

**Volume II, Part 2 – Employer’s Requirements
2. Specifications, A) General Requirements (ERG)**

| 1. | Appendix B - Split Responsibility on Rolling Stock and Other Works | Revise “Table B.1 Interface Responsibility Matrix” with the following: | | | | |
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| Table B.1 Interface Responsibility Matrix | | | | | | |
| No. | Interface Item | Design Requirement | Design, Size & Location | Supply | Fix | Remarks |
| 1-b | Description of on-board Signaling & Communication Equipment’s but not limited to the following: 1) On-board signaling system racks/cubicles 2) Wheel sensors SIG 3) Accelerometer SIG 4) Radar SIG 5) Antenna SIG 6) On boards data communication System (DCS) for ETCS-Level2 7) Driver Machine Interface SIG 8) Cables for interlink with signaling equipment 9) Cable connectors for signaling equipment 10) Train Radio- com 11) Antenna- com 12) Antenna cable - com Connectors for communication equipment | CP-NS-01 | CP107 and CP NS-01 | CP-NS-01 | CP107 | CP107 and CP NS-01 Contractors shall coordinate and agree on the size, space and location. |
| 2 | Equipment for Running and Stopping Assistant System | CP NS-01 | CP107 and CP NS-01 | CP NS-01 | CP107 | CP107 and CP NS-01 |

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| | | | <u>(This function could be part of the ETCS)</u> | | | | <u>Installation on the first train-set is supervision by CP 107 & CP NS-01 Contractors.</u> | Contractors shall coordinate and agree on the size, space and location. |
| | | 3 | Equipment for PSD Controller <u>(This function could be part of the ETCS)</u> | CP NS-01 & CP 106 | CP107 and CP NS-01 | CP NS-01 | CP107 <u>Installation on the first train-set is supervision by CP 107 & CP NS-01 Contractors.</u> | CP107 and CP NS-01 Contractors shall coordinate and agree on the size, space and location. |
| | | 4 | Cable description but not limited to the following: 1) Power supply cable for train radio 2) Power supply cable for Signaling & Communication equipment 3) Cables for train lines to signaling equipment Power supply cable for Advertising Equipment. | CP106 CP NS-01 | CP107 CP106 and CP NS-01 | CP107 CP NS-01 | CP107 <u>Installation on the first train-set is supervision by CP 107 & CP NS-01 Contractors. (for Signaling & Communication equipment)</u> | CP107, CP106 and CP NS-01 Contractors shall coordinate and agree on the size and location |
| | | 5 | Fixtures and Fittings: Disconnection and terminal blocks, device | CP106 CP NS-01 | CP107 CP106 and | CP106 CP NS-01 | CP107 <u>Installation on</u> | CP107, CP106 and CP NS-01 Contractors |

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| | | | mounting brackets and plates, flexible conduit assemblies complete with connectors and cables from speed measurement devices to the junction boxes. | | CP NS-01 | | <u>the first train-set is supervision by CP 107 & CP NS-01 Contractors. (for Signaling & Communication equipment)</u> | shall coordinate and agree on the size and location |
| 6 | | CP106 CP NS-01 | Power Supply and Earthing Arrangements: Power supply circuits, including positive and negative poles, for the on-board signaling equipment. Dedicated earthing arrangements for the on-board signaling equipment | CP107 CP106 and CP NS-01 | CP107 | CP107 | <u>Installation on the first train-set is supervision by CP 107 & CP NS-01 Contractors.</u> | |

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2. Specifications, B) Technical Requirements (ERT)***

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| <p>2.</p> | <p>Clause 1.8.4 Degraded/Emergency Performance</p> | <p>Revise 5th paragraph with the following:</p> <p><i>"The Contractor shall confirm by calculation and test that 8 cars train-set at W0 loading condition can push and tow a 10 cars train-set at 20 t/car loading condition (537 ton) with an inoperative propulsion system <u>in its worst condition</u> on a 3.5% upgrade at the tangent track of 2.0 km. If the healthy train cannot be pushed or towed at the 3.5% upgrade, then the high acceleration mode shall be applied. But this requirement is under the non-slip condition, and the adhesion at this requirement is not to be considered. The test shall be conducted under the non-slip condition."</i></p> |
| <p>3.</p> | <p>Clause 10.5 Brake Control/Brake Blending</p> | <p>Revise 4th paragraph with the following:</p> <p>When the regenerative braking force is insufficient with respect to the required braking force, the trailer car's friction brakes shall be initiated. If the braking torque is still insufficient, the motor car's friction brakes shall be initiated. Distribution of the friction braking torque derived from the trailer/motor cars shall be controlled by the TMS.</p> |
| <p>4.</p> | <p>Clause 10.7 Brake Control Unit (BCU)</p> | <p>Revise item no.7 on the 1st paragraph with the following:</p> <p><i>"In case <u>of brake troubles that could lead and cause other troubles for example wheel damaging, release</u> acceleration command shall be cut off. However, in this function, a short circuit switch shall be supplied;"</i></p> |

