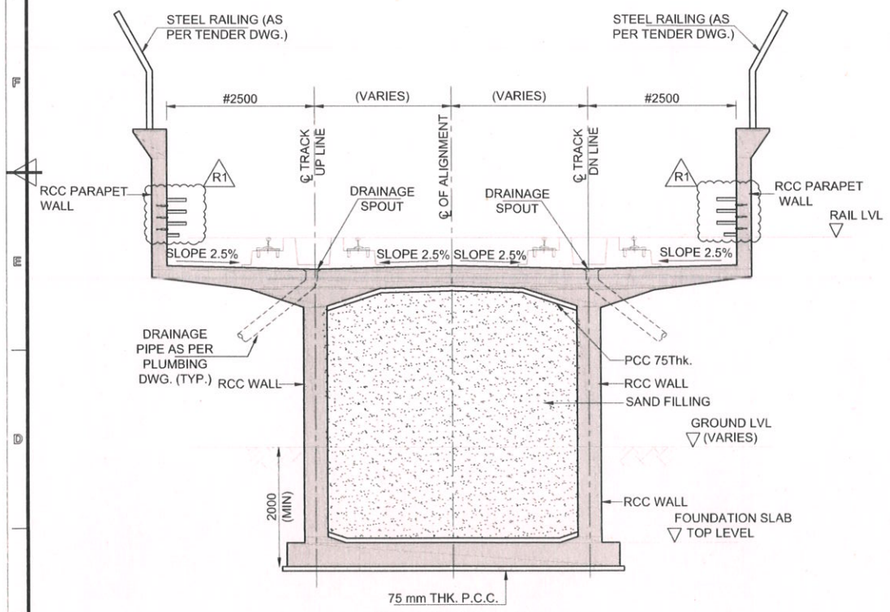
PLAN FOR CORRIDOR-2 DEPOT

SCALE : 1:250



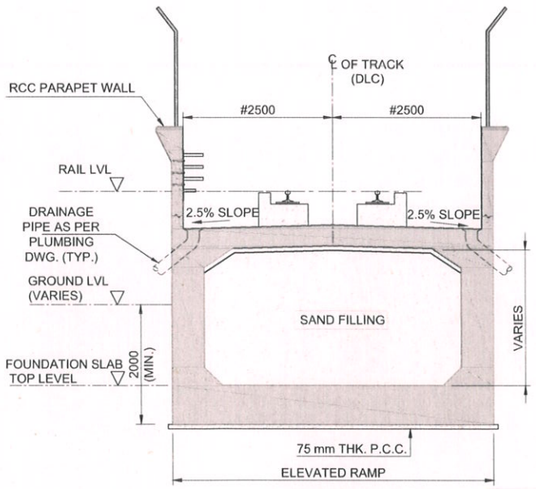
PLAN FOR CONNECTION TO EXISTING CORRIDOR 1 DEPOT

SCALE : 1:250



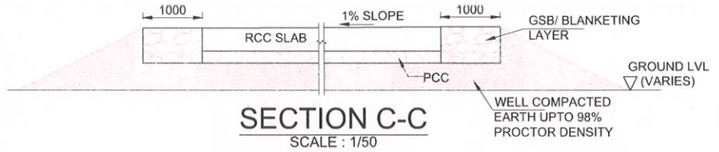
SECTION A-A

SCALE : 1:50



SECTION B-B

SCALE : 1:50



SECTION C-C

SCALE : 1/50

SPECIAL NOTES:-
STRUCTURAL DIMENSIONS MARKED 'L' AND OTHER DIMENSIONAL DETAILS ARE TENTATIVE, MAY LIKELY CHANGE DURING DETAIL DESIGN.

DIMENSIONS MARKED ARE TENTATIVE AND SHOULD BE AS PER FINAL SOD.

NOTE:
1. CHAINAGES SHOWN HERE ARE TENTATIVE AND SHOULD BE VERIFIED BEFORE EXECUTION.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT DEPOT ARCH, CSD, SEM AND TRACK DWGS.

TENDER DESIGN DRAWING

GENERAL NOTES:
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R1	15-Jan-24	Updated As Per GC Comments
R0	08-Jan-24	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.18 18:14:09 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.18 18:14:40 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.18 18:15:04 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.18 18:15:31 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑NOC	☐NOWC	☐RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 19.01.2024	DATE: 19.01.2024	DATE: 19.01.2024
NAME: ASO	NAME: MSJ	NAME: ATD
DESIGNATION: K3	DESIGNATION: K2	DESIGNATION: K1
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts Vibhuti Khand, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17.01.24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: ELEVATED RAMP - AGRA METRO CORRIDOR-2
GENERAL ARRANGEMENT DRAWING
STRUCTURE

SCALE: AS SHOWN | DATE: 08-Jan-24 | STAGE: TENDER DESIGN

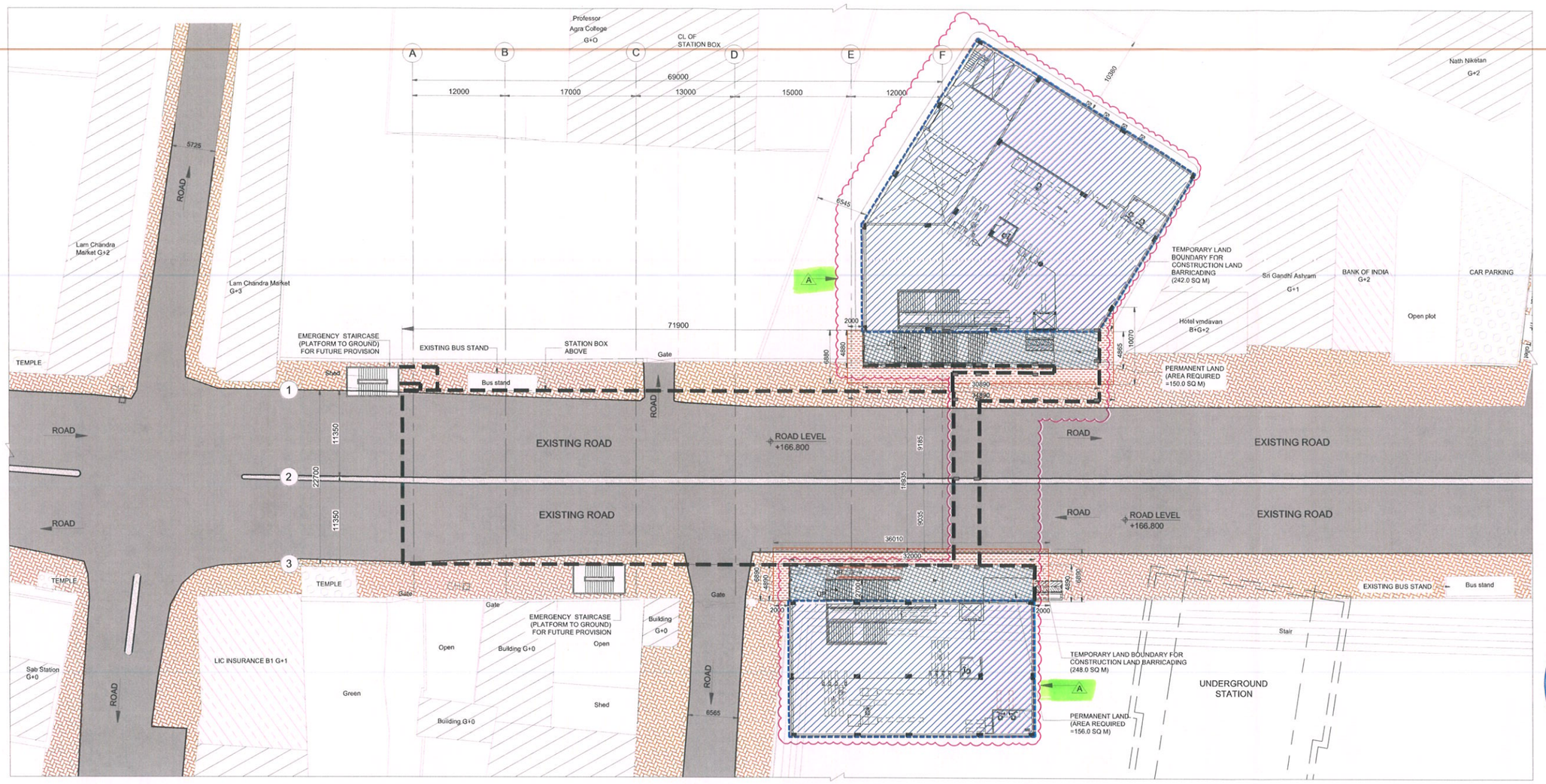
DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-13090

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1

Annexure-20 (1/2)

COLLECTORATE ← AGRA COLLEGE → HARIPARVAT



UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

INSERTION PLAN

SCALE - 1:300

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE TO BE READ AS MENTIONED ON THE DRAWINGS & NOT TO BE MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
9. PIT DIMENSIONS ARE SUBJECT TO CHANGE AS/VENDOR REQUIREMENTS.
10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
12. PIER SIZES/CRASH BARRIER THICKNESS , DG SIZE, COLUMN PROFILE HAVE BEEN TAKEN AS PER STRUCTURE
13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

LEGEND

	200 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN AREA
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	ALIGNMENT
	TRACK CENTER
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

LEGEND

	PART OF CORRIDOR 1 STATION
	GOVERNMENT STRUCTURE
	LANDMARK
	TEMPORARY LAND
	PERMANENT LAND

TEMPORARY LAND	PERMANENT LAND
474 SQ M	292 SQ M

A - HIGHLIGHTED(CLOUDED) PORTION IS UNDER UNDERGROUND CONTRACTOR'S SCOPE

NOTE:-

THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

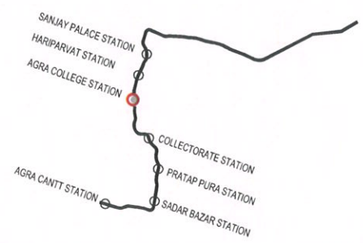
NOTE:-

1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.
3. THE LEVELS ARE REFERRED FROM DRAWING NO. AGCC02-11718A-GFC-AGC-AR-PLN-10812 OF AGRA COLLEGE UNDERGROUND STATION.

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TENDER DRAWING

KEY PLAN



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4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO.	DATE	DESCRIPTION
R4	10-JAN-2024	TENDER ADDENDUM
R3	05-OCT-2023	Fourth Issue
R2	04-MAY-2023	Third Issue
R1	21-APR-2023	As per GC comments
R0	10-FEB-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das (Digitally signed by Avijit Das Date: 2024.01.10 18:06:43 +05'30')	Sayantan Mukherjee	Sudipta Chakraborty (Digitally signed by Sudipta Chakraborty Date: 2024.01.10 18:07:27 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.10 18:07:43 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 665 5600
SUBSIDIARY OF
SYSTRA S.A. 5 AVENUE DU COQ, PARIS FRANCE

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights, Vibhuti Khand, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA COLLEGE STATION
INSERTION PLAN

ARCHITECTURE

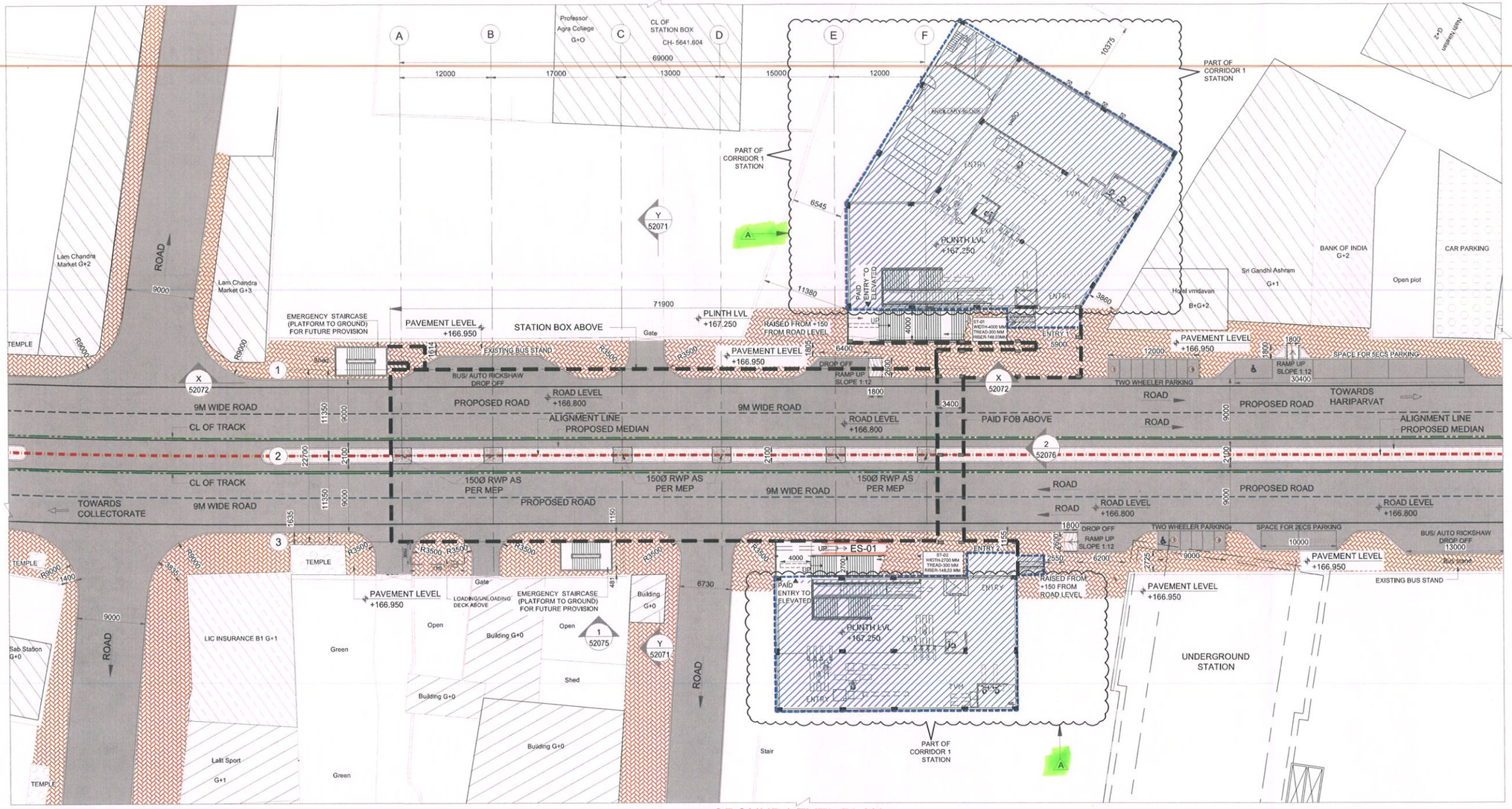
SCALE: AS SHOWN DATE: 10-FEB-2023 STAGE: TENDER

DRG NO.: KNPAGDDC-01-TDR-ARC-PLN-5018

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R4

COLLECTORATE ← AGRA COLLEGE → HARIPARVAT



GROUND LEVEL PLAN

SCALE - 1:300

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LEGEND

	200 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN AREA
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	ALIGNMENT
	TRACK CENTER
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

LEGEND

	PART OF CORRIDOR 1 STATION
	GOVERNMENT STRUCTURE
	LANDMARK

A - HIGHLIGHTED(CLOUDED) PORTION IS UNDER UNDERGROUND CONTRACTOR'S SCOPE

NOTE:-

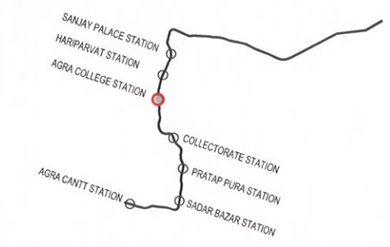
THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

NOTE:-

1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES CONFIRMED BY UPMRC.
3. EXISTING CAR PARKING AREA IN VICINITY.
4. THE LEVELS ARE REFERRED FROM DRAWING NO. AGCC02-11718A-GFC-AGC-AR-PLN-10812 OF AGRA COLLEGE UNDERGROUND STATION.

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

KEY PLAN



TENDER DRAWING

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RE. NO.	DATE	DESCRIPTION
R5	10-JAN-2024	TENDER ADDENDUM
R4	05-OCT-2023	Fourth Issue
R3	30-MAY-2023	As per GC comments
R2	04-MAY-2023	Third Issue
R1	21-APR-2023	As per GC comments
P	FEB-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

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☐ NOC ☐ NOWC ☐ RESUBMIT

DDC / CONTRACTOR

	DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	Avijit Das (Digitally signed by Avijit Das Date: 2024.01.10 18:08:19 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee Date: 2024.01.10 18:08:37 +05'30')	Sudipta Chakraborty (Digitally signed by Sudipta Chakraborty Date: 2024.01.10 18:08:53 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.10 18:09:01 +05'30')			
DATE:					13TH JANUARY 2024	13TH JANUARY 2024	13TH JANUARY 2024
NAME:					VIJAY S CHANDEL	ASHWANI MATHUR	ASHOK GHODESHWAR
DESIGNATION:					Architect (K3)	Senior Ar. (K2)	CA_GC / Arch. (K1)

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5500
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights, Vibhuti Khand, Gomti Nagar, Lucknow-226010

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA COLLEGE STATION
GROUND LEVEL PLAN

SCALE: AS SHOWN DATE: 10-FEB-2023 STAGE: TENDER

DRG NO.: KNPAGDDC-01-TDR-AGL-ARC-PLN-52052

OFFICE OF ORIGIN
SYSTRA

ARCHITECTURE

REVISION NO: R5

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

Annexure - 21

24" INCH DIAGONAL
FLAT LED SCREEN
DUAL MONITOR

PRINTER

BMS
WORK STATION

L2 16 PORT UNMANAGED SWITCH
(2 FO PORT AND 14 ETHERNET PORT)

COMMUNICATION CABLE
MODBUS TCP/IP

COMMUNICATION CABLE
MODBUS TCP/IP

COMMUNICATION CABLE
MODBUS TCP/IP

COMMUNICATION CABLE
MODBUS TCP/IP

COMMUNICATION CABLE
MODBUS TCP/IP

DDC CONTROLLER (ASS ROOM)

MAIN DISTRIBUTION BOARD
ESSENTIAL POWER PANEL
MAIN LIGHTING PANEL & AIR CONDITIONING PANEL
EMERGENCY LIGHTING PANEL
PASSENGER AMENITIES PANEL
LIGHTING CONTROL PANEL
UPS 1 & 2

CENTRALISED REMOTE
CONTROLLER/VRV

LIFT & ESCALATOR

FIRE ALARM PANEL

DDC CONTROLLER
(PUMP ROOM)

FIRE PUMP PANEL
DG PANEL

ABBREVIATION

	DESCRIPTION
DDC	DIRECT DIGITAL CONTROLLER
FACP	FIRE ALARM CONTROL PANEL
BMS	BUILDING MANAGEMENT SYSTEM
NS	NETWORK SWITCH
SCR	STATION CONTROL ROOM
MDB	MAIN DISTRIBUTION BOARD
RMS	REMOTE MONITORING SYSTEM
CLCP	CENTRAL LIGHTING CONTROL PANEL
VRV	VARIABLE REFRIGERANT VOLUME
UPS	UNINTERRUPTED POWER SUPPLY

NOTES:-

1. DDC PUMP ROOM SHALL BE LINKED TO THE CLOSEST SWITCH LOCATED IN THE SCR OR DDC ASS ROOM.
2. DDC CONTROLLER WILL BE EVALUATED IN ACCORDANCE WITH THE SPECIFICATIONS AND TENTATIVE IO LIST.
3. THIS SCHEMATIC IS TENTATIVE IN NATURE.

REV NO	DATE	DESCRIPTION	SIGN
P1	07-12-2023	REVISED	
P0	21-08-2023	-	

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC

P1	SIGN.	Akshay Kumar	Vikash Kumar	Vikash Kumar							Anil Jangid	07-12-2023
ISSUE		DRN	DSN	CHD	AR	EL	IC	ME	-	-	PE/PM	APPD	DATE
					CLEARED								

DETAIL DESIGN CONSULTANT

TATA CONSULTING ENGINEERS LIMITED, MUMBAI | 3TI PROGETTI S.p.A., ROME, ITALY | LEAP INFRAASYS PRIVATE LIMITED, FARIDABAD

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
GENERAL CONSULTANT		
SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE: 07-12-2023
NAME:	NAME:	NAME: Divakar Jha
DESIGNATION:	DESIGNATION:	DESIGNATION: Chief HAC Expert

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CEE	16/01	
CEE		

PROJECT: AGRA METRO RAIL PROJECT
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

LOCATION: AGRA ELEVATED STATIONS (TYPICAL)

TITLE: BMS SCHEMATIC OVERVIEW

SCALE: NTS | DATE: 21-08-2023 | STAGE: TDR

DRG NO: AGCC05-11718A-TDR-GKT-IC-BMS-41201

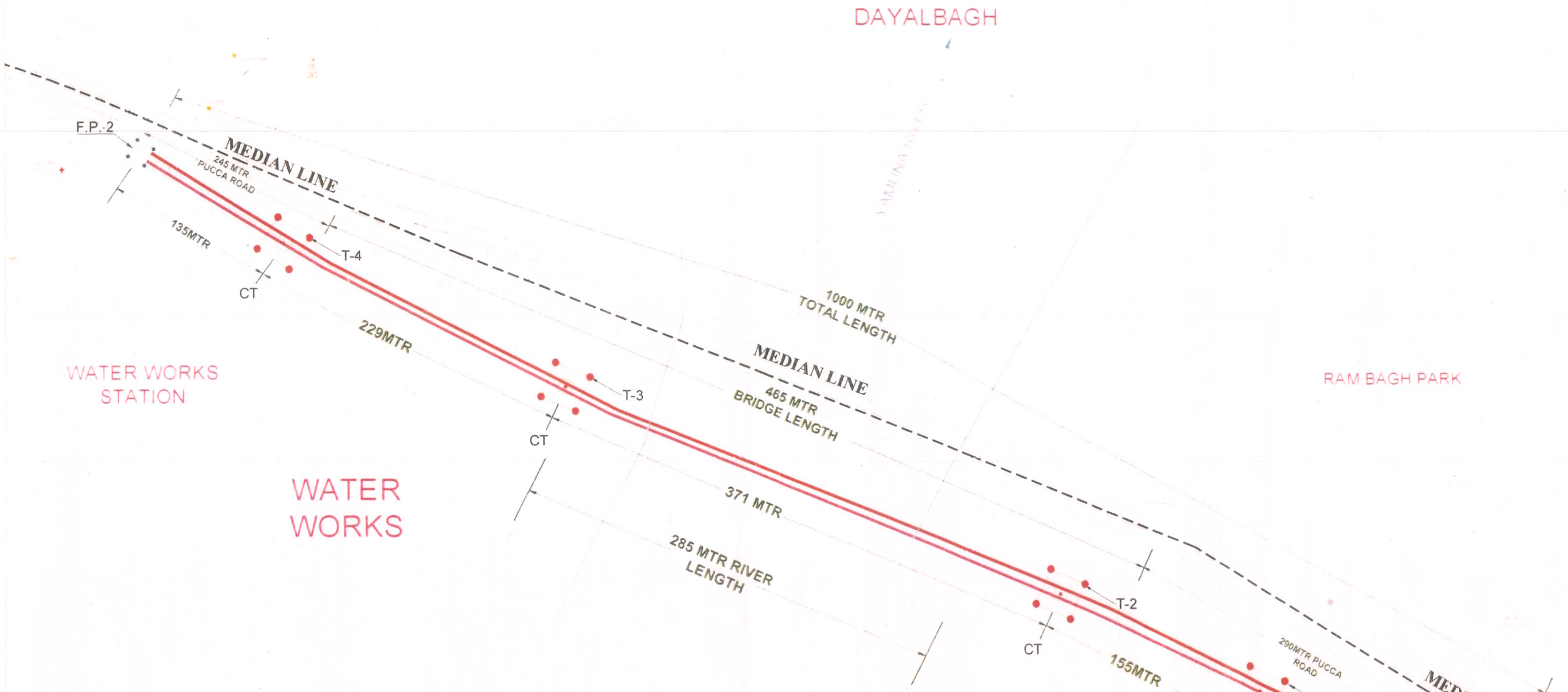
OFFICE OF ORIGIN

REVISION NO: P1

plot scale 50mm

Annexure -22

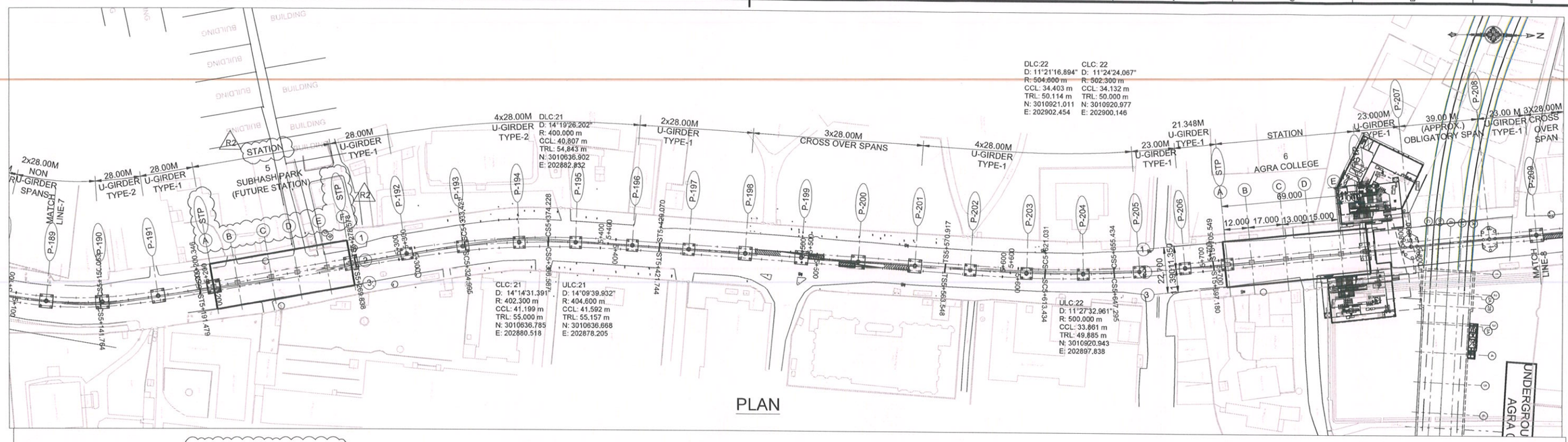
33KV YAMUNA RIVER CROSSING AT WATER WORKS



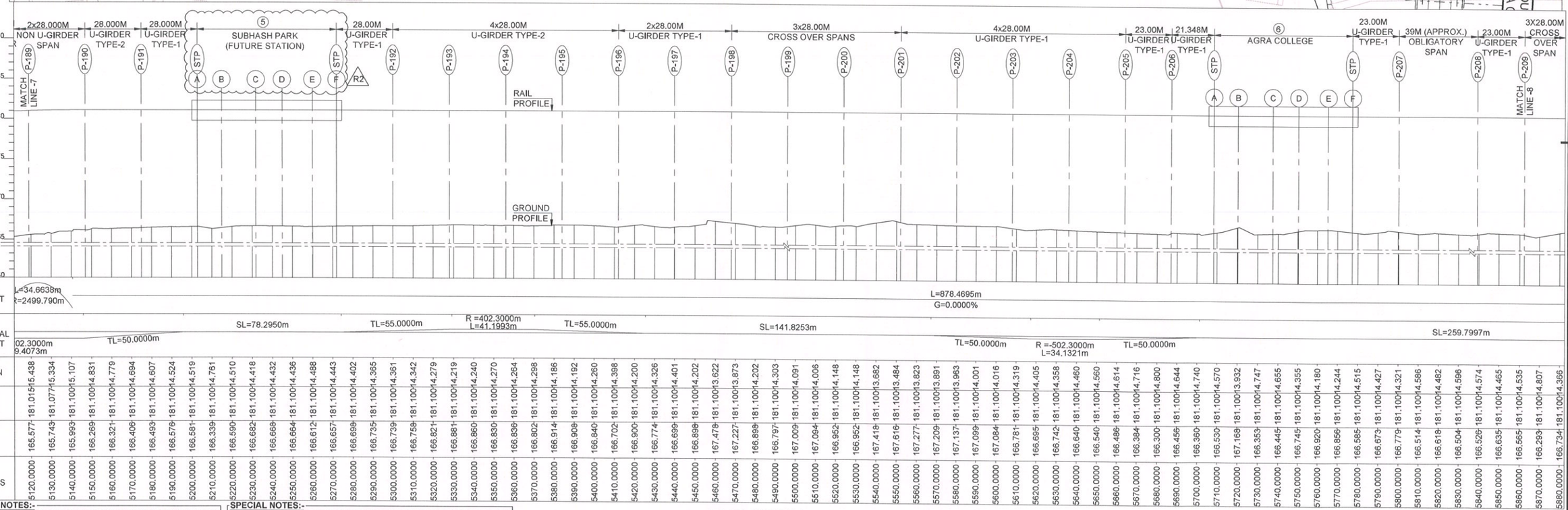
LOCATION	BASE SIZE	HEIGHT OF TOWER/POLE	LATITUDE TOWER CENTRE	LONGITUDE TOWER CENTRE	DISTANCE FROM SERVICE ROAD	DISTANCE FROM BRIDGE	DEPTH OF TOWER/POLE FROM GROUND LEVEL	DISTANCE FROM MEDIAN
FOUR POLE-2	2.76m x 3.08m	13.6. m	27.20647423	78.03038478	01.00 m	12.00 m	00.00 m	20.68 m
TOWER-4	6.68m x 6.68m	30.00 m	27.20619990	78.03077839	01.00 m	12.78 m	2.10 m	22.28 m
TOWER-3	5.5m x 5.5m	32.00 m	27.20563604	78.03256842	9.75 m	18.67 m	7.05 m	30.45 m
TOWER-2	5.5m x 5.5m	32.00 m	27.20422740	78.03639930	19.00 m	38.00 m	10.00 m	50.44 m
TOWER-1	7m x 7m	30.00 m	27.20372883	78.03768005	5.24 m	19.00 m	4.40 m	34.00 m
FOUR POLE-1	2m x 2m	11.41 m	27.20209905	78.03917672	00.00 m	11.00 m	00.00 m	23.98 m

LEGENDS

Annexure-23 (1/12)



PLAN



SPECIAL NOTES:-

1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-

3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

ELEVATION

TENDER DESIGN DRAWING

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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R2	05-Jan-24	Subhash Park (Future Station) shown
R1	25-Sep-23	GENERALLY REVISED
R0	25-May-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

Vikram Singh	Divyanshu Tripathi	Jitendra Rastogi	Amitava Das
Digitally signed by Vikram Singh Date: 2024.01.08 18:45:34 +05'30'	Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:51:48 +05'30'	Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:55:38 +05'30'	Digitally signed by Amitava Das Date: 2024.01.08 18:59:12 +05'30'
DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

DETAIL DESIGN CONSULTANT

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH. 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

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☑ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 10-01-24	DATE: 10-01-2024	DATE: 11.01.24
NAME: AR	NAME: M-S J.	NAME: RKg
DESIGNATION: SE	DESIGNATION: S.S.E.	DESIGNATION: CSE

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 8

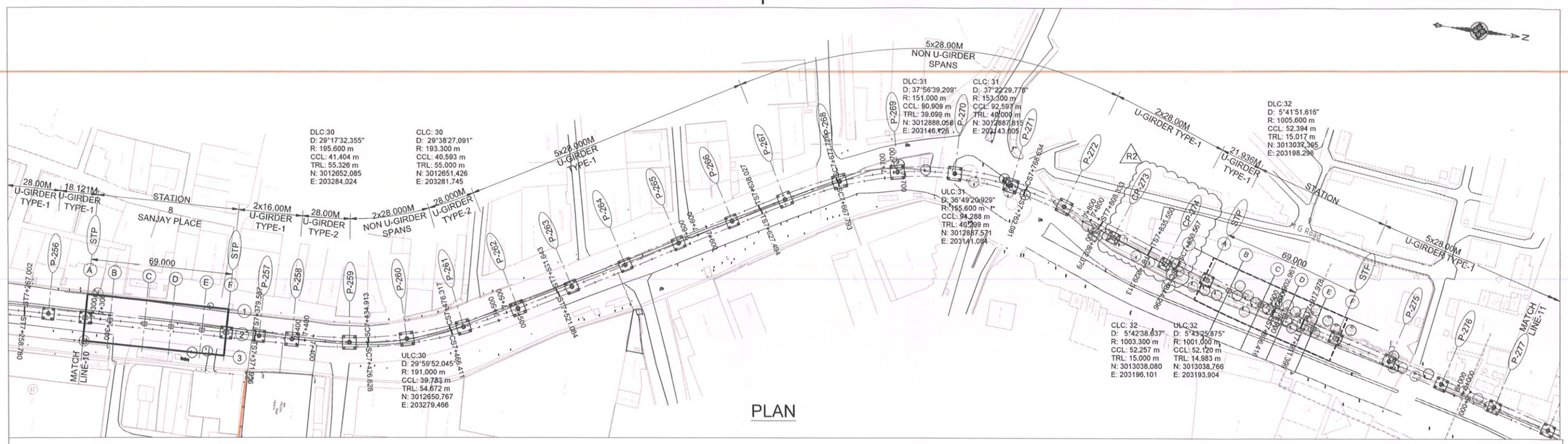
STRUCTURE

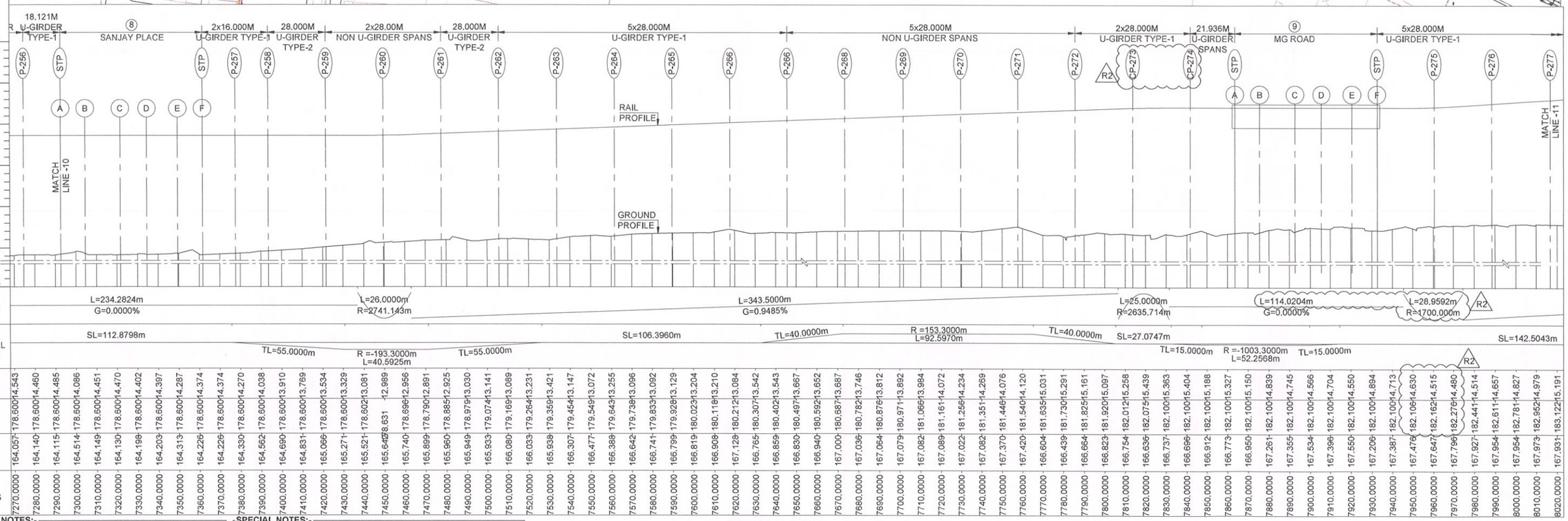
SCALE: AS SHOWN | DATE: 25-May-23 | STAGE: TENDER DESIGN

