Infrastructure Alliance

Hamilton City Council Downer

Inspection and Test Plan

SECTION 1 – GENERAL DETAILS			
Project Name:	Infrastructure Alliance		
Project Number:	094		
Customer:	Hamilton City Council		
Contract Number:	550580		
Area/ Sub-System:		Lot ID Number:	
ITP Number:		**Version**:	
ITP Description:	Asphalt Footpath Renewals		
Discipline:			
Specification:	Refer to relative RITS and SWMS		
Drawings:	Refer to relative RITS and SWMS		
Prepared By: *(Name)*		Date:	
Quality Specified:			

Inspection Key *Use in sections 3, 4 and 5.*

A	Action
B	Report by Breach
C	Check
D	Dimension Inspection
E	Examine
H	Hold Point
I	Inspection
M	Monitor on Random Basis
O	Operation
R	Review
S	Subcontractor
V	Visual Verification
W	Witness Point

Responsibilities *Use in sections 3, 4 and 5.*

Role Key		Name	Signature/ Initial
FP	Foreperson		
SV	Supervisor	Conrad Ferreira	
MM	Maintenance manager	Darrin Williams	
QE	Quality engineer	Gurjiwan Brar	
OM	Operations manager	Wayne Bowden	
RM	Renewals manager		
AM	Alliance manager		
PM	Project manager		
PE	Project engineer		

SECTION 2 – SIGNATURES – CLOSE-OUT & APPROVAL						
ITP Close-Out by Downer	Name:		Signature:		Date:	
Downer Approval	Name:		Signature:		Date:	
Customer Approval	Name:		Signature:		Date:	

SECTION 3 - Notifications									
Item No.	**Activity/ Task Description**	**Inspection Point: Quality Control Activity.**	**Acceptance Criteria**	**Verifying Document**	**Frequency**	**Inspection /Test Key**	**Role key**	**Authoriser signature & Date**	
3.1	Site inspection	Walk over with maintenance supervisor and foreperson	Visual inspection	ITP	Once	**V**	**SV FP**		
3.2	Service location and permits issued	All services located and marked. Permits issued	Permits issued and received by qualified staff only	Relative permits to be kept in work pack	As permits expire	**V**	**FP**		
3.3	Work pack Checklist	Check the work pack checklist	Copy of work pack with all documents	As per site meeting	Once	**V**	**FP**		
SECTION 4 - Construction									
4.1	Environmental controls	Apply environmental controls to site. Witches hats, silt socks, water for concrete saw	Consider drainage, noise, dust, weather.	Refer to DN-ZH-FM028.2	Once	**V**	**FP**		
4.2	Saw Cutting	Cut the existing footpath to the full depth of asphalt	Cut in straight line and regular shape	RITS 3.4.9.2	As required	**V**	**FP**		
4.3	Excavation	Dig out the existing footpath to the pavement depth.	Visual subgrade inspection by site Foreperson	Refer RITS 3.4.9.3 & Drawing D3.3.5	Once	**V**	**FP**		
4.4	Preparing subgrade(If Subgrade fails Visual inspection)	Subgrade shall be further compacted and replaced with Suitable material.	Visual inspection	Refer to RITS 3.4.9.4	Once	**V**	**FP SV**		
4.5	Timber Edging	Pegs spaced every 750 max from centre to centre and edge boards shall be 75 x 25.	Visual inspection	Refer to RITS D3.6.1	As required	**V**	**FP**		

4.6	Pavement base course	Make up existing base preparation where required. **It will change on as per suitable vehicle crossing.**	Clegg hammer value shall not less than 12 after 4 blows	Refer to RITS D3.3.5	Throughout the activity Clegg Every 10m	**H**	**FP** **SV**		
4.7	Asphalt surfacing	Asphalt layer 25mm. **40mm for vehicle crossings.**	String line from top of both sides of boxing.	Refer to RITS D3.3.5 & RITS 3.4.9.8	Every 10m for the duration of the project	**V**	**FP**		
4.8	Site reinstatement	Berms reinstated with top soil and grass seeded. Site to be swept	Minimum of 100mm of topsoil and a good amount of grass seed applied.	Refer to ***RITS*** 2.2.4.6	As required	**V**	**FP**		
SECTION 5 – Post Construction Audit									
5.1	Post Completion Audit	Area measured? Any visual crack observed? Photos taken? As-built updated?	Refer to RITS	Post completion Report	After the completion of job	**W**	**SV**		

COMMENTS

Berms are to be mown during the defects liability period as well as prior to take over by Council.

