General Bid Bulletin No. 2
30 April 2021

THE MALOLOS-CLARK RAILWAY PROJECT AND THE NORTH-SOUTH RAILWAY PROJECT SOUTH LINE COMMUTER PACKAGE CP NS-01: PROCUREMENT OF ELECTRICAL AND MECHANICAL SYSTEMS AND TRACK WORKS
(IFB No: 21-040-3)

TO ALL PROSPECTIVE BIDDERS:

This General Bid Bulletin is issued to amend/clarify certain provisions in the Bidding Documents for the above-mentioned Project. Please refer to the attached Annexes of this General Bid Bulletin for details:

1. **Annex "A"** — Clarifications to the Bidding Documents.
2. **Annex "B"** — Addendum to the Bidding Documents with "**Attachment 1**"
3. **Annex "C"** — Not Applicable

All other portions of the Bidding Documents not affected by these revisions, amendments and/or clarifications shall remain unchanged.

Revisions/amendments/clarifications made herein shall be conserved as an integral part of the Bidding Documents of this Project.

For your guidance and information.

For the Bids and Award Committee

SIGNATURE REDACTED

ENGR. JAIME M. NAVARRETE, JR
Chairperson,

Annex A

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1	Part I Section III,EQC- 11,4.2 Specific Experience Notes for the bidder: - The term "similar contract" shall mean a design- build contract consisting of design, procurement, supply, installation, inspection, testing and commissioning and delivery of the electrical and mechanical railway systems/subsystems including signaling, telecommunications, power supply and distribution and electric supply to rolling stock, for an urban railway project including MRT, LRT or HSR (high speed rail) with minimum designed transportation capacity of 6,000 pax/direction/hour and over.	It is very difficult to provide documentary evidence for the requirement of "minimum designed transportation capacity of 6,000 pax/direction/hour and over". In our experience, the project certificates do not clearly mention the minimum designed transportation capacity. In some cases, though the project is planned for a future capacity much higher than 6,000 PPHPD but the current operational or initial capacity is lower than 6,000 PPHPD. In such case the project documentation, generally refers only to the initial or operational capacity. Therefore, it becomes difficult to provide evidence of a higher designed transportation capacity. In view of the above, we request you		The bidder shall provide the information as required using the Form EXP – 2 (a). Bidder may provide the description based on the required criteria which is with similar contract with minimum designed transportation capacity of 6,000 pax/direction/hour along with any supplementary documentations.

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		to allow the bidders to demonstrate the designed transportation capacity through a self- declaration and supplementary documentation.		
2	Part I Section III,EQC- 11,4.2 Specific Experience Notes for the bidder: - The term "similar contract" shall mean a design- build contract consisting of design, procurement, supply, installation, inspection, testing and commissioning and delivery of the electrical and mechanical railway systems/subsystems including signaling, telecommunications, power supply and distribution and electric supply to rolling stock, for an urban railway project including MRT, LRT or HSR (high speed rail) with minimum designed transportation capacity of 6,000 pax/direction/hour and over.	We understand that credentials from Mainline Railway projects (conventional Railway project connecting two different cities) comprising of signaling, telecommunications, power supply and distribution and electric supply to rolling stock, shall be considered as similar contract. Kindly confirm.		The bidder's understanding is correct. The "similar contract" in this context referring to the urban railway project with minimum designed transportation capacity of 6,000 pax/direction/hour.

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3	Part I Section III,EQC- 11,4.2 Specific Experience - (ii) The term "similar contract" shall mean a design- build contract consisting of design, procurement, supply, installation, inspection, testing and commissioning and delivery of the electrical and mechanical railway systems/subsystems including signaling, telecommunications, power supply and distribution and electric supply to rolling stock, for an urban railway project including MRT, LRT or HSR (high speed rail) with minimum designed transportation capacity of 6,000 pax/direction/hour and over.	We understand that the "Similar contract" shall mean that Railway E&M Systems contracts including any single or combination of the works pertaining to Signaling, Telecommunications, power supply and distribution and electric supply to rolling stock for an urban railway project including MRT, LRT or HSR (high speed rail)". Kindly confirm our understanding.		Reference to the EQC-8, item 4.2(b), it can be single entity, or all parties combined.
4	Part I Section III,EQC- 11,EQC – Specific Experience - Notes for the Bidder (iii) - The term "substantially completed" means the work under the contract has been completed eighty percent (80%) or more based on value of the relevant works	We request you to modify the definition of "Substantial completion" to include the following: "If any Project is planned to be commissioned in more than one phase, and "if the first		The bidder's proposal is rejected.

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	without considerable defects which shall be certified by the Employer. A copy of the certificate or other evidence shall be attached to Form EXP-2 (a)	Phase of the project is commissioned and commercial operations have started, the same shall be treated as Substantially completed.""		
5	Part I Section III,EQC- 11,EQC – Specific Experience - Notes for the Bidder (iii) - The term "substantially completed" means the work under the contract has been completed eighty percent (80%) or more based on value of the relevant works without considerable defects which shall be certified by the Employer. A copy of the certificate or other evidence shall be attached to Form EXP-2 (a)	We understand that the term "substantially completed" means the work under the contract has been completed eighty percent (80%) or more of the original contract value awarded and not the revised contract value post any scope variation.		The bidders understanding is correct. The 80% completion is based on original contract value.
6	Part I Section II,BDS-9,ITB 21.1 - The amount and currency of the Bid Security shall be Japanese Yen Two Thousand Seven Hundred Fifty Million (JPY 2,750,000,000).	We understand that different Bank Guarantees may be provided by different JV/Consortium members towards Bid Security. Sum of these guarantees would be equal to the sum of the		The bidder's understanding is correct. Reference to the ITB 36.7: "The Bid Security of a JV shall be in the name of the JV that submits the Bid. If the JV has not been constituted into a legally enforceable JV at the time of Second Stage Bidding, the Bid Security shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.1.

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		required bank guarantee. Please confirm if our understanding is correct.		
7	Part I Section IV,BF-9,Letter of Technical Bid - The person signing the Bid shall have the power of attorney given by the Bidder (to be attached with the Bid).	We understand that the Power of Attorney shall be prepared according to the designated format of the company as the format of the same is not given in the tender document.		The bidder's understanding is correct. Bidder may also refer to ITB 22.3 for more information.
8	Part I Section IV,BF-255,SCHEDULE 2: Table of Adjustment Data - General	As per the current Schedule of Adjustment Data Table, bidder can specify the weightages within the range specified by the employer. However, we request the employer to allow the bidders to opt for fixed price for certain items where the vendors opt to offer fixed prices to the bidder.		The bidder's request is rejected. Bidder may refer to the ITB 18.5 and General Conditions (GC) clause 13.8 for more information.
9	Part I Section IV,BF-255,SCHEDULE 2: Table of Adjustment Data - General	As per the current Schedule of Adjustment Data Table, bidder can specify the "weightages within the range specified by the employer. However, we request the		The bidder's request is rejected. The non-adjustable item are having the fixed weighting of 0.15 as shown in the Schedule 2. The bidder may propose the weighting for Labor, Equipment and Materials as long as the value are fall within the range of weighting acceptable to the Employer (column (f)).

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		employer to indicate only the maximum weightage to be allocated to any Index description and remove the minimum weightage from the table. Employer should specify only the minimum weightage to be allocated to Fixed component and allow the bidder to increase the same if required to make the total of all weightages to 100%."		
10	Part I Section IV,BF-255,SCHEDULE 2: Table of Adjustment Data - General	As per the current Schedule of Adjustment Data Table, bidder can only specify different weightages for different currencies. However, we request the employer to allow bidder to add separate tables for different items under same currencies if required. This is required because this is a complex project involving multiple systems/sub- system with different composition of		The bidder's request is rejected. The Schedule 2 has shown the has shown the data for "Track Works" and "E&M Systems Works other than Track Works".

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		different items which can vary significantly.		
11	Part I Section IV,BF-265,Form ELI-1 - In the case of a JV, a letter of intent to form a JV with the draft JV agreement or the JV agreement, in accordance with ITB 4.1.	We understand that a letter of intent to form a JV with the draft JV agreement with details of the intended percentage of financial participation of each member in the JV may be submitted instead of JV agreement. It is requested to share the format for Letter of Intent to form a JV.		The bidders may prepare according to the format of the bidder's as the format is not given in the tender document. The content shall comply with the Section V Eligible Source Countries of Japanese ODA Loan shown in the Part 1 Bidding Procedures and Appendix 1 shown in the Part 3 Section VIII Particular Conditions.
12	Part I Section IV,BF-281,Form PER-1 Proposed Personnel - The Bidder shall provide the names of suitably qualified personnel to meet the specified requirements stated in Section III, Evaluation and Qualification Criteria, Sub-Section 3.2-2.2	We understand that the bidder is allowed to change the proposed engineers in their bid to others after the award of the contract, as long as such engineers meet the criteria set forth in the bidding documents. Kindly confirm.		Replacement staff can be proposed providing that have equivalent or superior qualification, experience and expertise compared to the candidate nominated in the bid. Any replacement will require approval by the Engineer.
13	,, - General – Access/ROW	Kindly inform the status of land acquisition on Right of Way including the land for depot. If the acquisition is not		The Right of Way (ROW) and land acquisitions are progressively ongoing. The time for access to and possession of the Site shown in the Particular Conditions (PC) Part A Contract Data Attachment 2.

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		completed yet, please inform the expected timeline for the same.		
14	Part III Section VIII,PC-5,Normal working hours – 6.5 - Work on the site is permitted 24 hours a day, 7 days a week. 9 hours shift working inclusive of 60 minutes meal period is permitted. However, overtime at the Contractor's expense will be permitted in accordance with Clause 6.5 (b) of the GC, subject to compliance with the applicable rules and regulations of Philippines Labor Codes. Each worker shall have a minimum of one rest day per week.	We understand that the Employer shall support in arranging for any approvals/work permits from local bodies. Kindly clarify on any specific applicable restrictions/ provision of Philippines Labor Codes which needs to be factored by the bidder.		The Contractor shall be responsible for all matters related to the safety health and welfare of its Sub-Contractors and suppliers of any tier and all employees performing any part of the Works on the Site, and shall comply in every respect with the provisions of all relevant statutory regulations, procedures, manuals and notices and with all requirements of the Philippine laws as are applicable, including but not limited to: • Occupational Safety and Health Standards (OSHS), 1979 and amended 1989, DOLE, (Published as a Landmark in Philippine Labour and Social Legislation by OSH Centre in 2013) • Department Order No128-B, 2013, DOLE, (Amending Rule 1414 on Scaffoldings of 1989 OSHS) • Department Order No13, Series of 1998, DOLE (known as DOLE-DO13) (Guidelines Governing OSH in the Construction Industry) • Procedural Guidelines for Department Order No13, Series of 1998, DOLE (Procedural Guidelines Governing OSH in the Construction Industry)

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				• Department Order No56, 2015, DPWH, (Guidelines for the Implementation of DOLE-DO13 in DPWH: How to estimate the Cost required for Construction Safety and Health Program) • Joint Administrative Order No 01, 2011 (Inter-Agency Memorandum of Agreement among DOLE, DPWH, DTI, DILG and PRC) • The Labour Code of the Philippines, Book Four, DOLE (Presidential Decree No442 of 1974, amended and renumbered 2015, Book Four covers Sections for Health, Safety and Social Welfare Benefits) • Department Order No18-A, 2011, DOLE, (Rules Implementing Articles 106 to 109 of Labour Code) • Contractors' Performance Evaluation System (CPES), 2008 (Implementing Guidelines for CPES in Infrastructure Projects) • Manual of Standards for Aerodromes, 2017, Civil Aviation Authority of the Philippines (CAAP), 2nd Edition • Republic Act No. 11469 dated 23 March 2020, the Bayanihan to Heal as One Act granting the President additional authority to combat the COVID-19 pandemic in the Philippines • DPWH Departmental Order No. 39 Revised Construction Safety Guidelines for the Implementation of

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				Infrastructure Projects During the COVID-19 Public Health Crisis, May 2020
15	Part III Section VIII,PC-6,Minimum Amount of Interim Payment Certificates - Amount combined together both Local Currency and Foreign Currency equivalent to twenty-five hundredths of a percent (0.25%) of the Accepted Contract Amount.	We request you to kindly allow the Invoices to be raised on monthly basis without any restriction on the Invoice amount.	-	The bidders request is rejected.
16	Part III Section VIII,PC-18,Attachment 2 - General	We understand that in case we cannot access to the site due to other contract packages contractor's delay, we shall be entitled to have "Extension of Time" and "Adjustment for Changes in Cost. Please confirm if our understanding is correct.		The bidder's understanding is correct. The bidder may refer to GC 2.1 and GC 8.4 and in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters. However, if and to the extent that the failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.
17	Part III Section VIII,PC-19,Attachment 2 - Time for	We understand that the total length of Viaduct to be handed over by CP N-01		The bidder's understanding is not correct. The lengths are cumulative length from the AD 1.1.1 to AD 1.1.4. The

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	Access to and Possession of the site –	contractor from km 34+479 to 51+670 calculates to be 16.92 Kms. whereas as per the breakup AD 1.1.1, 1.1.2, 1.1.3, 1.1.4 in the given table, the length of viaduct calculates to be 21 Kms. (3.5 + 7 + 10.5 Kms.) Request you to share the corrected data.		length of the viaduct is from km 34+749 to km 51+670 calculates to be 16.92 Kms.
18	Part III Section VIII,PC-19,Attachment 2 - Time for Access to and Possession of the site –	We understand that the total length of Viaduct to be handed over by CP N-02 contractor from km 51+670 to 67+440 calculates to be 15.77 Kms. whereas as per the breakup AD 1.2.1, 1.2.2, 1.2.3, 1.2.4 in the given table, the length of viaduct calculates to be 21 Kms. (3.5 + 7 + 10.5 Kms.) Request you to share the corrected data.		The bidder's understanding is not correct. The lengths are cumulative length from the AD 1.2.1 to AD 1.2.4. The length of the viaduct is from km 51.670 to km 67+440 calculates to be 15.77 Kms.
19	Part III Section VIII,PC-19,Attachment 2 - Time for Access to and Possession of the site –	We understand that the total length of Viaduct to be handed over by CP N-03 contractor from km 67+440		The bidder's understanding is not correct. The lengths are cumulative length from the AD 1.3.1 to AD 1.3.4. The length of the viaduct is from km 67+440 to km 79+880 calculates to be 12.44 Kms.

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		to 79+880 calculates to be 12.44 Kms. whereas as per the breakup AD 1.3.1a, 1.3.1b, 1.3.2, 1.3.3, 1.3.4 in the given table, the length of viaduct calculates to be 19.7 Kms. (1.2 + 3 + 6 + 9.5 Kms.) Request you to share the corrected data.		
20	Part III Section VIII,PC-19,Attachment 1 Summary of Key Dates Attachment 2 Time for Access to and Possession of the site - Section-2 KD 2-3 Achievement: Substantial Completion of Power Supply to all stations to achieve "Power On" for all station. – 30 Months CP N-01 - From km 34+749 to km 51.670 AD 1.1.4: The remaining viaduct section. – 27 Months	We have observed that the key date for substantial completion of KD 2-3 activity is 30 Months from commencement date (DOC) whereas the handover of the section as mentioned in AD 1.1.4 is 27 months from DOC. The period available for substantial completion of the section is only 3 months which is not feasible. We request you to increase the Key date for the referred section.		The bidder's request is rejected.
21	Part III Section VIII,PC-33,Particular Conditions GC	We have observed that Milestones for each section		The bidder's request is rejected.

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	1.1.6.11 - "Key Dates" are specified in Attachment-1 to PC Part A [Summary of Key Dates]. And failure to achieve a "Key Date" results in the deduction of Delay Damages at the daily rate stated in PC Part A Sub-clause 8.7 [Delay Damages for the Works] and Table: Summary of Section attached to Part A Contract Data."	have been further broken down into several key dates. "We request you to apply Delay damages only for the completion of each section defined in Table Summary of Section of PC-8 and not on the key dates for less critical works."		
22	Part III Section VIII,PC-39,14.7 Payment - Payments to the Contractor in both Local Currency and Foreign Currency will be made under the Transfer Procedure, detailed explanation of which could be found on JICA's web site.	As an option, we request you to confirm if the employer shall make payments to the individual members of consortium or JV, if so required by the contractor.		The bidder's request is rejected. Please refer to transfer procedure shown Particular Conditions Part B – Specific Provisions 14.7 Payment: "Payments to the Contractor in both Local Currency and Foreign Currency will be made under the Transfer Procedure, detailed explanation of which could be found on JICA's web site shown below: http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/oda_op_info/procedure/index.html All bank charges shall be borne by the Employer except the bank charges/commissions of Contractor's banks, which shall be borne by the Contractor."
23	Part III Section VIII,PC-39,14.7 Payment - Payments to the	This clause specifies that the payment to the foreign		The bidder's request is rejected.

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	Contractor in both Local Currency and Foreign Currency will be made under the Transfer Procedure, detailed explanation of which could be found on JICA's web site.	currency portion shall be made by the Transfer Procedure. As an option, we also request you to accept Commitment Procedure (i.e. L/C switch). Kindly note that the Commitment Procedure is accepted in other JICA projects.		
24	Part III Section VIII,PC-4,4.2 Performance Security - The Performance Security will be in the form of one "demand guarantee" for ten percent (10 %) of the Accepted Contract Amount and for the same currencies and proportion as the Accepted Contract Amount.	In view of the difficult times and economic slowdown due to COVID-19 pandemic, DOTr is requested to reduce the Performance Security to 5%.		The bidder's request is rejected.
25	Part III Section VIII,PC-8,Table: Summary of Sections - Damages for Delay	We understand that in case of any delay damages for delay in achieving a Key date, the same shall be offset and the delay damages recovered from the contractor shall be returned, if the contractor achieves the successive key		The bidder's understanding is not correct.

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		dates/milestones of the project.		
26	Part III Section VIII,PC-61 PC-39,Contract Form CF7 14.9 Payment of Retention Money - Retention Money Guarantee: The Guarantor shall insert an amount representing the amount of the second half of the Retention Money "The first half of the Retention Money retained on account of relevant Section"	As an option, we request you to release retention money on quarterly basis against an unconditional Bank guarantee of equivalent amount for the respective currency portions. The Bank Guarantees shall be valid for the period up to the end of the Defect Notification Period. Kindly note that the same practice is followed in some of the other JICA funded projects.		The bidder's request is rejected.
27	Part I Section IV,BF-47,Schedule 1 – Price Schedules - Note: The Bidder may subdivide the above Milestones and/or add appropriate proposed Milestones.	We understand that the bidder can subdivide the above Milestones and/or add appropriate proposed Milestones. Kindly clarify whether we can alter the given price schedule with detailed sub-division/addition. Or do we need to propose the changes only as an Annexure.		The bidder's understanding is correct. The bidder shall alter the schedule by adding additional rows.

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28	Part I Section IV,BF-47,Schedule 1 – Price Schedules - Note: The Bidder may subdivide the above Milestones and/or add appropriate proposed Milestones.	Kindly confirm whether we will be allowed to make changes and add/subdivide further after the award of the contract.		The bidder's understanding is correct.
29	JICA GC,GC Clause 14.6,14.6 Issue of Interim Payment Certificates 14.7 Payment - "…the Engineer shall, within 28 days after receiving a Statement and supporting documents, issue to the Employer an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due…" "…the amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents…"	The Time frame of 84 days, for realization of the interim payments appears to be too long and shall affect the cash flow. Also, as per our experience, suppliers generally give credit period of 15 or 30 days on back to back basis. Hence, we request the client to revise the payment cycle as follows: For interim payments, after preliminary scrutiny and certifications by the Engineer, payment of 80% of the certified net payment (due after recoveries and deductions) shall be paid in 15 days and remaining 20 % payment of certified net payment in 49 days from the		The bidder's request is rejected.

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		date of certification by Engineer. In some of the JICA funded projects, the payment cycle for interim payment is as mentioned below: - Application of Interim payment Certificate: on "I" date - Certification by Engineer to Employer: 1+21 = A days - 80% payment of certified amount A+14 days (35 days) - 20% payment of certified amount A+28 days (49 days) We request you to modify the payment cycle accordingly.		
30	General - General – Statutory Fees (ROW)	We understand that DOTr shall pay all the statutory fees such as demand notes / security deposit (bank guarantees) / road restoration or reinstatement charges / rentals, etc. directly to the concerned authorities such as Municipality Councils, Public Works Dept. (PWD),		Bidder's understanding is not correct. The access to the site are based on the Employer giving the Contractor right of access to, and/or occupation of the Site in accordance with the schedule described in Attachment-2 to Particular Conditions Part A Contract Data. Access will be given by Section / Sub-section. However, reference to the Employer's Requirement - General Requirements clause 3.10, the Contractor shall acquire, if needed, additional working areas in the vicinity of the Works or elsewhere for his camp, yard, for the storage of equipment, for his own office buildings, housing, quarters, stores,

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		State Highway Authority, National Highway Authority, other civic authorities / local agencies etc. However, Contractor shall carry out liaising with the concerned authorities in obtaining Right of Way. Please confirm.		plant yard, workshops, offices, and any additional areas required for construction purposes and access or other uses.
31	,,General - General – ROW	Please also confirm that Right of Way (ROW) charges for taking permission from any private entities for cable laying works crossing through private land/property, shall be negotiated and paid by DOTr directly to the concerned private entities/agencies.		The Contractor shall liaise and coordinate with civil contractor for the limit of the Right of Way. However, reference to the Employer's Requirement - General Requirements clause 3.10, the Contractor shall acquire, if needed, additional working areas in the vicinity of the Works or elsewhere for his camp, yard, for the storage of equipment, for his own office buildings, housing, quarters, stores, plant yard, workshops, offices, and any additional areas required for construction purposes and access or other uses.
32	,, - General – Road Restoration Works	We request you to please clarify whether any road restoration work is included in the scope of NS-01 contract. Kindly clarify if such scope shall be carried out by the concerned authorities in Philippines, or it must be		The bidder's understanding is not correct. Reference to the Part 2 Employer's Requirements, General Requirements, clause 3.8: " The Contractor will be held responsible for any damage to existing structures, works, materials, or equipment because of his operations or the operations of any of his Subcontractors. The Contractor shall repair or replace any damaged structures, works, materials, or equipment to the satisfaction of the Engineer, and at no additional

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		carried out by the Contractor. We understand that in case such road restoration is carried out by the concerned govt. authorities then necessary payment shall be made by DOTr to the respective govt. authorities directly. Kindly confirm.		cost to the Employer. The Contractor shall be responsible for all damage to streets, roads, railroads, curbs, sidewalks, highways, shoulders, ditches, embankment, culverts, bridges or other public or private property, which may be caused by the transport of equipment, materials or people to or from the Works."
33	Part I Section IV,BF - 234,Schedule 1.6 - Provisional Sums - Provisional Sum in accordance with Sub-Clause 13.5 of the General Conditions of Contract	We understand that the amount provisioned against Schedule 1.6 is tentative and only for the purpose of evaluation. However, in case any of the Provisional sum works are executed by the contractor then DOTr shall pay at actuals during execution of the project. Kindly confirm.		The bidder's understanding is correct.
34	Part III Section VIII,PC-10,Attachment 1 Summary of Key Dates - General – Status of Contracts to be Interfaced	DOTr is requested to share the status of works in the other ongoing contracts of NSCR, MCRP, MCRP Extn., NSRP-South, MMSP as on date which are		The status of the interfacing contract packages are as follows: **NSCR-EX (MCRP and NSRP-SC)** CPN01 - ongoing construction CPN02 - ongoing construction

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		required to be interfaced with the current project.		CPN03 - ongoing construction CPN04 - ongoing construction CPN05 - ongoing construction CPS01 - ongoing procurement CPS02 - ongoing procurement CPS03a - ongoing procurement CPS03b - ongoing procurement CPS03c - ongoing procurement CPS04 - ongoing procurement CPS05 - ongoing procurement CPS06 - ongoing procurement CPS07 - ongoing procurement CPNS02 - ongoing procurement CPNS03 - ongoing procurement **NSCR** CP01 - ongoing construction CP02 - ongoing construction CP03 - ongoing manufacturing trains CP04 - ongoing finalization of documents CP05 - ready for procurement **MMSP** CP101 - ongoing pre-construction works CP106 - ongoing procurement CP107 - ongoing conceptual design study The status of bids and awards are published on the web pages indicated below:

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				www.ps-philgeps.gov.ph/home/ www.dotr.gov.ph www.pnr.gov.ph
35	Part III Section VIII,PC-18,Attachment 2 - Time for Access to and Possession of the Site	We understand that in case of delay in Right to access as per the referred attachment of "Time for Access to and Possession of the Site", contractor shall be entitled to suitable EOT and Cost compensation. Kindly confirm.		Reference to the General Conditions GC 2.1, the extension of time or compensation is subject to the Sub-Clause 3.5 [Determinations] to agree or determine these matters. However, if and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.
36	Part II Section VI,ERG- 11 ERG- 74,4.2 Project Management Plan "16.5 Accommodation" - All Key Personnel shall be employed on a full-time basis until the issuance of the final Taking Over Certificate or such other time as the Engineer may instruct. The accommodation shall be provided from six (6) months prior to first site access to	Kindly define the term "Final taking Over" for a better understanding.		Reference to the Particular Conditions (PC) Part A Contract Data, Table: Summary of Sections, and General Conditions GC 10, final Taking Over referring to the Taking over of the last Sections of the Works.

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	issuance of the final Taking Over Certificate			
37	,GC-11,1.5 Priority of Documents - (a) the Contract Agreement (if any), (b) the Letter of Acceptance, (c) the Letter of Tender, (d) the Particular Conditions, - Part A (Contract Data), (e) the Particular Conditions – Part B (Specific Provisions), (f) these General Conditions, (g) the Employer's Requirements, (h) the Schedules, and (i) the Contractor's Proposal and any other documents forming part of the Contract.	We observed that the Priority of Documents list is not given in the tender agreement issued by DOTr. Hence we understand that the Priority of documents shall remain same as mentioned in GC Clause 1.5 of JICA document as referred here.		The bidder's understanding is correct. Bidder may refer to the Contract Form CF2 for the content of the Contract Agreement and full list of Contract Documents.

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38	Part I Section IV,BF-255,Schedule 2: Table of Adjustment Data - Table A. Local Currency (LC) Source of Index *1: The Department of Labour and Employment (DOLE). *2: The Philippine Statistics Authority (PSA): Table 1- Construction Materials Wholesale Price Index (CMWPI) in the National Capital Region (NSR), item "machinery and equipment rental". *3: The Philippine Statistics Authority (PSA): Table 1- Construction Materials Wholesale Price Index (CMWPI) in the National Capital Region (NSR), item "All Items"	DOTr is requested to share the online source for the referred Source of Index.		The bidder may refer to the related authority e.g. DOLE and PSA for the source of index, e.g. https://psa.gov.ph/ and https://www.dole.gov.ph/ respectively.
39	Part 1 – Bidding Procedures Section IV. Bidding Forms,BF-116,Schedule 1.2-12: Computerized Maintenance Management System - Milestone No. 1202.1 - Manufacture of the training equipment and facilities.	The Price schedule Schedule 1.2-12: Computerized Maintenance Management System, several Milestones have been wrongly referred to the Training Equipment and Facilities.		Schedule 1.2-12 has been updated. Refer to the Annex B and Annex B - Attachment 1 for the amendment detail.

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	Milestone No. 1202.2 - Transportation of training equipment and facilities from the place of manufacture to the Philippines. "Milestone No. 1202.3 - Delivery to the Contractor's secure storage of training equipment and facilities. Etc. Milestone No. 1203 - Installation and Testing: Delivery to the training facility, installation, and testing (including pre-installation tests, post-installation tests and partial acceptance tests) of all the training equipment and facilities and obtaining acceptance thereof from the Engineer."	We understand that it is a Typographical error, and we request you to kindly correct the Milestones definitions in the Price schedules for all sections.		
40	Part 2 – Section VI,ERG-6,3.3 Contractor's Labor Accommodation and Camps - The Contractor shall supply, equip and maintain for the Contract period all his own living accommodation, sheds, and	We request the employer to provide necessary support to the contractor in acquisition of land required for the establishment of Site Offices, Stores,		The stated works and tasks are the responsibility of Contractor. Refer to ERG 3.10.

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	stores necessary for the execution of the Work, and shall make his own arrangements with the owners of any land required and, if necessary, pay for its use.	Accommodation, Batching Plants, Precast Yards etc. and in getting approvals from the concerned Govt. authorities. We also request the employer to provide Land within the Depot area if available to the contractor free of cost, for the establishment of Site Offices, Stores, Accommodation, Batching Plants, Precast Yards etc.		
41	Part 1 – Section II,BDS-3,New ITB 7.7 - Visa Issuance and Entry Permits for Bidders Participating in Ongoing Procurements for DOTr Railways Section Project	We understand that DOTr shall provide assistance for Visa Issuance and Entry Permits for Contractor/Specialist Sub-contractors during execution stage of the project without any limitation on number of permits.		The visa assistance initiative by DOTr only aims to fast track a potential bidder's personnel's visa application. DOTr does not guarantee issuance of visa as this depends on DFA and the applicant. Follow ups may be done through the BAC Secretariat only.
42	,, - General – System/Equipment Make	We understand that all the Systems/sub-systems/equipment to be proposed for NS- 01 are vendor independent. There shall be no		The bidder's understanding is correct. Any equipment provided shall be compatible with equipment and systems provided by interfacing contractors to ensure interoperability.

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		compulsion on procurement of any System/Equipment specific to any Make or Vendor for reasons of uniform design/compatibility etc. with the systems of NSCR CP 04.		
43	Part 3 – Section VII,,GCC 1.2 - In these conditions, provisions including the expressions "Cost plus profit" require this profit to be onetwentieth (5%) of this Cost unless otherwise indicated in the Contract Data	Kindly increase the profit percentage applicable on Variations from 5% to 15%.		The bidder's proposal is rejected.
44	Part 2 – Section VI,ERT-15,1.8 Track Work Construction - For the viaduct section, the track structure shall be comprised of continuously welded rails supported on mono-block precast concrete sleepers using resilient fasteners spaced at 625 to 714 mm center to center. The standard value is 666 mm. The mono-block precast concrete is mounted on elastic pads in turn supported on the cast-in-situ	The bidder requests that if there is any provision to propose the changes in track structure provided in Tender or the track structure as per tender drawing: MCRP- DWG-GEN-TK-0101 is to be followed only. There are alternative track system designs which are more optimal from the civil structural design, metro operations & maintenance		The bidder shall fully comply with the specification and drawings. No alternative track systems is permitted.

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	track bed with a maximum length of 8m. Gaps of 100 mm shall be provided between concrete bed units/slabs. Drawing No. MCRP-DWG-GEN-TK-0101	perspectives & are long proven in use. Kindly confirm that alternative track system design can be used.		
45	Part 2 – Section VI,ERT-1,1.1.1 (4) - "Sections of the Main Line tracks and junctions on supporting structures subject to possible settlement shall be constructed using FFU sleepers with double elastic indirect fastenings embedded within a ballast track base"	We understand from the referred clause that the track-structure proposed for sections subject to possible settlement is different from the other section in mainline. Kindly clarify, if such sections subject to settlement are already identified by the Employer. If yes, we would request you share the details/locations.		The are no identified sections where differential settlement will occur. The interfaces between Civil contractors should be followed as stated in ERT 1.28 of Section VI Part 2 Volume II.
46	Part 2 – Section VI. Employer's Requirements,ERT-34,1.5.1 - 5) For the tracks in the Depot and Depot Access, the Contractor will also establish permanent datum points throughout the Depot area…….. The sub-ballast layer of crushed stone	We understand that the Formation Works, Blanket Layer required for the Track works in Depot shall be provided by the Civil Contractor and the NS-01 contractor is responsible for the works above the Blanket Layer.		The sub-ballast layer of crushed stone and formation will be laid by the Civil Contractor. Above the sub-ballast shall be the scope of NS-01 contractor. In addition, Interface Coordination is required to be done by NS-01 Contractors with Civil contractors as stated in ERT 1.28 of Section VI Part 2 Volume II.

