<u>Government of Jersey</u> <u>Highway Engineering</u>



<u>Specification and Standard</u> <u>Details for Highway</u> <u>Reinstatements:</u>

This document includes reinstatement of utility openings in carriageways, pedestrian streets, footways, cycle paths and verges

Revision	С
Status	Published
Date	March 2023
Next review due	March 2026

This page intentionally blank

Contents

Page No

Introduction					
Definitio	ons	9			
1.0	General	13			
2.0	Notifications	13			
3.0	Guarantee period	13			
4.0	Permanent reinstatement methods for flexible road carriageways	14			
5.0	Interim reinstatement methods for flexible roads	14			
6.0	Reinstatement methods for footways and cycleways	15			
7.0	Reinstatement of granite paving	16			
8.0	Reinstatement of composite roads	16			
9.0	Reinstatement using other materials	16			
10.0	Use of "cold lay" or "deferred set" materials	16			
11.0	Backfilling of service trenches below surface layers	17			
12.0	Reinstatement using foam concrete to back fill excavations	17			
13.0	Requirement to saw cut	18			
14.0	Trimlines, trim-back and stepped joints	18			
15.0	Protection from water ingress	18			
16.0	Undercutting	18			
17.0	Length of time excavations remain open	19			
18.0	Surface profile standards	19			
19.0	Control and monitoring of asphalt temperatures	19			
20.0	Testing of materials	19			

21.0	Safety of road surfaces prior to re-opening to traffic	20
22.0	Reinstatement of high friction surfacing	20
23.0	Reinstatement of traffic signs and other highway apparatus	20
24.0	Special requirements for the reinstatement of embargoed roads	20
25.0	Special requirements for the reinstatement of roads programmed to be resurfaced	20
26.0	Minimum depth of utility infrastructure	20
27.0	Reinstatement of road verges	21
28.0	Working adjacent to trees	21
29.0	Contaminated material/land	21

	List of Appendices	Page No
Appendix A:	Specification for the Reinstatement of Openings in Highways. Currently the Fourth edition dated May 2020 (the latest Edition or latest dated document to be used). Published by DfT	21
Appendix B:	Roads Contractors Competency Framework	22
Appendix C:	The Highway Authority acceptance procedure (Flow Chart)	23
Appendix D:	Surface Profile Requirements	24
Appendix E	Map of protected routes	27
Appendix F:	National Joint Utilities Group Publication Volume 4 "NJUG Guidelines for the Planning, Installation and Maintenance of Utility apparatus in Proximity to Trees" (Issue 2 – 16 th November 2007)	
Appendix G	: Maps of road and cycle path classes	29
Appendix H:	Trench Reinstatement Standard Detail Drawings	
	Key to Materials	33
	• Section 1 Road classification 1,2 and 3 - permanent reinstatement	34
	 Section 2 Pedestrian streets, cycle paths and footways permanent reinstatement 	41
	• Section 3 Heritage and modern granite paving - permanent reinstatement	51
	• Section 4 Road Classification 1,2 and 3 - Interim reinstatement with final stage	59
	• Section 5 Not used in this revision	66
	• Section 6 Placement of new services within GoJ roads (inclusive minimum depth requirements in carriageways, footways/cycle paths and verges)	67

This page intentionally blank

Introduction

The Government of Jersey Specification and Standard Details for Highway Reinstatement details the minimum requirements for the reinstatement of Utility Undertakers works on Government of Jersey Roads. It is published under article 33 of the Road Works and Events (Jersey) Law 2016.

This document covers the specification and standard details for the reinstatement of trenches and utility works in Government of Jersey road carriageways, pedestrian streets, footways, and cycle paths, according to their classification or construction material.

The relevant Parish Authority should be contacted for works affecting parish by-roads.

Where details are not included for elements of design or reinstatement such as signs, lining, kerb works, islands, street lighting and signals, contact should be made with Government of Jersey Highways (GoJ Highways) at an early stage, so that the reinstatement of specialist highway assets can be planned.

Specifications and standard details for protected routes and embargoed roads, footways and cycle paths are not included. Any planned utility works in a protected route or embargoed road, footway or cycle path should be discussed and agreed with GoJ Highways at an early stage of planning to understand the reinstatement requirements on an individual basis. The permanent reinstatement following emergency works in an embargoed road or protected route must be agreed with GoJ Highways.

This page intentionally blank

Definitions

carriageway	That part of the highway for use by vehicles.
composite road	A road structure including both concrete and asphalt layers.
cycle lane	Cycle facility within the carriageway limits designated for cyclists only.
cycle path	Cycle facility outside carriageway limits generally for the use of cyclists, or the shared use of pedestrians and cyclists.
cycle path class	GoJ cycle paths are classified for the purposes of this specification into 3 classes, Class 1 , Class 2 and Class 3 . The location and extent of each class of cycle path is shown on the Maps in Appendix G (Jersey and St Helier).
class B material	Granular material as specified in Appendix A1 of the "Specification for the Reinstatement of Openings in Highways" - fourth edition, dated May 2020, published by the UK DfT.
embargoed road	A road or part of a road in which Undertaker Works are prohibited for a period of 3 years for resurfaced roads and 5 years for roads that have been re-constructed. Embargoed roads are published and identified on the Government of Jersey website.
enhanced reinstatement	Reinstatement carried out following emergency or GoJ Highways approved works carried out on a road or section of road subject to an embargo.
footpath	A way over which the public have a right of way on foot only, which does not form part of the highway, is separated from a footway but may lead to or from a highway.
flexible road	A road where the road structure is constructed entirely from asphalt materials.
footway	That part of the highway for use by pedestrians.
HAUC	Highways Authorities and Utilities Committee of the United Kingdom.
DfT <i>(HAUC)</i> Specification 2020	Specification for the Reinstatement of Openings in Highways. Currently the Fourth edition dated May 2020 (the latest Edition or latest dated document to be used). Published by the UK Department for Transport.
GoJ Highways	Government of Jersey – Highway Engineering section contact <u>dfi@gov.je</u>
interim reinstatement	An asphalt reinstatement carried out entirely with binder course material flush with the finished road surface in a temporary arrangement. A second visit will be required to remove the upper 40mm of asphalt, to be replaced with the required surface course

material.

intervention Restoration of a reinstatement which does not comply with the performance standards, to a condition complying with those standards.

- *License* An approval granted in writing, under the Highways (Jersey) Law 1956, to a private individual or organisation to install a private utility in the highway, or to carry out physical changes to the highway.
- *Licensed* An individual or organisation issued with a License to install a private utility over or under, or carry out changes to, the highway.
- micro asphalt A thin cold-mix surfacing applied to improve and protect the condition of the road.
- pavement The structural layers of the highway.
- pedestrian Street or road where normal vehicular traffic is prohibited by legal street order.
- permanent The orderly placement and proper compaction of reinstatement layers up to and including the finished surface level. The entire structure being reinstated to a permanent standard at the first visit.
- *protected* A road within which the installation of new utility infrastructure will not be permitted unless approved in advance by the Minister for Dfl.
- road class Government of Jersey (GoJ) roads are classified for the purposes of this specification into 3 classes, **Class 1**, **Class 2** and **Class 3** in descending order of traffic loading. The location and extent of each class of road is shown on the Maps in **Appendix G** (Jersey and St Helier).
- RWEL Road Works and Events (Jersey) Law 2016.
- SHW Specification for Highway Works published by the UK Department for Transport.
- surface layers The upper most layer of road cross section consisting of asphalt and Type 1 material. Asphalt and Type 1 material may have to be provided in multiple layers, depending on the class of compaction equipment used.
- surface A thin protective layer applied to the road surface to restore or rejuvenate surface characteristics such as skid resistance and waterproofing.

StatutoryThe following organisations have statutory rights to place infrastructureUndertakerin the Highway:

- The Minister for Dfl acting under the Highways (Jersey) Law 1956
- The Minister for Dfl acting under the Drainage (Jersey) Law 2005
- Jersey Electricity PLC
- Jersey Gas Company
- The Jersey New Water Works Company (Jersey Water)
- Jersey Post International Limited
- Jersey Telecom Ltd
- Sure
- Newtel
- stepped joint The reinstated binder and/or surface course layers are made wider than the reinstatement layer below to provide higher resistance to water ingress and improve the mechanical strength of the pavement structure.
- Trafficworx Trafficworx is the system for the control, co-ordination, and management of road works on the Jerseys road network.
- TWX Permit An approved Trafficworx permit is required by law before works on the highway can commence. The process and indicative timescales for obtaining TWX permit are shown in stage two of the GoJ Highways acceptance procedure (Flow Chart) in **Appendix C**
- trim-line The saw cut face that defines the outer edge of an excavation at the surface to reduce joints and deviations.
- trim-back The area between the trim-line and a fixed feature and/or the edge of an excavation.
- Type 1Is granular Type 1 sub-base material (as the Specification for Highway
Works (SHW) CI 803)).
- verge The area of the highway outside the carriageway (cycle path and/or footway if present). A verge may be slightly raised but is exclusive of embankment or cutting slopes and is generally grassed.

vehicle A section of footway where kerbs have been lowered on a cycle path or footpath, to permit vehicles to cross to access private or other premises.

This page intentionally blank

Specification

1.0 General

1.1 Except where explicitly stated in this specification to the contrary, all reinstatement works are to be in accordance with the current (at the time of the reinstatement works) DfT *(HAUC)* Specification for the Reinstatement of Openings in Highways.

This is currently the fourth edition and dated May 2020. The current fourth edition is incorporated in **Appendix A** of this document.

1.2 <u>Article 10 of the RWEL</u> sets out the general duties on persons carrying out roadworks.

Statutory Undertakers shall carry out excavations and reinstatement in accordance with this specification.

Licensed Undertakers will be required to complete works in accordance with the specification detailed in their License.

All Undertakers shall guarantee the performance of the reinstatement for the guarantee period and to the relevant standards. See Appendix C for acceptance procedure.

Undertakers need to meet the Competency Framework laid out in Appendix B.

Undertakers may delegate utility works to organisations that meet the Competency Framework in **Appendix B.** The Undertaker remains responsible to the Government of Jersey for the work carried out by any organisation to which such delegation is made.

All Undertakers are required to apply for, and be issued with, a TWX permit in accordance with the RWEL before commencing works on Jersey roads.

2.0 Notifications

Where GoJ Highways require a notification in accordance with this specification, notifications should be e-mailed to <u>dfi@gov.je</u>

3.0 Guarantee period

The guarantee period for all work carried out on Government of Jersey roads by Undertakers shall be three years from the time of reopening the road to traffic. The guarantee period for work where an Undertaker carries out an interim reinstatement shall commence on registration in Trafficworx of the permanent reinstatement.

If at any time during the guarantee period, work carried out by an Undertaker fails the performance requirements of this specification, the Undertaker shall carry out remedial action to restore the reinstatement to the specified standard.

If the surface profile of a reinstatement exceeds any intervention limit during the guarantee period, then remedial action must be taken to return it to the as laid condition. Surface profile requirements when an asphalt reinstatement is first laid, and throughout the guarantee period, are detailed in appendix D.

Should remedial action be required during the guarantee period then the three years guarantee period re-commences from the time at which the remedial completion was registered on Trafficworx.

The Highway Authority acceptance procedure (flow chart), from permit to sign off at-a Type C inspection, is illustrated in **appendix C**.

The definitions and timings of the various Highway Authority Inspections are:

- **Type A** Inspections are inspections of works sites during the active works stage (prior to completion), checking permit and Approved Code of Practice compliance and trench or patch reinstatements for acceptable tolerances and standards of reinstatement methods, materials, and quality***
- **Type B** Inspections are inspections of the finished (Registered) trench or patch profile, quality and performance during the stage between completion and six months before the end of the trench or patch guarantee period (three years) ***
- **Type C** Inspections are inspections of the trench or patch during the six months period before the end of its guarantee period (three years) to assess whether the trench or patch has maintained its expected performance, integrity and quality for the duration of the guarantee period.

*** "measured and assessed by the Highway Authority against tolerances and standards specified"

4.0 Permanent reinstatement methods for flexible road carriageways

The Undertaker shall carry out the reinstatement of flexible road carriageways in accordance with this specification and the standard drawings in **section 1** of the standard detail drawings in **Appendix D**, **except where the existing road** construction exceeds the depths indicated in those standard drawings, in which case the reinstatement is to be at least equal to the existing road.

The Undertaker shall backfill all trenches below asphalt layers with granular Type 1 sub-base material (SHW CI 803) unless "as dug" material can be clearly demonstrated by testing to conform to the requirements for Class B granular backfill, as defined in the DfT (*HAUC*) Specification (May 2020). Test results shall be submitted to <u>dfi@gov.je</u> for approval prior to any backfilling operations taking place.

5.0 Interim reinstatement methods for flexible road carriageways

The Undertaker may carry out the reinstatement of roads over two separate visits.

The trench backfill, sub-base and asphalt base course shall be reinstated to a permanent standard at the first visit. The permanent base material, or an alternative approved temporary material, shall be extended to the surface as the interim surface course.

On the second visit the interim surface course shall be removed, typically by cold planing (cold milling), and a permanent surface course laid in accordance with this specification, and the standard drawings in **section 4** of the standard detail drawings

in Appendix D.

An interim reinstatement shall be made permanent within three months, except where seasonal restrictions on road works apply, in which case the permanent reinstatement will be carried out within 4 weeks of those seasonal restrictions being lifted.

6.0 Reinstatement methods for footways & cycle paths

The Undertaker shall carry out the reinstatement in footways and cycle paths in accordance with this specification and the standard drawings in **section 2** of the standard detail drawings in **Appendix D**. No interim reinstatement is permitted on footways or cycle paths.

The Undertaker shall carry out reinstatements to vehicle crossovers in accordance with the level of use of that crossover. The Undertaker should contact a Government of Jersey Highway Inspector to establish whether the vehicle crossover is light, medium or heavy duty before work commences.

The Undertaker shall backfill all trenches below asphalt layers with granular type 1 sub-base material (SHW Cl 803) unless "as dug" material can be clearly demonstrated by testing to conform to the requirements for Class B granular backfill, as defined in the in the DfT (*HAUC*) Specification (May 2020). Test results shall be submitted to <u>dfi@gov.je</u> for approval prior to any backfilling operations taking place.

