**SECTION 660 – BRIDGE EXPANSION JOINTS**

Section 660 sets out the requirements for supply and installation of bridge expansion joints.

Section 660 requires the work to be carried out in accordance with Austroads Technical Specifications, except for the amendments as described in Section 660 Parts A to E, for the following:

* ATS 5610 Compression Seal Expansion Joints (Edition 1.1, dated October 2023)
* ATS 5620 Cold Applied Sealant Joints (Edition 1.1, dated October 2023)
* ATS 5630 Elastomeric Strip Seal Expansion Joints (Edition 1.1, dated October 2023)
* ATS 5650 Bonded Metal – Elastomer Expansion Joints (Edition 1.1, dated October 2023)
* ATS 5670 Finger Type Expansion Joints (Edition 1.0, dated December 2022)

Amendments are denoted as follows:

* ‘replace’ means a requirement that is mandatory which replaces the ATS requirement.
* ‘add’ means a requirement that is mandatory which applies in addition to the ATS requirement, which is also mandatory.
* ‘remove’ means an ATS requirement that does not apply.

Any reference made to ‘Principal’ in the ATS must be taken to mean ‘Superintendent’.

Austroads Technical Specifications (ATS) are available at <https://austroads.com.au/publications>.

The numerical clause numbering in Section 660 ‘Parts A to E’ aligns with that used in the respective ATS.

PART A - Amendments to ATS 5610 Compression Seal Expansion Joints

PART B - Amendments to ATS 5620 Cold Applied Sealant Joints

PART C - Amendments to ATS 5630 Elastomeric Strip Seal Expansion Joints

PART D - Amendments to ATS 5650 Bonded Metal – Elastomer Expansion Joints

PART E - Amendments to ATS 5670 Finger Type Expansion Joints

**PART A - Amendments to ATS 5610 Compression Seal Expansion Joints**

**1 Scope**

1. Add Clause 1.2:

1.2 The design and construction of bridge expansion joints must also comply with the requirements specified in BTN 004.

**2 Referenced Documents**

1. Add the following reference:

Department of Transport and Planning

BTN 004 Bridge Joints

**8 Installation**

1. Add Clause 8.9:

8.9 Following completion of the joint assembly and tensioning of all anchor bolts (as applicable), the full length of the joint must be tested by tapping with a hammer. If any part of the joint exhibit a hollow-ring or movement, the affected length must be removed and re-bedded and all bolts replaced with new bolts and re-tensioned. If the concrete under the joint is found to have voids or other imperfections or any of the anchor bolts are not properly restrained, the Contractor must submit proposals for repair to the Superintendent.

|  |  |
| --- | --- |
| HOLD POINT 2 | |
| Process Held | Check movement in the expansion joint after installation. |
| Submission Details | Submission of the inspection report within 5 working days after installation and the method of repair at least 5 working days before the repair commences. |

**Annexure A: Summary of Hold Points, Witness Points and Records**

1. Replace the table as below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Clause** | **Hold point** | **Witness point** | **Record** |
| 5.3 | Installation of the Expansion Joint. |  | Quality Plan, details of the expansion joint and proposed warranty |
| 6.4 |  |  | Certificate of Compliance |
| 8.1 |  | 1. Installation of expansion joint and /or placement of concrete around the joint |  |
| 8.9 | Check movement in the expansion joint after installation. |  | Inspection report and method of repair |
| 9 |  |  | Warranty |

**PART B - Amendments to ATS 5620 Cold Applied Sealant Joints**

**1 Scope**

1. Add Clause 1.2:

1.2 The design and construction of bridge expansion joints must also comply with the requirements specified in BTN 004.

**2 Referenced Documents**

1. Add the following reference:

Department of Transport and Planning

BTN 004 Bridge Joints

**PART C - Amendments to ATS 5630 Elastomeric Strip Seal Expansion Joints**

**1 Scope**

1. Add Clause 1.2:

1.2 The design and construction of bridge expansion joints must also comply with the requirements specified in BTN 004.

**2 Referenced Documents**

1. Add the following reference:

Department of Transport and Planning

BTN 004 Bridge Joints

**8 Installation**

1. Add Clause 8.12:

8.12 Following completion of the joint assembly and tensioning of all anchor bolts (as applicable), the full length of the joint must be tested by tapping with a hammer. If any part of the joint exhibit a hollow-ring or movement, the affected length must be removed and re-bedded and all bolts replaced with new bolts and re-tensioned. If the concrete under the joint is found to have voids or other imperfections or any of the anchor bolts are not properly restrained, the Contractor must submit proposals for repair to the Superintendent.

