

NATIONAL CAPITAL REGION TRANSPORT CORPORATION LIMITED

(A Joint Venture Govt. of India and participating State Govts.)

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Dated 01.09.2020**Addendum and Corrigendum No. 06B**

Name of Work: - Bid No. DM/ST/COR-OF/100, Package 24: Design, Supply, Installation, Testing and Commissioning of Signalling & Train Control, Platform Screen Doors and Telecommunication Systems for Delhi – Ghaziabad – Meerut RRTS Corridor of NCRTC

S.N	Bid Document Section / Clause No.	Existing Document/Form/Clause/ Sub Clause	Modified Document/Form/Clause/Sub Clause
1	PART II A/ P24 PART-2- 1/ SECTION 6C PARTICULAR SPECIFICATIONS TELECOMMUNICATION / CH- 5/ CLAUSE NO. 5.6.2.6 (27), 5.6.2.7 (30), 5.6.2.10 (10)	5.6.2.6 (27): Storage Temp (-20 °C to + 70°C) 5.6.2.7 (30): Storage Temp (-20 °C to + 70°C) 5.6.2.10 (10): Temperature (-40°C to 50°C)	5.6.2.6 (27): Storage Temp: -20 °C to + 70 <u>55°C or better</u> 5.6.2.7 (30): Storage Temp: -20 °C to + 70 <u>55°C or better</u> 5.6.2.10 (10): Temperature: <u>-20</u> 40°C to 50°C <u>or better</u>
2	PART II A/ P24 PART-2- 1/ SECTION 6C PARTICULAR SPECIFICATIONS TELECOMMUNICATION / CH- 7/ CLAUSE NO. 7.2.20	"Preference to domestic made electronic goods In procurement due to security consideration" shall be applicable as per Government of India policy as on date of	"Preference to domestic made electronic goods In procurement due to security consideration" shall be applicable as per Government of India policy as on date

		<p>opening of price bid, The OEM claiming to qualify under the scope of such rules for PMA (Preferential Market Access) must submit the declaration of VA (Value Addition) as required under the Issued notification.</p>	<p>of opening of price bid, The OEM claiming to qualify under the scope of such rules for PMA (Preferential Market Access) must submit the declaration of VA (Value Addition) as required under the Issued notification.</p> <p><u>NOT USED</u></p>																																
<p>3</p>	<p>Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -3, Clause No:3.1.2 (Sl. No: 13 and 25)</p>	<table border="1"> <tr> <td data-bbox="819 518 876 810">13</td> <td data-bbox="876 518 1035 810">Meerut South</td> <td data-bbox="1035 518 1078 810">4</td> <td data-bbox="1078 518 1179 810">2 Island</td> <td data-bbox="1179 518 1260 810"></td> <td data-bbox="1260 518 1388 810">Elevated</td> <td data-bbox="1388 518 1489 810">Half Height all 4 edges for 6/3 car gates</td> <td data-bbox="1489 518 1590 810">RRTS+ Metro</td> </tr> <tr> <td data-bbox="819 810 876 975">25</td> <td data-bbox="876 810 1035 975">Modipuram Depot Station</td> <td data-bbox="1035 810 1078 975">2</td> <td data-bbox="1078 810 1179 975"></td> <td data-bbox="1179 810 1260 975">2 Side</td> <td data-bbox="1260 810 1388 975">Elevated / At Grade</td> <td data-bbox="1388 810 1489 975">Half Height</td> <td data-bbox="1489 810 1590 975">Metro</td> </tr> </table>	13	Meerut South	4	2 Island		Elevated	Half Height all 4 edges for 6/3 car gates	RRTS+ Metro	25	Modipuram Depot Station	2		2 Side	Elevated / At Grade	Half Height	Metro	<table border="1"> <tr> <td data-bbox="1617 518 1675 842">13</td> <td data-bbox="1675 518 1834 842">Meerut South</td> <td data-bbox="1834 518 1877 842">4</td> <td data-bbox="1877 518 1993 842">2 Island <u>1 Island</u></td> <td data-bbox="1993 518 2073 842"><u>1 Side</u></td> <td data-bbox="2073 518 2202 842">Elevated</td> <td data-bbox="2202 518 2303 842">Half Height all 4 edges <u>3 edges</u> for 6/3 car gates</td> <td data-bbox="2303 518 2404 842">RRTS+ Metro</td> </tr> <tr> <td data-bbox="1617 842 1675 1007">25</td> <td data-bbox="1675 842 1834 1007">Modipuram Depot Station</td> <td data-bbox="1834 842 1877 1007">2</td> <td data-bbox="1877 842 1993 1007"></td> <td data-bbox="1993 842 2073 1007">2 Side</td> <td data-bbox="2073 842 2202 1007">Elevated/ At Grade</td> <td data-bbox="2202 842 2303 1007">Half Height</td> <td data-bbox="2303 842 2404 1007">Metro</td> </tr> </table>	13	Meerut South	4	2 Island <u>1 Island</u>	<u>1 Side</u>	Elevated	Half Height all 4 edges <u>3 edges</u> for 6/3 car gates	RRTS+ Metro	25	Modipuram Depot Station	2		2 Side	Elevated/ At Grade	Half Height	Metro
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<p>4</p>	<p>Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -3, Clause No:3.2.1</p>	<p>These elements shall have the appropriate properties, and be of adequate design, to safely accommodate all the design loads identified herein in addition to PSG/ PSD dead weight, operational and dynamic loads. Maximum allowable deflections of the PSG/ PSD installation are 10 mm.</p>	<p>These elements shall have the appropriate properties, and be of adequate design, to safely accommodate all the design loads identified herein in addition to PSG/ PSD dead weight, operational and dynamic loads. Maximum allowable deflections of the PSG/PSD installation are 10 mm <u>shall be 10mm for Full Height PSD and 20mm for Half Height PSG from the static</u></p>																																