Where a reinstatement is being carried out on a crossover in an area where the current footway/footpath surface is constructed with concrete paviours, then GoJ Highways must be notified so that upgrading the whole crossover to an appropriate vehicle crossover standard can be considered.

The colour of asphalt surface courses must match the colour of the existing path. Generally, cycle paths are laid in "brown" A/C 6 surface course and footways within the St Helier ring road are laid with "red" A/C 6 surface course.

If red or brown material is not available or not economic on the day, surface courses may be laid in A/C 6 or A/C10 black and in all cases must be replaced with red/brown A/C 6 as appropriate within 3 months. A/C20 is not to be used as a temporary surface course on a footway or cycle path.

Paved footways and their reinstatements can be reasonably expected to withstand occasional overrun by vehicles. Where it can be shown that occasional over-run by any vehicle has caused surface deformation to a reinstatement within a paved footway and the adjacent surfaces do not show any associated surface deformation, the authority may notify the Undertaker accordingly, whereupon the Undertaker must restore the reinstatement to the as-laid profile.

7.0 Reinstatement of heritage and modern granite paving

7.1 General requirements

Undertakers will be required to submit a method statement to GoJ-Highways for approval before a Trafficworx permit and/or license will be issued for reinstatements in areas paved in granite/natural stone. Undertakers are advised to contact GoJ-Highways during the early planning of utility works in areas paved with granite.

Method statements should be prepared in accordance with the "Method of Working to be Adopted for Natural Stone Reinstatements" for the taking up and relaying of granite paving. See **Appendix H** section 3. Suitable adaptations should be made to reflect the requirements of any individual site.

7.2 Granite paving used in trafficked areas

Reinstatement details are provided in **section 3** of the standard details in **Appendix H**.

7.3 Reinstatement of granite paving in pedestrian only areas

Reinstatement details provided in **section 3** of the standard details in **Appendix H**.

7.4 Historic paving, setts and granite

Special measures are to be taken for the reinstatement of all heritage granite. Undertakers **must** contact GoJ Highways when planning works in heritage granite areas.

8.0 Permanent reinstatement methods for composite roads.

GoJ Highways should be contacted to discuss reinstatement requirements when utility undertakings are to be carried out in a composite road.

9.0 Reinstatement using other materials

If an Undertaker intends to use any method of reinstatement not contained within this specification and the standard detail drawings in **Appendix H sections 1 to 6**, then they must contact GoJ Highways before applying for a Trafficworx Permit.

10.0 Use of "cold lay" or "deferred set" materials

Where cold lay or deferred set materials are used, generally for emergency works carried out when "hot" materials are not available from Ronez, they must be replaced as soon as possible, but in any event no later than 10 working days after their use. The Undertaker is in no way relieved of their duty of care in ensuring the safety of all road users should there be a need to use deferred set materials.

11.0 Backfilling of service trenches below surface layers

If as dug material is to be used to backfill trenches, then the Utility Undertaker will be required to demonstrate that the material conforms to the DfT *(HAUC)* class B specification (May 2020), before that material is used for backfilling. Material test results must be submitted to GoJ Highways for approval.

The Undertaker shall backfill all trenches below asphalt layers with granular type 1 sub-base material unless "as dug" material can be clearly demonstrated to conform to the requirements for Class B granular backfill, as defined in the Dft *(HAUC)* specification (May 2020). Type 1 subbase used for backfilling trenches must conform to Clause 803 of the SHW. Type 1 material conforming to Clause 803 may be manufactured from recycled material.

All surplus excavated material is to be disposed off site in accordance with current legislation.

Services should be laid to the minimum depths shown on standard detail drawing UT1/01 (found in **section 6** of **Appendix D**). GoJ Highways must be notified if new services cannot be laid to the depths specified on standard detail drawing UT1/01, and/or the minimum required depth of services is unclear.

Where the required depth of cover cannot be achieved (450mm in footways, cycleways, or verges or 900mm in carriageways), then the Undertaker must seek approval to continue from GoJ Highways.

Compaction of trench backfill material (except foam concrete) must comply with Table A8.1 of the Dft (*HAUC*) specification (May 2020).

12.0 Reinstatement using foam concrete to back fill excavations

The minimum depth of foam concrete backfill shall be 450mm.

The minimum curing times of foam concrete shall be 48 hours before asphalt layers reinstatements are carried out.

Contractors must maintain records of concrete pour times and dates to demonstrate that asphalt reinstatements have not been carried out within 48 hrs of placing foam concrete.

Laying tolerances to surfaces, including any ridges that may form, are +10mm/ - 20mm.

Foam concrete reinstatements (FCRs) shall not be tamped or compacted but shall be smoothed with a wood float if necessary.

The maximum crushing strength for foam concrete used in all FCRs shall not exceed 10 N/mm² at 90 days.

13.0 Requirements to saw cut

All surfacing material edges are to be saw cut as follows:

- All surface course materials to S6.4.4 and S6.4.13 of the DfT (HAUC) specification (May 2020).
- All other edges (binder and base) to S6.8.6 DfT (HAUC) specification (May 2020).

A milled edge is not permitted under any circumstances.

14.0 Trimlines, trimback and stepped joints

14.1 Trimlines for reinstatements in carriageways

The carriageway trim line shall be a minimum of 300mm from any surfacing joint, iron work or kerb line, if not, the surfacing reinstatement will extend to the feature that is less than 300mm.

Trimline must be positioned such that the trim back is regular. See Fig S6.4 in DfT (HAUC) specification (May 2020).

14.2 Trimlines for reinstatements in footways

Where a trench reinstatement is laid in a footway less than 1200mm wide, the surface course asphalt reinstatement must be laid to the full width of the footway.

Where a footway is greater than 1200mm wide and where the joint on the side of a trench reinstatement is less than 500mm from the edge of that footway, then new surface course should be laid to the edge of the footway.

"Hoggin" is not acceptable backfill material, see the standard details for the required trench reinstatement **Section 3** in **Appendix D**.

Should "hoggin" material be found under an existing surfaced area, then GoJ-Highways shall be informed and the "hoggin" should be replaced by 50mm thick asphalt binder material.

15.0 Protection from water ingress

Undertakers and/or their delegated contractors must ensure that measures are taken to ensure surface water flows cannot enter open excavations.

16.0 Undercutting

Measures should be taken to fill any voids at the side of excavation and trenches, if necessary, existing asphalt should be cut back to ensure backfill material can be adequately compacted.

17.0 Length of time excavations remain open

Excavations should remain open for as short a time as possible, and in all cases not greater than five days, to avoid weathering and slumping of trench sides. Should a longer period be required then, an alternative construction method should be considered or additional control measures to prevent side slumping should be used.

18.0 Surface profile standards

Surface profile requirements are detailed at Appendix D. Reinstatements that do not meet the minimum surface profile standards will require remedial intervention. Remedial proposals must be submitted to GoJ-Highways for approval.

19.0 Control and monitoring of asphalt temperatures

Asphalt should be stored and transported in lorries equipped with hot boxes, or lorries equipped with sheeted insulated bodies, to ensure the temperature requirements for asphalt laid out in table 19.0 can be met at all times during transport, laying and compaction.

The temperature of asphalt should be monitored before and during laying.

Where Asphalt is outside the temperatures ranges in the following table, that asphalt should be discarded and recycled or disposed of appropriately.

Table 19.0 Temperature ranges for the transport and laying of asphalt concretes									
Grade of bitumen	Minimum te	Maximum temperature at							
	Within 30 minutes of arrival on site	Immediately prior to Rolling	any time during batching, storage and transport						
100/150 pen	120°C	90°C	170°C						
70/100 pen	125°C	95°C	180°C						
40/60 pen	130°	100°c	190°C						

20.0 Testing of materials

20.1 Testing of unbound materials

Undertakers will be required to submit Type 1 sub-base test certificates on demand.

Undertakers will also be required to undertake other relevant tests of all (any) unbound materials on request by GoJ-Highways.

20.2 Asphalt density testing

Undertakers will be required to carry out density testing of in-situ asphalt reinstatements to trenches by taking 2 pairs of cores on request by GoJ-Highways.

If cores demonstrate that the asphalt has not been compacted in accordance with this specification, then the Undertaker will be required to replace the asphalt reinstatement. Undertakers will also be required to undertake other relevant asphalt tests on request by GoJ-Highways.

21.0 Safety of road surfaces prior to re-opening to traffic

Undertakers should plan works so that no road will be reopened to traffic following Undertaker works unless an asphalt reinstatement has been carried out.

22.0 Reinstatement of high friction surfacing

All Undertakers are to notify Government of Jersey, Assistant Manager – Road Signs and Markings – contact <u>dfi@gov.je</u>, when openings are placed within High Friction Surfaced (HFS) areas: Undertakers will be charged for reinstatement of HFS. If the work is not notified, then Government of Jersey will carry out the work and charge an additional administration fee.

23.0 Reinstatement of traffic signs and highway apparatus

All traffic signs (including road markings), studs and traffic sensors, etc. removed or damaged during Undertakers works shall be re-erected or reinstalled upon completion in accordance with section S11 (Ancillary activities) of the DfT (HAUC) Specification (May 2020).

Where it is not possible for the Undertaker to provide the materials or expertise to complete the reinstatement in accordance with the DfT *(HAUC)* Specification (May 2020), they shall notify Government of Jersey (<u>dfi@gov.je</u>) of the damage and shall reimburse Government of Jersey the cost of the reinstatement or repair. In any such case the Undertaker shall complete their final reinstatement in accordance with the requirements of this specification, without delay.

Line markings must be replaced as soon as practicably possible and in all cases within 5 days of completion of the reinstatement works.

24.0 Special requirements for the reinstatement of embargoed roads

The details of all proposed enhanced trench reinstatements on *Embargoed Roads* must be submitted to the GoJ-Highways (<u>dfi@gov.je</u>) for approval prior to applying for a Trafficworx permit. The submission will include a site-specific method statement and anticipated timescales. A public communications plan may also be required.

25.0 Special requirements for the reinstatement of roads programmed to be resurfaced

Undertaker works planned on a section of road due to be resurfaced within 6 months of completion of those works, are required to have an enhanced reinstatement. Undertakers are advised to contact GoJ-Highways to discuss enhanced reinstatement requirements but will in any case will be notified of those specific requirements when the Trafficworx permit is issued.

26.0 Minimum depth of utility infrastructure

Utility Infrastructure to be at the minimum depths on the Standard detail drawing S6/UT/01 – The Placement of Services within the Public Highway.

27.0 Reinstatement methods for road verges

Earth Works

- a) Topsoil should be excavated as a separate operation to. and stored separately from, sub-soil. Topsoil storage heaps should be no deeper than 1 metre.**
- b) Trenches in verges should be back filled with the existing sub-soil (or an equivalent replacement) and compacted.
- c) Topsoil should be placed to an even thickness of no less than 150mm. A suitable topsoil should be imported if there is insufficient existing topsoil to achieve a depth of 150mm.
- d) All rubbish, stones, weed roots and other debris collected during the work must be removed completely off the site.
- e) Grade and level topsoil with a suitable blade to remove all dips, hollows, ridges, and mounds.
- f) Finished soil levels must be level with surrounding kerbs and manholes within the verge. The finished surface of topsoil should be raked and all surface stones exceeding 30 mm be picked and collected along with weed roots collected and disposed off site.

****Note:** Government of Jersey Manager of Municipal Services should be consulted before imported topsoil is used.

- 2) Seed Bed Preparation and Sowing
 - a) All seeding must be carried out during the appropriate weather conditions (consult with GoJ 'Parks & Gardens' for advice).
 - b) Apply Scotts Preseeder 8 + 12 + 8 + Mg at 40 g/m sq or similar approved preseeding fertiliser at the manufacturers recommended rate.
 - c) Sow grass seed at Advanta MM16 Low Maintenance Mix (spring, summer, autumn work), Or Advanta MM21 General Landscaping / Low Maintenance Mix (winter work) or similar approved at a rate of 35 g/m sq
 - d) Lightly rake the soil to no more than 15 mm deep, to cover seed.

28.0 Working adjacent to trees

When working near trees, the National Joint Utilities Group Publication Volume 4 "NJUG Guidelines for the Planning, Installation and Maintenance of Utility apparatus in Proximity to Trees" (Issue $2 - 16^{th}$ November 2007) should be followed. This publication is reproduced in **Appendix F**.

29.0 Contaminated material/land

Undertakers should be aware of the risks of discovering contaminated soils when excavating in roads.

Information is available

https://www.gov.je/environment/protectingenvironment/land/contamination/Pages/ index.aspx

Appendix A :

<u>Specification for the Reinstatement of Openings in Highways. Fourth edition dated May 2020</u> (the latest Edition or latest dated document to be used). Issued by DfT.

Appendix B : Contractor Competency Framework

This guidance does not relieve any duty holder in the supply chain of their responsibilities under the relevant Health and Safety Legislation.