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	will be laid by the Civil Contractor on the formation.	Kindly confirm.		
47	Part 2 – Section VI. Employer's Requirements,ERT-23,1.12.4 Head Hardened Rail - …… The heat treatment process shall be an in-line process delivering the specified hardness to a minimum depth of 25 mm.	According to the referred clause in Rail specifications, the heating process shall be through in-line treatment only. However, some of our Rail suppliers follow Off- line heat treatment process which is acceptable worldwide. Hence, we request you to kindly relax the criteria of in-line heating process and allow off-line heating process also.		In-line processing for the heating process is required.
48	Part 2 – Section VI. Employer's Requirements,ERT-37,1.17.4 Ordinary Rails in Turnouts - 2)… In depot turnouts, JIS 50N rail shall be used with compatible components. 3) All main line turnouts shall be head hardened rail, including the closure rails between crossovers.	We understand that, HH rails to be used for turnouts in mainline. The specification does not mention the type of rails to be used for Turnouts in Depots. Kindly clarify if we can use Standard Rails for the same.		Standard Rails can be used for turnouts in Depot except switch rail which shall be heat treated rail, nose rail and the crossing rail shall be used the heat treated rail or manganese rail. Refer to ERT1.17.2, 1.17.4, and 1.17.5 of Section VI Part 2 Volume II.
49	Part 2 – Section VI. Employer's Requirements,,1.27 Track Maintenance Vehicles and Equipment - Track maintenance	Rail Grinding Machine & Tamping Machine: As per the conditions of the Tender Documents, the		This proposal is rejected.

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	vehicles shall be provided for the ongoing maintenance of the line. Main track maintenance being considered are replacement of materials, rail grinding, realignment etc.	Contractor shall supply Rail Grinding Machine and Tamping Machine to the Employer. Kindly confirm, Whether the same machines can be used by the Contractor for the construction of the Track structure subject to periodical maintenance to keep them anew and handover to the Employer after using them. Please Confirm.		
50	Part 2 – Employer's Requirements,,Drawing No: MCRP-DWG- GEN-TK & NSRP-DWG- GEN-TK-0030 -	We understand that the details provided in this drawing (Length of Track in mainline, No. of Turnouts, No. of Rail Expansion Joints etc.) are pertaining to the Malolos-Clark Section only. Kindly Confirm. Also, kindly provide the details like Length of Track in mainline, No. of Turnouts, No. of Rail Expansion Joints etc. for the other two sections also (i.e., Solis-Bluementritt- Tutuban		The details provided in drawing MCRP-DWG- GEN-TK-0030 are indicative and for reference only. NS-01 is a Design and Build contract. Quantities of the items should be determined by the contractor during detailed design stage. Kindly refer to the track alignment drawings in Volume III Part 2-Employers Requirements Drawings (b).

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		section and Tutuban-Calamba Section) as the same are not mentioned in the Drawings pertaining to those sections.		
51	Part 2 – Employer's Requirements,,Drawing No: MCRP-DWG- GEN-TK & NSRP-DWG- GEN-TK-0030 -	Kindly provide the Type and Lengths of different Ballastless tracks in the depot.		The details provided in drawing MCRP-DWG- GEN-TK-0030 are indicative and for reference only. NS-01 is a Design and Build contract. Quantities of the items should be provided by the contractor during detailed design stage. Kindly refer to the track alignment drawngs in Volume III Part 2- Employers Requirements Drawings (b).
52	Part 2 – Section VI,ERT-15,1.8.1 & Drawing MCRP-DWG- GEN-TK-0140 - 1. "… Gaps of 100 mm shall be provided between concrete bed units/slabs." 2. TYPICAL TRACK ARRANGEMENT ON ELEVATED SECTION (TANGENT)	From the referred Clause, the gap between two track beds is 100mm. But in the drawing section, the same is shown as 10mm. Kindly clear the ambiguity.		The value on the drawing MCRP-DWG- GEN-TK-0140 are for reference only. The Gap of 100 mm shall be provided between concrete bed units/slabs which is stated in ERT 1.8 of Section VI Part 2 Volume II. 100mm is maximum and 10mm is minimum value. Approval from the engineer is required when determining the value within this range.
53	Part 2 – Section VI,ERT-15,1.8.1 - "… The exposed portion of the starter bars are to be coated by the Contractor, "	Please provide the specification of the material to be used for Coating of exposed portion of shear connectors.		NS-01 is a Design and Build contract. The bidder shall provide a technical proposal detailed as stated in Section IV Part 1 Volume 1 Appendix 7.3.

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54	Part 2 – Section VI,ERT-15,1.19 - Buffer Stops - 1. "Buffer Stops on the main line and depot test track: The Contractor shall provide friction sliding train weight of empty train at 7.5 km/h impact speed over a distance of 7.0 m respectively."	Please specify the mass of train and/or empty weight of train for the design of Buffer Stops. And also, kindly provide the numbers of different types of Buffer stops in Depot, as it is required for estimating the contract price.		The specifications shall be determined after interface coordination with the rolling stock contractors. Buffer stops are installed at the end on tracks in the Depot as shown on the Drawings.
55	Part 2 – Employer's Requirements,ERT-15,1.19.1 - Buffer Stops - Buffer stop	Please clarify the requirement of anti-climber from the Buffer stop.		Bidder shall propose the specification of the buffer stop. The bidder shall provide its technical proposal as required by Section IV Part 1 Volume 1 Appendix 7.3
56	Part 2 – Section VI,,Technical Requirements – Track Works - General	Kindly clarify if there is any provision of Pre camber of viaduct.		The flatness of the top slab shall be 3mm in 3m in the direction of traffic.
57	Part 2 – Section VI,,Technical Requirements – Track Works - Depot	We request the employer to provide the clear demarcation of Depot and mainline tracks for both Depots. And also kindly provide the track type bifurcation of special tracks (lengthwise-Embedded, pit, column type. Etc) in Depot.		The demarcation of Mabalacat Depot and mainline is stated in Drawing MCRP-DWG-ALT05-PL-0002 Depot Track Alignment (N-05) of Volume III Part 2 Employers Requirement Drawings (b) The demarcation of Banlic Depot and mainline is stated in Drawing NSRP-SW-ALT-PL-D-0001 Depot Track Alignment (S-07) of Volume III Part 2 Employers Requirement Drawings (b)

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58	Part 2 – Employer's Requirements,,Drawing – MCRP-DWG- GEN-TK-0403 - TYPICAL NON-GLUED INSULATED RAIL JOINTS AND ACCESSORIES	Kindly provide the specifications and details of the locations where Non-Glued Insulated Rail Joints shall be provided.		The location of Non-Glued Insulated Rail Joints shall be determined by the CP NS-01 contractor. The bidder shall provide its technical proposal as stated in Section IV Part 1 Volume 1 Appendix 7.3
59	Part 2 – Employer's Requirements,,Drawing – MCRP-DWG- GEN-TK-0101 - TYPICAL CROSS SECTION FOR ELEVATED SECTION (TANGENT)	Kindly provide the details of the scope & necessity of "Protection layer" above viaduct surface as mentioned in the drawing. Also kindly provide the specifications of this protection layer.		The 2.5% slope Protection layer is the scope of Civil contractor which is to provide slope going to the structure drainage.
60	Part 2 – Employer's Requirements,,Drawing – MCRP-DWG- GEN-TK-0101 & Drawing – MCRP-DWG- GEN-TK-0200 - TYPICAL CROSS SECTION FOR ELEVATED SECTION (TANGENT) & TYPICAL DETAILS OF SEF SYSTEM ON TRACK BED	Kindly clarify, whether the sleepers are connected to the Track bed through any system, or they are independent of the track bed. Also note that, in case of bridges & end- rotation, these sleepers may get uplifted if there is no connection to the track bed.		The PC sleeper shall be isolated from the trackbed concrete by elastic material, on the bottom, end and side surfaces
61	Part 2 – Employer's Requirements,,Drawing – MCRP-	In the referred drawing there is a 5mm gap in between sleeper		The ends and sides surface of PC sleeper are separated from the concrete trackbed by elastic material.

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	DWG- GEN-TK-0200 - TYPICAL DETAILS OF SEF SYSTEMON TRACK BED	and track bed on both sides of sleeper. kindly specify the specification of material to fill the gap between Sleepers and Track bed.		Elastic material specifications are specified in ERT 1.14.1 of Section VI Part 2 Volume II.
62	Part 2 – Employer's Requirements,ERT-15,1.8 Track Work Construction - 2 The reinforced track bed shall provide for stray current isolation.	Kindly clarify whether the structural rebars can be used for stray current mitigation or else kindly specify the number of bars required for the same.		NS-01 is a Design and Build contract. The bidder can propose the stray current mitigation and rebar arrangement as stated in Section IV Part 1 Volume 1 Appendix 7.3
63	Part 2 – Employer's Requirements,ERT-34,1.16.1 - "1.16 Rail Expansion Joints 1) The Contractor shall liaise with the Engineer and the other contractors to determine where provision of expansion joints is required to "	Kindly clarify the criteria to assess the requirement of REJ (rail expansion joint). Also kindly clarify if such assessment is already conducted by the employer or civil contractor. If yes, kindly furnish the details.		NS-01 is a Design and Build contract. The contractor shall perform the interface with civil contractors during detailed design stage for the requirement of REJ (Rail Expansion Joint) Also, the bidder can propose its technical proposal as stated in Section IV Part 1 Volume 1 Appendix 7.3
64	Part 2 – Employer's Requirements,,General - General	We understand that there is no requirement for "Provision of Gauge widening in depot and mainline". Kindly confirm.		The slack shall be added only in curves with less than 200m radius. The contractor shall consult the Engineer for the position at the detailed design stage.
65	Part 2 – Employer's Requirements,,MCRP-DWG- GEN-	Kindly confirm whether the bidder shall supply the same		The bidder shall fully comply with the requirements of the specification and drawings.

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	TK-0212 & MCRP-DWG- GEN-TK-0213 - TYPICAL FASTENING SYSTEM FOR BALLASTLESS TRACKS & FASTENING SYSTEM FOR BALLASTED TRACKS	fastenings as shown in reference drawings or can supply any other fastening system complying to the employer's requirement.		
66	Part 2 – Employer's Requirements,,General - General	We request the employer to provide the list of approved quarries to source the ballast from, if available for reference to the bidder.		We don't have any approve quarries to source the ballast. For the bidders information, there are numerous local quarries who can supply ballast subject to passing the requirement stated in ERT 1.15 of Section VI Part 2 Volume II
67	Part 2 – Employer's Requirements,, General - Noise & Vibration	Kindly clarify whether there is any requirement for noise & vibration mitigation or protection of nearby buildings from the noise & vibration generated from the project.		The contractor shall comply with: Noise: NPCC Memorandum Circular No.002 s. 1980 (Amendments to Article 1 (Noise Control Regulations) Chapter IV (Miscellaneous Regulations), Rules and Regulations of the NPCC; Vibration: The Contractor shall comply with the limits for vibration stated in US Federal Transportation Administration FTA-VA-90-1003-06 (2006) Table 12-3. Construction Vibration Damage Criteria.
68	Part 2 – Employer's Requirements,,General - Noise & Vibration	Kindly clarify if there is a requirement to limit the noise & vibration generated from construction activities.		The contractor shall comply with: Noise: NPCC Memorandum Circular No.002 s. 1980 (Amendments to Article 1 (Noise Control

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				Regulations) Chapter IV (Miscellaneous Regulations), Rules and Regulations of the NPCC; Vibration: The Contractor shall comply with the limits for vibration stated in US Federal Transportation Administration FTA-VA-90-1003-06 (2006) Table 12-3. Construction Vibration Damage Criteria.
69	Part 2 – Employer's Requirements,ERT-50,1.25.2 - 1.25 Depot Line Load Gauge 2) The contractor shall propose for Approval his construction vehicle load gauge design, "	We request the employer to clarify the term "Load Gauge" from the referred clause. Also kindly confirm whether any specific load or condition shall be considered for the same.		The "Load Gauge" is a physical gauge mounted over the track to ensure that any rolling stock and equipment it is carrying does not protrude outside of the structure gauge.
70	Part II Section VI,ERT-83,2.4.1 Signaling Scope of Work - General - The scope of work describes the requirements for a Train Control System using ETCS Level 2 (Baseline 3 Release 2 or later) and GSM-R (Packet switched) to constitute an ERTMS signaling system for the NSCR-Ex {Malolos to Clark (MCRP) and Solis to Calamba (NSRP) (This shall include Depots, which shall be located	We understand that only ETCS Level 2 + ATO (as optional) to be provided for mainline & ETCS Level-1 for Depots. As per our understanding, in most of the Metro Projects, Depots are installed with ETCS Level 1 only. Kindly confirm.		The Bidder's understanding is correct.

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	at Mabalacat and Banlic.			
71	Part II Section VI,ERT-112,2.12.11 Technical Requirements – Signaling - Automatic Train Operation (ATO) System	ATO is normally a SIL0 system as all the operations of ATO and the train movement are protected by ATP\ETCS system which is complaint to SIL4. So, kindly clarify if we can consider ATO as SIL0.		ATO shall be SIL 0.
72	Part II Section VI,ERT- 151,2.19.3 - Level Crossing in the Depot (Mabalacat and Banlic)	Kindly confirm the number of LC Gate in the depot.		This is an interface item for NS01 with other contractor/s and O&M Concessionaire/s
73	Part II Section VI,ERT- 152,2.20.3 Train Detection - The ETCS Level 2 system shall adopt Track Circuits on the main line to acquire the status of track occupancy.	Kindly confirm the type of track circuit to be used. Can we propose to use Digital Axle counters in place of Track circuits?		Track Circuits shall be provided.
74	Part II Section VI,ERT-165,2.26.10.2 - The ETCS Test Track at MMSP Depot:	Kindly share the test track depot layout.		Please refer to drawing DP-CVL-001. See Annex B of this GBB.
75	Part II Section VI,,Drawing No. MCRP-DWG- VIA00-ST-0020 - Key Plan	We understand that the there is no Telecom scope of works between CIA & NCC Station. Kindly confirm.		The bidders understanding is correct CIA to NCC is not the scope of NS-01. No telecommunications works are required between CIA and NCC.

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76	Part II Section VI,ERG-180,Appendix-8 - Outline Interface demarcation with NSCR &MMSP	We understand that there is no requirement of Telecom provision/extension of Telecom facilities for Interface with Platform Screen Doors from Solis to Malalos Section under the scope of this contract. Kindly confirm		There are no Telecom provisions between Solis to Malolos Stations, this is N1 Section and part of Contract CP04. The PSD's for Solis to Malolos stations are covered in the scope of NS-01.
77	Part II Section VI,ERT- 250,Table-3.11.4 - NS-01 & MMSP Telecommunication Interface(GSM-R Infrastructure at MMSP Track)	Kindly share the existing GSM-R RF Coverage Plot for Valenzuela Depot & Layout of Valenzuela Depot along with Test track Map Route.		Valenzuela Depot under MMSP does not have existing RF coverage.
78	Part II Section VI,ERT- 255,Clause 4.4 - Optical Fiber Cable(OFC) infrastructure shall be formed by two single-mode optical fibre cables, laid along two physically distinct routes.	Kindly confirm if OFC Cores are required to be laid in both sections from Solis to Calamba & from Malalos to CIA Station.		Yes, it is on both side of the viaduct as the Backbone Network needs to be redundant.
79	Part II Section VI,ERT- 255,Clause 4.4 Optical Fiber Cable - Optical Fiber Cable(OFC) infrastructure shall be formed by two single-mode optical fibre cables, laid	We understand that additional OFC (2*96) is required to be laid to connect Solis to Malalos only and the same is not required to be terminated		Yes. This is a requirement in case that the part of the SC Section could not be connected to the SC-Calamba (Banlic) OCC instead it can be connected to N2-Mabalacat OCC.

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	along two physically distinct routes.	at intermediate location of Solis to Malalos Station. Kindly confirm.		
80	Part II Section VI,ERT- 264,Figure 1.1 - Example of Radio System Configuration	We understand that separate BSC (GSM-R) will not be required for Stations. Same BSC at Depot OCC will cater to the requirement of all the GSM-R locations at Stations/Depot. Kindly confirm.		This is a Deign and Build Contract: GSMR Network will be design based on the coverage parameters complying to the GSMR standards as defined on ERT-265- GSMR Specific Standards.
81	Part II Section VI,ERT- 265,Clause 2.2 Scope of Supply - GSM-R hand portable radios with accessories shall be similar to a handphone style/shape.	Kindly clarify the quantity of OPH & GPH to be provisioned per station/Depot for GSM-R system.		The quantity and the type of Handheld Portable Radios shall be determined by the contractor during detailed design following discussions with interfacing parties.
82	Part II Section VI,ERT- 266,Clause 2.3 Scope of Services - The Contractor shall liaise with all concerned authorities such as NTC for obtaining license.	We understand that only liaising with authorities from GSM-R scope is in contractor's scope. All the necessary fees/payments for licences etc. will be borne by DOTr. Kindly confirm.		Only the Radio Frequency License to operate will borne by DOTr as they would be the owner of the Frequency Band. Any other fees like Equipment Type Approval, Acceptance Certificates, Equipment Licences, Administrative/Processing fees etc, will be borne by the Contractor.
83	Part II Section VI,ERT- 270,Clause 3.2 Radio System Coverage - The full alignment of the viaduct and	We understand that GSM-R Radio System for CP 04, NSCR (Malolos -Tutuban) Section is		Yes, Malolos to Solis (Not including Tutuban) is part of CP04. Tutuban is part of NS01. Please note that there is interfacing with CP04 at

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	any other area with CP04 trackwork.	not included in the scope of this contract. Kindly confirm. Kindly also share the existing GSM-R OEM make & model & coverage plot of CP-04 & NSCR Package.		Malolos and Solis Stations. There is no existing GSMR Coverage, the Contractor shall design and supply a GSMR Network.
84	Part II Section VI,ERT- 270,Clause 3.2 Radio System Coverage - Sufficient overlap for radio coverage shall be provided at the boundaries of NSCR. The Contractor shall interface with the NSCR-N1 Contractor for detailed radio coverage plan	Kindly clarify the demarcation of GSM-R RF Coverage plot of BTS at Solis Station & Malalos Station.		The contractor shall interface with the CP04 Contractor with regards to the coverage design and its overlaps to create one seamless coverage for NSCR. Please refer to ERT-249 Section 3.11.3 Interface between NSCR-EX and NSCR (N1) Project.
85	Part II Section VI,ERT- 271,Clause 3.4 User Access - AccessUnit /MMI	We understand that Radio Control workstation (RCW) will be provisioned in OCC CER only. Kindly confirm		Yes. The RCW will be provisioned at the OCC with the controller. Please note that we have 2 OCCs (Mabalacat and Banlic) and these two will be combined and Mabalacat will be an Integrated OCC for the whole NSCR Line (N2, SC and N1). RCW's shall be provided at all stations.
86	Part II Section VI,ERT- 313,Clause 2.2(a) - Voice System: Remote IP-PBX shall be installed where necessary.	Kindly clarify the specifications & configuration of IP-PBX to be provisioned for Remote locations.		Same specifications for remote locations. It is part of one PABX System.

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87	Part II Section VI,ERT- 314,Clause 2.2(a) - Voice System: Direct Line Telephones	Request to confirm our understanding that DLT Phones & other Office phones/IP phones will be extended through same IP- PBX.		Yes, it shall be interconnected. Please. refer to ERT-315 -Direct Line Telephone.
88	Part II Section VI,ERT- 314,Figure 2.2 - Example of Voice System Configuration	We understand that Intra building Analog phones can be extended over PIJF Cables /2 Core Cables from nearest satellite PBX.		We confirm that can be extended.
89	Part II Section VI,ERT- 319,Clause 1.2 - On each platform, a monitor will be installed, for a train driver to view the boarding & alighting of passengers	Kindly clarify the specifications & configuration of Monitors to be provisioned at platform.		Please refer to ERT-323- 7- CCTV Monitors under Sub-section b) Platform Headwall.
90	Part II Section VI,ERT- 319,Overview of the Closed-Circuit Television (CCTV) System - On-board Rolling Stock CCTV systems are not included in this system.	For interface between the Onboard CCTV system and Radio communication system, we understand that the scope of NS-01 contractor shall be limited to providing the wireless Tx / Rx at Rolling stock with suitable interface port. We understand complete on board CCTV system including		For the On-board Radio System, the Contractor will supply and supervise the installation on the Rolling Stock. For the CCTV System, it will be supplied and installed by the Rolling Stock contractors.

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		cameras, monitor and connectivity up to the Tx / Rx port will be provided by Rolling Stock contractor. Kindly confirm.		
91	Part II Section VI,ERT-326,Requirements for CCTV Video Analytics System - Intrusion Detection It should be possible to detect and alert when a person enters a protected zone or station area outside of hours. The video analytics system shall be capable of detecting loitering activities and shall have face recognition functionality.	Please clarify what is face recognition distance expectation i.e. haw many feet's 1 meters from camera a face can be recognized. What should be the size of database for face recognition system.		There is no face distance requirements, and the placements or positions of the cameras shall be determined by the contractor based on their study to ensure the required coverage. The contractor shall ensure the video quality shall be as stated on ERT-325- No. 11 Video Quality. The video recorder shall have 1 month of capacity with high-quality images. (Please refer to ERT-319- Sub - Section 1.2)
92	Part II Section VI,ERT- 344 & 345,Clause 2.2(a) Figure 2.2 - Time server & Master Clock is composed of a Master Clock unit, Sub-Master Clock, Clock Controller, Slave clock	We understand that redundancy for Master Clock, Submaster Clock, Clock Controller is not required. Kindly confirm.		No. The Time Server and Master Clock should be redundant to be reliable.
93	Part II Section VI,ERT- 344 & 345,Clause 2.2(a) Figure 2.2 - Time server & Master Clock is	We understand that Submaster Clock at Station shall suffice the requirement of		No. The Sub-Master clock is the one which synchronizes the time from the Master Clock to the Slave clocks. The Sub-Master clock is not a Slave clock. Please see for Reference only Drawing No. NSRP-

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	composed of a Master Clock unit, Sub-Master Clock, Clock Controller, Slave clock	Sub Station slave Clocks & Interface. Kindly confirm.		DWG-X/X-COM-0008- Example of the Time Server and Master Clock System.
94	Part II Section VI,ERT- 344 & 345,Clause 2.2(a) Figure 2.2 - Time server & Master Clock is composed of a Master Clock unit, Sub-Master Clock, Clock Controller, Slave clock	Kindly Clarify the term'' Clock Controller".		The Clock Controller is part or can be part of Sub-Master Clock (Depends on the Manufacturer). This is the one that controls and send signals to the slave clock from the Sub Master clock.
95	Part II Section VI,ERT- 346,Clause 2.2(b) - Slave Clock	Kindly confirm the specifications of Slave Clocks.		The type and dimension of the slave clock is dependent in each station and depot. This is part of the interface with the Architectural/ Civil design. They shall defined a guideline on what type, dimension and locations as it is part of the station aesthetics.
96	Part II Section VI,ERT- 346,Clause 2.2(b) - Slave Clock	Kindly confirm the no. of Analog & Digital Clocks to be provisioned per Station, Depots and OCC.		The number is dependent on each location. The Civil/Architectural Team has a guideline regarding the Station design specifically the Front of the House Strategy.
97	Part II Section VI,ERT- 349,Clause 2.2 - Scope of Supply of Meteorological & Seismic Monitoring System	We understand that for each system at particular Station (Installation location) separate PC terminal for monitoring purpose is not required. Kindly confirm.		Yes. All Monitoring will be done in the OCC.
98	Volume II of IV PART 2/	For conducting mentioned simulation studies and decide		The requested data will be shared once finalize and submitted by interfacing parties.

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	Section VI,ERT 364,Chapter 4: Power Supply system, Clause No. 4.1.3, System studies. - The Contractor shall undertake his own studies, calculations, analysis and confirm the required number, sizing and location of TSS taking into account of timetable simulation data, section data, rolling stock data, traction system data and etc.; BP (Battery Post) traction power simulation studies; Re-generating power absorbing device study, specification and effect;	the optimum ratings and sizes, following data is required. Please share: i) Mechanical and Electrical data of RS loco. ii) Train Timetable for the current and projected traffic scenario. iii) Tractive effort and braking effort curves for different voltages. iv) Running curves for peak hours and off hours. v) Minimum rating of battery. vi) Minimum rating of regenerating power absorbing device. vii) Auxiliary load of the train to be considered for Simulation. viii) Speed and auxiliary load of the train to be considered for the BP size calculation for taking the stranded train to the nearest station during the power failure.		

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99	Part 2 – Section VI,ERT- 410,4.1 Scope of Works - Total eighteen (19) Traction Substations (TSS) on Main Line and one (1) Sectioning Post (SP) are planned to construct and the locations and site condition are described as follows	There is an ambiguity between figure and words for number of Traction Substations (TSS). Kindly clarify and confirm the exact number of Traction Substations (TSS) to be considered in NS-01 contract for North South Railway Project-South line (Commuter) (NSRP-South).		There are a total of 19 Traction Substations (TSS) on Main Line and one (1) Sectioning Post (SP). Please note that TSS No.1 is covered by the scope of works.
100	Volume II of IV PART 2/ Section VI,ERT – 367 ERT- 360,4.1.3 System Overview/ 7) BP (Battery Post)/ ix. 4.1.1 General - The exact number, the location and the required capacity of the battery post shall be determined during the traction power simulation study. The simulation shall determine the optimum quantity and position of the battery posts to maximize the overall energy efficiency of	As per the tender clauses we understand that the quantity of battery posts as stated in Clause 4.1.1 is for reference purposed only and exact numbers shall be based on simulation. Please confirm our understanding.		The bidders understanding is correct.

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	the system. The quantity of battery posts as stated in Clause 4.1.1 is for reference purposed only. "The work shall include the following: 1) Main Line with thirteen (13) Traction Substations (TSS), four (4) Battery Posts (BP), one (1) Sectioning Post (SP) and at North Depot, one (1) Depot Traction station (Depot SS), one (1) Depot Sectioning Post (Depot SP)"			
101	"Volume II of IV PART 2/ Section VI",ERT-383 ERT - 482 ERT - 1070,4.4.6 5.6.10 12.2.1 - SCADA	We understand that the scope of NS-01 contract only includes design, supply, installation, testing and commissioning of SCADA works. The annual maintenance for the SCADA system is not under the scope of this contract. Please confirm if our		The bidders understanding is correct.

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		understanding is correct.		
102	5a_CP NS-01 BD Part 2 Vol.3 E_M,164 0f 321, - 5) POWER SUPPLY SYSTEM DRG No. MCRP-DWG-PSS-1001 Sheet No. 3 of 40: Traction power feeding system	At SP (83km 436), feeders connecting to track require Infeed isolators. Please confirm bidder's understanding.		The bidders understanding is correct.
103	5a_CP NS-01 BD Part 2 Vol.3 E_M,167 0f 321, - 5) POWER SUPPLY SYSTEM: DRG No. MCRP-A/C-PSS-2003 Sheet No. 6 of 40: Substation connection (SS No.12)	SS No.12 ratings are not matching between Substation connection drawing (MCRP-A/C- PSS-2003) and feeding system drawing (MCRP-DWG-PSS-1001). Please clarify.		The correct rating is 1500V DC/6,000kW as indicated on page 368 of ERT.
104	Volume II of IV PART 2/ Section VI,ERT 368,Chapter 4, Power Supply system, Clause No. 10, TSS equipment, ii) Rectifier equipment - AC Bus duct between Rectifier Transformer and Rectifier DC 1500V outdoor type metal enclosed air insulated switchgear with high-speed	AC Bus Duct is normally not available for the 1500V DC system. Request to allow for the cables between Rectifier Transformer and Rectifier. Also, we assume that HSCB and Disconnecting switches will come after the Rectifier and not between Rectifier transformer and rectifier. Please confirm our		Any design revision shall be approved by the Engineer. We confirm the disconnect switch and HSCB will come after the rectifier and not between the rectifier and rectifier transformer.

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	circuit breaker and disconnecting switches.	understanding.		
105	Volume II of IV PART 2/ Section VI,ERT 379,Chapter 4, 4.4.2 (3)(2) - Rectifier sets shall accommodate the load cycle requirements as defined with relevant standards and regulations for "Extra Heavy Traction Duty Class D" as a minimum.	Please confirm whether bidder can propose heavy traction duty instead of Extra heavy traction duty to suffice following requirement mentioned in contract clause 4.4.2 if the same is permissible through power system simulation studies: a. 100% continuous. b. 130% to 150% overload - 120min. c. 300% overload - 1min		The traction power simulation reports or study should compliment the technical capacity of the proposed Substation Equipment's (transformers, circuit breakers, etc.).
106	5a_CP NS-01 BD Part 2 Vol.3 E_M,,General - Required drawings	Please share the following drawings for better estimation of quantities: 1. Depot track alignment plan for Banlic depot. 2. Civil and Architectural drawings of Banlic depot. 3. Civil and Architectural drawings of stations in NSRP stretch. 4. Civil Cross section detail		A selection of drawings for items 1-5 are included in the ERD. Further drawings are published as part of the tender packages for the interfacing contract and are available from the DOTr, PNR and PS-DBM websites. For item 6 routing shall be coordinated with the utility companies.

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		of Tunnel and Underground station. 5. General arrangement (span layout) of NSRP- South including connection to Tutuban and OCS boundary point (Solis). 6. Cable route of 69kV/115 kV/34.5 kV incoming lines for mainline and depot from electric companies.		
107	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERG-55,b) GENERAL REQUIREMEN TS (ERG) 10.5. Test Groups 10.5.1. - (1) Type Test - A Type test is a requirement for first production items in respect of each major component or assembly or sub-assembly …	Fresh type test is required for all equipment? Can we submit available type test reports?		Fresh Type Test are not required for off the shelf or standard equipment. Detailed type test reports shall suffice subject to the approval by the Engineer.
108	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERG-56,b) GENERAL REQUIREMEN TS	What equipment are subject to FAI test?		All equipment shall be subject to FAI test.

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	(ERG) 10.5. Test Groups 10.5.1. - (2) First Article Inspection - The Engineer will advise any adjustments required and the Contractor shall prepare a visit schedule for inspection of those items as required by the Engineer.			
109	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERG-59,b) GENERAL REQUIREMEN TS (ERG) 12.2. Software Framework 12.2.1. - All the software produced or supplied for the Project shall be subject to a defined quality framework….	All software within supplied equipment is subject to vendor's own quality framework. We understand this clause is only applicable to other software's which are to be directly used by the Employer. All embedded software is not subject to this clause.		The bidders understanding is correct.
110	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERG-59,b) GENERAL REQUIREMEN TS (ERG) 12.9. Software Rights 12.9.1 - The Contractor shall	We understand this clause is only applicable to other software's which are to be directly used by the Employer. All embedded software is not subject to this clause.		The bidders understanding is correct.

