

**Document Name:**

- Contractor Quality Control Plan for Civil Work
- Inspection and Test Plan for Civil work

No.	Item description	CC	TPI	Owner
<b>1.</b>	<b>Civil and building</b>			
<b>1.1</b>	<b>Earthwork</b>			
1.1.1	Soil materials Backfilling Earth dike Underground piping and cable	H		
1.1.2	Excavation 1) Dimension - Location - Level - Line - Profiles 2) Excavated bottom - Soil conditions - Degree of compaction - Removal of unsuitable material	H		
1.1.3	Backfilling - Layering (Thickness of list) - Degree of compaction	H		
1.1.4	Filling and banking 1) Clearing and grubbing 2) Compaction - Layering (Thickness of list) - Degree of compaction - Type of roller & number of roller passes - Intensity of pressure applied to soil 3) Dimension - Final line and grades - Level - Slope	H		
1.1.5	Compaction control 1)Max. dry density test ASTM D 698 or ASTM D 2557	H		

**Document Name:**

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	2)Field density test - ASTM D 1556 or ASTM D 2167			
<b>1.2</b>	<b>Concrete work</b>			
1.2.1	Materials 1) Certificate of cement ASTM C-150 2) Aggregate - Sample of aggregate - Sieve analysis ASTM C-136 - Amount of chloride and sulfate - Reactivity to alkalis - ASTM C-227 and ASTM C-289 3) Reinforcing steel (Mill certificates)	H		
1.2.2	Reinforcing steel works 1) Sizes 2) Numbers 3) Arrangement and location 4) Visual 5) Hook and lap splice	H		
1.2.3	Form work 1) Visual 2) Dimension 3) Internal surface of forms	H		
1.2.4	Visual of surface	H		
1.2.5	Grout and mortar finishing for foundation 1) Visual 2) Dimension (Thickness) 3) Filling into cavity in base plate of rotating machines 4) Light hammer test for rotating machine foundation 5) Type of grout	H		
1.2.6	Concrete test 1) Compressive strength test 2) Slump test ASTM C143-90	H		

**Document Name:**

- Contractor Quality Control Plan for Civil Work
  - Inspection and Test Plan for Civil work
- 

	3) Air content test - ASTM C173 or 138			
1.2.7	Water filling test for concrete ponds 1) Visual (Displacement or crack of structure & water-proofing material) 2) Buoyant	H		
<b>1.3</b>	<b>Sewer and Drainage work</b>			
1.3.1	Materials 1) Sample check 2) Visual check 3) Manufacturer's certificates (if required)	H		
1.3.2	Dimension 1) Elevation and location 2) Lines	H		
1.3.3	Welding (Refer to the section 7.1 welding)	H		
1.3.4	Visual inspection of welds (Refer to the section 7.2 visual inspection of welds)	H		
1.3.5	Water tightness test	H		
1.3.6	Protective coating/wrapping	H		
1.4	Hot-Mixed asphalt pavements	H		
1.4.1	Subgrade 1) Soil conditions 2) Non-repetitive staTPI plat load test (ASTM D1196) or field CBR test	H		
1.4.2	Granular subbase 1) Materials 2) Layers (Thickness or list) 3) Non-repetitive staTPI plate load test 4) (ASTM D 119G) or field CBR test 5) Finished conditions of each layer 6) Elevation of finished surface	H		

**Document Name:**

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1.4.3	Asphalt concrete 1) Materials - Aggregates - Asphalt cement or road tar 2) Density of pavement (ASTM D 1188 or ASTM D 2726) 3) Finished elevation of asphalt surface courses 4) Undulation of asphalt base and surface courses 5) 5) Thickness of asphalt base and surface courses	H		
1.4.4	Prime coat 1) Material 2) 2) Visual	H		
1.4.5	Tack coat 1) Material 2) Visual	H		
<b>1.5</b>	<b>Concrete pavements</b>			
1.5.1	Subgrade 1) Soil conditions 2) Non-repetitive staTPI plate load test (ASTM D1196)	H		
1.5.2	Granular subbase 1) Materials 2) Layer (Thickness of list) 3) Non-repetitive staTPI plate load test (ASTM D1196) 4) Finished condition of each layer 5) Elevation of finished surface	H		
1.5.3	Concrete slab 1) Materials - Concrete - Reinforcement - Expansion joint filler	H		

**Document Name:**

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- 

	<ul style="list-style-type: none"> <li>- Joint sealer</li> <li>- Subgrade paper</li> <li>2) Concrete test</li> <li>3) Finished elevation &amp; thickness of concrete</li> <li>4) Undulation of surface courses</li> <li>5) Surface drainage</li> </ul>	H		
<b>1.6</b>	<b>Tank pads</b>			
1.6.1	Materials <ul style="list-style-type: none"> <li>1) Filling material</li> <li>2) Concrete</li> <li>1) Re-bar</li> </ul>	H		
1.6.2	Sand filling compaction plate Load test or field density test ASTM D1556 or (ASTM D2167)	H		
1.6.3	Dimension <ul style="list-style-type: none"> <li>1) Location</li> <li>2) Top surfaces of sand fill</li> <li>3) Finished surface (Slope, elevation)</li> <li>4) Foundation roundness</li> <li>5) Foundation finished elevation</li> <li>6) Settlement records</li> </ul>	H		
1.6.4	Particle size distribution	H		
1.6.5	Laboratory compaction	H		
1.6.6	Embankment test results	H		
<b>1.7</b>	<b>Setting anchor bolts</b>			
1.7.1	Material Certificates	H		
1.7.2	Setting in concrete <ul style="list-style-type: none"> <li>1) Orientation</li> <li>2) Position and location</li> <li>3) Plumb</li> <li>4) Projection</li> </ul>	H		
1.7.3	Visual check	H		

**Document Name:**

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- 

<b>1.8</b>	<b>Acid proofing tile</b>			
1.8.1	Material certificates	H		
1.8.2	Concrete surface preparation 1) Slope 2) Milling of whole concrete surface	H		
1.8.3	Visual check	H		
1.8.4	Wet film thickness test	H		
1.8.5	Spark test	H		
1.9	Concrete basin, pit and sump (to be later)	H		
1.10	Water and effluent trench (to be later)	H		
1.11	Building (included H.V.A.C, plumbing F.F and electrical) (to be later)	H		

**CC:** Construction Contractor

**TPI:** Third Party Inspection

**H: Hold Point;** Hold on the production till TPI Inspector performs inspection and supervise the required test

If you want to use this draft for inspection and test plan, you need to fill the TPI and Owner Column based your project requirement. You may use following abbreviation for filling the columns:

**W: Witness Point;** Manufacture shall notify client and TPI Inspector but there is no hold on the Construction;

**R: Document Review;** Review means Review document, which includes of material test certificates, test reports, records and etc.

**A: Approval**

**SW: Spot Witness;** for items with spot witness contractor shall notify TPI inspector as fulfilling the monitoring;