- Companies should have a minimum of £5,000,000 public and products liability and a minimum of £10,000,000 Employers liability insurance.
- Companies should have a Health and Safety Policy
- Companies should provide an appropriate level of supervision appropriate to the works
- Companies must have current registration on Trafficworx to act in the capacity of a Temporary Undertaker under the RWEL
- Staff should have appropriate levels of competence including formal qualifications in the use of all plant and equipment intended to be used on site
- Relevant risk assessments, safe systems of work and health surveillance monitoring
- Relevant experience and track record demonstrated with a Company CV
- Supervisors who have an appropriate Management of Health and Safety Qualification, such as the IOSH "Managing Safely Course"

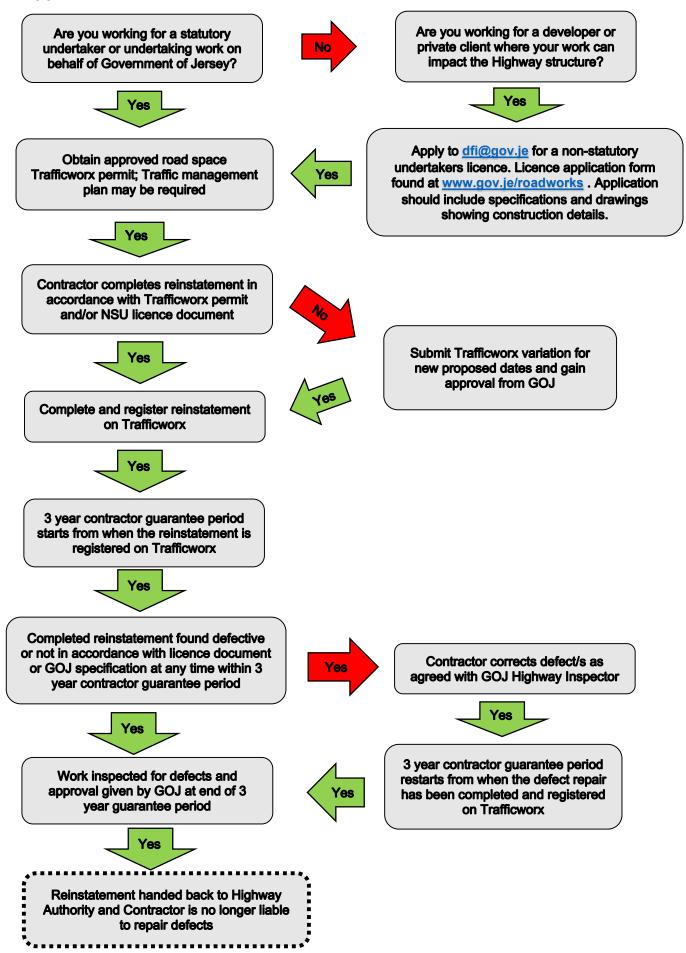
Requirements Specific to Works on Government of Jersey Highway Infrastructure

	requirement for at least 1 member of team on site to have supervisor qualification and at least one in 3 site operatives on site to have the parentice qualification at any one time)						or	70% pass rate for TypeConfinedA, Type B and Type Cspace highRoadwork inspectionsriskbytheHighway		Confined space Competence ir medium risk the use of a environment gas detector		occupational health monitoring,		
Supervisor qualification	n	S1	S2	S3	S4	S5	S6	S7		Authority on previous				eg HEP A
Operative qualification	I LA	01	02	03	04	05	06	07	08	6 months activities			vaccination	
Utility Undertakers Works	✓	✓	✓	✓	✓	✓	√	√	✓	√				
Footpaths	✓	✓	✓	\checkmark	✓	~	✓	✓	✓	√				
Entrance ways	✓	√	✓	~	√	~	~	✓	✓	✓				
Kerb laying	√	✓	~	~	√	~	~	~	~	√				
Asphalt laying	✓	✓	~	~	√	~	~	~	~	√				
Dropped kerbs	√	✓	~	~	√	~	~	~	~	√				
Vehicle Crossings	✓	✓	~	√	~	~	~	~	~	✓				
Pedestrian crossings	√	✓	~	√	~	~	~	~	~	✓				
Roadside and retaining walls that affect the road structure	✓	✓	\checkmark	~	✓	~	~	~	\checkmark	✓				
Street Lighting	✓	✓	\checkmark	~	✓	~	~	~	\checkmark	✓				
Special Surfacings	✓	\checkmark	\checkmark	\checkmark	\checkmark	~	~	✓	~	\checkmark				
Bus shelters for adoption	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	~	✓	~	\checkmark				
Resetting Manhole Covers in the Public Highway inc road side footpaths	✓	\checkmark								\checkmark			\checkmark	\checkmark
Re-setting Gullys in the Public HIghway	√	~	~	~	~	~	~	~	~	\checkmark				

Requirements Specific to Works on Government of Jersey Sewer Infrastructure

Break into Manholes/Live sewer working											√	\checkmark
Private foul sewers constructed in public land											✓	\checkmark
Private foul sewers constructed in the Highway	√	√	~	✓	✓	✓	~	✓	\checkmark		✓	\checkmark
Surface water sewer constructed in private land											√	\checkmark
Surface water sewers constructed in the Highway	√	~	~	~	~	✓	~	~	~		\checkmark	\checkmark
Maintenance of private sewers and manholes in public land											\checkmark	\checkmark
Maintenance of private sewers and manholes in the Highway	√	~	~	~	~	✓	~	~	~		\checkmark	\checkmark

Appendix C: The Highway Authority acceptance procedure



Appendix D Intervention Levels

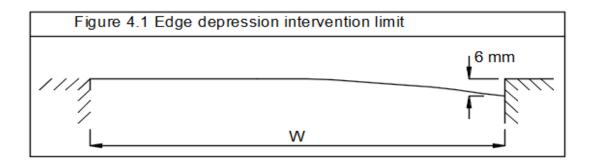
18.0 Surface Profile Standards

Edge Depression - see figure 4.1

An edge depression is a level difference between the reinstatement and the adjacent surface or cover and frame. An edge depression for a newly laid reinstatement should not exceed 3mm. Should an edge depression exceed 6mm for a newly laid reinstatement, the entire surface course for that re-instatement should be re-laid.

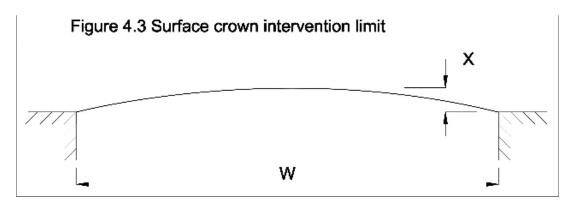
Any reinstatement with an edge depression that exceeds 6mm will require the replacement of the entire reinstatement surface course.

Should an edge depression exceed 6mm within the three year guarantee period then the surface course for that reinstatement shall be re-laid. Remedial work will be carried out for the full width of the reinstatement and for a minimum length of 3m.



Surface Crowning

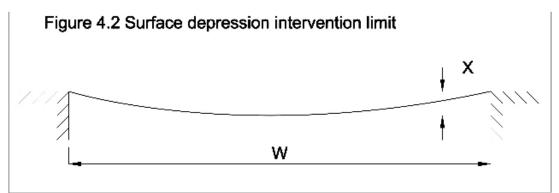
Surface crowning occurs where a reinstatement lies above the mean level of the adjacent surfaces.



Any reinstatement with surface crowning that exceeds the limits in table 18.0 will require the replacement of the entire reinstatement surface course.

Surface Depression

A surface depression is a depressed area in a reinstatement having generally smooth edges and gently sloping sides.



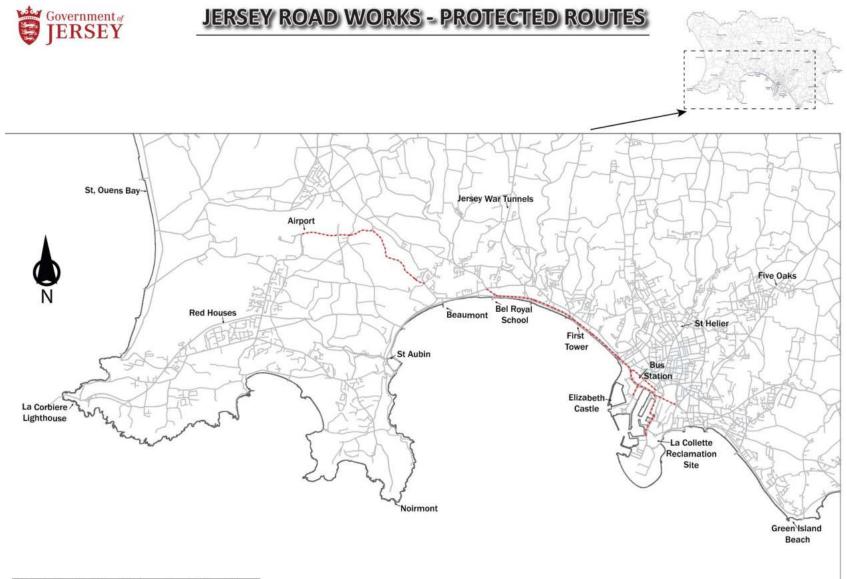
Any reinstatement with surface depression that exceeds the limits specified in table 18.0 will require remedial action. Normally the replacement of the entire reinstatement surface course.

Table 18.0 Intervention limits – Surface crowning and surface depression							
Reinstatement width	Intervention limit	Combined defect					
	(surface crowning or	intervention limit					
	surface depression)	(surface crowning and					
		surface depression)					
(mm)	(mm)	(mm)					
Up to 400	10	10					
400 to 500	12	10					
500 to 600	14	12					
600 to 700	17	14					
700 to 800	19	16					
800 to 900	22	18					
Over 900	25	20					

There is an absolute requirement to re-lay reinstatements should ponding occur as a result of the reinstatement.

Where intervention levels are met and a reinstatement requires to be re-laid, the reinstatement is to be carried out for the full width of the trench, and for a minimum length of 3m, or as agreed with GoJ-Highways.

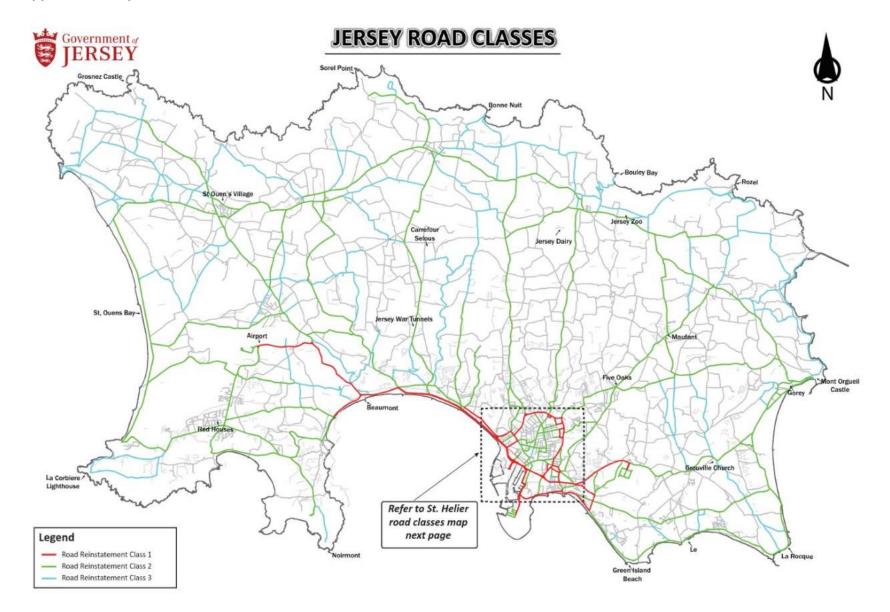
Appendix E: Map of Protected Routes

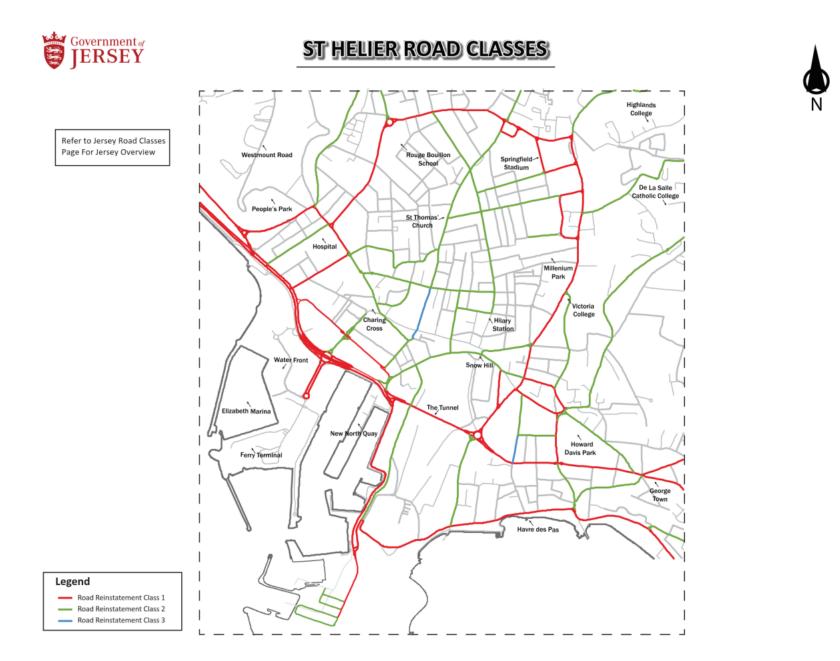


Protected Routes. R Road Works and Events (Jersey) Law.

Appendix F : <u>National Joint Utilities Group Publication Volume 4 "NJUG Guidelines for the</u> <u>Planning, Installation and Maintenance of Utility apparatus in Proximity to</u> <u>Trees" (Issue 2 – 16th November 2007)</u>

Appendix G: Map of road classes





Cycle Path Reinstatement Standards

Class 1

- St Aubin's Bay Promenade Cycle Path
- Gorey Promenade

Class 2

- St Peters Valley Cycle Path
- Grouville Common Cycle Path
- Airport South Perimeter Cycle Path
- Le Rocquier Playing Fields to St Clement Parish Hall Cycle Path
- Sections of the Cycle path adjacent Belle Vue and Les Quennevais School

Class 3

- Corbiere Walk Cycle Path (Railway Walk)
- Sections of the Cycle path adjacent Belle Vue and Les Quennevais School

For other cycle paths and cycle paths finished with a material other than asphalt or GP hoggin, contact GoJ-Highways to discuss and agree reinstatement specification.