DRG NO.: KNPAGDDC-01-TDR-ELV-VDC-DWG-09028

OFFICE OF ORIGIN

REVISION NO: R2





CHAINAGES (M)	GROUND LEVELS (M)	RAIL LEVELS (M)	DIFF. IN ELEVATION (M)
7270.0000	164.057	178.600	14.543
7280.0000	164.140	178.600	14.460
7290.0000	164.115	178.600	14.485
7300.0000	164.514	178.600	14.086
7310.0000	164.149	178.600	14.451
7320.0000	164.130	178.600	14.470
7330.0000	164.198	178.600	14.402
7340.0000	164.203	178.600	14.397
7350.0000	164.313	178.600	14.287
7360.0000	164.226	178.600	14.374
7370.0000	164.226	178.600	14.374
7380.0000	164.330	178.600	14.270
7390.0000	164.562	178.600	14.038
7400.0000	164.690	178.600	13.910
7410.0000	164.831	178.600	13.769
7420.0000	165.066	178.600	13.534
7430.0000	165.271	178.600	13.329
7440.0000	165.521	178.602	13.081
7450.0000	165.6478	178.631	12.989
7460.0000	165.740	178.696	12.956
7470.0000	165.899	178.790	12.891
7480.0000	165.960	178.885	12.925
7490.0000	165.949	178.979	13.030
7500.0000	165.933	179.074	13.141
7510.0000	166.080	179.169	13.089
7520.0000	166.033	179.264	13.231
7530.0000	165.938	179.359	13.421
7540.0000	166.307	179.454	13.147
7550.0000	166.477	179.549	13.072
7560.0000	166.388	179.643	13.255
7570.0000	166.642	179.738	13.096
7580.0000	166.741	179.833	13.092
7590.0000	166.799	179.928	13.129
7600.0000	166.819	180.023	13.204
7610.0000	166.908	180.118	13.210
7620.0000	167.128	180.212	13.084
7630.0000	166.765	180.307	13.542
7640.0000	166.859	180.402	13.543
7650.0000	166.830	180.497	13.667
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7690.0000	167.064	180.876	13.812
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7720.0000	167.089	181.161	14.072
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7770.0000	166.604	181.635	15.031
7780.0000	166.439	181.730	15.291
7790.0000	166.684	181.825	15.161
7800.0000	166.823	181.920	15.097
7810.0000	166.754	182.012	15.258
7820.0000	166.636	182.075	15.439
7830.0000	166.737	182.100	15.363
7840.0000	166.696	182.100	15.404
7850.0000	166.912	182.100	15.188
7860.0000	166.773	182.100	15.327
7870.0000	166.950	182.100	15.150
7880.0000	167.261	182.100	14.839
7890.0000	167.355	182.100	14.745
7900.0000	167.534	182.100	14.566
7910.0000	167.396	182.100	14.704
7920.0000	167.550	182.100	14.550
7930.0000	167.206	182.100	14.894
7940.0000	167.387	182.100	14.713
7950.0000	167.476	182.106	14.630
7960.0000	167.647	182.162	14.515
7970.0000	167.796	182.276	14.480
7980.0000	167.927	182.441	14.514
7990.0000	167.954	182.611	14.657
8000.0000	167.954	182.781	14.827
8010.0000	167.973	182.952	14.979
8020.0000	167.931	183.122	15.191

SPECIAL NOTES:-
1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

ELEVATION

TENDER DESIGN DRAWING

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

REV NO	DATE	DESCRIPTION
R2	08-Jan-24	Piers P-273 & P-274 changed to CP-273 & CP-274
R1	25-Sep-23	GENERALLY REVISED
R0	25-May-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Vikram Singh — Digitally signed by Vikram Singh, Date: 2024.01.08 18:46:03 +05'30'	Divyanshu Tripathi — Digitally signed by Divyanshu Tripathi, Date: 2024.01.08 18:52:08 +05'30'	Jitendra Rastogi — Digitally signed by Jitendra Rastogi, Date: 2024.01.08 18:55:57 +05'30'	Amitava Das — Digitally signed by Amitava Das, Date: 2024.01.08 18:59:29 +05'30'

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 10-01-24	DATE: 10-01-2024	DATE: 10/01/24
NAME: AR	NAME: M-S-J-	NAME: BKS
DESIGNATION: SE	DESIGNATION: S.S.E.	DESIGNATION: CSE

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM		

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar
Lucknow-226010

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 11

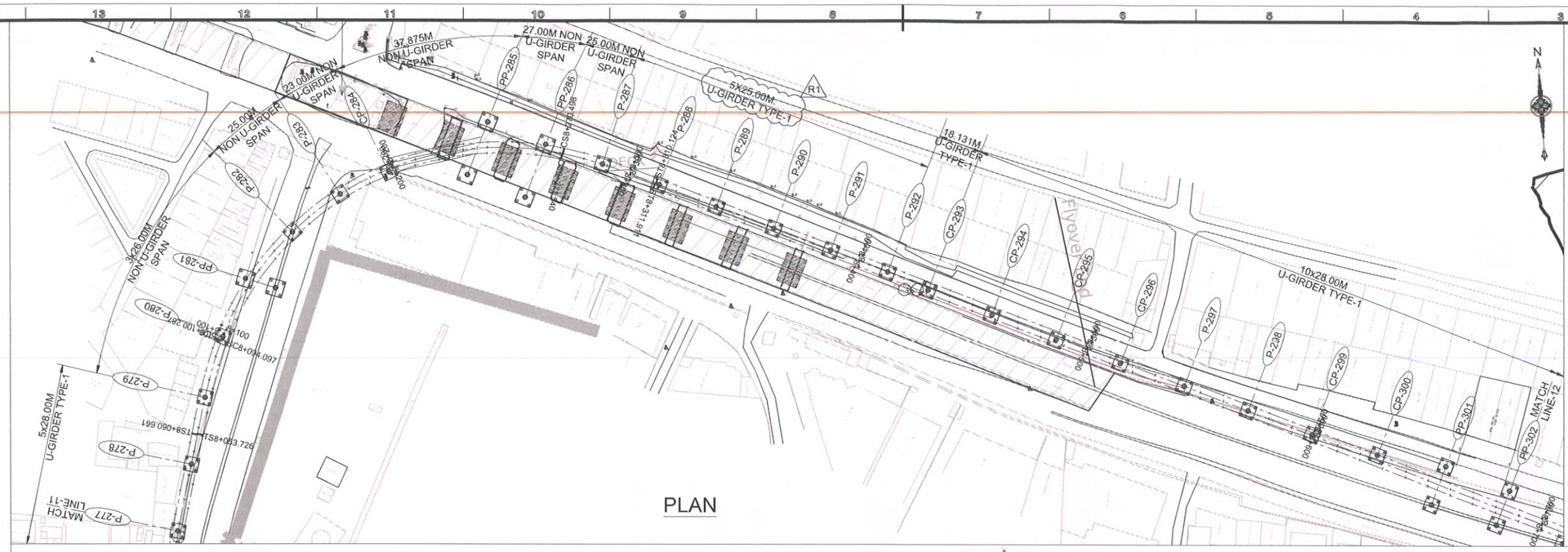
STRUCTURE

SCALE: AS SHOWN | DATE: 25-May-23 | STAGE: TENDER DESIGN

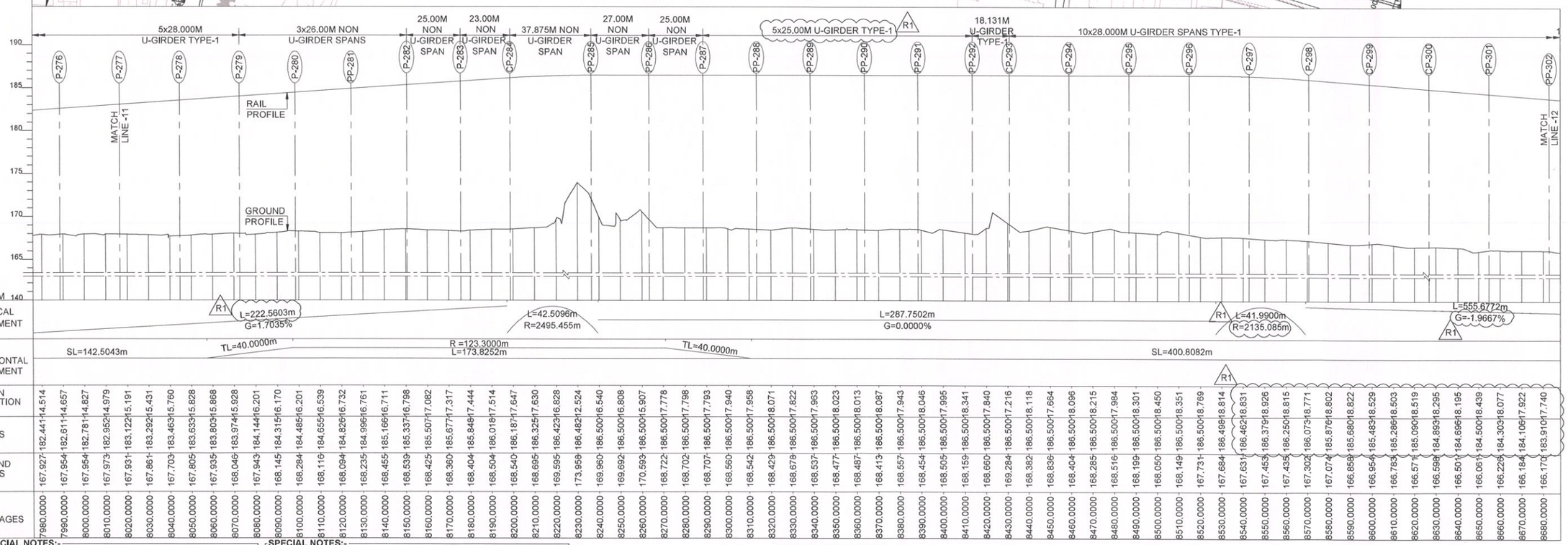
DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09031

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R2



PLAN



ELEVATION

SPECIAL NOTES:-
1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

TENDER DESIGN DRAWING

GENERAL NOTES:
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV. NO	DATE	DESCRIPTION
R1	09-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	REVIEWED BY	APPROVED BY	VETTED BY
Vikram Singh (Digitally signed by Vikram Singh Date: 2024.01.08 18:46:26 +05'30')	Divyanshu Tripathi (Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:52:27 +05'30')	Jitendra Rastogi (Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:56:13 +05'30')	Amitava Das (Digitally signed Date: 2024.01.08 18:59:53 +05'30')	SIGN:	SIGN:	SIGN:
				DATE: 10-01-24	DATE: 10-01-2024	DATE: 10/1/24
				NAME: AR	NAME: M-S-S.	NAME: RKG
				DESIGNATION: SE	DESIGNATION: S.S.E.	DESIGNATION: CSE

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar
Lucknow-226010

	COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL			
CPM		17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

OFFICE OF ORIGIN: SYSTRA

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 12

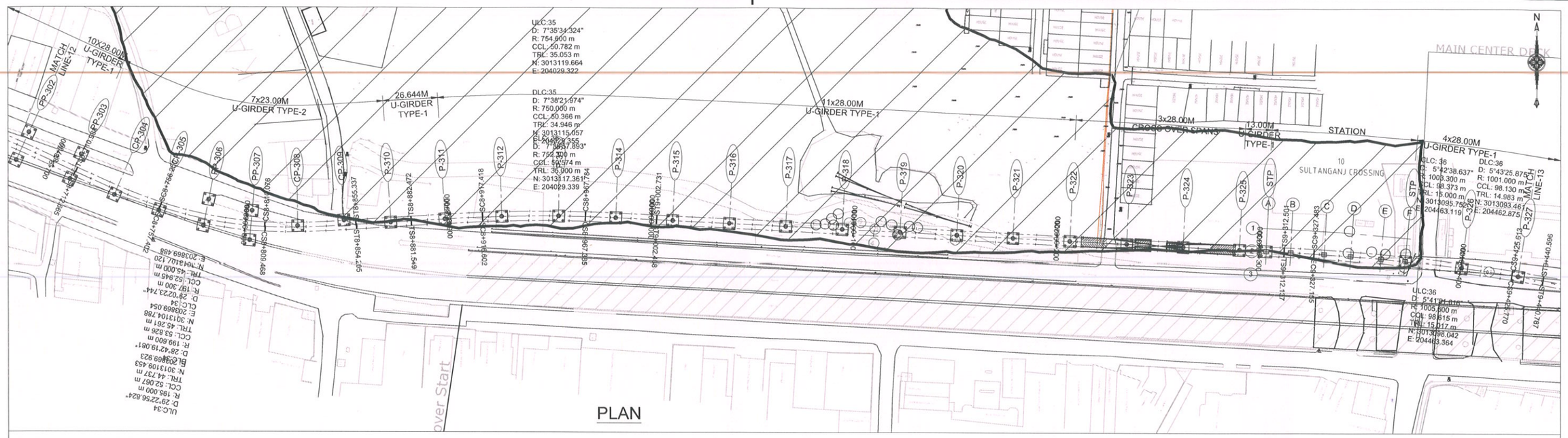
STRUCTURE

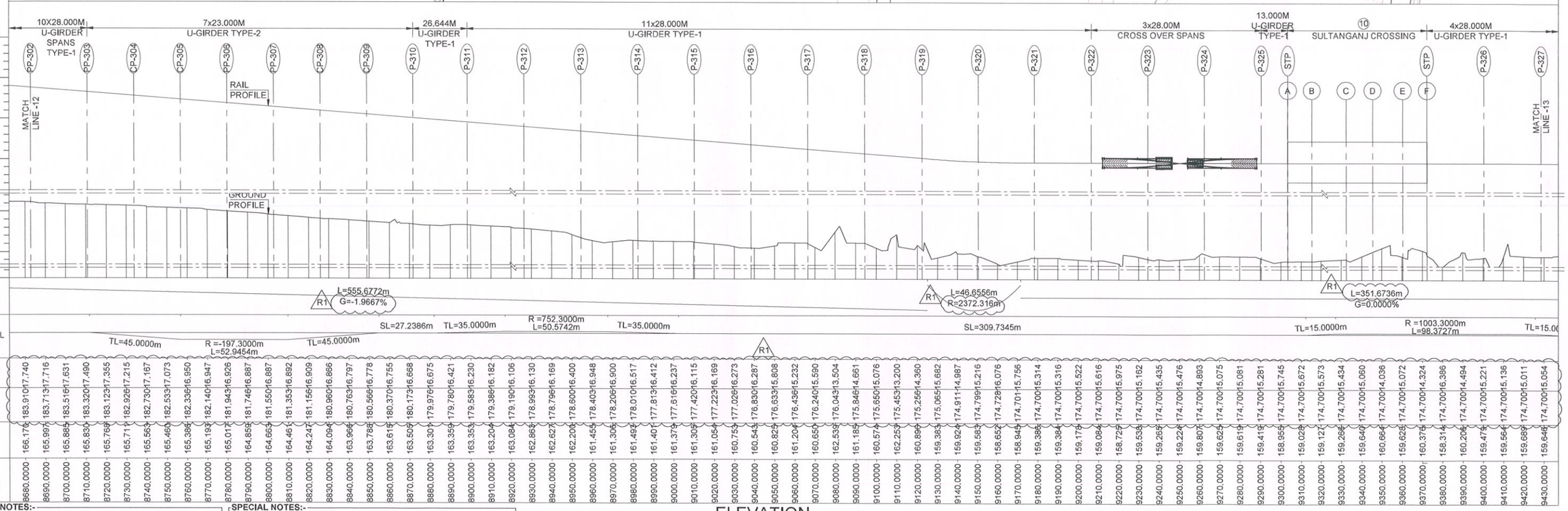
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09032

REVISION NO: R1

(4112)





SPECIAL NOTES:-
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SPECIAL NOTES:-
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TENDER DESIGN DRAWING

GENERAL NOTES:
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R1	06-Jan-24	Updated As Per Latest Alignment
P0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR			
Vikram Singh (Digitally signed by Vikram Singh, Date: 2024.01.08 18:46:56 +05'30')	Divyanshu Tripathi (Digitally signed by Divyanshu Tripathi, Date: 2024.01.08 18:52:46 +05'30')	Jitendra Rastogi (Digitally signed by Jitendra Rastogi, Date: 2024.01.08 18:56:30 +05'30')	Amitava Das (Digitally signed by Amitava Das, Date: 2024.01.08 19:00:11 +05'30')
DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC	☐ NOWC	☐ RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 10-01-24	DATE: 10-01-2024	DATE: 10.01.24
NAME: AR	NAME: M-S-J.	NAME: RKg
DESIGNATION: SE	DESIGNATION: S.S.E.	DESIGNATION: CSE
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UPMRCL
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 13

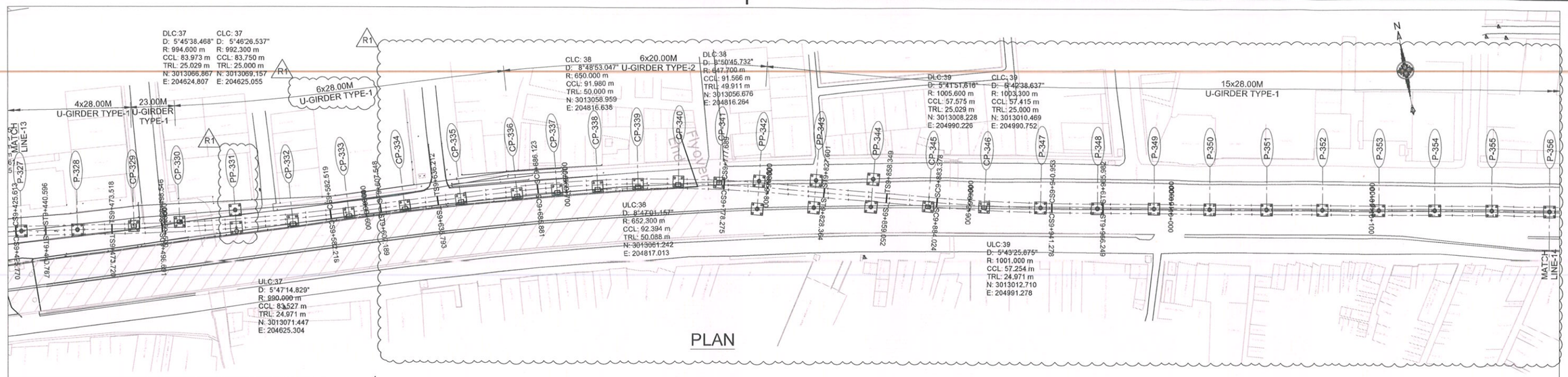
STRUCTURE

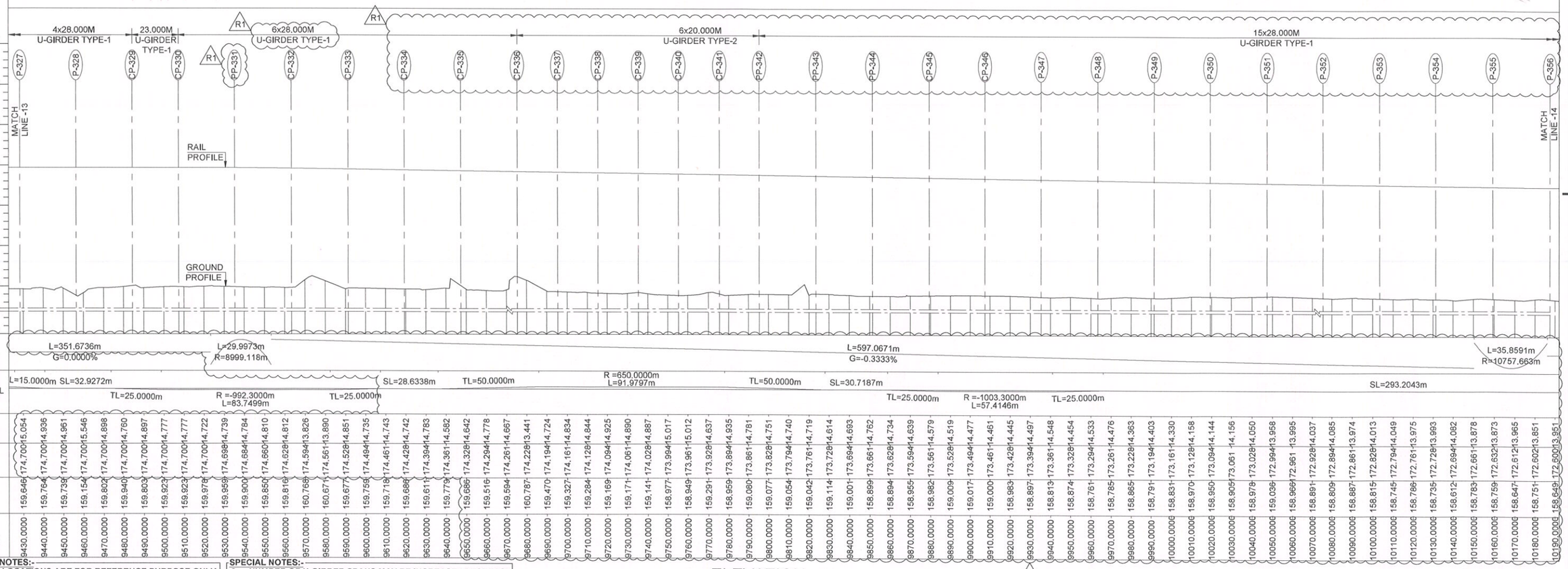
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09033

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1





ELEVATION

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SPECIAL NOTES:-
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TENDER DESIGN DRAWING

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REV NO	DATE	DESCRIPTION
R1	08-Jan-24	Updated As Per Latest Alignment
P0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

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☑ NOC ☐ NOWC ☐ RESUBMIT

DDC / CONTRACTOR

	DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	Vikram Singh (Digitally signed by Vikram Singh Date: 2024.01.08 18:47:30 +05'30')	Divyanshu Tripathi (Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:53:02 +05'30')	Jitendra Rastogi (Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:56:47 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.08 19:00:29 +05'30')			
DATE:					10-01-24	10.01.2024	10/1/24
NAME:					AR	M.S.J.	RKG
DESIGNATION:					SE	S.S.E.	CSE

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

	COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL			
CPM			

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 14

STRUCTURE

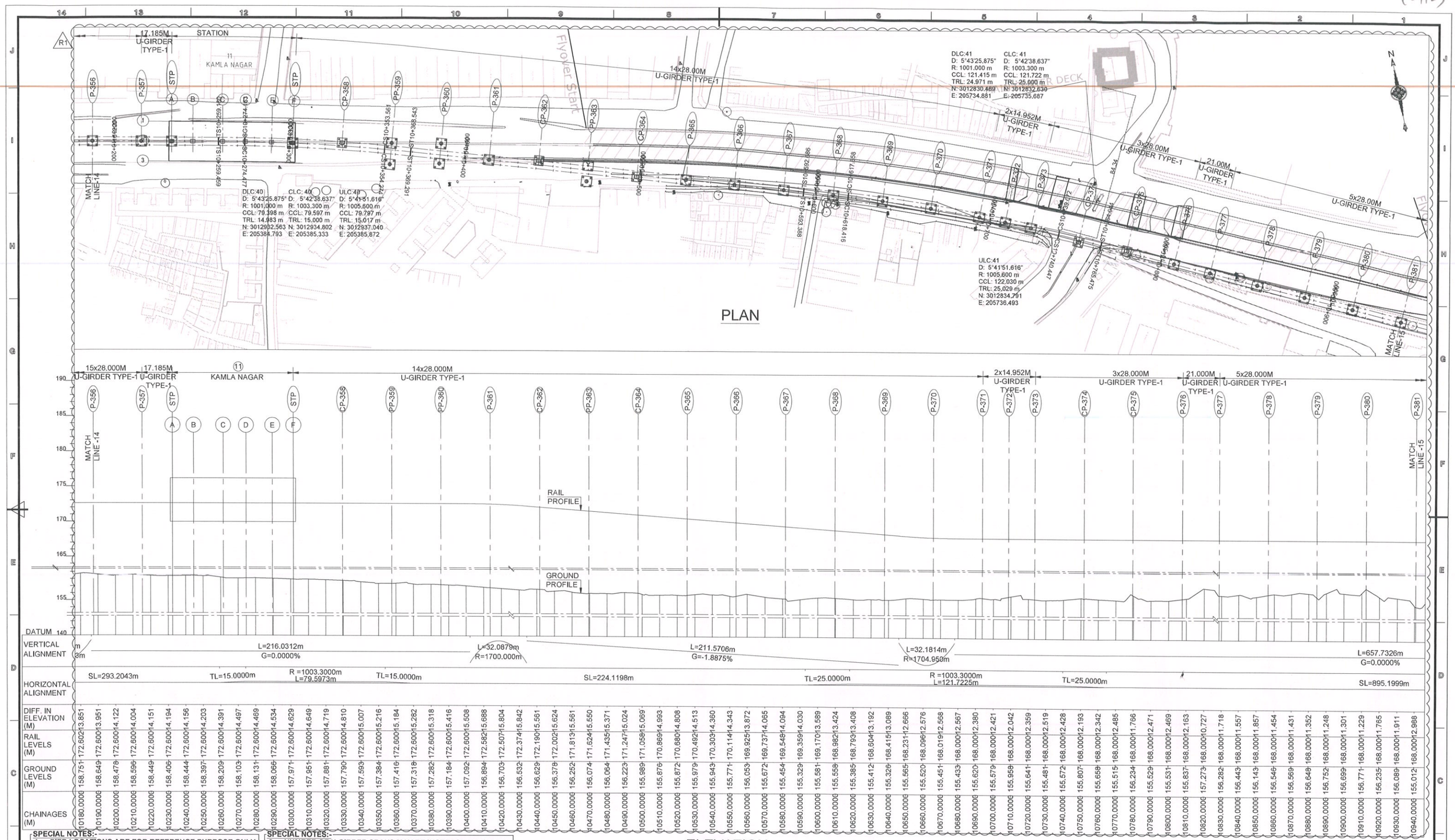
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09034

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1

(6/12)



ELEVATION

SPECIAL NOTES:-
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2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

TENDER DESIGN DRAWING

GENERAL NOTES:
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REV NO	DATE	DESCRIPTION
R1	09-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

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☑ NOC ☐ NOWC ☐ RESUBMIT

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	REVIEWED BY	APPROVED BY	VETTED BY
Vikram Singh (Digitally signed by Vikram Singh Date: 2024.01.08 18:48:00 +05'30')	Divyanshu Tripathi (Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:53:19 +05'30')	Jitendra Rastogi (Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:57:02 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.08 19:00:46 +05'30')	SIGN: DATE: 10-01-24 NAME: AR DESIGNATION: SE	SIGN: DATE: 10-01-2024 NAME: M-S J. DESIGNATION: S.S.E.	SIGN: DATE: 11/01/24 NAME: BKS DESIGNATION: CSE

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE PIU 0 D2 - FAPIS 75006

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17.01.24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

OFFICE OF ORIGIN: SYSTRA

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 15

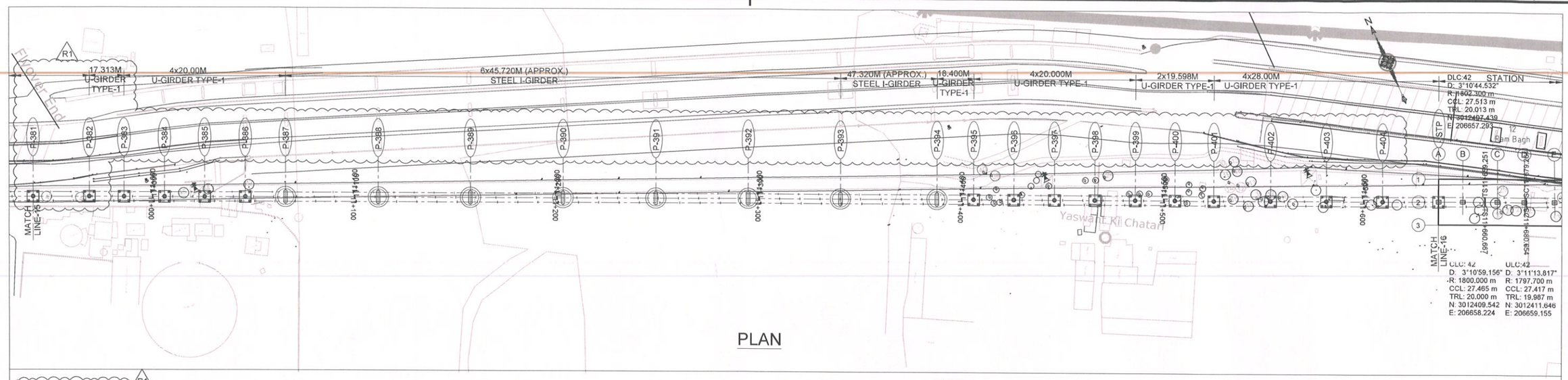
STRUCTURE

SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

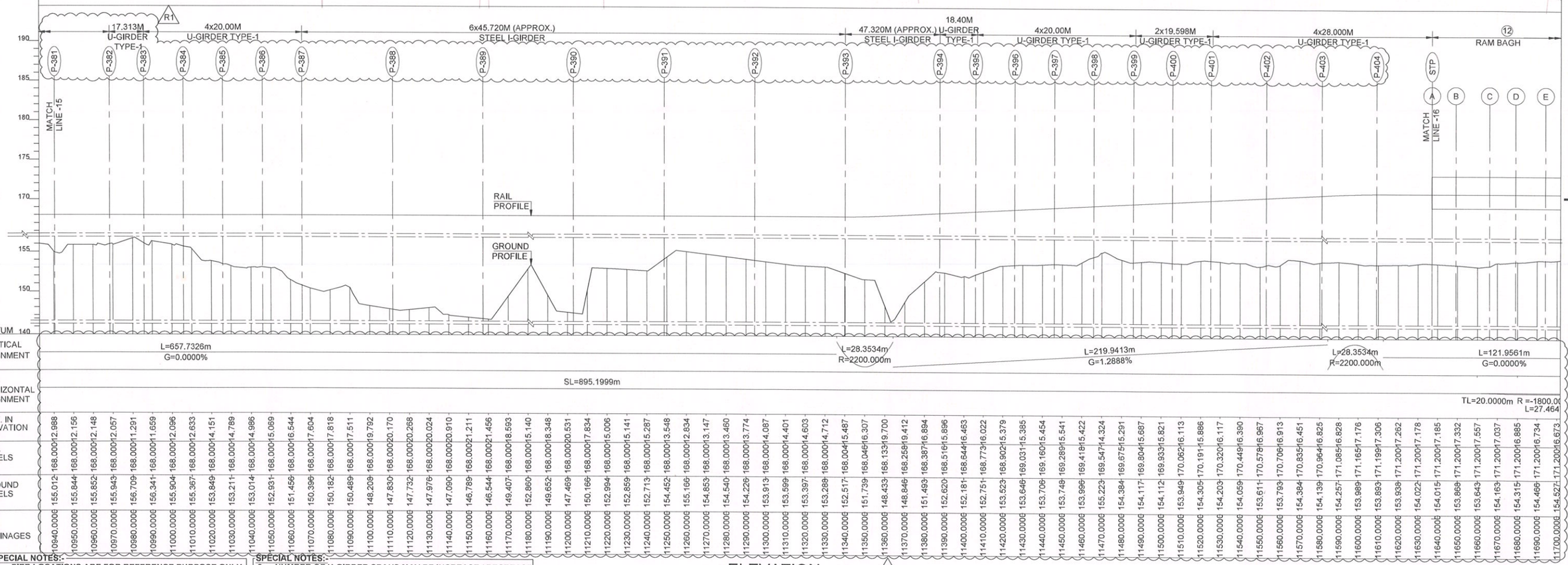
DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09035

REVISION NO: R1

(7/12)



PLAN



ELEVATION

SPECIAL NOTES:-
1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

TENDER DESIGN DRAWING

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

REV NO	DATE	DESCRIPTION
R1	05-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

DDC / CONTRACTOR — ☑NOC ☐NOWC ☐RESUBMIT

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	REVIEWED BY	APPROVED BY	VETTED BY
Vikram Singh (Digitally signed by Vikram Singh Date: 2024.01.08 18:48:27 +05'30')	Divyanshu Tripathi (Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:53:37 +05'30')	Jitendra Rastogi (Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:57:18 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.08 19:01:04 +05'30')	SIGN: DATE: 10-01-24 NAME: AR DESIGNATION: SE	SIGN: DATE: 10-01-2024 NAME: M.S.J. DESIGNATION: S.S.E.	SIGN: DATE: 11.01.24 NAME: RKG DESIGNATION: DSE