3.4.9 Footpaths, Cycle Paths and Vehicle Crossings

This section outlines the work required to construct, reinstate or repair footpaths, vehicle crossings and away-from-road cycle paths.

3.4.9.1 Alignments, Lines and Levels

The edge lines of kerbs, footpaths, shared paths and vehicle crossings shall be perfectly straight between tangent points, and on curves shall sweep round without kinks, flats or angles in a smooth, true arc to the radius shown or directed.

Design levels and alignments shall be strictly adhered to and the grade from level peg to level peg shall be even, provided always that at changes of grade the angle between the grades shall be eased so as to form a vertical curve or other form of smooth transition. The entire berm area shall fall, at an even grade where possible, from the property boundaries to the kerb and channel.

3.4.9.2 Break out, Removal and Disposal of Existing Berm Features

All existing berm features that are to be removed shall be broken up and lifted out to reduce damage to the surrounding features. The outer limits of these features shall be saw cut, except in the case of paving blocks or grass verges, before removing to provide a tidy interface between existing and replacement work.

Where salvaging of materials (e.g. catchpits, gratings, frames, stormwater piping) is specified, care shall be taken to ensure that as little damage as possible is done to materials. Such units shall be neatly stacked on the site such that they do not obstruct any footpath, vehicle crossing or roadway until they are taken off site. All materials not for reuse shall be removed from site and appropriately disposed of.

3.4.9.3 Excavation to Pavement Depth

Excavation shall be to the pavement depth as shown on Drawing D3.3.5.

The width of all excavation shall be no wider than necessary to construct or reinstate the various berm features.

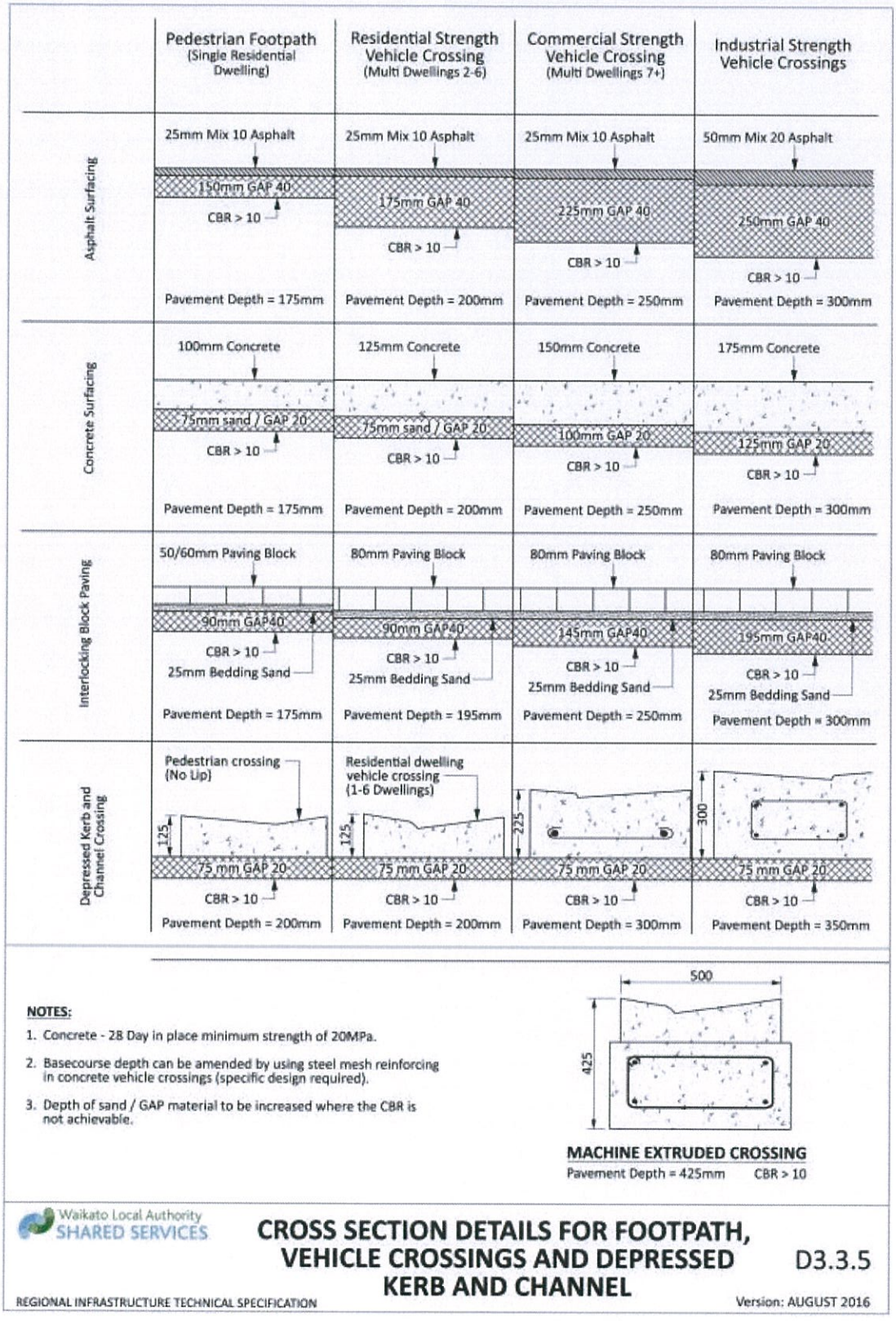
Where excavation adjoins existing berm features or carriageways, care shall be taken not to undermine the existing surfacing while material is being removed. The sides of the excavated area shall be trimmed to as vertical as possible without being unstable or causing undermining.