Appendix H: Utility Trench Reinstatement - Standard Detail Drawings Key to Materials



ACCSC - Asphalt Concrete Close Surface Course to BS EN 13108 - 1 2006 and PD 6691 2007 - All roads. AC 10 close surf 100/150. All footways - AC 6 dense surf 100/150



ACBC - Asphalt Concrete Binder Course to BSEN 13108 -1 2006 and PD 6691 2007. All roads and footways - AC 20 dense bin 100/150



GSB1 - Type 1 Granular Sub-base Material to SHW Clause 803



Backfill Material - Class B Granular Backfill Material used in accordance with Appendix A1 of HAUC latest edition



FCR - Cement Bound General Material Catagory B to SHW Clause 822



CBGM B - Cement Bound General Material Catagory B to SHW Clause 822

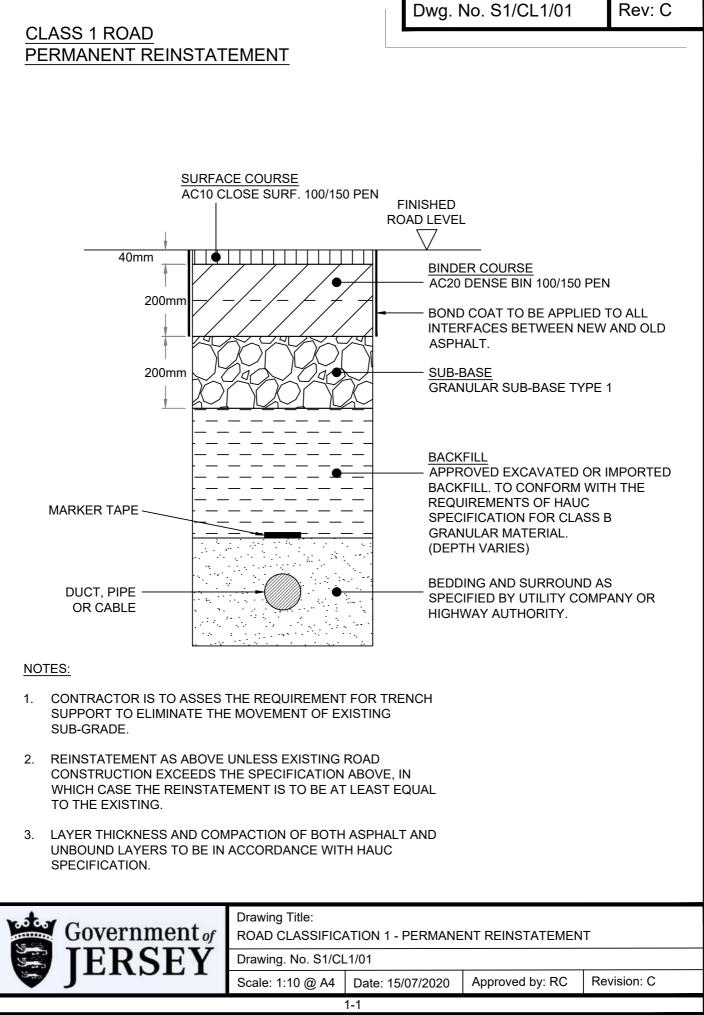


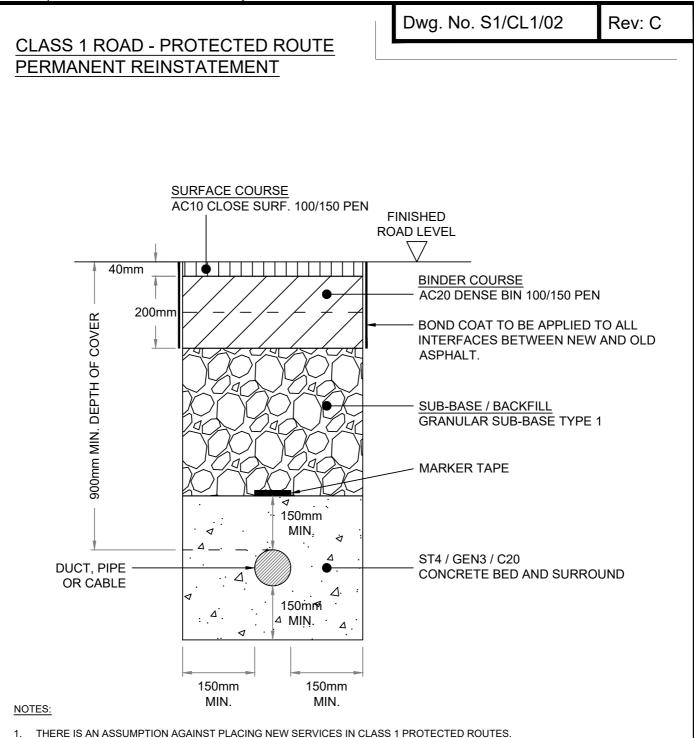
Concrete - Pavement Quality Concrete to shw Clause 1001

Standard Drawings Section 1 Permanent reinstatement of flexible road carriageways (class 1, 2 and 3)

roads).

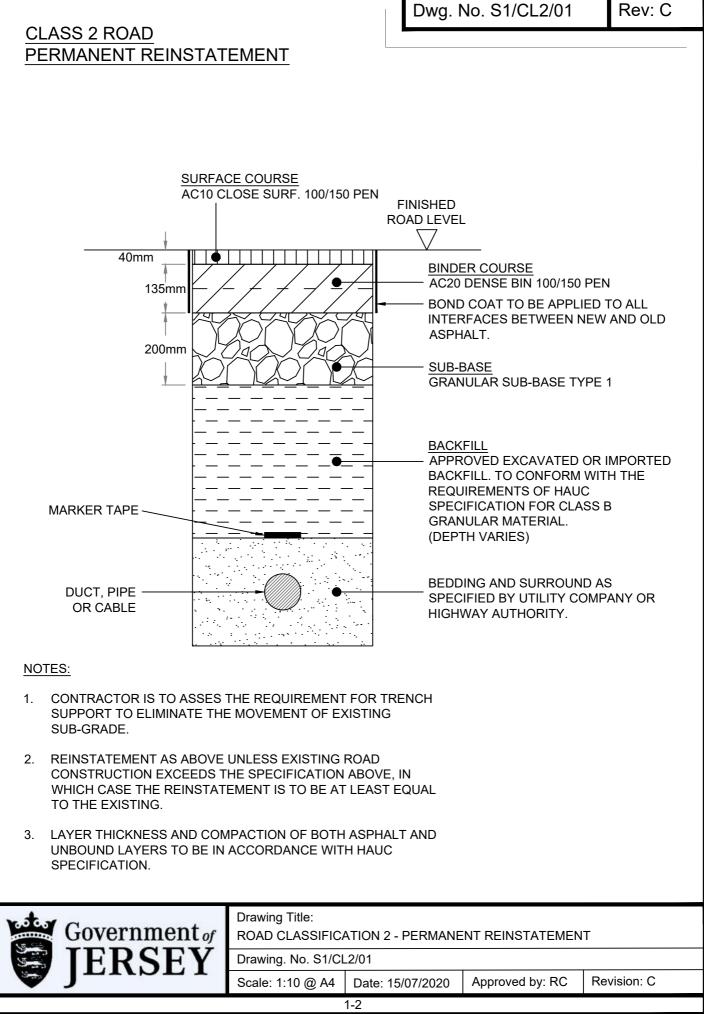
Drawing Number	Reference	Description	Revision	Date issued
S1/CL1/01	1-1	Road Classification 1 - permanent reinstatement	Rev C	15 Jul 20
S1/CL1/02	1-1A	Road Classification 1 – Protected Route Permanent Reinstatement	Rev C	23 Dec 21
S1/CL2/01	1-2	Road Classification 2 - permanent reinstatement	Rev C	15 Jul 20
S1/CL3/01	1-3	Road Classification 3 - permanent reinstatement	Rev C	15 Jul 20
S1/CL123/01	1-4	Road Classification 1, 2 & 3 - Foamed concrete reinstatement.	Rev C	15 Jul 20
S1/CL123/02	1-5	Road Classification 1, 2 & 3 - Shallow service reinstatement.	Rev C	15 Jul 20

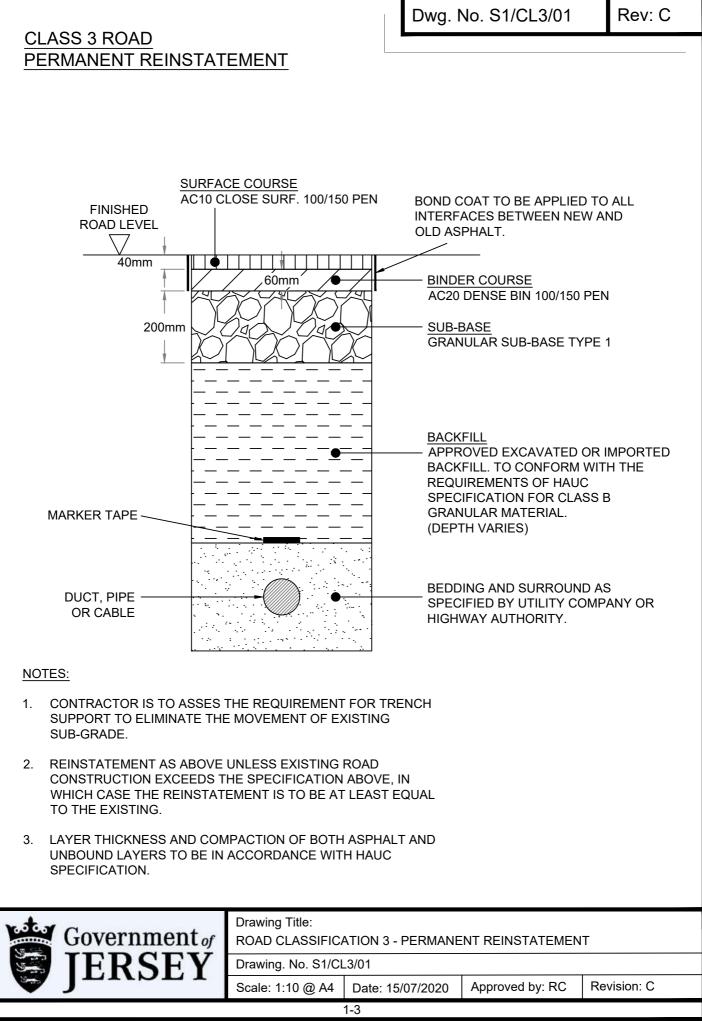


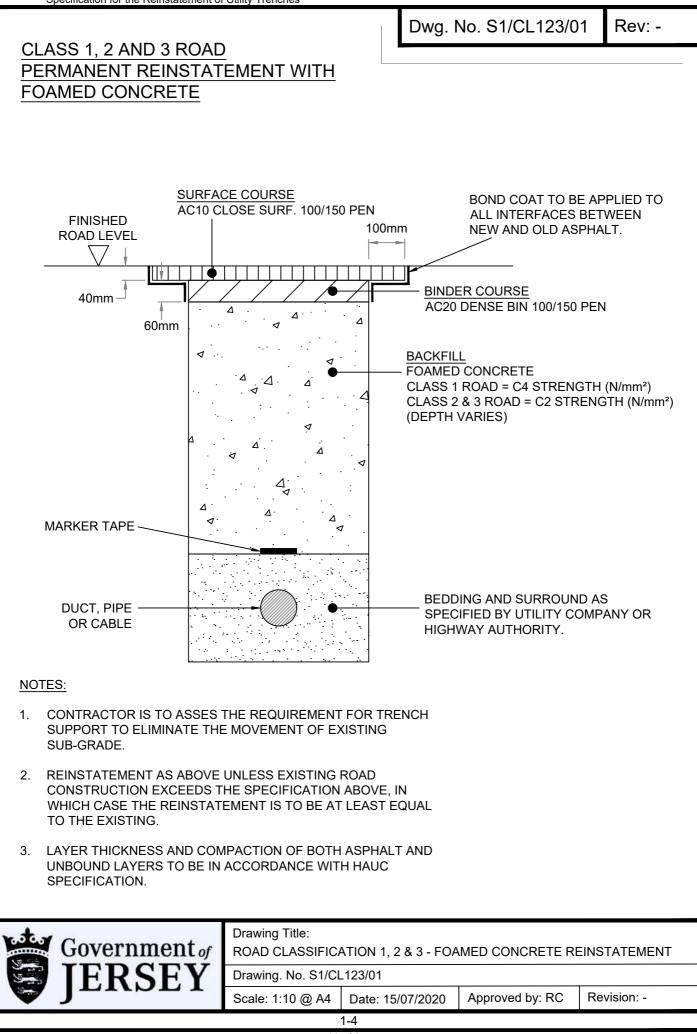


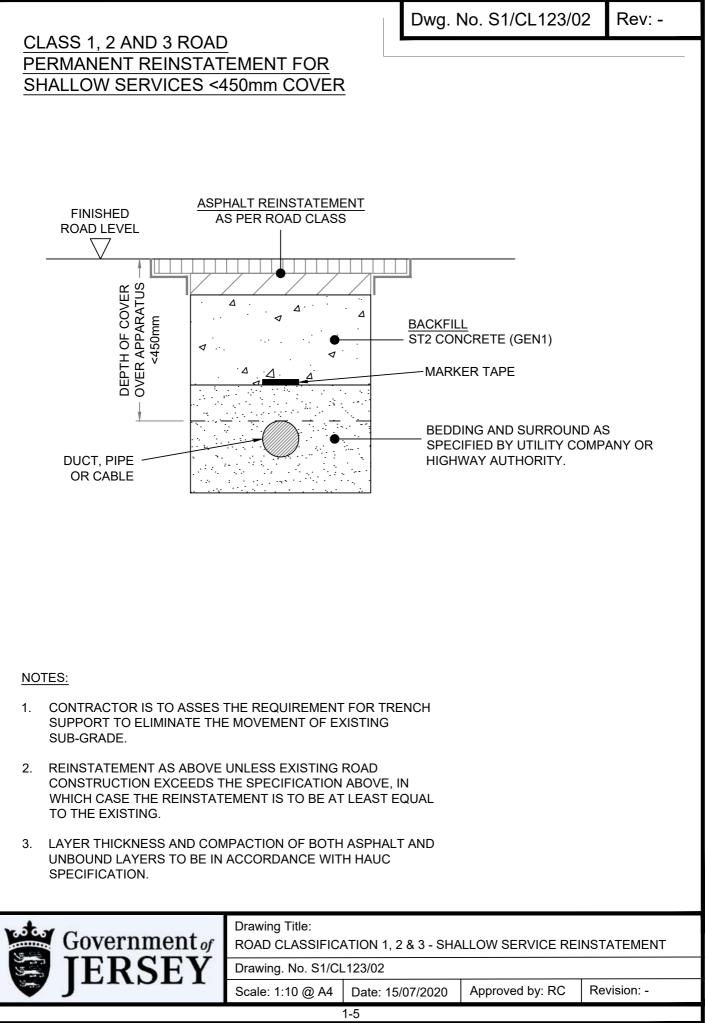
- 2. CONTRACTOR IS TO ASSES THE REQUIREMENT FOR TRENCH SUPPORT TO ELIMINATE THE MOVEMENT OF EXISTING SUB-GRADE.
- 3. ASPHALT REINSTATEMENT AS ABOVE UNLESS EXISTING ROAD CONSTRUCTION EXCEEDS THE SPECIFICATION ABOVE, IN WHICH CASE THE REINSTATEMENT IS TO BE AT LEAST EQUAL TO THE EXISTING.
- 4. LAYER THICKNESS AND COMPACTION OF BOTH ASPHALT AND UNBOUND LAYERS TO BE IN ACCORDANCE WITH HAUC SPECIFICATION.
- 5. ALL NEW or REPAIRED SERVICES IN A PROTECTED ROUTE MUST BE DUCTED SO THAT ANY FUTURE FAULTS CAN BE REPAIRED BY WITHDRAWING THE CABLE, PIPE or OTHER SERVICE WITHOUT THE REQUIREMENT FOR ROAD AND/OR LANE CLOSURES.

