

WORK INSTRUCTIONS FOR ENGINEERS

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**CH-033. CHECKLIST FOR BORED PILE
INSTRUMENTATION INSTALLATION**

CHECKLIST FOR BORED PILE INSTRUMENTATION INSTALLATION

No.	CHECKLIST ITEMS	CHECKED BY G&P GEOTECHNICS	Remarks
	Project No. : _____ Project : _____ Contractor : _____ Date : _____ Supervised by : _____	Tick (✓) if done , or else mark cross (X) if not available at site.	
1.0	PLANNING		
1.1	The instrumentation contractor submits full details on instrumentation equipment and method of statement before the commencement of installation work?		
2.0	EQUIPMENT		
2.1	<u>Load Cell /Hydraulic Jack</u> a) Type of Load cell:_____ Capacity _____ ton Nos. to be Adopted: _____ Calibration Date: _____ b) Type of Hydraulic Cell:_____ Capacity: _____ ton Nos. to be Adopted:_____ Calibration Date: _____	☐	
2.2	Are all the load cell(s) and/or hydraulic jack(s) sufficient to load up to extra (additional) 20% of the intended maximum test load??	Yes ☐ No ☐	
2.3	<u>Strain gauges</u> Strain gauges details, specification and calibration certificate (validity not more than 6 months) provided to G&P before commencement of installation works?		
2.3.1	_____ levels of strain gauges with _____ Nos. of strain gauges per level		
2.3.2	Details of welding/mounting of strain gauges at * reinforcement bars / * sister bars? _____		
2.3.3	Any damage protection on strain gauges? If yes, please specify:		

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2.4	<u>Extensometer</u> Extensometer details and specification provided to G&P before commencement of installation works?		
2.4.1	____ Nos. levels of extensometer with ____ Nos. of extensometers per level		
2.4.2	Details of attachment of extensometer at * reinforcement bars / * sister bars ?		
2.4.2	Any damage protection on extensometer? If yes, please specify _____		
3.0	* SETTING UP OF PILE HEAD/CHAIR FOR INSTRUMENTED PILE		
3.1	Does the pile head setting-up designed and endorsed by Professional Engineer? - If Yes, designed calculation submitted on _____ - If No (Reason): _____	☐	
3.2	Does the fabricated steel pile head comply as per design/drawing? - Diameter : _____ mm - Thickness of the upper base plate: _____ mm - Number of stiffener: _____ mm - Thickness of the stiffener: _____ mm - Thickness of the lower base plate: _____ mm - Thickness of mid plate: _____ mm - Butt weld size : _____ mm		
3.3	Does the steel pile head flat or level and fit enough to attach to the bore pile head?		
4.0	REINFORCEMENT/STEEL CAGE		
4.1	Details: ☐ Nos. of main reinforcement bar of size of ____ mm - Shear link spacing of _____ mm with size of ____ mm - Design cover = _____ mm		
4.2	Has the anchorage/lap length been checked ?		

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4.3	Has adequate spacer been incorporated in the reinforcement cage? Type of spacer: _____		
4.4	Has the rubber protection around the steel plate been fixed as per drawing to prevent further influx of concrete grout into the pile base?		
4.5	Has the polystyrene at the bottom of the steel cage been fixed? - Thickness of polystyrene = _____ mm - Diameter of polystyrene = _____ mm		
4.6	Zinc plate installation at soil-rock interface ? If yes: From : _____ m to _____ m below ground level		
5.0	CASINGS		
5.1	* Temporary casing / * Permanent casing ?		
5.2	<u>Temporary casing</u> Casing level: from _____ m to _____ m below ground level <u>Permanent Casing</u> Casing level: from _____ m to _____ m below ground level		
5.3	Detail of the steel casing: - Outer Diameter = _____ mm - Inner Diameter = _____ mm - Thickness = _____ mm - Length = _____ mm		
5.4	Does the position of the casings maintain in axial direction relative to the instrumented test pile during and immediately after placing the casing?		
5.5	Does the temporary casing cause any lifting of concrete grout when being extracted from the boring hole?		
6.0	INSTRUMENTATION INSTALLATION		
6.1	The computerized device/data logger recording the parameter adopted and the output readings used in good order?		
6.2	Does every strain gauge and respective signal cable and rod extensometers be named and marked to avoid controversy when taking reading during pile test?		
6.3	Does the extensometers and strain gauges securely installed/attached to the reinforcement cage/bar as per detail/drawing? If no, any recommendation? _____		

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6.4	Does the cable and wire connecting to strain gauges and extensometers in good order and sufficiently strong to withstand additional loading so that no component is displaced during placing of reinforcement cage or concreting?		
6.5	Does the extensometers and strain gauges in good order and their respectively readings being checked at the following conditions? • During installation/attachment to the reinforcement cage? ----- ☐ • During placing together with the reinforcement cage into the drill bore and before concreting? ----- ☐ • After concreting? ----- ☐ If the extensometers and strain gauges are damaged, please specify which extensometer / strain gauges. _____		
7	RECORDS		
7.1	Does all the data checked and rectified by the instrumentation contractor for errors prior to submission?		
Note: * indicates delete where appropriate			
Signature by Engineers or Site Representatives :-		G&P	Contractor Supervisor