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	ensure that the Employer/the Engineer or its licensee is granted all necessary rights to use software embodied in the equipment and there are no restrictions attached to the use of any information supplied by the Contractor which might later prevent or hinder the Employer/the Engineer or its licensee from modifying or adopting or extending the system...	In case of supply of equipment using firmware, only the firmware installed in the equipment shall be provided. Any documentation related to firmware (including source codes, etc.) will not be supplied to Employer.		
111	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERG-90,b) GENERAL REQUIREMEN TS (ERG) 21.3. Reliability, Availability, and Maintainability Management - Table 21.2 E&M systems and Track works RAM Targets 8) Power Supply Availability: 99.995% MTTR: 0.5 hours	Mentioned RAM targets are very strict. We understand this target for the Power Supply System in totality and not for each of the equipment (i.e. Battery Post). Is this understanding correct?		The bidders understanding is correct. RAM perspective should cover all events impacting the applicable RAM targets for reasons related to the system itself.

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112	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ESMP-36,Appendix B Generic Safety Requirements - SR-23: Cables shall be of zero halogen type according to IEC 60754-1. SR-24 Cables shall be of low smoke emission type according to IEC 61034.	We understand this requirement is applicable for external cables only. Please confirm.		The contractor shall comply with IEC 60754-1 and IEC 61034.
113	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERG-184,APPENDIX 8- OUTLINE INTERFACE DEMARCATIO N WITH MMSP - Power Supply (MMSP-NS01) Power simulation will cover CP107 trains running on the NSCR (MMSP-CP107) Train parameters shall be provided for the power simulation.	Please provide train parameters and operation parameters for Battery Post Simulations.		Train's operational parameters will be provided by interfacing rolling stock contractors.
114	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-	We understand that the air-conditioning system shall be based on the heat loads of the		We confirm bidders understanding.

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	362,c) TECHNICAL REQUIREMEN TS (ERT)4 POWER SUPPLY SYSTEMI. MCRP4.1.1 General - 6) The power supply equipment when in operation in normal and degraded mode shall not exceed the heat dissipation figures used in the sizing of the fans and air-conditioning used in the various rooms that house power supply equipment.	substation equipment. Please confirm.		
115	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-362- 363,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.1.3 System Overview 4.1.3 System Overview 1) System Studies PART 2 – EMPLOYER'S REQUIREMEN TS DRAWINGS Sheet 3-16 of 40 - ii. BP (Battery Post) traction power simulation			The battery post on the left figure is its set of assembly whereas the figure on the right signifies its supplying section.

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	studies; iii. Re-generating power absorbing device study, specification and effect;	As per ERT, Regenerative power device is required aside from the battery posts. We understand this is the battery post (with battery panel) shown in the traction power feeding system and substation connection drawings. What is the difference in purpose between Battery Post and substation Battery Post (Regenerative Power absorption device)? Battery Post x 4 Battery Post (Regen Absorption Device) x 13		

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		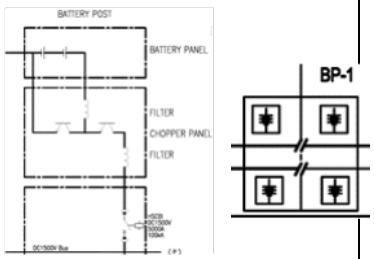		
116	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-367,c) TECHNICAL REQUIREMENTS (ERT) 4 POWER SUPPLY SYSTEM 4.1.3 System Overview 4.1.3 System Overview 7) BP (Battery Post) - v. The BP system shall be utilized to safely	"Electrical sections" mentioned in this class is understood to be the electric companies (MERALCO, PELCO III, etc) section of supply. We understand BP size shall allow powering of trains in case a power failure in an electric company's franchise section. Please confirm.		We confirm the bidders understanding. The BP will supply the stored energy to the system to provide voltage stabilization, demand reduction, energy efficiency, acceleration and running of trains in commercial service and as emergency power during power outages.

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	bring passengers to the nearest station during adjacent TSS power failure. The BP's shall be sized to allow for multiple trains within the electrical sections to move out of the affected section.			
117	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-368,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM 4.1.3 System Overview 4.1.3 System Overview 10) TSS Equipment - ii. Rectifier equipment AC Bus duct between Rectifier Transformer and Rectifier DC 1500V outdoor type metal enclosed air insulated switchgear with high-speed circuit breaker and disconnecting switches	This clause also mentions for busduct for outdoor DC1500V HSCB/DS panel. We understand AC bus duct is required only between rectifier transformer and rectifier equipment. DC Switchgear set including incoming panel from rectifier equipment is understood to be suitable for indoor installation and without any requirement for busducts. Please confirm.		We confirm.
118	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-372,c) TECHNICAL REQUIREMEN	We understand design life of 30 years (particularly for Battery Post) is in the condition that proper		We confirm. The design life of 30 years shall be achieved subject the equipment being operated and maintained in accordance with the contractors recommendations.

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	TS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.3 Design Criteria and Standards - 4.3.1Design Life (3) Design life is 30 years;	maintenance and recommended parts replacement be strictly observed. Please confirm		
119	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-372,c) TECHNICAL REQUIREMEN TS (ERT)4 POWER SUPPLY SYSTEMI. MCRP4.3 Design Criteria and Standards - 4.3.2 Proven Design3) Sub-systems and equipment proposed by the Contractor shall have been in use and have Railway System over a period of at least five years.	Supply record in other countries other than Philippines shall be applicable in the consideration of proven design. Please confirm if acceptable.		We confirm that overseas projects can be considered.
120	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-372,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM	Please provide concrete environmental conditions including ambient temperature, pollution degree, humidity, etc. for consideration of design.		Environmental conditions shall be determined by the contractor during preliminary design.

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	I. MCRP 4.3 Design Criteria and Standards - 4.3.3 Adequate margin Adequate margin shall be built into the design particularly to take care of the higher ambient temperatures, dusty conditions, and high seasonal humidity, etc. prevailing in Manila.			
121	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-373,c) TECHNICAL REQUIREMENTS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.3 Design Criteria and Standards - 4.3.4 EMC (Electromagnetic Compatibility) 8) The Contractor shall conduct full EMI tests on each one set of equipment and type tests as well as full EMC tests on complete traction power supply equipment in accordance with IEC 62236.	We understand that the full EMC tests are to be done as integrated test for all the substation equipment and will be under the main contractor's scope.		The full EMC test shall be under the scope of NS-01.

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122	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-375, 376,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements - (2) 69kV Switchgear 3)-b. Gas insulated vacuum circuit breakers withdrawable type. 5)-a. Circuit breaker which can withdraw or fix mounted circuit breakers;	We understand both withdrawable & fix mounted circuit breakers can be applied for the 69kV Switchgear. Please confirm.		We confirm.
123	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-378,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements - 6) All DC switchgears shall be isolated from the ground and the	Is this clause pertaining to isolation from ground through the use of insulation mats between panel and ground? Please confirm. If yes, is it only to be applied for the DC switchgear set?		The insulated mat shall be used for the DC Switchgear and Negative Panel.

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	switchgears shall be rigidly fixed to the floor with anchor bolts.			
124	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-368, 380,c) TECHNICAL REQUIREMENTS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements - 10) TSS equipment ii. Rectifier equipment 69kV/1180V gas insulated self-cooling or oil insulated transformer self-cooling Rectifier transformer (eco-friendly type);8) Rectifier transformers shall be of oil insulated or gas insulated self-cooling type with an enclosed bus ducting or cable connection to the rectifier cubicle.	Can we offer either conventional mineral oil insulated transformer or eco-friendly oil insulated transformer? Please confirm.		The contractor shall provide eco-friendly oil immersed type transformer.
125	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-	Please provide information on allowable noise level for transformers.		The reference for the determination of allowable noise level of transformers can be found in IEC 60076-10 or its equivalent standard.

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	368, 380,c) TECHNICAL REQUIREMEN TS (ERT)4 POWER SUPPLY SYSTEMI. MCRP4.4 Technical Requirements - 4.4.3 Transformers(2) 69kV/6.6kV Distribution transformers3)-d. d. Noise level:Permissible noise level shall comply with the Philippine environmental standard.			
126	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-383,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements 4.4.5 BP (Battery Post) - (1) The BP system consists of following; 1) Control Panel … 2) Filter Panel/Chopper 3) DC switch panel 4) Capacitor panel 5) Resistor panel	The battery specification calls for capacitor panel and resistor panel as part of the battery post. What is the purpose of these panels? These are not necessary in case of battery-based energy storage system for battery post application.		The stated parameters are for the conceptual design. During the preliminary design phase the contractor shall prepare a detailed design to achieve the performance requirements of the ERT. The contractor may submit an improve design which will be subject for the approval of the Engineer.

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127	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-383,c) TECHNICAL REQUIREMENTS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements 4.4.5 BP (Battery Post) - (2) Rating and Specifications 5) Housing for BP shall be outdoor type.	Housing for the BP is not within the scope of the BP supplier/E&M supplier. Please confirm. Battery post (regenerative absorption device) for each substation is assumed to be for indoor installation within the substation. Please confirm.		The housing/panel for the BP in under the scope of NS-01. The equipment shall be indoor type.
128	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-386,c) TECHNICAL REQUIREMENTS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements 4.4.6 Power SCADA (SCADA for Power Supply System) - (5) Main Operating Facilities 5) Records of energy demand and consumption and other data at electric companies	Battery post/regenerative absorption device charge/discharge information is required to be sent to SCADA? Please confirm.		We confirm

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	incoming feeders, each station, traction and depot service substation for checking bills, for the electric companies' trend analysis and cost budgeting purposes;			
129	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-386,c) TECHNICAL REQUIREMEN TS (ERT) 4 POWER SUPPLY SYSTEM I. MCRP 4.4 Technical Requirements 4.4.6 Power SCADA (SCADA for Power Supply System) - (13) Substation Automation 1) The automation of substations shall be compliant with IEC61850.	Does this clause imply that connection to SCADA/RTU must be via IEC61850 protocol? Please confirm.		We confirm.
130	Part 2 – Employer's Requirements Section V1. Employer's Requirements,ERT-416,c) TECHNICAL REQUIREMEN TS (ERT)4 POWER SUPPLY SYSTEMII. NSRP-	We propose energy storage systems for regenerative devices. Is this acceptable?		This is acceptable.

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	South4.1.2 System Requirements - (2) TSS (Traction Substation) shall include 115kV or 34.5kV circuit breakers, Rectifier transformers, Rectifiers, DC 1,500V Switchgears, Re-generating devices, protective relays, cables and other, but not limited to, for train traction power, and 6.6kV substation cubicle with Distribution transformer for AC 6.6kV power supply.			

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131	PART 2 – EMPLOYER'S REQUIREMEN TS DRAWINGS 4. Power Supply I. MCRP Sheet 8-30 of 40 - Regeneration Controller and Regeneration Resister shown in substation layout.	Reference substation layout shows regenerative resistor as regenerative absorption device whereas the substation single line diagrams shows battery posts as regenerative absorption device. We understand the requirement is a battery post (not resistor). Please confirm. 		The figure on the left is an integral part of the battery post which is situated outdoor. This is a conceptual design which should be developed by the contractor.
132	Part 2 – Employer's Requirements Section V1. Employer's Requirements,,PART 2 – EMPLOYER'S REQUIREMEN TS DRAWINGS 4. Power	Instead of using separate ΔI-CT for ΔI protection, can we use the H-CT for Δ I protection? In this case, there is no need for 2 sets of CT's for each feeder. Please confirm.		The design provided are for reference only, the contractor shall develop its own design for approval by the Engineer.

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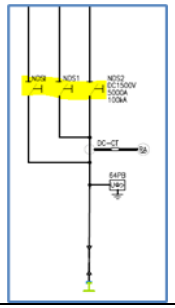
	Supply I. MCRP Sheet 5 of 40 - Current transformer x 2 (ΔI-CT and H-CT) is required for each feeder.			
133	Part 2 – "Employer's Requirements Section V1. Employer's" Requirements,,PART 2 – EMPLOYER'S "REQUIREMEN TS DRAWINGS 4. Power Supply" I. MCRP Sheet 5 of 40 - Negative Disconnector (NDS)requirement is for a manual type of disconnector.	Is there a particular purpose for using manual type NDS? Is it possible to use either motor-type or manual-type? Please confirm. 		The design provided are for reference only, the contractor shall develop its own design for approval by the Engineer.
134	Part 2 – Employer's Requirements Section V1. Employer's	We understand this CT/Ammeter can be changed to suitable ratings. Please confirm.		The design provided are for reference only, the contractor shall develop its own design for approval by the Engineer.

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	Requirements,,PART 2 – EMPLOYER'S REQUIREMEN TS DRAWINGS 4. Power Supply I. MCRP Sheet 5 of 40 - Negative panel H-CT (1H-CT, 2H-CT) are rated 4kA against 5000A rated output current for rectifier (also 54P HSCB, NDS rated current).			
135	Part 2 – Employer's Requirements Section V1. Employer's Requirements,,PART 2 – EMPLOYER'S REQUIREMEN TS DRAWINGS 4. Power Supply I. MCRP Sheet 3 of 40 Sheet 6 of 40 - Traction Power Feeding System drawing shows 4000kW	Please confirm if 4000kW Rectifier Transformer / Rectifier sets are necessary.		Confirmed necessary.

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	requirement for rectifier set of Substation No. 12. However, Substation Connection drawing of Substation No. 12 shows 6.5MW Rectifier Transformer and 6.0MW Rectifier specification.			
136	Part 2 – Employer's Requirements Section V1. Employer's Requirements,,PART 2 – EMPLOYER'S REQUIREMEN TS DRAWINGS 4. Power Supply I. MCRP Sheet 3 of 40 Sheet 6 of 40 - Substation Connection drawing shows 50kVA - 1.18kV/ 400-230V operation transformers connected to the rectifier transformer secondary side.	Please provide specification for this transformer as it is not mentioned in the technical specifications.		The design provided are for reference only, the contractor shall develop its own design for approval by the Engineer.
137	Volume II of IV PART 2/ Section VI,ERT 545 and 584,Chapter 6, OCS i) 6.1. 4.1 6.4.13 - i) 6.1.4.1 (6) TR-OCS Page No. 545	Please confirm whether aluminum light weight tubes can be proposed.		Aluminum lightweight tubes can be proposed.

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	"Cantilever: It is an insulated swivelling type structure member, comprising of assorted sizes of metal tubes (lightweight and non-corrosive), to support and to keep the OCS in position to facilitate current collection by pantograph at all speed without doing the structural member damage. 6.4.13 TR- OCS Page No. 584 " b) Material Grade: STK 490, SS400, CAC 702 (pull-off arm & ear), SS400 (drop bracket), SUS304 (fitting); c) Pole surface: Hot dip galvanized;"			
138	Volume II of IV PART 2/ Section VI,ERT 537 ERT 556 ERT 13,6.1.1 TR- OCS 6.1.5 TR- OCS 1.6.1 TR-Track works - i) 6.1.1 TR-OCS "The OCS shall have a capability to supply electric power to the	Request you to clearly specify the sections which are to be equipped with OCS suitable for 160 kmph and sections which are to be equipped with OCS suitable for 120 kmph. Also confirm the design speed for OCS of each section.		The 160km/h operation sections are summarized below: N2 Section 35+300.00 to 41+370.00 N2 Section 42+140.00 to 73+900.00 N2 Section 74+900.00 to 77+350.00 All other sections of the railway shall be operated at 120km/h

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	different rolling stock running at the maximum speeds of 160km/h and 120km/h" ii) 6.1.5 TR- OCS "This design shall include a computer simulated operational analysis of the dynamic performance of the pantograph/OCS interface for all rolling stock to be used on the line. This simulation shall be based on highest "operating speed plus 10% margin"" iii) 6.1.5 TR-Track works ""Design speed ・Main Line : 160 km/h and 120km/h (Based on location)"""			
139	Volume II of IV PART 2/ Section VI,ERT 560,Chapter 6, 6.2.1 - " The requirement for either compound catenary or simple catenary shall be determined by the contractor following a detailed analysis considering the train consists	The studies requested in the referred clause can be performed only during detailed design stage when all the input parameter like exact make and details of RS pantograph, exact train Configurations, details of spacing of pantographs and		The systems to be adopted shall be proposed by the contractor.

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	using the line, conductor sizes, pantograph parameters and rolling stock speed, etc"	static forces required for modelling etc are available. Therefore, for the bid stage, we request you to clearly specify the type of catenary system (whether compound or simple catenary) to be considered for each section. In case of any change during execution stage, the same shall be treated as variation.		
140	Volume II of IV PART 2/ Section VI,ERT 560 ERT 578,Chapter 6, 6.2.2 TR- OCS & 6.4.2 (ix) TR- OCS - Size of Auxillary Catenary is mentioned as ST 135 But in Drg No. MCRP-DWG-X/X-OCS-0003 it is shown as PH 356.	Please confirm the cross section of catenary wire.		The sizes of wires stated are for reference only. All conductor sizes shall be determined by the contractor to meet the design and operational requirements.
141	Volume II of IV PART 2/ Section VI,ERT 563,Chapter 6, 6.2.4(1.5) - Design ambient pressure - 1013 hPa	In Table 6.2.3 Wind loads at wind speed against structures is provided in N/m2. There is difference between both the wind pressures.		The contractor is to propose design wind pressure based on geographical conditions throughout.

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		Please confirm the Final design wind pressure for OCS.		
142	Volume II of IV PART 2/ Section VI,ERT 564,Chapter 6, 6.2.4(2) - "For the CIA tunnel section, the design shall take into account the maximum velocity of air being blown by the tunnel fans".	Please clarify the maximum velocity of air being blown by the tunnel fans.		The normal speed of the tunnel fans is 1 m/s and during emergency mode, is 2 m/s.
143	Volume II of IV PART 2/ Section VI,ERT 566,Chapter 6, 6.3.1(O) - Installation of lightning arrester positioned at less than 500m apart and the earthing wire connected to the negative terminal of the lightning arrester installed along the pillar and embedded into the of ground with the prescribed length and depth and earth resistance	Requirement and Position of Lightening arrester in the Main line will be decided based on the insulation coordination study. Please confirm bidder's understanding.		The insulation co-ordination study will determine the requirements and position of lightening arrestors. This shall be undertaken by the NS-01 contractor.
144	Volume II of IV PART 2/ Section VI,ERT 580,Chapter 6, 6.4.3 - For the elevated and	As per the bidder's understanding, the Civil foundation for OCS structurers/poles in viaduct		The OCS pole foundations are 'planted' and pre-fabricated - Refer to GA drawings MCRP-DWG-X/X-OCS-0018, MCRP-DWG-X/X-OCS-0019 Rev 00 dated 31 January 2019 and NSRP-SOUTH-DWG-X/X-OCS-

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	embankment section, the pole foundation of bore-holes and drain holes shall be prepared with the civil work.	and embankment along with provision of bore holes, drawing holes and Nuts & Bolts shall be in the Scope of Civil Contractor.		0018, NSRP-SOUTH-DWG-X/X-OCS-0019, NSRP-SOUTH-DWG-X/X-OCS-0020 Rev 00 dated 23 February 2019.
145	5a_CP NS-01 BD Part 2 Vol.3 E_M,291 of 321, - MCRP-DWG-X/X-OCS-0018: Overhead contact system pole and guy foundation diagram at viaduct	Can bidder design alternative arrangement for fixing of OCS structures/poles in Viaduct and Embankment to the Viaduct Bolting/base plate arrangement.		The bidder cannot propose alternative arrangements.
146	Volume II of IV PART 2/ Section VI,ERT 577,Chapter 6, 6.4.2(vii) - The inclination of the top of support should be less than 50 mm on a vertical plane of rail track center along a track under the maximum loads.	As per the understanding of the Bidder, the mentioned inclination at top of support is the maximum deflection of OCS pole to be considered without any factor of safety i.e., under serviceability loading conditions. Please confirm our understanding.		Yes, deflection to be considered under serviceability loading conditions.
147	Volume II of IV PART 2/ Section VI,ERT 580,Chapter 6, 6.4.3 - If the OCS design shall be based on the Japanese design,	For Foundation and structure, the data required for quake resistance design shall be provided from Civil Contract/ or competent		Table 6.4.2 Mast Loading dictates the unfactored pole loads. The civil design take into account other factors which determining the strength of the viaduct and mast support structures.

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	the guidelines in note 1 and 2 below, they need to closely coordinates in advance with the civil works regarding the design data in coordination with the quake resistance parameters below: a) Equivalent period of proper oscillation, b) The ratio of breakdown load of the pier to total "elevation structure weight, c) The ground classification, d) The ratio of breakdown rotation angle [rad] to breakdown displacement, e) The data of response function via non-linear response spectrum method, and f)The data needed to design the quake resistance for the OCS."	authority. Kindly confirm.		
148	Volume II of IV PART 2/ Section VI,ERT 569,Chapter 6,	The along track feeder wires (if required) in the Depot shall be provided with spring		We confirm that Spring Tensioning devices are to be used.

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	6.3.7(2) - Feeder wires in the depot shall use a tension device with 19.6 lth per wire tensile force for securing enough safe electrical clearance with earthed structures when swinging due to strong winds.	tensioning device. Please confirm.		
149	Volume II of IV PART 2/ Section VI,ERT 569,Chapter 6, 6.3.7(2) - The power simulation shall take into account worn contact wire conditions.	Please share the maximum allowable percentage wear of Contact wire to be provided for simulation.		The contractor is to propose and use a suitable maximum allowable percentage of wire wear for simulation / modelling purposes. As a minimum these shall be 20% overall wear and 33% local wear.
150	Volume II of IV PART 2/ Section VI,ERT 367,Chapter 6, 4.1.3(6)(ii) - The instantaneous voltage at any train along the route shall not fall below 1100V DC during normal operations with all substations in rated service and shall not fall below 1000V DC with any abnormal operating condition under any single outage condition.	Please confirm whether voltage dependent line current limitation according to EN 50388 is applicable for Voltages range between 1350 to 1000V.		We confirm.
151	Volume II of IV PART 2/	Please confirm whether bidder can procure Contact wire with		The contractor is to propose / determine a suitable contact wire for the proposed system design.

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	Section VI,ERT 582,Chapter 6, 4.6 - Standard contact wire system consists of a wire with of GT 170 sq.mm with feeding pole on elevated section and feeder jumper between the feeder and contact wire, prescribed by JIS. E. -1990 Hard — Drawn Grooved Trolley Wires or Copper Alloy.	Dimensions as per JIS E 2101:1990 and remaining parameters as per EN 50149 and equivalent Standards.		
152	Volume II of IV PART 2/ Section VI,ERT 594,Chapter 6, 6.4.24 - The section insulator shall have equivalent characteristics prescribed by JIS E 2219-2001.	Please confirm, whether bidder can propose Section insulator as per IEC and EN standard and equivalent Standards.		The contractor is to propose / determine suitable section insulators for the proposed system design.
153	Volume II of IV "PART 2/ Section VI",ERT 598,Chapter 6, 6.4.29 - Moveable Conductor Rail in Work Shops	Kindly specify the length of track to equipped with Moveable Conductor rail system. Request you to also share the workshop layouts.		The contractor is to propose / determine the length of track to be equipped with a moveable conductor rail system. Please refer to drawings in Annex B of this GBB : MCRP-DWG-URS-AR-3001, MCRP-DWG-URS-AR-3011, MCRP-DWG-URS-AR-3101, MCRP-DWG-URS-AR-3201, MCRP-DWG-URS-AR-3311, MCRP-DWG-URS-AR-3312, MCRP-DWG-URS-AR-3313, MCRP-DWG-URS-AR-3601 Rev 30 dated August 2020 and NSRP-DWG-URS-AR-3001 NSRP-DWG-URS-AR-3011, NSRP-DWG-URS-AR-3101, NSRP-DWG-URS-AR-3201, NSRP-DWG-URS-AR-3311, NSRP-DWG-URS-AR-3312, NSRP-DWG-URS-AR-3313, NSRP-DWG-URS-AR-3601 Rev 31 dated September 2020.

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154	Part II Section VI,ERT- 619,7. Automatic Fare Collection (AFC) System - General – Scope of Automatic Fare Collection (AFC) System	We understand that AFC is to be provided at 26 No. stations in Malolos to Clark Section and Solis to Calamba Section. We understand that AFC for Malolos and Solis stations are not included in the NS-01 contract. Kindly confirm.		Confirmed.
155	Part II Section VI,ERT- 619,7.1.1.2 Automatic Fare Collection (AFC) System - The system shall be capable of being interoperable with the existing LRT 1, LRT 2, and MRT 3 AFC systems and the AFC system being installed on the North South Commuter Railway Project (NSCR) under Contract CP04 and Metro Manila Subway Project (MMSP) under Contract CP106	You are requested to kindly provide the OEM details of existing AFC Systems installed at LRT 1, LRT 2 and MRT 3 lines and the AFC system being installed on the North South Commuter Railway Project (NSCR) under Contract CP04 and Metro Manila Subway Project (MMSP) under Contract CP106. The details shall assist the contractor in understanding the interoperability requirements.		Please note that the related information with regards to the detailed specifications of AFC for LRT1, LRT2, MRT3, CP04 and CP106 is on the DOTr official website.
156	Part II Section VI,ERT- 1018,10.1.1 Platform Screen Doors - Platform	The scope of works also includes provision of PSD system for the NSCR		Interface requirements are covered in NS01 as well as in NSCR-N1 line contracts. This is an interface issue to be resolved by the interfacing contractors.

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	Screen Doors (PSD) shall be provided for all stations on the MCRP, NSCR and NSPR-South. The PSD's shall prevent people falling onto or gaining unauthorized access to the tracks	(Malolos- Tutuban) section. We would like to bring your attention to the fact that PSD integration is a very difficult process. As there is no existing international standard for the PSD interface, the integration "process of real elements with a different Signaling system provider would require strong co-operation between the interfacing companies. If not done properly, it can bring lots of extra costs and delays. In order to avoid such interfacing issues, we request you to introduce contractual provisions to ensure good co-operation between the parties and also specify contractual remedies in case of defaults and disputes."		

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157	Volume II of IV PART 2/ Section VI,ERT- 1007,9.2.1 Train Operation Simulator - Train Operation Simulator The Contractor shall provide two (2) Train Operation Simulators at the Training Center in Mabalacat Depot. One (1) Train Operation Simulator shall be designed for the Commuter Train (CP NS-02) and the other one (1) for Limited Express Train (CP NS-03).	Kindly share the exact make and model for Commuter Train (CP NS-02) and the Limited Express Train (CP NS-03).		The information requested can not be provided at this stage it is not available. Contracts for supply of Commuter Trains (NS-02) and Limited Express (NS-03) are yet to be awarded. Bidder should look for the regular updates on DOTr site for information regarding award of NS-02 and NS-03 contract packages.
158	Volume II of IV PART 2/ Section VI,ERT- 1007,9.2.1 Train Operation Simulator - Train Operation Simulator	Please inform us of that for whom the training simulator shall be used. We would like to know the trainees' skill level whether beginner or experienced in the local train. Kindly clarify.		Please refer to ERT Clause 9.2.1 of Chapter 9 in Section VI, Part 2 of Vol II. As stated, "The train operation simulators shall be provided in order to establish a high-quality approach for driver training and route familiarization. It is essential to train the required number of train drivers ready prior to the taking-over of NSCR. They may be **newly trained and/or be existing drivers** from existing lines."
159	Volume II of IV PART 2/ Section VI,ERT- 1008,9.2.1.9 Test of Train Operation Simulator - The Contractor shall submit a	We understand that simulator training shall be based in one of the North or South depot in Philippines only. Kindly confirm.		Please refer to ERT Clause 9.2.1, Chapter 9 in Section VI, Part 2 of Vol II. As stated, "The Contractor shall provide two (2) Train Operation Simulators at the Training Center in **Mabalacat** Depot (Mabalacat is the North Depot).

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	plan for testing and commissioning the Train Operation Simulator, as well as the test specification for the Engineer's review. Training of operation staff shall be completed two months prior to the commencement of the first train's running test.	Further, we request you to specify the number of staff and total number of hours for the simulation training.		For detail training requirements bidder shall refer relevant ERG and ERT Clauses in Section VI, Part 2 of Vol II for Training.
160	Volume II of IV PART 2/ Section VI,ERT- 1008,9.2.1.10 Staff Training - The Contractor shall supply the train operation simulator. The simulator is a tool for operation staff to study the operation procedures in a virtual reality environment. After handing over the simulator, the Contractor shall have its commissioning engineers on stand-by during the experimental train running period and to train the Employer's	We understand that staff training shall be based in one of the North or South depot in Philippines only. Also, To & Fro and accommodation of staff shall be under the employer's scope. Kindly confirm. Further, we request you to specify the number of staff and total number of hours for the staff training.		Please refer ERG Clause 15.20.1, Chapter 15 in Section VI, Part 2 of Vol II. "The Contractor shall be: (1) Responsible for the reception of, and hotel and travel arrangements for each trainee in regions other than Manila". For Employer's training requirement bidder shall refer to relevant ERG and ERT clauses in Section VI, Part 2 of Vol II. Necessary interface shall be done with O&M concessionaire at suitable time of the project to obtain training requirement of O&M personnel as per ERG Clause 4.3.2, Section VI, Part 2 of Vol II.

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	instructors about the way to operate and maintain the simulator as well as how to install and modify the software.			
161	Volume II of IV PART 2/ Section VI,ERT- 1008,9.2.1.11 Submitting Document - The Contractor shall provide the operation and maintenance manual of the simulator written in English. The simulator maintenance manual shall include the following but not be limited to: schematic/electrical diagram, illustrated parts catalogue, and spare parts (complete with description and part nos.).	Kindly specifies the number of sets of documents required for training.		Please refer ERG Clause 8.7 of Chapter 8 in Section VI, Part 2 of Vol II.
162	Volume II of IV PART 2/ Section VI,ERT- 1008,9.2.3 Signal System - The contractor shall incorporate and include, but not limited to, the following facilities for the Signal System equipment in the training center.	We request you kindly indicate the number of quantities against each item.		Please refer ERT Clause 2.17.38 of Chapter 2 and ERT Clause 9.2.3 of Chapter 9 in Section VI, Part 2 of Vol II.

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163	Part 2 – Employer's Requirements,SOW-4,10. Depot Facilities - 10. Depot Facilities The outline of the Depot and Workshop Facilities are: "a) Installation of equipment for Depot and Workshop shall include the following as a minimum: i Equipment to support Preventive Maintenance activities; ii Equipment to support Corrective Maintenance activities; iii Equipment to support Major Overhaul activities;"	Most of these Depot & Workshop Equipment are related to Rolling stock. In this regard, we request the employer to kindly specify the detailed specifications & requirements of Rolling Stock with the detailed drawings.		Request is rejected. Detailed specifications and requirements of Rolling Stocks with drawings are to be made available and provided on relevant stages of the Project. There is information provided for Major Specification of Rolling Stock in ERT Clause 8.8.3 of Chapter 8 in Section VI, Part 2 of Vol II. For Depot Equipment, information are provided in Chapter 8, Part A and Part B of Appendix 8.1 in Bid document Part 2 of Vol II. In addition, Interface Coordination is required to be done by Depot Contractors with Rolling Stocks contractors as stated in ERT Clause 8.1.1 of Chapter 8, Part 2 of Vol II.
164	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - COMPUTERIZED	We request you to kindly confirm the number of licenses expected to be procured for mobile devices for the scope of this NS-01 project.		CMMS solution shall offer an unlimited user license. Please refer to ERT Clause 11.1.1.7, 11.1.2.3 and 11.1.2.4.