Government of	Drawing Title: ROAD CLASSIFICATION 1 PROTECTED - PERMANENT REINSTATEMENT								
	Drawing. No. S1/CL1/02								
JERBET	Scale: 1:10 @ A4	Date: 23/12/2021	Revision: C						
		1-1A							





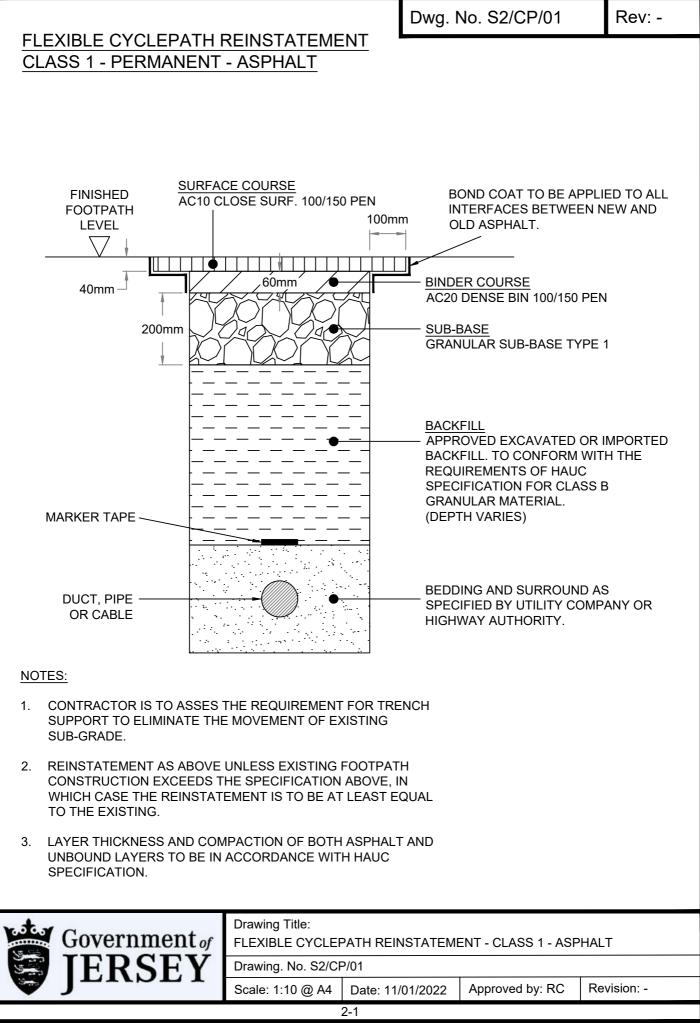


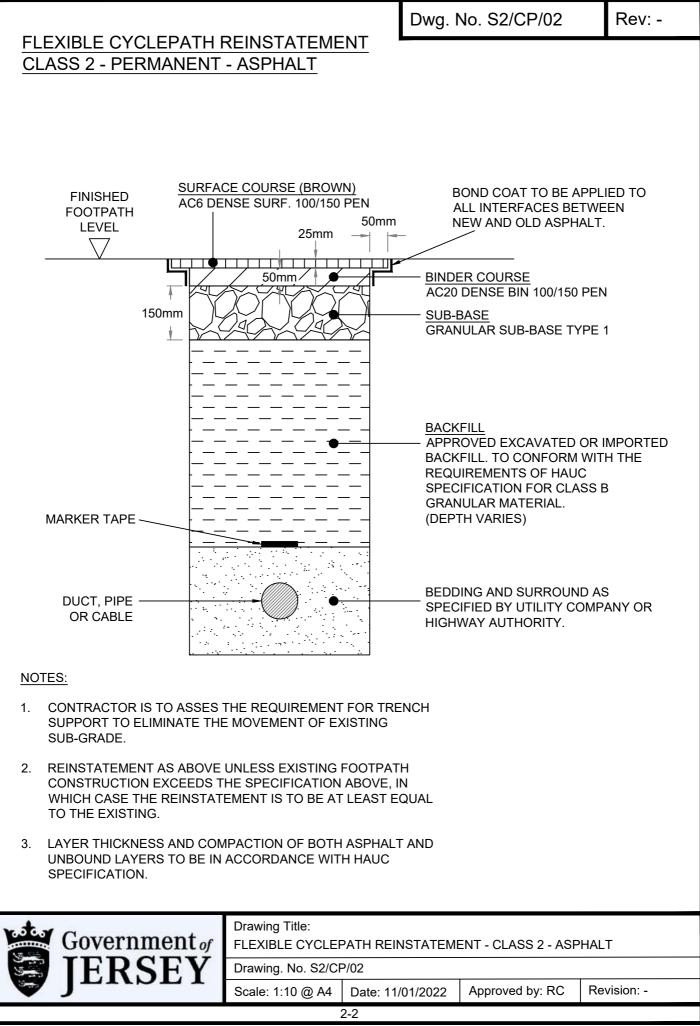


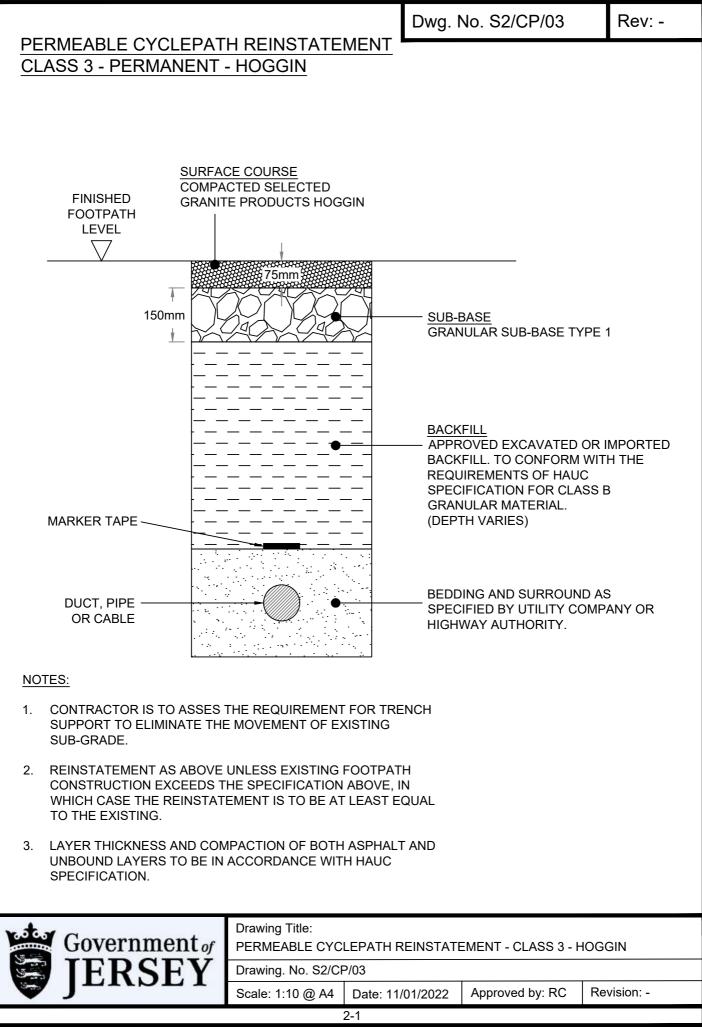
Standard Drawings Section 2 Permanent reinstatement of footways, vehicle crossovers and cycle

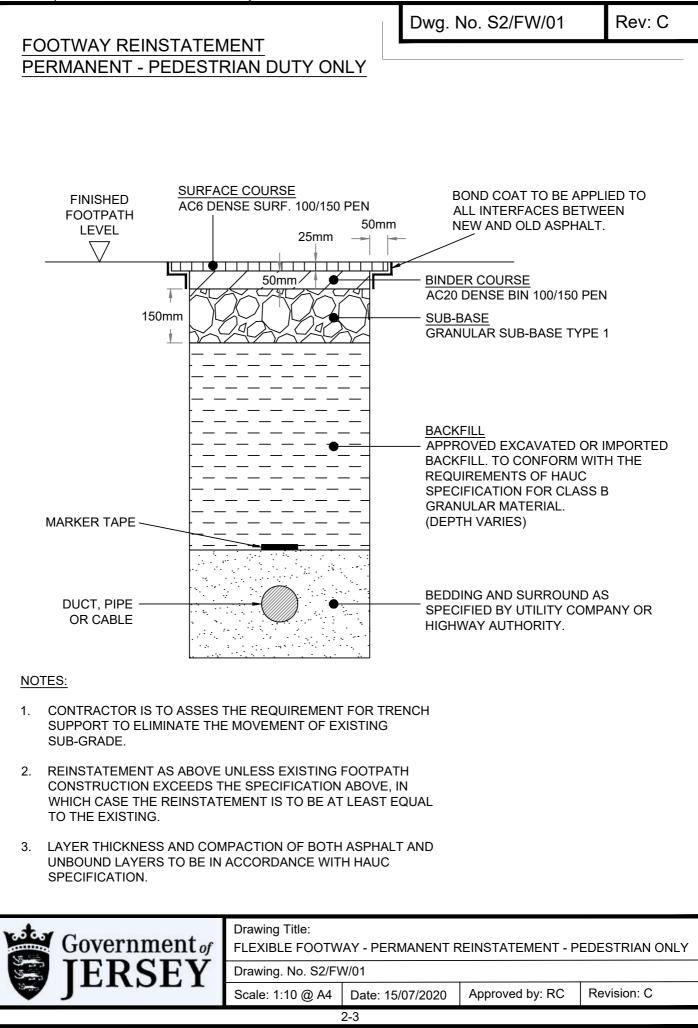
paths.

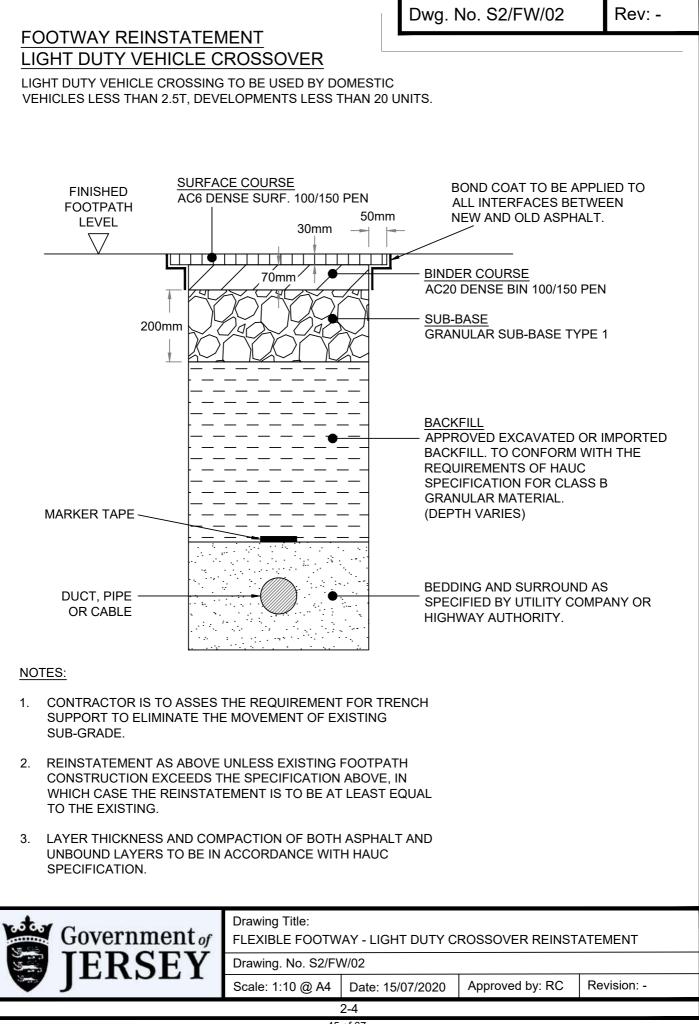
Drawing Deference Description Detail					
Number	Reference	Description	Revision	Date issued	
S2/CP/01	2.1	Flexible Cycle path Reinstatement – Class 1 – Permanent - Asphalt.	Rev C	11 th Jan 22	
S2/CP/02	2.2	Flexible Cycle path Reinstatement – Class 2 – Permanent Asphalt.	Rev C	11 th Jan 22	
S2/CP/03	2.3	Permeable Cycle path Reinstatement – Class 3 Permanent Hoggin.	Rev C	11 th Jan 22	
S2/FW/01	2.4	Flexible Footway - permanent reinstatement – pedestrian duty only.	Rev C	15 th Jul 20	
S2/FW/02	2.5	Flexible Footway - Light duty crossover reinstatement.	Rev C	15 th Jul 20	
S2/FW/03	2.6	Flexible Footway - Medium duty crossover reinstatement.	Rev C	15 th Jul 20	
S2/FW/07	2.7	Flexible Footway - Heavy-duty crossover reinstatement.	Rev C	15 th Jul 20	
S2/FW/08	2.8	Footway reinstatement - concrete slabs.	Rev C	15 th Jul 20	
S2/FW/11	2.9	Footway reinstatement - Tactile paving.	Rev C	15 th Jul 20	



