WAKA KOTAHI NZ TRANSPORT AGENCY	HIGGINS	INSPECTIO TEST PLAN	Lot Reference number: FBS01
		Project Nam NOC AWPTs 2022-2023	Date submitted: 14-09-2022
		Construction Process: **In-Situ Modified Basecourse**	Prepared By: Deen Joseph
Client's Rep.: Nigel Green	Contractor: Higgins	Specification: TS section 507	Approved By: Derek Wisniewski

Item	Task/Activity/Description	Inspection/Test				Acceptance Criteria	Record documents	Responsibility	Comments	Checked by		
		Detail of Activity	Action (Hold, Monitor, Witness)	Minimum Test Frequency (Lot = 1 day's production or 1,500m2)	Inspection / Test method					Engineer's Rep	Contractor	Date
1.1. AGGREGATE AND BINDER OPTIMISATION / ACCEPTANCE TESTING												
1.1.1	M4 AP40 Basecourse Aggregates used for overlay Notes: H = Hold point up to approval of Optimisation Testing	Quality of Fines, either PI or SE or CI	H / M*	1 per 1,000 m2	NZS4407:3.4 - PI NZS4407:3.5 - CI NZS4407:3.6 - SE	PI ≤ 5 CI ≤ 3 SE ≥ 40	IANZ Report	Contractor				
1.1.2		Broken Faces Content	H / M*	1 per 1,000 m2	NZS4407:3.14	≥ 70% more than two broken faces on aggregates between 37.5mm and 4.75mm	IANZ Report	Contractor				
1.1.3		Particle Size Distribution	H / M*	1 per 1,000 m2	NZS4407:3.8.1	Check if 50:50 blend of average existing (from TPs) and NZTA M/4 AP40 will meet the FBS grading.	Report using IANZ Reports for AP40 and TP PSDs	Contractor to provide analysis	Designer to advise if "average" blend is acceptable.			
1.1.4	Optimisation of Stabilizing Agent	Indirect Tensile Strength, ITS	H	1 Optimisation test per aggregate type	NZTA T/19: 2020	Dry ITS: 175kPa to 400 kPa Soaked ITS: 150 kPa to 350 kPa TSR ≥ 70%	IANZ Report	Contractor				
1.1.5		Modified Maximum Dry Density	M	At Optimised Binder selection	NZS 4402.4.1.3	To determine target density	IANZ Report	Contractor	Required before Stabilisation comences			
1..2. BEFORE STABILISATION COMENCES												
1.2.1	Setout section	Install offset pegs; record centreline, edge line or mark out stabilisation extents from existing line marking	M	Prior to each section	Survey	Document existing furniture	Electronic survey files	Contractor				
1.2.2	Production Plan	Plan showing cut lines and sequencing of works	M	Prior to each section	Daily Report	Points covered in NZTA B/5	Daily Production Plan	Contractor				
1.2.3	Weather conditions	Ambient Temperature (C&L) Material to be stabilised (BE&FBS)	M	Prior to spreading	Measurement	Ambient Temperatures: Cement: > 5°C, Lime: > 10°C Material after stabilisation: BE: > 20°C, FB: > 20°C	Daily work Log	Contractor				
1.2.4	Weather conditions	Wind	M	Prior to spreading cement or lime	Local weather stations	Wind speed < 25 km/hr	Daily work Log	Contractor				
1.2.5	Weather conditions	Rain	M	Prior to spreading cement or lime	Local weather stations	No spreading of cement / lime if it is raining or likely to rain before these can be mixed in with the material	Daily work Log	Contractor				
1.3. STABILISATION OPERATION												
1.3.1	Stabilizing Agent	Cement, GP	M	Per Batch	NZS 3122	Conform to Specification	Certificate in contractor's site folder	Contractor				
1.3.2	Spreading of powdered stabilising agent (Cement)	Place 1m2 canvas or 0.5m x 0.5m trays along spreader run	M	every 400 m2 every 150m for a 2.4m width	Weigh mat or tray	± 5% of specified rate	Daily work Log	Contractor				
1.3.3		Compare area spread with weight used for each spreader load	M	On-going measurement by computer/load cells	Measurement each run	± 2.5% of specified rate	Daily work Log	Contractor				
1.3.4	Injection & Mixing of Water	In-situ Stabilisation process	M	On-going visual assessment	Visual and hand squeeze test	Mixed material free of pockets or streaks. Overlaps minimum of 150mm	Daily work Log	Contractor				
1.3.5	Depth of stabilisation	Depth of stabilisation	M	Every 200m	Measurement	+15mm / -5mm from specified depth	Daily work Log	Contractor				
1.3.6	Compaction	Plateau Density Test	W	On first day and then 1 per 20,000m2 unless material or anvil conditions change	Draft NZTA T/24	To establish suitability of rollers and compaction mode / pattern	Daily work Log	Contractor				

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1.3.7		Maximum Dry Density	M	1 per day up to 3,000 m2, 1 per 2,000m2 thereafter	NZS 4402.4.1.3	For analysis of DoC	IANZ Report	Contractor				
1.3.8		Degree of Compaction	H	5 per 1,000m2	NZS 4407.4.2.1 (to 100mm and 200mm) and NZS 4407.4.2.2	Average DoC ≥ 98% Minimum DoC ≥ 95% Refer NZTA T/23	IANZ Report	Contractor				
1.3.9	Finished Pavement	Crossfall	H	every 20m	Measurement	± 0.5% of specified crossfall measure 2m apart	Survey	Contractor				
1.3.10		Stabilised width	H	1 every 20m	Measurement	-20mm, +100mm	Survey	Contractor				
1.3.11		Surface Shape	H	every 20m	Measurement	< 10mm using 3m straight edge	Survey	Contractor				
1.3.12		Surface Levels	H	every 20m	Measurement	-5mm, +15mm	Survey	Contractor				
1.3.13		Surface Finish	H	Per Lot	Visual	1. Larger aggregate held in pace with a matrix of smaller aggregate 2. Smaller aggregate held in place by fine material 3. matrix does not displace under normal trafficking and/or sweeping	Survey	Contractor				
1.3.14		Degree of Saturation, DOS	H	5 per Lot	Measurement	DOS ≤ 80%	IANZ report	Contractor				
1.4. FINAL SIGN OFF												
1.4.1	Non-conforming results	Assessment of all test results for conformity	H	Each Lot	Site Inspection	Reporting of any non-conforming results to Designer via NCR	NCR	Engineer's Rep				

Client Final Inspection - the signature below verifies that this ITP has been completed in accordance with the Specifications and verifies lot compliance.

Contractor's Rep Name:_____ Signature:_____ Date: _____

Engineer's Rep. Name:_____ Signature:_____ Date: _____

H	Hold Point	Work Shall not proceed past the HP until released by the Eng. Rep.
W	Witness Point	An Inspection which must be witnessed by the Eng. Rep.
M	Monitor Point	Intermittent monitoring of any stage of the work in progress by the Eng. Rep.