			<u>position and no part of facade should infringe the KE or damage the PSG/PSD facade under deflection</u>
5	Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -4, Clause No:4.14.1	The PSG/PSD structure shall withstand the effect of cyclic and repetitive loading pressures associated with crowd loads, impact and train movements over the design life of the PSG/PSD installations. The effect of loading due to a run through train at 100 Kmph shall also be considered. Maximum allowable (fully elastic) deflection at the PSG/PSD frame members on which the glass is fixed, under worst case combined loading conditions, shall be 10mm from the static position	The PSG/PSD structure shall withstand the effect of cyclic and repetitive loading pressures associated with crowd loads, impact and train movements over the design life of the PSG/PSD installations. The effect of loading due to a run through train at 100 Kmph shall also be considered. Maximum allowable (fully elastic) deflection at the PSG/PSD frame members on which the glass is fixed, under worst case combined loading conditions, shall be 10mm <u>for Full Height PSD and 20mm for Half Height PSG</u> from the static position <u>and no part of facade should infringe the KE or damage the PSG/PSD facade under deflection.</u>
6	Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -5, Clause No:5.1.13.3 (A)	PSG installations: - PSG frame members on which the top of PSG facade shall be 10 mm from the static position and no part of facade should infringe the KE or damage the PSG facade under deflection	PSG installations: - PSG frame members on which the top of PSG facade shall be 40 <u>20</u> mm from the static position and no part of facade should infringe the KE or damage the PSG facade under deflection
7	Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -5, Clause No:5.8.3 (B)	The Contractor shall demonstrate, by a combination of attention to the design detail of the leading edge of the door screen and appropriate actuation and control facilities, the ability of the door systems to reduce the	The Contractor shall demonstrate, by a combination of attention to the design detail of the leading edge of the door screen and appropriate actuation and control facilities, the ability of the door systems to reduce the risk