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 16

STRUCTURE

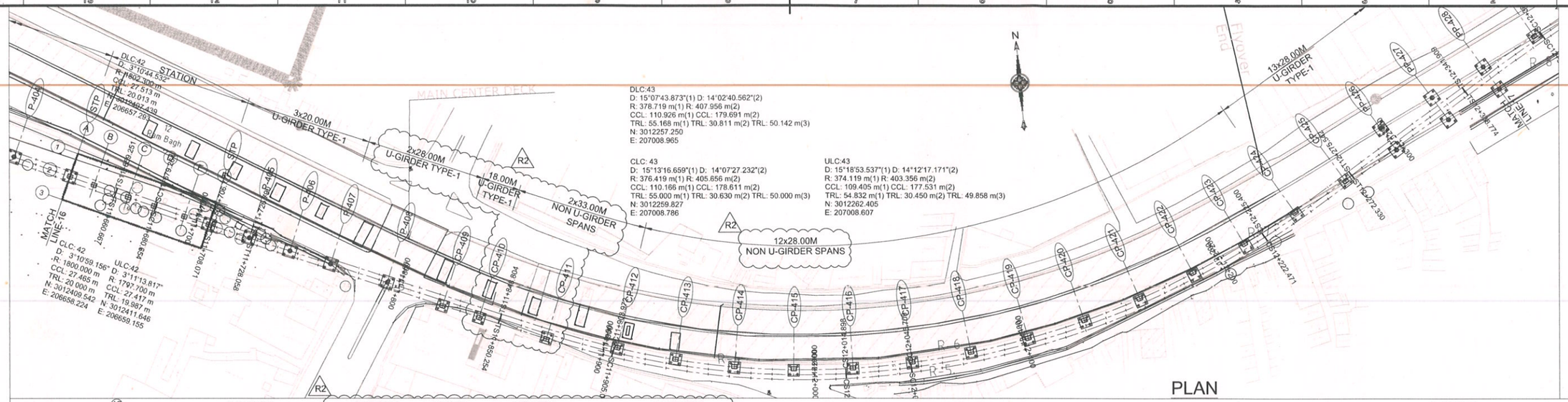
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09036

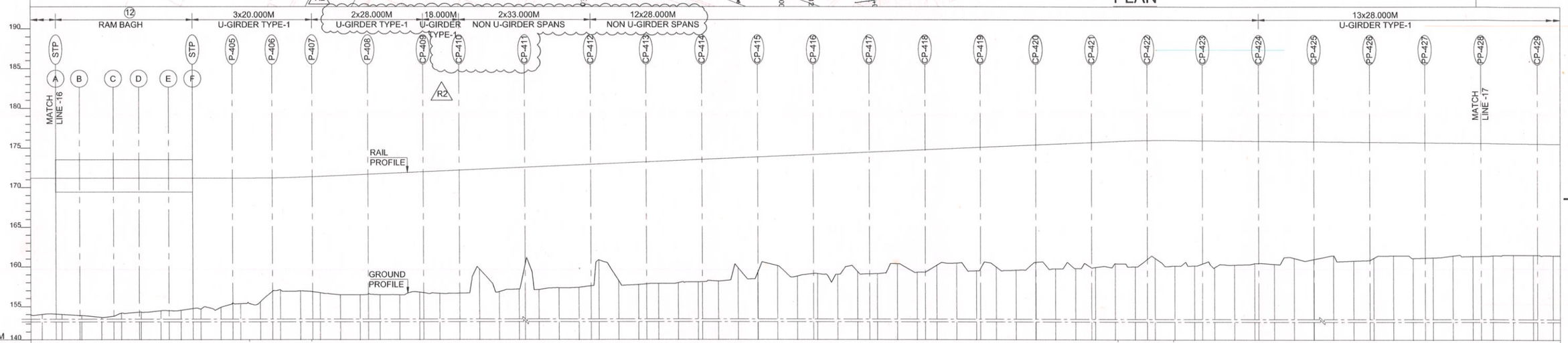
OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1

(8/12)



PLAN



ELEVATION

SPECIAL NOTES:-
1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

R1

TENDER DESIGN DRAWING

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

REV NO	DATE	DESCRIPTION
R2	18-Jan-24	Updated As Per GC Comments
R1	05-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.18 18:27:50 +05'30'	Divyansh u Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.18 18:28:17 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.18 18:28:55 +05'30'	Amitav a Das Digitally signed by Amitava Das Date: 2024.01.18 18:29:21 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

	NOC	NOWC	RESUBMIT
SIGN:			
DATE:	19.01.2024	19.01.2024	19.01.2024
NAME:	ASO	MSJ	ATD
DESIGNATION:	K3	K2	K1
	REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/01/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 17

STRUCTURE

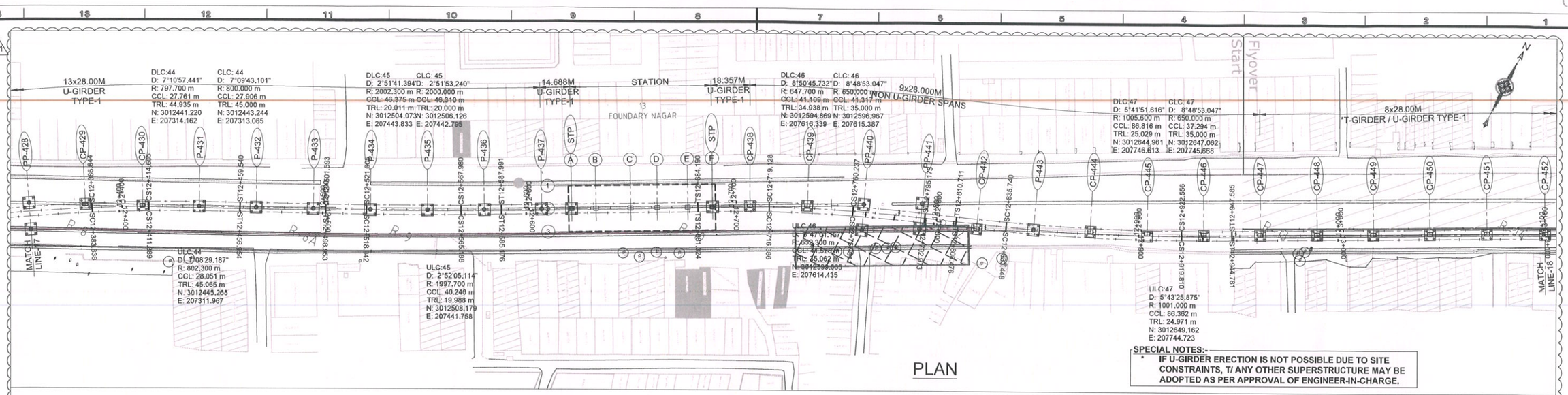
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09037

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R2

(9/12)



TENDER DESIGN DRAWING

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV. NO.	DATE	DESCRIPTION
R1	06-Jan-24	Updated As Per Latest Alignment
P1	15-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Vikram Singh (Digitally signed by Vikram Singh Date: 2024.01.08 18:49:31 +05'30')	Divyansh u Tripathi (Digitally signed by Divyanshu Tripathi Date: 2024.01.08 18:54:14 +05'30')	Jitendra Rastogi (Digitally signed by Jitendra Rastogi Date: 2024.01.08 18:57:52 +05'30')	Amitav a Das (Digitally signed by Amitava Das Date: 2024.01.08 19:01:48 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 10-01-24	DATE: 10-01-2024	DATE: 11/01/24
NAME: AR	NAME: M-S J.	NAME: RKS
DESIGNATION: SE	DESIGNATION: S.S.E.	DESIGNATION: CSE

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/01/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 18

STRUCTURE

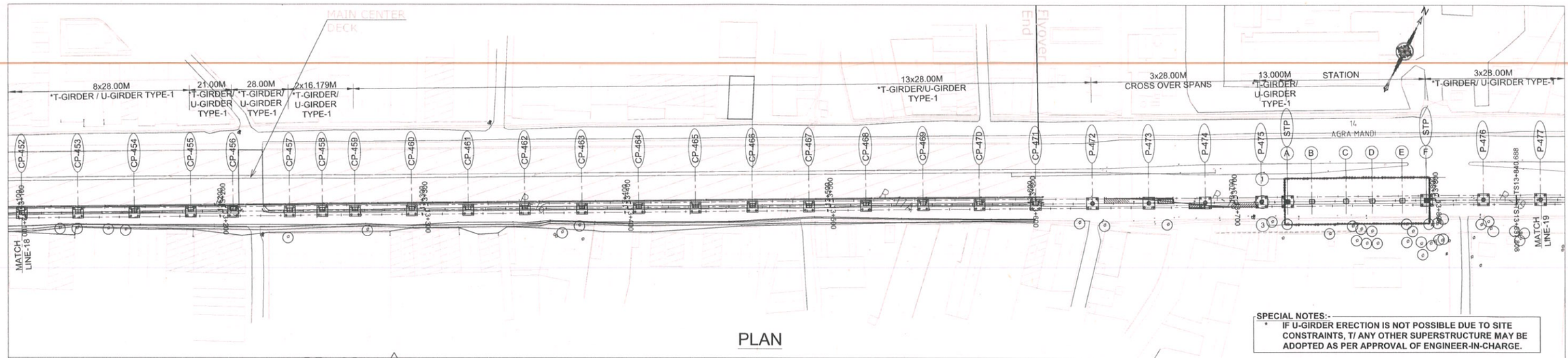
SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09038

OFFICE OF ORIGIN
SYSTRA

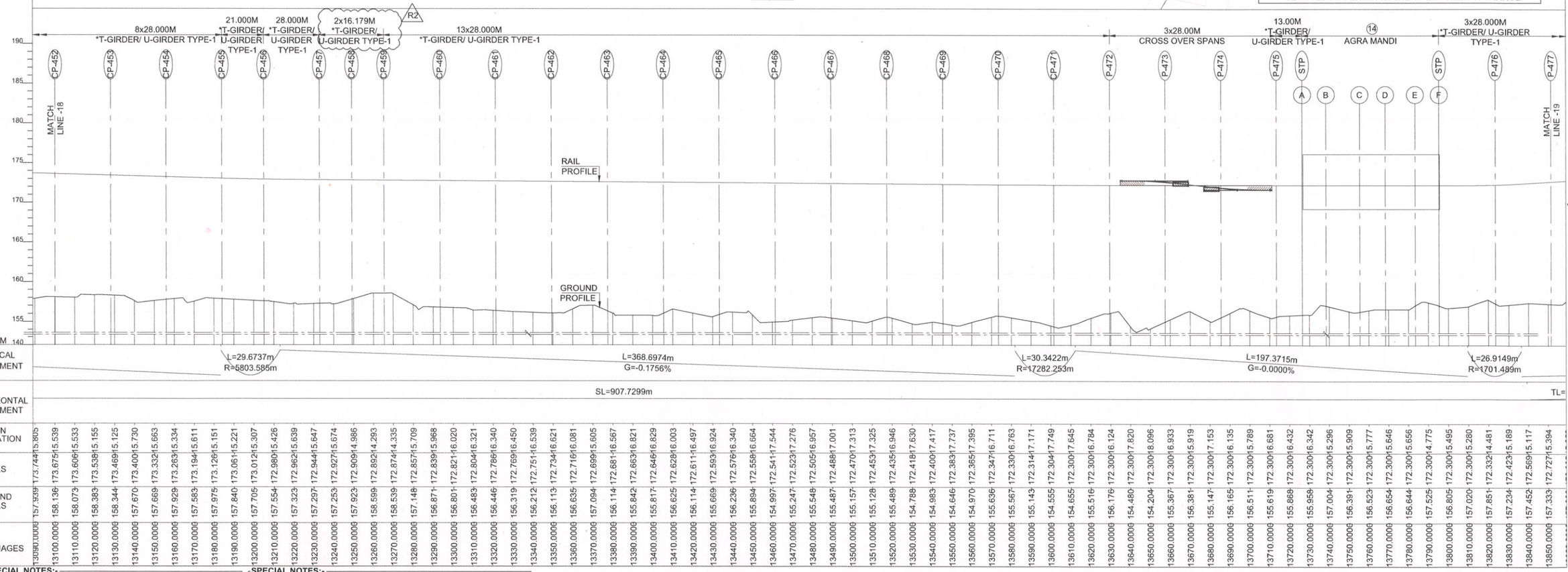
REVISION NO: R1

(10/12)



PLAN

SPECIAL NOTES:-
* IF U-GIRDER ERECTION IS NOT POSSIBLE DUE TO SITE CONSTRAINTS, T/ ANY OTHER SUPERSTRUCTURE MAY BE ADOPTED AS PER APPROVAL OF ENGINEER-IN-CHARGE.



SPECIAL NOTES:-
1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-
3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

ELEVATION

TENDER DESIGN DRAWING

GENERAL NOTES:
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R2	18-Jan-24	Updated As Per GC Comments
R1	08-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.18 16:19:29 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.18 16:20:01 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.18 16:20:23 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.18 16:20:44 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC	☐ NOWC	☐ RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 19.01.2024	DATE: 19.01.2024	DATE: 19.01.2024
NAME: ASO	NAME: MSJ	NAME: ATD
DESIGNATION: K3	DESIGNATION: K2	DESIGNATION: K1
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts Vibhuti Khand, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 19

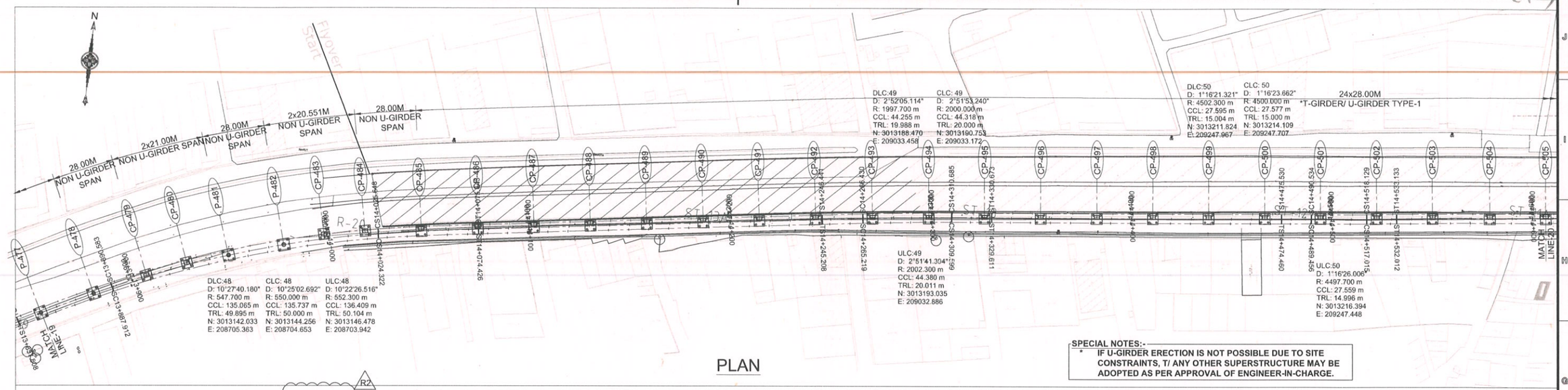
STRUCTURE

SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09039

OFFICE OF ORIGIN
SYSTRA

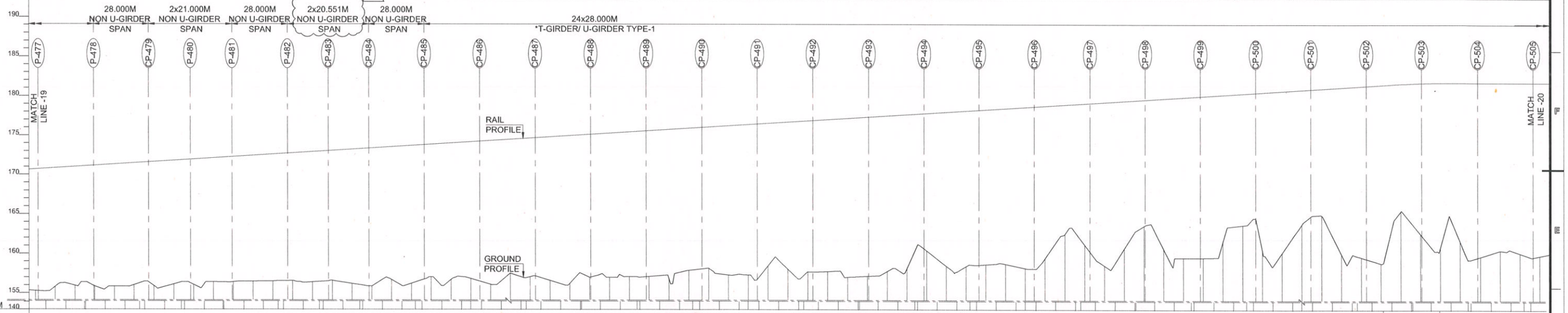
REVISION NO: R2



PLAN

SPECIAL NOTES:-

* IF U-GIRDER ERECTION IS NOT POSSIBLE DUE TO SITE CONSTRAINTS, T/ ANY OTHER SUPERSTRUCTURE MAY BE ADOPTED AS PER APPROVAL OF ENGINEER-IN-CHARGE.



CHAINAGES (M)	GROUND LEVELS (M)	RAIL LEVELS (M)	DIFF. IN ELEVATION (M)
13860.0000	157.832	172.885	15.053
13870.0000	157.989	173.043	15.054
13880.0000	157.883	173.202	15.319
13890.0000	157.887	173.360	15.473
13900.0000	158.061	173.518	15.457
13910.0000	157.957	173.676	15.719
13920.0000	158.155	173.834	15.679
13930.0000	158.110	173.993	15.883
13940.0000	158.434	174.151	15.717
13950.0000	158.435	174.309	15.874
13960.0000	158.513	174.467	15.954
13970.0000	158.547	174.625	16.078
13980.0000	158.598	174.783	16.185
13990.0000	158.424	174.942	16.518
14000.0000	158.620	175.100	16.480
14010.0000	158.227	175.258	17.031
14020.0000	157.933	175.416	17.483
14030.0000	158.738	175.574	16.836
14040.0000	158.243	175.733	17.490
14050.0000	159.085	175.891	16.806
14060.0000	158.729	176.049	17.320
14070.0000	158.859	176.207	17.348
14080.0000	158.133	176.365	18.232
14090.0000	159.536	176.524	16.988
14100.0000	159.100	176.682	17.582
14110.0000	158.643	176.840	18.197
14120.0000	158.239	176.998	18.759
14130.0000	159.052	177.156	18.104
14140.0000	159.048	177.314	18.266
14150.0000	159.121	177.473	18.352
14160.0000	159.142	177.631	18.489
14170.0000	158.870	177.789	18.919
14180.0000	159.923	177.947	18.024
14190.0000	160.178	178.105	17.927
14200.0000	159.327	178.264	18.937
14210.0000	159.350	178.422	19.072
14220.0000	160.497	178.580	18.083
14230.0000	160.099	178.738	18.639
14240.0000	159.735	178.896	19.161
14250.0000	159.788	179.054	19.266
14260.0000	159.089	179.213	20.144
14270.0000	159.192	179.371	20.179
14280.0000	159.809	179.529	19.720
14290.0000	160.186	179.687	19.501
14300.0000	162.423	179.845	17.422
14310.0000	160.502	180.004	19.502
14320.0000	160.432	180.162	19.730
14330.0000	160.681	180.320	19.639
14340.0000	160.757	180.478	19.721
14350.0000	160.217	180.636	20.419
14360.0000	161.485	180.794	19.309
14370.0000	164.570	180.953	16.383
14380.0000	163.205	181.111	17.906
14390.0000	160.572	181.269	20.697
14400.0000	162.735	181.427	18.692
14410.0000	165.600	181.585	15.985
14420.0000	162.675	181.744	19.069
14430.0000	161.539	181.902	20.363
14440.0000	161.551	182.060	20.509
14450.0000	163.599	182.218	18.619
14460.0000	165.691	182.376	16.685
14470.0000	162.450	182.535	20.085
14480.0000	162.197	182.693	20.496
14490.0000	165.792	182.851	17.059
14500.0000	166.950	183.009	16.059
14510.0000	162.060	183.167	21.107
14520.0000	161.632	183.325	21.693
14530.0000	160.862	183.484	22.622
14540.0000	167.505	183.637	16.132
14550.0000	164.598	183.744	19.146
14560.0000	162.874	183.795	20.921
14570.0000	163.704	183.800	20.096
14580.0000	161.705	183.800	22.095
14590.0000	162.494	183.800	21.306
14600.0000	162.157	183.800	21.643
14610.0000	161.824	183.800	21.976

SPECIAL NOTES:-

1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-

3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

ELEVATION

TENDER DESIGN DRAWING

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R2	18-Jan-24	Updated As Per GC Comments
R1	08-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.18 16:21:21 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.18 16:21:44 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.18 16:22:10 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.18 16:22:31 +05'30'

DETAIL DESIGN CONSULTANT

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC	☐ NOWC	☐ RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 19.01.2024	DATE: 19.01.2024	DATE: 19.01.2024
NAME: ASO	NAME: MSJ	NAME: ATD
DESIGNATION: K3	DESIGNATION: K2	DESIGNATION: K1
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17.01.24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 20

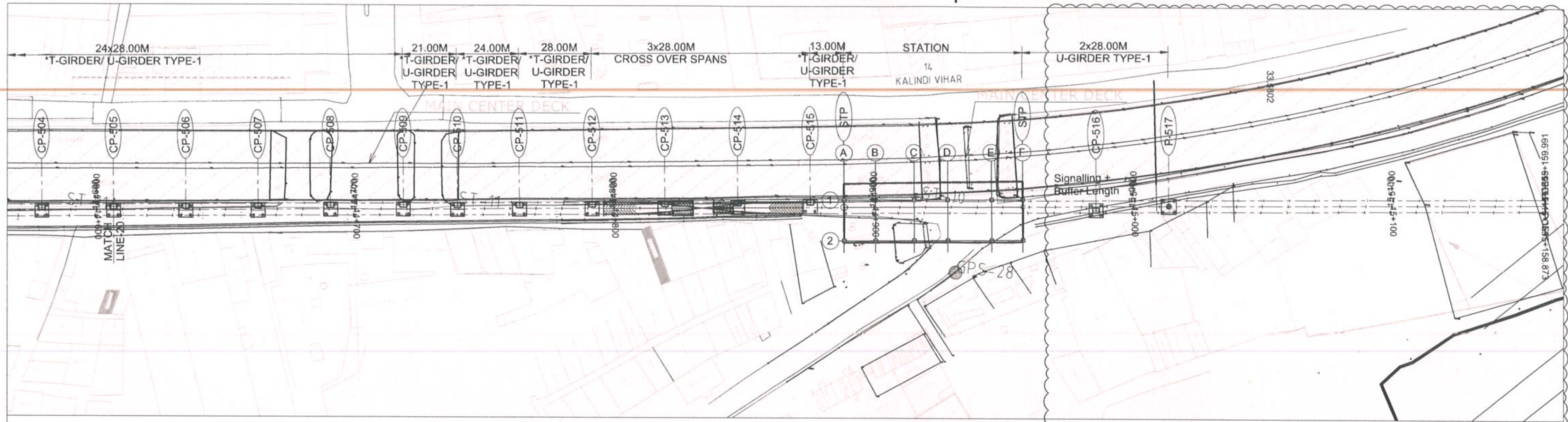
STRUCTURE

SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09040

OFFICE OF ORIGIN
SYSTRA

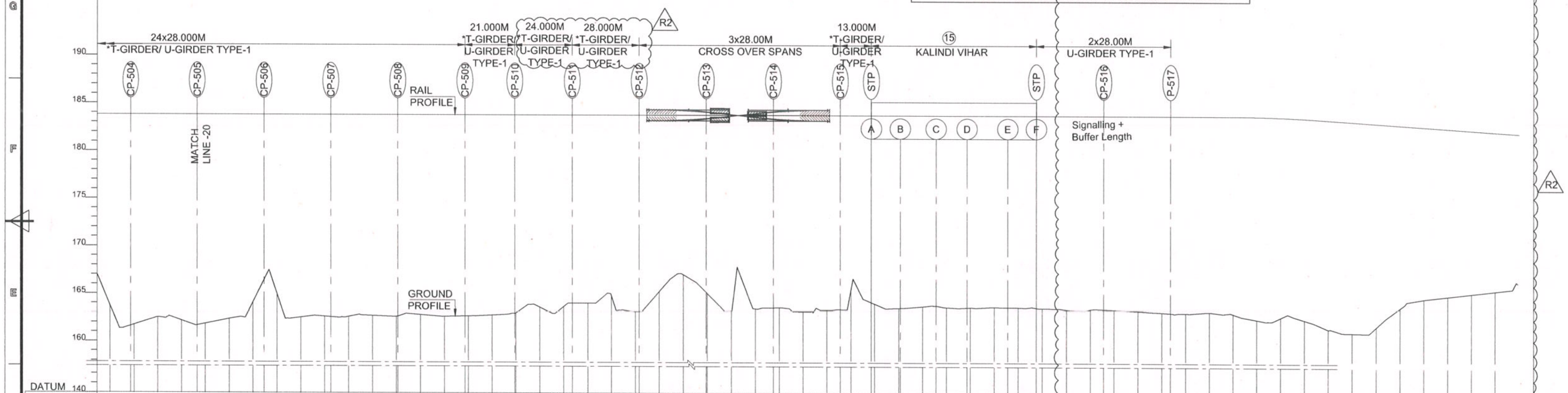
REVISION NO: R2



PLAN

SPECIAL NOTES:-

* IF U-GIRDER ERECTION IS NOT POSSIBLE DUE TO SITE CONSTRAINTS, T/ ANY OTHER SUPERSTRUCTURE MAY BE ADOPTED AS PER APPROVAL OF ENGINEER-IN-CHARGE.



VERTICAL ALIGNMENT: L=477.2315m, G=0.0000% ; L=33.5802m, R=2000.000m ; L=376.8529m, G=-1.6790%

HORIZONTAL ALIGNMENT: SL=626.8598m

CHAINAGES (M)	GROUND LEVELS (M)	RAIL LEVELS (M)	DIFF. IN ELEVATION (M)
14570.0000	163.704	183.800	20.096
14580.0000	161.705	183.800	22.095
14590.0000	162.494	183.800	21.306
14600.0000	162.157	183.800	21.643
14610.0000	161.824	183.800	21.976
14620.0000	162.331	183.800	21.469
14630.0000	164.086	183.800	19.714
14640.0000	165.003	183.800	18.797
14650.0000	162.512	183.800	21.288
14660.0000	162.599	183.800	21.201
14670.0000	162.581	183.800	21.219
14680.0000	162.705	183.800	21.095
14690.0000	162.615	183.800	21.185
14700.0000	162.813	183.800	20.987
14710.0000	162.621	183.800	21.179
14720.0000	162.670	183.800	21.130
14730.0000	162.761	183.800	21.039
14740.0000	163.006	183.800	20.794
14750.0000	163.619	183.800	20.181
14760.0000	163.689	183.800	20.111
14770.0000	164.057	183.800	19.743
14780.0000	164.832	183.800	18.968
14790.0000	163.143	183.800	20.657
14800.0000	165.289	183.800	18.511
14810.0000	167.049	183.800	16.751
14820.0000	165.100	183.800	18.700
14830.0000	163.255	183.800	20.545
14840.0000	163.477	183.800	20.323
14850.0000	163.613	183.800	20.187
14860.0000	163.168	183.800	20.632
14870.0000	163.371	183.800	20.429
14880.0000	165.413	183.800	18.387
14890.0000	164.011	183.800	19.789
14900.0000	163.570	183.800	20.230
14910.0000	163.742	183.800	20.058
14920.0000	163.664	183.800	20.136
14930.0000	163.651	183.800	20.149
14940.0000	163.693	183.800	20.107
14950.0000	163.657	183.800	20.143
14960.0000	163.584	183.800	20.216
14970.0000	163.466	183.800	20.334
14980.0000	163.499	183.800	20.301
14990.0000	163.451	183.800	20.349
15000.0000	163.318	183.800	20.482
15010.0000	163.174	183.800	20.626
15020.0000	163.101	183.800	20.699
15030.0000	163.212	183.800	20.588
15040.0000	163.041	183.800	20.759
15050.0000	162.451	183.782	21.331
15060.0000	162.688	183.714	21.026
15070.0000	162.428	183.597	21.169
15080.0000	161.475	183.436	21.961
15090.0000	161.082	183.268	22.186
15100.0000	161.719	183.100	21.381
15110.0000	163.740	182.932	19.192
15120.0000	164.691	182.764	18.073
15130.0000	164.983	182.596	17.613
15140.0000	165.267	182.428	17.161
15150.0000	165.551	182.260	16.709
15160.0000		182.092	

SPECIAL NOTES:-

1. PIER LOCATIONS ARE FOR REFERENCE PURPOSE ONLY.
2. FOUNDATION DETAILS ARE INDICATIVE.

SPECIAL NOTES:-

3. NUMBER OF U-GIRDER SPANS MAY BE INCREASE / DECREASE AS PER TRACK AXIS.

ELEVATION

TENDER DESIGN DRAWING

GENERAL NOTES:

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

REV NO	DATE	DESCRIPTION
R2	18-Jan-24	Updated As Per GC Comments
R1	08-Jan-24	Updated As Per Latest Alignment
R0	25-Sep-23	First Issue

A1 (594x841+2mm)

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram — Digitally signed by SINGH Vikram Date: 2024.01.18 16:23:14 +05'30'	Divyanshu Tripathi — Digitally signed by Divyanshu Tripathi Date: 2024.01.18 16:23:49 +05'30'	Jitendra Rastogi — Digitally signed by Jitendra Rastogi Date: 2024.01.18 16:24:37 +05'30'	Amitava Das — Digitally signed by Amitava Das Date: 2024.01.18 16:25:00 +05'30'

DETAIL DESIGN CONSULTANT

SYSTRA

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN: [signature]	SIGN: [signature]	SIGN: [signature]
DATE: 19.01.2024	DATE: 19.01.2024	DATE: 19.01.2024
NAME: ASO	NAME: MSJ	NAME: ATD
DESIGNATION: K3	DESIGNATION: K2	DESIGNATION: K1

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		[signature]
CPM	[signature] 17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2

UPMRCL
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMTI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

OFFICE OF ORIGIN: SYSTRA

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SPAN ARRANGEMENT - AGRA CORRIDOR
SHEET 21

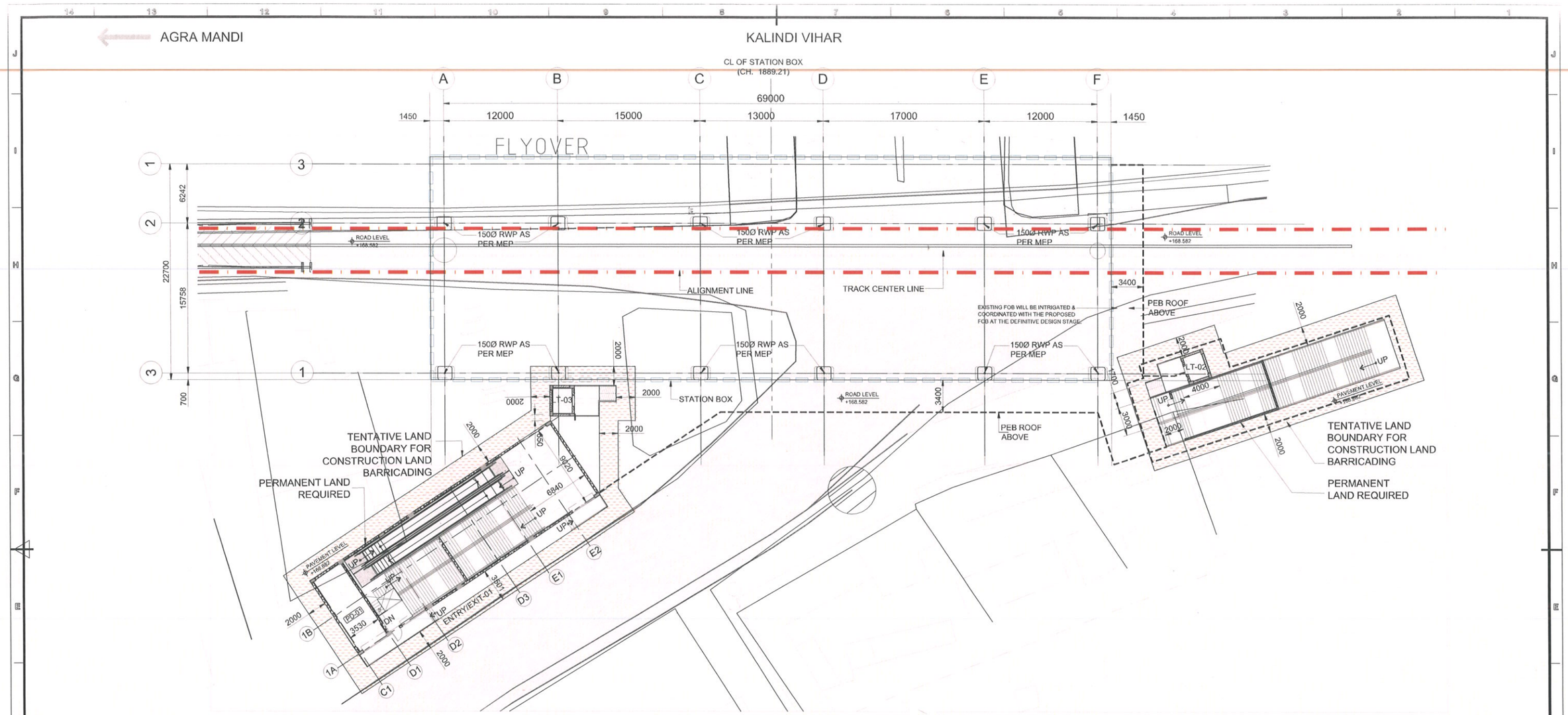
STRUCTURE

SCALE: AS SHOWN | DATE: 25-Sep-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09041

