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| **Pavement - Structural Asphalt on Concrete** | | | | | | | | | | | | | |
| **Project Name:** | | | | Weymouth RAB: Roscommon Road and Weymouth East | | | | | **Design Report .** | Weymouth Construction | | | |
| **ITP Prepared By:** | | | | AA - FH | | | **Date:** | **17/12/2024** | **Peer Review By:** | SS - FH – initial version only | | **Date: 18/12/2024** | |
| **No.** | | **ACTIVITY DESCRIPTION** | | **VERIFICATION ACTIVITY** | | **METHODS OR REFERENCE** | **FREQUENCY** | **ACCEPTANCE CRITERIA** | **TYPE** | **RECORDS (Responsibility)** | **ONSITE RESPONSIBILITY** | **SIGNOFF** | |
| **Milling/Excavation** | | | | | | | | | | | | | |
| 1 | | Identification and location of services | | Service plans and GPR Markouts | | Trained contractor staff | Full Pavement Extent | Services sufficiently deep to avoid damage. | **Mandatory HOLD POINT Engineer Signoff Required** | Photos and Report | Project Engineer | **MSQA Signoff** | |
| 2 | | Milling / Cut to Waste (350mm at Weymouth and 400mm at Roscommon) | | Stringline | | Dip from stringline or survey as-built | 5m each lane | +0 / -20mm to design level | **Mandatory HOLD POINT Engineer Signoff Required** | Stringline Sheet | Project Engineer | **MSQA Signoff** | |
| 3 | | Subgrade | | No unacceptable subgrade materials after excavation | | Visual Inspection | NA | Free of detritius and loose material. Subgrade Treatment may Required | **Inprocess Inspection** | Site diary | Project Engineer |  | |
| **Subgrade Treatment** | | | | | | | | | | | | | |
| 4 | | Subgrade Testing and Treatment | | Testing, Scala Penetrometer Testing, Shear Vane testing, and Proof rolling | | Design Report | At 10m intervals staggered in each wheel path | For,  Subgrade CBR > 3%, Scala < 50mm per blow, shear vane >= 60kPa and no visual movement under static roller.   * No Undercut required | **Mandatory HOLD POINT Designer Signoff Required** | Testing results, QA and video of proof rolling. | Project Engineer | **MSQA Signoff** | |
| 5 | | Subgrade Testing and Treatment | | Testing, Scala Penetrometer Testing, Shear Vane testing, and Proof rolling | | Design Report | At 10m intervals staggered in each wheel path | For,  Subgrade CBR 2 - 3%, Scala 50 - 100mm per blow, shear vane 40 - 60kPa and visual movement under static roller.   * No Undercut required at Weymouth East and Geotextile to remain at bottom of concrete subbase. * 150mm undercut required at Roscommon Road and geotextile placed before backfilling with granular | **Mandatory HOLD POINT Designer Signoff Required** | Testing results, QA and video of proof rolling. | Project Engineer | **MSQA Signoff** | |
| 6 | | Subgrade Testing and Treatment | | Testing, Scala Penetrometer Testing, Shear Vane testing, and Proof rolling | | Design Report | At 10m intervals staggered in each wheel path | For,  Subgrade CBR 1 - 2%, Scala >= 100mm per blow, shear vane 20 - 40kPa and visual movement under static roller.   * 200mm Undercut required at Weymouth East and geotextile placed before backfilling with granular. * 250mm undercut required and geotextile placed before backfilling with granular | **Mandatory HOLD POINT Designer Signoff Required** | Testing results, QA and video of proof rolling. | Project Engineer | **MSQA Signoff** | |
| **AP40 Layer (Subgrade improvement layer)** | | | | | | | | | | | | | |
| 7 | | 150mm or 200mm or 250mm Excavation | | Stringline | | Dip from string line | 10m each lane | +0 / -20mm  No trafficking of the excavated subgrade | **Mandatory HOLD POINT Designer Signoff Required** | Marked up drawing | Project Engineer | **MSQA Signoff** | |
| 8 | | Class C Geotextile | | N/A | | NZTA F/7 | NA | Geotextile material and construction in accordance with NZTA F/7  Placed as per subgrade treatment | **In process Inspection and Contractor Records** | Testing Results | Project Engineer |  | |
| 9 | | ATAP40 (material) | | No non-compliant results | | Material test results | Once | Compliance with AT Series 800 Specification for the Supply of Aggregates | **Contractor Records** | Testing Results | Project Engineer |  | |
| 10 | | ATAP40 (Compaction) | | Compaction | | CIV | Every 10m in each lane | CIV>=35 | **Contractor Records** | Testing Results | Project Engineer |  | |