		<p>risk of entrapment to a minimum and eliminate the risk of a train being released to start with an obstruction between any door leaves. The minimum size of obstacle to be detected is 4mm x 40mm steel bar (for the purpose of obstacle detection testing, the 4mm length shall be placed in the direction of door travel and the 40mm length shall be placed in the vertical direction; the testing locations of the steel bar at the PSD/PED shall be subject to the Approval of the Employer's Representative).</p>	<p>of entrapment to a minimum and eliminate the risk of a train being released to start with an obstruction between any door leaves. The minimum size of obstacle to be detected is 4mm x 40mm steel bar <u>and/or any object larger than 4mm diameter at 0.9 m above Finish Floor Level</u> (for the purpose of obstacle detection testing, the 4mm length shall be placed in the direction of door travel and the 40mm length shall be placed in the vertical direction; the testing locations of the steel bar at the PSD/PED shall be subject to the Approval of the Employer's Representative).</p>																		
<p>8</p>	<p>Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -5, Clause No: 5.25</p>	<p>Integrated Digital Advertisement and Passenger Information Display</p>	<p>Integrated Digital Advertisement <u>and/or</u> Passenger Information Display</p>																		
<p>9</p>	<p>Employer's Requirement Part-2, Section 6G: PS- Platform Screen Doors-R1, Chapter -6, Clause No:6.1.10</p>	<table border="1"> <tr> <td data-bbox="813 836 892 1011"> <p>14</p> </td> <td data-bbox="892 836 1116 1011"> <p>Obstacle trapping limit</p> </td> <td data-bbox="1116 836 1592 1011"> <p>Any object larger than 4 mm diameter at 0.9 m above Finish Floor Level (FFL) will trigger the obstacle detection system</p> </td> </tr> <tr> <td data-bbox="813 1011 892 1187"> <p>15</p> </td> <td data-bbox="892 1011 1116 1187"> <p>Climatic conditions for PSG</p> </td> <td data-bbox="1116 1011 1592 1187"> <p>Climatic conditions as specified in GS and PS. PSGs are outdoor type with suitable for IP-65 conditions.</p> </td> </tr> <tr> <td data-bbox="813 1187 892 1362"> <p>16</p> </td> <td data-bbox="892 1187 1116 1362"> <p>Climatic conditions for PSD</p> </td> <td data-bbox="1116 1187 1592 1362"> <p>Climatic conditions as specified in GS and PS. PSDs are underground type with Header Box suitable for IP-54 conditions.</p> </td> </tr> </table>	<p>14</p>	<p>Obstacle trapping limit</p>	<p>Any object larger than 4 mm diameter at 0.9 m above Finish Floor Level (FFL) will trigger the obstacle detection system</p>	<p>15</p>	<p>Climatic conditions for PSG</p>	<p>Climatic conditions as specified in GS and PS. PSGs are outdoor type with suitable for IP-65 conditions.</p>	<p>16</p>	<p>Climatic conditions for PSD</p>	<p>Climatic conditions as specified in GS and PS. PSDs are underground type with Header Box suitable for IP-54 conditions.</p>	<table border="1"> <tr> <td data-bbox="1612 836 1708 1098"> <p>14</p> </td> <td data-bbox="1708 836 1922 1098"> <p>Obstacle trapping limit</p> </td> <td data-bbox="1922 836 2414 1098"> <p><u>The minimum size of obstacle to be detected is 4mm x 40mm steel bar and/or</u> any object larger than 4 mm diameter at 0.9 m above Finish Floor Level (FFL) will trigger the obstacle detection system</p> </td> </tr> <tr> <td data-bbox="1612 1098 1708 1273"> <p>15</p> </td> <td data-bbox="1708 1098 1922 1273"> <p>Climatic conditions for PSG</p> </td> <td data-bbox="1922 1098 2414 1273"> <p>Climatic conditions as specified in GS and PS. PSGs are outdoor type with suitable for IP-65 <u>(For Structural Part)</u> conditions.</p> </td> </tr> <tr> <td data-bbox="1612 1273 1708 1417"> <p>16</p> </td> <td data-bbox="1708 1273 1922 1417"> <p>Climatic conditions for PSD</p> </td> <td data-bbox="1922 1273 2414 1417"> <p>Climatic conditions as specified in GS and PS. PSDs are underground type with Header Box</p> </td> </tr> </table>	<p>14</p>	<p>Obstacle trapping limit</p>	<p><u>The minimum size of obstacle to be detected is 4mm x 40mm steel bar and/or</u> any object larger than 4 mm diameter at 0.9 m above Finish Floor Level (FFL) will trigger the obstacle detection system</p>	<p>15</p>	<p>Climatic conditions for PSG</p>	<p>Climatic conditions as specified in GS and PS. PSGs are outdoor type with suitable for IP-65 <u>(For Structural Part)</u> conditions.</p>	<p>16</p>	<p>Climatic conditions for PSD</p>	<p>Climatic conditions as specified in GS and PS. PSDs are underground type with Header Box</p>
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		21	Velocity Pressure on PSG/PSD	<p>a) For Full Height PSD = 2000 Pascal</p> <p>b) For Half Height PSG = 1200 Pascal</p>			suitable for IP-54 (For Structural Part) conditions.
		28	Aerodynamic Pressure criteria acting on PSDs	<p>The Aerodynamic pressure criteria acting on the PSG/ PSD system caused by Tunnel Ventilation System or wind pressure and a train running through the station is:</p> <p>a) For Full Height PSD = 2000 Pascal</p> <p>b) For Half Height PSG = 1200 Pascal</p>	21	Velocity Pressure on PSG/PSD	<p>a) For Full Height PSD = 2000 Pascal</p> <p>b) For Half Height PSG = 1200 Pascal</p> <p><u>As per the piston effect pressure of maximum train speed of 100 Km/h and all other site conditions</u></p>
		29	PSG/ PSD Controller	IP 42	28	Aerodynamic Pressure criteria acting on PSDs	<p>The Aerodynamic pressure criteria acting on the PSG/ PSD system <u>caused by TVS and the passing through train is +/-1500 Pa (minimum or more if required as per site condition) and on PSG system caused by wind pressure and the passing through train is +/-1200 Pa (minimum or more if required as per site condition)</u> caused by Tunnel Ventilation System or wind pressure and a train running through the station is:</p> <p>a) For Full Height PSD = 2000 Pascal</p> <p>b) For Half Height PSG = 1200 Pascal</p>
					29	PSG/ PSD Controller	IP 42