REVISION NO: R2

Annexure - 24 (11)



INSERTION PLAN

SCALE - 1:200

KEY PLAN

1. ALL DIMENSIONS ARE IN MM, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE TO BE READ AS MENTIONED ON THE DRAWINGS & NOT TO BE MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL DATED 13.04.2023
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
9. PIT DIMENSIONS ARE SUBJECT TO CHANGE AS/VENDOR REQUIREMENTS.
10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
12. PIER SIZES/CRASH BARRIER THICKNESS , DG SIZE, COLUMN PROFILE HAVE BEEN TAKEN AS PER STRUCTURE
13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF.J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

PLATFORM LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-01	LIFT	5.48
U21-A	PLATFORM-A	396.87

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC / ELEV. NAME
	DRAWING NUMBER

PLATFORM LEVEL DOOR SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT	PANEL	VISION PANEL	FIRE RATING(MIN.)		DESCRIPTION/REF LVL MEASURE FROM FFL
FD3	600	00	2105	2	SINGLE	NO	90	FLUSH DOOR	ELECTRICAL SHAFT

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

SPECIAL NOTE -
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TENDER DRAWING

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO	DATE	DESCRIPTION
R1	19-JAN-2024	Tender Addendum
R0	04-OCT-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod Kumar Digitally signed by Pramod Kumar Date: 2024.01.19 18:24:31 +05'30'	Snekha Natrajan Digitally signed by Snekha Natrajan Date: 2024.01.19 18:24:51 +05'30'	Bhawana Bajpai Digitally signed by Bhawana Bajpai Date: 2024.01.19 18:25:03 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.19 18:25:16 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20th JANUARY 2024	DATE: 20th JANUARY 2024	DATE: 20th JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/01/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KALINDI VIHAR STATION
INSERTION PLAN

ARCHITECTURE

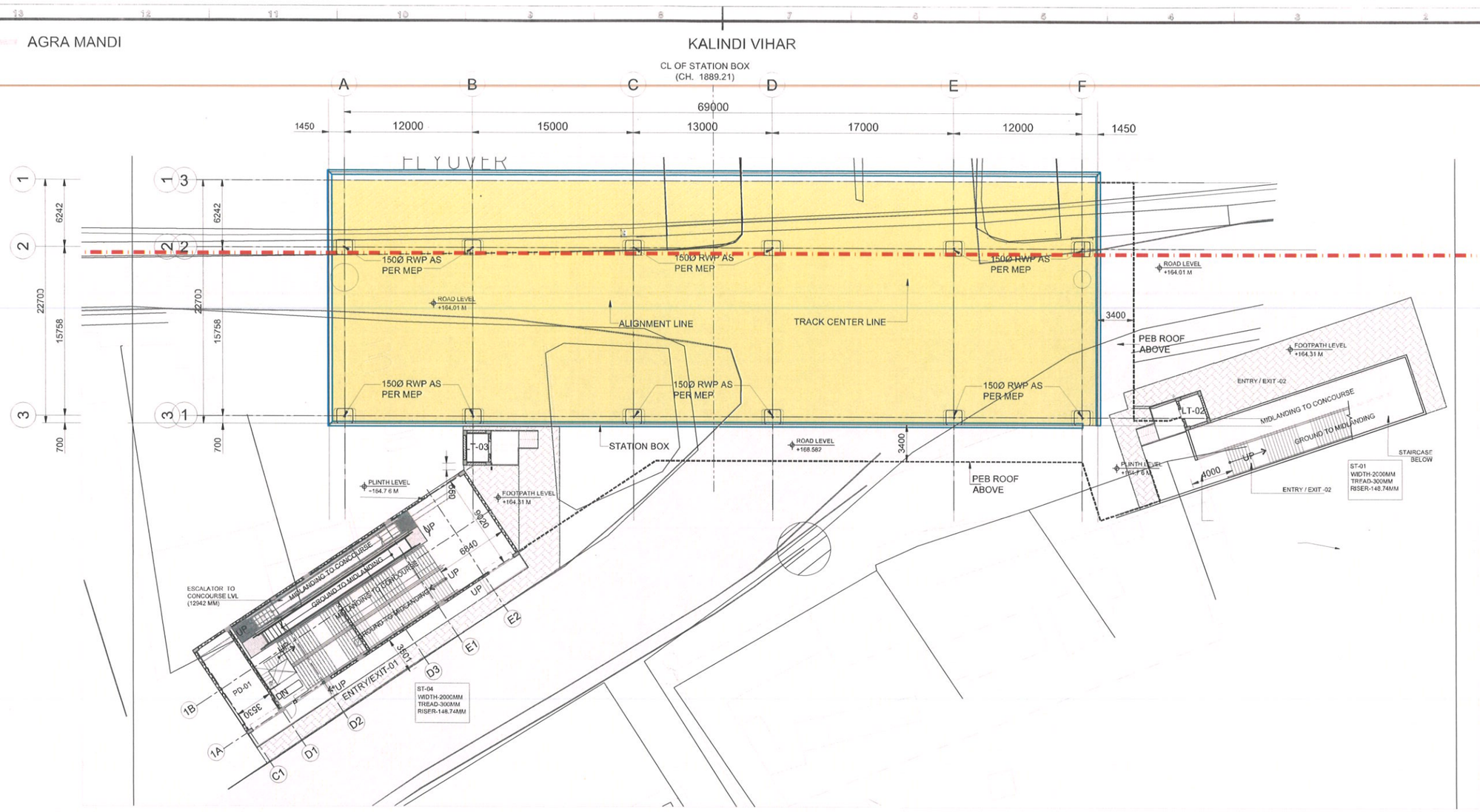
SCALE: AS SHOWN | DATE: 04-OCT-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-KLV-ARC-PLN-61051

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1

A1 (594x841mm)



GROUND LEVEL PLAN

SCALE - 1:200

1. ALL DIMENSIONS ARE IN MM, UNLESS NOTED OTHERWISE.
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4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL DATED 13.04.2023
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
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10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
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16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

PLATFORM LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-01	LIFT	5.48
U21-A	PLATFORM-A	396.87

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC./ ELEV. NAME
	DRAWING NUMBER

PLATFORM LEVEL DOOR SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT	PANEL	VISION PANEL	FIRE RATING(MIN.)		DESCRIPTION(REF LVL MEASURE FROM FFL
FD3	600	00	2105	2	SINGLE	NO	90	FLUSH DOOR	ELECTRICAL SHAFT

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

KEY PLAN

TENDER DRAWING

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO	DATE	DESCRIPTION
R1	19-JAN-2024	Tender Addendum
R0	04-OCT-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod Kumar (Digitally signed by Pramod Kumar, Date: 2024.01.19 18:30:34 +05'30')	Snekha Natrajan (Digitally signed by Snekha Natrajan, Date: 2024.01.19 18:30:45 +05'30')	Bhawana Bajpai (Digitally signed by Bhawana Bajpai, Date: 2024.01.19 18:30:57 +05'30')	Amitava Das (Digitally signed by Amitava Das, Date: 2024.01.19 18:31:08 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/01/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KALINDI VIHAR STATION
GROUND PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 04-OCT-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-KLV-ARC-PLN-61052

OFFICE OF ORIGIN
SYSTRA

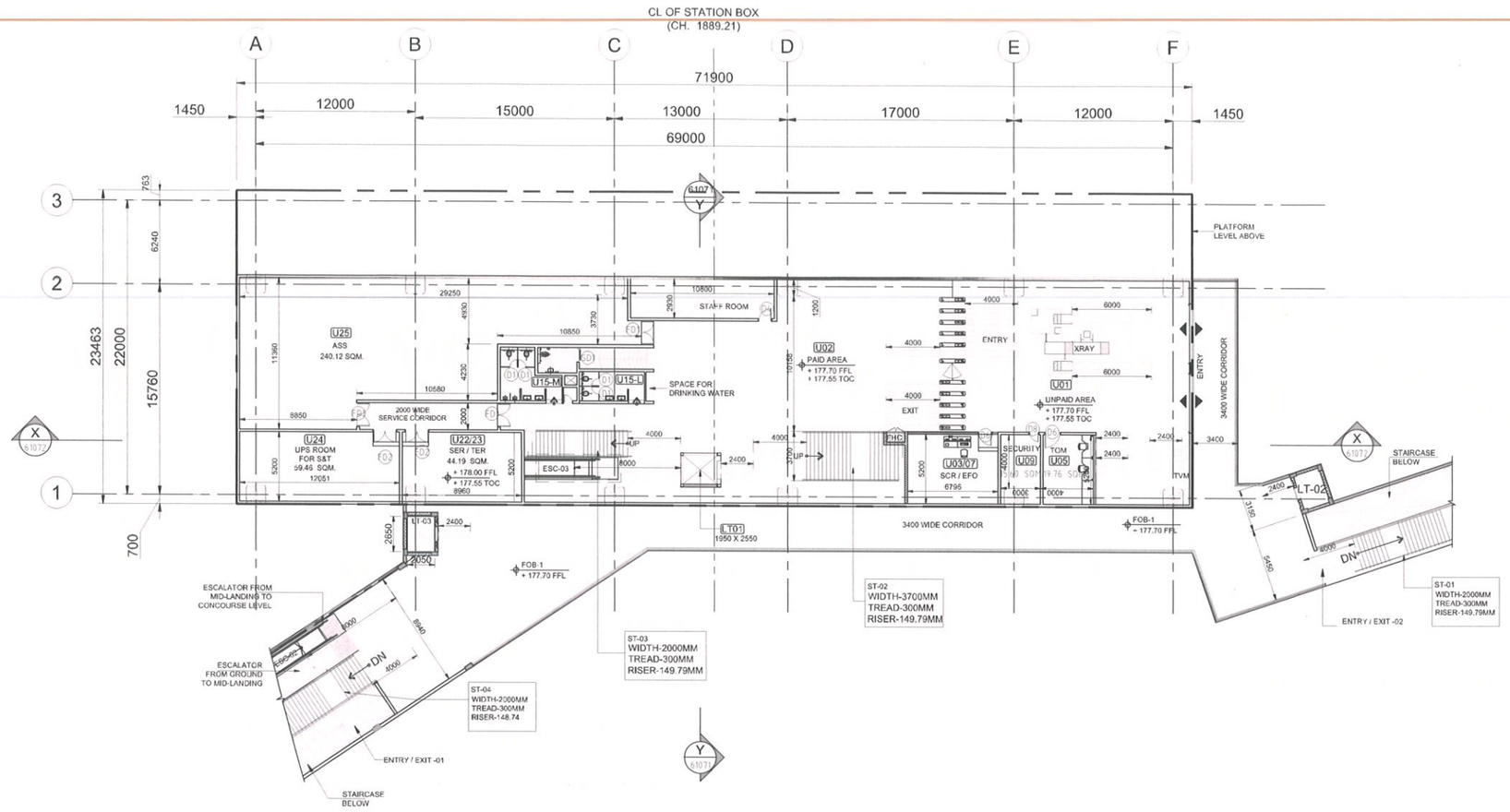
REVISION NO: R1

A1 (594x841mm)

(3|c)

AGRA MANDI

KALINDI VIHAR



CONCOURSE LEVEL PLAN

SCALE - 1:200

CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U01	UNPAID AREA	389.40
U02	PAID AREA	456.71
U03/07	SCR/EFO- STATION CONTROL ROOM/EXCESS FARE OFFICE	30.36
U05	TOM - TICKET OFFICE MACHINE	8.28
U09	SECURITY ROOM	11.40
U15-L	TOILET - LADIES	11.49
U15-M	TOILET - GENTS	14.35
U22/U23	SER/TER	65.00
U24	UPS ROOM FOR S&T	74.87
U25	ASS/TSS	389.00
U46	TOILET - DIFFERENTLY ABLED	5.60
PD-03	PROPERTY DEVELOPMENT	41.19
PD-04	PROPERTY DEVELOPMENT	9.27
LT-01	LIFT	5.48
LT-02	LIFT	5.48
LT-03	LIFT	4.97
LT-04	LIFT	4.97
	JANITOR'S ROOM	0.9
	STAFF ROOM	25.19
	UTILITY ROOM	3.255

LEGEND

- 230 MM BLOCK WALL
- GLASS
- RCC WALL
- FOOTPATH
- GREEN
- RAILWAY BOUNDARY
- STATION BOX
- FUTURE PLATFORM
- TRACK CENTER
- ALIGNMENT
- ROAD
- EXISTING DRAIN
- SEC. / ELEV. NAME
- DRAWING NUMBER

CONCOURSE LEVEL DOOR SCHEDULE

TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT	PANEL	VISION PANEL	FIRE RATING(MIN.)		DESCRIPTION(REF LVL MEASURE FROM FFL
D1	800	100	2105	4	SINGLE	NO	30	FLUSH DOOR	TOILET CUBICALS
D2	800	00	2105	1	SINGLE	NO	30	METAL DOOR	JANITOR CLOSET
D4	1000	00	2105	2	SINGLE	NO	30	METAL DOOR	STORE, SECURITY
D5	1000	00	2105	5	SINGLE	NO	90	GLASS DOOR	FIRE RATED DOOR IN PD
D6	1200	00	2105	2	SINGLE	NO	30	GLASS DOOR	SCR,TOM
D7	800	00	2105	2	SINGLE	NO	30	METAL DOOR	SCR
D8	750	00	2105	1	SINGLE	NO	30	METAL DOOR	CLEANER'S REST ROOM
FD1	1800	00	2405	2	DOUBLE	YES	90	METAL DOOR	ASS
FD2	1800	150	2555	2	DOUBLE	YES	90	METAL DOOR	UPS
FD3	800	00	2105	2	SINGLE	NO	90	FLUSH DOOR	ELECTRICAL SHAFT
FD4	2400	150	2555	1	SINGLE	YES	90	FLUSH DOOR	SER & TER
SD1	1000	00	2105	1	SINGLE	NO	30	METAL DOOR	DA TOILET

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE TO BE READ AS MENTIONED ON THE DRAWINGS & NOT TO BE MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
9. PIT DIMENSIONS ARE SUBJECT TO CHANGE AS/VENDOR REQUIREMENTS.
10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
12. PIER SIZES/CRASH BARRIER THICKNESS , DG SIZE. COLUMN PROFILE HAVE BEEN TAKEN AS PER STRUCTURE
13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

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REV NO	DATE	DESCRIPTION
R1	19-JAN-2024	Tender Addendum
R0	04-OCT-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod kumar — Digitally signed by Pramod kumar Date: 2024.01.19 18:46:52 +05'30'	Snekha Natarajan — Digitally signed by Snekha Natarajan Date: 2024.01.19 18:47:11 +05'30'	Bhawana Bajpai — Digitally signed by Bhawana Bajpai Date: 2024.01.19 18:47:28 +05'30'	Amitava Das — Digitally signed by Amitava Das Date: 2024.01.19 18:47:46 +05'30'

DETAIL DESIGN CONSULTANT

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

TENDER DRAWING

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KALINDI VIHAR STATION
CONCOURSE LEVEL PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 04-OCT-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-KLV-ARC-PLN-61053

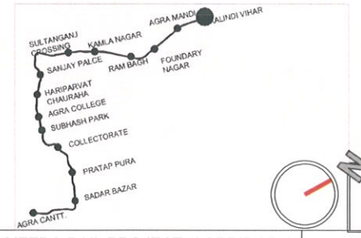
OFFICE OF ORIGIN

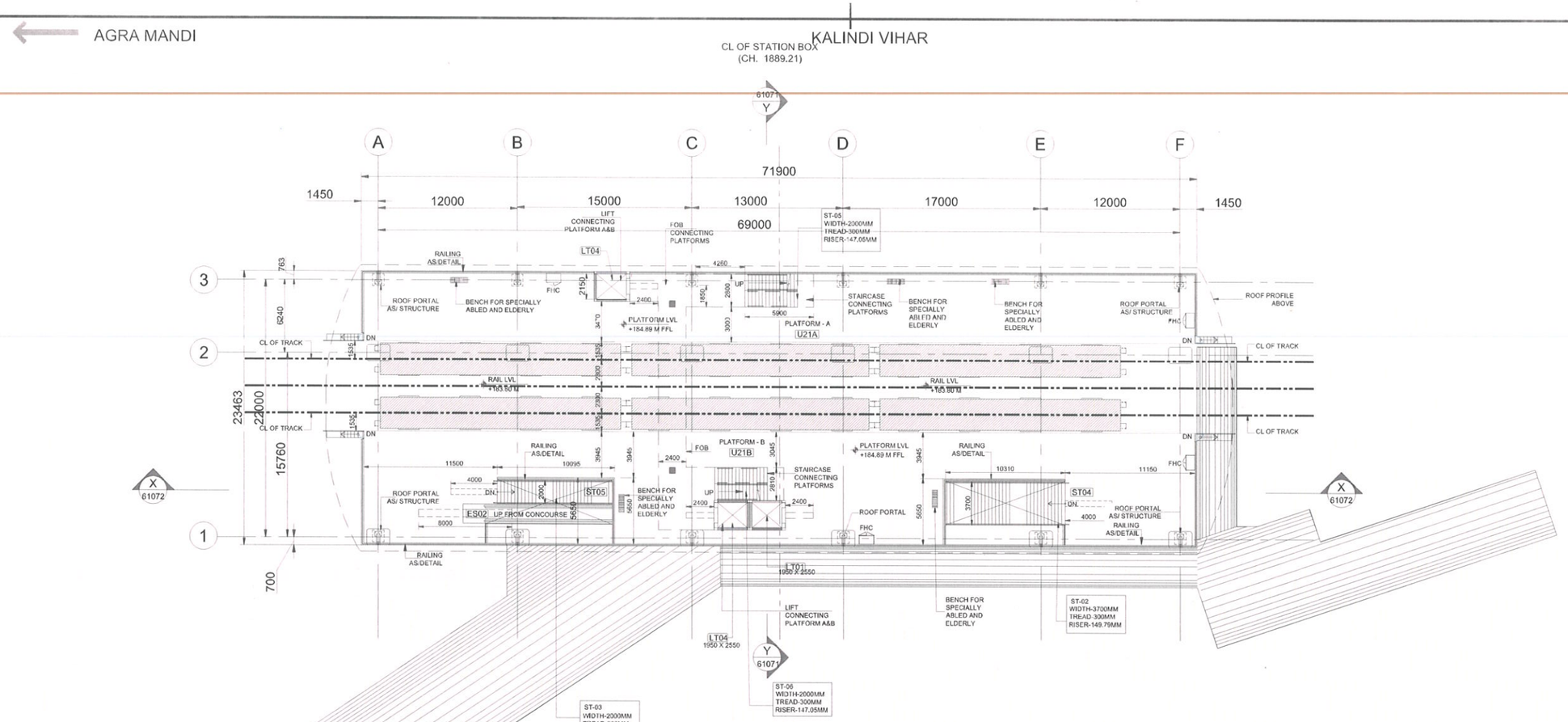
SYSTRA

REVISION NO: R1

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

KEY PLAN





PLATFORM LEVEL PLAN

SCALE - 1:200

CONCOURSE LEVEL ROOM SCHEDULE (SQ. MT.)		
ROOM NO.	ROOM NAME	AREA
U01	UNPAID AREA	389.40
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U03/07	SCR/EFC- STATION CONTROL ROOM/EXCESS FARE OFFICE	30.36
U05	TOM - TICKET OFFICE MACHINE	8.28
U09	SECURITY ROOM	11.40
U15-L	TOILET - LADIES	11.49
U15-M	TOILET - GENTS	11.35
U22/U23	SER/TER	65.00
U24	UPS ROOM FOR S&T	74.67
U25	ASS/ISS	389.00
U46	TOILET - DIFFERENTLY ABLED	5.60
PD-03	PROPERTY DEVELOPMENT	41.19
PD-04	PROPERTY DEVELOPMENT	9.27
LT-01	LIFT	5.48
LT-02	LIFT	5.48
LT-03	LIFT	4.97
LT-04	LIFT	4.97
	JANITOR'S ROOM	0.9
	STAFF ROOM	25.19
	UTILITY ROOM	3.255

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC / ELEV. NAME
	DRAWING NUMBER

CONCOURSE LEVEL DOOR SCHEDULE									
TYPE	WIDTH	SILL LVL	LINTEL LVL	COUNT	PANEL	VISION PANEL	FIRE RATING(MIN.)		DESCRIPTION(REF LVL MEASURE FROM FFL
D1	600	100	2105	4	SINGLE	NO	30	FLUSH DOOR	TOILET CUBICALS
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D4	1000	00	2105	2	SINGLE	NO	30	METAL DOOR	STORE, SECURITY
D5	1000	00	2105	5	SINGLE	NO	90	GLASS DOOR	FIRE RATED DOOR IN PD
D6	1200	00	2105	2	SINGLE	NO	30	GLASS DOOR	SCR,TOM
D7	600	00	2105	2	SINGLE	NO	30	METAL DOOR	SCR
D8	750	00	2105	1	SINGLE	NO	30	METAL DOOR	CLEANER'S REST ROOM
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ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
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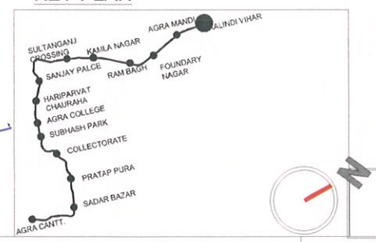
UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

KEY PLAN



TENDER DRAWING

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REV NO	DATE	DESCRIPTION
R1	19-JAN-2024	Tender Addendum
R0	04-OCT-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod kumar (Digitally signed by Pramod Kumar Date: 2024.01.19 18:38:37 +05'30')	Snekha Natarajan (Digitally signed by Snekha Natarajan Date: 2024.01.19 18:39:00 +05'30')	Bhawana Bajpai (Digitally signed by Bhawana Bajpai Date: 2024.01.19 18:39:21 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.19 18:39:38 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/01/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KALINDI VIHAR STATION
PLATFORM LEVEL PLAN

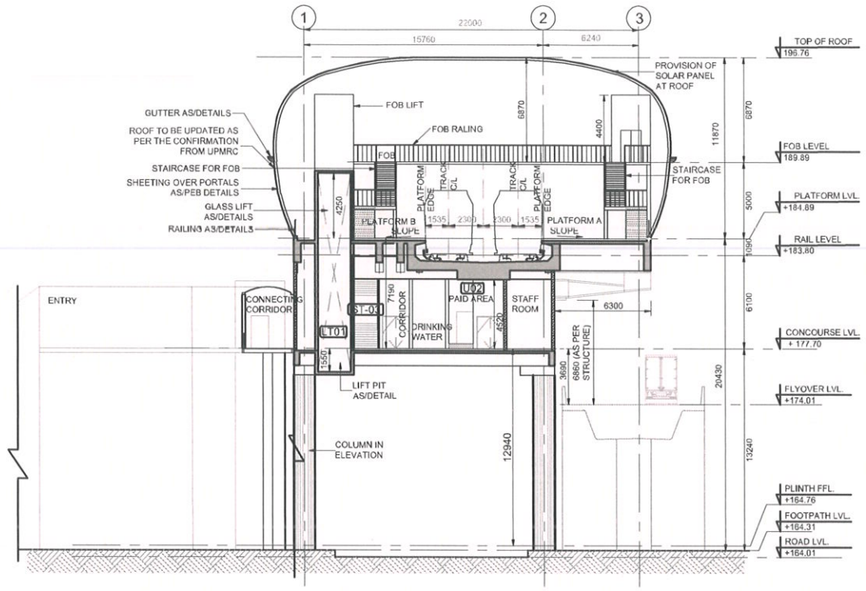
SCALE: AS SHOWN | DATE: 04-OCT-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-KLV-ARC-PLN-61054

ARCHITECTURE

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1



CROSS SECTION - YY

SCALE - 1:200

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6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL DATED 13.04.2023
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
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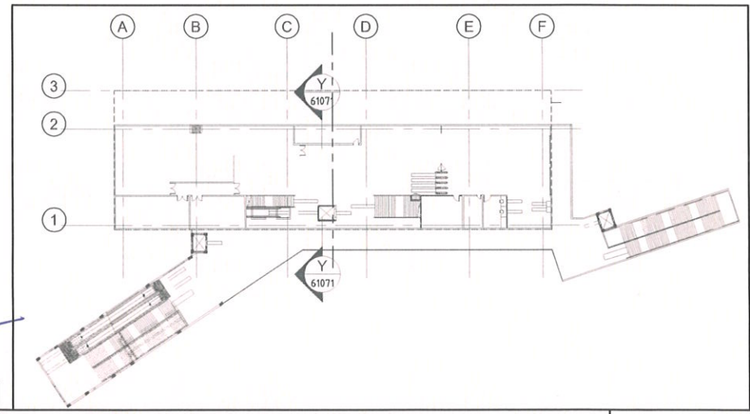
KEY PLAN



UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

TENDER DRAWING

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REV NO	DATE	DESCRIPTION
R1	19-JAN-2024	Tender Addendum
R0	04-OCT-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Pramod Kumar (Digitally signed by Pramod Kumar Date: 2024.01.19 18:11:28 +05'30')	Snekha Natarajan (Digitally signed by Snekha Natarajan Date: 2024.01.19 18:12:37 +05'30')	Bhawana Bajpai (Digitally signed by Bhawana Bajpai Date: 2024.01.19 18:12:59 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.19 18:13:15 +05'30')

DETAIL DESIGN CONSULTANT

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KALINDI VIHAR STATION
CROSS SECTION Y-Y

ARCHITECTURE

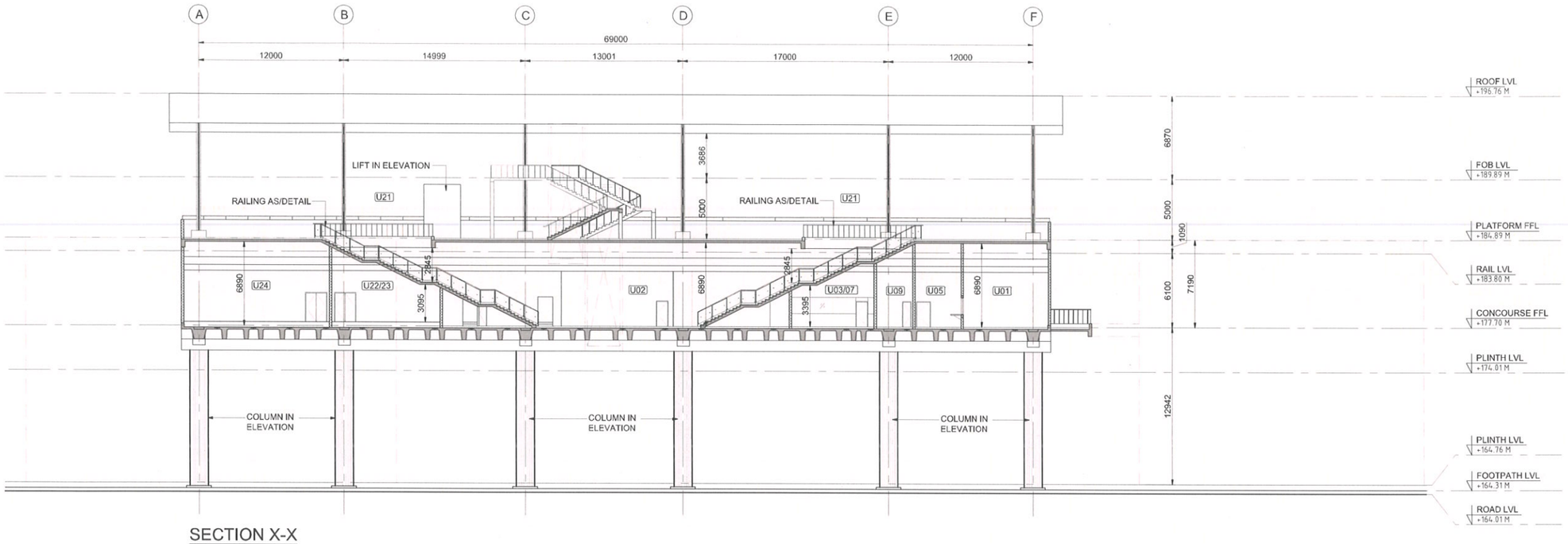
SCALE: AS SHOWN | DATE: 04-OCT-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-KLV-ARC-CRS-61071

OFFICE OF ORIGIN

SYSTRA

REVISION NO: R1



SECTION X-X

SCALE-1:200

1. ALL DIMENSIONS ARE IN MM, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE TO BE READ AS MENTIONED ON THE DRAWINGS & NOT TO BE MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL DATED 13.04.2023
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
9. PIT DIMENSIONS ARE SUBJECT TO CHANGE AS/VENDOR REQUIREMENTS.
10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
12. PIER SIZES/CRASH BARRIER THICKNESS , DG SIZE, COLUMN PROFILE HAVE BEEN TAKEN AS PER STRUCTURE
13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO	DATE	DESCRIPTION
R0	19-JAN-2024	FIRST ISSUE

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Arjun Prasad (Digitally signed by Arjun Prasad, Date: 2024.01.19 18:11:28 +05'30')	Snekha Natrajan (Digitally signed by Snekha Natrajan, Date: 2024.01.19 18:11:40 +05'30')	Bhawana Bajpai (Digitally signed by Bhawana Bajpai, Date: 2024.01.19 18:11:55 +05'30')	Amitava Das (Digitally signed by Amitava Das, Date: 2024.01.19 18:12:15 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024	DATE: 20TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts Vibhuti Khand, Gomti Nagar, Lucknow-226010

UTTAR PRADESH-INDIA GCS General Consultant Services TYPSA-ITALFERR JV KANPUR & AGRA METRO PROJECTS

TENDER DRAWING

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KALINDI VIHAR STATION
LONGITUDINAL SECTION

ARCHITECTURE

SCALE: AS SHOWN | DATE: 19-JAN-2024 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-KLV-ARC-LGS-61072

OFFICE OF ORIGIN
SYSTRA

REVISION NO:
R0

A1 (594x841 mm)

PIER COORDINATES OF AGRA ELEVATED CORRIDOR-2 (AGCC07)

P-98	21	U-Girder Type-1	21	U-Girder Type-1	203586.764	3008364.263
CP-99	21	U-Girder Type-1	21	U-Girder Type-1	203585.464	3008385.202
CP-100	21	U-Girder Type-1	28	U-Girder Type-1	203586.124	3008406.159
P-101	28	U-Girder Type-1	28	U-Girder Type-1	203587.875	3008434.099
P-102	28	U-Girder Type-1	28	U-Girder Type-1	203590.149	3008462.007
P-103	28	U-Girder Type-1	28	U-Girder Type-1	203592.425	3008489.914
P-104	28	U-Girder Type-1	28	U-Girder Type-1	203595.055	3008517.789
P-105	28	U-Girder Type-1	28	U-Girder Type-1	203599.037	3008545.500
P-106	28	U-Girder Type-1	28	U-Girder Type-1	203604.616	3008572.936
P-107	28	U-Girder Type-1	28	U-Girder Type-1	203610.917	3008600.217
P-108	28	U-Girder Type-1	28	U-Girder Type-1	203617.262	3008627.489
P-109	28	U-Girder Type-1	28	U-Girder Type-1	203623.607	3008654.761
P-110	28	U-Girder Type-1	28	U-Girder Type-1	203629.952	3008682.032
P-111	28	U-Girder Type-1	28	U-Girder Type-1	203636.297	3008709.304
PARTAPURA STATION			STP	GRID A	203642.642	3008736.576
			STP	GRID F	203658.216	3008803.795
P-112	27	U-Girder Type-2	27.192	Non U-Girder Span	203662.913	3008830.372
P-113	27.192	Non U-Girder Span	18	U-Girder Type-2	203664.227	3008857.510
P-114	18	U-Girder Type-2	28	Non U-Girder Span	203662.994	3008875.461
P-115	28	Non U-Girder Span	28	Non U-Girder Span	203657.779	3008902.946
P-116	28	Non U-Girder Span	28	U-Girder Type-1	203648.819	3008929.456
P-117	28	U-Girder Type-1	28	U-Girder Type-1	203637.988	3008955.275
P-118	28	U-Girder Type-1	20	U-Girder Type-1	203627.004	3008981.031
P-119	20	U-Girder Type-1	28	U-Girder Type-1	203619.158	3008999.428
P-120	28	U-Girder Type-1	28	U-Girder Type-2	203608.174	3009025.183
P-121	28	U-Girder Type-2	28	Non U-Girder Span	203597.650	3009051.127
CP-122	28	Non U-Girder Span	28	Non U-Girder Span	203592.056	3009078.469
CP-123	28	Non U-Girder Span	28	U-Girder Type-1	203586.811	3009105.756
P-124	28	U-Girder Type-1	28	U-Girder Type-1	203583.914	3009133.594
P-125	28	U-Girder Type-1	28	U-Girder Type-1	203582.393	3009161.553
P-126	28	U-Girder Type-1	23	U-Girder Type-2	203580.965	3009189.516
P-127	23	U-Girder Type-2	23	U-Girder Type-2	203580.677	3009212.511
P-128	23	U-Girder Type-2	23	U-Girder Type-2	203582.152	3009235.457
P-129	23	U-Girder Type-2	28	U-Girder Type-2	203585.517	3009258.203
P-130	28	U-Girder Type-2	28	U-Girder Type-2	203591.280	3009285.602
P-131	28	U-Girder Type-2	28	U-Girder Type-2	203597.383	3009312.929
P-132	28	U-Girder Type-2	17	U-Girder Type-2	203602.823	3009340.389
CP-133	17	U-Girder Type-2	17	U-Girder Type-2	203602.062	3009357.414
P-134	17	U-Girder Type-2	17	U-Girder Type-2	203604.434	3009374.283
P-135	17	U-Girder Type-2	17	U-Girder Type-2	203602.417	3009391.154
P-136	17	U-Girder Type-2	17	U-Girder Type-2	203598.533	3009407.696
P-137	17	U-Girder Type-2	17	U-Girder Type-2	203592.831	3009423.701
CP-138	17	U-Girder Type-2	17	U-Girder Type-2	203587.040	3009439.899
P-139	17	U-Girder Type-2	17	U-Girder Type-2	203576.277	3009453.319
PP-140	17	U-Girder Type-2	28	U-Girder Type-1	203558.372	3009460.186
PP-140	28	U-Girder Type-1	28	U-Girder Type-1	203569.643	3009470.084
P-141	28	U-Girder Type-1	45	Obligatory Span	203546.255	3009486.764
P-142	45	Obligatory Span	21	U-Girder Type-1	203514.334	3009518.482
P-143	21	U-Girder Type-1	28	U-Girder Type-1	203499.437	3009533.283
P-144	28	U-Girder Type-1	28	U-Girder Type-1	203479.575	3009553.019
P-145	28	U-Girder Type-1	28	U-Girder Type-1	203459.712	3009572.754
P-146	28	U-Girder Type-1	28	U-Girder Type-2	203439.850	3009592.490
P-147	28	U-Girder Type-2	28	Non U-Girder Span	203420.284	3009612.515
CP-148	28	Non U-Girder Span	28	Non U-Girder Span	203401.927	3009633.737
P-149	28	Non U-Girder Span	28	Non U-Girder Span	203388.397	3009658.319