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Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
	MAINTENANCE MANAGEMENT SYSTEM			
165	Volume II of IV PART 2/ Section VI,ERT- 1050,11.4 System Descriptions and Performance Requirements - COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM	We request you to kindly confirm the number of number of licenses expected to be procured for Implementation usage.		CMMS solution shall offer an unlimited user license. Please refer to ERT Clause 11.1.1.7, 11.1.2.3 and 11.1.2.4.
166	Volume II of IV PART 2/ Section VI,ERT- 1050,11.4 System Descriptions and Performance Requirements - COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM	Please specify the total number of user count, who are expected to use the CMMS system.		CMMS solution shall offer an unlimited user license. Please refer to ERT Clause 11.1.1.7, 11.1.2.3 and 11.1.2.4.
167	Volume II of IV PART 2/Section VI,ERT- 1050,11.4 System Descriptions and Performance Requirements - COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM	We request you to kindly specify the numbers of users for whom the training is to be given.		CMMS solution shall offer an unlimited user license. Please refer to ERT Clause 11.1.1.7, 11.1.2.3 and 11.1.2.4.
168	Volume II of IV PART 2/ Section VI,ERT- 1050,11.4 System Descriptions and Performance Requirements - COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM	We request you to kindly specify that, are both the depot's running on the same network or each depot has a dedicated network facility.		The individual OCC in each depot for N2 and SC will be running separately first (separate network), until we combine everything to the integrated OCC (IOCC). Please refer to Section 12 -IOCC and DCC of our bidding documents which completely discusses about the migration of OCC to IOCC.

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Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
		Further, also clarify that, is dedicated server's need to be stationed at each depot.		For dedicated server requirement, please refer to ERT Clause 11.1.2.
169	Volume II of IV PART 2/ Section VI,ERT- 1050,11.1.1.11 - The Contractor shall maintain configuration control records of the CMMS. The Contractor shall ensure that all equipment, including spare parts and consumables, is maintained at the same configuration throughout the Contract, including the Defects Notification Period of two (2) years after the Taking Over Certificate has been issued.	We request you to clarify the highlighted text. "The Contractor shall ensure that all equipment, including spare parts and consumables, is maintained at the same configuration throughout the Contract,"		The configuration for all equipment, including spare parts and consumables item shall be maintained and recorded in CMMS server throughout the Contract, including the Defects Notification Period of two (2) years after the Taking Over Certificate has been issued.
170	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to clarify that the CMMS system needs to be implemented for all the railway subsystems like RS, Signaling, Telecommunication, PSD, AFC, Power Supply & Distribution and Overhead Contact wire system and		Please refer to 11.1.1.1 for General Scope of Work.

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Annex A

Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
		Trackwork etc..		
171	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to clarify that the, is there any third-party applications to be interfaced with Maximo (CMMS software) like ERP and railway systems. Please specify the list of Systems that need to be interfaced with Maximo.		Please refer to 11.1.1.1 for General Scope of Work.
172	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to clarify that is it required that the CMMS software shall be able to be interfaced with legacy software EAM software of the operator (SAP, ORACLE etc. Please clarify how many systems exist as such to be interfaced.		Based on ERT 11.4.6.6, The CMMS software shall be able to be interfaced with legacy software EAM software of the operator (SAP, ORACLE,etc), if required. As of now, there is no legacy EAM software for packages stated in ERT 11.1.1.1.
173	Volume II of IV PART 2/ Section VI,ERT- 1050,11.4.6.5 - The CMMS software shall be able to interface with multiCad data inputs from various system Contractors.	We request you to clarify that which format & protocol is the multi cad data stored in. Further, also clarify how many interfaces are to be developed regarding the same.		CMMS contractor shall clarify this with Other Work Contractors. Please refer to ERT 11.5.

PACKAGE CP NS-01: E&M SYSTEMS AND TRACK WORKS
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Annex A

Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
174	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to specify the number of integration touch points for each external system. Also confirm the system to be Inbound or Outbound.		CMMS contractor shall clarify this with Other Work Contractors. Please refer to ERT 11.5. Also please elaborate Inbound or Outbound is referring to?
175	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to clarify and explain the details about the Integration of NSCR Maintenance Management System (MMS) with the MCRP and NSRP South CMMS.		CMMS shall intergrade with Maintenance Management System from other packages. Please refer to ERT 11.1.1.1.
176	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to clarify the amount of data published from external system per hour or per day basis.		CMMS contractor shall clarify this with Other Work Contractors. Please refer to ERT 11.5.
177	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We request you to specify the expected number of custom reports including KPI's and DRACAS reports.		The Contractor shall provide, propose and state the performance requirement for Engineer final approval at Design Stage. Please refer to ERT 11.1.2.
178	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System Descriptions and Performance Requirements - General	We understand that HADR is not under the scope of this NS-01 contract.		Please refer to ERT 11.1.2.1 for redundancy requirement and ERT 11.4.3 for CMMS server performance criteria requirement.
179	Volume II of IV PART 2/ Section VI,ERT-1050,11.4 System	We request you to specify the software used for Document		Aconex shall be adopted for Document Management System.

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Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
	Descriptions and Performance Requirements - General	management system.		
180	Volume II of IV PART 2/ Section VI,ERT- 1050,11.4 System Descriptions and Performance Requirements - General	We understand from the tender document that the Employer requirement is to host the services in On-premise model. We request you to clarify that whether Cloud hosting services can be considered.		Hosting the service on-premise model shall be adopted. Cloud hosting services shall not be considered.

Annex B

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Annex B

ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
Volume I Part 1 – Bidding Procedures		
1	Part 1 – Bidding Procedures Section IV. Bidding Forms Schedule 1.2-12: Computerized Maintenance Management System Page BF-116	Schedule 1.2-12 revised to repair the typographical error. Refer to the Annex B – Attachment 1:
2		
Volume II Part 2 – Employer's Requirements		
3	Part 2 – Employer's Requirements Section VI Employer's Requirements Technical Requirements - OCS	Revised Table 6.4.2.
4		
Volume III Part 2 – Employer's Requirements d) Employer's Drawings		
5	DP-CVL-001 Sheet 1 to 6	Metro Manila Subway Project Phase 1 : CP101 General Arrangement Plan
6	DP-CVL-001	Metro Manila Subway Project Phase 1 : CP101 General Arrangement Plan

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
7	NSRP-DWG-URS-AR-3001	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-DRAWING INDEX
8	NSRP-DWG-URS-AR-3011	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-SITE DEVELOPMENT PLAN AND LOCATION PLAN
9	NSRP-DWG-URS-AR-3101	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-FLOOR PLAN, REFLECTED CEILING PLAN AND ROOD PLAN
10	NSRP-DWG-URS-AR-3201	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-ELEVATIONS AND SECTIONS
11	NSRP-DWG-URS-AR-3311	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-BLOW-UP PLAN, SECTION DETAILS
12	NSRP-DWG-URS-AR-3312	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-BAY SECTIONS
13	NSRP-DWG-URS-AR-3313	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-DETAIL 1
14	NSRP-DWG-URS-AR-3601	NSRP-SOUTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-SCHEDULE OF FINISHES, SCHEDULE OF DOORS, WINDOWS AND LOUVERS
15	MCRP-DWG-URS-AR-3001	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-DRAWING INDEX
16	MCRP-DWG-URS-AR-3011	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-SITE DEVELOPMENT PLAN AND LOCATION PLAN
17	MCRP-DWG-URS-AR-3101	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-FLOOR PLAN, REFLECTED CEILING PLAN AND ROOF PLAN
18	MCRP-DWG-URS-AR-3201	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-ELEVATIONS AND SECTIONS

PACKAGE CP NS-01: E&M SYSTEMS AND TRACK WORKS
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Annex B

ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
19	MCRP-DWG-URS-AR-3311	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-BLOW UP SECTION DETAILS
20	MCRP-DWG-URS-AR-3312	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-BAY SECTIONS
21	MCRP-DWG-URS-AR-3313	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-DETAILS
22	MCRP-DWG-URS-AR-3601	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL-SCHEDULE OF FINISHES, SCHEDULE OF DOORS, WINDOWS AND LOUVERS

Annex B – Attachment 1

Schedule 1.2-12: Computerized Maintenance Management System

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
1201	**Design**						
1201.1	Preparation and submission of the design submission program and obtaining acceptance thereof from the Engineer.	sum	1				
1201.2	Preparation and submission of the conceptual and detailed design, and obtaining acceptance thereof from the Engineer.	sum	1				
1201.3	Preparation and submission of the construction and installation drawings and documents for the Computerized Maintenance Management System, and obtaining acceptance thereof from the Engineer.	sum	1				
1201.4	Compilation, submission of the as-built documents and obtaining acceptance thereof from the Engineer.	sum	1				
	(Payment for Milestones 1201.1 to 1201.4 will be made upon completion of each.)	-	-	-	-	-	-
	Sub-total for Milestone No. 1201						
1202	**Manufacture, Transportation, Delivery and Storage**						
1202.1	Manufacture of the Computerized Maintenance Management System.	sum	1				

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
1202	**Manufacture, Transportation, Delivery and Storage**						
1202.1	Manufacture of the Computerized Maintenance Management System~~training equipment and facilities~~.	sum	1				
	(Payment will be made when the last batch of Computerized Maintenance Management System~~depot and training equipment and facilities~~ has been loaded for shipment to the Philippines.)	-	-	-	-	-	-
1202.2	Transportation of Computerized Maintenance Management System~~training equipment and facilities~~ from the place of manufacture to the Philippines.	sum	1				
	(Payment will be made when the last batch of Computerized Maintenance Management System~~training equipment and facilities~~ has arrived safely at the port of unloading in the Philippines.)	-	-	-	-	-	-
1202.3	Delivery to the Contractor's secure storage of Computerized Maintenance Management System~~training equipment and facilities~~.	sum	1				
	(Payment will be made after all Computerized Maintenance Management System~~training equipment and facilities~~ have been delivered ~~to the training facility~~ and accepted by the Engineer.)	-	-	-	-	-	-

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
	Sub-total for Milestone No. 1202						
1203	**Installation and Testing**						
	Delivery to the ~~training facility~~Site, installation, and testing (including pre-installation tests, post-installation tests and partial acceptance tests) of all the Computerized Maintenance Management System~~training equipment and facilities~~, and obtaining acceptance thereof from the Engineer.	sum	1				
	(Payment for the above Milestone will be made upon completion of all required tests and commissioning.)	-	-	-	-	-	-
1204	**System Acceptance Tests, Integrated Testing and Commissioning**						
	Conducting, and obtaining the Engineer's acceptance of, the System Acceptance Tests, Integrated Testing and Commissioning.	sum	1				
	(Payment for the above Milestone will be made upon completion of all required tests and commissioning.)	-	-	-	-	-	-

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
~~1204~~12 05	**Spare Parts, Special Tools, Testing Equipment**						
	Delivery to the Site of spare parts, consumables, special tools, testing equipment and measurement instruments, including drawings and catalogue in English (original plus 5 hard copies), and obtaining acceptance thereof from the Engineer.	sum	1				
	(Payment will be made upon completion of the delivery of all spare parts to the Site.)	-	-	-	-	-	-
~~1205~~12 06	**Training and Operation and Maintenance Manuals**						
~~1205~~12 06.1	Preparing and delivering Operating Manuals and Maintenance Manuals together with record drawings/catalogues in English (original plus 5 hard copies and 2 copies in electronic (soft) format), and obtaining acceptance thereof from the Engineer.	sum	1				
	(Payment will be made upon completion of the delivery of all the above documentation and data.)	-	-	-	-	-	-
~~1205~~12 06.2	Conducting operation and maintenance training and obtaining acceptance thereof from the Engineer, comprising: - Operating Staff Training; - Maintenance Staff Training; and - Engineering Staff Training.	sum	1				

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
	(Payment will be made upon completion of all the above training.)	-	-	-	-	-	-
	Sub-total for Milestone No. 12065						
12076	Other obligations with regard to the ~~Training Facility~~Computerized Maintenance Management System that are considered necessary to comply with the Contract but which are not covered in other Schedules and the above Milestone items.	sum	1				
	Note: The Bidder may the above Milestones and/or add appropriate proposed Milestones.	-	-	-	-	-	-
					Total for Schedule 1.2-12		
					(Carried forward to Total for Schedule 1.2)	_____	_____

Schedule 1.2-12: Computerized Maintenance Management System

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
1201	**Design**						
1201.1	Preparation and submission of the design submission program and obtaining acceptance thereof from the Engineer.	sum	1				
1201.2	Preparation and submission of the conceptual and detailed design, and obtaining acceptance thereof from the Engineer.	sum	1				
1201.3	Preparation and submission of the construction and installation drawings and documents for the Computerized Maintenance Management System, and obtaining acceptance thereof from the Engineer.	sum	1				
1201.4	Compilation, submission of the as-built documents and obtaining acceptance thereof from the Engineer.	sum	1				
	(Payment for Milestones 1201.1 to 1201.4 will be made upon completion of each.)	-	-	-	-	-	-
	Sub-total for Milestone No. 1201						
1202	**Manufacture, Transportation, Delivery and Storage**						
1202.1	Manufacture of the Computerized Maintenance Management System.	sum	1				

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
	(Payment will be made when the last batch of Computerized Maintenance Management System has been loaded for shipment to the Philippines.)	-	-	-	-	-	-
1202.2	Transportation of Computerized Maintenance Management System from the place of manufacture to the Philippines.	sum	1				
	(Payment will be made when the last batch of Computerized Maintenance Management System has arrived safely at the port of unloading in the Philippines.)	-	-	-	-	-	-
1202.3	Delivery to the Contractor's secure storage of Computerized Maintenance Management System.	sum	1				
	(Payment will be made after all Computerized Maintenance Management System have been delivered and accepted by the Engineer.)	-	-	-	-	-	-
	Sub-total for Milestone No. 1202						
1203	**Installation and Testing**						
	Delivery to the Site, installation, and testing (including pre-installation tests, post-installation tests and partial acceptance tests) of all the Computerized Maintenance Management System, and obtaining	sum	1				

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
	acceptance thereof from the Engineer.						
	(Payment for the above Milestone will be made upon completion of all required tests and commissioning.)	-	-	-	-	-	-
1204	**System Acceptance Tests, Integrated Testing and Commissioning**						
	Conducting, and obtaining the Engineer's acceptance of, the System Acceptance Tests, Integrated Testing and Commissioning.	sum	1				
	(Payment for the above Milestone will be made upon completion of all required tests and commissioning.)	-	-	-	-	-	-
1205	**Spare Parts, Special Tools, Testing Equipment**						
	Delivery to the Site of spare parts, consumables, special tools, testing equipment and measurement instruments, including drawings and catalogue in English (original plus 5 hard copies), and obtaining acceptance thereof from the Engineer.	sum	1				
	(Payment will be made upon completion of the delivery of all spare parts to the Site.)	-	-	-	-	-	-
1206	**Training and Operation and Maintenance Manuals**						
1206.1	Preparing and delivering Operating Manuals and Maintenance Manuals together with record	sum	1				

Milestone No.	Work Description (Milestone)	Unit	Quantity	Unit Rate/Price		Amount	
				Local	Foreign	Local	Foreign
	drawings/catalogues in English (original plus 5 hard copies and 2 copies in electronic (soft) format), and obtaining acceptance thereof from the Engineer.						
	(Payment will be made upon completion of the delivery of all the above documentation and data.)	-	-	-	-	-	-
1206.2	Conducting operation and maintenance training and obtaining acceptance thereof from the Engineer, comprising: - Operating Staff Training; - Maintenance Staff Training; and - Engineering Staff Training.	sum	1				
	(Payment will be made upon completion of all the above training.)	-	-	-	-	-	-
	Sub-total for Milestone No. 1206						
1207	Other obligations with regard to the Computerized Maintenance Management System that are considered necessary to comply with the Contract but which are not covered in other Schedules and the above Milestone items.	sum	1				
	Note: The Bidder may the above Milestones and/or add appropriate proposed Milestones.	-	-	-	-	-	-
					Total for Schedule 1.2-12 **(Carried forward to Total for Schedule 1.2)**	____	____

Table 6.4.2 Superimposed Dead Loads (Permanent) Summary

~~Load Case~~	~~Description~~	~~Loading~~
~~Weight of OHS poles~~	~~75 kN/pole each side = 150 kN total~~ ~~For girder design – adopt 150 kN located at mid span of girder.~~ ~~For pier design – adopt 150 kN located at center line of pier~~	~~75 kN/150 kN~~
~~OHS Imposed loadings due to tensioning of electrical supply wires~~	~~OHW moment of axis transverse to track~~ ~~OHW – concentrated load acting longitudinally to track.~~ ~~OHW concentric load acting transfer to track.~~ ~~OHW moment about axis longitudinal to track~~	~~+/- 450 KNm at 2m c/c 4 no.s per span~~ ~~+/- 70 kN~~ ~~+/- 30 kN~~ ~~+/- 180 kNm~~

Direction	Transverse to Track		Longitudinal to Track		Vertical Load
Load	Bending Moment	Horizontal load	Bending Moment	Horizontal load	
Unit	kNm	kN	kNm	kN	kN
Each pole unfactored	225	15	90	35	75

e) Steel drop support

Main tubular drop support for supporting the OCS and feeders is specified as follows:

a) Standard diameter: 216.3 mm, 267.4 mm, etc.,

b) Material Grade: STK 400, STK 490, STK 500, STK 540 prescribed by JIS G 3444-2010,

c) Pole surface: A class 50 under hot dip galvanized coatings prescribed by JIS H 8641: 2007,

d) Standard: JIS G 3444-2010, and

e) Thickness: Dependence on supporting loads, should meet load thickness with considerable strength in selecting a material grade.

6.4.3 Foundations

For the elevated and embankment section, the pole foundation of bore-holes and drain holes shall be prepared with the civil work. Filters for the drain holes shall be installed by the Contractor to prevent erosion of materials inside the foundation. The foundation and pile shall be designed to withstand the weight and tension of the OCS, wires and other components. If the OCS design shall be based on the Japanese design, the guidelines in

Table 6.4.2 Superimposed Dead Loads (Permanent) Summary

Direction	Transverse to Track		Longitudinal to Track		Vertical Load
Load	Bending Moment	Horizontal load	Bending Moment	Horizontal load	
Unit	kNm	kN	kNm	kN	kN
Each pole unfactored	225	15	90	35	75

e) Steel drop support

Main tubular drop support for supporting the OCS and feeders is specified as follows:

a) Standard diameter: 216.3 mm, 267.4 mm, etc.,

b) Material Grade: STK 400, STK 490, STK 500, STK 540 prescribed by JIS G 3444-2010,

c) Pole surface: A class 50 under hot dip galvanized coatings prescribed by JIS H 8641: 2007,

d) Standard: JIS G 3444-2010, and

e) Thickness: Dependence on supporting loads, should meet load thickness with considerable strength in selecting a material grade.

6.4.3 Foundations

For the elevated and embankment section, the pole foundation of bore-holes and drain holes shall be prepared with the civil work. Filters for the drain holes shall be installed by the Contractor to prevent erosion of materials inside the foundation. The foundation and pile shall be designed to withstand the weight and tension of the OCS, wires and other components. If the OCS design shall be based on the Japanese design, the guidelines in note 1 and 2 below, they need to closely coordinates in advance with the civil works regarding the design data in coordination with the quake resistance parameters below:

a) Equivalent period of proper oscillation,

b) The ratio of breakdown load of the pier to total elevation structure weight,

c) The ground classification,

d) The ratio of breakdown rotation angle [rad] to breakdown displacement,

e) The data of response function via non-linear response spectrum method, and

f) The data needed to design the quake resistance for the OCS

If the design will be based in the Philippines (National Structural Code of the Philippines 2015) there is a need to calculate the quake resistance and shall fill the blank in table below and shall interface with the civil team.

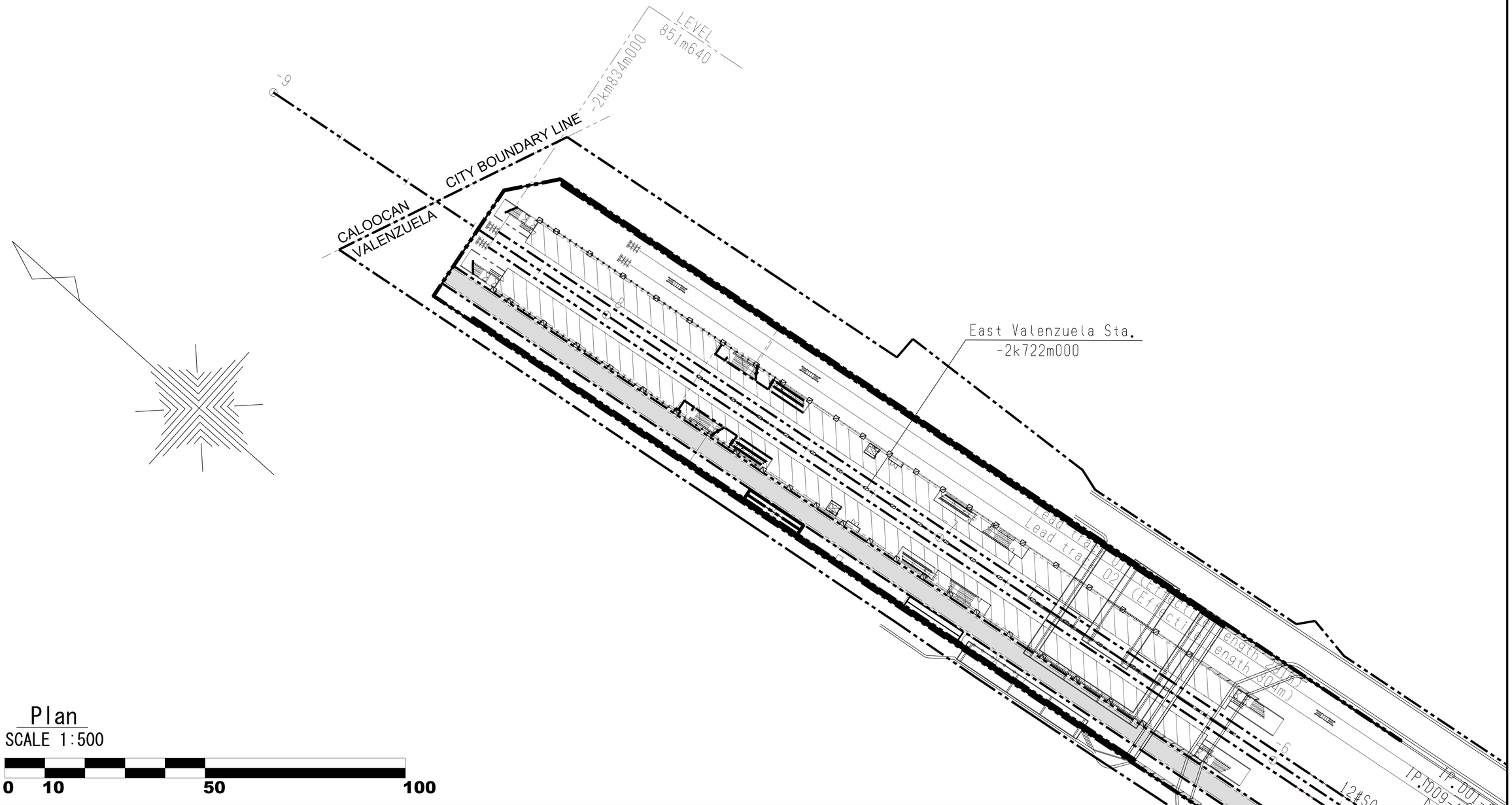
Any exceeded values obtained, the Contractor shall take the following countermeasures:

a) Reduction of pole span,

b) Moving parts of loads to the other pole, and

c) Installation of new pole

GBB No.2 REFERENCE ONLY



Plan

SCALE 1:500

0 10 50 100

VERSIONS	DATE	DESCRIPTION
	31/03/19	Revised / Additional Dwg.
0	15/01/19	Detail Design Submission

DEPARTMENT OF TRANSPORTATION (DOTr)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

CONSULTANT

JICA DESIGN TEAM

ORIENTAL CONSULTANTS GLOBAL CO.,LTD.

KATAHIRA & ENGINEERS INTERNATIONAL

TOKYO METRO CO., LTD.

PACIFIC CONSULTANTS CO.,LTD.

JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.

TONICHI ENGINEERING CONSULTANTS, INC.

ALMEC CORPORATION

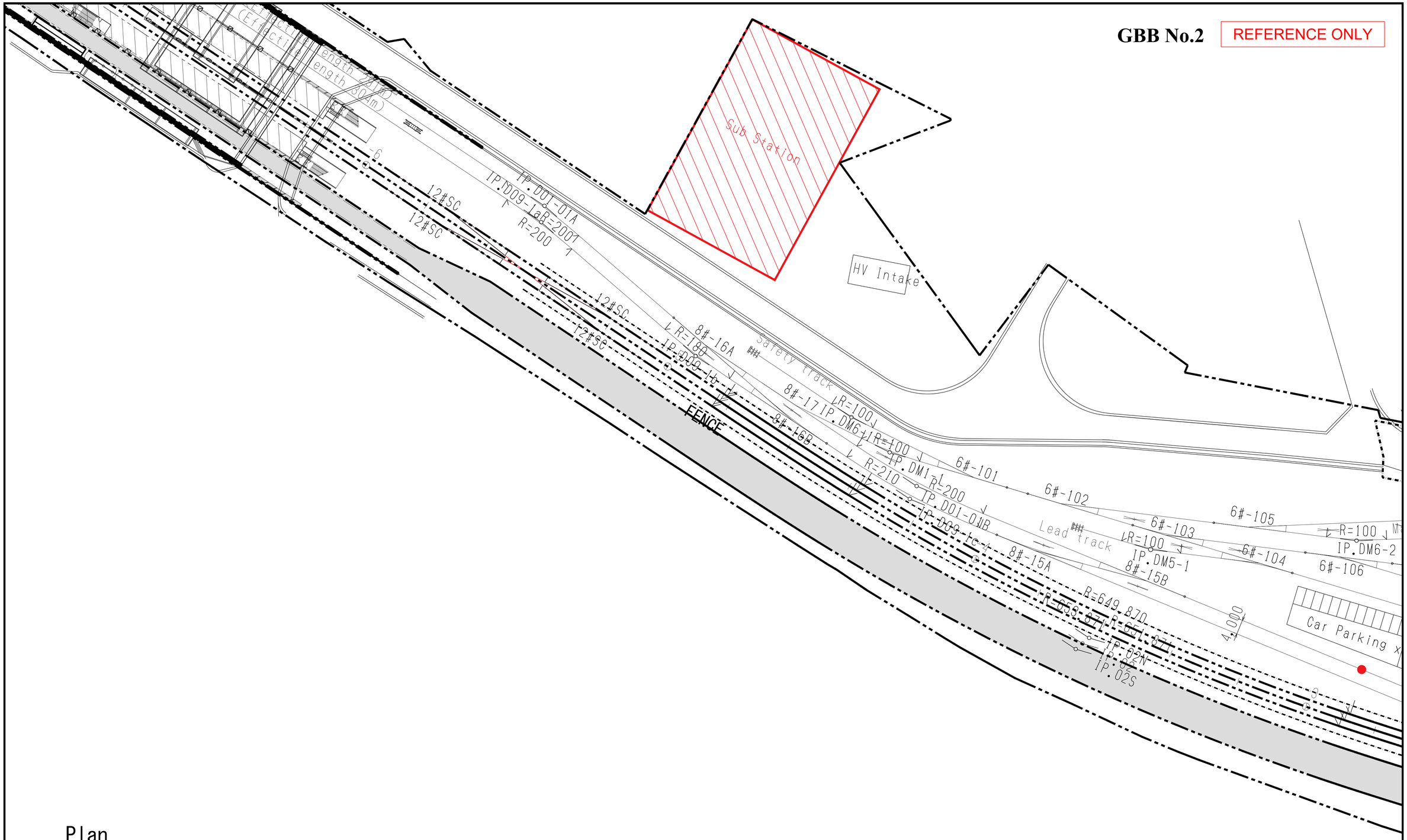
	TITLE	NAME	SIGNATURE
DESIGNER			
CHECK			
TEAM LEADER			
PR. MANAGER			

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:500
SHEET No.	1/6
DRG No.	DP-CVL-001
DRG S.	REV 1

GBB No.2 REFERENCE ONLY



Plan

SCALE 1:500

0 10 50 100

VERSIONS	DATE	DESCRIPTION
	31/03/19	Revised / Additional Dwg.
0	15/01/19	Detail Design Submission

DEPARTMENT OF TRANSPORTATION (DOTr)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

CONSULTANT

JICA DESIGN TEAM

ORIENTAL CONSULTANTS GLOBAL CO.,LTD.
KATAHIRA & ENGINEERS INTERNATIONAL
TOKYO METRO CO., LTD.
PACIFIC CONSULTANTS CO.,LTD.
JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.
TONICHI ENGINEERING CONSULTANTS, INC.
ALMEC CORPORATION

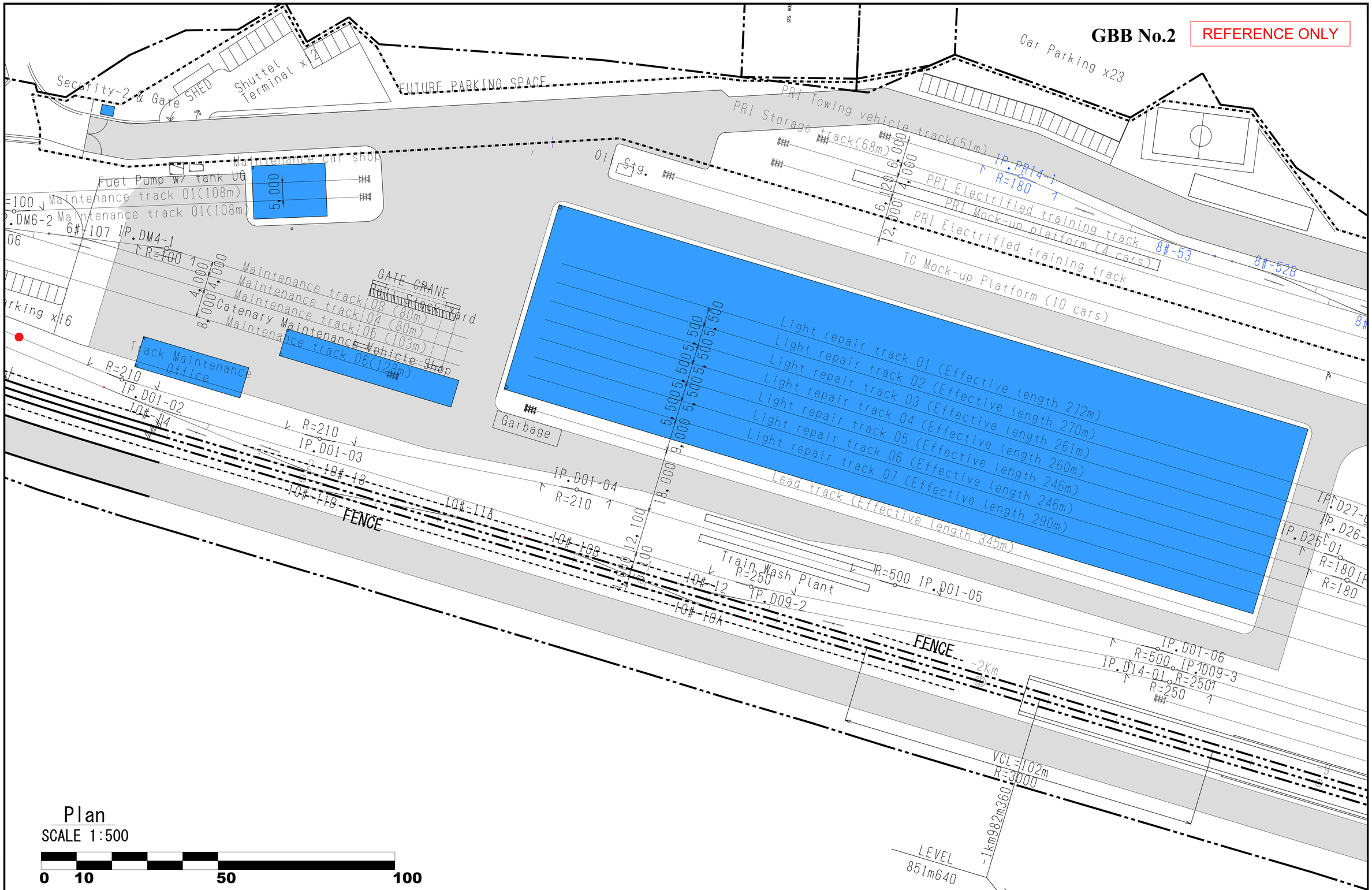
TITLE	NAME	SIGNATURE
DESIGNER		
CHECK		
TEAM LEADER		
PR. MANAGER		

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:500
SHEET No.	2/6
DRG No.	DP-CVL-001
DRG S.	
REV	1