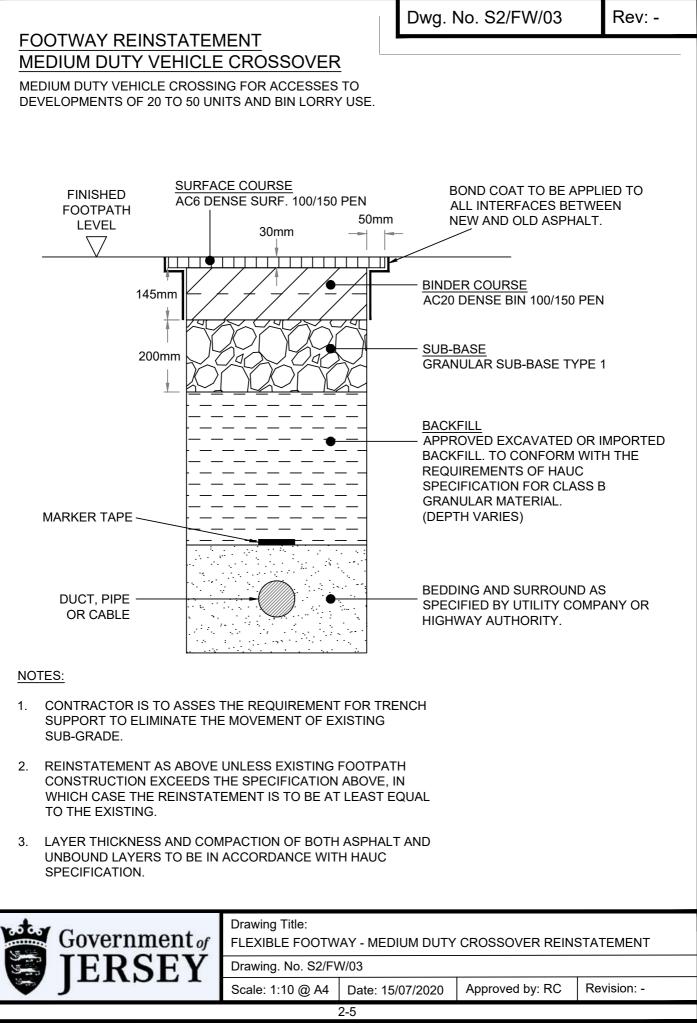




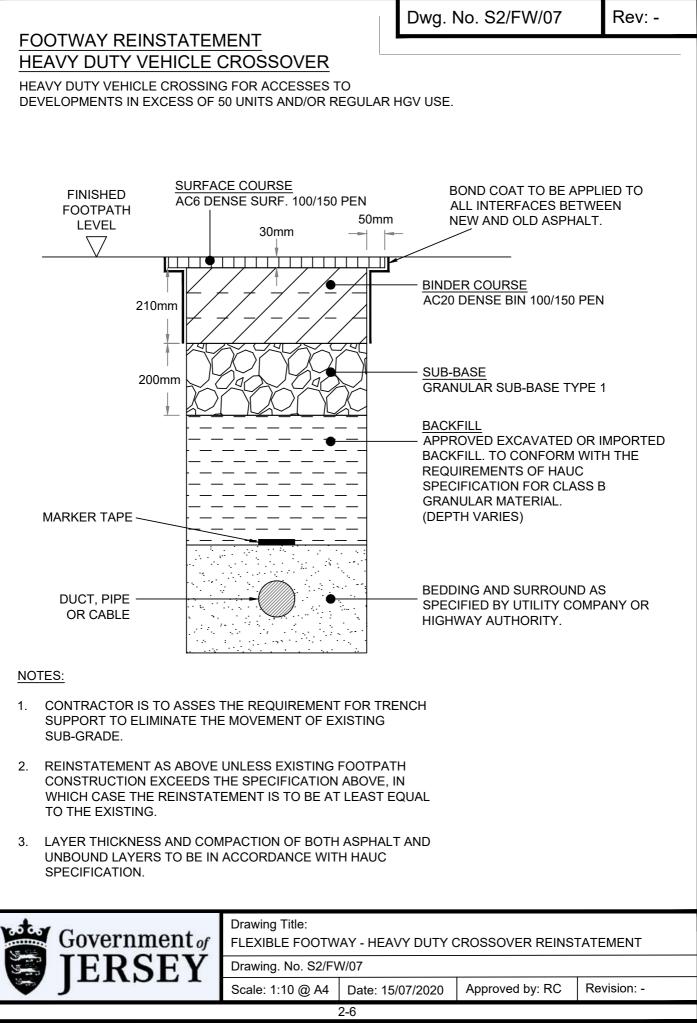


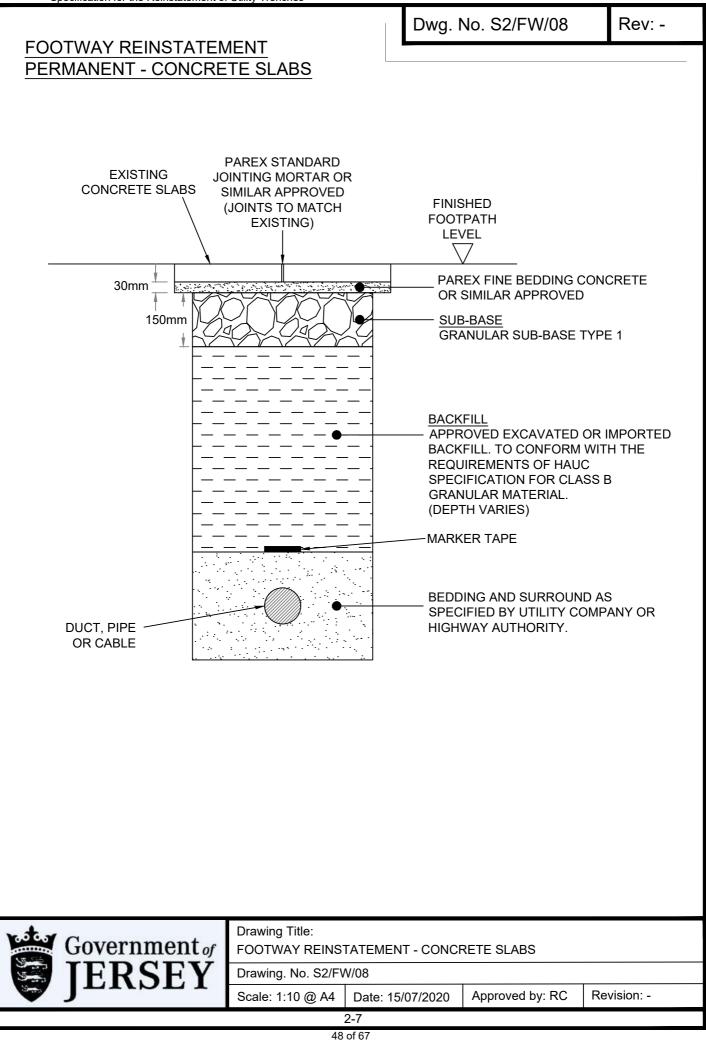


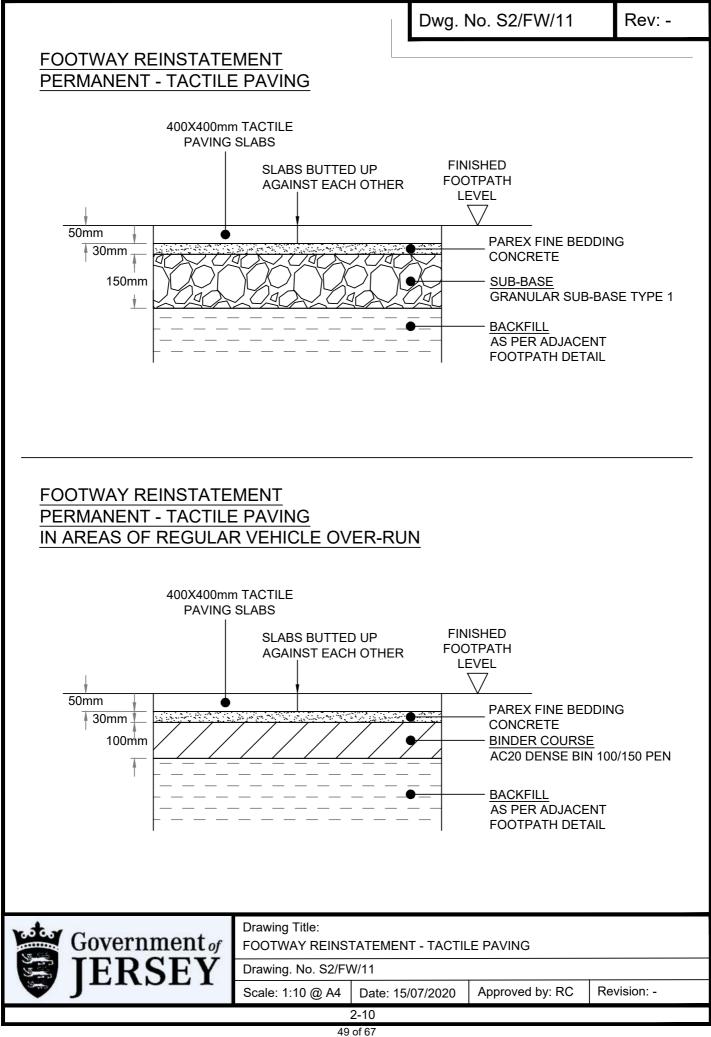
45 of 67



46 of 67



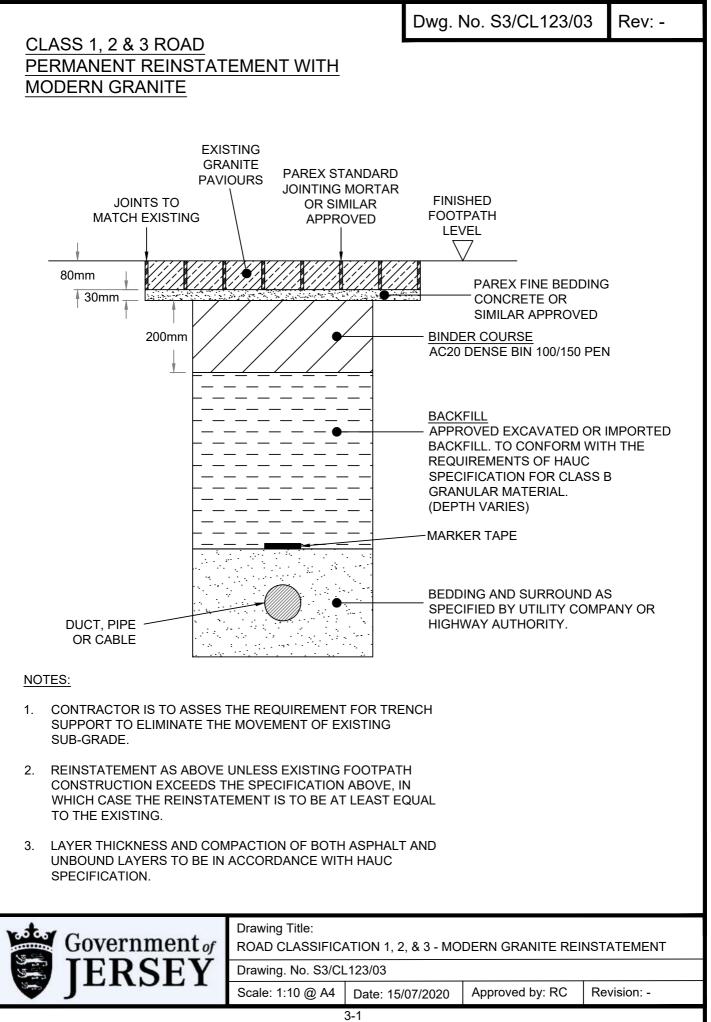


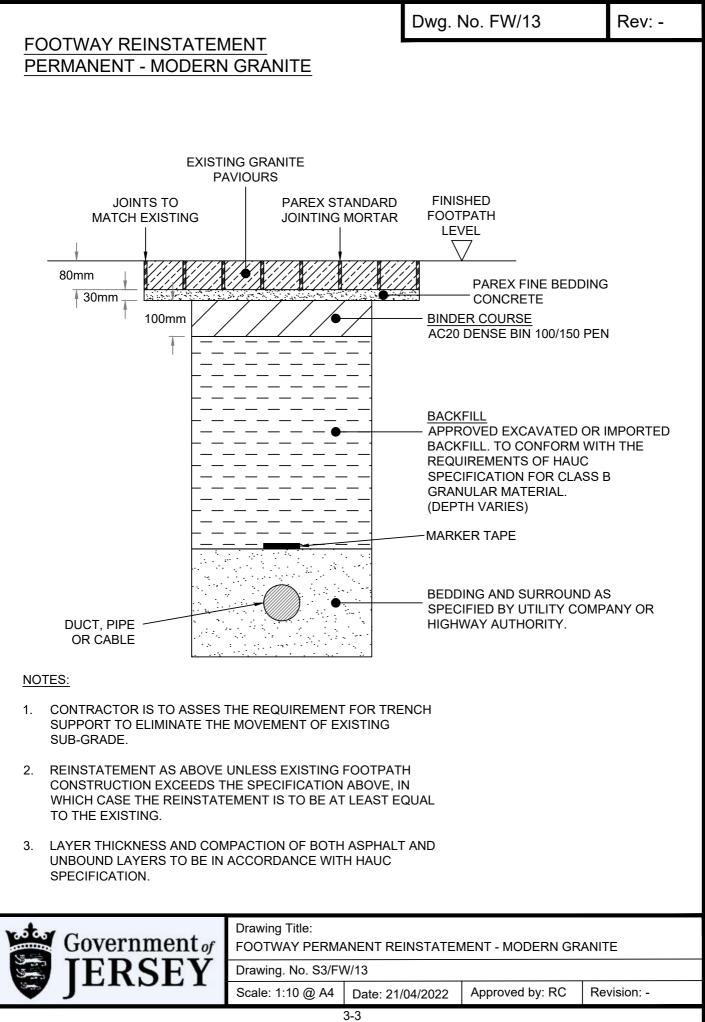


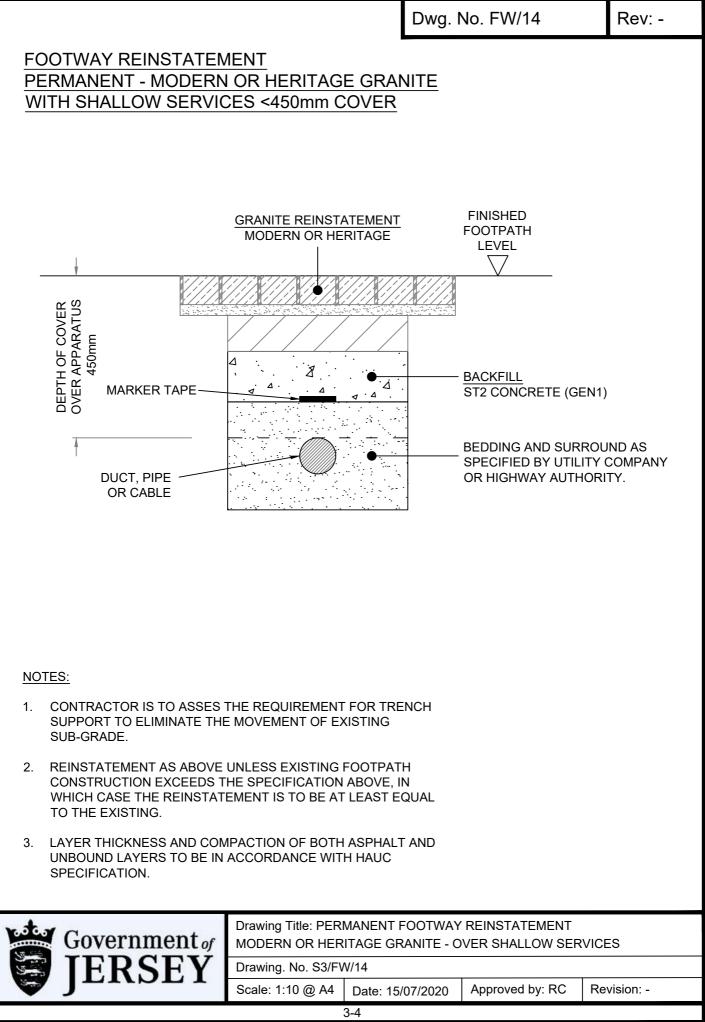
Utility Undertakers must contact GoJ Highways section (dfi@gov.je) when planning utility works in areas paved in natural stone.

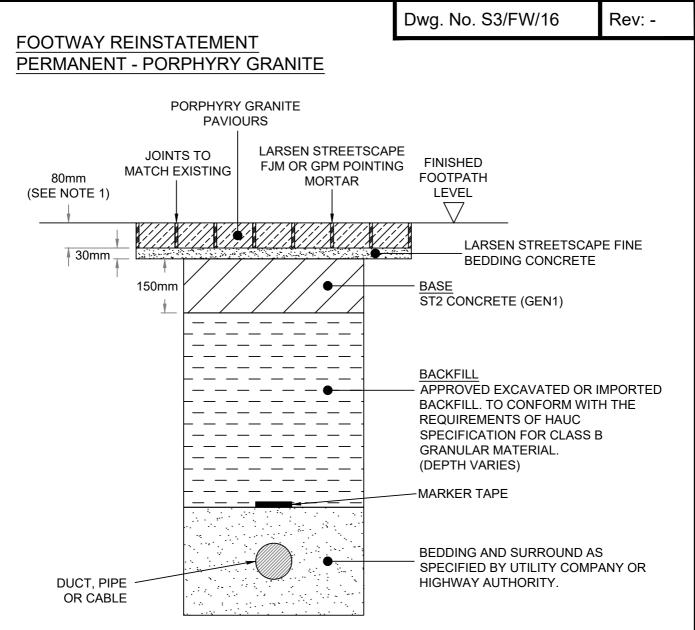
Standard Drawings Section 3 Permanent reinstatement of heritage and modern granite paving.

Drawing Number	Reference	Description	Revision	Date issued
S3/CL123/03	3-1	Road Classification 1,2,3 – Modern Granite Reinstatement	-	15 Jul 20
Use S3/CL123/03	3-1	Pedestrian Street Permanent Reinstatement – Modern Granite		
Use S3/FW/16	3-7	Pedestrian Street Permanent Reinstatement – Porphyry Granite		
S3/FW/13	3-3	Footway Permanent Reinstatement - Modern granite	-	21 Apr 22
S3/FW/14	3-4	Permanent Footway Reinstatement Modern or heritage granite – over shallow services	-	15 Jul 20
S3/FW/16	3-7	Footway Reinstatement Permanent – Porphyry Granite	-	17 May 21
S3/FW/17		Method of Working to be adopted for natural stone reinstatements		









NOTES:

- PAVIOURS TO BE A MINIMUM OF 70mm THICK WHERE NEW PAVIOURS ARE TO BE SUPPLIED. WHERE EXISTING PAVIOURS ARE TO BE RE-USED, IHE CIVIL WORKS MANAGER MUST INSPECT REMOVED GRANITE AND APPROVE ITS USE BEFORE REINSTATEMENT. CALL 448355 / 07797710959 TO ARRANGE AN INSPECTION.
- 2. SHOULD THE CONTRACTOR PROPOSE TO USE AN ALTERNATIVE PAVIOUR JOINTING OR PAVIOUR BEDDING MATERIAL THAN THOSE SPECIFIED ABOVE, PRIOR WRITTEN APPROVAL IS REQUIRED FROM THE IHE HIGHWAY ENGINEERING TEAM. CALL 445509 TO SPEAK TO AN IHE HIGHWAYS ENGINEER.
- 3. CONTRACTOR IS TO ASSES THE REQUIREMENT FOR TRENCH SUPPORT TO ELIMINATE THE MOVEMENT OF EXISTING SUB-GRADE.
- 4. LAYER THICKNESS AND COMPACTION OF BOTH ASPHALT AND UNBOUND LAYERS TO BE IN ACCORDANCE WITH HAUC SPECIFICATION.

Government of	Drawing Title: PERMANENT FOOTWAY REINSTATEMENT PORPHYRY GRANITE Drawing. No. S3/FW/16			
JERSEI	Scale: 1:10 @ A4	Date: 17/05/2021	Approved by: RC	Revision: -
3-6				

S3/FW/17 Method of Working to be Adopted for Natural Stone Reinstatements

(Permanent reinstatement of heritage, Porphry and modern granite paving)

This method of working should be regarded as guidance for adaptation and modification where required to meet the specific requirements of particular tasks or locations.

Site Clearance

1.0 granite removal

all modules to be marked with yellow chalk (1-5) and photograph's taken to ensure correct replacement sequence.

the corners of the waterfit chamber to be drilled out using a drill to avoid damage, then the remaining mortar ground out using a 4" grinder.

hand use of thin bolster and mallet to 'work' the first module free and lift out using a suction pad.

remaining modules should then become 'free' to lift out using the suction pad.

the kerb line, where applicable, will remain in situ and not disturbed.

the modules will be cleaned, stored and protected from damage.

the trench will be excavated, pipework laid, sand surround and marker tape installed. the paving modules at the trench sides will be protected to avoid damage. Trench backfilled in accordance with standard detail drawings and compacted in accordance with the HAUC specification.

The following will be implemented for the replacement of granite modules:

bedding, bonding and jointing mortar specification

1.0 general

all parex (or similar approved) bedding, priming and jointing mortars are proprietary systems which comply with the requirements of BS7533.

dry fine aggregates and cement mixtures must not be used.

the contractor shall be able to confirm satisfactory operative skill levels in the use of all parex materials to include storage, mixing, application and curing.

at the start of the works it is recommended that a representative sample of the paving works be established for use as a guide and point of reference.

2.0 adverse weather - general guidance

temperature - do not lay or joint paving if the temperature is below 3°c on a falling thermometer or below 2°c on a rising thermometer.

frozen roadbase - do not lay upon a roadbase surface which has not been protected from temperatures below 2°c for at least 24 hours prior to use.

frozen materials - do not use. all water used for mixing mortars must be at a temperature not less than 2°c.

do not apply jointing mortars when ambient temperature exceeds 25°c and is rising.

protect fresh mortar joints and/or bedding mortar from frost and rapid drying out until mortar has cured.

3.0 laying course

parex fine bedding concrete (fbc), min compacted layer - 30mm to max compacted layer - 70mm.

a greater thickness may be built up in layers and bonded with parex bond plus, if required.

only sufficient laying course material should be prepared for the remaining working period or until the onset of inclement weather within the current period.

the paving units should be laid onto the laying course to the correct line and level allowing for permitted surface tolerances and drainage apertures.