P-150	28	Non U-Girder Span	25	U-Girder Type-2	203377.428	3009684.066
P-151	25	U-Girder Type-2	18	U-Girder Type-1	203368.970	3009707.592
P-152	18	U-Girder Type-1	28	U-Girder Type-1	203362.937	3009724.551
COLLECTRATE STATION			STP	GRID A	203353.553	3009750.932
			STP	GRID F	203330.429	3009815.941
P-153	26.465	U-Girder Type-1	23	Non U-Girder Span	203321.112	3009840.708
P-154	23	Non U-Girder Span	23	Non U-Girder Span	203310.633	3009861.153
PP-155 UP LINE	23	Non U-Girder Span	23	Non U-Girder Span	203292.701	3009875.723
PP-155 DOWN LINE	23	Non U-Girder Span	23	Non U-Girder Span	203301.591	3009883.931
PP-156 UP LINE	23	Non U-Girder Span	23	Non U-Girder Span	203276.540	3009890.643
PP-156 DOWN LINE	23	Non U-Girder Span	23	Non U-Girder Span	203283.111	3009899.464
PP-157 UP LINE	23	Non U-Girder Span	23	Non U-Girder Span	203257.779	3009902.183
PP-157 DOWN LINE	23	Non U-Girder Span	23	Non U-Girder Span	203262.241	3009911.300
PP-158 UP LINE	23	Non U-Girder Span	23	Non U Girder Span	203236.804	3009908.653
PP-158 DOWN LINE	23	Non U-Girder Span	23	Non U-Girder Span	203239.606	3009918.772
CP-159	23	Non U-Girder Span	23	Non U-Girder Span	203216.026	3009920.123
P-160	23	Non U-Girder Span	23	U-Girder Type-1	203192.936	3009919.251
P-161	23	U-Girder Type-1	28	U-Girder Type-1	203169.974	3009917.936
P-162	28	U-Girder Type-1	28	U-Girder Type-2	203142.029	3009916.186
P-163	28	U-Girder Type-2	28	U-Girder Type-2	203114.077	3009914.552
P-164	28	U-Girder Type-2	23	U-Girder Type-2	203086.089	3009914.584
P-165	23	U-Girder Type-2	23	U-Girder Type-2	203063.246	3009917.164
CP-166	23	U-Girder Type-2	23	U-Girder Type-2	203040.026	3009919.371
P-167	23	U-Girder Type-2	23	U-Girder Type-2	203019.030	3009929.530
P-168	23	U-Girder Type-2	23	U-Girder Type-2	202998.162	3009939.175
P-169	23	U-Girder Type-2	23	U-Girder Type-2	202978.441	3009950.990
P-170	23	U-Girder Type-2	23	U-Girder Type-2	202960.095	3009964.843
P-171	23	U-Girder Type-2	23	U-Girder Type-2	202943.281	3009980.522
P-172	23	U-Girder Type-2	28	U-Girder Type-2	202928.019	3009997.719
CP-173	28	U-Girder Type-2	28	U-Girder Type-2	202912.664	3010021.073
CP-174	28	U-Girder Type-2	28	U-Girder Type-2	202899.699	3010045.678
CP-175	28	U-Girder Type-2	28	U-Girder Type-2	202888.598	3010071.073
P-176	28	U-Girder Type-2	28	U-Girder Type-2	202877.215	3010096.635
P-177	28	U-Girder Type-2	20	U-Girder Type-1	202871.230	3010123.975
P-178	20	U-Girder Type-1	20	U-Girder Type-1	202868.700	3010143.810
P-179	20	U-Girder Type-1	28	U-Girder Type-1	202867.331	3010163.762
P-180	28	U-Girder Type-1	28	U-Girder Type-1	202866.083	3010191.734
P-181	28	U-Girder Type-1	28	Non U-Girder Span	202864.930	3010219.710
P-182	28	Non U-Girder Span	22	Non U-Girder Span	202865.780	3010247.674
P-183	22	Non U-Girder Span	22	Non U-Girder Span	202869.554	3010269.332
P-184	22	Non U-Girder Span	28	U-Girder Type-2	202876.023	3010290.347
P-185	28	U-Girder Type-2	20	U-Girder Type-1	202886.051	3010316.489
P-186	20	U-Girder Type-1	20	U-Girder Type-1	202893.291	3010335.133
P-187	20	U-Girder Type-1	28	U-Girder Type-2	202900.255	3010353.880
P-188	28	U-Girder Type-2	28	Non U-Girder Span	202908.167	3010380.724
P-189	28	Non U-Girder Span	28	Non U-Girder Span	202912.511	3010408.362
P-190	28	Non U-Girder Span	28	U-Girder Type-2	202912.996	3010436.335
P-191	28	U-Girder Type-2	28	U-Girder Type-1	202910.025	3010464.166
SUBHASH PARK STATION (FUTURE)			STP	U-Girder Type-1	202905.434	3010491.786 R1
			STP	U-Girder Type-1	202893.749	3010559.790
P-192	28	U-Girder Type-1	28	U-Girder Type-2	202889.134	3010587.407
P-193	28	U-Girder Type-2	28	U-Girder Type-2	202885.425	3010615.157
P-194	28	U-Girder Type-2	28	U-Girder Type-2	202883.459	3010643.082

NOTE:- COORDINATES OF OBLIGATORY SPANS PIERS, CANTILEVER PIERS, AND PORTAL PIERS SHALL NOT BE MODIFIED BY CONTRACTOR WITHOUT APPROVAL OF ENGINEER.

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

REV NO	DATE	DESCRIPTION
R1	06-Jan-24	Updated As Per Latest Alignment
R0	25-Oct-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC ☐ NOWC ☐ RESUBMIT

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	REVIEWED BY	APPROVED BY	VETTED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.08 19:39:10 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.08 19:39:47 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.08 19:40:26 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.08 19:41:03 +05'30'	SIGN: DATE: 10-01-24 NAME: AR DESIGNATION: SE	SIGN: DATE: 10-01-2024 NAME: M.S.J. DESIGNATION: S.S.E.	SIGN: DATE: 11/01/24 NAME: BKJ DESIGNATION: CSE

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UPMRCL
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: PIER CENTER COORDINATES - AGRA METRO CORRIDOR-2
SHEET 2 OF 6

STRUCTURE

SCALE: AS SHOWN | DATE: 25-Oct-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09052

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R1

PIER COORDINATES OF AGRA ELEVATED CORRIDOR-2 (AGCC07)

P-195	28	U-Girder Type-2	28	U-Girder Type-2	202883.427	3010671.077
P-196	28	U-Girder Type-2	28	U-Girder Type-1	202884.837	3010699.040
P-197	28	U-Girder Type-1	28	U-Girder Type-1	202886.747	3010726.974
P-198	28	U-Girder Type-1	28	Cross Over Span	202888.676	3010754.908
P-199	28	Cross Over Span	28	Cross Over Span	202890.606	3010782.841
P-200	28	Cross Over Span	28	Cross Over Span	202892.535	3010810.775
P-201	28	Cross Over Span	28	U-Girder Type-1	202894.464	3010838.708
P-202	28	U-Girder Type-1	28	U-Girder Type-1	202896.379	3010866.643
P-203	28	U-Girder Type-1	28	U-Girder Type-1	202897.875	3010894.602
P-204	28	U-Girder Type-1	28	U-Girder Type-1	202898.144	3010922.597
P-205	28	U-Girder Type-1	23	U-Girder Type-1	202896.869	3010950.564
P-206	23	U-Girder Type-1	21.348	U-Girder Type-1	202894.934	3010973.482
AGRA COLLEGE STATION			STP	GRID A	202892.855	3010994.729
			STP	GRID F	202886.067	3011063.394
P-207	23	U-Girder Type-1	39	Obligatory Span	202883.807	3011086.283
P-208	39	Obligatory Span	23	U-Girder Type-1	202879.970	3011125.094
P-209	23	U-Girder Type-1	23	Cross Over Span	202877.704	3011147.982
P-210	23	Cross Over Span	23	Cross Over Span	202874.950	3011175.846
P-211	23	Cross Over Span	23	Cross Over Span	202872.195	3011203.710
P-212	23	Cross Over Span	28	U-Girder Type-1	202869.441	3011231.575
P-213	28	U-Girder Type-1	18.852	U-Girder Type-1	202866.716	3011259.442
P-214	18.852	U-Girder Type-1	28	U-Girder Type-2	202865.265	3011278.237
P-215	28	U-Girder Type-2	28	U-Girder Type-2	202864.909	3011306.223
P-216	28	U-Girder Type-2	28	U-Girder Type-2	202867.581	3011334.081
P-217	28	U-Girder Type-2	28	U-Girder Type-1	202873.196	3011361.502
P-218	28	U-Girder Type-1	28	U-Girder Type-1	202880.525	3011388.524
P-219	28	U-Girder Type-1	28	U-Girder Type-1	202888.151	3011415.465
P-220	28	U-Girder Type-1	28	U-Girder Type-1	202895.761	3011442.412
P-221	28	U-Girder Type-1	28	U-Girder Type-1	202903.088	3011469.436
P-222	28	U-Girder Type-1	28	U-Girder Type-1	202909.982	3011496.573
P-223	28	U-Girder Type-1	28	U-Girder Type-1	202916.441	3011523.818
P-224	28	U-Girder Type-1	60	Obligatory Span	202922.572	3011551.138
P-225	60	Obligatory Span	28	U-Girder Type-1	202935.640	3011609.698
P-226	28	U-Girder Type-1	28	U-Girder Type-1	202941.740	3011637.025
P-227	28	U-Girder Type-1	28	U-Girder Type-1	202948.028	3011664.310
P-228	28	U-Girder Type-1	28	U-Girder Type-1	202955.093	3011691.402
P-229	28	U-Girder Type-1	28	U-Girder Type-1	202963.226	3011718.193
P-230	28	U-Girder Type-1	28	U-Girder Type-1	202972.420	3011744.638
P-231	28	U-Girder Type-1	28	U-Girder Type-1	202982.645	3011770.703
HARIPARVAT CHAURAHA STATION			STP	GRID A	202993.534	3011796.499
			STP	GRID F	203020.679	3011859.935
P-232	15.423	U-Girder Type-1	28	U-Girder Type-1	203026.789	3011874.096
P-233	28	U-Girder Type-1	28	U-Girder Type-1	203038.151	3011899.687
P-234	28	U-Girder Type-1	28	U-Girder Type-1	203049.870	3011925.116
P-235	28	U-Girder Type-1	28	U-Girder Type-1	203061.943	3011950.379
P-236	28	U-Girder Type-1	28	U-Girder Type-1	203074.247	3011975.531
P-237	28	U-Girder Type-1	28	U-Girder Type-1	203086.561	3012000.678
P-238	28	U-Girder Type-1	28	U-Girder Type-1	203098.866	3012025.829
P-239	28	U-Girder Type-1	17	U-Girder Type-1	203110.911	3012051.105
P-240	17	U-Girder Type-1	28	U-Girder Type-1	203117.995	3012066.559
P-241	28	U-Girder Type-1	28	U-Girder Type-1	203129.279	3012092.184
P-242	28	U-Girder Type-1	28	U-Girder Type-1	203140.243	3012117.948
P-243	28	U-Girder Type-1	28	U-Girder Type-1	203151.187	3012143.721
P-244	28	U-Girder Type-1	28	U-Girder Type-1	203162.130	3012169.494
P-245	28	U-Girder Type-1	28	U-Girder Type-1	203173.074	3012195.267
P-246	28	U-Girder Type-1	28	U-Girder Type-1	203184.017	3012221.040
P-247	28	U-Girder Type-1	28	U-Girder Type-2	203195.138	3012246.736

CP-248	28	U-Girder Type-2	28	U-Girder Type-2	203206.361	3012272.495
PP-249 UP LINE	28	U-Girder Type-2	28	U-Girder Type-2	203219.448	3012297.510
PP-249 DOWN LINE	28	U-Girder Type-2	28	U-Girder Type-2	203230.308	3012290.364
PP-250 UP LINE	28	U-Girder Type-2	28	U-Girder Type-2	203235.669	3012320.453
PP-250 DOWN LINE	28	U-Girder Type-2	28	U-Girder Type-2	203246.316	3012312.993
PP-251 UP LINE	28	U-Girder Type-2	28	Non U-Girder Span	203252.090	3012343.125
PP-251 DOWN LINE	28	U-Girder Type-2	28	Non U-Girder Span	203263.174	3012335.419
CP-252	28	Non U-Girder Span	28	Non U-Girder Span	203268.457	3012365.681
PP-253 UP LINE	28	Non U-Girder Span	28	Non U-Girder Span	203272.270	3012393.578
PP-253 DOWN LINE	28	Non U-Girder Span	28	Non U-Girder Span	203286.016	3012388.962
P-254	28	Non U-Girder Span	28	Non U-Girder Span	203287.081	3012417.976
P-255	28	Non U-Girder Span	28	U-Girder Type-1	203288.664	3012445.903
P-256	28	U-Girder Type-1	18.121	U-Girder Type-1	203287.841	3012473.891
SANJAY PALACE STATION			STP	GRID A	203287.219	3012492.001
			STP	GRID F	203284.851	3012560.960
P-257	16	U-Girder Type-1	16	U-Girder Type-1	203284.302	3012576.951
P-258	16	U-Girder Type-1	28	U-Girder Type-2	203283.662	3012592.938
P-259	28	U-Girder Type-2	28	Non U-Girder Span	203281.276	3012620.827
P-260	28	Non U-Girder Span	28	Non U-Girder Span	203275.652	3012648.232
P-261	28	Non U-Girder Span	28	U-Girder Type-2	203266.142	3012674.542
P-262	28	U-Girder Type-2	28	U-Girder Type-1	203253.486	3012699.507
P-263	28	U-Girder Type-1	28	U-Girder Type-1	203239.479	3012723.752
P-264	28	U-Girder Type-1	28	U-Girder Type-1	203225.352	3012747.927
P-265	28	U-Girder Type-1	28	U-Girder Type-1	203211.225	3012772.101
P-266	28	U-Girder Type-1	28	U-Girder Type-1	203197.098	3012796.276
P-267	28	U-Girder Type-1	28	Non U-Girder Span	203183.022	3012820.481
P-268	28	Non U-Girder Span	28	Non U-Girder Span	203170.489	3012845.499
P-269	28	Non U-Girder Span	28	Non U-Girder Span	203162.200	3012872.204
P-270	28	Non U-Girder Span	28	Non U-Girder Span	203158.899	3012899.969
P-271	28	Non U-Girder Span	28	Non U-Girder Span	203160.696	3012927.873
P-272	28	Non U-Girder Span	28	U-Girder Type-1	203167.314	3012955.051
CP-273	28	U-Girder Type-1	28	U-Girder Type-1	203178.712	3012980.727
CP-274	28	U-Girder Type-1	21.936	U-Girder Type-1	203187.941	3013007.169
M G ROAD STATION			STP	GRID A	203192.548	3013028.787
			STP	GRID F	203211.807	3013095.037
P-275	28	U-Girder Type-1	28	U-Girder Type-1	203219.250	3013122.030
P-276	28	U-Girder Type-1	28	U-Girder Type-1	203226.693	3013149.022
P-277	28	U-Girder Type-1	28	U-Girder Type-1	203234.136	3013176.015
P-278	28	U-Girder Type-1	28	U-Girder Type-1	203241.580	3013203.008
P-279	28	U-Girder Type-1	26	Non U-Girder Span	203249.143	3013229.966
P-280	26	Non U-Girder Span	26	Non U-Girder Span	203258.224	3013254.328
PP-281 UP LINE	26	Non U-Girder Span	26	Non U-Girder Span	203269.187	3013277.491
PP-281 DOWN LINE	26	Non U-Girder Span	26	Non U-Girder Span	203281.244	3013272.946
P-282	26	Non U-Girder Span	25	Non U-Girder Span	203289.699	3013295.357
P-283	25	Non U-Girder Span	23	Non U-Girder Span	203310.281	3013309.547
CP-284	23	Non U-Girder Span	37.875	Non U-Girder Span	203330.810	3013317.457
PP-285 UP LINE	37.875	Non U-Girder Span	27	Non U-Girder Span	203372.706	3013335.311
PP-285 DOWN LINE	27	Non U-Girder Span	27	Non U-Girder Span	203362.841	3013314.123
PP-286 UP LINE	27	Non U-Girder Span	25	Non U-Girder Span	203395.752	3013324.521
PP-286 DOWN LINE	27	Non U-Girder Span	25	Non U-Girder Span	203385.887	3013303.333
P-287	25	Non U-Girder Span	25	U-Girder Type-1	203418.552	3013314.810
P-288	25	U-Girder Type-1	25	U-Girder Type-1	203441.161	3013304.834
P-289	25	U-Girder Type-1	25	U-Girder Type-1	203463.860	3013294.356
P-290	25	U-Girder Type-1	25	U-Girder Type-1	203486.558	3013283.879
P-291	25	U-Girder Type-1	25	U-Girder Type-1	203509.257	3013273.401
P-292	25	U-Girder Type-1	18.131	U-Girder Type-1	203531.955	3013262.924

R1

NOTE:- COORDINATES OF OBLIGATORY SPANS PIERS, CANTILEVER PIERS, AND PORTAL PIERS SHALL NOT BE MODIFIED BY CONTRACTOR WITHOUT APPROVAL OF ENGINEER.

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

REV NO	DATE	DESCRIPTION
R1	08-Jan-24	Updated As Per Latest Alignment
R0	25-Oct-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.08 19:36:44 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.08 19:37:18 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.08 19:37:55 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.08 19:38:29 +05'30'

DETAIL DESIGN CONSULTANT: SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. 18 AVENUE EDOUARD - PARIS 75008

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

	☑ NOC	☐ NOWC	☐ RESUBMIT
SIGN:			
DATE:	10-01-24	10-01-2024	11/01/24
NAME:	AR	M S J	RKS
DESIGNATION:	SE	S S E	CSE
	REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT: TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar
Lucknow-226010

	COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL			
CPM		17/01/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: PIER CENTER COORDINATES - AGRA METRO CORRIDOR-2
SHEET 3 OF 6

STRUCTURE

SCALE: AS SHOWN | DATE: 25-Oct-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-000153

OFFICE OF ORIGIN: SYSTRA

REVISION NO: R1

PIER COORDINATES OF AGRA ELEVATED CORRIDOR-2 (AGCC07)

CP-293	18.131	U-Girder Type-1	28	U-Girder Type-1	203548.010	3013254.442
CP-294	28	U-Girder Type-1	28	U-Girder Type-1	203573.360	3013242.551
CP-295	28	U-Girder Type-1	28	U-Girder Type-1	203598.725	3013230.693
CP-296	28	U-Girder Type-1	28	U-Girder Type-1	203624.364	3013219.426
P-297	28	U-Girder Type-1	28	U-Girder Type-1	203650.107	3013208.386
P-298	28	U-Girder Type-1	28	U-Girder Type-1	203675.529	3013196.651
CP-299	28	U-Girder Type-1	28	U-Girder Type-1	203701.056	3013185.143
CP-300	28	U-Girder Type-1	28	U-Girder Type-1	203727.212	3013174.997
PP-301 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	203755.149	3013168.710
PP-301 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	203748.079	3013153.395
PP-302 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	203780.571	3013156.975
PP-302 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	203774.287	3013143.361
PP-303 UP LINE	28	U-Girder Type-1	23	U-Girder Type-2	203806.412	3013146.146
PP-303 DOWN LINE	28	U-Girder Type-1	23	U-Girder Type-2	203800.798	3013133.986
CP-304	23	U-Girder Type-2	23	U-Girder Type-2	203822.615	3013126.225
CP-305	23	U-Girder Type-2	23	U-Girder Type-2	203844.484	3013118.540
PP-306 UP LINE	23	U-Girder Type-2	23	U-Girder Type-2	203869.246	3013123.953
PP-306 DOWN LINE	23	U-Girder Type-2	23	U-Girder Type-2	203866.596	3013111.011
PP-307 UP LINE	23	U-Girder Type-2	23	U-Girder Type-2	203890.668	3013118.502
PP-307 DOWN LINE	23	U-Girder Type-2	23	U-Girder Type-2	203889.429	3013104.035
CP-308	23	U-Girder Type-2	23	U-Girder Type-2	203913.000	3013111.036
CP-309	23	U-Girder Type-2	23	U-Girder Type-2	203935.833	3013113.880
P-310	23	U-Girder Type-2	26.644	U-Girder Type-1	203958.939	3013112.851
P-311	26.644	U-Girder Type-1	28	U-Girder Type-1	203985.530	3013114.525
P-312	28	U-Girder Type-1	28	U-Girder Type-1	204013.500	3013115.795
P-313	28	U-Girder Type-1	28	U-Girder Type-1	204041.498	3013116.063
P-314	28	U-Girder Type-1	28	U-Girder Type-1	204069.486	3013115.307
P-315	28	U-Girder Type-1	28	U-Girder Type-1	204097.454	3013113.968
P-316	28	U-Girder Type-1	28	U-Girder Type-1	204125.419	3013112.574
P-317	28	U-Girder Type-1	28	U-Girder Type-1	204153.384	3013111.181
P-318	28	U-Girder Type-1	28	U-Girder Type-1	204181.350	3013109.788
P-319	28	U-Girder Type-1	28	U-Girder Type-1	204209.315	3013108.395
P-320	28	U-Girder Type-1	28	U-Girder Type-1	204237.280	3013107.002
P-321	28	U-Girder Type-1	28	U-Girder Type-1	204265.246	3013105.609
P-322	28	U-Girder Type-1	28	Cross Over Span	204293.211	3013104.216
P-323	28	Cross Over Span	28	Cross Over Span	204321.176	3013102.823
P-324	28	Cross Over Span	28	Cross Over Span	204349.142	3013101.429
P-325	28	Cross Over Span	13	U-Girder Type-1	204377.107	3013100.036
SULTAN GANJ CROSSING STATION			STP	GRID A	204390.091	3013099.390
			STP	GRID F	204458.912	3013094.570
P-326	28	U-Girder Type-1	28	U-Girder Type-1	204486.723	3013091.324
P-327	28	U-Girder Type-1	28	U-Girder Type-1	204514.431	3013087.304
P-328	28	U-Girder Type-1	28	U-Girder Type-1	204542.065	3013082.787
CP-329	28	U-Girder Type-1	23	U-Girder Type-1	204569.899	3013079.515
CP-330	23	U-Girder Type-1	28	U-Girder Type-1	204592.782	3013077.249
PP-331 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	204620.961	3013077.905
PP-331 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	204619.777	3013067.472
CP-332	28	U-Girder Type-1	28	U-Girder Type-1	204647.853	3013065.966
CP-333	28	U-Girder Type-1	28	U-Girder Type-1	204675.888	3013064.676
CP-334	28	U-Girder Type-1	28 20	U-Girder Type-1 2	204703.857	3013063.160
CP-335	28	U-Girder Type-1 2	28 20	U-Girder Type-1 2	204731.801	3013061.464
CP-336	28	U-Girder Type-1 2	20	U-Girder Type-2	204759.655	3013059.173
CP-337	20	U-Girder Type-2	20	U-Girder Type-2	204779.506	3013057.361
CP-338	20	U-Girder Type-2	20	U-Girder Type-2	204799.316	3013055.193
CP-339	20	U-Girder Type-2	20	U-Girder Type-2	204819.123	3013052.810
CP-340	20	U-Girder Type-2	20	U-Girder Type-2	204838.967	3013050.305
CP-341	20	U-Girder Type-2	20	U-Girder Type-2	204858.826	3013047.475

PP-342 UP LINE	20	U-Girder Type-2	28	U-Girder Type-1	204878.749	3013044.496
PP-342 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	204875.226	3013031.102
PP-343 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	204906.563	3013039.853
PP-343 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	204902.931	3013026.801
PP-344 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	204934.363	3013035.306
PP-344 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	204930.675	3013022.060
CP-345	28	U-Girder Type-1	28	U-Girder Type-1	204958.342	3013016.963
CP-346	28	U-Girder Type-1	28	U-Girder Type-1	204985.913	3013011.579
P-347	28	U-Girder Type-1	28	U-Girder Type-1	205013.440	3013006.313
P-348	28	U-Girder Type-1	28	U-Girder Type-1	205040.902	3013000.852
P-349	28	U-Girder Type-1	28	U-Girder Type-1	205068.401	3012995.579
P-350	28	U-Girder Type-1	28	U-Girder Type-1	205095.900	3012990.305
P-351	28	U-Girder Type-1	28	U-Girder Type-1	205123.399	3012985.032
P-352	28	U-Girder Type-1	28	U-Girder Type-1	205150.898	3012979.759
P-353	28	U-Girder Type-1	28	U-Girder Type-1	205178.397	3012974.485
P-354	28	U-Girder Type-1	28	U-Girder Type-1	205205.896	3012969.212
P-355	28	U-Girder Type-1	28	U-Girder Type-1	205233.395	3012963.938
P-356	28	U-Girder Type-1	28	U-Girder Type-1	205260.894	3012958.665
P-357	28	U-Girder Type-1	17.185	U-Girder Type-1	205288.392	3012953.392
KAMLA NAGAR STATION			STP	GRID A	205305.270	3012950.155
			STP	GRID F	205372.913	3012936.559
CP-358	28	U-Girder Type-1	28	U-Girder Type-1	205400.569	3012931.688
PP-359 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	205428.214	3012926.358
PP-359 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	205424.872	3012914.684
PP-360 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	205455.838	3012921.000
PP-360 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	205452.627	3012909.988
P-361	28	U-Girder Type-1	28	U-Girder Type-1	205480.902	3012906.932
CP-362	28	U-Girder Type-1	28	U-Girder Type-1	205508.447	3012901.373
PP-363 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	205535.891	3012895.468
PP-363 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	205532.832	3012884.976
CP-364	28	U-Girder Type-1	28	U-Girder Type-1	205561.235	3012882.359
P-365	28	U-Girder Type-1	28	U-Girder Type-1	205588.423	3012875.576
P-366	28	U-Girder Type-1	28	U-Girder Type-1	205615.303	3012867.737
P-367	28	U-Girder Type-1	28	U-Girder Type-1	205642.184	3012859.898
P-368	28	U-Girder Type-1	28	U-Girder Type-1	205669.055	3012852.029
P-369	28	U-Girder Type-1	28	U-Girder Type-1	205695.788	3012843.704
P-370	28	U-Girder Type-1	28	U-Girder Type-1	205722.279	3012834.639
P-371	28	U-Girder Type-1	14.952	U-Girder Type-1	205748.507	3012824.839
P-372	14.952	U-Girder Type-1	14.952	U-Girder Type-1	205762.398	3012819.306
P-373	14.952	U-Girder Type-1	28	U-Girder Type-1	205776.205	3012813.567
CP-374	28	U-Girder Type-1	28	U-Girder Type-1	205801.293	3012801.095
CP-375	28	U-Girder Type-1	28	U-Girder Type-1	205827.557	3012791.213
P-376	28	U-Girder Type-1	21	U-Girder Type-1	205852.737	3012778.950
P-377	21	U-Girder Type-1	28	U-Girder Type-1	205871.825	3012770.196
P-378	28	U-Girder Type-1	28	U-Girder Type-1	205897.276	3012758.523
P-379	28	U-Girder Type-1	28	U-Girder Type-1	205922.727	3012746.851
P-380	28	U-Girder Type-1	28	U-Girder Type-1	205948.178	3012735.178
P-381	28	U-Girder Type-1	28	U-Girder Type-1	205973.630	3012723.507
P-382	28	U-Girder Type-1	17.313	U-Girder Type-1	205999.081	3012711.834
P-383	17.313	U-Girder Type-1	20	U-Girder Type-1	206014.818	3012704.617
P-384	20	U-Girder Type-1	20	U-Girder Type-1	206032.997	3012696.280
P-385	20	U-Girder Type-1	20	U-Girder Type-1	206051.177	3012687.943
P-386	20	U-Girder Type-1	20	U-Girder Type-1	206069.356	3012679.605
P-387	20	U-Girder Type-1	45.720	STEEL I Girder SPAN	206087.535	3012671.268
P-388	45.72	STEEL I Girder SPAN	45.720	STEEL I Girder SPAN	206129.093	3012652.209

NOTE:- COORDINATES OF OBLIGATORY SPANS PIERS, CANTILEVER PIERS, AND PORTAL PIERS SHALL NOT BE MODIFIED BY CONTRACTOR WITHOUT APPROVAL OF ENGINEER.