|  |  |
| --- | --- |
| HOLD POINT 3 | |
| Process Held | Check movement in the expansion joint after installation. |
| Submission Details | Submission of the inspection report within 5 working days after installation and the method of repair at least 5 working days before the repair commences. |

**Annexure A: Summary of Hold Points, Witness Points and Records**

1. Replace the table as below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Clause** | **Hold point** | **Witness point** | **Record** |
| 9.1 | Installation of the Expansion Joint. |  | Quality Plan, details of the expansion joint and warranty |
| 7.1 | Dispatch of the expansion joint to site |  | Certificate of Conformance |
| 8.1 |  | 1. Installation of expansion joint and /or placement of concrete around the joint |  |
| 8.12 | Check movement in the expansion joint after installation. |  | Inspection report and method of repair |
| 9 |  |  | Warranty |

**PART D - Amendments to ATS 5650 Bonded Metal – Elastomer Expansion Joints**

**1 Scope**

1. Add Clause 1.2:

1.2 The design and construction of bridge expansion joints must also comply with the requirements specified in BTN 004.

**2 Referenced Documents**

1. Add the following reference:

Department of Transport and Planning

BTN 004 Bridge Joints

**9 Installation**

1. Add Clause 9.7:

9.7 Following completion of the joint assembly and tensioning of all anchor bolts (as applicable), the full length of the joint must be tested by tapping with a hammer. If any part of the joint exhibit a hollow-ring or movement, the affected length must be removed and re-bedded and all bolts replaced with new bolts and re-tensioned. If the concrete under the joint is found to have voids or other imperfections or any of the anchor bolts are not properly restrained, the Contractor must submit proposals for repair to the Superintendent.

|  |  |
| --- | --- |
| HOLD POINT 3 | |
| Process Held | Check movement in the expansion joint after installation. |
| Submission Details | Submission of the inspection report within 5 working days after installation and the method of repair at least 5 working days before the repair commences. |

**Annexure A: Summary of Hold Points, Witness Points and Records**

1. Replace the table as below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Clause** | **Hold point** | **Witness point** | **Record** |
| 4.3 | Installation of the Expansion Joint. |  | Quality Plan, details of the expansion joint and warranty |
| 8.1 | Dispatch of the expansion joint to site |  | Certificate of Conformance |
| 9.1 |  | 1. Installation of expansion joint and /or placement of concrete around the joint |  |
| 9.7 | Check movement in the expansion joint after installation. |  | Inspection report and method of repair |
| 10 |  |  | Warranty |

**PART E - Amendments to ATS 5670 Finger Type Expansion Joints**

**1 Scope**

1. Add Clause 1.2:

1.2 The design and construction of bridge expansion joints must also comply with the requirements specified in BTN 004.

**2 Referenced Documents**

1. Add the following reference:

Department of Transport and Planning

BTN 004 Bridge Joints

**10 Installation**

1. Add Clause 10.13:

10.13 Following completion of the joint assembly and tensioning of all anchor bolts (as applicable), the full length of the joint must be tested by tapping with a hammer. If any part of the joint exhibit a hollow-ring or movement, the affected length must be removed and re-bedded and all bolts replaced with new bolts and re-tensioned. If the concrete under the joint is found to have voids or other imperfections or any of the anchor bolts are not properly restrained, the Contractor must submit proposals for repair to the Superintendent.

|  |  |
| --- | --- |
| HOLD POINT 4 | |
| Process Held | Check movement in the expansion joint after installation. |
| Submission Details | Submission of the inspection report within 5 working days after installation and the method of repair at least 5 working days before the repair commences. |

**Annexure A: Summary of Hold Points, Witness Points and Records**

1. Replace the table as below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Clause** | **Hold point** | **Witness point** | **Record** |
| 4.1 | Installation of the expansion joint. |  | Quality Plan |
| 8.2 | Dispatch of the expansion joint to site |  | Certification from the supplier |
| 10.2 | Installation of expansion joint |  | Evidence of the installer’s accreditation |
| 10.3 |  | 1. Installation of expansion joint |  |
| 10.10 |  | 2. Tightening of the holding down bolts | Evidence that the torque will achieve the required tension |
| 10.12 |  | 3. Check the tension of all the bolts after 12 months |  |
| 10.13 | Check movement in the expansion joint after installation. |  | Inspection report and method of repair |
| 12.1 |  |  | Records |
| 13 |  |  | Warranty |