Fulton Hogan	**Inspection and Test Plan – Control and Supervision of the Works**	**Doc ID:** FH-SAT10-PM-ITP004C **Rev:** 02

Principal's: Melbourne Airport (APAM)	**Contract No:** CP18104	**Prepared By:** Michael Natalizio
Project: MAPMP SAT10 PCC Works	**Reviewed By:** Mukaram Mohammad	**Date:** 08/08/2022
Construction Process: Hot Mix Asphalt Production – Airfield Asphalt	**Approved By:** Kevin Gatt	**Date:** 08/08/2022
Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022		
Structure / Component: Asphalt Pavement		

Lot No:	Lot Details:	Lot size/Quantity:	Date:

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
1.0	**Preliminary Activities**										
1.1	Submission of Production Plan	Prior to each work shift	The production plan shall demonstrate that the production capacity and the hot storage capacity of the mixing plant is sufficient to supply asphalt to complete the work undertaken within each shift. It will ensure that there will be no interruption to the placement of asphalt.	AECOM – MAP MP Spec. Cl 12.4.15.1	Verify	Approved production plan Aconex Correspondence	**HP**	Project Engineer / Contract Administrator			
1.2	Checking of Weighting Devices and Certificates	Prior to commencing works	The Contractor shall supply details of current certification of weighing equipment including belt weighers and weighbridges to the Contract Administrator.	AECOM – MAP MP Spec. Cl 12.4.15.6	Verify	Aconex Correspondence	**WP**	Project Engineer / Contract Administrator			
1.3	Calibration of the mixing plant	Prior to commencing works	Calibrating all necessary devices and parameters at the mixing plant to achieve the "Job Mix". Established plants shall provide historical records of the asphalt production over the previous one (1) month to verify consistency.	AECOM – MAP MP Spec. Cl 12.4.15.11	Verify	Historical records of asphalt production This ITP signed	**WP**	Project Engineer / Contract Administrator			

Principal's: Melbourne Airport (APAM) | **Contract No:** CP18104 | **Prepared By:** Michael Natalizio

Project: MAPMP SAT10 PCC Works | **Reviewed By:** Mukaram Mohammad | **Date:** 08/08/2022

Construction Process: Hot Mix Asphalt Production – Airfield Asphalt | **Approved By:** Kevin Gatt | **Date:** 08/08/2022

Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022

Structure / Component: Asphalt Pavement

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
1.4	Material Submission (Coarse and Fine Aggregates and Added Filler)	Prior to commencing works	Submission of a report which contains: • Details about the source of the material. • Summary of recent test results indicating compliance with the specification requirements.	AECOM – MAP MP Spec. Cl 12.5.2.2 12.5.2.3 12.5.2.4 12.5.2.5 12.5.2.6	Verify	Aconex Correspondence	**HP**	Project Engineer / Contract Administrator			
2.0	**Production Conditions**										
2.1	Asphalt mix temperature	Once per 200 tonnes of asphalt produced	The temperature of the mix immediately following discharge from the mixer shall be within 10ºC of that nominated by the Contractor but shall not be greater than 175ºC (for polymer modified bitumen).	AECOM – MAP MP Spec. Cl 12.8.1	Inspection	Delivery Dockets	**TP**	Laboratory Technician / Plant Operator			
3.0	**Coarse Aggregates Material Properties**										
3.1	Particle Density Coarse	1 per 2000 tonnes aggregate	Not less than 2300 kg/m^3	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.6.1 /6.2	Test Report	**TP**	Laboratory Technician			

Fulton Hogan	Inspection and Test Plan – Control and Supervision of the Works	**Doc ID:** FH-SAT10-PM-ITP004C **Rev:** 02
Principal's: Melbourne Airport (APAM)	**Contract No:** CP18104	**Prepared By:** Michael Natalizio
Project: MAPMP SAT10 PCC Works	**Reviewed By:** Mukaram Mohammad	**Date:** 08/08/2022
Construction Process: Hot Mix Asphalt Production – Airfield Asphalt	**Approved By:** Kevin Gatt	**Date:** 08/08/2022
Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022		
Structure / Component: Asphalt Pavement		

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
3.2	Water Absorption	1 per 1000 tonnes aggregate	Not more than 2.0% (Asphalt mix designed to meet performance criteria with current aggregate source rock producing water absorption >2.0% - In accordance with Taxiway Zulu Project - No objection by AECOM)	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.6.1 /6.2	Test Report	**TP**	Laboratory Technician			
3.3	Particle Size Distribution	1 per 500 tonnes aggregate	PSD to FH Internal Limits	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS1141.1 1.1 (washed)	Test Report	**TP**	Laboratory Technician			
3.4	Material Finer than 0.075mm in Aggregates (by washing)	1 per 500 tonnes aggregate	Not more than 2.0%	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS1141.1 1.1 (washed)	Test Report	**TP**	Laboratory Technician			