the units should be placed onto the laying course and compacted down to the final level with a paviour's maul.

joint widths may be varied slightly within a range of 6-10mm to allow for paving units manufacturing tolerances and to maintain the bond and straight lines.

the paving units should be laid on the prepared laying course in the nominated pattern.

all work must be carried out on the side of the unlaid face, at no time shall operatives stand, work or rest materials on freshly laid paving. the surface of the roadbase or supporting structure must be thoroughly cleaned.

bedding mortar must not be laid in advance of more than 1 row of paving elements.

bedding mortar must be laid to a surcharge height of not less than 6mm.

the underside of the paving units are to be coated with Parex bond plus priming mortar to a minimum thickness of 1.5mm immediately prior to paving unit being placed onto bedding mortar.

priming mortar may be applied by brushing on or by dipping the paving elements into a shallow receptacle containing priming mortar.

paving units are to be positioned firmly to line and level and are not to be disturbed.

all mortar contamination must be removed from the surface of freshly laid paving immediately, using clean water and a sponge.

areas of freshly laid paving to be thoroughly rinsed with clean water at the end of a working shift.

4.0 bedding/priming mortar

parex bond plus shall be used to bond the fbc to the roadbase and the paving units to the fbc in areas subject to vehicular overrun, as specified in bs7533-4:2006 clause 5.4.1 - general, all defined as site categories 1-3 (see table 2 in bs 7533-4:2006). bond plus is not required in areas that are not subject to vehicular traffic as specified in bs7533-4:2006 clause 5.4.1 - general, and Parex recommendations.

bonding is applied, brushed or dipped to both the concrete roadbase layer and the underside of the paving units, which shall then be compacted into the fbc.

priming mortar shall not be applied more than one minute prior to paving elements being laid upon bedding mortar.

the surface of the roadbase or supporting structure is to be coated with parex bond plus priming mortar to a minimum thickness of 1.5mm immediately prior to the bedding mortar being laid. <u>5.0 jointing mortar</u>

parex granatech jointing mortar is to be applied as a slurry into the joints to the manufacturer's instructions. units are to be laid with a minimum joint width of 7mm for paving units. prior to laying of the jointing material, the surface should be free from debris.

joints must be clean and clear of all foreign matter. the area to be jointed must be thoroughly soaked with clean water and maintained in a wet condition until jointing mortar is applied.

mortar is mixed to a free flowing liquid slurry grout. freshly mixed mortar is spread over the surface and forced into joints using a suitable rubber/neoprene squeegee. mortar is allowed to settle in joints and fresh mortar is drawn across the surface repeatedly until joints are full and settlement has ceased.

water may be applied to the surface at any time in the form of a fine spray, to prevent drying of the mortar on the surface. excess mortar is removed using a suitable rubber/neoprene squeegee or belt cleaner (supplied by parex).

6.0 protection and quarantine for freshly jointed paving

freshly jointed areas must be protected from vehicular traffic until bedding mortar has gained not less than 30 n/mm² compressive strength and jointing mortar had gained not less than 25 n/mm². note: 25 n/mm² is for heavily trafficked areas.

for areas subjected to non-hgv traffic or purely pedestrian areas, it is normal to specify only a period of quarantine time following jointing and a minimum strength requirement for jointing mortar may be omitted.

mortar cubes for testing shall be cured on site in unprotected conditions.

non-hgv trafficking may be permitted after quarantine of one day following jointing, providing the minimum strength gain requirements for bedding mortar has been passed. pedestrian trafficking may be permitted on the next day following jointing.

materials storage: do not overload paving with stacks of meterials until the quarantine period for vehicular traffic has passed.

cleanliness: keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.

all parex mortars must be applied in accordance with relevant data sheets and application guides and in conjunction with the project scope of works.

7.0 roadbase (where applicable)

a 200mm layer of dbm asphaltic concrete is to be laid onto a type 1 sub-base layer, in accordance with table 7 of bs 7533-10:2010 for all vehicular areas.

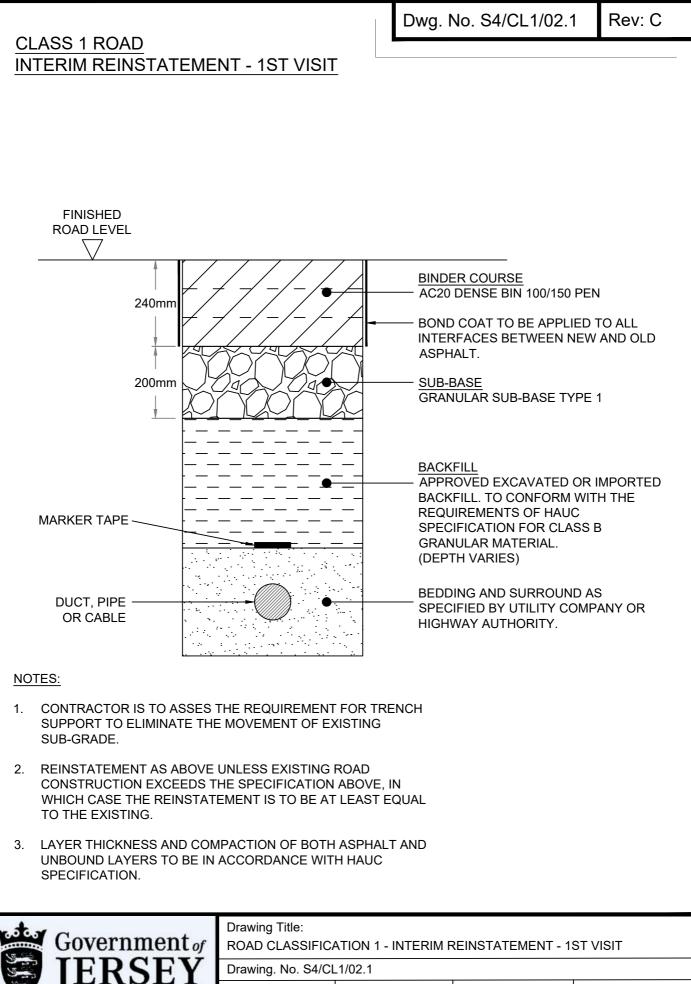
roadbase materials should be selected and specified using the relevant clauses regarding materials and compaction as stated in the highways agency "specification for highway works" or relevant british standard.

the roadbase should be laid to an acceptable tolerance to ensure that a consistent thickness of laying course material is maintained. the upper surface of the roadbase should be swept and washed with water to ensure that it is free from dust, loose material and debris.