			(For Indoor equipment installed in technical room)
10	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 3, Clause No.3.4.2.4	Earthing Pits: Earth Termination Bar in UPS room will be available for shared use by signalling contractor. Signalling contractor shall set up earth bus bar in Signalling room and other locations where signalling equipment are located from the Earth Termination bar in UPS room.	Earthing Pits: Earth Termination Bar in UPS room & S&T technical rooms shall be provided as per Appendix A will be available for shared for use by signalling contractor. Signalling contractor shall set up earth bus bar in Signalling room and other locations where signalling equipment are located from the Earth Termination bar in UPS room. <u>Earthing connections from MET/CET in S&T Technical room and UPS room to S&T equipment shall be in the scope of S&T contractor.</u>
11	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No.5.11.1.2	Contractor shall submit the design of line side signals and shall obtain the approval of Engineer. The line side signals shall be rugged, reliable, aesthetic of proven design.	Contractor shall submit the design of line side signals and shall obtain the approval of Engineer. The line side signals and route indicators shall be rugged, reliable, aesthetic of proven design.
12	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No.5.11.1.3	Mainline Signals shall be single aspect colour light signal. The sizes of the signal unit shall be so designed so that it does not infringe the requirements of structure gauge without affecting the visibility of the signals. Each unit shall be equipped with a hood & background.	Mainline Signals shall be multiple aspect colour light signal. The sizes of the signal unit shall be so designed so that it does not infringe the requirements of structure gauge without affecting the visibility of the signals. Each unit shall be equipped with a hood & background.
13	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No.5.11.1.7	All signals shall be rugged, reliable, of reputed make, aesthetic, matching best industrial quality, of proven design and high-performance LED type in accordance with Indian Railway Standards and sourced from an Indian supplier.	All signals shall be rugged, reliable, of reputed make, aesthetic, matching best industrial quality, of proven design and high-performance LED type in accordance with Indian Railway Standards and sourced from an Indian supplier. <u>Route Indicator shall be LED matrix type.</u>
14	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5,		[Added new clause]