| 11 | | ATAP40 (Level Tolerance) | | Stringline | | Dip from string line | 10m each lane | +5 / -25mm  No trafficking of the excavated subgrade | **Contractor Records** | Testing Results | Project Engineer |  | |
| 12 | | ATAP40 (Surface finish) | | N/A | | Visual Inspection | NA | Free of detritius and loose material | **Inprocess Inspection** | Site diary | Project Engineer |  | |
| **New Pavement Joint** | | | | | | | | | | | | | |
| 13 | | Transverse Tie In To existing pavement | | Pavement Joint | | Visual Inspection | Each Subsection |  | **Mandatory HOLD POINT Designer Signoff Required** | Photos and Report | Project Engineer | **MSQA Signoff** | |
| 14 | | Longitudinal Tie In To existing pavement | | Pavement Joint | | Visual Inspection | Each Subsection |  | **Mandatory HOLD POINT Designer Signoff Required** | Photos and Report | Project Engineer | **MSQA Signoff** | |
| **Concrete Subbase** | | | | | | | | | | | | | |
| 15 | | Concrete Subbase | | Strength and slump | | Concrete dockets | | each pour | Strength = 20MPa  Slump = 130mm pump mix  Pump mix being used hence cannot specify slump. Shape of the concrete to be closely monitored due to fluidity nature of pump mix on graded surface | **Inprocess Testing** | Docket | Project Engineer |  |
| 16 | | Concrete Subbase | | Levels / thickness | | Dip from stringline or survey as-built to top of subbase (Surveyor to provide set-out information prior to concrete pour) | | 10m each lane | For Weymouth Road,  Target Depth = 150mm below design surface  -0 / +10mm  For Roscommon Road,  Target Depth = 200mm below design surface  -0 / +10mm | **Mandatory HOLD POINT Designer Signoff Required** | Stringline Sheet | Project Engineer | **MSQA Signoff** |
| 17 | | Concrete Subbase | | Rough trowel surface finish | | Visual Inspection | | NA | Rough surface verified over 100% of surface area | **Inprocess Inspection** | Production Recurs | Project Engineer |  |
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| 18 | | Concrete Joint – if two different pours | | Joints | | Visual Inspection | | Each Subsection |  | **Mandatory HOLD POINT Designer Signoff Required** | Photos and Report | Project Engineer | **MSQA Signoff** |
| 19 | | Crack Bandage if crack occurs | | Cracks | | Visual Inspection | | Each Subsection |  | **Mandatory HOLD POINT Designer Signoff Required** | Photos and Report | Project Engineer | **MSQA Signoff** |

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| **Emulsion – Tack and Blind (Concrete and AC layer)** | | | | | | | | | |
| 20 | Emulsion tack coat | CAT60 cationic emulsion or approved alternative | Visual Inspection | each lot | Hand spray tack coat emulsion | **Inprocess Testing** | Photos | Project Engineer |  |
| **Structural Asphalt (AC20 – 160mm in two lifts 80mm each)** | | | | | | | | | |
| 21 | AC20 | Check weather reports | Forecast and thermometer | Daily | No fog, rain or wet surface. Base temp ≥ 7o C | Inprocess Testing | AC check sheet | Project Engineer |  |
| 22 | AC20 | Ensure previous layer is broomed clean | Visual | Prior to starting | Free of detritius and loose material | Inprocess Testing | AC check sheet | Project Engineer |  |
| 23 | AC20 | Production tests | Grading, binder content, max density, temp | As per M/10 | NZTA M/10 | Inprocess Testing | Lab test | Project Engineer |  |
| 24 | AC20 | Surface finish inspection | Visual inspection by the Engineer | Each lot | Uniform texture, no roller marks, no bleeding, cracking or shoving, no crushing of the aggregate. | Inprocess Testing | Inspection sheet | Project Engineer |  |
| 25 | AC20 | Density testing | NDM | Every 30m2 | Air voids (4% - 6%) | Inprocess Testing | Inspection sheet | Project Engineer | **MSQA Signoff** |
| 26 | AC20 | As-built layer | Stringline | Each lot | First layer = 60mm +/- 10mm | Inprocess Testing | As-build drawings & stringline measures | Project Engineer |  |
| 27 | AC20 | As-built layer | Stringline | Each lot | Second layer = 60mm +/- 10mm | Inprocess Testing | As-build drawings & stringline measures | Project Engineer |  |
| 28 | Joint Inspection | Visual | Design Report | Each Subsection |  | **Mandatory HOLD POINT Auckland Transport Signoff Required** |  | Project Engineer | **MSQA Signoff** |
| **No Cores on AC20** | | | | | | | | | |