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2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R1	06-Jan-24	Updated As Per Latest Alignment
R0	25-Oct-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.06 19:33:58 +05'30'	Divyansh u Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.06 19:34:30 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.06 19:35:10 +05'30'	Amitav a Das Digitally signed by Amitava Das Date: 2024.01.06 19:35:49 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

	REVIEWED BY	APPROVED BY	VETTED BY
	☐ NOC	☑ NOWC	☐ RESUBMIT
SIGN:			
DATE:	10-01-24	10-01-2024	11.01.24
NAME:	AR	M.S.J.	BKJ
DESIGNATION:	SE	S.S.E.	CSE

GENERAL CONSULTANT
TYPSA - IT ALFERR
Consortium of Technica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights, Vibhuti Khand, Gomti Nagar, Lucknow-226010

	COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY CE CIVIL			
CPM		17.01.24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: PIER CENTER COORDINATES - AGRA METRO CORRIDOR-2
SHEET 4 OF 6

STRUCTURE

SCALE: AS SHOWN | DATE: 25-Oct-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09054

OFFICE OF ORIGIN: SYSTRA

REVISION NO: R1

PIER COORDINATES OF AGRA ELEVATED CORRIDOR-2 (AGCC07)

P-389	45.72	STEEL I Girder SPAN	45.720	STEEL I Girder SPAN	206170.651	3012633.150
P-390	45.72	STEEL I Girder SPAN	45.720	STEEL I Girder SPAN	206212.209	3012614.091
P-391	45.72	STEEL I Girder SPAN	45.720	STEEL I Girder SPAN	206253.767	3012595.032
P-392	45.72	STEEL I Girder SPAN	45.720	STEEL I Girder SPAN	206295.326	3012575.973
P-393	45.72	STEEL I Girder SPAN	47.320	STEEL I Girder SPAN	206336.884	3012556.914
P-394	47.32	STEEL I Girder SPAN	18.400	U-Girder Type-1	206379.896	3012537.187
P-395	18.4	U-Girder Type-1	20	U-Girder Type-1	206396.621	3012529.517
P-396	20	U-Girder Type-1	20	U-Girder Type-1	206414.800	3012521.180
P-397	20	U-Girder Type-1	20	U-Girder Type-1	206432.980	3012512.843
P-398	20	U-Girder Type-1	20	U-Girder Type-1	206451.159	3012504.505
P-399	20	U-Girder Type-1	19.598	U-Girder Type-1	206469.338	3012496.168
P-400	19.598	U-Girder Type-1	19.598	U-Girder Type-1	206487.152	3012487.998
P-401	19.598	U-Girder Type-1	28	U-Girder Type-1	206504.966	3012479.829
P-402	28	U-Girder Type-1	28	U-Girder Type-1	206530.417	3012468.157
P-403	28	U-Girder Type-1	28	U-Girder Type-1	206555.868	3012456.484
P-404	28	U-Girder Type-1	28	U-Girder Type-1	206581.319	3012444.812
RAMBAGH STATION			STP	GRID A	206606.770	3012433.140
			STP	GRID F	206669.642	3012404.715
P-405	20	U-Girder Type-1	20	U-Girder Type-1	206688.017	3012396.819
P-406	20	U-Girder Type-1	20	U-Girder Type-1	206706.410	3012388.964
P-407	20	U-Girder Type-1	28	U-Girder Type-1	206724.803	3012381.109
P-408	28	U-Girder Type-1	28	U-Girder Type-1	206750.553	3012370.112
CP-409	28	U-Girder Type-1	18	U-Girder Type-1	206775.321	3012356.815
R2 CP-410	18	U-Girder Type-1	33	U-Girder Type-1	206791.874	3012349.745
CP-411	33	U-Girder Type-1	33	Non U-Girder Span	206822.291	3012336.876
CP-412	33	Non U-Girder Span	28	Non U-Girder Span	206854.895	3012329.843
CP-413	28	Non U-Girder Span	28	Non U-Girder Span	206881.548	3012321.912
CP-414	28	Non U-Girder Span	28	Non U-Girder Span	206908.716	3012315.983
CP-415	28	Non U-Girder Span	28	Non U-Girder Span	206936.280	3012312.388
CP-416	28	Non U-Girder Span	28	Non U-Girder Span	206964.007	3012310.255
CP-417	28	Non U-Girder Span	28	Non U-Girder Span	206991.812	3012310.453
CP-418	28	Non U-Girder Span	28	Non U-Girder Span	207019.552	3012312.591
CP-419	28	Non U-Girder Span	28	Non U-Girder Span	207047.078	3012316.637
CP-420	28	Non U-Girder Span	28	Non U-Girder Span	207074.259	3012322.572
CP-421	28	Non U-Girder Span	28	Non U-Girder Span	207100.967	3012330.368
CP-422	28	Non U-Girder Span	28	Non U-Girder Span	207127.073	3012339.987
CP-423	28	Non U-Girder Span	28	Non U-Girder Span	207152.497	3012351.294
CP-424	28	Non U-Girder Span	28	U-Girder Type-1	207177.472	3012363.691
CP-425	28	U-Girder Type-1	28	U-Girder Type-1	207202.620	3012376.129
PP-426 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	207221.464	3012399.106
PP-426 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	207227.968	3012388.316
PP-427 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	207246.836	3012411.252
PP-427 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	207253.496	3012400.203
PP-428 UP LINE	28	U-Girder Type-1	28	U-Girder Type-1	207272.184	3012423.460
PP-428 DOWN LINE	28	U-Girder Type-1	28	U-Girder Type-1	207278.850	3012412.332
CP-429	28	U-Girder Type-1	28	U-Girder Type-1	207297.544	3012435.690
CP-430	28	U-Girder Type-1	28	U-Girder Type-1	207322.862	3012447.827
P-431	28	U-Girder Type-1	28	U-Girder Type-1	207348.017	3012460.141
P-432	28	U-Girder Type-1	28	U-Girder Type-1	207373.195	3012472.390
P-433	28	U-Girder Type-1	28	U-Girder Type-1	207398.391	3012484.603
P-434	28	U-Girder Type-1	28	U-Girder Type-1	207423.569	3012496.855
P-435	28	U-Girder Type-1	28	U-Girder Type-1	207448.605	3012509.391
P-436	28	U-Girder Type-1	28	U-Girder Type-1	207473.466	3012522.272
P-437	28	U-Girder Type-1	14.688	U-Girder Type-1	207498.245	3012535.311
FOUNDARY NAGAR STATION			STP	GRID A	207511.243	3012542.152
			STP	GRID F	207572.303	3012574.287
CP-438	18.357	U-Girder Type-1	28	Non U-Girder Span	207588.421	3012583.087
CP-439	28	Non U-Girder Span	28	Non U-Girder Span	207613.284	3012596.064
PP-440 UP LINE	28	Non U-Girder Span	28	Non U-Girder Span	207638.108	3012609.485
PP-440 DOWN LINE	28	Non U-Girder Span	28	Non U-Girder Span	207642.849	3012597.781

PP-441 UP LINE	28	Non U-Girder Span	28	Non U-Girder Span	207663.067	3012622.768
PP-441 DOWN LINE	28	Non U-Girder Span	28	Non U-Girder Span	207667.592	3012611.007
CP-442	28	Non U-Girder Span	28	Non U-Girder Span	207692.601	3012623.979
P-443	28	Non U-Girder Span	28	Non U-Girder Span	207717.802	3012636.456
CP-444	28	Non U-Girder Span	28	Non U-Girder Span	207743.093	3012648.469
CP-445	28	Non U-Girder Span	28	Non U-Girder Span	207768.431	3012660.268
CP-446	28	Non U-Girder Span	28	Non U-Girder Span	207793.546	3012672.617
CP-447	28	Non U-Girder Span	28	T-Girder/U-Girder Type-1	207818.542	3012685.238
CP-448	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207843.376	3012698.170
CP-449	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207868.280	3012710.969
CP-450	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207893.115	3012723.901
CP-451	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207917.949	3012736.833
CP-452	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207942.807	3012749.721
CP-453	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207967.642	3012762.653
CP-454	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	207992.408	3012775.718
CP-455	28	T-Girder/U-Girder Type-1	21	T-Girder/U-Girder Type-1	208017.081	3012788.961
CP-456	21	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208035.609	3012798.849
CP-457	28	T-Girder/U-Girder Type-1	16.179	T-Girder/U-Girder Type-1	208060.881	3012810.937
CP-458	16.179	T-Girder/U-Girder Type-1	16.179	T-Girder/U-Girder Type-1	208075.199	3012818.473
CP-459	16.179	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208089.539	3012825.964
CP-460	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208114.397	3012838.852
CP-461	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208139.254	3012851.740
CP-462	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208164.135	3012864.583
CP-463	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208188.993	3012877.471
CP-464	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208213.851	3012890.358
CP-465	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208238.731	3012903.202
CP-466	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208263.589	3012916.089
CP-467	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208288.562	3012928.755
CP-468	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208313.190	3012942.087
CP-469	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208338.070	3012954.930
CP-470	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208362.951	3012967.773
CP-471	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208387.832	3012980.617
P-472	28	T-Girder/U-Girder Type-1	28	Cross over span	208412.943	3012993.016
P-473	28	Cross over span	28	Cross over span	208437.800	3013005.904
P-474	28	Cross over span	28	Cross over span	208462.658	3013018.791
P-475	28	Cross over span	13	T-Girder/U-Girder Type-1	208487.516	3013031.679
AGRA MANDI STATION			STP	GRID A	208499.057	3013037.663
			STP	GRID F	208560.314	3013069.422
P-476	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208585.171	3013082.309
P-477	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208610.035	3013095.186
P-478	28	T-Girder/U-Girder Type-1	28	Non U-Girder Span	208635.065	3013107.733
CP-479	28	Non U-Girder Span	21	Non U-Girder Span	208660.416	3013119.646
CP-480	21	Non U-Girder Span	21	Non U-Girder Span	208679.713	3013128.014
P-481	21	Non U-Girder Span	28	Non U-Girder Span	208699.846	3013134.131
P-482	28	Non U-Girder Span	20.551	Non U-Girder Span	208726.610	3013142.349
CP-483	20.551	Non U-Girder Span	20.551	Non U-Girder Span	208745.920	3013149.940
CP-484	20.551	Non U-Girder Span	28	Non U-Girder Span	208766.214	3013153.719
CP-485	28	Non U-Girder Span	28	T-Girder/U-Girder Type-1	208793.958	3013157.984
CP-486	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208821.654	3013162.229
CP-487	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208849.349	3013166.351
CP-488	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208877.088	3013170.176
CP-489	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208904.828	3013173.981
CP-490	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208932.562	3013177.826
CP-491	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208960.285	3013181.750
CP-492	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	208988.016	3013185.624
CP-493	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209015.851	3013188.793

NOTE:- COORDINATES OF OBLIGATORY SPANS PIERS, CANTILEVER PIERS, AND PORTAL PIERS SHALL NOT BE MODIFIED BY CONTRACTOR WITHOUT APPROVAL OF ENGINEER.

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4. ANY DISCREPANCIES MUST BE BROUGHT TO NOTICE OF THE CONSULTANT BEFORE EXECUTION.

REV NO	DATE	DESCRIPTION
R2	18-Jan-24	Updated As Per GC Comments
R1	06-Jan-24	Updated As Per Latest Alignment
R0	25-Oct-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.18 18:23:52 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.18 18:24:28 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.18 18:25:21 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.18 18:26:05 +05'30'

DETAIL DESIGN CONSULTANT: SYSTRA

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC	☐ NOWC	☐ RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 19.01.2024	DATE: 19.01.2024	DATE: 18.01.2024
NAME: ASO	NAME: MSJ	NAME: ATD
DESIGNATION: K3	DESIGNATION: K2	DESIGNATION: K1
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT: TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts Vibhuti Khand, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17/1/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: PIER CENTER COORDINATES - AGRA METRO CORRIDOR-2
SHEET 5 OF 6

STRUCTURE

SCALE: AS SHOWN | DATE: 25-Oct-23 | STAGE: TENDER DESIGN

DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09055

OFFICE OF ORIGIN: SYSTRA

REVISION NO: R2

PIER COORDINATES OF AGRA ELEVATED CORRIDOR-2 (AGCC07)

CP-494	28	*T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209043.677	3013191.972
CP-495	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209071.487	3013195.252
CP-496	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209099.308	3013198.415
CP-497	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209127.128	3013201.585
CP-498	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209154.956	3013204.692
CP-499	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209182.783	3013207.795
CP-500	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209210.613	3013210.875
CP-501	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209238.439	3013213.973
CP-502	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209266.257	3013217.115
CP-503	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209294.068	3013220.356
CP-504	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209321.856	3013223.799
CP-505	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209349.627	3013227.390
CP-506	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209377.426	3013230.734
CP-507	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209405.232	3013234.027
CP-508	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209433.008	3013237.569
CP-509	28	T-Girder/U-Girder Type-1	21	T-Girder/U-Girder Type-1	209460.813	3013240.870
CP-510	21	T-Girder/U-Girder Type-1	24	T-Girder/U-Girder Type-1	209481.684	3013243.196
CP-511	24	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209505.537	3013245.858
CP-512	28	T-Girder/U-Girder Type-1	28	Cross over span	209533.319	3013249.351
CP-513	28	Cross over span	28	Cross over span	209561.113	3013252.744
CP-514	28	Cross over span	28	Cross over span	209588.895	3013256.236
CP-515	28	Cross over span	13	T-Girder/U-Girder Type-1	209616.671	3013259.778
KALANDI VIHAR STATION			STP	GRID A1	209629.477	3013262.180
			STP	GRID A2	209631.331	3013246.531
			STP	GRID F1	209697.998	3013270.296
			STP	GRID F2	209699.852	3013254.648
R2 CP-516	28	T-Girder/U-Girder Type-1	28	T-Girder/U-Girder Type-1	209726.307	3013269.340
P-517	28	T-Girder/U-Girder Type-1			209753.942	3013274.075
DP1	25	Arch Girder	25	Arch Girder	203621.398	3008117.740
DP2	25	Arch Girder	25	Arch Girder	203640.000	3008134.377
DP3	25	Arch Girder	25	Arch Girder	203661.578	3008146.917
DCP4	25	Arch Girder	25	Arch Girder	203685.792	3008152.405
DPP5 UPLINE	25	Arch Girder	32	Arch Girder	203710.199	3008148.087
DPP5 DOWNLINE	32	Arch Girder	32	Arch Girder	203709.990	3008159.480
DP6	32	Arch Girder	32	Arch Girder	203741.852	3008154.981
DP7	32	Arch Girder	32	Arch Girder	203773.541	3008150.531
DP8	32	Arch Girder	32	Arch Girder	203805.230	3008146.081
DP9	32	Arch Girder	32	Arch Girder	203836.916	3008141.610
DP10	32	Arch Girder	32	Arch Girder	203868.580	3008136.982
DP11	32	Arch Girder	32	Arch Girder	203900.230	3008132.263
DP12	32	Arch Girder	32	Arch Girder	203931.880	3008127.544
DP13	32	Arch Girder	32	Arch Girder	203963.530	3008122.824
DP14	32	Arch Girder	32	Arch Girder	203995.181	3008118.110
DP15	32	Arch Girder	32	Arch Girder	204026.841	3008113.463
DP16	32	Arch Girder	32	Arch Girder	204058.509	3008108.866
DP17	32	Arch Girder	32	Arch Girder	204090.178	3008104.270
DP18	32	Arch Girder	32	Arch Girder	204121.846	3008099.673
DP19	32	Arch Girder	24	Arch Girder	204153.512	3008095.065
DP20	24	Arch Girder	32	Arch Girder	204177.225	3008091.363
DP21	32	Arch Girder	32	Arch Girder	204208.744	3008085.836
DP22	32	Arch Girder	32	Arch Girder	204240.137	3008079.637
DP23	32	Arch Girder	32	Arch Girder	204271.428	3008072.940
DP24	32	Arch Girder	32	Arch Girder	204302.712	3008066.207
DP25	32	Arch Girder	32	Arch Girder	204333.996	3008059.474
DP26	32	Arch Girder	20.606	Arch Girder	204365.278	3008052.736
DP27	20.606	Arch Girder	20.606	Arch Girder	204385.410	3008048.344
DP28	20.606	Arch Girder	32	Arch Girder	204405.528	3008043.883
DP29	32	Arch Girder	32	Arch Girder	204436.757	3008036.902
DP30	32	Arch Girder	32	Arch Girder	204467.987	3008029.923
DP31	32	Arch Girder	32	Arch Girder	204499.236	3008023.031
DP32	32	Arch Girder	32	Arch Girder	204530.509	3008016.249
DP33	32	Arch Girder	32	Arch Girder	204561.784	3008009.476
DP34	32	Arch Girder	32	Arch Girder	204593.059	3008002.703
DP35	32	Arch Girder	17.780	Arch Girder	204624.334	3007995.930

DP36	17.78	Arch Girder	17.780	Arch Girder	204641.711	3007992.166
DP37	17.78	Arch Girder	32	Arch Girder	204659.088	3007988.404
DP38	32	Arch Girder	32	Arch Girder	204690.410	3007981.850
DP39	32	Arch Girder	32	Arch Girder	204721.824	3007975.758
DP40	32	Arch Girder	32	Arch Girder	204753.260	3007969.778
DP41	32	Arch Girder	32	Arch Girder	204784.696	3007963.797
DP42	32	Arch Girder	32	Arch Girder	204816.133	3007957.816
DP43	32	Arch Girder	32	Arch Girder	204847.557	3007951.772
DP44	32	Arch Girder	32	Arch Girder	204878.894	3007945.298
DCP45	32	Arch Girder	32	Arch Girder	204910.277	3007938.967
DCP46	32	Arch Girder	32	Arch Girder	204941.403	3007931.504
DCP47	32	Arch Girder	32	Arch Girder	204972.371	3007923.370
DP48	32	Arch Girder	32	Arch Girder	205003.088	3007914.406
DP49	32	Arch Girder	32	Arch Girder	205033.808	3007905.447
DP50	32	Arch Girder	29	Arch Girder	205064.456	3007896.242
DP51	29	Arch Girder	28	Arch Girder	205092.229	3007887.899
DPP52 UPLINE	28	Arch Girder	28	Arch Girder	205119.044	3007879.843
DPP52 DOWNLINE	28	Arch Girder	28	Arch Girder	205122.598	3007891.671
DPP53 UPLINE	28	Arch Girder	28	Arch Girder	205145.733	3007871.363
DPP53 DOWNLINE	28	Arch Girder	28	Arch Girder	205149.414	3007883.615
DPP54 UPLINE	28	Arch Girder	28	Arch Girder	205172.533	3007863.255
DPP54 DOWNLINE	28	Arch Girder	28	Arch Girder	205176.230	3007875.559
DPP55 UPLINE	28	Arch Girder	28	Arch Girder	205199.336	3007855.153
DPP55 DOWNLINE	28	Arch Girder	28	Arch Girder	205202.995	3007867.334
DPP56 UPLINE	28	Arch Girder	28	Arch Girder	205226.117	3007846.981
DPP56 DOWNLINE	28	Arch Girder	28	Arch Girder	205229.662	3007858.783
DPP57 UPLINE	28	Arch Girder	28	Arch Girder	205252.965	3007839.044
DPP57 DOWNLINE	28	Arch Girder	28	Arch Girder	205256.562	3007850.741
DP58 UPLINE	28	Arch Girder	32	Arch Girder	205279.807	3007831.073
DP58 DOWNLINE	28	Arch Girder	32	Arch Girder	205284.224	3007844.642
DCP59	32	Arch Girder	32	Arch Girder	205310.444	3007821.826
DCP60	32	Arch Girder	24	Arch Girder	205341.094	3007812.520
DP61	24	Arch Girder	32	Arch Girder	205364.249	3007806.195
DP62	32	Arch Girder	32	Arch Girder	205394.891	3007796.972
DP63	32	Arch Girder	32	Arch Girder	205425.537	3007787.764
DP64	32	Arch Girder	21	Arch Girder	205456.195	3007778.594
DCP65	21	Arch Girder	21	Arch Girder	205476.363	3007772.742
DP66	21	Arch Girder	32	Arch Girder	205496.579	3007767.056
DP67	32	Arch Girder	32	Arch Girder	205527.416	3007758.507
DP68	32	Arch Girder	32	Arch Girder	205558.253	3007749.958
DP69	32	Arch Girder	32	Arch Girder	205589.143	3007741.609
DP70	32	Arch Girder	32	Arch Girder	205620.467	3007735.104
DP71	32	Arch Girder	32	Arch Girder	205652.192	3007730.976
DP72	32	Arch Girder	21	Arch Girder	205684.100	3007728.559
DP73	21	Arch Girder	25	Arch Girder	205705.047	3007727.057
DCP74	25	Arch Girder	25	Arch Girder	205730.047	3007727.052
DCP75	25	Arch Girder	22.5	Arch Girder	205754.999	3007728.601
DPP76 UPLINE	22.5	Arch Girder	22.5	Arch Girder	205777.033	3007730.563
DPP76 DOWNLINE	22.5	Arch Girder	22.5	Arch Girder	205775.668	3007742.837
DP77	22.5	Arch Girder	28	Arch Girder	205797.031	3007744.534
DP78	28	Arch Girder	28	Arch Girder	205820.353	3007759.879
DP79	28	Arch Girder	28	Arch Girder	205840.573	3007779.192
DP80	28	Arch Girder	28	Arch Girder	205856.995	3007801.823
DP81	28	Arch Girder	22	Arch Girder	205869.084	3007827.037
DP82	22	Arch Girder	15	Arch Girder	205875.281	3007848.127
DP83	15	Arch Girder	11.252	Arch Girder	205877.823	3007862.906
DP1A	25	Arch Girder	25	Arch Girder	205309.120	3007846.383
DP2A	25	Arch Girder	25	Arch Girder	205333.161	3007853.087
DP3A	25	Arch Girder	25	Arch Girder	205355.366	3007864.480
DP4A	25	Arch Girder	25	Arch Girder	205374.833	3007880.098
DP5A	25	Arch Girder	25	Arch Girder	205390.768	3007899.306
DP6A	25	Arch Girder	25	Arch Girder	205402.523	3007921.322

NOTE:- COORDINATES OF OBLIGATORY SPANS PIERS, CANTILEVER PIERS, AND PORTAL PIERS SHALL NOT BE MODIFIED BY CONTRACTOR WITHOUT APPROVAL OF ENGINEER.

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

REV NO	DATE	DESCRIPTION
R2	18-Jan-24	Updated As Per GC Comments
R1	08-Jan-24	Updated As Per Latest Alignment
R0	25-Oct-23	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SINGH Vikram Digitally signed by SINGH Vikram Date: 2024.01.18 16:39:04 +05'30'	Divyanshu Tripathi Digitally signed by Divyanshu Tripathi Date: 2024.01.18 16:39:42 +05'30'	Jitendra Rastogi Digitally signed by Jitendra Rastogi Date: 2024.01.18 16:40:42 +05'30'	Amitava Das Digitally signed by Amitava Das Date: 2024.01.18 16:41:23 +05'30'

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☑ NOC	☐ NONOC	☐ RESUBMIT
SIGN:	SIGN:	SIGN:
DATE: 19.01.2024	DATE: 19.01.2024	DATE: 19.01.2024
NAME: ASO	NAME: MSJ	NAME: ATD
DESIGNATION: K3	DESIGNATION: K2	DESIGNATION: K1
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CE CIVIL		
CPM	17.1.24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT : CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010
UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: PIER CENTER COORDINATES - AGRA METRO CORRIDOR-2
SHEET 6 OF 6

STRUCTURE

SCALE: AS SHOWN | DATE: 25-Oct-23 | STAGE: TENDER DESIGN

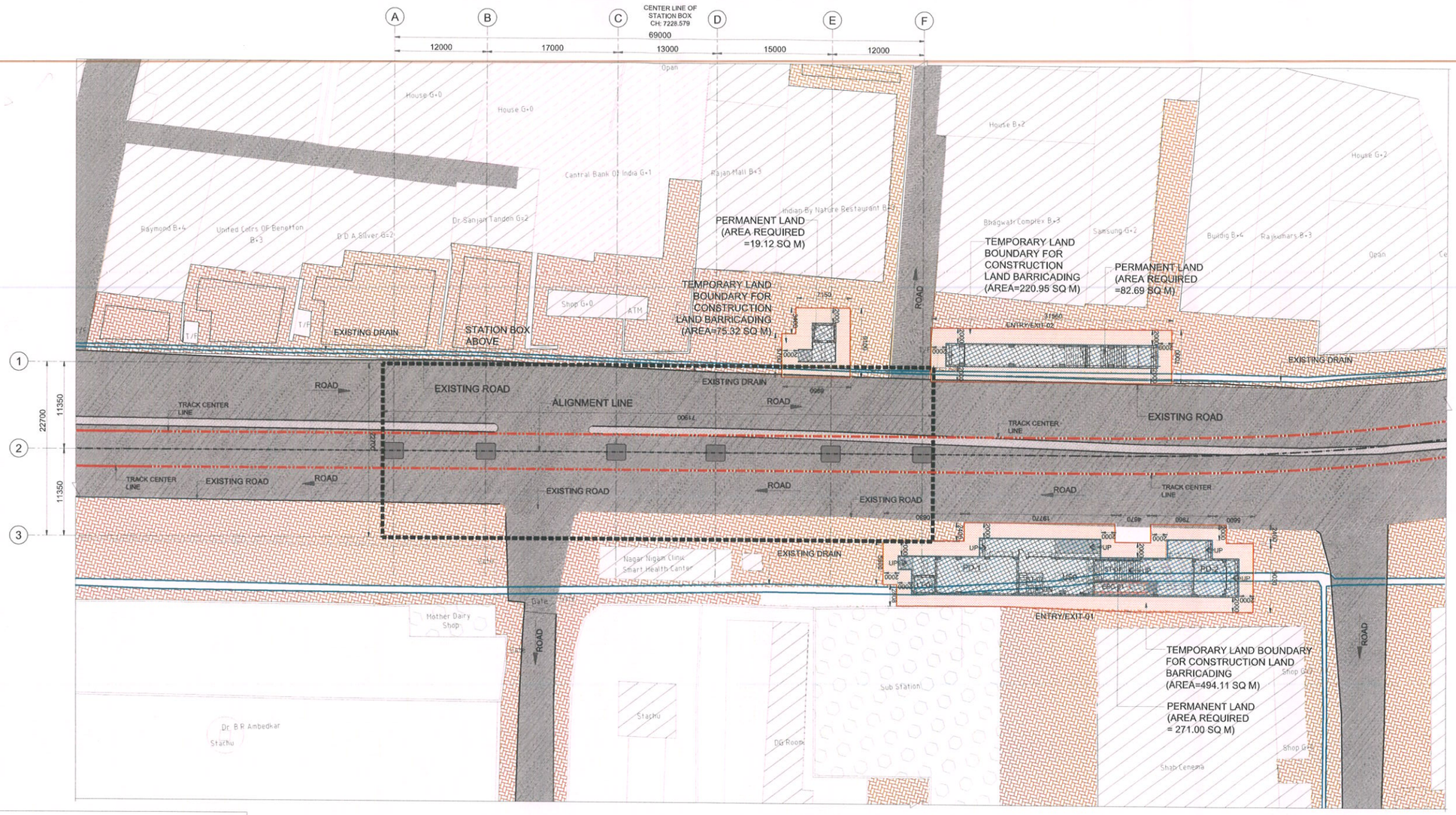
DRG NO: KNPAGDDC-01-TDR-ELV-VDC-DWG-09056

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R2

A1 (594x841mm)

Annexure-27 (1/2)



INSERTION PLAN

SCALE - 1:300

1. ALL DIMENSIONS ARE IN MM, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE TO BE READ AS MENTIONED ON THE DRAWINGS & NOT TO BE MEASURED.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL, MEP, SYSTEM, VENDOR, FIRE FIGHTING & TRAFFIC MANAGEMENT DRAWINGS.
4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
9. PIT DIMENSIONS ARE SUBJECT TO CHANGE AS/VENDOR REQUIREMENTS.
10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
12. PIER SIZES/CRASH BARRIER THICKNESS , DG SIZE, COLUMN PROFILE HAVE BEEN TAKEN AS PER STRUCTURE
13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

LEGEND

	PART OF CORRIDOR 1 STATION
	GOVERNMENT STRUCTURE
	LANDMARK
	TEMPORARY LAND
	PERMANENT LAND

TEMPORARY LAND	PERMANENT LAND
790.38 SQ M	372.81 SQ M

NOTE:-
1. COLUMN SIZE USED 2500MM X 2100MM. (SINGLE PIER).

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

NOTE:-

THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

UTTAR PRADESH-INDIA GCS General Consultant Services TYPSA-ITALFERR JV KANPUR & AGRA METRO PROJECTS

KEY PLAN

GENERAL NOTES:
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4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

R5	10-JAN-2024	TENDER ADDENDUM
R4	05-OCT-2023	Fourth Issue
R3	01-AUG-2023	Third Issue
R2	04-MAY-2023	As per GC Comments
R1	06-MAY-2023	As per GC comments
R0	10-FEB-2023	First Issue
NO.	DATE	DESCRIPTION

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das (Digitally signed by Avijit Das, Date: 2024.01.10 16:18:32 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee, Date: 2024.01.10 18:18:45 +05'30')	Sudipta Chakraborty (Digitally signed by Sudipta Chakraborty)	Amitava Das (Digitally signed by Amitava Das, Date: 2024.01.10 18:19:17 +05'30')

DETAIL DESIGN CONSULTANT

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A., 5 AVENUE PHILOSO - PARIS 75016

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
7th& 7th Floor, Cyber Heights
Vibhut Khand, Gomti Nagar
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/1/24	

TENDER DRAWING

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SANJAY PLACE STATION
INSERTION LEVEL PLAN

SCALE: AS SHOWN DATE: 10-FEB-2023 STAGE: TENDER

DRG NO.: KNPA02/O-SYST-TDR-SPL-ARC-PLN-54001

ARCHITECTURE

OFFICE OF ORIGIN
SYSTRA

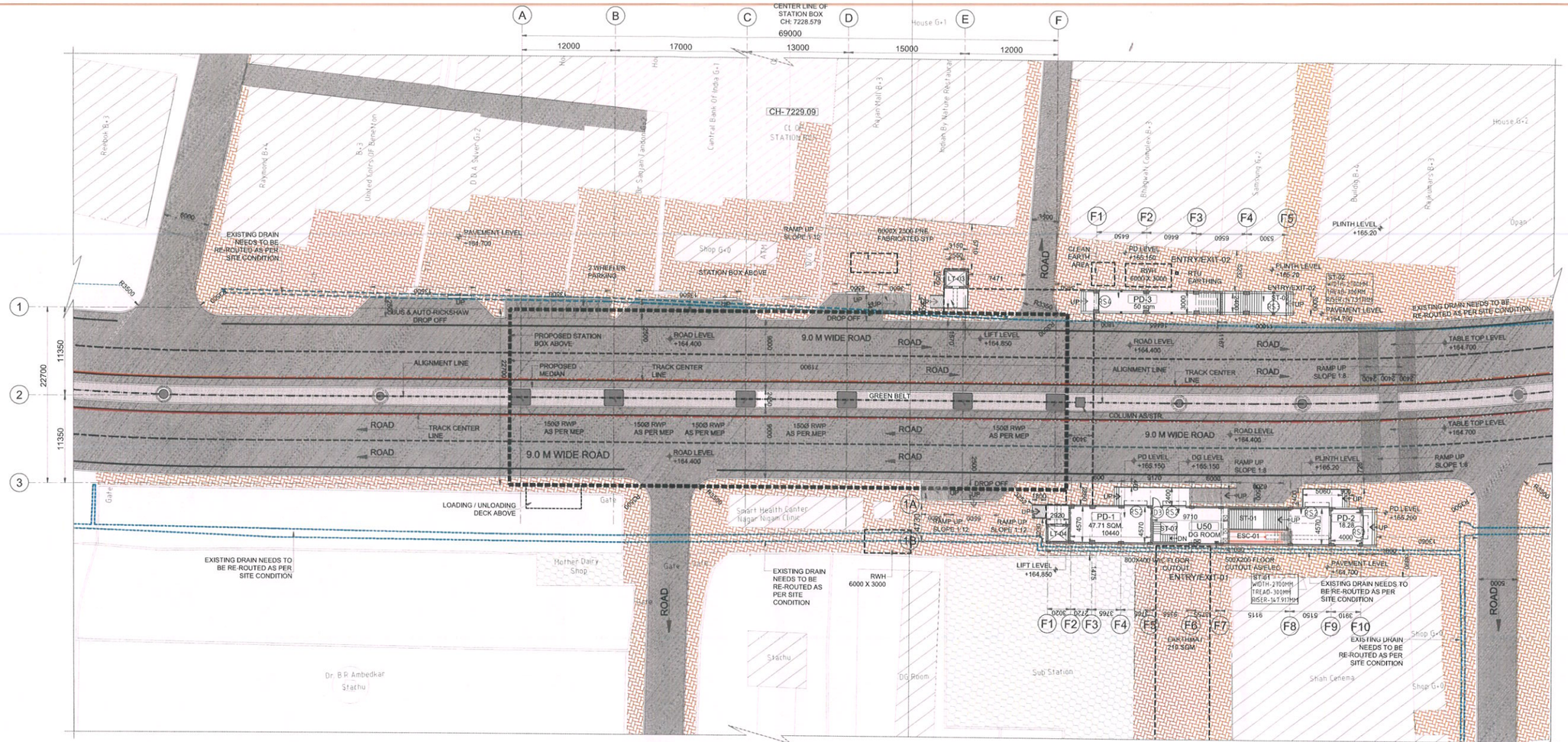
REVISION NO: R5

(12/2)

← HARIPARVAT

SANJAY PLACE STATION

M G ROAD →



GROUND FLOOR PLAN

SCALE - 1:300

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13. ALL MATERIALS / FINISHES THIS MENTIONED ON THE DRAWINGS ARE SUBJECT TO UPMRC REVIEW & APPROVAL.
14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	5.43
PD-01	PROPERTY DEVELOPMENT	47.71
PD-02	PROPERTY DEVELOPMENT	18.28
PD-03	PROPERTY DEVELOPMENT	50.00

ANCILLARY BUILDING LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

NOTE:-
1. COLUMN SIZE USED 2500MM X 2100MM. (SINGLE PIER).

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

NOTE:-
THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	ALIGNMENT
	TRACK CENTER LINE
	DRAIN
	ROAD
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

KEY PLAN

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
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4. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.