	Clause No.5.11.1.8		<p><u>Route indicators shall be provided on main line to indicate each route wherever a signal can lead to more than one route and shall be mounted on the signal in such a way that it does not infringe the requirements of structure gauge. It should be capable of displaying-</u></p> <p><u>M for Main Line;</u></p> <p><u>D for first Diversion;</u></p> <p><u>S for second Diversion; and</u></p> <p><u>T for Third Diversion, as the case may be</u></p>
15	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No.5.11.2.1	<p>The mainline line side signal aspect shall be used in fallback ETCS Level 1 and degraded modes as under.</p> <p>Non-Lit /Dark/Blank: Stop: Route not set and locked.</p> <p>Lit: Proceed: Route set and locked.</p> <p>Aspects shall be designed to be clearly visible at the required sighting distance under all weather conditions including rain and direct sunlight.</p>	<p>The mainline line side signal aspect shall be used in fallback ETCS Level 1 and degraded modes as under.</p> <p>Non-Lit /Dark/Blank: Stop: Route not set and locked.</p> <p>Lit: Proceed: Route set and locked.</p> <p>Aspects shall be <u>finalized during design stage and aspects shall be</u> designed to be clearly visible at the required sighting distance under all weather conditions including rain and direct sunlight.</p>
16	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No.5.11.2.6	Route Indicators are not required.	<u>Not Used</u>
17	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No. 5.14	<p>Functional Architecture of CCS</p> <p>From a logical and functional point of view, the CCS system shall carry out the following macro functions but not limited to:</p> <ol style="list-style-type: none"> 1) Traffic Management System (TMS); 2) Diagnostic & Maintenance Management; 3) Power supply and Traction system Management; 	<p>Functional Architecture of CCS</p> <p>From a logical and functional point of view, the CCS system shall carry out the following macro functions but not limited to:</p> <ol style="list-style-type: none"> 1) Traffic Management System (TMS); 2) Diagnostic & Maintenance Management; 3) Power supply and Traction system Management;

		<p>4) Passenger Information; 5) Video Surveillance and security system(CCTV System); 6) Emergency management (tunnel ventilation system); 7) CCS personnel training & Simulation facilities; 8) Quality of service reports; 9) Access control and Intrusion Detection system (No interface with TMS); 10) Distributed Acoustic System (provided by other Contractor for Interface with TMS for Alarms); and 11) Playback system.</p>	<p>4) Passenger Information; 5) Video Surveillance and security system(CCTV System); 6) Emergency management (tunnel ventilation system); 7) CCS personnel training & Simulation facilities; 8) Quality of service reports; 9) Access control and Intrusion Detection system (No interface with TMS); 10) Distributed Acoustic System (provided by other Contractor for Interface with TMS for Alarms); and 11) Playback system. <u>12) Display information from Seismometer (provided by other contractor for interface with TMS for display).</u> <u>13) Display information from Anemometer (provided by other contractor for interface with TMS for display).</u></p>
18	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No. 5.20.6 and new clause 5.20.7	5.20.6 Not used.	<p>5.20.6-Not used. <u>TMS shall Communicate with Seismometer installed by another vendor on D-G-M Corridor for display of information on TMS MMI and generating logs.</u></p> <p><u>5.20.7 TMS shall Communicate with Anemometer installed by another vendor on D-G-M Corridor for display of information on TMS MMI and generating logs.</u></p>
19	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, New Clause No. 5.25.5 and 5.25.6		<p><u>5.25.5 The Train control & Signalling System shall display alarms on MMI for the operator and generate logs on receiving information from seismometer which will be installed by another vendor. TMS shall display alarms divided in category (based on emergency) according to information provided by Seismometer. TMS shall</u></p>