| 29 | AC20 | Density testing | Cores (Random testing plan to be agreed with client) | 1/300m2 or min 4 no. | Air voids to meet NZTA M/10:2020 | **Mandatory HOLD POINT Auckland Transport Signoff Required** | RFI response | Project Engineer | **MSQA Signoff** |
| 30 | AC20 | Thickness | Cores depth (Random testing standard) | 1/300m2 or min 4 no. | - Target depth 160mm | **Mandatory HOLD POINT Auckland Transport Signoff Required** | Core test report | Project Engineer | **MSQA Signoff** |
| **Hatelit grid to be laid in between asphalt layers** | | | | | | | | | |
| 31 | Hatelit C40/17 | Length direction grid overlap | Visual inspection | Ongoing during install | Min. 250mm | Inprocess Testing | Photo / diary note / check sheet | Project Engineer |  |

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| 32 | Hatelit C40/17 | Cross direction grid overlap | Visual inspection | Ongoing during install | Min. 150mm | Inprocess Testing | Photo / diary note / check sheet | Project Engineer |  |
| 33 | Hatelit C40/17 | Tack coat | Visual inspection | Ongoing during install | 0.5 lt / m2, residual bitumen emulsion (depending on surface condition) | Inprocess Testing | Photo / diary note / check sheet | Project Engineer |  |
| 34 | Hatelit C40/17 | Emulsion on overlaps | Visual inspection | Ongoing during install | 0.5 lt / m2 if required | Inprocess Testing | Photo / diary note / check sheet | Project Engineer |  |
| 35 | Hatelit C40/17 | Evenly laid grid | Visual inspection | Ongoing during install | Minimal air voids in grid, grid pulled tight | Inprocess Testing | Photo / diary note / check sheet | Project Engineer |  |
| **Asphalt Surfacing 40mm – AC10** | | | | | | | | | |
| 36 | Rougness of Road | Insitu | Contract Spec 4415 | Every 100m | The new pavement shall have an average dynamic roughness, when  measured over a length of 100m, of less than 60 NAASRA counts/km for  any three consecutive results and no individual value greater than 70 | **Inprocess Inspection** | NAASRA count | Project Engineer |  |
| 37 | Shape of road | 3m straight edge | NZTA M/10 spec | At joints and any other areas of concern | Irregularities < 5mm under straight edge | **Inprocess Inspection** | Check sheet | Project Engineer |  |
| 38 | Temperature Limitations | Temperature | Contract Spec / M10 Spec | Every Site | Asphalt not to be paved when foggy or raining, or placed on a wet surface or when temperature is below the base temperature limitations of 120 Degree | **Inprocess Inspection** | Asphalt QA | Project Engineer |  |
| 39 | Surface Preparation | Visual | NZTA M/10 spec | Every Site | Swept clean; all necessary measures to prevent ponding prior to any surfacing | **Inprocess Inspection** | Visual | Project Engineer |  |
| 40 | Asphalt Production Tests for AC10 | Production Tests | Grading, binder content, max density, temp | As per M/10 | NZTA M/10 | **Laboratory Testing** | IANZ Lab | Project Engineer |  |
| 41 | Joint Placement | Paving Plan |  | Every Site | Paving Plan to be completed for every site with dimensions. Joint sealing shall be applied between new and existing surfacing. Joints off-set 150mm | **Inprocess Inspection** | Nil | Project Engineer |  |
| 42 | AC10 - Layer thickness – 40mm compacted depth | Insitu | Contract Spec / NZTA M10 Spec | Continuous | 40 mm minimum and 45 mm maximum compacted depth | **Mandatory HOLD POINT Auckland Transport Signoff Required** | Asphalt QA | Project Engineer | **MSQA Signoff** |
| 43 | AC10 | Density testing | NDM | Every 30m2 | NZTA M/10 | **Mandatory HOLD POINT Auckland Transport Signoff Required** | RFI response | Project Engineer | **MSQA Signoff** |

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| 44 | Reinstatement of Linemarking and RRPM's | Visual | NZTA M7 approved (Class B or C as required for anticipated traffic level) | Every site | \*Carried out within 12 hours of each shift completed and as per the existing markings  \* Suitable Traffic Control to remain in place until pavement markings have been reinstated | **Inprocess Inspection** | Linemarking Records | Project Engineer |  |
| **APPROVALS** | | | | | | | | | |
| **Approved by Project Engineer :** | | TBC | | **Signature:** | | **Date:** |  |  | |
| **Approved by Contract Manager :** | | TBC | | **Signature:** | | **Date:** |  |  | |
| **Approved by Client Rep :** | | TBC | | **Signature:** | | **Date:** |  |  | |