| <p>5.</p> | <p>Clause 12 PROPULSION SYSTEM, 12.1 GENERAL</p> | <p>Revise 2nd paragraph with the following:</p> <p><i>“In the following conditions, the propulsion system shall have enough capacity <u>for normal and recovery operation. The CP 107 Contractor shall validate and confirm the normal and recovery run (power consumption) at curves submitted by CP 106 and NS-01 Contractors.</u> The CP 107 Contractor shall simulate acceleration power consumption, regenerative power amount, RMS current, maximum drawn current during acceleration, maximum return current during regenerative braking to OCS and the temperature rise of each equipment etc. Total power consumption of a round trip (Quirino Highway <u>East Valenzuela-Bicutan, and East Valenzuela to Calamba, etc.</u>) for the following as a minimum condition shall be submitted for review by the Engineer:</i></p> <p><i>3) In case of <u>recovery (catch up mode)</u> operation (ATO all out condition);”</i></p> | | | | | | |
|-----------|---|---|-----|---------------------|------------------|---|---|--------------------------------------|
| <p>6.</p> | <p>Clause 17.1 General</p> | <p>Revise “Table 17.1 Responsibility Matrix” with the following:</p> <p style="text-align: center;">Table 17.1 Responsibility Matrix</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">SOW</th> <th style="text-align: center;">Item Description</th> <th style="text-align: center;">By Contractor</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td>Train radio system to allow full-duplex audio communication between the driver and the OCC <u>for the entire section. In NSRP South section Train radio system to allow full-duplex audio communication between the driver and all the stations.</u> Additional interfaces shall be provided within the OCC to relay to the trains PA audio messages.</td> <td style="text-align: center;"><u>CP106 CP NS-01 (GSMR)</u></td> </tr> </tbody> </table> | SOW | Item Description | By Contractor | 5 | Train radio system to allow full-duplex audio communication between the driver and the OCC <u>for the entire section. In NSRP South section Train radio system to allow full-duplex audio communication between the driver and all the stations.</u> Additional interfaces shall be provided within the OCC to relay to the trains PA audio messages. | <u>CP106 CP NS-01 (GSMR)</u> |
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| <p>7.</p> | <p>Clause 17.7 Train Radio System</p> | <p>Revise 1st paragraph with the following:</p> <p><i>"The Train Radio System for the <u>CP 107 Contractor's</u> Rolling Stock shall be designed and supplied by the CP106 Contractor for the <u>MMS-CP107 Contractor to install on the Rolling Stock and CP NS-01 Contractor for NSRP South section.</u> <u>The CP107 Contractor shall install train radio system on the Rolling Stock.</u> The CP106 Contractor <u>and CP NS-01 Contractor</u> shall provide supervision for the first Train Radio System installation on- site. But Train Protection Radio system for MMS, and through service section shall be supplied by the CP107 Contractor."</i></p> |
| <p>8.</p> | <p>Clause 17.9 TRAIN RADIO SYSTEM</p> | <p>Revise 1st paragraph with the following:</p> <p><i>The Train Radio System for the CP 107 Contractor's Rolling Stock shall be designed and supplied by the CP106 Contractor for the MMS and CP NS-01 Contractor for NSRP South section. The CP107 Contractor shall install train radio system on the Rolling Stock. The CP106 Contractor and CP NS-01 Contractor shall provide supervision for the first Train Radio System installation on- site.</i></p> <p><i>The Train Radio System for the Rolling Stock shall be designed and supplied by the CP106 Contractor for the CP107 Contractor to install on the Rolling Stock. The CP106 Contractor shall provide supervision for the first Train Radio System installation on- site. But Train Protection Radio system for MMS, and through service section shall be supplied by the CP107 Contractor.</i></p> |

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| 9. | Clause 17.11 Train Protection Radio | Revise 1 st paragraph with the following: <i>"The radio system which is provided from CP106 <u>and CP NS-01</u> (and CP NS-02) Contractors shall include this <u>Train Protection Radio</u> function."</i> |
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