			<p><u>directly Interface with the Seismometer. Its detail design shall be finalized in design stage.</u></p> <p><u>5.25.6 The Train control & Signalling System shall display alarms on MMI for the operator and generate logs on receiving information from anemometer which will be installed by another vendor. TMS shall display alarms divided in category (based on emergency) according to information provided by Anemometer. TMS shall directly Interface with the Anemometer. Its detail design shall be finalized in design stage.</u></p>
20	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 5, Clause No. 5.34.4.5, New points 37 and 38		<p><u>37) Seismometer Information</u></p> <p><u>38) Anemometer information</u></p>
21	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 6, Clause No.6.4.3.6	Signalling system shall enable the Traffic Controller to take train movement decision based on the indications available with him (i.e. TMS MMI/ Mimic Panel/ Interlocking VDU) in the event of failure of a signal or train detection due to any reason when a train operator is to be authorized to pass a signal at non lit / blank condition.	Signalling system shall enable the Traffic Controller to take train movement decision based on the indications available with him (i.e. TMS MMI/ Mimic Panel/ Interlocking VDU) in the event of failure of a signal or train detection due to any reason when a train operator is to be authorized to pass a signal at non lit Red / blank condition.
22	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 8, Clause No. 8.2.1	The sequence of tests shall be as follows: 1) Tests;	The sequence of tests shall be as follows: 1) Type Tests;
23	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 10, Clause No. 10.1.4 (6)	Appropriate fixed means of access shall be provided for easy and safe maintenance of Trackside equipment such as signals.	Appropriate fixed means of access shall be provided for easy and safe maintenance of Trackside equipment such as signals, Route indicators .
24	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 10, Clause No.10.7.4.1	Earth Termination Bar in UPS room will be provided by E&M contractor for use by Signalling Contractor. Earthing connection from MET/CET to S&T equipment shall be in the scope of S&T contractor.	Earth Termination Bar in UPS room & S&T technical rooms shall be provided by E&M contractor as per Appendix A for use by Signalling Contractor. Earthing connection from MET/CET in S&T Technical room and