Principal's: Melbourne Airport (APAM)	**Contract No:** CP18104	**Prepared By:** Michael Natalizio
Project: MAPMP SAT10 PCC Works	**Reviewed By:** Mukaram Mohammad	**Date:** 08/08/2022
Construction Process: Hot Mix Asphalt Production – Airfield Asphalt	**Approved By:** Kevin Gatt	**Date:** 08/08/2022
Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022		
Structure / Component: Asphalt Pavement		

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
3.5	Flakiness Index (nominal 10 mm and larger aggregate)	1 per 1000 tonnes aggregate	Maximum 25% (Flakiness Index used in place of particle shape test - In accordance with Taxiway Zulu Project - No objection by AECOM)	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.15	Test Report	**TP**	Laboratory Technician			
3.6	Weak particles	1 per 1000 tonnes aggregate	Not more than 0.2%	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.32	Test Report	**TP**	Laboratory Technician			
3.7	Soundness (using Sodium Sulphate)	Initial	Not more than 3% weighted loss	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.24	Test Report	**TP**	Laboratory Technician			

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
3.8	Wet Strength	1 per 2500 tonnes aggregate	~~Not less than 180kN~~ Not less than 150kN - In accordance with Taxiway Zulu Project - No objection by AECOM	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.22	Test Report	**TP**	Laboratory Technician			
3.9	Wet / Dry Strength Variation	Initial	~~Not more than 25%~~ Not more than 30% - In accordance with Taxiway Zulu Project - No objection by AECOM	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.22	Test Report	**TP**	Laboratory Technician			
3.10	Los Angeles Abrasion	Initial	Not more than 25% loss (B or K Test Grading)	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	AS 1141.23	Test Report	**TP**	Laboratory Technician			

Principal's: Melbourne Airport (APAM) | **Contract No:** CP18104 | **Prepared By:** Michael Natalizio

Project: MAPMP SAT10 PCC Works | **Reviewed By:** Mukaram Mohammad | **Date:** 08/08/2022

Construction Process: Hot Mix Asphalt Production – Airfield Asphalt | **Approved By:** Kevin Gatt | **Date:** 08/08/2022

Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022

Structure / Component: Asphalt Pavement

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
3.11	Secondary Mineral Content	Initial	Not more than 20% (Basic rock types only)	AECOM – MAP MP Spec. Cl 12.5.2.3, 12.5.2.7, Table 12-1 Table 12-5	Petrographic Analysis	Test Report	**TP**	Laboratory Technician			
4.0	**Fine Aggregates Material Properties**										
4.1	Particle Size Distribution	1 per 500 tonnes aggregate	PSD to FH Internal Limits	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS1141.1 1.1	Test Report	**TP**	Laboratory Technician			
4.2	Particle Density Fine	1 per 1000 tonnes aggregate	Not less than 2300kg/m^3	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS 1141.5	Test Report	**TP**	Laboratory Technician			

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
4.3	Water absorption – crushed aggregate	1 per 1000 tonnes aggregate	Not more than 2.5%	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS 1141.5	Test Report	**TP**	Laboratory Technician			
4.4	Water absorption – uncrushed aggregate	1 per 1000 tonnes aggregate	Not more than 2.0%	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS 1141.5	Test Report	**TP**	Laboratory Technician			
4.5	Plasticity Index	1 per 1000 tonnes aggregate	Non Plastic (Plastic Index must equal 0.0%)	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS 1289.3.3.1	Test Report	**TP**	Laboratory Technician			

Principal's: Melbourne Airport (APAM) | **Contract No:** CP18104 | **Prepared By:** Michael Natalizio

Project: MAPMP SAT10 PCC Works | **Reviewed By:** Mukaram Mohammad | **Date:** 08/08/2022

Construction Process: Hot Mix Asphalt Production – Airfield Asphalt | **Approved By:** Kevin Gatt | **Date:** 08/08/2022

Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022

Structure / Component: Asphalt Pavement

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
4.6	Linear Shrinkage	1 per 500 tonnes aggregate	Not more than 1%	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS 1289.3.4.1	Test Report	**TP**	Laboratory Technician			
4.7	Soundness (using Sodium Sulphate)	Initial	Not more than 3% weighted loss	AECOM – MAP MP Spec. Cl 12.5.2.4, 12.5.2.7, Table 12-3 Table 12-6	AS 1141.24	Test Report	**TP**	Laboratory Technician			
5.0	**Binder Testing**										
5.1	Bituminous Binder Sampling and Submission	Prior to commencing each production shift	All samples of bitumen must be obtained in accordance with AS 2008. Samples of bitumen shall be taken during construction at the rate of one (1) sample from each separate delivery vessel delivered to the mixing plant. The samples shall consist of two (2) 0.5 litre (minimum) sealed containers labelled appropriately identifying the relevant lot and traceability to the source. These samples to be submitted to the Contract Administrator.	AECOM – MAP MP Spec. Cl 12.5.3.2 12.5.3.6	AS 2008 Verify	This ITP signed	**HP**	Laboratory Technician Project Engineer / Contract Administrator			

Principal's: Melbourne Airport (APAM)	**Contract No:** CP18104	**Prepared By:** Michael Natalizio
Project: MAPMP SAT10 PCC Works	**Reviewed By:** Mukaram Mohammad	**Date:** 08/08/2022
Construction Process: Hot Mix Asphalt Production – Airfield Asphalt	**Approved By:** Kevin Gatt	**Date:** 08/08/2022
Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022		
Structure / Component: Asphalt Pavement		

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
5.2	Bituminous Binder Testing	Prior to commencing each production shift	Bitumen is to be tested at the point of delivery. The sample is to be tested for the following: • Viscosity at 165°C according to AG:PT/T111. • Torsional recovery at 25°C, 30 s according to AG:PT/T122 • Softening Point according to AG:PT/T131	AECOM – MAP MP Spec. Cl 12.5.3.2	AG:PT/T111 AG:PT/T122 AG:PT/T131	Test Certificates	**HP**	Laboratory Technician Project Engineer / Contract Administrator			
6.0	**Asphalt Production Testing**										
6.1	Sampling	Once per 200t asphalt produced or 1 test per shift (whichever is greater)	Mix to be sampled from asphalt delivery trucks.	AECOM – MAP MP Spec. Cl 12.10.2	AS 2891.1.1	Test Report	**TP**	Laboratory Technician			
6.2	Checking of Bitumen Usage	At the end of each production shift	The Contractor shall determine the average bitumen content of each size of asphalt produced during each continuous mixing period or shift based on the total quantity of bitumen used and total asphalt produced.	AECOM – MAP MP Spec. Cl 12.4.15.7	Verify	Records of bitumen usage	**HP**	Project Engineer / Contract Administrator			

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
6.3	Moisture content	Once per sample obtained as per Item 6.1 of this document	Moisture content of asphalt to be <0.5%.	FH Internal	RC 211.01[1]	Test Report	**TP**	Laboratory Technician			
6.4	Combined aggregate grading	Once per sample obtained as per Item 6.1 of this document	Grading to be within the following tolerances of the "job mix" target grading: Sieve Size (mm) / Tolerance % passing 13.2 / ± 4 9.5 / ± 4 6.7 / ± 4 4.75 / ± 3 2.36 / ± 3 1.18 / ± 3 0.600 / ± 3 0.300 / ± 2 0.150 / ± 2 0.075 / ± 1	AECOM – MAP MP Spec. Cl 12.10.3	AS 2891.3.3	Test Report	**TP**	Laboratory Technician			

Principal's: Melbourne Airport (APAM)	**Contract No:** CP18104	**Prepared By:** Michael Natalizio
Project: MAPMP SAT10 PCC Works	**Reviewed By:** Mukaram Mohammad	**Date:** 08/08/2022
Construction Process: Hot Mix Asphalt Production – Airfield Asphalt	**Approved By:** Kevin Gatt	**Date:** 08/08/2022
Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022		
Structure / Component: Asphalt Pavement		

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
6.5	Binder content	Once per sample obtained as per Item 6.1 of this document	Bitumen content to be within -0.3% and +0.3% of the "job bitumen content" target.	AECOM – MAP MP Spec. Cl 12.10.3	AS 2891.3.3	Test Report	**TP**	Laboratory Technician			
6.6	Maximum density	Once per sample obtained as per Item 6.1 of this document	Average maximum density for each production shift to be reported.	AECOM – MAP MP Spec. Cl 12.10.2	AS 2891.7.1	Test Report	**TP**	Laboratory Technician			
6.7	Bulk density	Once per sample obtained as per Item 6.1 of this document	Two Marshall blocks to be produced using automatic hammers (75 blow compaction) and the results averaged. Compaction temperature is to be within the range of 165ºC to 175ºC. Result to be reported.	AECOM – MAP MP Spec. Cl 12.10.2	AAA MT 001-2007	Test Report	**TP**	Laboratory Technician			
6.8	Voids in mineral filler (VMA)	Once per sample obtained as per Item 6.1 of this document	14% minimum	AECOM – MAP MP Spec. Cl 12.6.3 Table 12-8	AAA MT 001-2007	Test Report	**TP**	Laboratory Technician			

