

# Training Plan for National Certificate in Infrastructure Works



**Level 2**  
**54 Credits**

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**Trainee name:**

**Company name:**

## **Qualification requirements**

To achieve this qualification, complete the following:

- All core compulsory unit standards
- Selected core elective unit standards – note there are two sets to choose from (50–60 credits)

You may also choose to complete one of the following optional strands:

- Earthworks
- Pavement surfacing
- Roads
- Rural contracting
- Utilities

## **Special notes**

Be aware that some core elective unit standards are also included in optional strands. If you select an optional strand, double-check that your core electives are not the same as any electives you choose in the optional strand.

If you achieve Unit Standards 21563 and 21564, you may be eligible for Approved Handler test certification. Ask your InfraTrain Regional Advisor for further information.

## Core compulsory unit standards

Unit standard	Level	Credit	Prerequisite or comment	
22283 Demonstrate knowledge of occupational areas and structures in the New Zealand infrastructure works industry	2	2		✓
26720 Describe health, safety, and environmental care at an infrastructure works site	2	2		✓
<b>Total compulsory credits</b>		<b>4</b>		

## Core elective unit standards

Select a total of at least 50 credits (maximum 60) with a minimum of 40 credits at level 2 or above.

A minimum of 30 credits are required from Elective Set A. Select the balance from Elective Set B, if required.

Unit standard	Level	Credit	Prerequisite or comment	✓
<b>Elective set A</b>				
497 Demonstrate knowledge of workplace health and safety requirements	1	3		<input type="checkbox"/>
6255 Drive a wheel tractor towing a heavy load	3	3	19044 & 24552	<input type="checkbox"/>
6257 Operate a mounted front end loader unit for agricultural contracting	3	5	Driver licence and appropriate endorsement required.	<input type="checkbox"/>
6452 Maintain, transport, and store equipment used for temporary traffic management	2	3		<input type="checkbox"/>
6465 Operate a power-driven rotary broom	3	6	Driver licence and appropriate class required.	<input type="checkbox"/>
27500 Operate trench compaction equipment for infrastructure works	2	4		<input type="checkbox"/>
6469 Maintain small machinery used on an infrastructure works site	1	2		<input type="checkbox"/>
6470 Use a handheld pavement breaker	2	4		<input type="checkbox"/>
6472 Carry out manual excavation for infrastructure works	1	2		<input type="checkbox"/>
6475 Describe and complete work records for infrastructure works	2	2		<input type="checkbox"/>
6476 Read and interpret civil construction plans	2	2		<input type="checkbox"/>
6477 Identify, hand spread, and assist in compacting materials for infrastructure works	1	3		<input type="checkbox"/>
6478 Maintain and disestablish temporary civil works sites	2	3		<input type="checkbox"/>
6479 Locate and identify services for infrastructure works	3	5		<input type="checkbox"/>

Unit standard	Level	Credit	Prerequisite or comment	✓
6480 Assist with survey and set-out on civil construction works	1	3		<input type="checkbox"/>
6484 Install gabion baskets for civil construction works	3	8		<input type="checkbox"/>
6485 Install hand rails or sight rails for road	2	4		<input type="checkbox"/>
12933 Complete minor concrete works as a BCATS project	2	4		<input type="checkbox"/>
16701 Demonstrate knowledge and skills for driving on a road for endorsement W (wheels)	3	3	Driver licence with appropriate class for the vehicle being driven required. Off-job	<input type="checkbox"/>
16702 Demonstrate knowledge and skills for driving on a road for endorsement R (rollers)	3	3	Driver licence with appropriate class for the vehicle being driven required. Off-job	<input type="checkbox"/>
16703 Demonstrate knowledge and skills for driving on a road for endorsement T (tracks)	3	3	Driver licence with appropriate class for the vehicle being driven required. Off-job	<input type="checkbox"/>
17327 Apply communication skills on an infrastructure works site	2	3		<input type="checkbox"/>
17328 Demonstrate fundamental knowledge of earthworks	2	5		<input type="checkbox"/>
17593 Apply safe work practices in the workplace	2	4		<input type="checkbox"/>
17600 Explain safe work practices for working at heights	3	3		<input type="checkbox"/>
17602 Apply hazard identification and risk assessment procedures in the workplace	3	4	Option of off-job	<input type="checkbox"/>
18426 Demonstrate knowledge of hazards associated with confined space	3	4	Off-job recommended 497 & 3508 recommended	<input type="checkbox"/>
19044 Describe the legal requirements and occupational hazards associated with tractor use	2	2		<input type="checkbox"/>
19200 Demonstrate knowledge of, and apply, mathematics in the water industry	2	3	Off-job recommended	<input type="checkbox"/>
19522 Undertake job safety analysis	2	4		<input type="checkbox"/>
19675 Operate a road saw	2	4		<input type="checkbox"/>
20616 Demonstrate knowledge of earthworks in relation to the environment	2	4		<input type="checkbox"/>
20868 Demonstrate knowledge of emergency response in the civil infrastructure industry	3	4		<input type="checkbox"/>
20874 Demonstrate knowledge of health and fitness for infrastructure works personnel	3	7		<input type="checkbox"/>
20875 Demonstrate knowledge of slinging, lifting, moving, and placing loads with an excavator or loader	2	5		<input type="checkbox"/>
20877 Demonstrate knowledge of working safely at sites under temporary traffic management	2	1		<input type="checkbox"/>
20878 Assist with temporary traffic management for low volume and Level 1 roads	2	1		<input type="checkbox"/>