			UPS room to S&T equipment shall be in the scope of S&T contractor.												
25	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 13, Clause No.13.2.3, (iii)	The contractor shall provide overall 60 days of training. Minimum one expat trainer along with another trainer shall conduct each training module. Number of trainees shall be decided as per employer’s discretion.	The contractor shall provide overall 60 days of training for S&TC system . Minimum one expat trainer along with another trainer shall conduct each training module. Number of trainees shall be decided as per employer’s discretion.												
26	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Chapter 15, Clause No. 15.5.2 Sub clause (5)	15.5.2 The scope of work to be performed is Design, Engineering, Supply, Installation, Testing and Commissioning, including the following: Sub clause 5) Defect Liability Period of 3 years from Revenue Operation Date	15.5.2 The scope of work to be performed is Design, Engineering, Supply, Installation, Testing and Commissioning, including the following: Sub clause 5) Defect Liability Period of 3 years from Revenue Operation Date of that section .												
27	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Appendix A, Clause no. 9.4 List of Interface sheets for S&T		<p>[Added new items]</p> <table border="1"> <tr> <td>31</td> <td>Signalling Vs. Seismometer</td> <td>Present Annexure</td> </tr> <tr> <td>32</td> <td>Signalling Vs. Anemometer</td> <td>Present Annexure</td> </tr> </table>	31	Signalling Vs. Seismometer	Present Annexure	32	Signalling Vs. Anemometer	Present Annexure						
31	Signalling Vs. Seismometer	Present Annexure													
32	Signalling Vs. Anemometer	Present Annexure													
28	Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Appendix A		<p>[Added new Table]</p> <p>31) Signalling Vs. Seismometer</p> <table border="1"> <thead> <tr> <th colspan="2">Contractor- A</th> <th>Contractor- B</th> <th>Sheet #: 1/1</th> </tr> <tr> <th>Signalling Contractor</th> <th>Design Stage</th> <th colspan="2">Seismometer Contractor</th> </tr> </thead> <tbody> <tr> <td>1. Shall display alarms on MMI for the operator and generate</td> <td></td> <td colspan="2">1. Shall install Seismometer and all accessories at</td> </tr> </tbody> </table>	Contractor- A		Contractor- B	Sheet #: 1/1	Signalling Contractor	Design Stage	Seismometer Contractor		1. Shall display alarms on MMI for the operator and generate		1. Shall install Seismometer and all accessories at	
Contractor- A		Contractor- B	Sheet #: 1/1												
Signalling Contractor	Design Stage	Seismometer Contractor													
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			<p><u>logs on receiving information from seismometer which will be installed by Contractor-B.</u></p> <p>2. <u>TMS shall display alarms divided in category(based on emergency) according to information provided by Contractor-B.</u></p> <p>3. <u>TMS shall directly Interface with the Seismometer. Its detail design shall be finalized in design stage.</u></p> <p>4. <u>Shall provide connectivity (supply and install/lay) from TER/SER at station/depot to TMS at OCC and BCC.</u></p>	<p><u>station/s. (Detail will be finalized during design stage).</u></p> <p>2. <u>Shall assist Contractor-A for all interface issues including interfacing of hardware, software, data etc.</u></p> <p>3. <u>Seismometer shall directly Interface with TMS. Its detail design shall be finalized in design stage.</u></p> <p>4. <u>Shall provide connectivity (supply and install/lay) from Seismometer at station/depot to TER/SER at station/depot.</u></p>
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<p>29</p>	<p>Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1, Appendix A</p>		<p>[Added new Table]</p>									
			<p>32) Signalling Vs. Anemometer</p> <table border="1"> <thead> <tr> <th colspan="2" data-bbox="1615 252 2003 336">Contractor- A</th> <th data-bbox="2003 252 2295 336">Contractor- B</th> <th data-bbox="2295 252 2404 336">Sheet #: 1/1</th> </tr> <tr> <th data-bbox="1615 336 1884 421">Signalling Contractor</th> <th colspan="2" data-bbox="1884 336 2142 421">Design Stage</th> <th data-bbox="2142 336 2404 421">Anemometer Contractor</th> </tr> </thead> <tbody> <tr> <td data-bbox="1615 421 2003 1383"> <p>1. <u>Shall display alarms on MMI for the operator and generate logs on receiving information from Anemometer which will be installed by Contractor-B.</u></p> <p>2. <u>TMS shall display alarms divided in category (based on emergency) according to information provided by Contractor-B.</u></p> <p>3. <u>TMS shall directly Interface with the Anemometer. Its detail design shall be</u></p> </td> <td colspan="2" data-bbox="2003 421 2142 1383"></td> <td data-bbox="2142 421 2404 1383"> <p>1. <u>Shall install Anemometer and all accessories at station/s. (Detail will be finalized during design stage).</u></p> <p>2. <u>Shall assist Contractor-A for all interface issues including interfacing of hardware, software, data etc.</u></p> <p>3. <u>Anemometer shall directly Interface with TMS. Its detail design shall be finalized in design stage.</u></p> <p>4. <u>Shall provide connectivity (supply</u></p> </td> </tr> </tbody> </table>	Contractor- A		Contractor- B	Sheet #: 1/1	Signalling Contractor	Design Stage		Anemometer Contractor	<p>1. <u>Shall display alarms on MMI for the operator and generate logs on receiving information from Anemometer which will be installed by Contractor-B.</u></p> <p>2. <u>TMS shall display alarms divided in category (based on emergency) according to information provided by Contractor-B.</u></p> <p>3. <u>TMS shall directly Interface with the Anemometer. Its detail design shall be</u></p>
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<p>30</p>	<p>Employer Requirement Part 2, Section 6B: PS – Signalling & Train Control R1/Appendix R /Section 1.1 Table</p>	<p>Station name</p>	<p>Type of Service</p>	<p>Station Level</p>	<p>Stations with /without points and crossing</p>	<p>Station name</p>	<p>Type of Service</p>	<p>Station Level</p>	<p>Stations with /without points and crossing</p>	
		<p>Duhai Depot</p>	<p>RRTS</p>	<p>Elevated</p>	<p>Stations with points and crossing</p>	<p>Duhai Depot</p>	<p>RRTS</p>	<p>Elevated At Grade</p>	<p>Stations with points and crossing</p>	
		<p>Modipuram Depot</p>	<p>MRTS</p>	<p>Elevated</p>	<p>Stations with points and crossing</p>	<p>Modipuram Depot</p>	<p>MRTS</p>	<p>Elevated At Grade</p>	<p>Stations with points and crossing</p>	
<p>31</p>	<p>Employer's Requirement Part-2, Section 6F, Track Plan</p>	<p><u>The Revised Track Plan Drawing is attached herewith as Attachment No. 1 in Addendum and Corrigendum No. 06B. Bidders may kindly note the same.</u></p>								

Enclosures:

- 1) Revised Section 6F: D-G-M Corridor Track Plan R-7