Principal's: Melbourne Airport (APAM) | **Contract No:** CP18104 | **Prepared By:** Michael Natalizio

Project: MAPMP SAT10 PCC Works | **Reviewed By:** Mukaram Mohammad | **Date:** 08/08/2022

Construction Process: Hot Mix Asphalt Production – Airfield Asphalt | **Approved By:** Kevin Gatt | **Date:** 08/08/2022

Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022

Structure / Component: Asphalt Pavement

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/IP/ TP/ SCP	Responsibility Project Engineer Superintendent Surveyor Foreman	Checked by:		
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			AECOM	FH	Date
6.9	Voids filled with binder (VFB)	Once per sample obtained as per Item 6.1 of this document	70% minimum to 80% maximum	AECOM – MAP MP Spec. Cl 12.6.3, 12.10.3 Table 12-8	AAA MT 001-2007	Test Report	**TP**	Laboratory Technician			
6.10	Air voids	Once per sample obtained as per Item 6.1 of this document	Two Marshall blocks to be produced using automatic hammers (75 blow compaction) and the results averaged. Compaction temperature is to be within the range of 165ºC to 175ºC. ~~Air voids to be 4% ± 1%~~ Air voids to be ± 1.5% of design air voids - In accordance with Taxiway Zulu Project - No objection by AECOM	AECOM – MAP MP Spec. Cl 12.6.3, 12.10.3 Table 12-8	AAA MT 001-2007	Test Report	**TP**	Laboratory Technician			
6.11	Marshall stability	Once per sample obtained as per Item 6.1 of this document	Two Marshall blocks to be produced using automatic hammers (75 blow compaction) and the results averaged. Compaction temperature is to be within the range of 165ºC to 175ºC. Minimum Marshall stability to be 12kN.	AECOM – MAP MP Spec. Cl 12.6.3, 12.10.3 Table 12-8	AAA MT 001-2007		**TP**	Laboratory Technician			
6.12	Marshall flow	Once per sample obtained as per Item 6.1 of this document	Two Marshall blocks to be produced using automatic hammers (75 blow compaction) and the results averaged. Compaction temperature is to be within the range of 165ºC to 175ºC. Report flow result. Report stability vs flow chart.	AECOM – MAP MP Spec. Cl 12.6.3, 12.10.3 Table 12-8	AAA MT 001-2007		**TP**	Laboratory Technician			

Fulton Hogan	**Inspection and Test Plan – Control and Supervision of the Works**	**Doc ID:** FH-SAT10-PM-ITP004C **Rev:** 02
Principal's: Melbourne Airport (APAM)	**Contract No:** CP18104	**Prepared By:** Michael Natalizio
Project: MAPMP SAT10 PCC Works	**Reviewed By:** Mukaram Mohammad	**Date:** 08/08/2022
Construction Process: Hot Mix Asphalt Production – Airfield Asphalt	**Approved By:** Kevin Gatt	**Date:** 08/08/2022
Specifications: Technical Specification - MAP MP - PCC Works, Stages 1, 2, 4 and 5 - Revision 0 - 08-Mar-2022		
Structure / Component: Asphalt Pavement		

Final Inspection

The signature below verifies that this ITP has been completed in accordance with the Fulton Hogan's Quality \System Procedures and verifies lot compliance with specifications.

Print Name: **Position:** **Signature:** **Date:** / /

Legend:

HP	Hold Point	Work shall not proceed past the HP until released by the Superintendent	**IP**	Inspection point	Formal Inspection to be done and recorded
HP*	Fulton Hogan Hold Point	Work shall not proceed past the HP* until released by Fulton Hogan	**TP**	Test Point	Product compliance test to be undertaken and recorded/reported
WP	Witness Point	An inspection which must be witnessed by the Superintendent	**SCP**	Survey conformance point	A qualified surveyor to check product/section/structure and report
AP	Approval Point	Written or verbal approval given by the Superintendent			

Notes