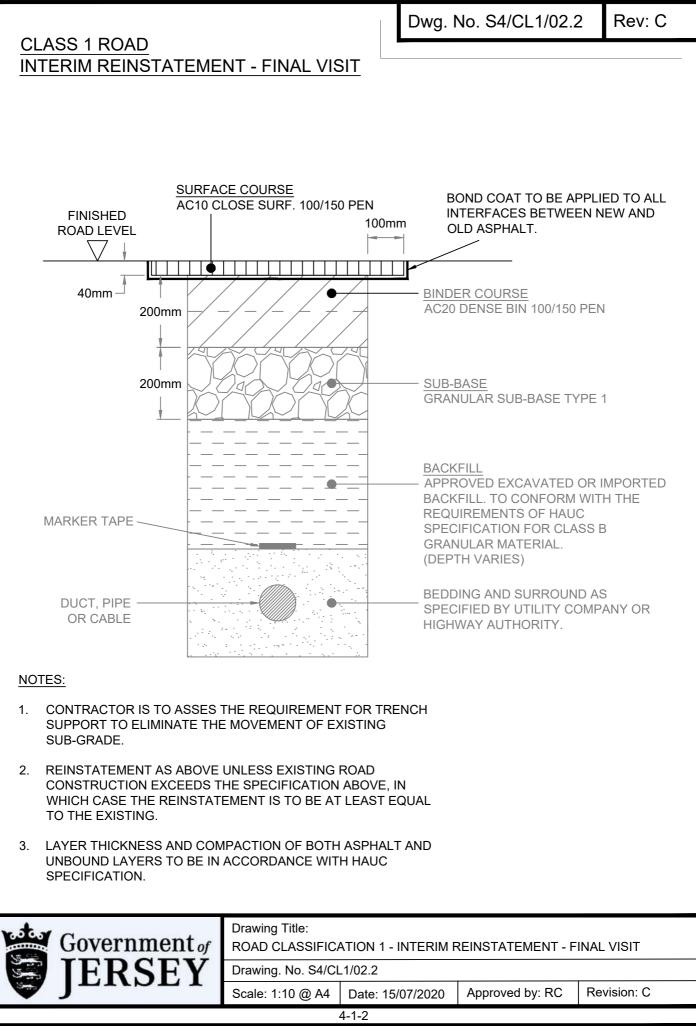
Standard Drawings Section 4 Permanent reinstatement by road class where an interim asphalt

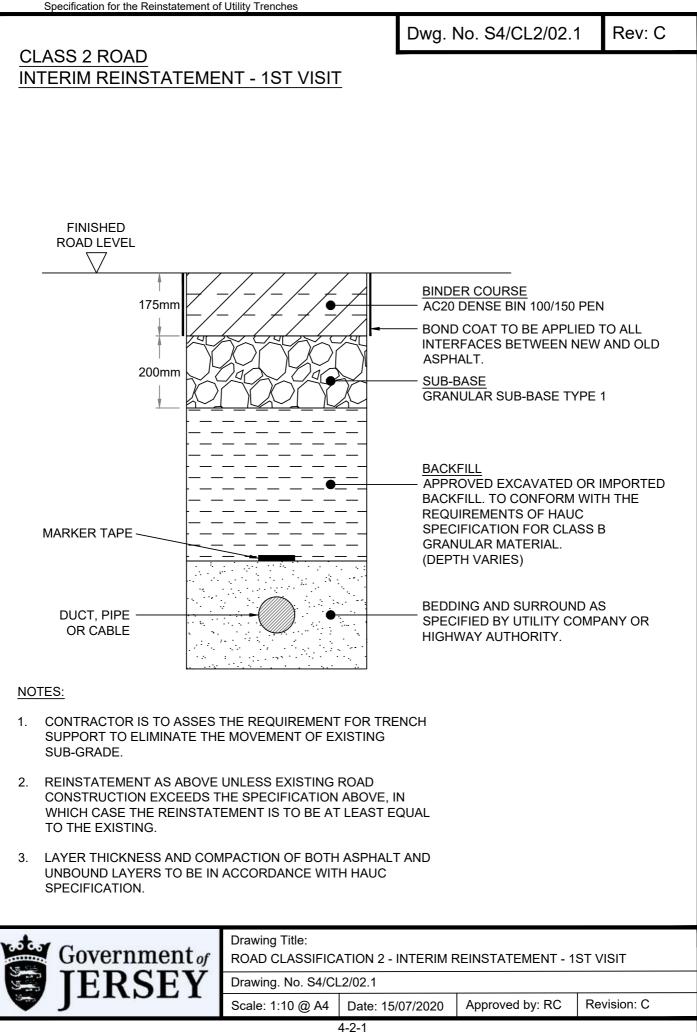
reinstatement stage is required.

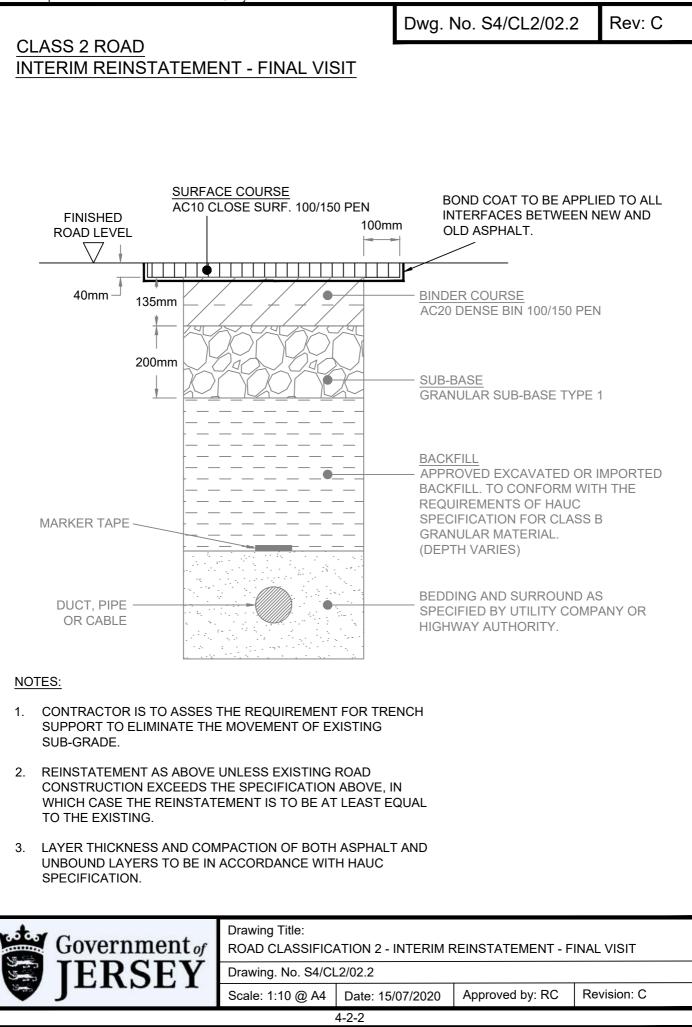
Drawing Number	Reference	Description	Revision	Date issued
S4/CL1/02.1	4.1.1	Road Classification 1 - interim reinstatement – 1st visit	Rev C	15 th Jul 20
S4/CL1/02.2	4-1-2	Road Classification 1 - interim reinstatement – final visit	Rev C	15 th Jul 20
S4/CL2/02.1	4-2-1	Road Classification 2 - interim reinstatement – 1st visit	Rev C	15 th Jul 20
S4/CL2/02.2	4-2-2	Road Classification 2 - interim reinstatement – final visit	Rev C	15 th Jul 20
S4/CL3/02.1	4-3-1	Road Classification 3 - interim reinstatement – 1st visit	Rev C	15 th Jul 20
S4/CL3/02.2	4-3-2	Road Classification 3 - interim reinstatement – final visit	Rev C	15 th Jul 20

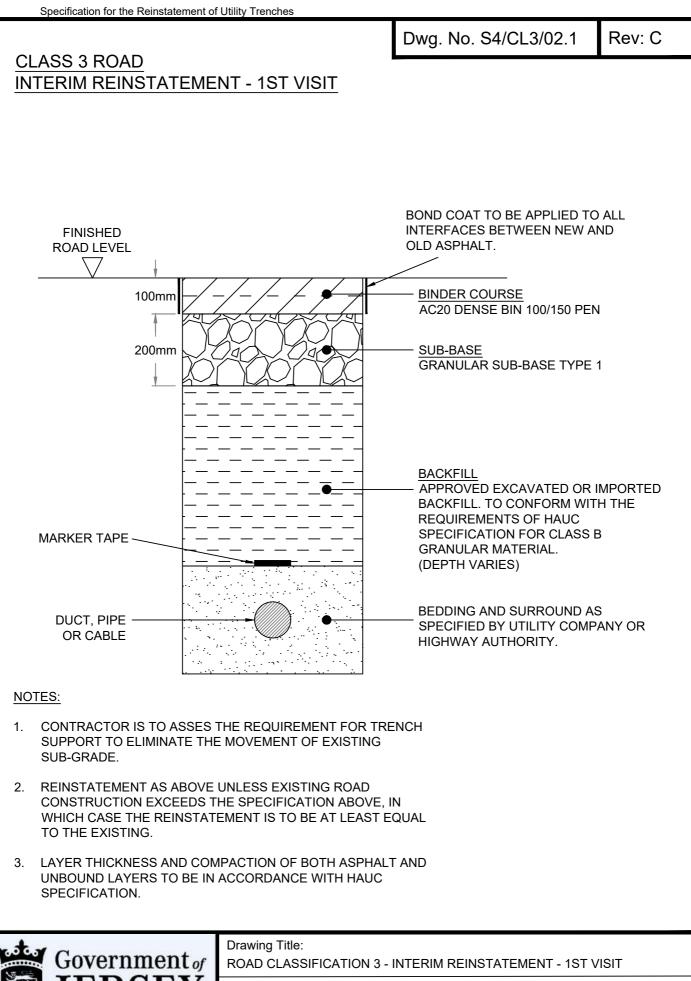


Scale: 1:10 @ A4 | Date: 15/07/2020



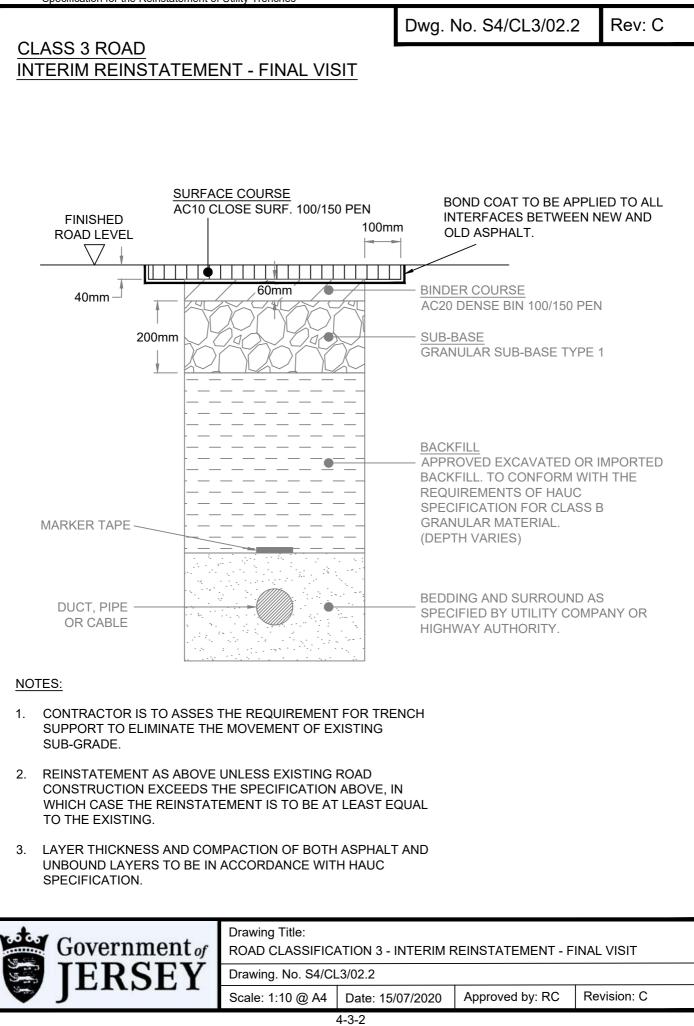






Drawing. No. S4/CL3/02.1

Scale: 1:10 @ A4 | Date: 15/07/2020



Standard Drawings Section 5 Not used in this revision.

Drawing Number	Reference	Description	Revision	Date issued

Standard Drawings Section 6 Placement of New Services within Public Highway.

Drawing Number	Reference	Description	Revision	Date issued
S6/UT/01	6-1-1	Placement of New Services within Public Highway (inclusive minimum depth requirements in carriageways, footways/cycleways and verges	Rev 0	27 Feb 19

Variations to accommodate local conditions or utility company separation requirements must be agreed with GoJ Highway Section.