GBB No.2 REFERENCE ONLY



Plan
SCALE 1:500

0 10 50 100

VERSIONS	DATE	DESCRIPTION
	31/03/19	Revised / Additional Dwg.
0	15/01/19	Detail Design Submission

DEPARTMENT OF TRANSPORTATION (DOTr)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

CONSULTANT

JICA DESIGN TEAM

ORIENTAL CONSULTANTS GLOBAL CO.,LTD.
KATAHIRA & ENGINEERS INTERNATIONAL
TOKYO METRO CO., LTD.
PACIFIC CONSULTANTS CO.,LTD.
JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.
TONICHI ENGINEERING CONSULTANTS, INC.
ALMEC CORPORATION

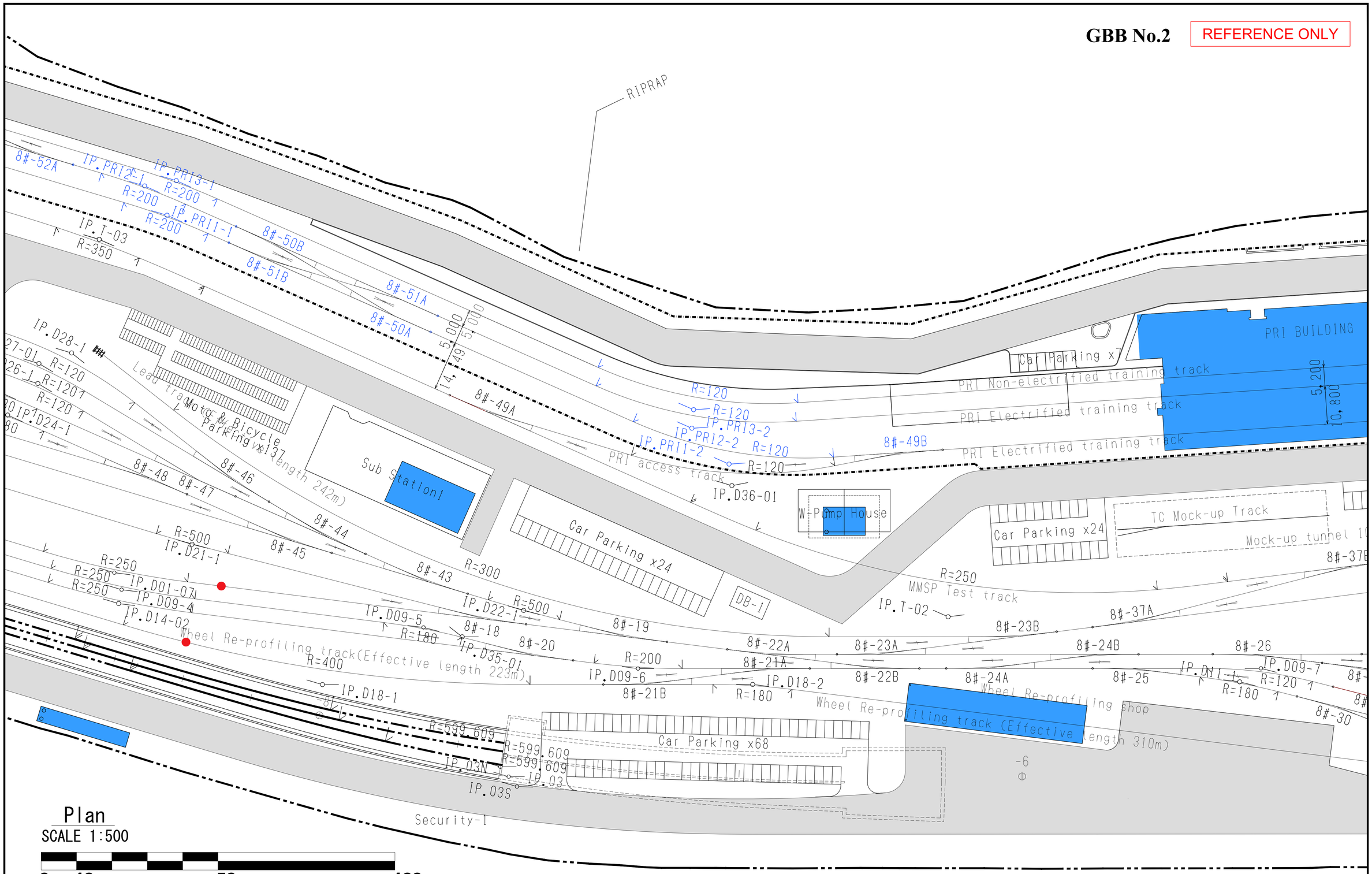
TITLE	NAME	SIGNATURE
DESIGNER		
CHECK		
TEAM LEADER		
PR. MANAGER		

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:500
SHEET No.	3/6
DRG No.	DP-CVL-001
DRG S.	REV 1

GBB No.2 REFERENCE ONLY



Plan

SCALE 1:500

0 10 50 100

VERSIONS	DATE	DESCRIPTION
	31/03/19	Revised / Additional Dwg.
0	15/01/19	Detail Design Submission

DEPARTMENT OF TRANSPORTATION (DOTr)

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JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.
TONICHI ENGINEERING CONSULTANTS, INC.
ALMEC CORPORATION

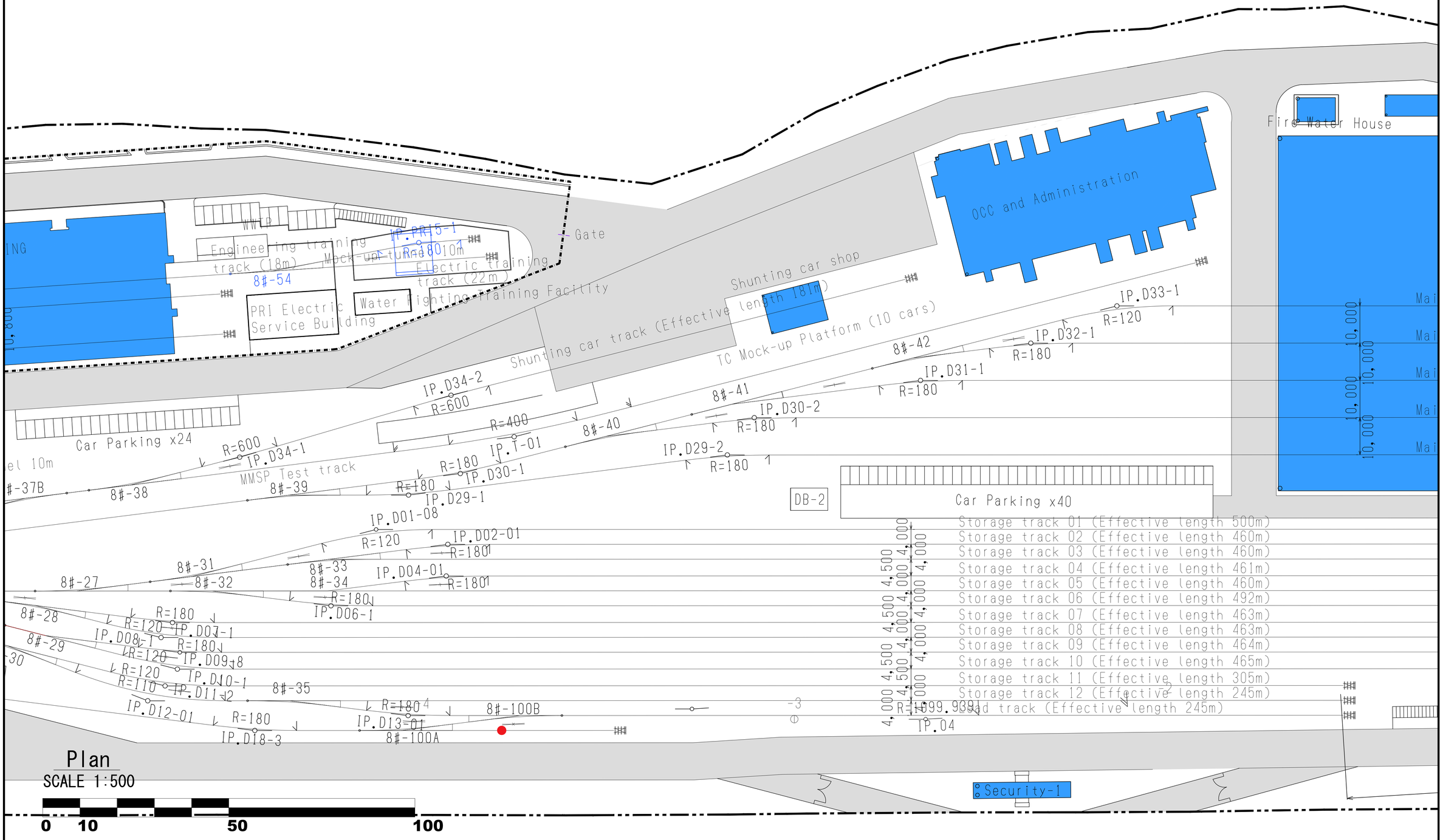
TITLE	NAME	SIGNATURE
DESIGNER		
CHECK		
TEAM LEADER		
PR. MANAGER		

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:500
SHEET No.	4/6
DRG No.	DP-CVL-001
DRG S.	REV 1

GBB No.2 REFERENCE ONLY



Plan

SCALE 1:500

0 10 50 100

VERSIONS	DATE	DESCRIPTION
	31/03/19	Revised / Additional Dwg.
0	15/01/19	Detail Design Submission

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TONICHI ENGINEERING CONSULTANTS, INC.
ALMEC CORPORATION

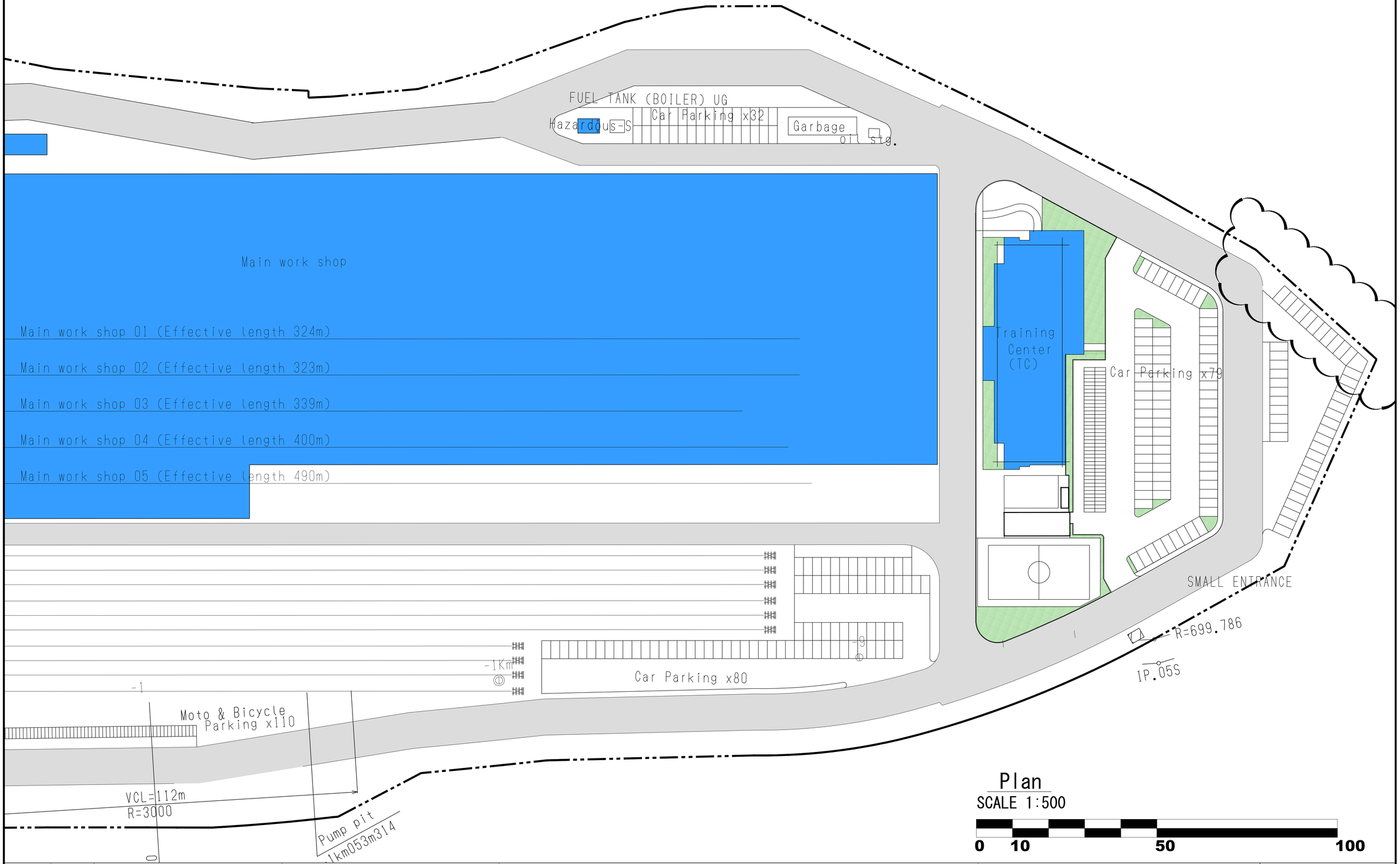
TITLE	NAME	SIGNATURE
DESIGNER		
CHECK		
TEAM LEADER		
PR. MANAGER		

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:500
SHEET No.	5/6
DRG No.	DP-CVL-001
DRG S.	
REV	1

GBB No.2 REFERENCE ONLY



Plan

SCALE 1:500

0 10 50 100

VERSIONS	DATE	DESCRIPTION
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0	15/01/19	Detail Design Submission

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TONICHI ENGINEERING CONSULTANTS, INC.
ALMEC CORPORATION

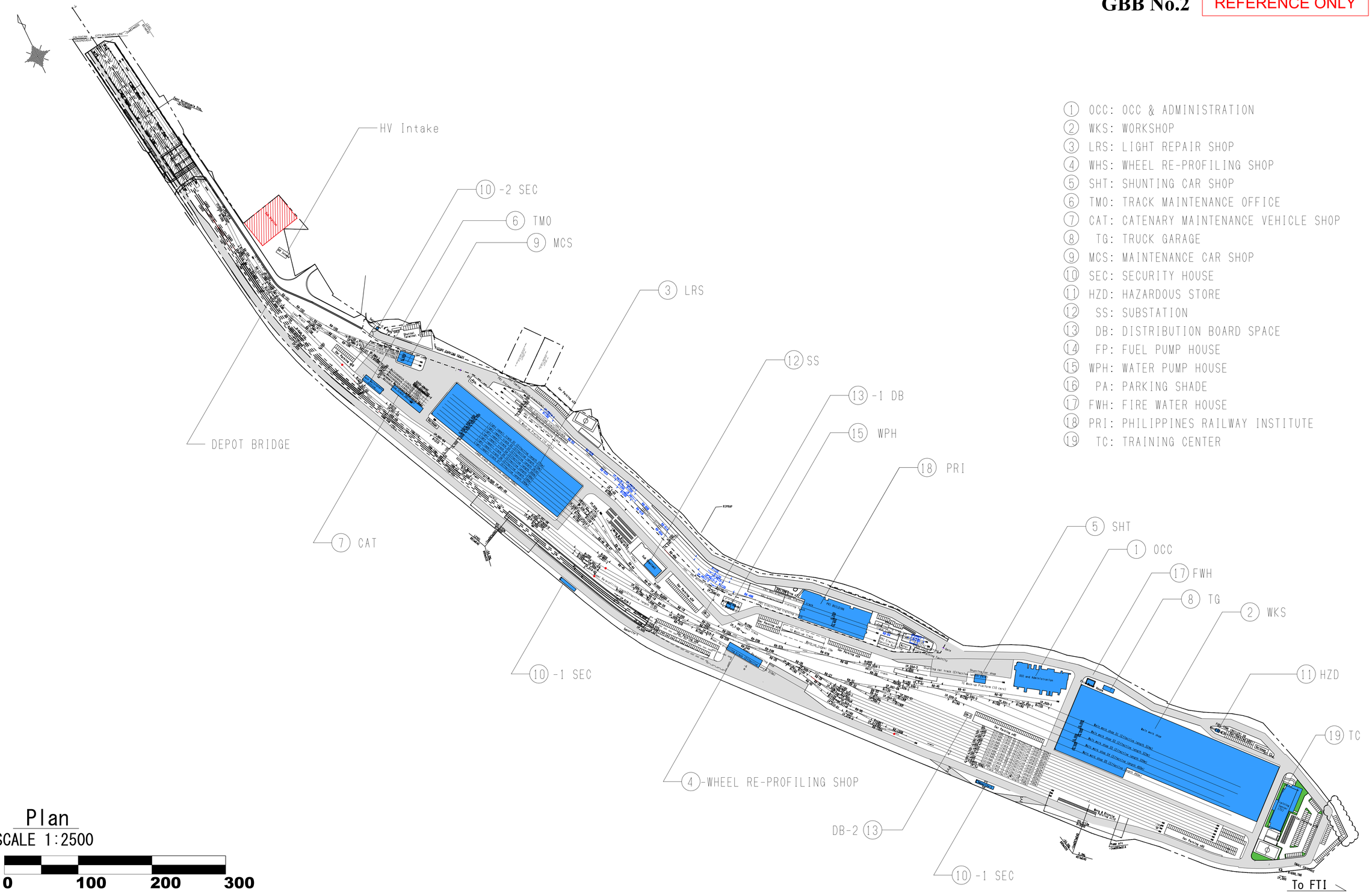
TITLE	NAME	SIGNATURE
DESIGNER		
CHECK		
TEAM LEADER		
PR. MANAGER		

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:500
SHEET No.	6/6
DRG No.	DP-CVL-001
DRG S.	REV 1

GBB No.2 REFERENCE ONLY



1 OCC: OCC & ADMINISTRATION
2 WKS: WORKSHOP
3 LRS: LIGHT REPAIR SHOP
4 WHS: WHEEL RE-PROFILING SHOP
5 SHT: SHUNTING CAR SHOP
6 TMO: TRACK MAINTENANCE OFFICE
7 CAT: CATENARY MAINTENANCE VEHICLE SHOP
8 TG: TRUCK GARAGE
9 MCS: MAINTENANCE CAR SHOP
10 SEC: SECURITY HOUSE
11 HZD: HAZARDOUS STORE
12 SS: SUBSTATION
13 DB: DISTRIBUTION BOARD SPACE
14 FP: FUEL PUMP HOUSE
15 WPH: WATER PUMP HOUSE
16 PA: PARKING SHADE
17 FWH: FIRE WATER HOUSE
18 PRI: PHILIPPINES RAILWAY INSTITUTE
19 TC: TRAINING CENTER

Plan
SCALE 1:2500

0 100 200 300

VERSIONS	DATE	DESCRIPTION
	31/03/19	Revised / Additional Dwg.
0	15/01/19	Detail Design Submission

DEPARTMENT OF TRANSPORTATION (DOTr)

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PACIFIC CONSULTANTS CO.,LTD.
JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.
TONICHI ENGINEERING CONSULTANTS, INC.
ALMEC CORPORATION

TITLE	NAME	SIGNATURE
DESIGNER		
CHECK		
TEAM LEADER		
PR. MANAGER		

METRO MANILA SUBWAY PROJECT
PHASE1 : CP101

General Arrangement Plan

DATE	
SCALE	S=1:2500
SHEET No.	
DRG No.	DP-CVL-001
DRG S.	REV 1

GBB No.2 3

UNSCHEDULED REPAIR SHOP
DRAWING INDEX

DRAWING No.	CONTENTS
NSRP-DWG-URS-AR-3001	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DRAWING INDEX
NSRP-DWG-URS-AR-3011	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SITE DEVELOPMENT PLAN AND LOCATION PLAN
NSRP-DWG-URS-AR-3101	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - FLOOR PLAN, REFLECTED CEILING PLAN AND ROOF PLAN
NSRP-DWG-URS-AR-3201	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - ELEVATIONS AND SECTIONS
NSRP-DWG-URS-AR-3311	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BLOW-UP PLAN, SECTION DETAILS
NSRP-DWG-URS-AR-3312	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BAY SECTIONS
NSRP-DWG-URS-AR-3313	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DETAIL 1
NSRP-DWG-URS-AR-3601	NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SCHEDULE OF FINISHES, SCHEDULE OF DOORS, WINDOWS AND LOUVERS

VERSIONS	DATE	DESCRIPTION
21	21 SEP 2020	ISSUE FOR BIDDING

DEPARTMENT OF TRANSPORTATION (DOTr)

PHILIPPINE NATIONAL RAILWAYS

CONSULTANT

JICA DESIGN TEAM (JDT)

ORIENTAL CONSULTANTS GLOBAL CO., LTD.

JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD.

KATAHIRA & ENGINEERS INTERNATIONAL

TONICHI ENGINEERING CONSULTANTS INC.

PACIFIC CONSULTANTS CO., LTD.

TOKYO METRO CO., LTD

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DESIGNER	K. SAKAMOTO	P. REYNALDO, JR.
CHECK	H. KISHI	A. ALLI
TEAM LEADER	N. MATSUMOTO	W. FRENCKEN
P. MANAGER	N. KAWAI	R. YUZON JR.

NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

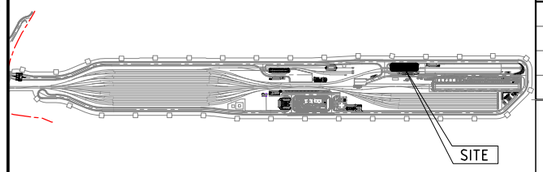
NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DRAWING INDEX

DATE: SEPTEMBER 2020
SCALE: N/A
SHEET No.:
DRG No.: NSRP-DWG-URS-AR-3001
DRG S.:
REV: 21

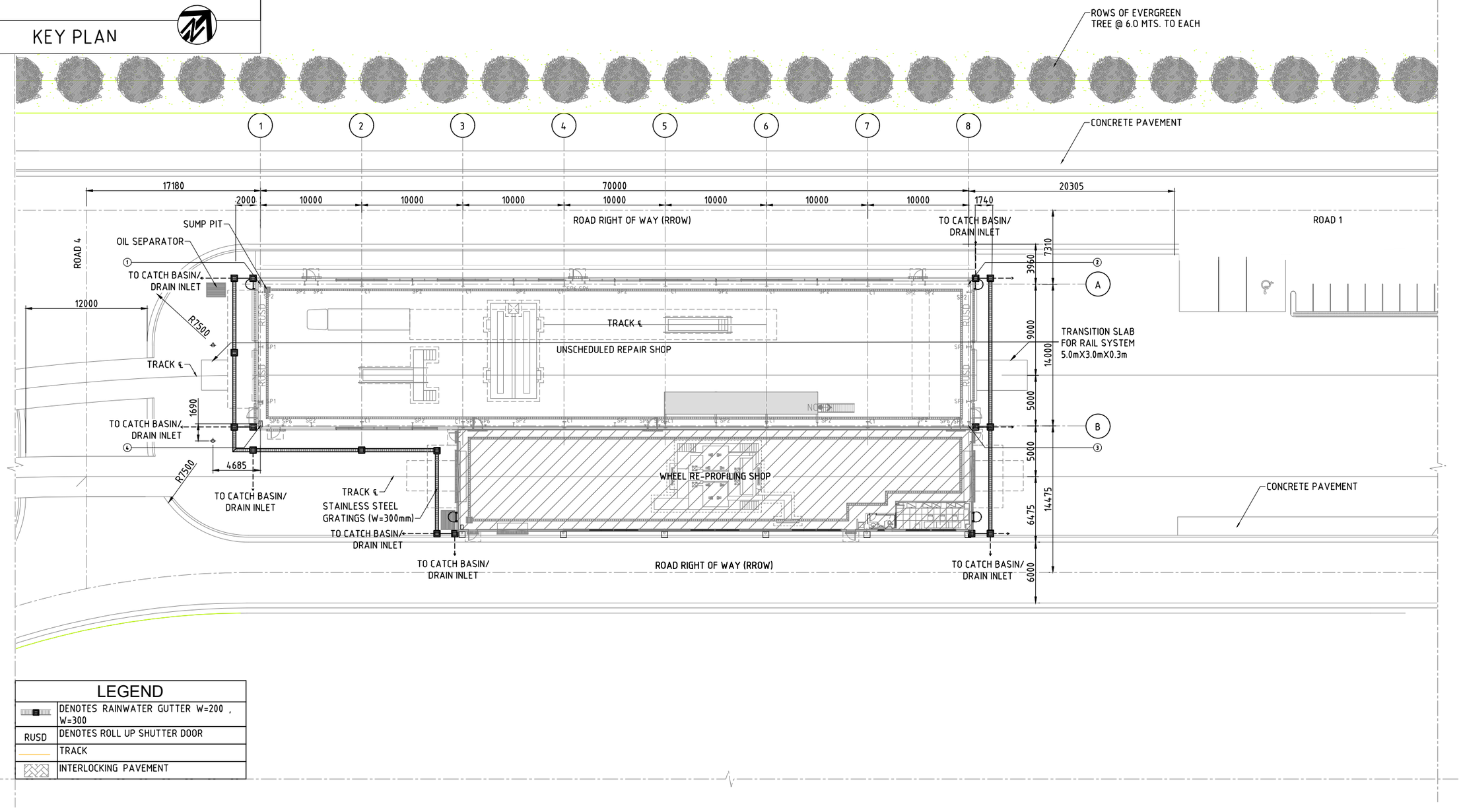
WVR-690

GBB No.2

SETTING-OUT POINTS		
POINTS	NORTHING	EASTING
1 (A/1)	1573386.9071	517321.3194
2 (A/8)	1573415.1704	517385.3600
3 (B/8)	1573402.3624	517391.0126
4 (B/1)	1573374.0987	517326.9722



KEY PLAN



LEGEND	
	DENOTES RAINWATER GUTTER W=200 , W=300
RUSD	DENOTES ROLL UP SHUTTER DOOR
	TRACK
	INTERLOCKING PAVEMENT

SITE DEVELOPMENT PLAN

SCALE 1:200

SCALE 1:200 2 0 2 4 6 8 10

VERSIONS	DATE	DESCRIPTION
21	21 SEP 2020	ISSUE FOR BIDDING

DEPARTMENT OF TRANSPORTATION (DOTr)

PHILIPPINE NATIONAL RAILWAYS

CONSULTANT

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P. MANAGER	N. KAWAI	R. YUZON JR.

NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SITE DEVELOPMENT PLAN AND LOCATION PLAN

DATE: SEPTEMBER 2020

SCALE: AS SHOWN IN A1

SHEET No.:

DRG No.: NSRP-DWG-URS-AR-3011

DRG S.:

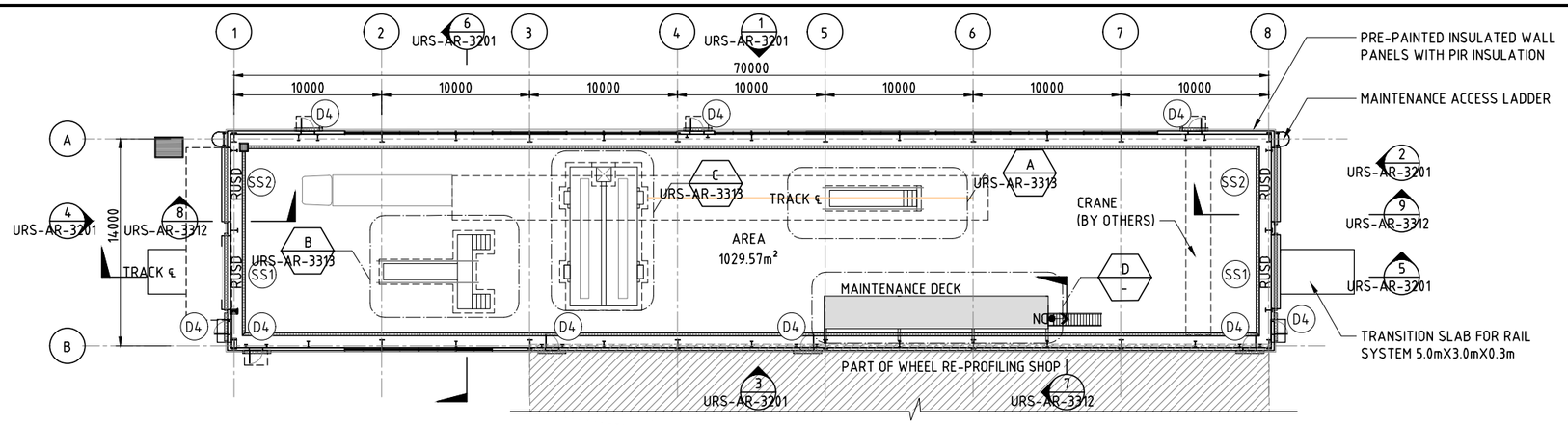
REV: 21

Last modified by CG6200339 / 15 Sep 2020
Filename: V:_Vault\Projects\7051194\NSRP-SL\CAD\DWG\22_DEP_Depot\29_URS_Unschedule Repair Shop\05_URS-AR\NSRP-DWG-URS-AR-3011

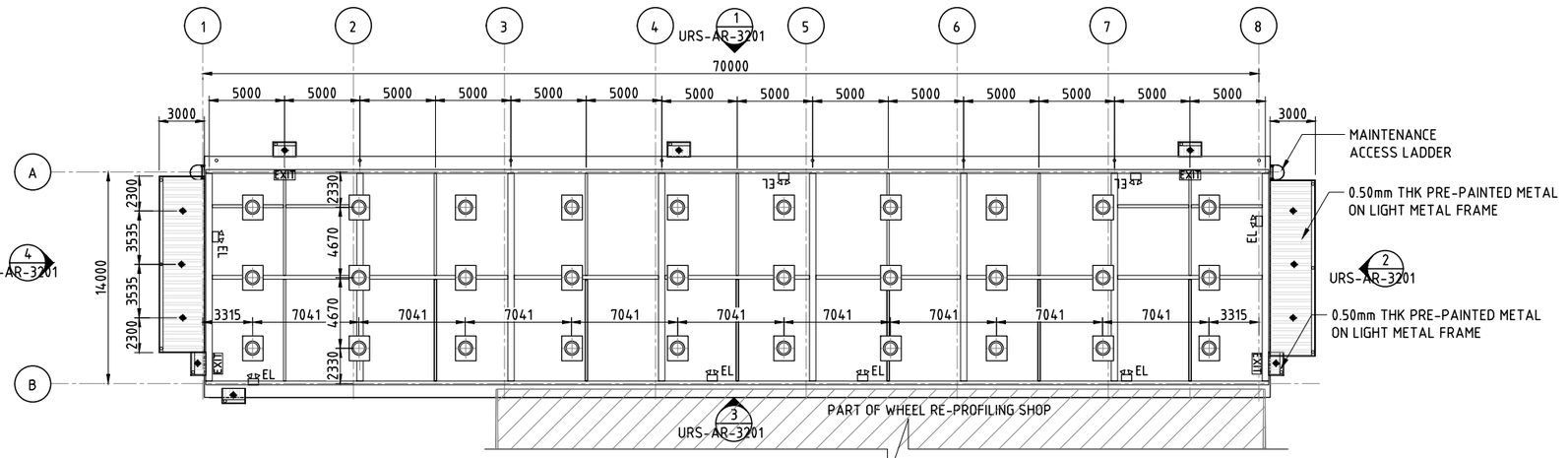
WVR-761

GBB No.2

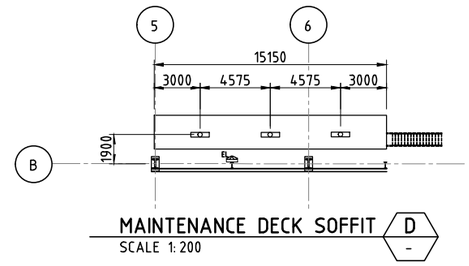
LEGEND	
HB	188W LED LAMP HIGH BAY LIGHTING FIXTURE
S	SMOKE DETECTOR
EL	EMERGENCY LIGHT
	RECESSED TYPE PINLIGHT
EXIT	ACRYLIC LED EXIT SIGN



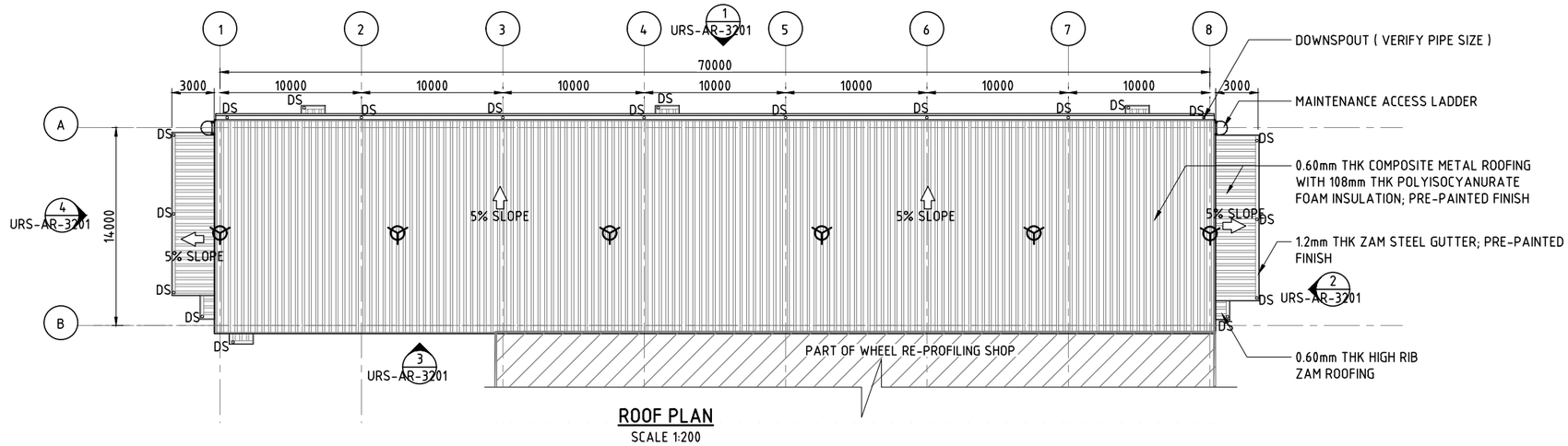
FLOOR PLAN
SCALE 1:200



REFLECTED CEILING PLAN
SCALE 1:200



MAINTENANCE DECK SOFFIT D
SCALE 1:200



ROOF PLAN
SCALE 1:200

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. FGL +0.00 =+15.5m ABOVE MEAN SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL SEPARATION FOR VERIFICATION.
4. THE CONTRACTORS SHALL CAREFULLY STUDY AND COMPARE THE REELECTED CEILING PLANS WITH: ELECTRICAL, LIGHTING SYSTEMS AND COMMUNICATION DRAWINGS, MECHANICAL SUPPLIES AND RETURNS EXHAUST DRAWINGS, AIR CONDITIONING DRAWINGS, FIRE PROTECTION DRAWINGS, OR ANY OTHER UTILITY DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT ON ANY OMISSIONS OR INCONSISTENCIES.
5. IF A CEILING TILE MODULE IS USED, THE LOCATION OF LIGHTING FIXTURES, SPRINKLER HEADS, MECHANICAL VENTILATION DIFFUSERS, CEILING MOUNTED AIR CONDITIONING, HEAT AND SMOKE DETECTORS SHALL BE IN IN THE CENTRE OF EACH TILE- UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR SHALL VERIFY CEILING ACCESS PANEL LOCATIONS AS IT MAY VARY PER REQUIREMENT OF DIFFERENT UTILITY DISCIPLINES

SCALE 1:200 2 0 2 4 6 8 10

VERSIONS	DATE	DESCRIPTION
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DEPARTMENT OF TRANSPORTATION (DOTr)

PHILIPPINE NATIONAL RAILWAYS

CONSULTANT

JICA DESIGN TEAM (JDT)

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KATAHIRA & ENGINEERS INTERNATIONAL
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TOKYO METRO CO., LTD

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P. MANAGER	N. KAWAI	R. YUZON JR.

NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

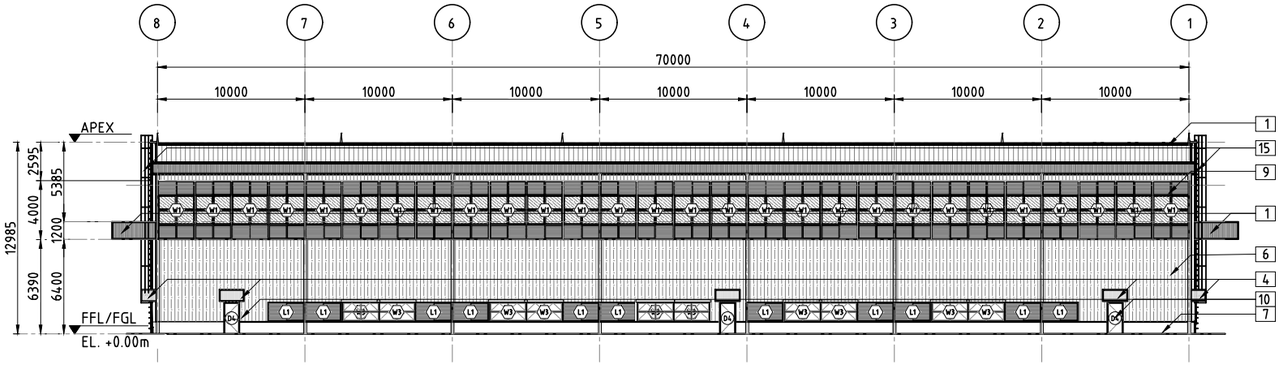
NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - FLOOR PLAN, REFLECTED CEILING PLAN AND ROOF PLAN

DATE: SEPTEMBER 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: NSRP-DWG-URS-AR-3101
DRG S.:
REV: 21

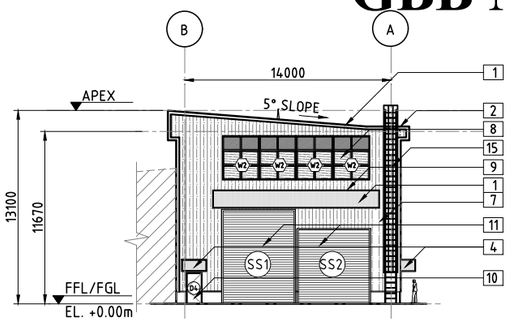
Last modified by CS6260347 / 15 Sep 2020
Filename: V:_Vault\Projects\705194\NSRP-SL\CAD\DWG\22_DEP_Depot\29_URS_Unschedule Repair Shop\05_URS-AR\NSRP-DWG-URS-AR-3101

WVR-761

GBB No.2



FRONT (WEST) ELEVATION 1
SCALE: 1:200 URS-AR-3101

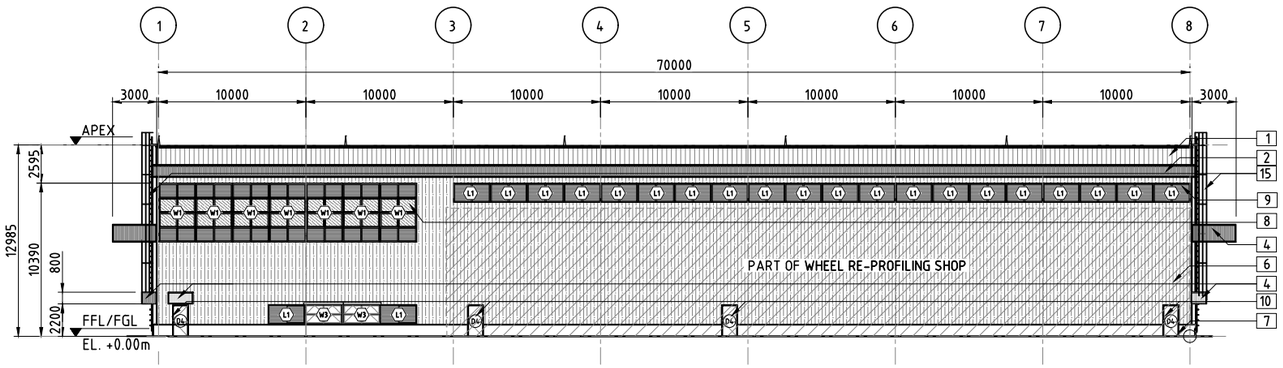


LEFT SIDE (NORTH) ELEVATION 2
SCALE: 1:200 URS-AR-3101

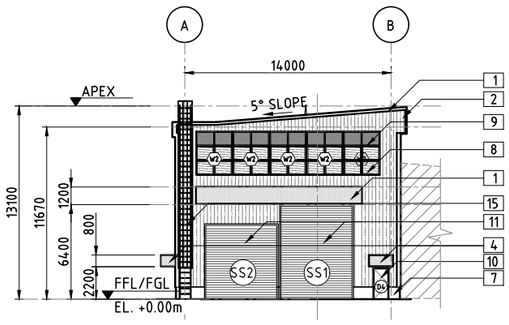
LEGEND	
MARK	BLDG. PART / ITEM
1	COMPOSITE METAL ROOFING
2	ROOF GUTTER
3	ROOF FLASHING
4	CANOPY ROOFING
6	COMPOSITE METAL WALL
7	RC WALL
8	ALUMINUM WINDOWS
9	ALUMINUM LOUVERS
10	STEEL DOORS
11	ROLL-UP SHUTTER DOOR
13	DOWNSPOUT
15	MAINTENANCE LADDER

NOTES

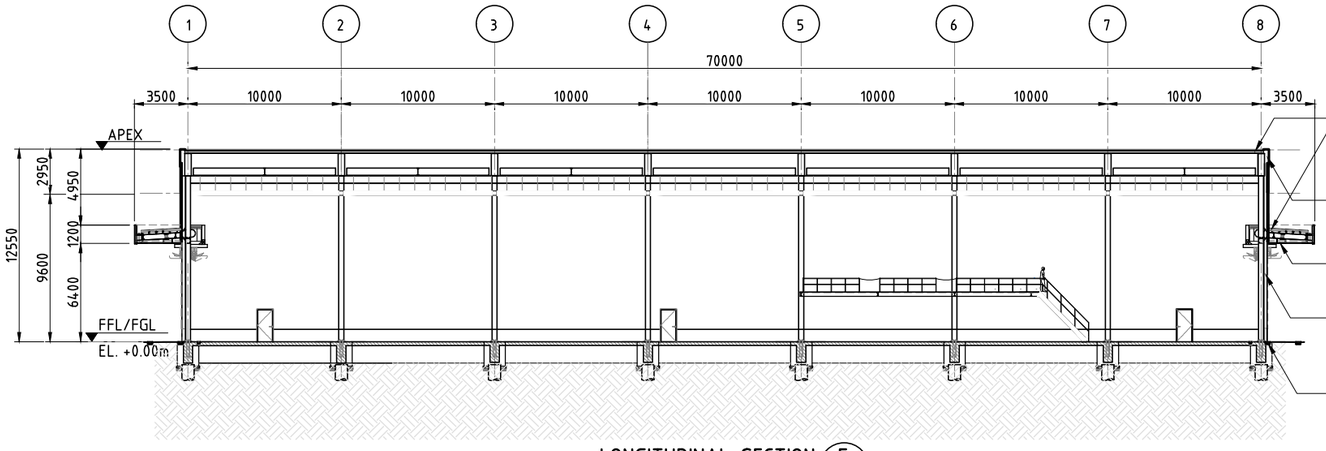
1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. FGL +0.00 =+15.5m ABOVE MEAN SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL VERIFICATION.



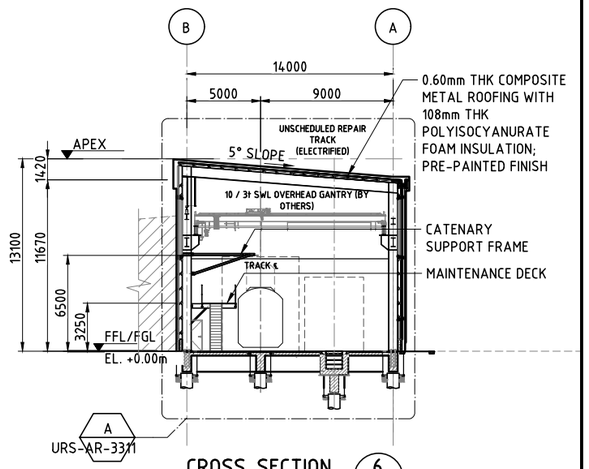
REAR (EAST) ELEVATION 3
SCALE: 1:200 URS-AR-3101



RIGHT SIDE (SOUTH) ELEVATION 4
SCALE: 1:200 URS-AR-3101



LONGITUDINAL SECTION 5
SCALE: 1:200 URS-AR-3101



CROSS SECTION 6
SCALE: 1:200 URS-AR-3101

SCALE 1:200 2 0 2 4 6 8 10

VERSIONS	DATE	DESCRIPTION
21	21 SEP 2020	ISSUE FOR BIDDING

DEPARTMENT OF TRANSPORTATION (DOTr)

PHILIPPINE NATIONAL RAILWAYS

CONSULTANT

JICA DESIGN TEAM (JDT)

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NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

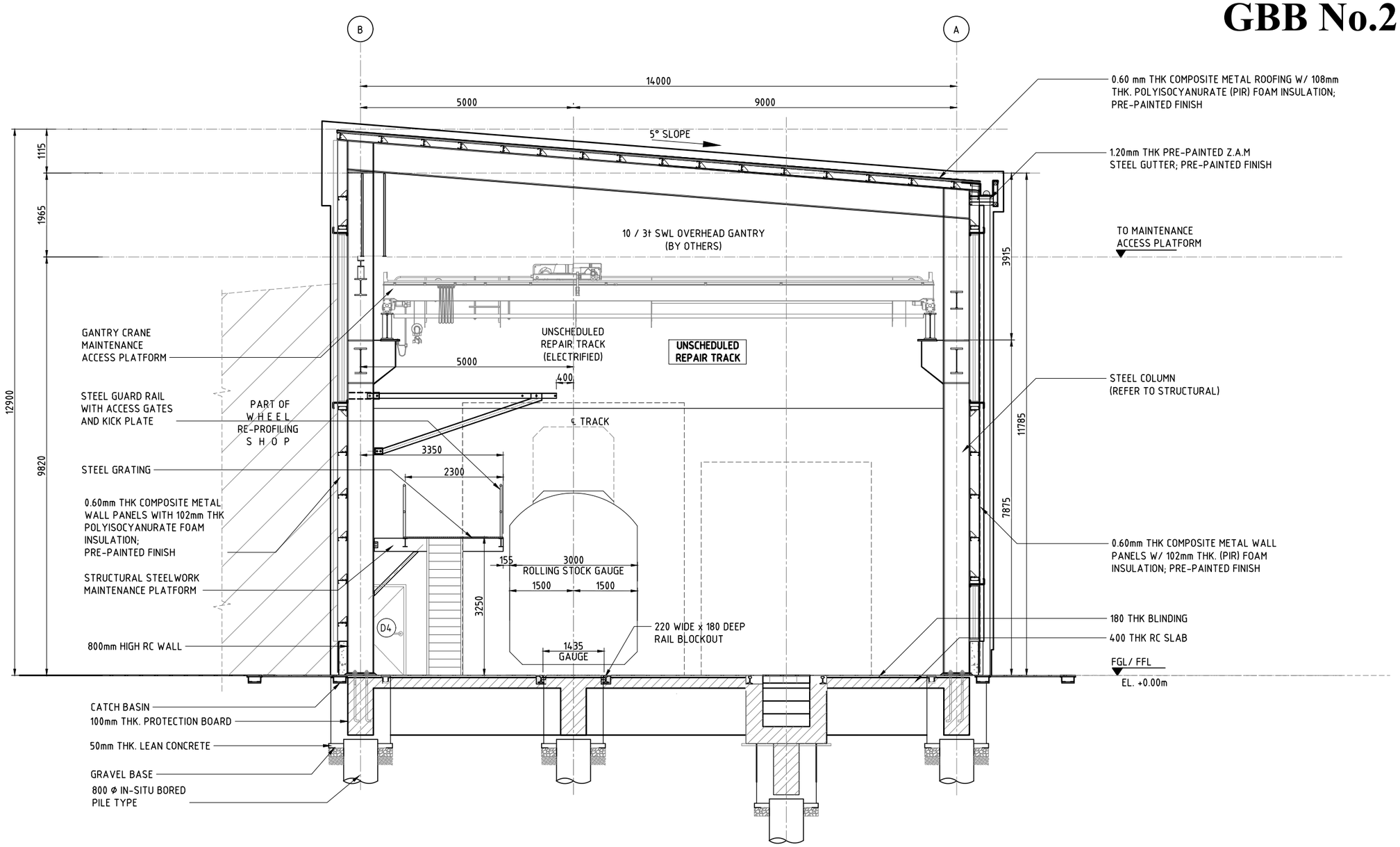
NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - ELEVATIONS AND SECTIONS

DATE: SEPTEMBER 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: NSRP-DWG-URS-AR-3201
DRG S.:
REV: 21

Last modified by CS6260347 / 15 Sep 2020
Filename: V:_Vault\Projects\705119A\NSRP-SL\CAD\DWG\22_DEP_Depot\29_URS_Unschedule Repair Shop\05_URS-AR\NSRP-DWG-URS-AR-3201

WVR-761

GBB No.2



BLOW-UP SECTION A
SCALE 1:50 URS-AR-3201

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. FGL +0.00 =+15.5m ABOVE MEAN SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL VERIFICATION.

SCALE 1:50 0.5 0 1 2

VERSIONS	DATE	DESCRIPTION
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PHILIPPINE NATIONAL RAILWAYS

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NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

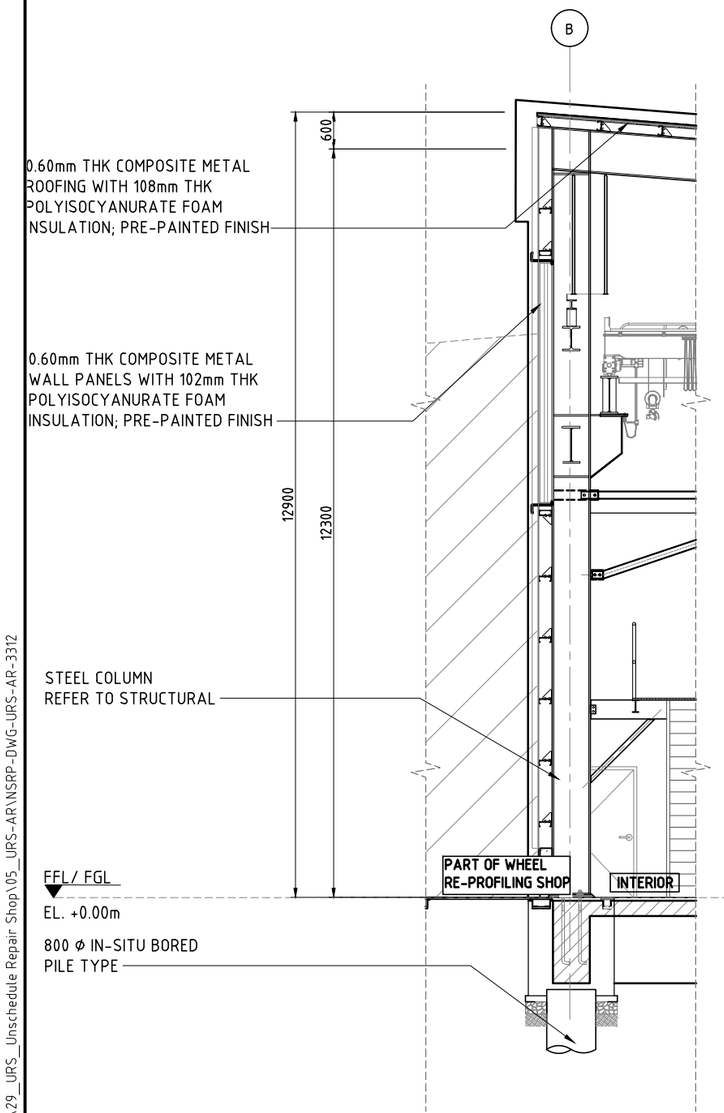
PACKAGE CP S-07 : DETAILED DESIGN

NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BLOW-UP PLAN, SECTION DETAILS

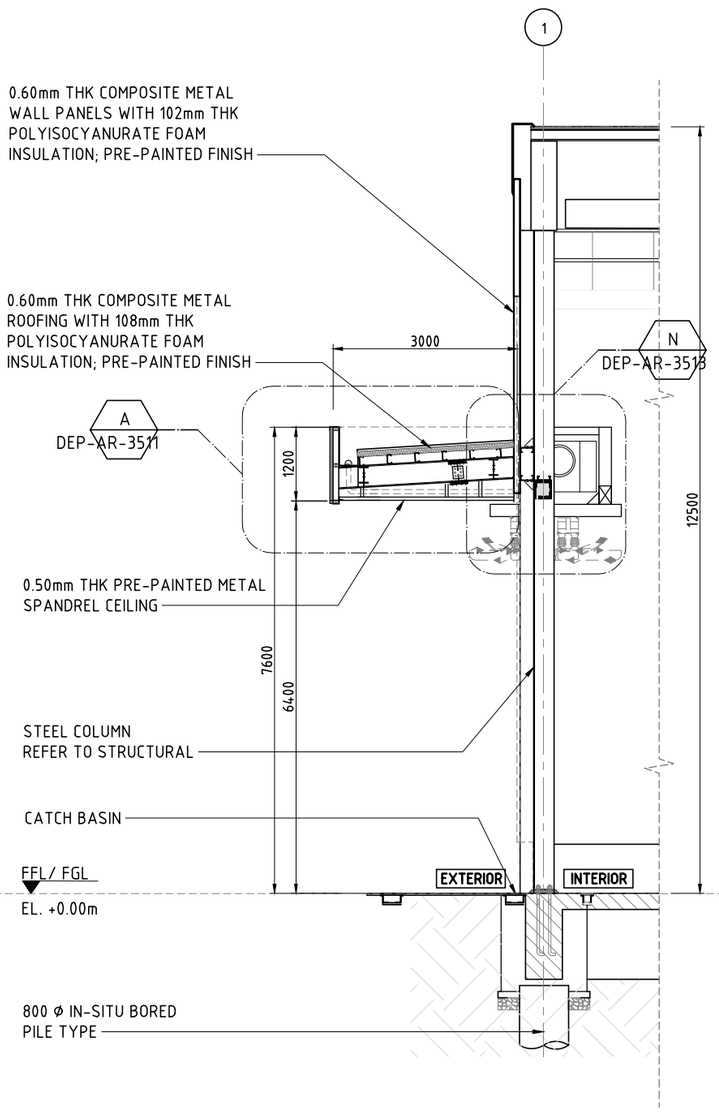
DATE: SEPTEMBER 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: NSRP-DWG-URS-AR-3311
DRG S.:
REV: 21

Last modified by CS626034.7 / 15 Sep 2020
Filename: V:_Vault\Projects\7051194\NSRP-SL\CAD\DWG\22_DEP_Depot\29_URS_Unschedule Repair Shop\05_URS-AR\NSRP-DWG-URS-AR-3311

GBB No.2



BAY SECTION AT GRID B (7)
SCALE 1:50 URS-AR-3101



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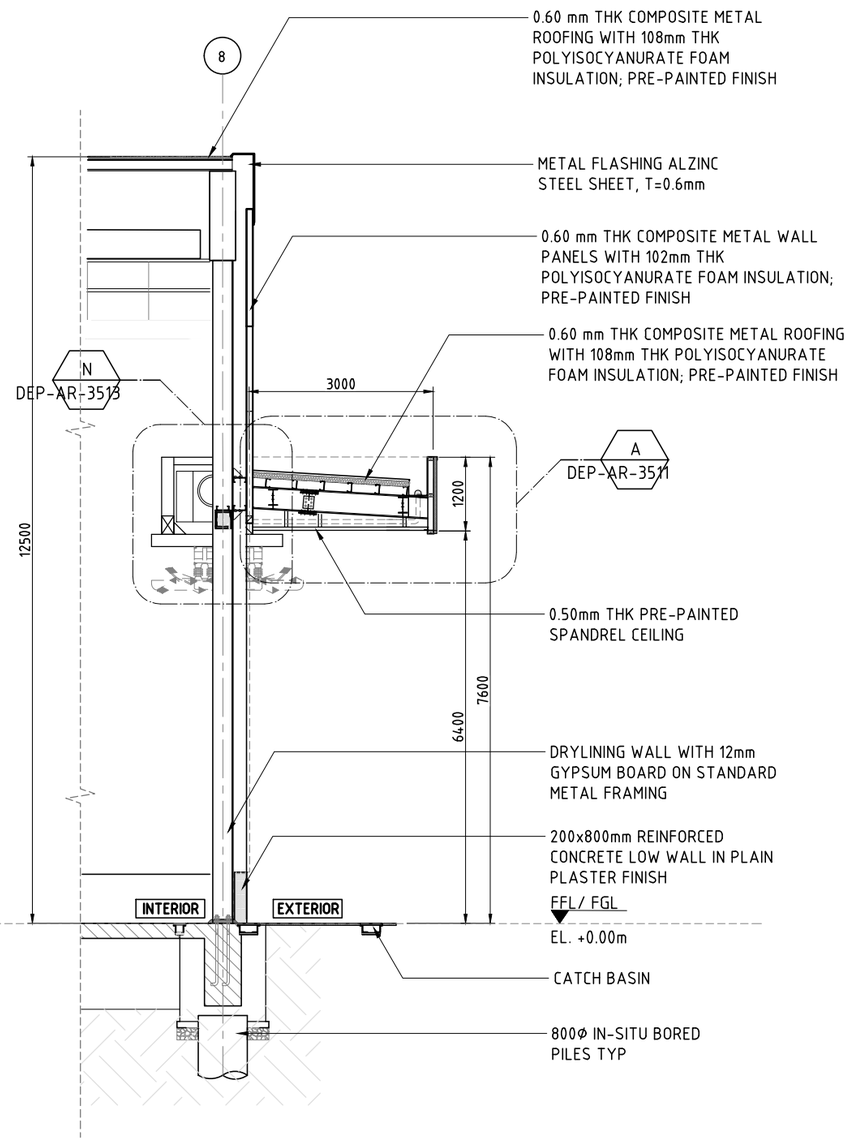
SCALE 1:50 URS-AR-3101



BAY SECTION AT GRID 8 (9)
SCALE 1:50 URS-AR-3101

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. FGL +0.00 =+15.5m ABOVE MEAN SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL VERIFICATION.

SCALE 1:50 0.5 0 1 2

VERSIONS	DATE	DESCRIPTION
21	21 SEP 2020	ISSUE FOR BIDDING

DEPARTMENT OF TRANSPORTATION (DOTr)

PHILIPPINE NATIONAL RAILWAYS

CONSULTANT

JICA DESIGN TEAM (JDT)

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JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD.
KATAHIRA & ENGINEERS INTERNATIONAL
TONICHI ENGINEERING CONSULTANTS INC.
PACIFIC CONSULTANTS CO., LTD.
TOKYO METRO CO., LTD

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CHECK	H. KISHI	A. ALLI
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P. MANAGER	N. KAWAI	R. YUZON JR.

NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

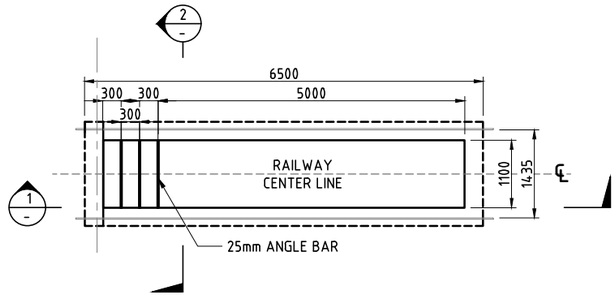
NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP
ARCHITECTURAL - BAY SECTIONS

DATE: SEPTEMBER 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: NSRP-DWG-URS-AR-3312
DRG S.:
REV: 21

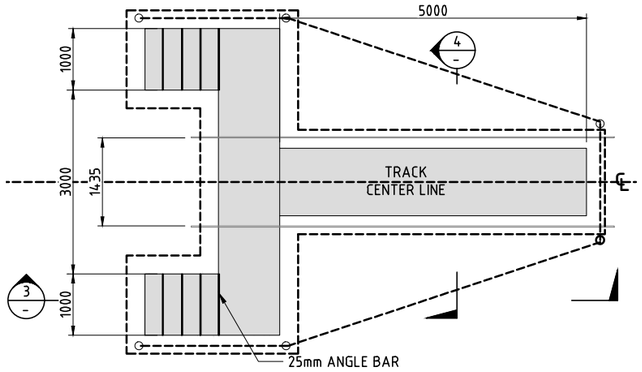
WVR-761

Last modified by CS6260347 / 15 Sep 2020
Filename: V:__Vault\Projects\705194\NSRP-SL\CAD\DWG\22_DEP_Depot\29_URS_Unschedule Repair Shop\05_URS-AR\NSRP-DWG-URS-AR-3312

GBB No.2



PLAN DETAIL A
SCALE 1:50 URS-AR-3101



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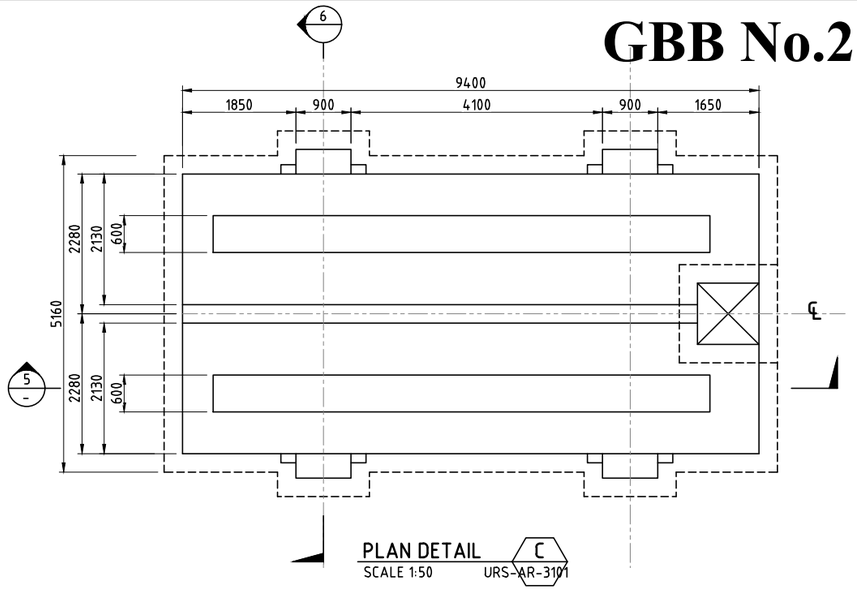

PLAN DETAIL C
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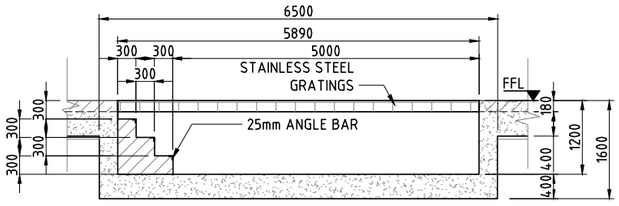

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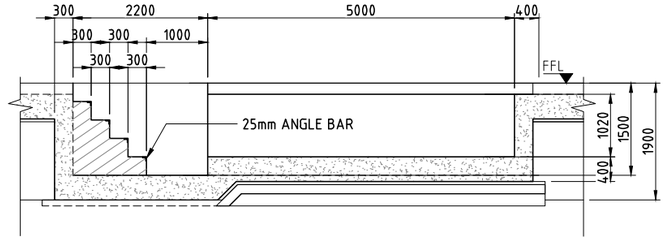
SCALE: 1:50



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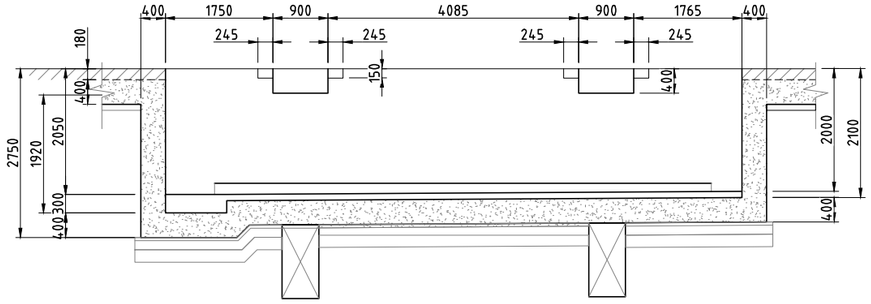

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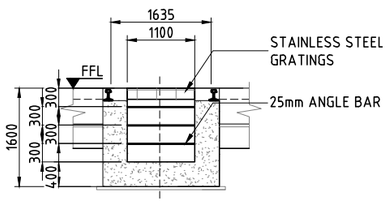
SCALE: 1:50



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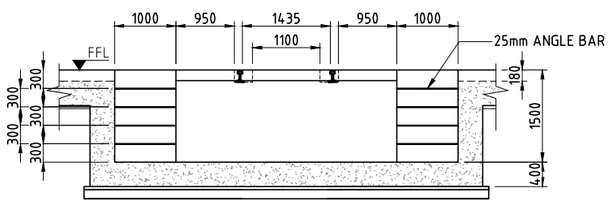
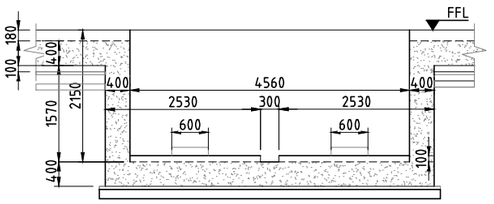


SECTION DETAIL 4
SCALE: 1:50



SECTION DETAIL 6
SCALE: 1:50

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. FGL +0.00 =+15.5m ABOVE MEAN SEA LEVEL/ DEPOT TOP OF RAIL.

SCALE 1:50 0.5 0 1 2

VERSIONS	DATE	DESCRIPTION
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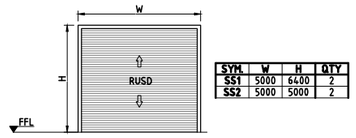
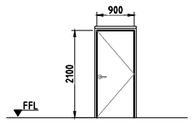
NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

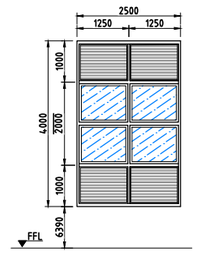
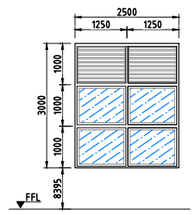
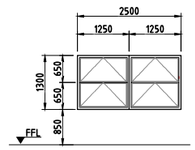
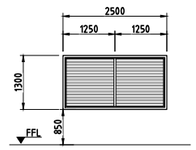
NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DETAIL 1

DATE: SEPTEMBER 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: NSRP-DWG-URS-AR-3313
DRG S.:
REV: 21

GBB No.2

1	**SYMBOL**	SS1, SS2	D4			
2	**NAME**	MOTORIZED STAINLESS STEEL ROLL-UP SHUTTER DOOR	SINGLE LEAF FIRE-RATED STEEL FLUSH DOOR			
3	**MATERIAL**	GA #18 STAINLESS STEEL	FLOURO URETHANE OVEN-BAKED FIN. STEEL SHEET t=1.6			
4	**NUMBER**	SEE TABLE BELOW	5 SETS			
5	**LOCATION**	WORK AREA	WORK AREA			
6	**SHAPE**					
7	**FRAME**	STAINLESS STEEL SHEET t=2.3 (RAIL)	C) FLOURO URETHANE OVEN-BAKED FIN. STEEL SHEET t=1.6			
8	**THRESHOLD**	-	D) STAINLESS STEEL SHEET t=2.0			
9	**GLASS**	-	-			
10	**LOUVER**	FITTING METAL WORK	-			
11	**HARDWARE**	-	T			
12	**LOCK**	-	C) LEVER HANDLE			
13	**MISCELLANEOUS**	-	D.C , SMALL CANOPY			
14	**REMARKS**	W/ GUARD POST Ø150 H=1200x4 nos. STEEL L-50x50 CAST -IN FLOOR GUARD RAIL : STAINLESS STEEL, W/ TOUCH SENSOR	W/ MASTER KEY			

SYM	W	H	Q.TY
SS1	5000	6400	2
SS2	5000	5000	2

1	**SYMBOL**	W1	W2	W3	L1	
2	**NAME**	DOUBLE PANED FIXED WINDOW W/ LOUVER	DOUBLE PANED FIXED WINDOW	DOUBLE PANED AWNING TYPE WINDOW	LOUVER	
3	**MATERIAL**	GA #18 STAINLESS STEEL	GA #18 STAINLESS STEEL			
4	**NUMBER**	36 SETS	9 SETS	12 SETS	34 SETS	
5	**LOCATION**	WORK AREA	WORK AREA	WORK AREA	WORK AREA	
6	**SHAPE**					
7	**FRAME**	ALUMINUM POWDER COATED (PVDF)	ALUMINUM POWDER COATED (PVDF)	ALUMINUM POWDER COATED (PVDF)	STEEL FLOUROURETHAN OVEN-BAKE FINISH	
8	**THRESHOLD**	-	-	-	-	
9	**GLASS**	LOW-E8 + A 12 + FL 8 (FILM) = 28mm THK.	LOW-E8 + A 12 + FL 8 (FILM) = 28mm THK.	LOW-E8 + A 12 + FL 8 (FILM) = 28mm THK.	-	
10	**LOUVER**	D) GA# 18 G.I. SHEET LOUVER W/ STAINLESS INSECT SCREEN	D) GA# 18 G.I. SHEET LOUVER W/ STAINLESS INSECT SCREEN		D) GA# 18 G.I. SHEET LOUVER W/ STAINLESS INSECT SCREEN	
11	**HARDWARE**	FULL ACCESSORIES	FULL ACCESSORIES	FULL ACCESSORIES	FULL ACCESSORIES	
12	**LOCK**	-	-	OPERATOR HANDLE	-	
13	**MISCELLANEOUS**	WITH UV CUT FILM, FLASHING INSECT SCREEN	WITH UV CUT FILM, FLASHING INSECT SCREEN	WITH UV CUT FILM, FLASHING INSECT SCREEN	FLASHING INSECT SCREEN	
14	**REMARKS**	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHAN OVEN BAKE FINISH	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOURO URETHANE OVEN BAKE FINISH	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHAN OVEN BAKE FINISH	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHAN OVEN BAKE FINISH	

EXTERIOR SCHEDULE OF FINISHES

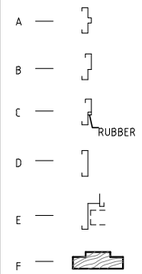
ITEM	MATERIAL	DESCRIPTION
COMPOSITE METAL ROOFING	PRE-PAINTED INSULATED ROOF PANELS WITH POLYISOCYANURATE (PIR) INSULATION	COMPOSITE ROOFING PANELS: TOP & BOTTOM SKIN ALZINC STEEL SHEET t=0.6mm, H=108, POLYISOCYANURATE (PIR) DENSITY = 32-35KG/M3
ROOF GUTTER	PRE-PAINTED HI-RIB ZINC - ALUMINUM - MAGNESIUM (ZAM) GUTTER	1.2mm THK. ZAM STEEL, POST-FORMED, WELDED JOINTS
ROOF FLASHING	PRE-PAINTED G.I. FLASHING	0.6mm THK. ALZINC STEEL SHEET, FLOURETHANE PRE-PAINTED
CANOPY ROOFING	PRE-PAINTED HI-RIB ZINC - ALUMINUM - MAGNESIUM (ZAM) ROOFING	ALZINC STEEL SHEET t=0.6mm, H=25mm
CANOPY CEILING	0.5mm THICK PRE-PAINTED SPANDREL METAL CEILING	
COMPOSITE METAL WALL	PRE-PAINTED INSULATED WALL PANELS WITH POLYISOCYANURATE (PIR) INSULATION	COMPOSITE WALL PANEL; TOP & BOTTOM SKIN ALZINC STEEL SHEET t=0.6mm, H=102, POLYISOCYANURATE (PIR) DENSITY = 32-35KG/M3
RC WALL	200x800mm HIGH REINFORCED CONCRETE WALL, ELASTOMERIC PAINT FINISH	PLAIN CEMENT STEEL TROWELLED FINISH WITH HARDENER AND CEMENTIOUS WATERPROOFING

INTERIOR SCHEDULE OF FINISHES

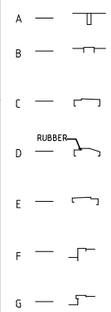
ROOM NAME / SPACE	FLOOR FINISHES	CEILING FINISHES	WALL FINISHES	BASE BOARD / ACCESSORIES	REMARKS
WORK AREA	SELF LEVELING EPOXY WITH HARDENER	EXPOSED UNDERSIDE OF PIR INSULATED STEEL ROOFING	A) EXPOSED INSIDE COMPOSITE METAL PANELS B) PLAIN CEMENT PLASTER PAINTED FINISH	150mm HIGH EPOXY PAINTED BASE STRIP	
SERVICE PIT	SELF-LEVELING EPOXY PAINT HARDENER	EXPOSED UNDERSIDE OF PIR INSULATED STEEL ROOFING	PLAIN CEMENT PLASTER PAINTED FINISH	150mm HIGH EPOXY PAINTED BASE STRIP	STAINLESS STEEL CORNER ANGLE BAR

REMARK

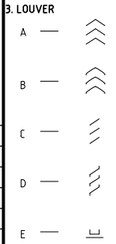
1. DOOR FRAME TYPE



2. SADDLE / THRESHOLD



3. LOUVER



4. HARDWARE

T	BUTT HINGE
A.H	AUTO HINGE
P.H	PIVOT HINGE
F.H	FLOOR HINGE
L.H	LAVATORY HINGE
F.ST	FLOOR STOPER
B.ST	BASE STOPER
W.ST	WALL STOPER
D.C.	DOOR CLOSER

5. LOCK

C	CYLINDER LOCK
I	INTEGRAL LOCK
M	MONO LOCK
L	LATCH
D	DEAD LOCK
M.L.H	MORTISE LEVER HANDLE LOCK
P	EMERGENCY EXIT LOCK
E	ELECTRICAL LOCK

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NORTH SOUTH RAILWAY PROJECT - SOUTH LINE (COMMUTER)

PACKAGE CP S-07 : DETAILED DESIGN

NSRP-SOUTH DEPOT - UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SCHEDULE OF FINISHES, SCHEDULE OF DOORS, WINDOWS AND LOUVERS

DATE: SEPTEMBER 2020

SCALE: N/A

SHEET No.:

DRG No.: NSRP-DWG-URS-AR-3601

DRG S.:

REV: 21

UNSCHEDULED REPAIR SHOP
DRAWING INDEX

DRAWING No.	CONTENTS
MCRP-DWG-URS-AR-3001	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DRAWING INDEX
MCRP-DWG-URS-AR-3011	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SITE DEVELOPMENT PLAN AND LOCATION PLAN
MCRP-DWG-URS-AR-3101	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - FLOOR PLAN, REFLECTED CEILING PLAN AND ROOF PLAN
MCRP-DWG-URS-AR-3201	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - ELEVATIONS AND SECTIONS
MCRP-DWG-URS-AR-3311	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BLOW UP SECTION DETAILS
MCRP-DWG-URS-AR-3312	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BAY SECTIONS
MCRP-DWG-URS-AR-3313	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DETAILS
MCRP-DWG-URS-AR-3601	MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SCHEDULE OF FINISHES, SCHEDULE OF DOORS, WINDOWS AND LOUVERS

VERSIONS	DATE	DESCRIPTION
30	14 AUG 2020	ISSUE FOR DETAILED DESIGN

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P. MANAGER	Y. MAEDA	R. YUZON JR.

MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DRAWING INDEX

DATE: AUGUST 2020

SCALE: N/A

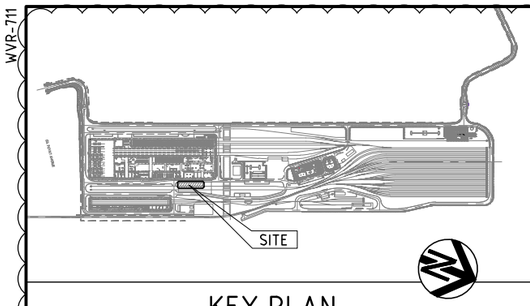
SHEET No.:

DRG No.: MCRP-DWG-URS-AR-3001

DRG S.:

REV: 30

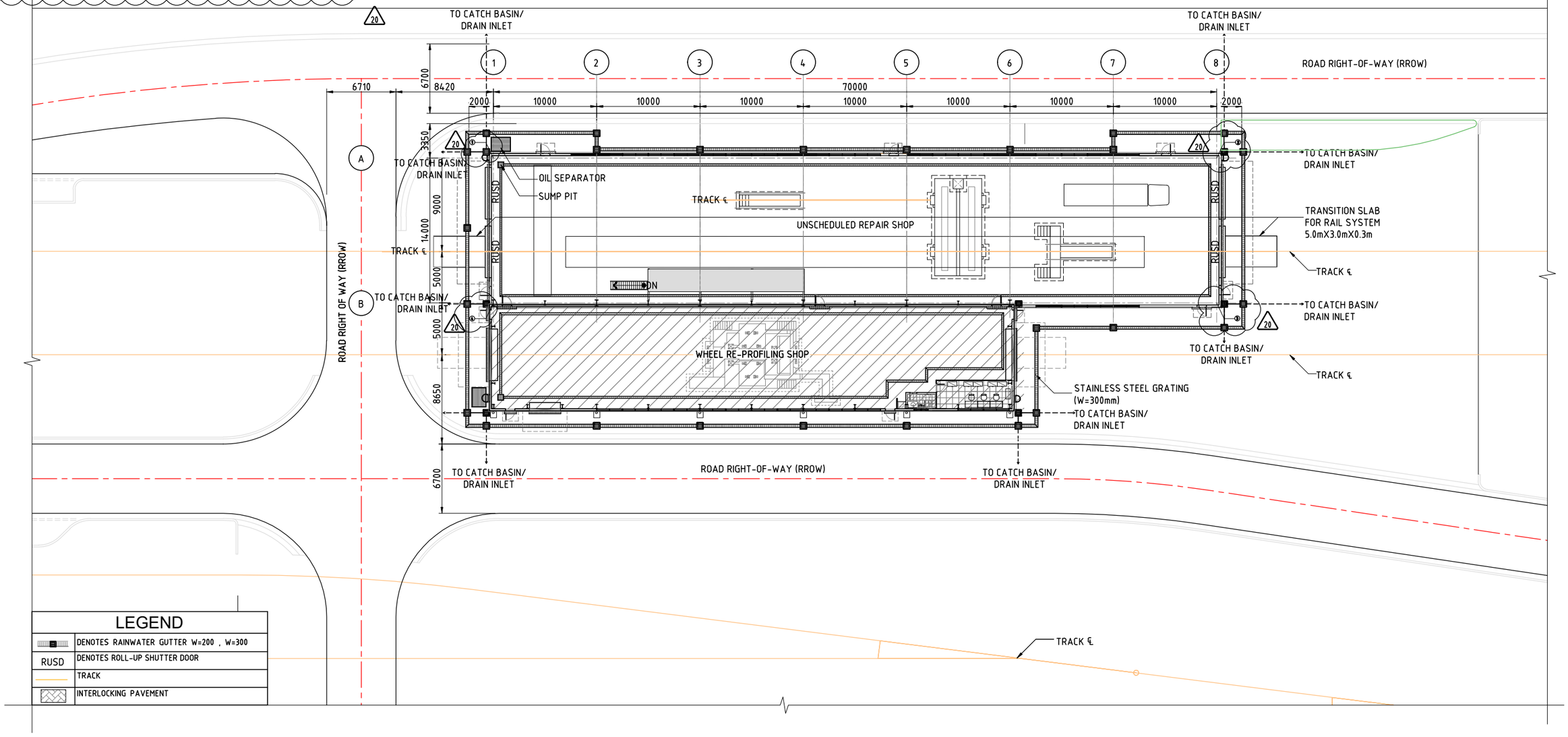
GBB No.2



KEY PLAN

SETTING-OUT POINTS

POINTS	NORTHING	EASTING
1 (A/1)	1683405.0507	453329.2556
2 (A/8)	1683472.3040	453309.8392
3 (B/8)	1683476.1873	453323.2901
4 (B/1)	1683408.9340	453342.7065



LEGEND

	DENOTES RAINWATER GUTTER W=200 , W=300
RUSD	DENOTES ROLL-UP SHUTTER DOOR
	TRACK
	INTERLOCKING PAVEMENT

SITE DEVELOPMENT PLAN

SCALE 1:200

SCALE 1:200 2 0 2 4 6 8 10

VERSIONS	DATE	DESCRIPTION
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P. MANAGER	Y. MAEDA	R. YUZON JR.

MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SITE DEVELOPMENT PLAN AND LOCATION PLAN

DATE: AUGUST 2020

SCALE: N/A

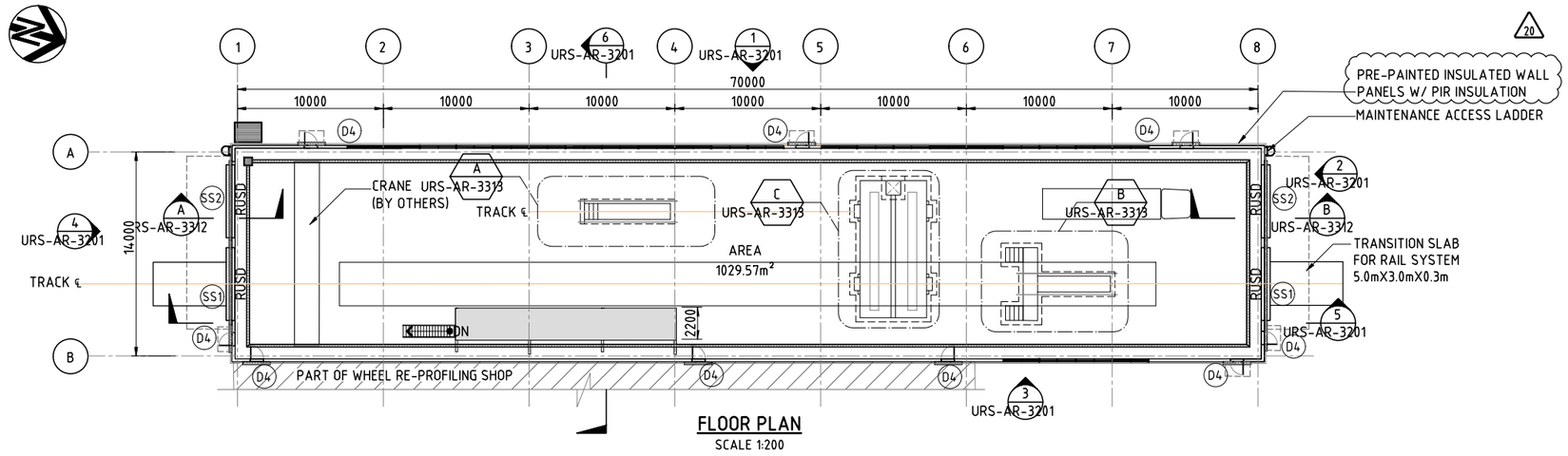
SHEET No.:

DRG No.: MCRP-DWG-URS-AR-3011

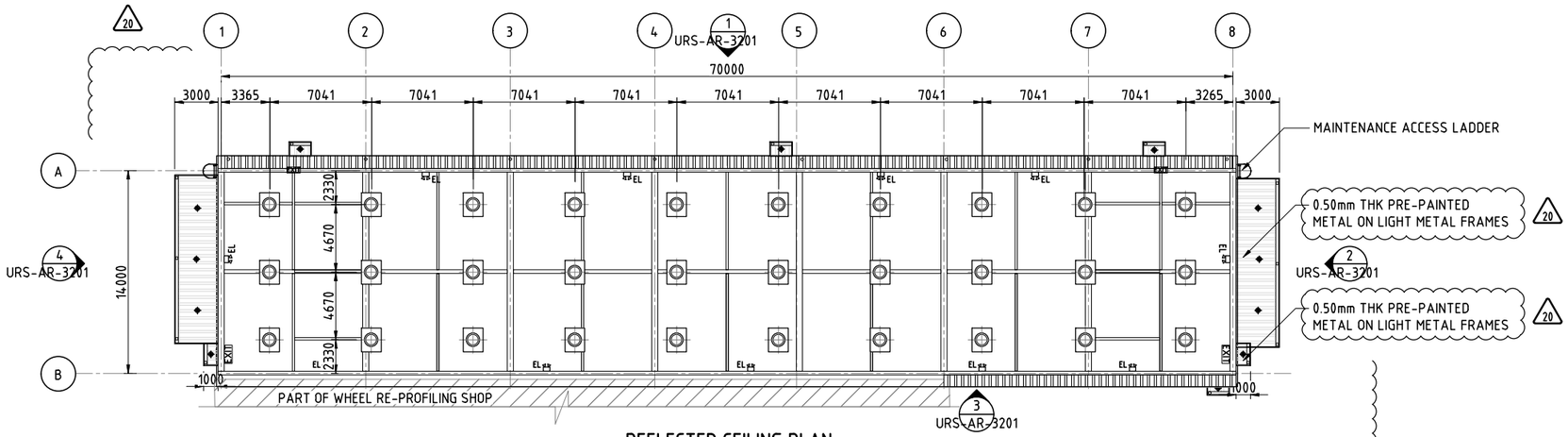
DRG S.:

REV: 30

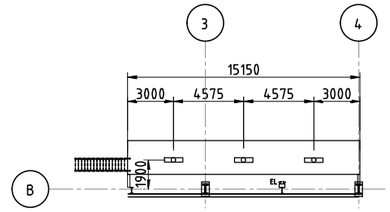
GBB No.2



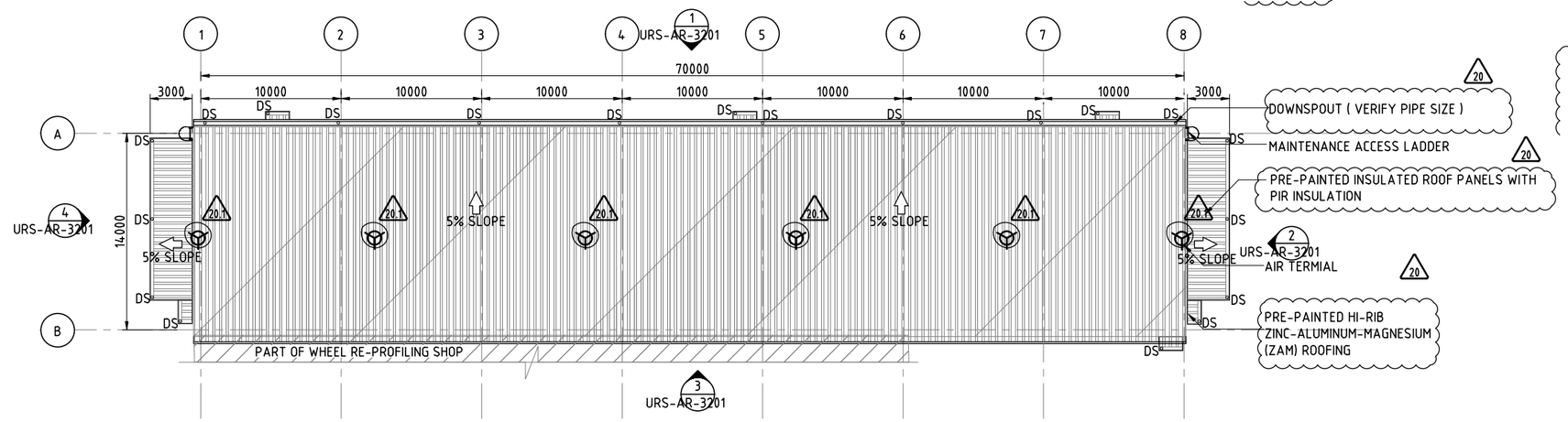
FLOOR PLAN
SCALE 1:200



REFLECTED CEILING PLAN
SCALE 1:200



MAINTENANCE DECK SOFFIT
SCALE 1:200



ROOF PLAN
SCALE 1:200

LEGEND	
	SURFACE-MOUNTED LAMP WITH REFLECTOR (WEATHERPROOF)
HB	188W LED LAMP HIGH BAY LIGHTING FIXTURE
EL	EMERGENCY LIGHT
	RECESSED TYPE PINLIGHT
EXIT	ACRYLIC LED EXIT SIGN

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. SUMP PIT & OIL SEPARATION FOR VERIFICATION.
3. THE CONTRACTORS SHALL CAREFULLY STUDY AND COMPARE THE REFLECTED CEILING PLANS WITH: ELECTRICAL, LIGHTING SYSTEMS AND COMMUNICATION DRAWINGS, MECHANICAL SUPPLIES AND RETURNS EXHAUST DRAWINGS, AIR-CONDITIONING DRAWINGS, FIRE PROTECTION DRAWINGS, OR ANY OTHER UTILITY DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT ON ANY OMISSIONS OR INCONSISTENCIES.
4. IF A CEILING TILE MODULE IS USED, THE LOCATION OF LIGHTING FIXTURES, SPRINKLER HEADS, MECHANICAL VENTILATION DIFFUSERS, CEILING-MOUNTED AIR-CONDITIONING, HEAT AND SMOKE DETECTORS SHALL BE IN IN THE CENTER OF EACH TILE-UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL VERIFY CEILING ACCESS PANEL LOCATIONS AS IT MAY VARY PER REQUIREMENT OF DIFFERENT UTILITY DISCIPLINES.

SCALE 1:200 2 0 2 4 6 8 10

VERSIONS	DATE	DESCRIPTION
30	14 AUG 2020	ISSUE FOR DETAILED DESIGN

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PHILIPPINE NATIONAL RAILWAYS

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JICA DESIGN TEAM (JDT)

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P. MANAGER	Y. MAEDA	R. YUZON JR.

MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - FLOOR PLAN, REFLECTED CEILING PLAN AND ROOF PLAN

DATE: AUGUST 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: MCRP-DWG-URS-AR-3101
DRG S.:
REV: 30

WVR-711

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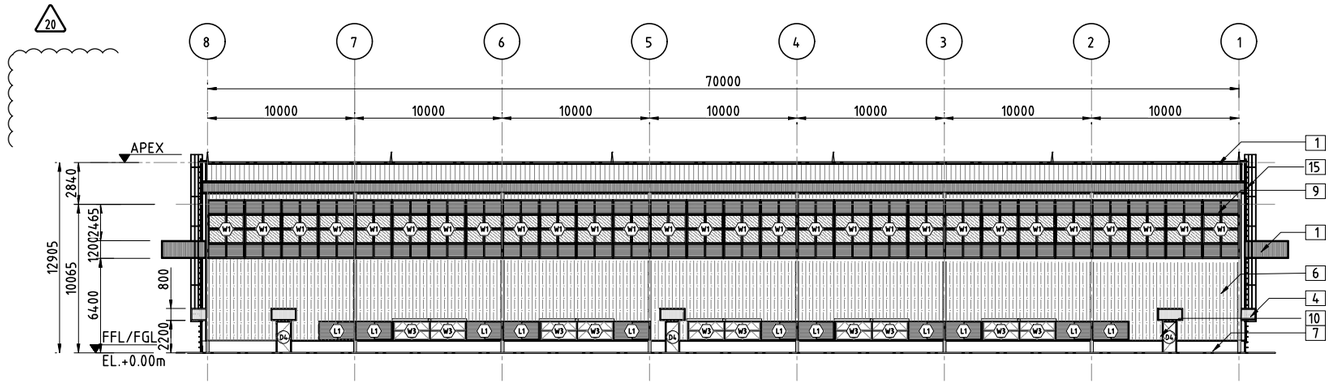
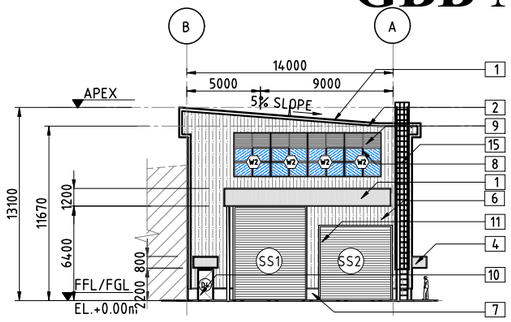
GBB No.2

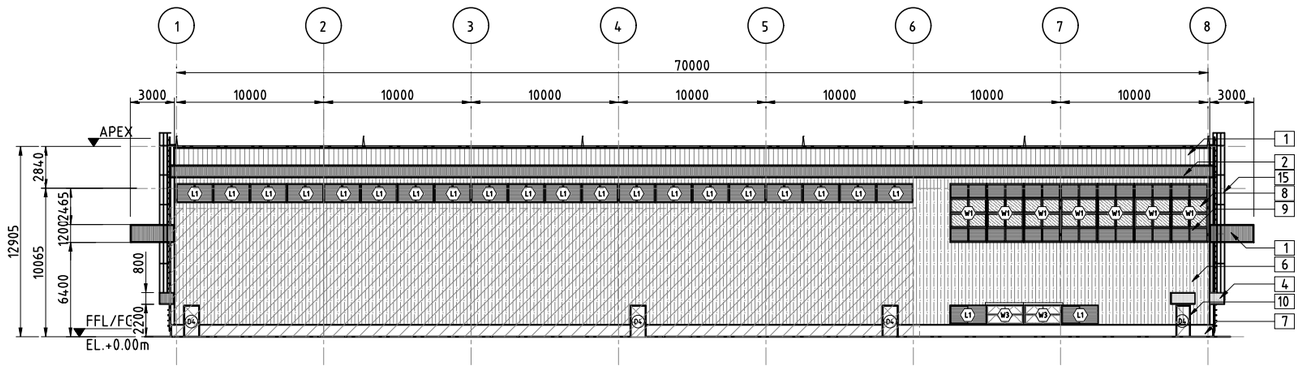
LEGEND	
MARK	BLDG. PART / ITEM
1	COMPOSITE METAL ROOFING
2	ROOF GUTTER
3	ROOF FLASHING
4	CANOPY ROOFING
6	COMPOSITE METAL WALL
7	RC WALL
8	ALUMINUM WINDOWS
9	ALUMINUM LOUVERS
10	STEEL DOORS
11	ROLL-UP SHUTTER DOOR
13	DOWNSPOUT
15	MAINTENANCE LADDER



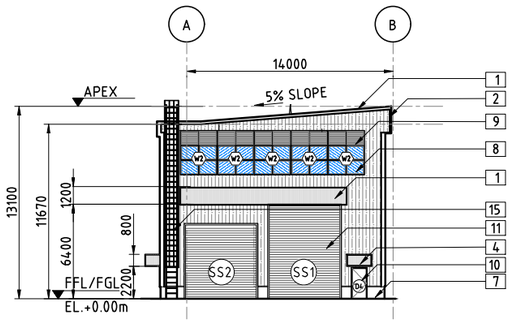
FRONT (WEST) ELEVATION 1
SCALE: 1:200 URS-AR-3101



LEFT SIDE (NORTH) ELEVATION 2
SCALE: 1:200 URS-AR-3101



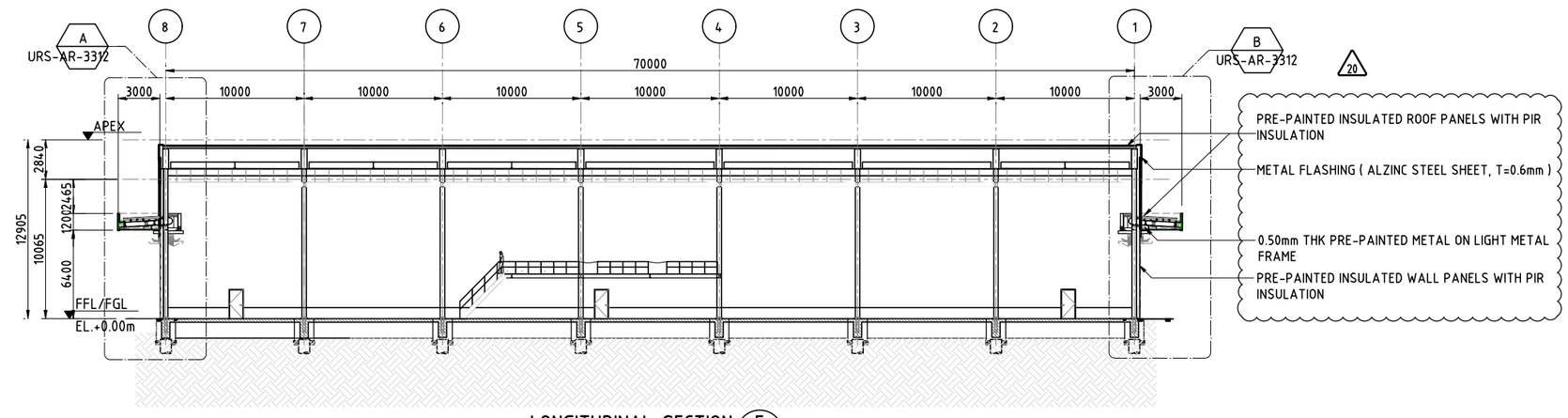
REAR (EAST) ELEVATION 3
SCALE: 1:200 URS-AR-3101



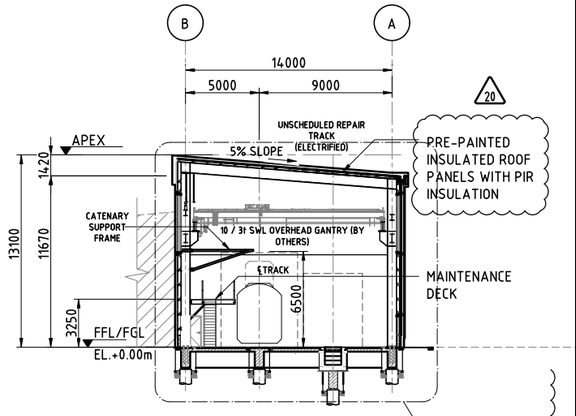
RIGHT SIDE (SOUTH) ELEVATION 4
SCALE: 1:200 URS-AR-3101

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ELEV. +0.00m = +108.750m MEAN ABOVE SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL VERIFICATION.



LONGITUDINAL SECTION 5
SCALE: 1:200 URS-AR-3101



CROSS SECTION 6
SCALE: 1:200 URS-AR-3101

SCALE 1:200 2 0 2 4 6 8 10

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P. MANAGER	Y. MAEDA	R. YUZON JR.

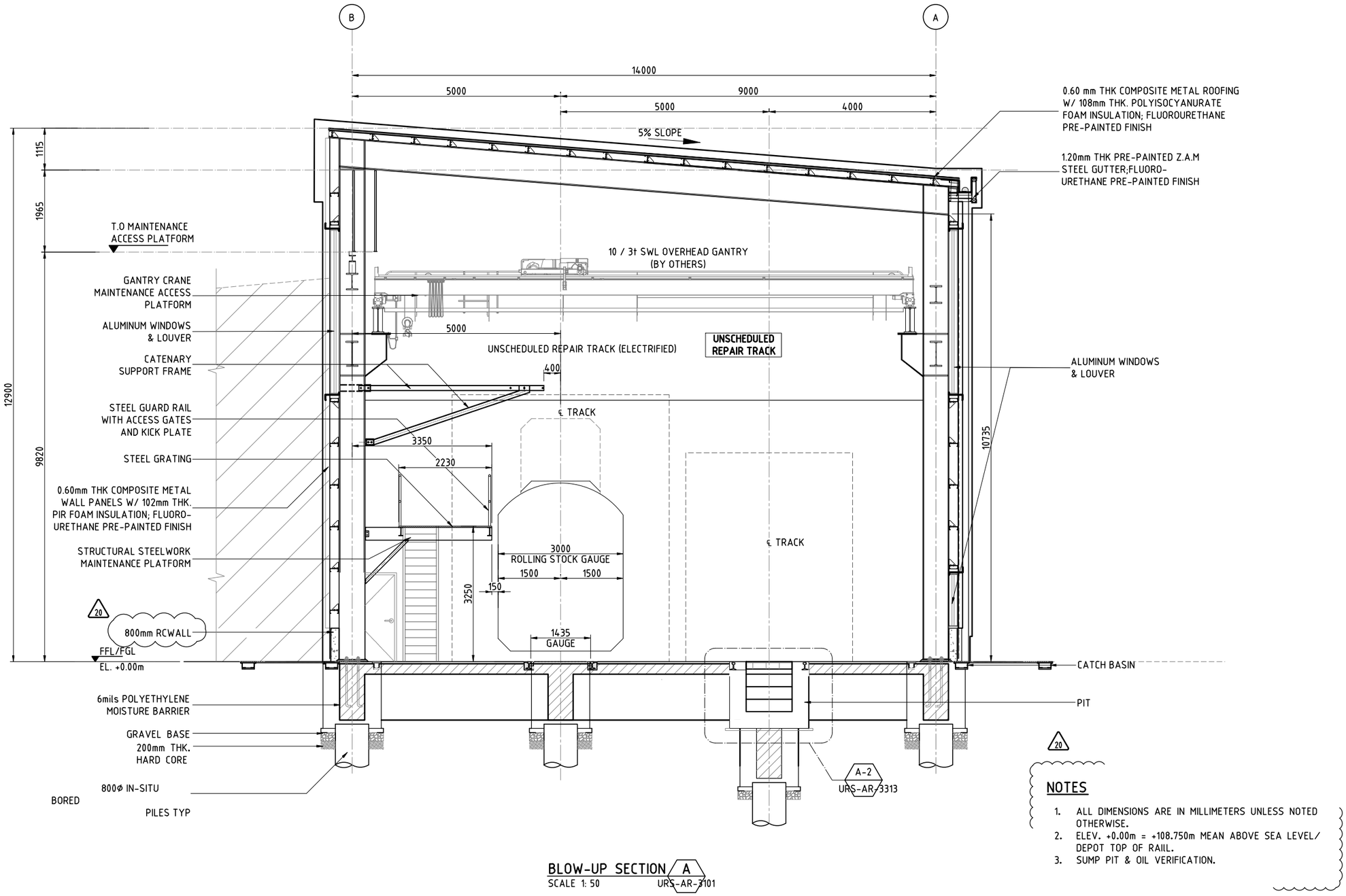
MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - ELEVATIONS AND SECTIONS

DATE: AUGUST 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: MCRP-DWG-URS-AR-3201
DRG S.:
REV: 30

GBB No.2



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ELEV. +0.00m = +108.750m MEAN ABOVE SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL VERIFICATION.

BLOW-UP SECTION A
SCALE 1: 50
URS-AR-3101

SCALE 1:50 0.5 0 1 2

VERSIONS	DATE	DESCRIPTION
30	14 AUG 2020	ISSUE FOR DETAILED DESIGN

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MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BLOW UP SECTION DETAILS

DATE: AUGUST 2020
SCALE: AS SHOWN IN A1
SHEET No.:
DRG No.: MCRP-DWG-URS-AR-3311
DRG S.:
REV: 30

WVR-711

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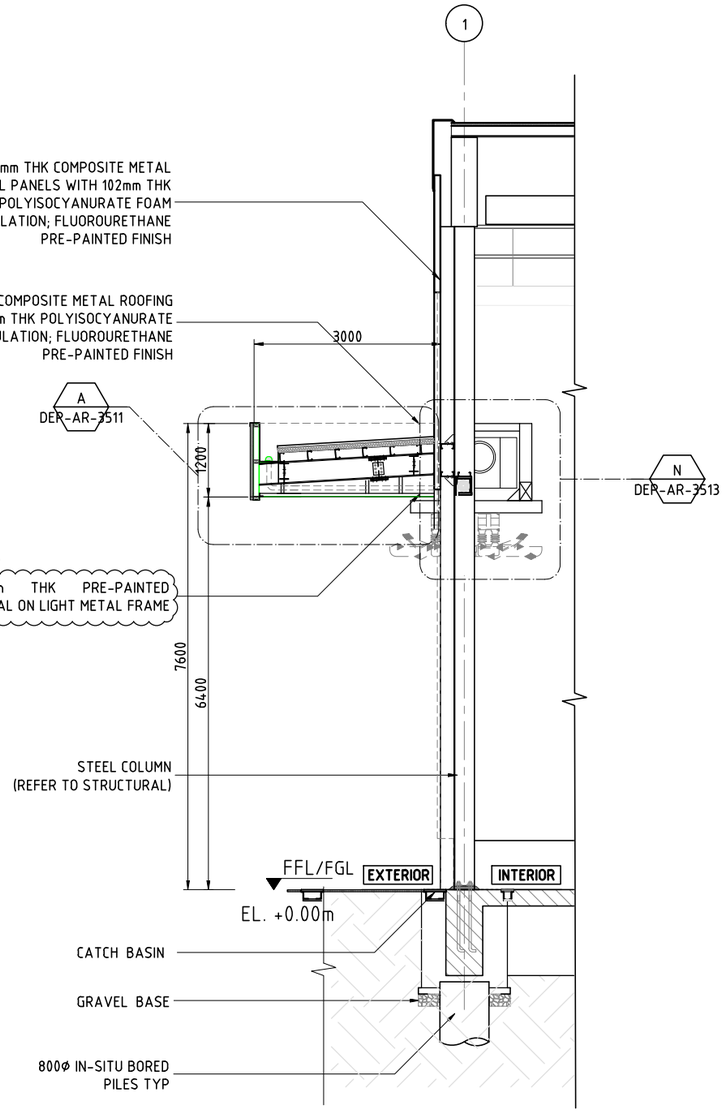
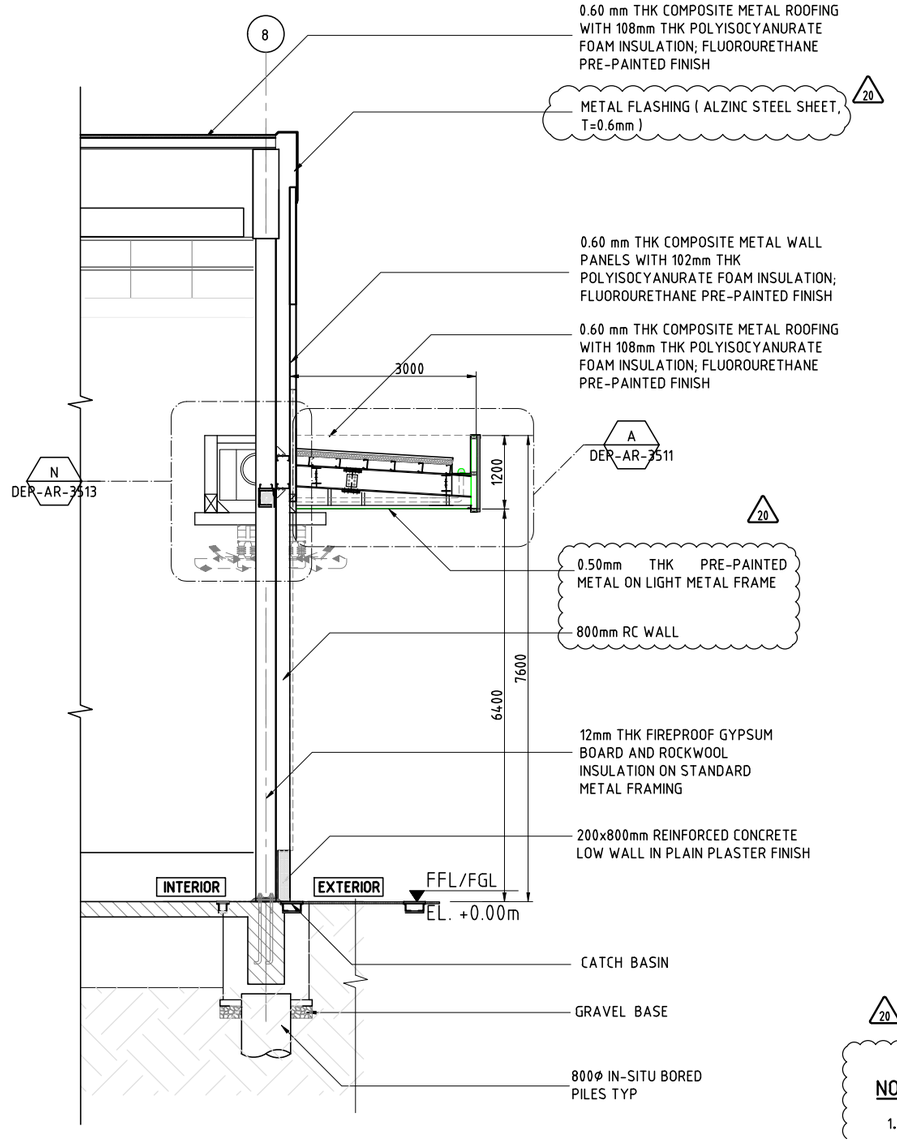
GBB No.2



BAY SECTION AT GRID 1 / A

SCALE 1: 50 URS-AR-3201



BAY SECTION AT GRID 8 / B

SCALE 1: 50 URS-AR-3201

20

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ELEV. +0.00m = +108.750m MEAN ABOVE SEA LEVEL/ DEPOT TOP OF RAIL.
3. SUMP PIT & OIL VERIFICATION.

SCALE 1:50 0.5 0 1 2

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P. MANAGER	Y. MAEDA	R. YUZON JR.

MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - BAY SECTIONS

DATE: AUGUST 2020

SCALE: AS SHOWN IN A1

SHEET No.:

DRG No.: MCRP-DWG-URS-AR-3312

DRG S.: REV 30

WVR-711

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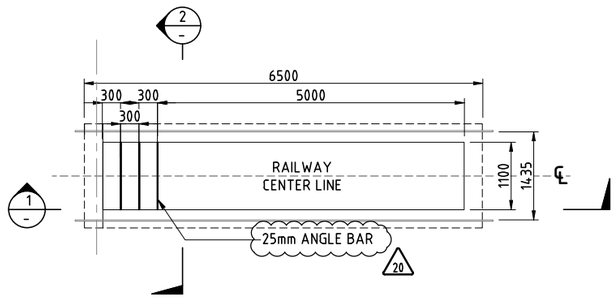
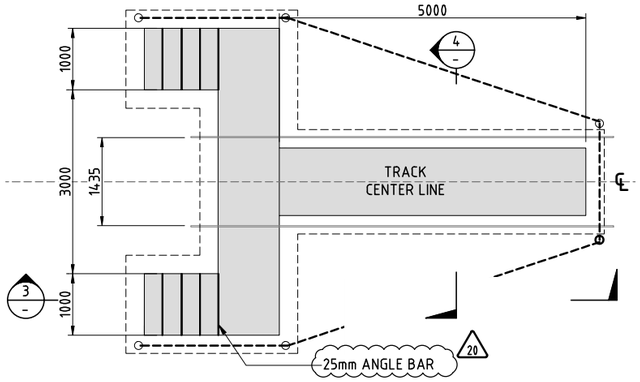
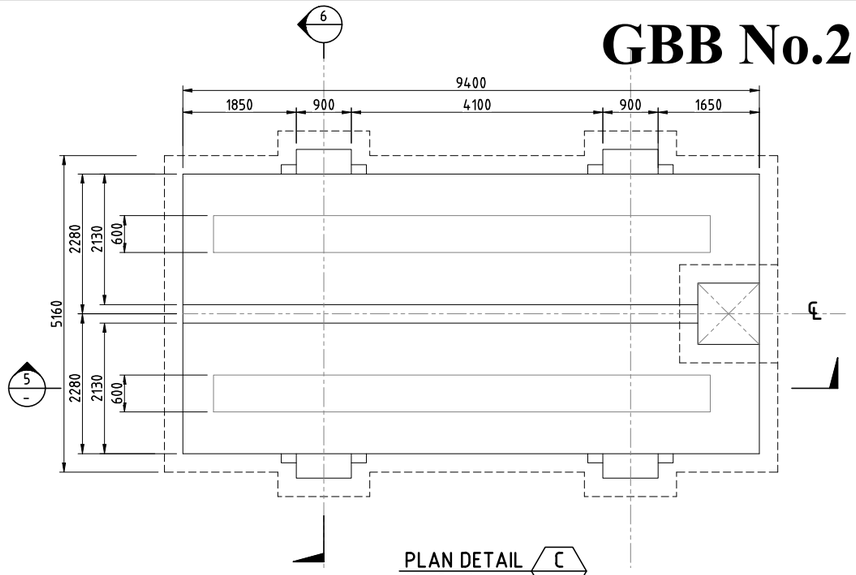
GBB No.2



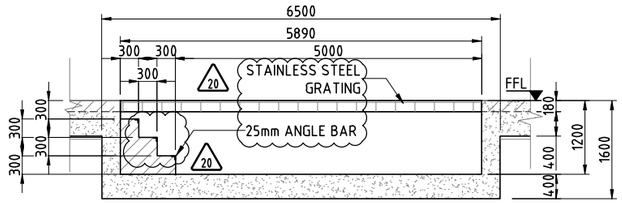
PLAN DETAIL A
SCALE 1:50



PLAN DETAIL B
SCALE 1:50



PLAN DETAIL C
SCALE 1:50



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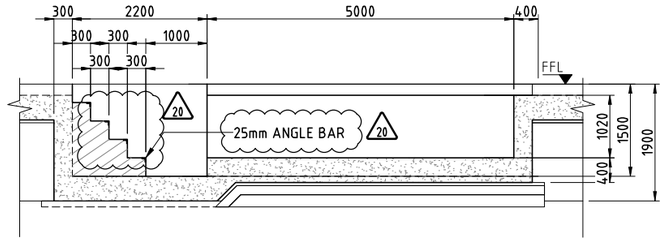
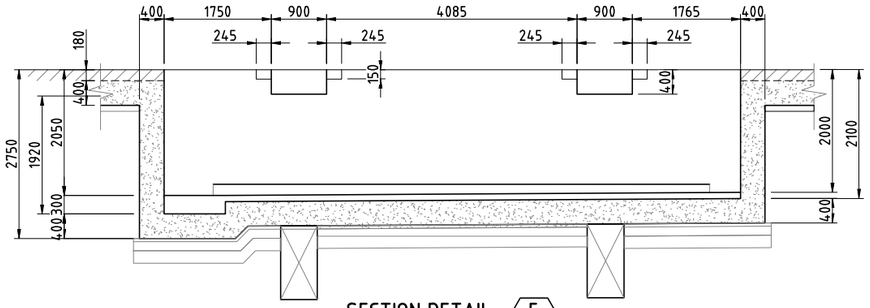
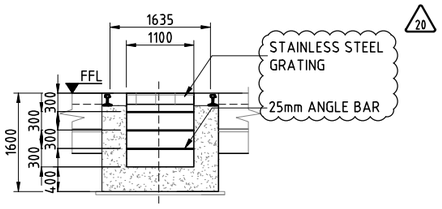
SCALE 1:50



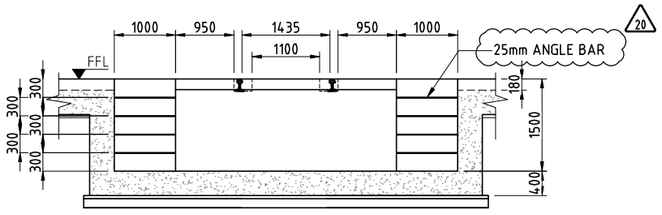
SECTION DETAIL 3
SCALE 1:50



SECTION DETAIL 5
SCALE 1:50



SECTION DETAIL 2
SCALE 1:50



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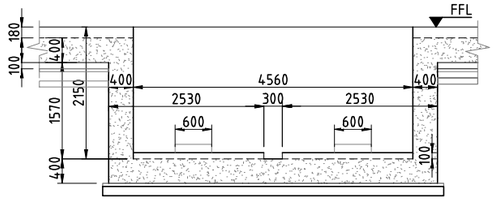

SECTION DETAIL 6
SCALE 1:50

VERSIONS	DATE	DESCRIPTION
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MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - DETAILS

DATE: AUGUST 2020

SCALE: AS SHOWN IN A1

SHEET No.

DRG No.: MCRP-DWG-URS-AR-3313

DRG S.

REV: 30

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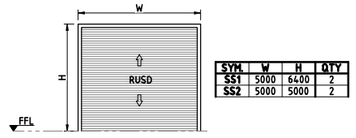
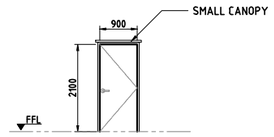
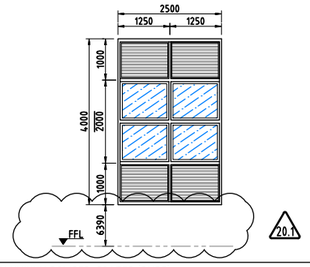
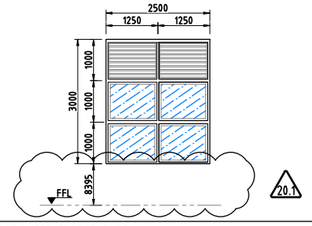
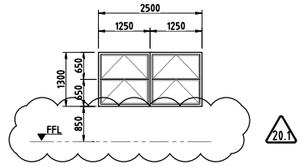
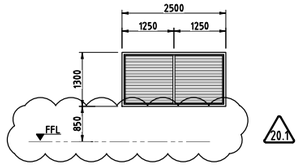
WVR-711

GBB No.2

1	**SYMBOL**	SS1, SS2	D4			
2	**NAME**	MOTORIZED STAINLESS STEEL ROLL-UP SHUTTER DOOR	SINGLE LEAF FIRE-RATED STEEL FLUSH DOOR (20)			
3	**MATERIAL**	GA #18 STAINLESS STEEL	FLOUROURETHANE OVEN BAKED FIN. STEEL SHEET t=1.6			
4	**NUMBER**	SEE TABLE BELOW	5 SETS			
5	**LOCATION**	WORK AREA	WORK AREA			
6	**SHAPE**	 SYM. W H Q'TY: SS1 5000 6400 2; SS2 5000 5000 2				
7	**FRAME**	STAINLESS STEEL SHEET t=2.3 (RAIL)	C) FLOUROURETHANE OVEN-BAKED FIN. STEEL SHEET t=1.6			
8	**THRESHOLD**	-	D) STAINLESS STEEL SHEET t=2.0			
9	**GLASS**	-	-			
10	**LOUVER**	FITTING METAL WORK	-			
11	**HARDWARE**	-	T			
12	**LOCK**	-	C) LEVER HANDLE			
13	**MISCELLANEOUS**	-	D.C , SMALL CANOPY			
14	**REMARKS**	W/ GUARD POST Φ150 H=1200x4 nos. STEEL L-50x50 CAST -IN FLOOR GUARD RAIL : STAINLESS STEEL, W/ TOUCH SENSOR	W/ MASTER KEY			

1	**SYMBOL**	W1	W2	W3	L1	
2	**NAME**	DOUBLE-PANED FIXED WINDOW W/ LOUVER	DOUBLE PANED FIXED WINDOW	DOUBLE PANED AWNING TYPE WINDOW	LOUVER	
3	**MATERIAL**	GA #18 STAINLESS STEEL	GA #18 STAINLESS STEEL			
4	**NUMBER**	36 SETS	9 SETS	12 SETS	34 SETS	
5	**LOCATION**	WORK AREA	WORK AREA	WORK AREA	WORK AREA	
6	**SHAPE**					
7	**FRAME**	ALUMINUM POWDER-COATED (PVDF)	ALUMINUM POWDER-COATED (PVDF)	ALUMINUM POWDER-COATED (PVDF)	STEEL FLOUROURETHANE OVEN-BAKED FINISH	
8	**THRESHOLD**	-	-	-	-	
9	**GLASS**	LOW-E8 + A 12 + FL 8 (FILM) = 28mm THK.	LOW-E8 + A 12 + FL 8 (FILM) = 28mm THK.	LOW-E8 + A 12 + FL 8 (FILM) = 28mm THK.	-	
10	**LOUVER**	D) GA# 18 G.I. SHEET LOUVER W/ STAINLESS INSECT SCREEN	D) GA# 18 G.I. SHEET LOUVER W/ STAINLESS INSECT SCREEN		D) GA# 18 G.I. SHEET LOUVER W/ STAINLESS INSECT SCREEN	
11	**HARDWARE**	FULL ACCESSORIES	FULL ACCESSORIES	FULL ACCESSORIES	FULL ACCESSORIES	
12	**LOCK**	-	-	OPERATOR HANDLE	-	
13	**MISCELLANEOUS**	WITH UV CUT FILM, FLASHING INSECT SCREEN	WITH UV CUT FILM, FLASHING INSECT SCREEN	WITH UV CUT FILM, FLASHING INSECT SCREEN	FLASHING INSECT SCREEN	
14	**REMARKS**	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHANE OVEN-BAKED FINISH	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHANE OVEN-BAKED FINISH	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHANE OVEN-BAKED FINISH	OUT FRAME 2"x4"x2.0mm TUBULAR STEEL W/ FLOUROURETHANE OVEN-BAKE FINISH	

EXTERIOR SCHEDULE OF FINISHES

ITEM	MATERIAL	DESCRIPTION
COMPOSITE METAL ROOFING	PRE-PAINTED INSULATED ROOF PANELS WITH POLYISOCYANURATE (PIR) INSULATION	COMPOSITE ROOFING PANELS: TOP & BOTTOM SKIN ALZINC STEEL SHEET t=0.6mm, H=108, POLYISOCYANURATE (PIR) DENSITY = 32-35KG/M3
ROOF GUTTER	PRE-PAINTED HI-RIB ZINC - ALUMINUM - MAGNESIUM (ZAM) GUTTER	1.2mm THK. ZAM STEEL, POST-FORMED, WELDED JOINTS
ROOF FLASHING	PRE-PAINTED G.I. FLASHING	0.6mm THK. ALZINC STEEL SHEET, FLOUROURETHANE PRE-PAINT FINISH
CANOPY ROOFING	PRE-PAINTED HI-RIB ZINC - ALUMINUM - MAGNESIUM (ZAM) ROOFING	ALZINC STEEL SHEET t=0.6mm, H=25mm
CANOPY CEILING	0.5mm THICK PRE-PAINTED SPANDREL METAL CEILING	
COMPOSITE METAL WALL	PRE-PAINTED INSULATED WALL PANELS WITH POLYISOCYANURATE (PIR) INSULATION	COMPOSITE WALL PANEL; TOP & BOTTOM SKIN ALZINC STEEL SHEET t=0.6mm, H=102, POLYISOCYANURATE (PIR) DENSITY = 32-35KG/M3
RC WALL	200x800mm HIGH REINFORCED CONCRETE WALL, ELASTOMERIC PAINT FINISH	PLAIN CEMENT STEEL TROWELLED FINISH WITH HARDENER AND CEMENTIOUS WATERPROOFING

INTERIOR SCHEDULE OF FINISHES

ROOM NAME / SPACE	FLOOR FINISHES	CEILING FINISHES	WALL FINISHES	BASE BOARD / ACCESSORIES	REMARKS
WORK AREA	SELF-LEVELING EPOXY WITH HARDENER	EXPOSED UNDERSIDE OF PIR INSULATED STEEL ROOFING	A) EXPOSED INSIDE COMPOSITE METAL PANELS B) PLAIN CEMENT PLASTER PAINT FINISH	150mm HIGH EPOXY-PAINTED BASE STRIP	(20)
SERVICE PIT	SELF-LEVELING EPOXY PAINT HARDENER	EXPOSED UNDERSIDE OF PIR INSULATED STEEL ROOFING	PLAIN CEMENT PLASTER PAINT FINISH	150mm HIGH EPOXY-PAINTED BASE STRIP	25mm ANGLE BAR

REMARK

1. DOOR FRAME TYPE
   - A
   - B
   - C — RUBBER
   - D
   - E
   - F
2. SADDLE / THRESHOLD
   - A
   - B
   - C
   - D — RUBBER
   - E
   - F
   - G
3. LOUVER
   - A
   - B
   - C
   - D
   - E
4. HARDWARE

T	BUTT HINGE
A.H	AUTO HINGE
P.H	PIVOT HINGE
F.H	FLOOR HINGE
L.H	LAVATORY HINGE
F.ST	FLOOR STOPER
B.ST	BASE STOPER
W.ST	WALL STOPER
D.C.	DOOR CLOSER

5. LOCK

C	CYLINDER LOCK
I	INTEGRAL LOCK
M	MONO LOCK
L	LATCH
D	DEAD LOCK
M.L.H	MORTISE LEVER HANDLE LOCK
P	EMERGENCY EXIT LOCK
E	ELECTRICAL LOCK

VERSIONS	DATE	DESCRIPTION
30	14 AUG 2020	ISSUE FOR DETAILED DESIGN

DEPARTMENT OF TRANSPORTATION (DOTr)

PHILIPPINE NATIONAL RAILWAYS

CONSULTANT

JICA DESIGN TEAM (JDT)

ORIENTAL CONSULTANTS GLOBAL CO., LTD.

KATAHIRA & ENGINEERS INTERNATIONAL

PACIFIC CONSULTANTS CO., LTD.

JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD.

TONICHI ENGINEERING CONSULTANTS INC.

TOKYO METRO CO., LTD

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MALOLOS-CLARK RAILWAY PROJECT (MCRP)

PACKAGE CP N-05 : DETAILED DESIGN

MCRP-NORTH DEPOT-UNSCHEDULED REPAIR SHOP ARCHITECTURAL - SCHEDULE OF FINISHES, SCHEDULE OF DOORS, WINDOWS AND LOUVERS

DATE: AUGUST 2020

SCALE: N/A

SHEET No.:

DRG No.: MCRP-DWG-URS-AR-3601

DRG S.:

REV: 30

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