

GCT INLET SUMP (SAND TRAP) INSTALLATION

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IMPORTANT NOTICE: ENGINEERED DESIGN REQUIRED

These instructions represent general, non-prescriptive guidelines. Due to the high variability of site conditions, soil bearing capacities, and seismic loads, this document is not a standalone installation manual. A qualified professional engineer must be retained to design the foundation, support structure, and anchoring specific to the site location.

1. **Location Planning:** Although inlet sump grates can handle medium slow-moving wheel loads (load class on product data sheet) it is best to install them directly in the middle of the wash bay floor between the vehicle tracks, the passing vehicle straddles the drain, placing the wheels on solid concrete and not directly on the grate itself.

2. **Excavate:** Leave 200mm to 400mm of space around all sides. This clearance ensures you can safely work the backfill material down the walls and achieve complete, void-free compaction. If groundwater is present in the excavation, it must be continuously pumped out throughout the installation process to ensure a stable and dry working environment.

3. **Bedding:** The type and thickness of bedding will depend on site conditions. Remove all large and loose rocks or debris that may compromise the sump or bedding. Install bedding as per engineer's specifications (increase bedding thickness where needed to level out uneven areas).

4. **Sump Placement:** Carefully place the sump on top of the prepared bedding in the designated excavated area. Note the direction of flow (outlet) and place according to setup. Ensure the sump is level. Lay a long, sturdy spirit level across the top rim of the sump in both directions (front-to-back and side-to-side). If out of level, adjust accordingly.

5. **Backfill:** Before commencing the backfilling process, fill the sump with water, gradually. Do not fill the entire tank at once. Fill around the perimeter of the sump with suitable backfill material as per engineer's specifications

- **Step 1:** Fill the sump with water to one-third (1/3) of its total capacity. Backfill and compact around the sump up to that same level.
- **Step 2:** Fill the sump with water to two-thirds (2/3) of its total capacity. Continue backfilling and compacting to match the water level.
- **Step 3:** Fill the sump completely to the top with water. Complete the final backfill and compaction until it reaches the underside of the pipes.

6. **Pipework:** Install and connect the inlet and outlet pipework in accordance with the approved drawings using SABS-approved pipes and fittings.

7. **Concrete slab:** Pour concrete slab to engineer's specifications. Ensure the concrete slab slopes at least 2% toward the grate to guarantee water evacuates the wash bay safely without pooling.

IMPORTANT NOTE: SEE REFERENCE A: When making the final pour of concrete, it is recommended to vibrate the concrete so that no voids are present. Make sure concrete encapsulates the entire profile of the channel edge, it ensures the load is transferred away from the sump and into the concrete