3.4.9.4 Subgrade Preparation

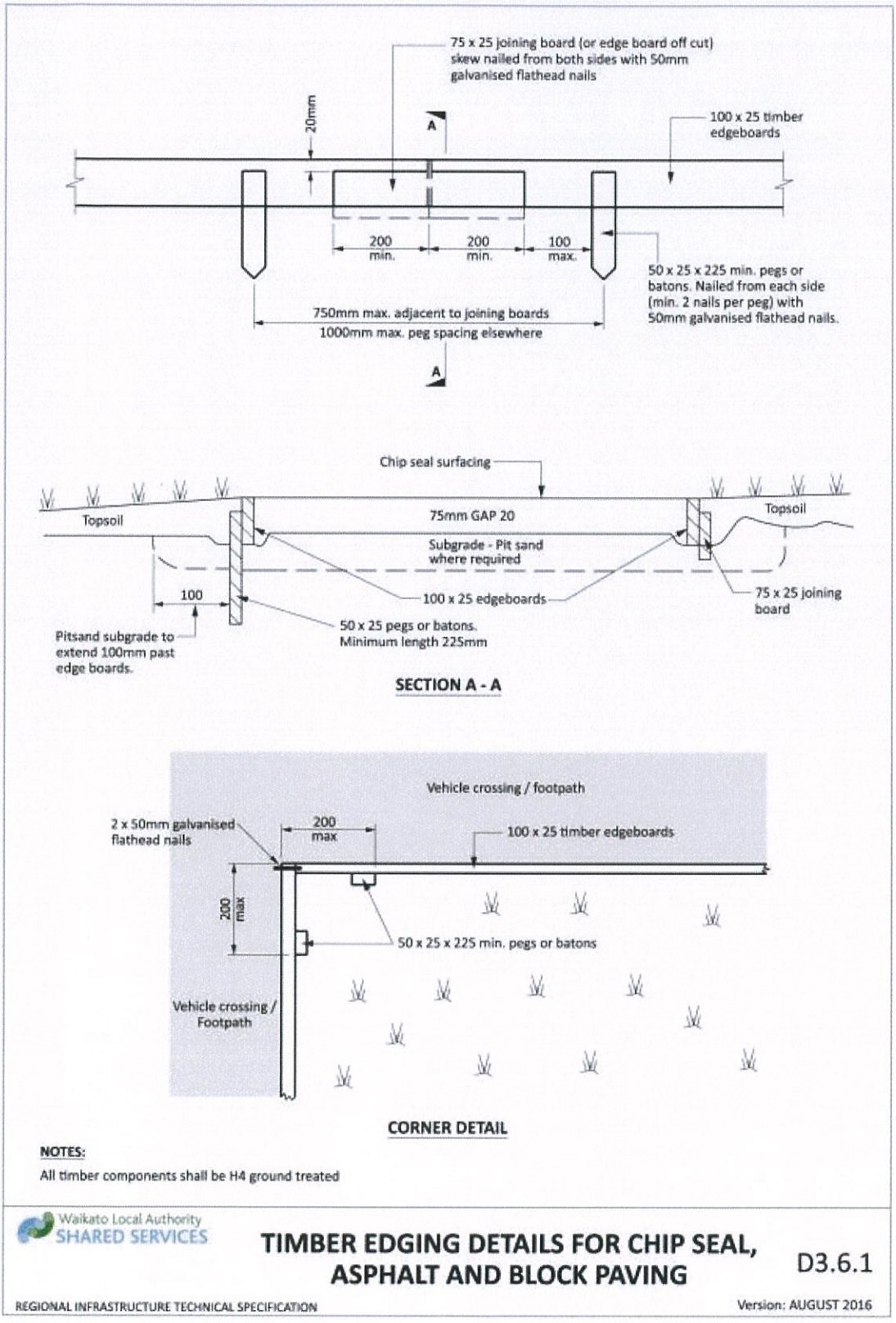
The exposed subgrade (excavated to trial subgrade level or pavement depth) shall be tested by using a Scala Penetrometer for compliance with the following CBR values