REV NO.	DATE	DESCRIPTION
R5	19-JAN-2024	TENDER ADDENDUM
R4	05-OCT-2023	Fifth Issue
R3	01-AUG-2023	Fourth Issue
R2	30-MAY-2023	As per GC comments
R1	04-MAY-2023	As per GC comments
R0	10-FEB-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das	Sayantan Mukherjee	Sudipta Chakraborty	Amitava Das

DETAIL DESIGN CONSULTANT
SYSTRA

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. 2 AVENUE DE SOCA PARIS

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

	NOC	NOWC	RESUBMIT
SIGN:			
DATE:	13TH JANUARY 2024	13TH JANUARY 2024	13TH JANUARY 2024
NAME:	VIJAY S CHANDEL	ASHWANI MATHUR	ASHOK GHODESHWAR
DESIGNATION:	Architect (K3)	Senior Ar. (K2)	CA_GC / Arch. (K1)
	REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
7th Floor, Cyber Heights, Vibhuti Khand, Gomti Nagar, Lucknow-226010

TENDER DRAWING

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
GM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: SANJAY PLACE STATION
GROUND FLOOR PLAN

SCALE: AS SHOWN DATE: 10-FEB-2023 STAGE: TENDER

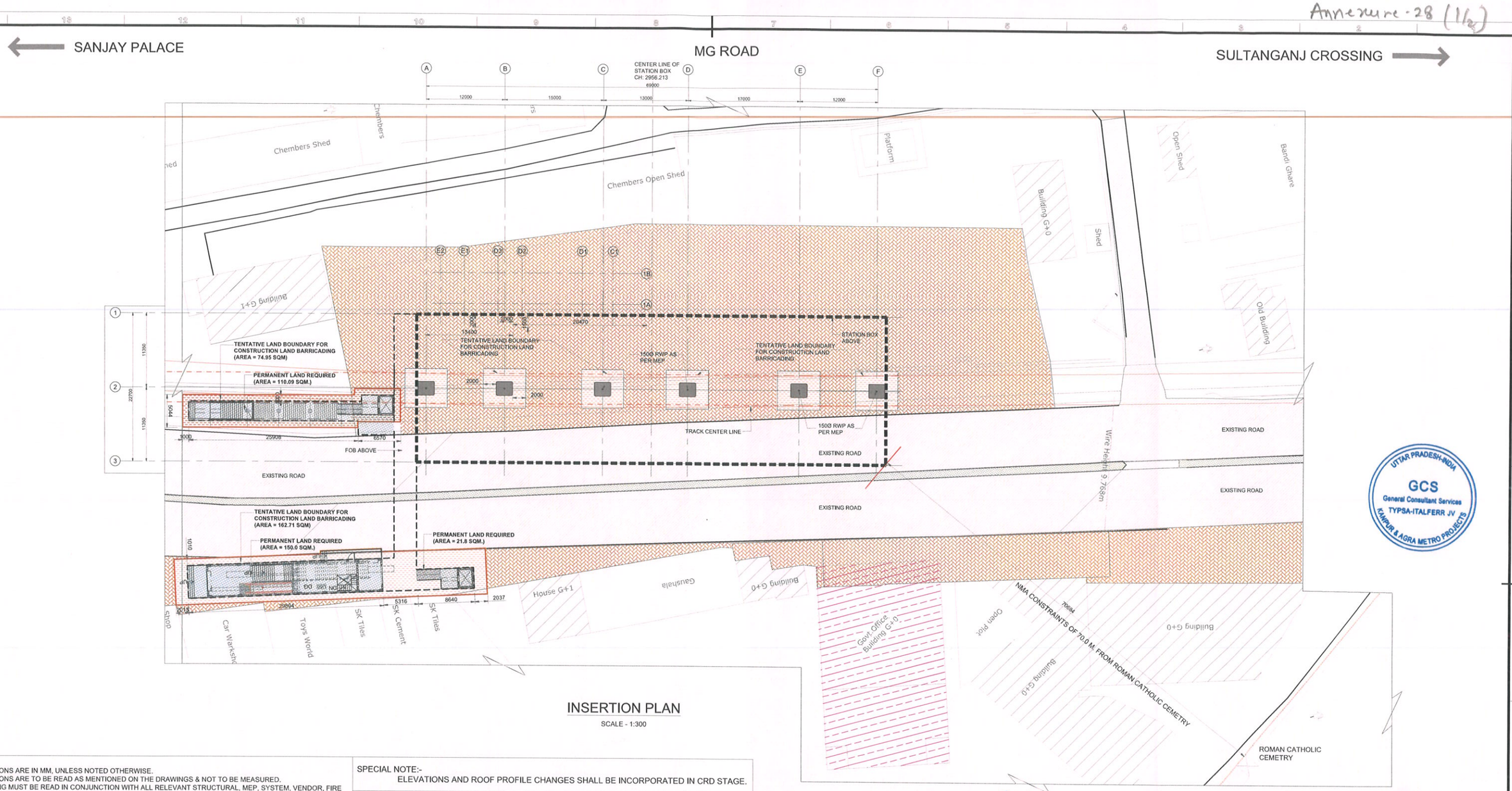
DRG NO: KNPAGIDDC-01-TDR-SPL-ARC-PLN-54052

ARCHITECTURE

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R5

Annexure-28 (1/2)



INSERTION PLAN

SCALE - 1:300

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GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	4.97
PD-01	PROPERTY DEVELOPMENT	16.13

TENTATIVE LAND	PERMANENT LAND
688 SQ M	325 SQ M

ANCILLARY BUILDING LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

LEGEND

	FOUNTAIN
	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
	PERMANENT LAND

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
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LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
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KEY PLAN

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R4	10-JAN-2024	TENDER ADDENDUM
R3	29-NOV-2023	As per GC Comments
R2	02-NOV-2023	As per GC Comments
R1	26-OCT-2023	As per GC Comments
R0	25-SEP-2023	First Issue
REV. NO.	DATE	DESCRIPTION

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das	Sayantan Mukherjee	Sudipta Chakraborty	Amitava Das

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES. TOWER-B, 12/3,
MATHURA ROAD. NH-2. SECTOR-27/D,
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PH. 0129 668 5600
SUBSIDIARY OF
SYSTRA S.A. 25 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN:		SIGN:	SIGN:
DATE:	13TH JANUARY 2024	DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024
NAME:	VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION:	Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)
REVIEWED BY		APPROVED BY	VETTED BY

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
7th Floor, Cyber Heights, Vibhuti Khand, Gomti Nagar, Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

TENDER DRAWING

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: MG ROAD STATION
INSERTION PLAN

SCALE: AS SHOWN DATE: 25-SEP-2023 STAGE: TENDER

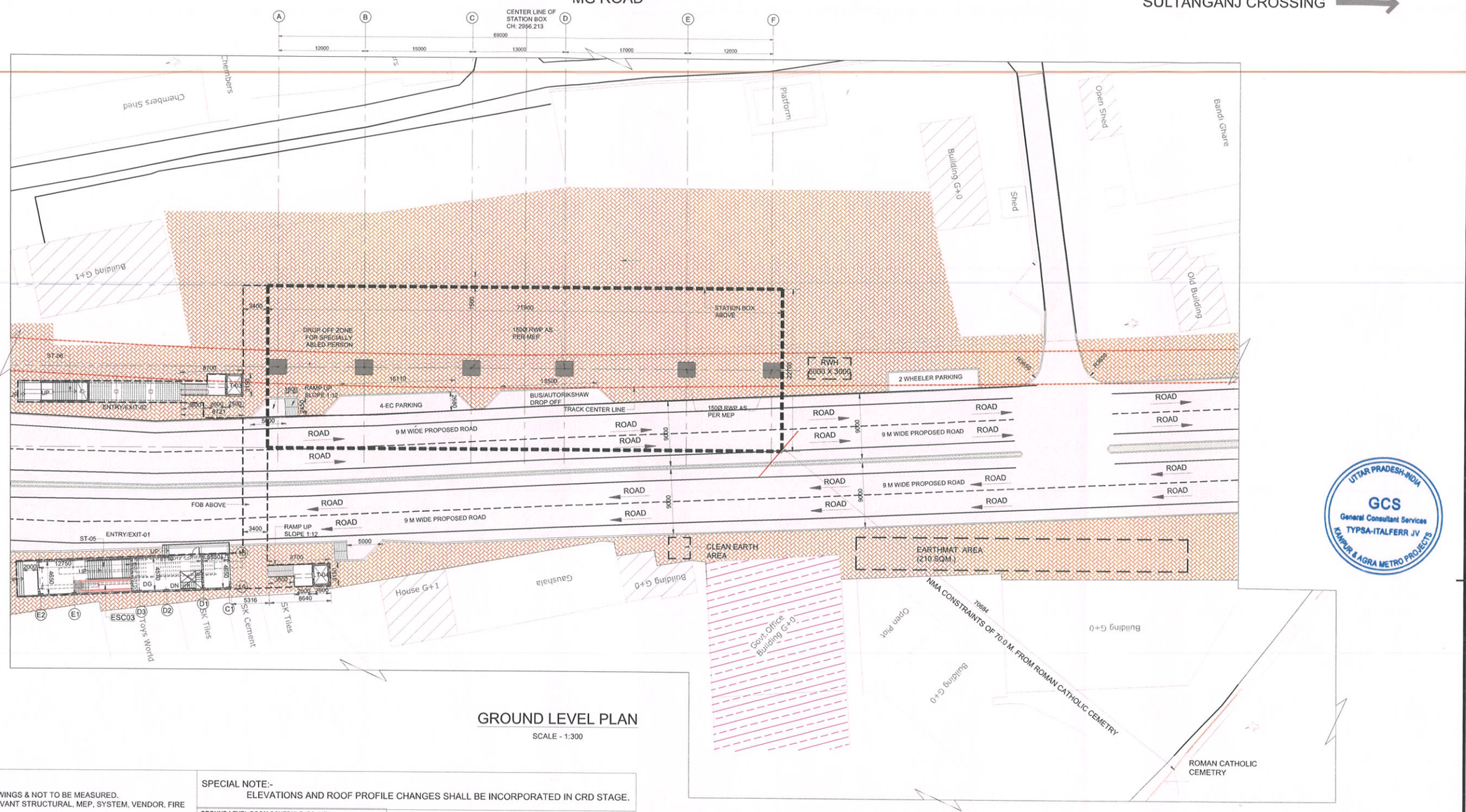
ORIGINAL DRAWING NO: KAP-SDD-ARCHITECTURE-MGR-PLN-55001

OFFICE OF ORIGIN
SYSTRA

REVISION NO: R4

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

SANJAY PALACE ← MG ROAD → SULTANGANJ CROSSING



GROUND LEVEL PLAN

SCALE - 1:300

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GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	4.97
PD-01	PROPERTY DEVELOPMENT	16.13

TENTATIVE LAND	PERMANENT LAND
688 SQ M	325 SQ M

ANCILLARY BUILDING LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

LEGEND

	FOUNTAIN
	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
	PERMANENT LAND

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LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
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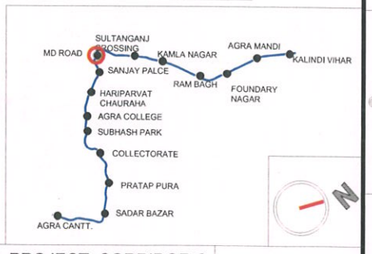
ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN



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RE.	DATE	DESCRIPTION
R3	10-JAN-2024	TENDER ADDENDUM
R2	29-NOV-2023	As per GC Comments
R1	26-OCT-2023	As per GC Comments
R0	25-SEP-2023	For Issue

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DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das	Sayantan Mukherjee	Sudipta Chakraborty	Amitava Das

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
FURTHER INFO OF SYSTRA AT 14 AVENUE DU COQ - PARIS 75009

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☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024	DATE: 13TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos. S.A. and Italferr S.P.A
7th Floor, Cyber Heights, Vishal Khand, Gomti Nagar, Lucknow

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

TENDER DRAWING

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: MG ROAD STATION
GROUND LEVEL PLAN

SCALE: AS SHOWN DATE: 25-SEP-2023 STAGE: TENDER

DRG NO.: KAPA-GCS-STATION-MGR-ARC-PLN-55002

OFFICE OF ORIGIN
SYSTRA

ARCHITECTURE

REVISION NO: R3

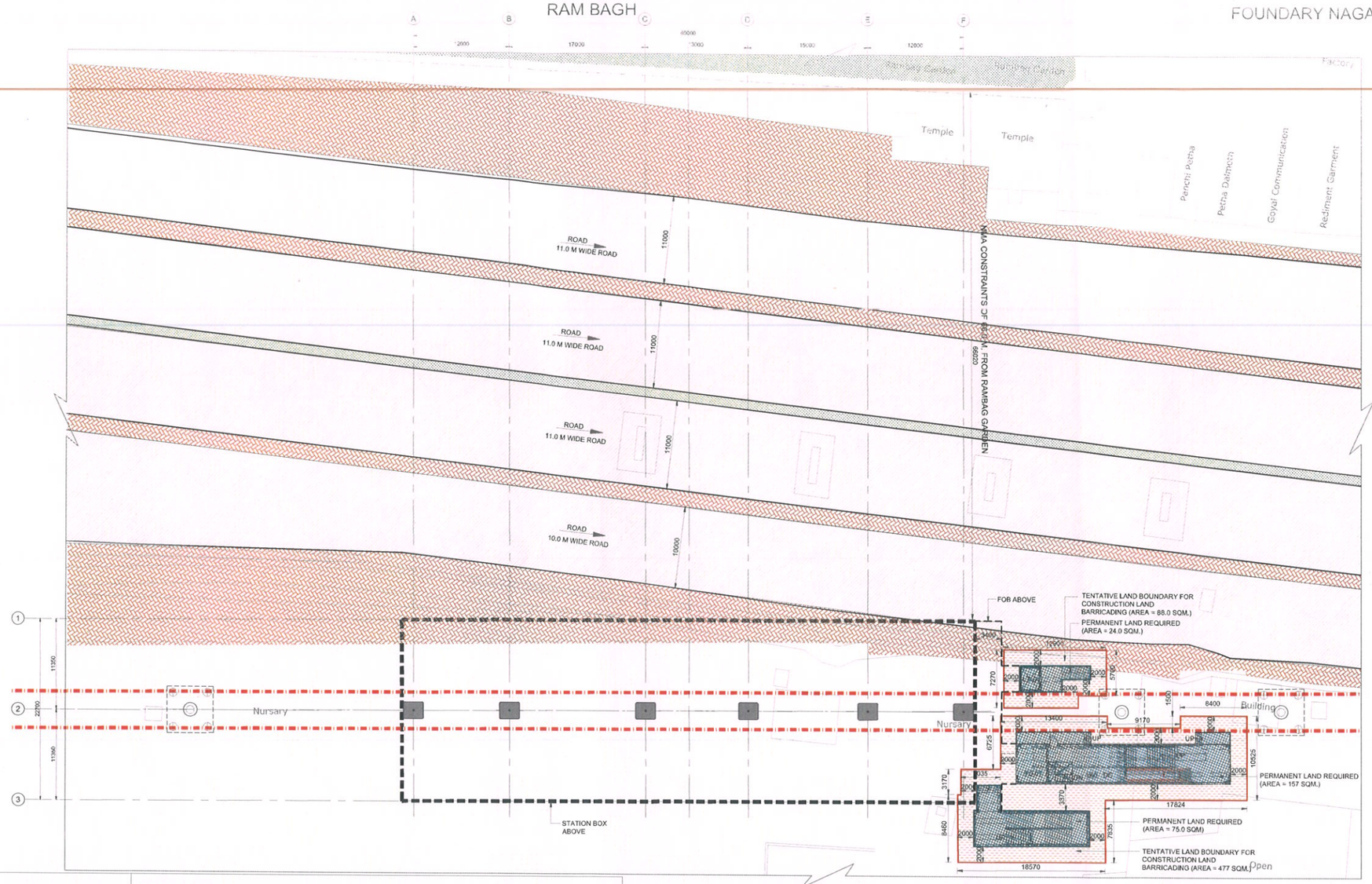
UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

Annexure - 29 (1/2)

KAMLA NAGAR

RAM BAGH

FOUNDARY NAGAR



INSERTION PLAN

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LT-04	LIFT	4.97
PD-01	PROPERTY DEVELOPMENT	16.13

TENTATIVE LAND	PERMANENT LAND
565 SQ M	256 SQ M

LEGEND

	FOUNTAIN
	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
	PERMANENT LAND

ANCILLARY BUILDING LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

NOTE:-
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TENDER DRAWING

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN

GENERAL NOTES:
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REV NO	DATE	DESCRIPTION
R2	16-JAN-2024	TENDER ADDENDUM
R1	02-NOV-2023	As per GC Comments
R0	25-SEP-2023	First Issue

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DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das (Digitally signed by Avijit Das, Date: 2024.01.16 15:50:08 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee, Date: 2024.01.16 15:51:44 +05'30')	Sudipta Chakraborty (Digitally signed by Sudipta Chakraborty, Date: 2024.01.16 15:52:12 +05'30')	Amitava Das (Digitally signed by Amitava Das, Date: 2024.01.16 15:53:03 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 16th JANUARY 2024	DATE: 16th JANUARY 2024	DATE: 16th JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Helghts
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: RAM BAGH STATION
INSERTION PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-RMB-ARC-PLN-58051

OFFICE OF ORIGIN
SYSTRA

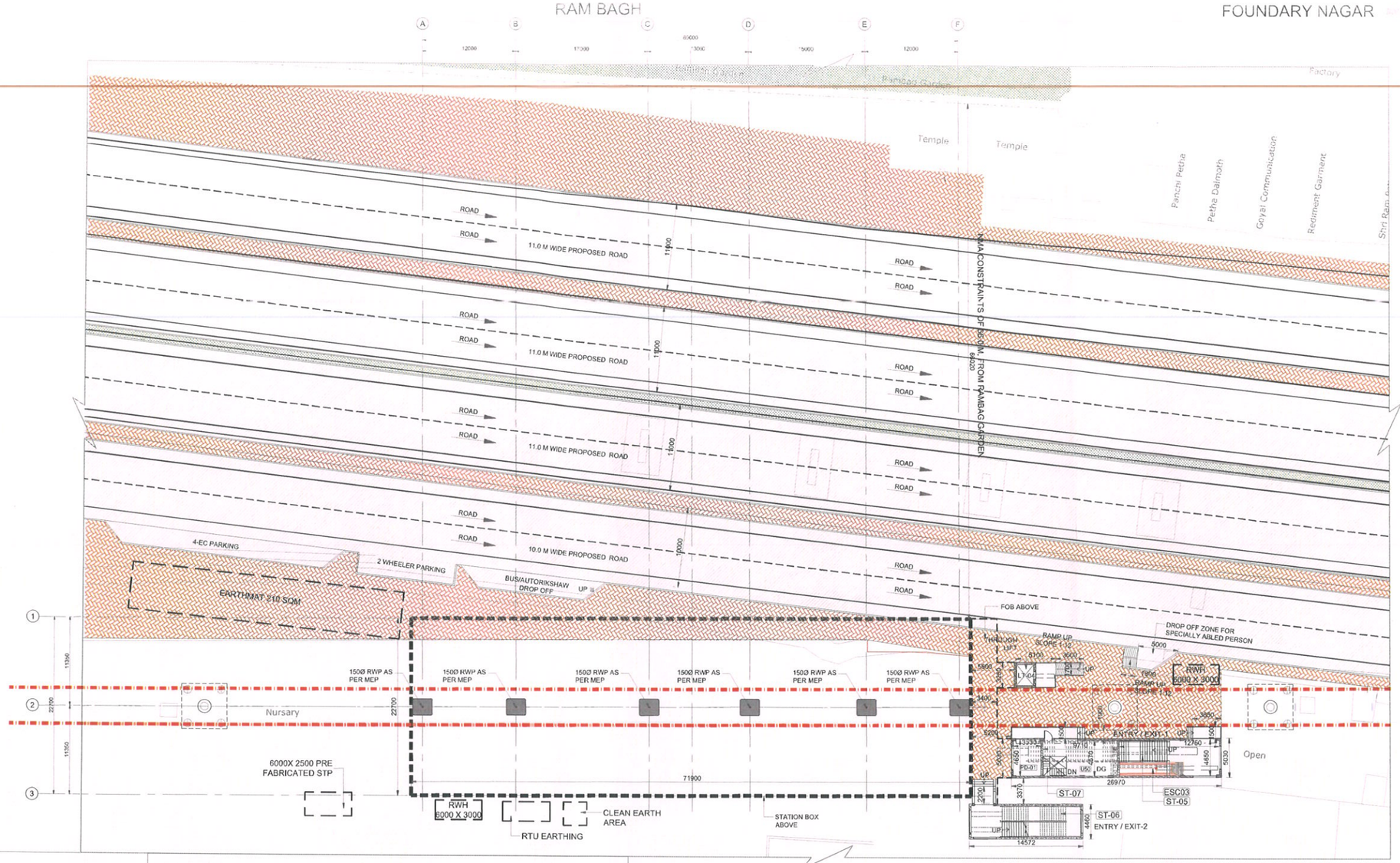
REVISION NO: R2

UTTAR PRADESH-INDIA
GCS
General Consultant Services
TYPSA-ITALFERR JV
KANPUR & AGRA METRO PROJECTS

KAMLA NAGAR

RAM BAGH

FOUNDARY NAGAR



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16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1.D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	4.97
PD-01	PROPERTY DEVELOPMENT	16.13

TENTATIVE LAND	PERMANENT LAND
565 SQ M	256 SQ M

LEGEND

	FOUNTAIN
	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
	PERMANENT LAND

ANCILLARY BUILDING LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

GROUND LEVEL PLAN

SCALE - 1:300

NOTE:-
THE SHOWN STATION ARRANGEMENT IS SCHEMATIC ONLY FOR UNDERSTANDING. EITHER A 'SINGLE COLUMN STATION SCHEME' OR 'TWO COLUMN PORTAL STATION SCHEME' OR 'THREE COLUMN PORTAL STATION SCHEME', WITHOUT AFFECTING ADJACENT STRUCTURES/PRIVATE PROPERTY/OPEN PLOTS ETC, SHALL BE IMPLEMENTED AS PER SITE CONSTRAINTS AND CONSTRUCTION FEASIBILITY, AFTER THE APPROVAL OF THE ENGINEER. "

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN

TENDER DRAWING

GENERAL NOTES:
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REV NO	DATE	DESCRIPTION
R2	16-JAN-2024	TENDER ADDENDUM
R1	02-NOV-2023	As per GC Comments
R0	25-SEP-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Avijit Das (Digitally signed by Avijit Das Date: 2024.01.16 15:54:10 +05'30')	Sayantan Mukherjee (Digitally signed by Sayantan Mukherjee Date: 2024.01.16 15:55:13 -05'30')	Sudipta Chakraborty (Digitally signed by Sudipta Chakraborty Date: 2024.01.16 15:55:47 +05'30')	Amitava Das (Digitally signed by Amitava Das Date: 2024.01.16 15:56:22 +05'30')

DETAIL DESIGN CONSULTANT

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
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REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE: 16TH JANUARY 2024	DATE: 16TH JANUARY 2024	DATE: 16TH JANUARY 2024
NAME: VIJAY S CHANDEL	NAME: ASHWANI MATHUR	NAME: ASHOK GHODESHWAR
DESIGNATION: Architect (K3)	DESIGNATION: Senior Ar. (K2)	DESIGNATION: CA_GC / Arch. (K1)

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: RAM BAGH STATION
GROUND LEVEL PLAN

ARCHITECTURE

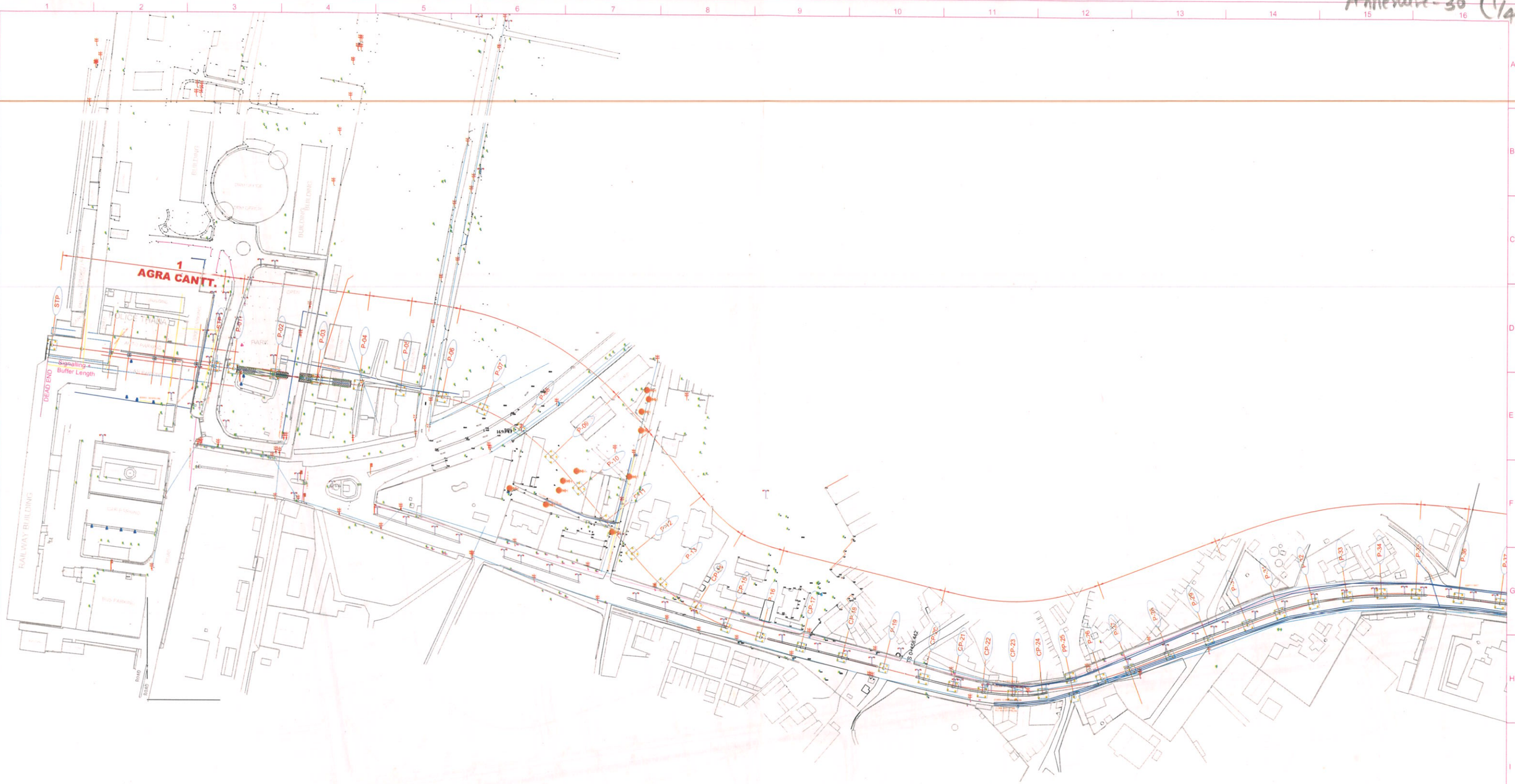
SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-RMB-ARC-PLN-58052

OFFICE OF ORIGIN

REVISION NO: R2

Annexure-30 (1/4)



LEGEND

No.	DESCRIPTION	SYMBOL
1	ELECTRIC CABLE LINE	
2	WATER LINE	
3	SEWER LINE	
4	BSNL FIBRE LINE	
5	GREEN GAS LINE	
6	LIGHT POLE	
7	TRAFFIC SIGNAL	
9	CAMERA	
10	MH	
11	JUNCTION BOX-JB	
12	UG ELECTRIC LINE	

GENERAL CONSULTANT

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED

☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
JE/CIVIL		
AM/CIVIL		
DY.CE./CIVIL		
CPM		17/01/24

PROJECT: AGRA METRO RAIL PROJECT
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

LOCATION: CHAINAGE

TITLE: UTILITY DRAWING

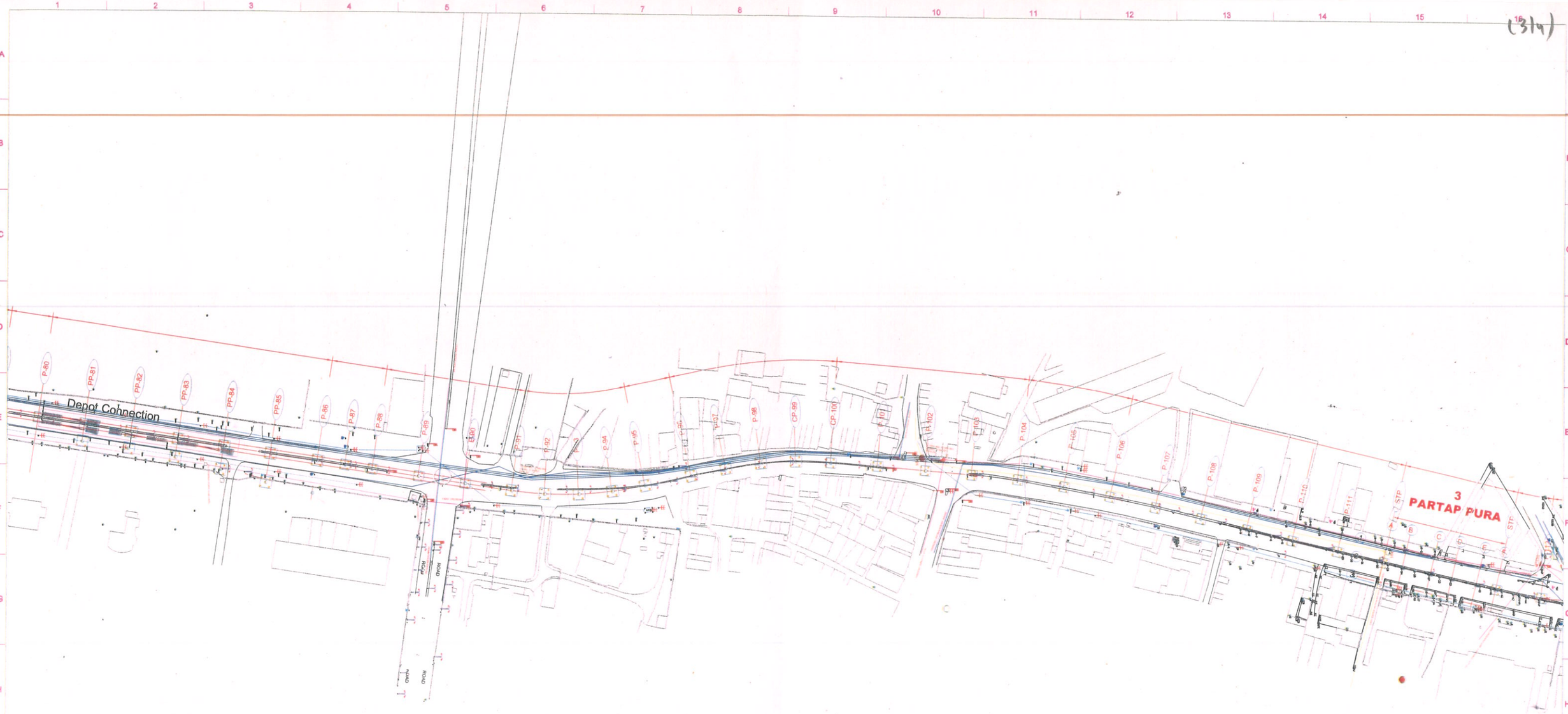
SCALE: As indicated | DATE: | STAGE:

DRG NO.: AGCC07-TDR-UTILITY SHEET-01

REVISION NO: R1

plot scale 50mm

(314)



LEGEND

No.	DESCRIPTION	SYMBOL
1	ELECTRIC CABLE LINE	
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☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
JE/CIVIL		
AM/CIVIL		
DY.CE/CIVIL		
CPM		17/01/24

PROJECT: AGRA METRO RAIL PROJECT
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

LOCATION: CHAINAGE

TITLE: UTILITY DRAWING

SCALE: As indicated | DATE: | STAGE:

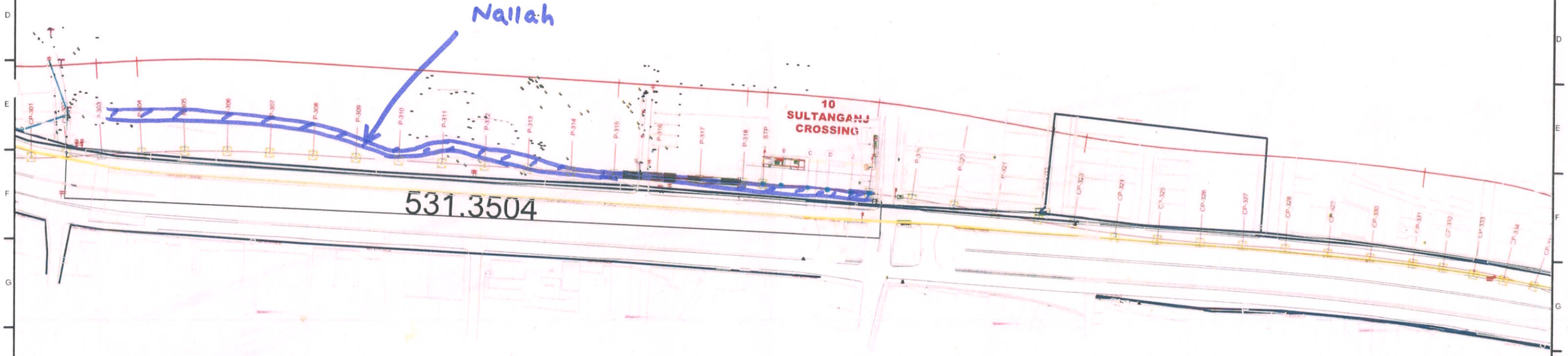
DRG NO.: AGCC07-TDR-UTILITY SHEET-03

REVISION NO: R1

plot scale 50mm

<< TOWARDS M G ROAD

TOWARDS KAMLA NAGAR >>



LEGEND

No.	DESCRIPTION	SYMBOL
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12	UG ELECTRIC LINE	

GENERAL CONSULTANT

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☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN	SIGN	SIGN
DATE	DATE	DATE
NAME	NAME	NAME
DESIGNATION	DESIGNATION	DESIGNATION

Consortium of Tecnica y Proyectos, S.A. and Italfer, S.P.A.
710 7th Floor, Cyber Heights Vibhuti Khand, Gomti Nagar Lucknow - 226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
JE/CIVIL		
AM/CIVIL		
DY.CE/CIVIL		
CPM		

PROJECT: AGRA METRO RAIL PROJECT
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: UTILITY DRAWING (CORRIDOR- 2)

SCALE: As indicated | DATE: | STAGE:

DRG NO. AGCC07-TDR-UTILITY SHEET-11

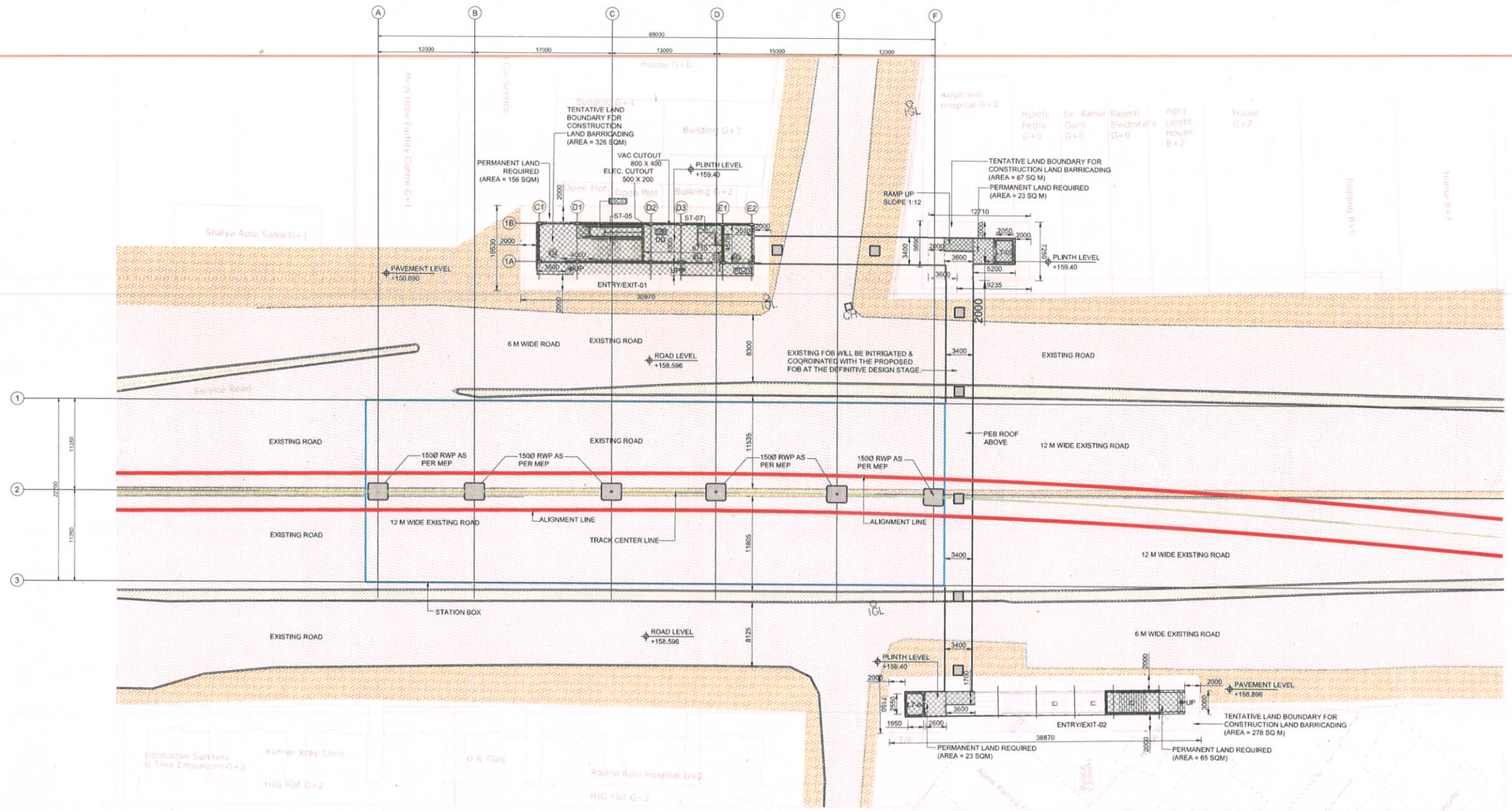
REVISION NO: R1

Annexure 31 (1/12)

SULTANGANJ CROSSING

KAMLA NAGAR
Chainage-172.600

RAM BAGH



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SPECIAL NOTE:-

ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TENTATIVE LAND	PERMANENT LAND
691 SQ M	278 SQ M

LEGEND

FOUNTAIN
GOVERNMENT STRUCTURE
PARK
TENTATIVE LAND
PERMANENT LAND

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INSERTION PLAN

SCALE - 1:300

GROUND LEVEL ROOM SCHEDULE (SQ. MT.)		
ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	5.27
PD-01	PROPERTY DEVELOPMENT	16.1

ANCILLARY BUILDING LEVEL ROOM SCHEDULE (SQ. MT.)		
ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

TENDER DRAWING

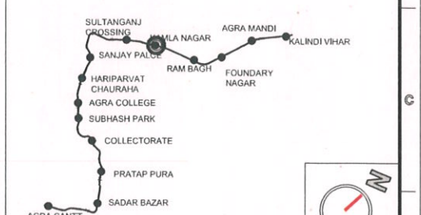
LEGEND

230 MM BLOCK WALL
GLASS
RCC WALL
FOOTPATH
GREEN
RAILWAY BOUNDARY
STATION BOX
FUTURE PLATFORM
TRACK CENTER
ALIGNMENT
ROAD
EXISTING DRAIN
SEC. / ELEV. NAME
DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN



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REV NO	DATE	DESCRIPTION
R2	03-JAN-2024	ADDENDUM
R1	06-NOV-2023	REVISED AS PER GC COMMENTS
R0	25-SEP-2023	First Issue

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DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Prerika Saxena (Digitally signed by Prerika Saxena Date: 2024.01.04 16:23:09 +05'30')	Snekha NATARAJAN (Digitally signed by Snekha NATARAJAN Date: 2024.01.04 16:23:27 +05'30')	Bhawana BAJPAI (Digitally signed by Bhawana BAJPAI Date: 2024.01.04 16:23:41 +05'30')	Amitava DAS (Digitally signed by Amitava DAS Date: 2024.01.04 16:23:59 +05'30')

DETAIL DESIGN CONSULTANT

SYSTRA

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
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SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

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☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:
REVIEWED BY	APPROVED BY	VETTED BY

GENERAL CONSULTANT

TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
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Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM	17/24	

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KAMLA NAGAR STATION
INSERTION PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

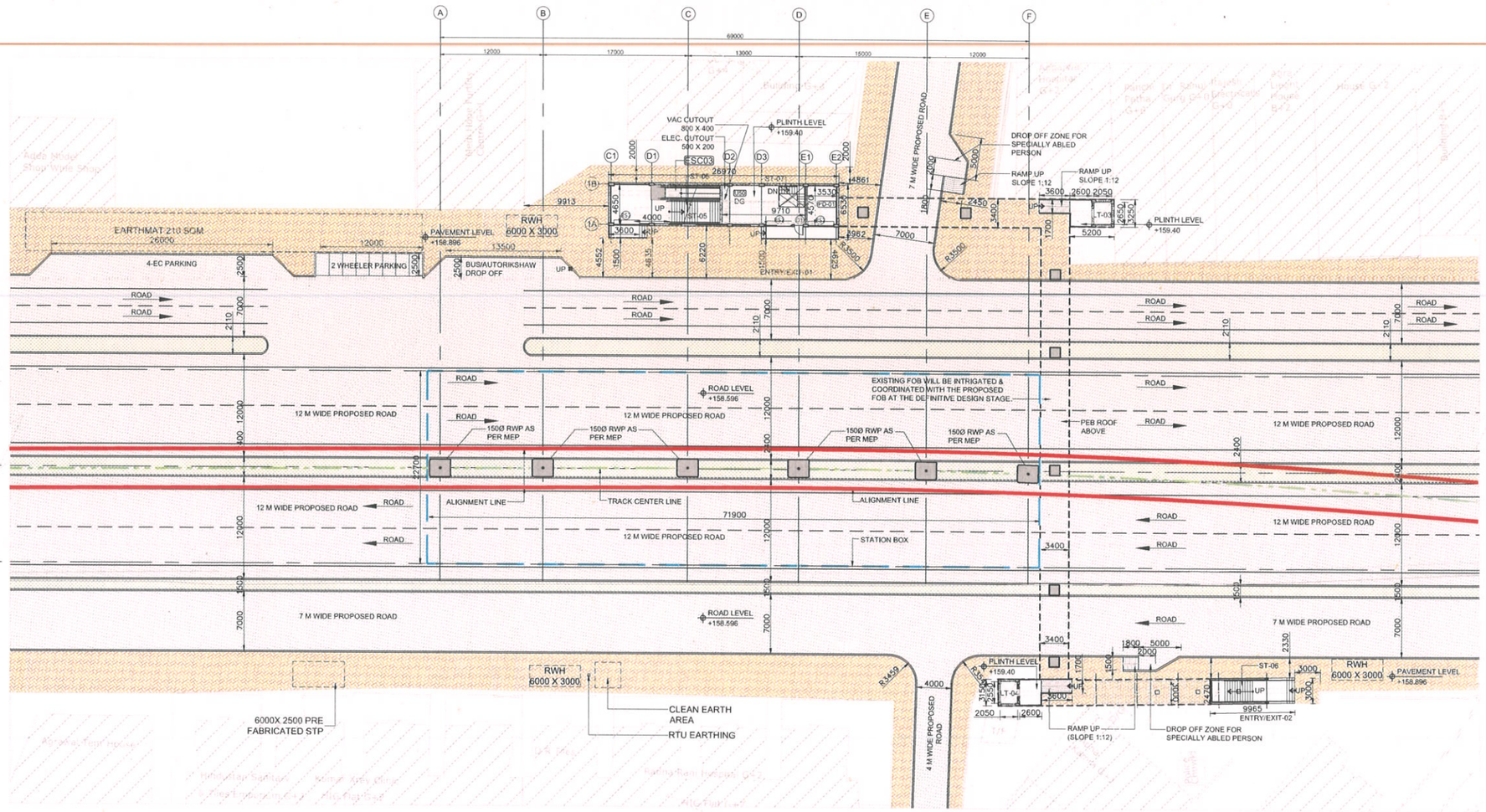
DRG NO: KNPAGDDC-01-TDR-KLN-ARC-PLN-57051

OFFICE OF ORIGIN

SYSTRA

REVISION NO: R2

SULTANGANJ CROSSING ← KAMLA NAGAR Chainage-172.600 → RAM BAGH



GROUND LEVEL PLAN

SCALE - 1:300

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SPECIAL NOTE:-

ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TENTATIVE LAND	PERMANENT LAND
691 SQ M	278 SQ M

LEGEND

- FOUNTAIN
- GOVERNMENT STRUCTURE
- PARK
- TENTATIVE LAND
- PERMANENT LAND

NOTE:-

1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	5.27
PD-01	PROPERTY DEVELOPMENT	16.1

ANCILLARY BUILDING **LEVEL ROOM SCHEDULE** (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

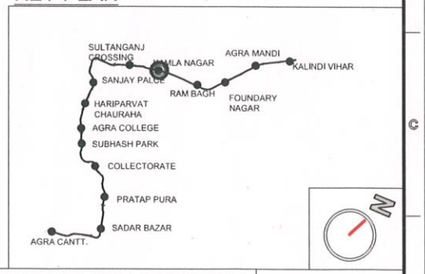
LEGEND

- 230 MM BLOCK WALL
- GLASS
- RCC WALL
- FOOTPATH
- GREEN
- RAILWAY BOUNDARY
- STATION BOX
- FUTURE PLATFORM
- TRACK CENTER
- ALIGNMENT
- ROAD
- EXISTING DRAIN
- SEC. / ELEV. NAME
- DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN



TENDER DRAWING

GENERAL NOTES:

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REV NO	DATE	DESCRIPTION
R2	03-JAN-2024	ADDENDUM
R1	06-NOV-2023	REVISED AS PER GC COMMENTS
R0	25-SEP-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Prerika Saxena (Digitally signed by Prerika Saxena Date: 2024.01.04 16:24:36 +05'30')	Snekha NATARAJAN (Digitally signed by Snekha NATARAJAN Date: 2024.01.04 16:24:55 +05'30')	Bhawana BAJPAI (Digitally signed by Bhawana BAJPAI Date: 2024.01.04 16:25:08 +05'30')	Amitava DAS (Digitally signed by Amitava DAS Date: 2024.01.04 16:25:22 +05'30')

DETAIL DESIGN CONSULTANT: SYSTRA

SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:

GENERAL CONSULTANT: TYPSA - ITALFERR

Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

	COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA			
CA			
CPM			

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: KAMLA NAGAR STATION
GROUND LEVEL PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

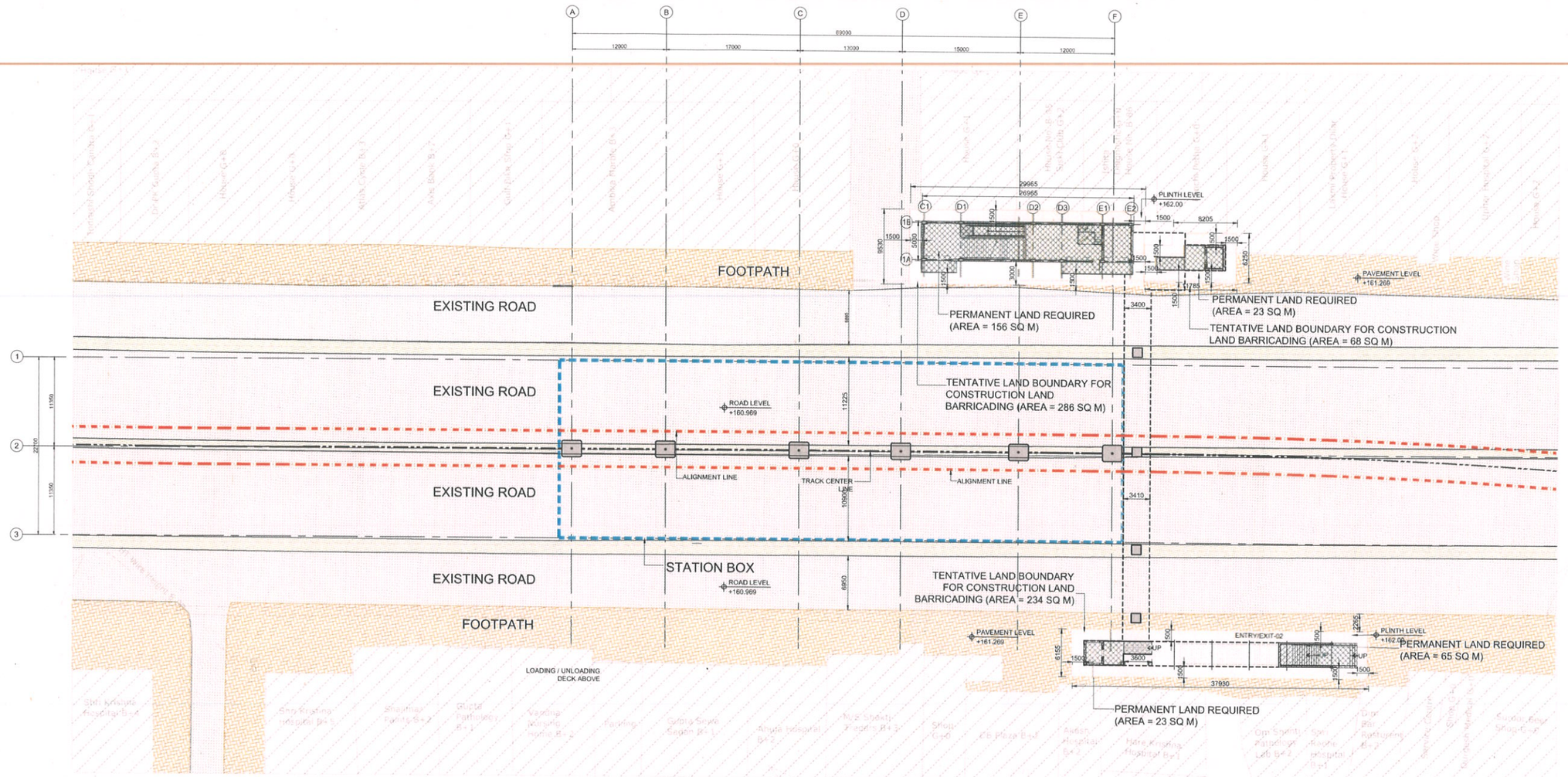
DRG NO: KNPAGDDC-01-TDR-KLN-ARC-PLN-57052

OFFICE OF ORIGIN: SYSTRA

REVISION NO: R2

Annexure - 32 (1/2)

RAM BAGH ← FOUNDARY NAGAR Chainage–175.200 → AGRA MANDI



INSERTION PLAN

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SPECIAL NOTE:-

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TENTATIVE LAND	PERMANENT LAND
588 SQ M	267 SQ M

LEGEND

	FOUNTAIN
	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
	PERMANENT LAND

NOTE:-

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GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	5.27
PD-01	PROPERTY DEVELOPMENT	16.1

ANCILLARY BUILDING **LEVEL ROOM SCHEDULE** (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

TENDER DRAWING

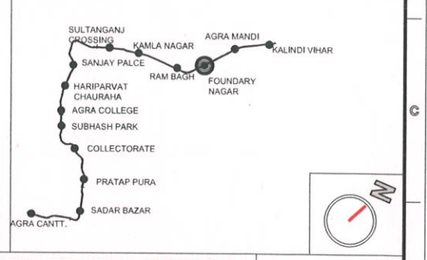
LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN



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DDC / CONTRACTOR

Prerika Saxena	Snekha NATARAJAN	Bhawana BAJPAI	Amitava DAS
Digitally signed by Prerika Saxena Date: 2024.01.04 16:18:33 +05'30'	Digitally signed by Snekha NATARAJAN Date: 2024.01.04 16:19:12 +05'30'	Digitally signed by Bhawana BAJPAI Date: 2024.01.04 16:19:29 +05'30'	Digitally signed by Amitava DAS Date: 2024.01.04 16:19:48 +05'30'
DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:
REVIEWED BY	APPROVED BY	VETTED BY

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

DETAIL DESIGN CONSULTANT

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GENERAL CONSULTANT

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Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
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Vibhuti Khand, Gomti Nagar,
Lucknow-226010

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED, ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR, LUCKNOW, UTTAR PRADESH-226010

UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: FOUNDARY NAGAR STATION
INSERTION PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-FDN-ARC-PLN-59051

OFFICE OF ORIGIN

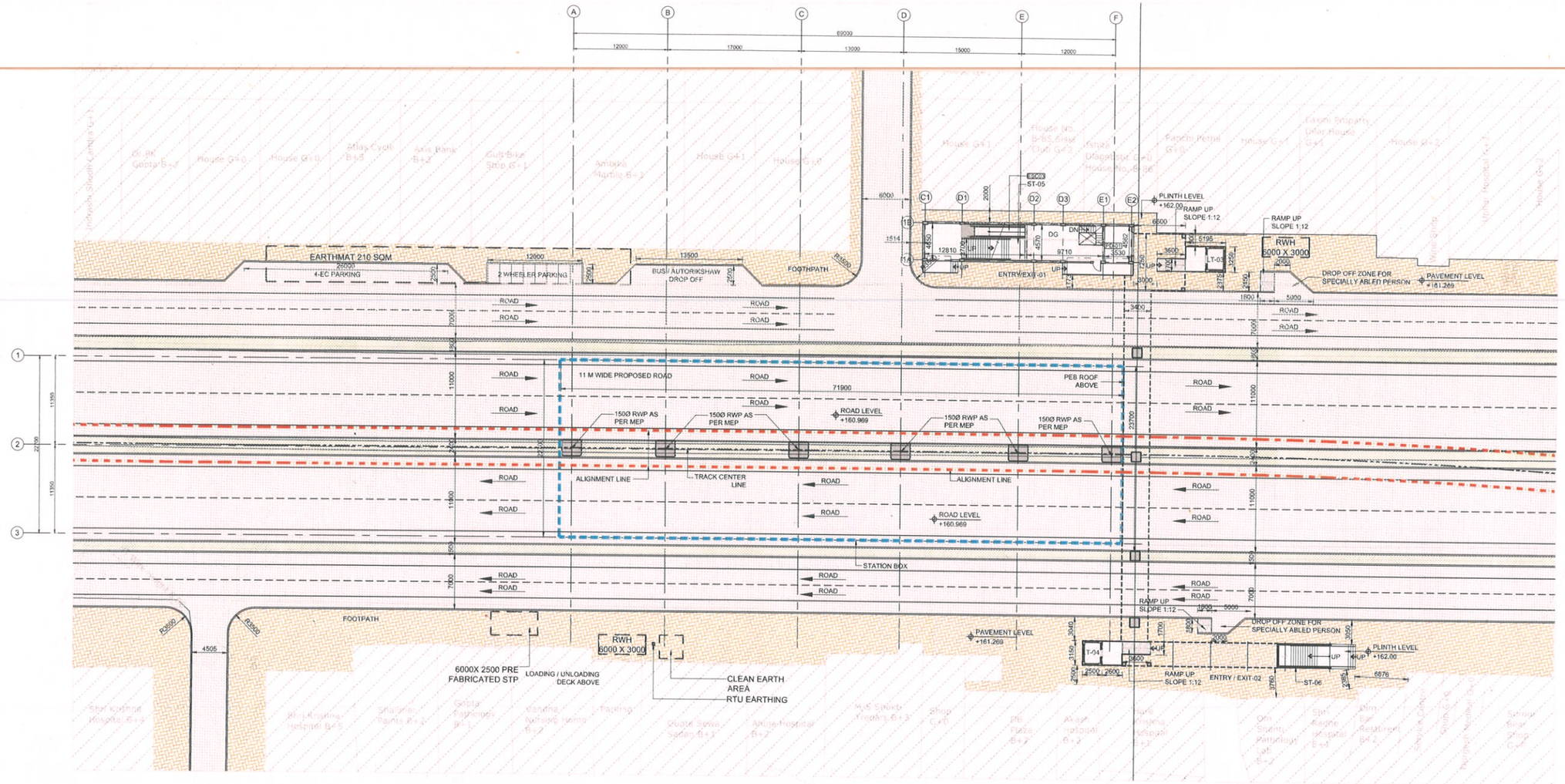
SYSTRA

REVISION NO: R2

17/1/24

(212)

RAM BAGH ← FOUNDARY NAGAR Chainage–175.200 → AGRA MANDI



GROUND LEVEL PLAN

SCALE - 1:300

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ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

TENDER DRAWING

LEGEND

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	GLASS
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	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
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KEY PLAN

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DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Prerika Saxena (Digitally signed by Prerika Saxena Date: 2024.01.04 16:16:57 +05'30')	Snekha NATARAJAN (Digitally signed by Snekha NATARAJAN Date: 2024.01.04 16:27:32 +05'30')	Bhawana BAJPAI (Digitally signed by Bhawana BAJPAI Date: 2024.01.04 16:27:49 +05'30')	Amitava DAS (Digitally signed by Amitava DAS Date: 2024.01.04 16:28:04 +05'30')

DETAIL DESIGN CONSULTANT

SYSTRA

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VATIKA MINDSCAPES, TOWER-B, 12/3,
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REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:

GENERAL CONSULTANT

TYPSA - ITALFERR

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PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
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UPMRCL

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: FOUNDARY NAGAR STATION
GROUND LEVEL PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-FDN-ARC-PLN-59052

OFFICE OF ORIGIN

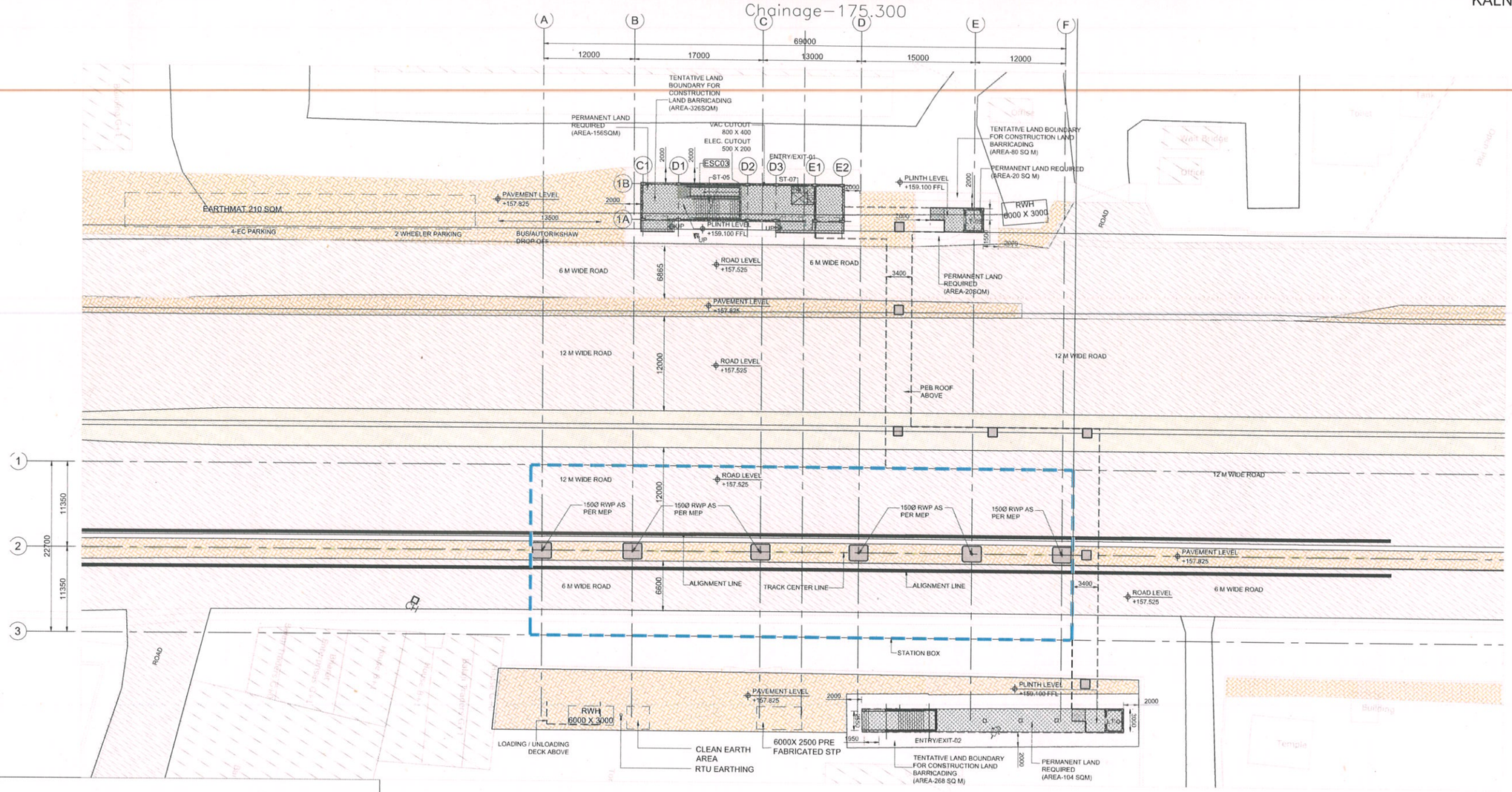
SYSTRA

REVISION NO: R2

FOUNDARY NAGAR

AGRA MANDI STATION
Chainage – 175.300

KALNDI VIHAR



INSERTION PLAN

SCALE - 1:300

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14. ROOM SIZE, HEIGHTS DOOR/SIZE AND CUTOUT DIMENSIONS BY RELEVANT DICIPLINES OF ENGINEERING.
15. ALL PEB PROFILES / STRUCTURAL SUPPORT SYSTEM SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY, DETAILS TO BE PROVIDED BY PEB CONSULTANT.
16. CONCOURSE SHALL BE POINT OF SAFTY AS PER CLAUSE REF:J-5.1,D:ECAVATION TIME,PART-4 FIRE LIFE & SAFTY OF NBC 2016 VOL.1

NOTE:-
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SPECIAL NOTE:-
ELEVATIONS AND ROOF PROFILE CHANGES SHALL BE INCORPORATED IN CRD STAGE.

TENTATIVE LAND	PERMANENT LAND
675 SQ M	300 SQ M

LEGEND

	FOUNTAIN
	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
	PERMANENT LAND

NOTE:-
1. EXISTING DRAIN NEEDS TO BE DIVERTED.
2. AVAILABILITY OF LAND FOR PROPOSED ENTRIES NEEDS TO BE CONFIRMED BY UPMRC.

GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
LT-03	LIFT	5.43
LT-04	LIFT	5.27
PD-01	PROPERTY DEVELOPMENT	16.1

ANCILLARY BUILDING **LEVEL ROOM SCHEDULE** (SQ. MT.)

ROOM NO.	ROOM NAME	AREA
U50	DG	44.37

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
	ROAD
	EXISTING DRAIN
	SEC. / ELEV. NAME
	DRAWING NUMBER

ABBREVIATIONS

LT	LIFT
ST	STAIRCASE
ESC	ESCALATOR
RWH	RAINWATER HARVESTING
STP	SEWAGE TREATMENT PLANT
RS	ROLLING SHUTTER

KEY PLAN

TENDER DRAWING

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
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REV NO	DATE	DESCRIPTION
R1	03-JAN-2024	ADDENDUM
R0	25-SEP-2023	First Issue

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT / CODAL PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT.

DDC / CONTRACTOR

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
Prerika Saxena (Digitally signed by Prerika Saxena Date: 2024.01.04 16:30:08 +05'30')	Snekha NATARAJAN (Digitally signed by Snekha NATARAJAN Date: 2024.01.04 16:30:25 +05'30')	Bhawana BAJPAI (Digitally signed by Bhawana BAJPAI Date: 2024.01.04 16:30:40 +05'30')	Amitava DAS (Digitally signed by Amitava DAS Date: 2024.01.04 16:30:56 +05'30')

DETAIL DESIGN CONSULTANT
SYSTRA MVA CONSULTING (INDIA) PVT. LTD.
VATIKA MINDSCAPES, TOWER-B, 12/3,
MATHURA ROAD, NH-2, SECTOR-27/D,
FARIDABAD, HARYANA-121013
PH: 0129 668 5600
SUBSIDIARY OF:
SYSTRA S.A. - 5 AVENUE DU COQ - PARIS 75009

THIS DRAWING, DESIGN AND DETAILING HAVE BEEN PROOF CHECKED BY US AND IS SUITABLE FOR EXECUTION AND IS APPROVED.

☐ NOC ☐ NOWC ☐ RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:

GENERAL CONSULTANT
TYPSA - ITALFERR
Consortium of Tecnica y Proyectos, S.A. and Italferr S.P.A
710, 7th Floor, Cyber Heights
Vibhuti Khand, Gomti Nagar,
Lucknow-226010

COUNTER SIGNED BY UPMRCL	DATE	SIGNATURE
DY.CA		
CA		
CPM		

PROJECT: KANPUR & AGRA METRO RAIL PROJECT: CORRIDOR-2
UTTAR PRADESH METRO RAIL CORPORATION LIMITED,
ADMINISTRATIVE BUILDING, VIPIN KHAND, GOMATI NAGAR,
LUCKNOW, UTTAR PRADESH-226010

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA MANDI STATION
INSERTION PLAN

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-AGM-ARC-PLN-60051

ARCHITECTURE

OFFICE OF ORIGIN
SYSTRA

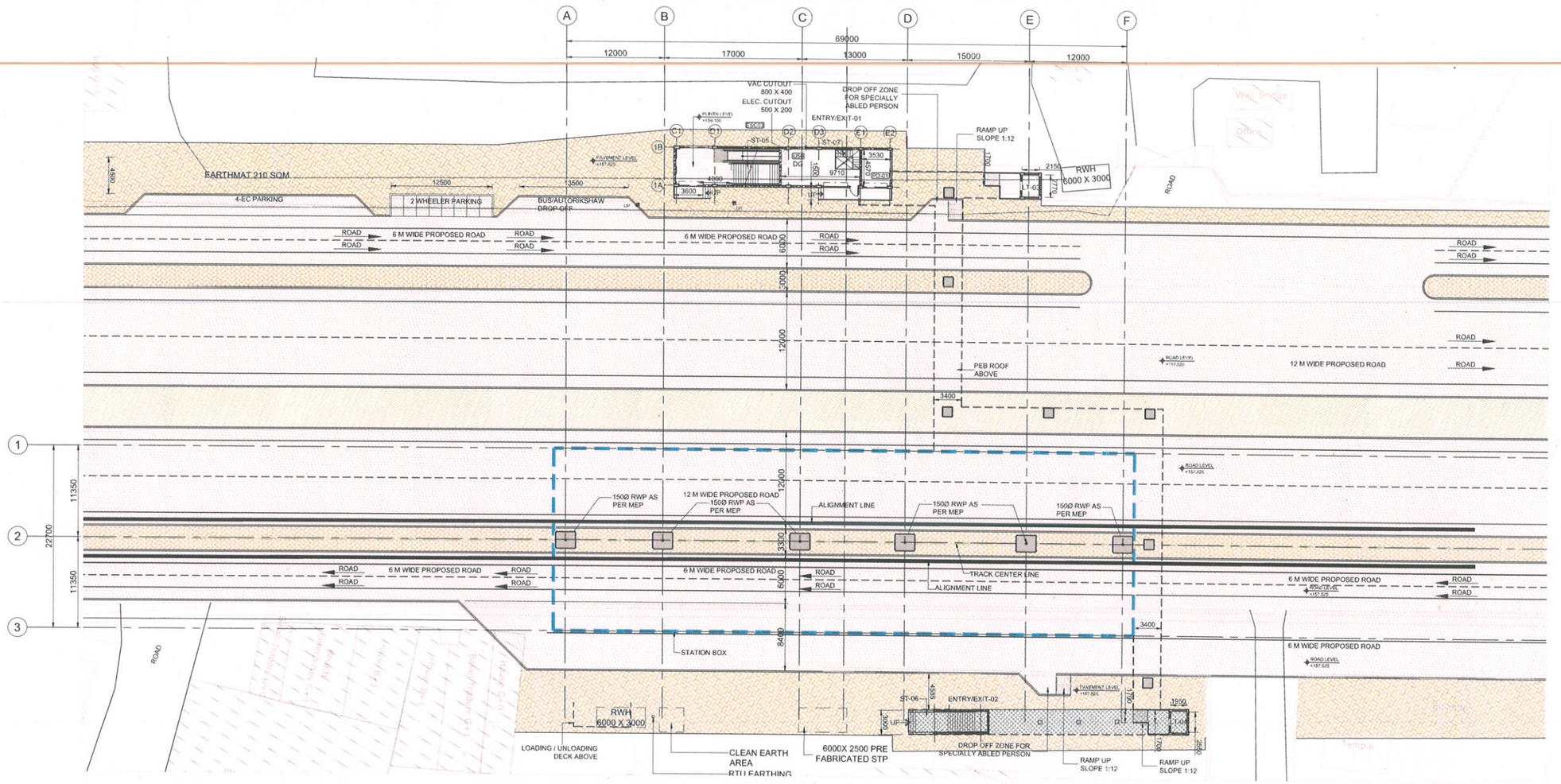
REVISION NO: R1

Annexure - 33 (1/2)

FOUNDARY NAGAR

AGRA MANDI
CHAINAGE-172.300

KALINDI VIHAR



GROUND LEVEL PLAN

SCALE - 1:300

SPECIAL NOTE:-
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4. ANY DISCREPANCY THUS ARRIVED MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT.
5. THIS DRAWINGS HAVE BE DEVELOPED IN CONFORMITY TO DPR,SOD,UPMRC & OTHER LOCAL BODY REQUIRMENT.
6. THE DRAWINGS HAVE BEEN DEVELOPED BASED ON THE ALIGNMENT RECEIVED VIA EMAIL
7. LIFT PIT & SHAFT SIZE IN THE DRAWINGS HAVE BEEN PROVIDED AS / NBC REF (CLAUSE: 5.10.31 PAGE 376,38, VL-2, PART 8)
8. FOR CONFORMATION OF FIRE , LIFT & SAFETY REQUIREMENTS, NBC REF (CLAUSE 4.4.2.2, PART 4) HAS BEEN REFEREED.
9. PIT DIMENSIONS ARE SUBJECT TO CHANGE AS/VENDOR REQUIREMENTS.
10. TRACK C/C DIMENSIONS ARE PROVIDED WITH LETTER REF. NO. LMRC/KNDOD-01/BILL PAYMENT DATED 11.11.2019 MOM REF. NO. - O-SYST-KNPDD-01-MOM-00010, DATED 07.08.2019
11. STAIRCASE MID-LANDING DIMENSIONS HAVE BEEN ADOPTED VIDE MOM REF.O-SYST-KNPDD-01-MM-00011, DATED -22.08.19.
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675 SQ M	300 SQ M

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	GOVERNMENT STRUCTURE
	PARK
	TENTATIVE LAND
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GROUND LEVEL ROOM SCHEDULE (SQ. MT.)

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LT-04	LIFT	5.27
PD-01	PROPERTY DEVELOPMENT	16.1

ANCILLARY BUILDING **LEVEL ROOM SCHEDULE** (SQ. MT.)

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U50	DG	44.37

TENDER DRAWING

LEGEND

	230 MM BLOCK WALL
	GLASS
	RCC WALL
	FOOTPATH
	GREEN
	RAILWAY BOUNDARY
	STATION BOX
	FUTURE PLATFORM
	TRACK CENTER
	ALIGNMENT
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	EXISTING DRAIN
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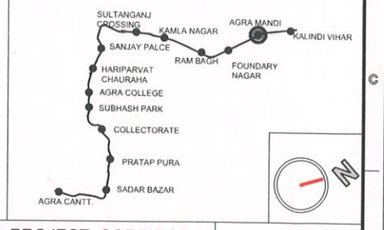
KEY PLAN



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DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
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☐NOC ☐NOWC ☐RESUBMIT

REVIEWED BY	APPROVED BY	VETTED BY
SIGN:	SIGN:	SIGN:
DATE:	DATE:	DATE:
NAME:	NAME:	NAME:
DESIGNATION:	DESIGNATION:	DESIGNATION:

GENERAL CONSULTANT
TYPSA - ITALFERR
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OFFICE OF ORIGIN: SYSTRA

CLIENT: UP METRO RAIL CORPORATION LTD.

TITLE: AGRA MANDI STATION
GROUND LEVEL PLAN

ARCHITECTURE

SCALE: AS SHOWN | DATE: 25-SEP-2023 | STAGE: TENDER

DRG NO: KNPAGDDC-01-TDR-AGM-ARC-PLN-60052

REVISION NO: R1