

QUALITY CONTROL CHECK LIST FOR BRIDGE STRUCTURE SURVEYS

SURVEY UNDERTAKEN BY:

DATE:

SURVEY PROJECT DESCRIPTION:

REPORT NO.:

JOB NUMBER:

BRIDGE STRUCTURE NUMBER:

Note: The completed check list must be submitted by the Surveyor with his final submission

I hereby confirm that this survey was checked against and complies with the project specifications and TMH11 survey requirements as stated in the survey instruction/contract documents.

The Items that do not form part of the survey instruction are marked as N/A.

	REQUIREMENTS	Confirmation By The Contractor
1.	PERMANENT SURVEY CONTROL FOR STRUCTURAL SURVEYS	
1.1	Were the permanent survey control observations and coordinates submitted for approval to the Client prior to acceptance?	
1.2	Were the beacons numbered correctly?	
1.3	Do the positions (locations) of the permanent control adhere to the requirements?	
1.4	Were the heights based on correct datum and was the datum height determined correctly? (Survey control points for road structures are normally based on the control established along the road)	
1.5	Were the calibration results between beacons for horizontal fixing submitted?	

1.6	Can the calibration results be accepted?	
1.7	Do the independent GPS height checks conform to the requirements?	
1.8	Do the level accuracies between level and check levels adhere to TMH11 requirements?	
1.9	Does the level closure between terminal points adhere to TMH11 requirements?	
1.10	What percentage of height differences between level and check exceeds 5mm? <i>Note: Acceptable if not more than 5% exceeds 5mm and 0% exceeds 10mm</i>	0 – 5mm > 10mm % %
1.11	Does the accuracy adhere to the requirements?	
1.12	Were the level comparisons between levels and check levels as well as the actual and allowable closing errors supplied?	
1.13	Does the final coordinate list conform to the requirements of TMH11?	
1.14	Was a final coordinate list supplied in Excel and hard copy formats?	
1.15	Is the height datum point number and height shown on the coordinate list?	
1.16	Were the raw survey data supplied for fixing the PRMs?	
1.17	Is the process of fixing control in position and elevation fully discussed in the survey report?	
1.18	Is the permanent survey control in accordance with TMH11 and the contract specifications?	
1.19	Was the final coordinate list signed by a registered Surveyor?	
1.21	General Comments on the Fixing of Permanent Survey Control:	
2.	VERIFICATION OF PERMENT SURVEY CONTROL (IF REQUIRED)	
2.1	Were the verification report, results and recommendations by the Surveyor submitted to the Client prior to acceptance of the values?	
2.2	Was a permanent beacon condition report submitted prior to final acceptance?	
2.3	Do both reports form part of the final submission to the Client?	
2.4	Were the raw survey data supplied for the verification survey?	
2.5	Is the verification of permanent survey control in accordance with TMH11 and the contract specifications?	

2.6	General comments on the Verification of Permanent Survey Control:	
3.	2D PRESENTATION AND SURVEYED DIMENSIONS	
3.1	Were the following features surveyed and the levels, dimensions and other specified information submitted and shown on the different 2D view drawing?	
	<ul style="list-style-type: none"> The total length of each span of each deck 	
	<ul style="list-style-type: none"> The clear span of each span of each deck 	
	<ul style="list-style-type: none"> The width and length of each support at top and bottom 	
	<ul style="list-style-type: none"> The depth of the deck 	
	<ul style="list-style-type: none"> The level on top of the footings (foundation) 	
	<ul style="list-style-type: none"> The position of the New Jersey barriers or any other balustrades or handles 	
	<ul style="list-style-type: none"> Levels on the abutment and piers 	
	<ul style="list-style-type: none"> Existing ducts and visible services through the deck 	
	<ul style="list-style-type: none"> The minimum vertical clearance and all levels and positions on the soffit profile 	
	<ul style="list-style-type: none"> The level and position at the start and end of each span of each deck 	
	<ul style="list-style-type: none"> The deck level at regular intervals (not exceeding 5m) 	
	<ul style="list-style-type: none"> The deck levels at each end of each span along all edges and centre lines of the decks 	
	<ul style="list-style-type: none"> The kerb levels at the supports 	
	<ul style="list-style-type: none"> The asphalt thickness at the kerb at the end of the spans on each edge of each deck 	
	<ul style="list-style-type: none"> The intersection angle or angle of skew relative to the river/road/railway line 	
3.2	Were the co-ordinates and heights of all observed surveyed positions added to the 2D drawings?	
3.3	Was a co-ordinate list of all the strategic points surveyed as well as the measured dimensions and invert levels supplied in Excel format?	
3.4	Were photos of the different views of the structure supplied in:	

	<ul style="list-style-type: none"> • Hard copy format? 	
	<ul style="list-style-type: none"> • Digital format? 	
3.5	Were the photos annotated?	
3.6	Were the results of the test survey submitted?	
3.7	Are the results within the specified tolerance?	
3.8	Was a survey report submitted?	
3.9	Were the 2D view drawings submitted in AutoCAD format?	
3.10	Were the 2D view drawings submitted in MicroStation format?	
3.11	For conventional surveyed structures,	
	<ul style="list-style-type: none"> • Was a list of survey codes and descriptions submitted? 	
	<ul style="list-style-type: none"> • Do the survey codes conform to the requirements? 	
	<ul style="list-style-type: none"> • Were the submitted survey codes used in the survey? 	
3.12	General Comments on 2D Presentation	
4.	3D PRESENTATION	
4.1	Was a 3D drawing supplied in AutoCAD format?	
4.2	Was a 3D drawing supplied in MicroStation format?	
4.3	Does the 3D drawing represent a combination of all the 2D views, giving an accurate representation of the structure?	
4.4	General Comments on 3D Presentation	
5.	GENERAL	
5.1	Was the hard copy data supplied as specified?	
5.2	Was the survey undertaken by laser scanning?	

5.3	Was the quality control report for laser scanning submitted as per Annexure 2.4.4?	
5.4	Was the point cloud of the laser scanning submitted in LAS format	
5.5	Was the survey report submitted in:	
	<ul style="list-style-type: none"> • Hard copy format? 	
	<ul style="list-style-type: none"> • Digital format? 	
5.6	Was the compliance certificate submitted and signed by a registered Surveyor? (Only for use by the Client)	
5.7	Was the quality control check list as per Annexure 24.5 supplied and signed by a registered Surveyor? (For use by the Client only)	
5.8	Were the office and field checked plans submitted?	
5.	Comments	
6.	GENERAL COMMENTS	
6.1	Was the project delivered on time?	
6.2	Does the labeling of CD, DVD or hard drive conform to the requirements?	
6.3	Does the naming of files and folders conform to the requirements?	
6.4	Was a delivery note, showing all data submitted, supplied?	
6.5	Was the version number of the data on the CD, DVD or hard drive shown?	
6.6	Was all the data re-submitted after corrections or extensions were done in order to facilitate deletion of the previous version?	
	Any other general comments not stated before:	

I, the undersigned, being the representative of the appointed survey company on the above project, hereby certify that:

- 1. All information required in the project specifications is hereby supplied.
- 2. All field and office checks have been carried out in terms of the relevant requirements and specifications.
- 3. All data supplied conforms to the relevant requirements and specifications for this project

Signed at.....this.....day of

Signature:.....

Plato Registration Number:.....

Name of Surveyor:.....