a) In footpath, cycle paths and traffic island infill CBR value >10 (4 blows per 100mm)

b) In vehicle crossing and kerb and channel areas CBR value >10 (4 blows per 100mm)



Drawing 3-17: Cross section details for footpath, vehicle crossings and depressed kerb and channel



Drawing 3-24: Timber edging details for chip seal, asphalt and block paving

2.2.4.3 End Product Specification

Where an end product specification is required, the desired compaction criteria of the placed and compacted fill are specified and the earthworks contractor is free to choose whatever method of compaction they wish to achieve the targets specified.

2.2.4.4 Frequency of Tests

During the earthworks, soil tests need to be undertaken on the placed fill to ensure the necessary degree of compaction is being achieved. The methods of testing and frequency of tests shall be specified and included in the Fill Design Report.

2.2.4.5 Cuttings and Embankments

For cuttings and embankments formed as part of the earthworks, details of analytical methods used to determine slope stability are to be included. As part of this, the engineering properties and relevant ground investigation information is required.

As these earthwork features can affect the groundwater and surface run off, or need drainage measures to ensure stability, details of the drainage must be included.

If embankments form part of the proposed site works, settlement calculations must be included and justified from ground investigation data.

Details of any special measures to analyse slope or control settlements shall be included.

2.2.4.6 Topsoil

Top soiled surfaces shall be between 150–300mm consolidated depth, and shall consist of the outermost layer of natural soil with the highest concentration of organic matter and microorganisms, and generally be free of vegetation, large clumps, excessive and large stones, and be suitable for easy spreading in an even layer.

This topsoiling should endeavour to mimic the pre-existing conditions.

2.3 CONSTRUCTION AND FINAL DOCUMENTATION

2.3.1 Construction

During construction, site inspection and or testing shall be undertaken by a suitability qualified geo-professional with the requirements outlined in the geotechnical assessment report.

If any archaeological site or waahi tapu is discovered or disturbed during the works, Iwi and the Council shall be notified immediately

2.3.2 Dust Management

Reference should be made to MfE's Good Practice Guide for Assessing and Managing Dust.

During dry weather, where there is more than 400 m2 of bare soil exposed on a development, one or more of the measures below is to be employed to reduce wind erosion and the amount of airborne dust emanating from the site: