CLARIFICATION#5: Correction to Clarification #4

FOR

Request for offers for Recycling Pilot Works Contract – Dhan Khola Lamahi 40km Road Section (MCA-N/RMP/CB/008)
(ISSUED ON 09 JANUARY 2025)

SN	Reference to the Request for Offers	Questions from Offers	Response of Millennium Challenge Account Nepal (MCA-Nepal)
44.	**Full Depth Reclamation (FDR) Thickness:**	o We request clarification on the required thickness for the Full Depth Reclamation layer. We understand that this information is crucial for us to accurately estimate costs and prepare a competitive bid for this project.	Dhan Khola to Bhalubang (Ch 676+720 to 693+000)– 250 mm Bhalubang to Lamahi (Ch 693+000 to 714+985) – 300 mm The FDR Base thickness is specified as 250 mm for the road section from Dhan Khola to Bhalubang, and 300 mm for the road section from Bhalubang to Lamahi. For more detailed information, please refer to the bidding documents Part 2 Section V.

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46.	**Bidding Doucment-Vol-2** **Standard Cross section/sheet no-1 &2** *Details of Typical Cross Sections*	The specified cross-section indicates that the pavement structure consists of an FDR base, Superpave Binder, and Superpave Wearing layers. The FDR base functions as a semi-rigid pavement layer, while the Superpave Binder and Wearing layers provide the flexible pavement structure. To minimize reflection cracking due to the semi-rigid FDR base, the inclusion of a crack relief layer is essential. This layer, placed between the bituminous layers and the cementitious base, helps delay the reflection of cracks from the Cement Treated Base (CTB) layer into the bituminous layers. We request the inclusion of a crack relief layer to prevent cracking in the bituminous layers.	To control reflection cracking, the following design approaches were adopted: 1) limiting the unconfined compressive strength (UCS) of the FDR to 2.1-2.8 MPa, which is lower than the UCS of the typical CTB, 2) microcracking of the newly constructed FDR, and 3) provision of polymer-modified bitumen in the Superpave mix. Therefore, the request for inclusion of a crack relief layer cannot be granted.

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52.		With reference to your Clarification #3 Dtd. 09-12-2024 Sl. No.4, it is stated that Experience in executing Soil Stabilization, CTSB (Cement Treated Sub-Base) and CTB (Cement Treated Base) shall be considered equivalent to FDR (Full Depth Reclamation) experience. - We understand that CTB/ CTSB doesn't involve pulverization process, and the execution process is done with the help of Rotavator itself, but when it comes to (FDR) Full Depth Reclamation, the execution process involves huge State-of-the-Art Equipment like Recycler/ Pulverizer which aptly does the job of Full Depth Reclamation. Hence it is requested to consider only those agencies which are having good industry experience in executing FDR technology with such equipment only.	Your observation regarding the distinctions among Soil-Cement Stabilization (SCS), Cement Treated Base (CTB), Cement Treated Sub-Base (CTSB), and Full Depth Reclamation (FDR) is accurate. Both SCS and FDR involve in-place treatment of existing materials to enhance pavement strength and durability. Contractors proficient in SCS, CTB, or CTSB possess relevant experience, including a solid understanding of cement stabilization techniques, material behavior, and construction methodologies. However, FDR typically requires specialized equipment, such as road reclaimers, to pulverize and mix the full depth of the existing pavement with stabilizing agents like cement. Therefore, successful bidders must demonstrate their methodology, including the

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			use of appropriate equipment, to effectively execute FDR with cement.