Unit standard	Level	Credit	Prerequisite or comment	✓
21560 Demonstrate knowledge of agrichemicals	3	6		<input type="checkbox"/>
21563 Demonstrate knowledge of the HSNO Act, and NZS 8409:2004 for the use of agrichemicals	3	5		<input type="checkbox"/>
21564 Prepare to apply, and apply, agrichemicals	3	5	21563 recommended	<input type="checkbox"/>
23285 Use and care for hand tools used for infrastructure works	2	2		<input type="checkbox"/>
24552 Check and drive a basic wheel tractor with an attached implement on flat terrain	2	5	19044	<input type="checkbox"/>
24921 Select, use, and maintain tools and equipment in water reticulation	2	7		<input type="checkbox"/>
25043 Lockout and reinstate machinery in the workplace	2	4	Recommended off-job	<input type="checkbox"/>
25045 Employ height safety equipment in the workplace	3	4	Recommended off-job	<input type="checkbox"/>
25046 Describe hazard identification and control, and apply risk assessment procedures under supervision in the workplace	2	2	Recommended off-job	<input type="checkbox"/>
25048 Handle dangerous and hazardous goods in the workplace	2	3	Recommended off-job	<input type="checkbox"/>
26051 Demonstrate knowledge, and carry out curing, of concrete	2	8		<input type="checkbox"/>
26717 Use a generator on an infrastructure works site	2	1		<input type="checkbox"/>
26718 Use a compressor on an infrastructure works site	2	1		<input type="checkbox"/>
26719 Lay interlocking pavers for infrastructure works under supervision	2	6		<input type="checkbox"/>
27201 Apply factors relating to a contamination incident at an infrastructure works site	2	5	Recommended off-job course	<input type="checkbox"/>
27202 Demonstrate knowledge of factors relating to the environment which influence an infrastructure works site	2	7	Recommended off-job course	<input type="checkbox"/>
<b>Total elective set A credits (minimum of 30 required)</b>		<b>204</b>		

Unit standard	Level	Credit	Prerequisite or comment	✓
<b>Elective set B</b>				
496 Manage personal wellness	1	3		<input type="checkbox"/>
548 Demonstrate knowledge of management of alcohol and other drugs	1	2		<input type="checkbox"/>
1978 Identify and describe basic employment rights and responsibilities, and sources of information and assistance	1	3		<input type="checkbox"/>
3466 Apply risk reduction techniques and strategies while driving	3	4	Full driver licence with appropriate class for the vehicle being driven required	<input type="checkbox"/>

Unit standard	Level	Credit	Prerequisite or comment	✓
3471 Tow a light simple trailer	2	1	Full driver licence with appropriate class for the vehicle being driven required	<input type="checkbox"/>
3501 Demonstrate knowledge of and apply listening techniques	1	3		<input type="checkbox"/>
3503 Participate and communicate in a team or group to complete a routine task	1	2		<input type="checkbox"/>
4249 Demonstrate care and timeliness as an employee	1	4		<input type="checkbox"/>
4258 Describe ways of managing and coping with change	2	2	<b>Note: last date for assessment 31 Dec 2014</b>	<input type="checkbox"/>
7117 Produce a plan to enhance own learning	2	2		<input type="checkbox"/>
7118 Manage own learning programme	2	3		<input type="checkbox"/>
7123 Apply a problem solving method to a problem	2	2		<input type="checkbox"/>
8021 Demonstrate knowledge of chipseal construction plant	3	5		<input type="checkbox"/>
9631 Use personal protection equipment in a petrochemical workplace	2	2		<input type="checkbox"/>
12348 Demonstrate knowledge of anger and options for dealing with anger issues	1	2		<input type="checkbox"/>
12349 Demonstrate knowledge of time management	2	3		<input type="checkbox"/>
12355 Describe stress and ways of dealing with it	2	2		<input type="checkbox"/>
11304 Maintain road by repairing chipsealed surfaces	2	3		<input type="checkbox"/>
11305 Adjust the height of surface boxes for roading maintenance	2	3		<input type="checkbox"/>
11306 Restore pavement using stabilisation techniques	2	5		<input type="checkbox"/>
11307 Maintain road bridge surface and furniture	2	5		<input type="checkbox"/>
11308 Maintain road bridge waterways	2	3		<input type="checkbox"/>
11309 Maintain road by manually cleaning and repairing open drainage system	3	7		<input type="checkbox"/>
11313 Maintain footpath in road reserve	3	5		<input type="checkbox"/>
11315 Maintain road reserve by removing detritus and litter	2	3		<input type="checkbox"/>
11317 Install and maintain roadside amenities	2	3		<input type="checkbox"/>
11319 Trim and remove vegetation for roading maintenance	2	2		<input type="checkbox"/>
11326 Interpret symbols, signs, and terminology specific to a gas distribution network	2	2		<input type="checkbox"/>

Unit standard	Level	Credit	Prerequisite or comment	✓
13517 Demonstrate sweeping, chip-spreading, and associated handwork skills for chipseal surfacing	2	15	20455	<input type="checkbox"/>
13518 Demonstrate sweeping, placing, compacting, and associated handwork skills for asphalt surfacing	2	15	20455	<input type="checkbox"/>
13521 Demonstrate knowledge of the compaction of hot mix asphalt	3	5		<input type="checkbox"/>
15930 Locate work sites using route data system, maps and plans	2	3		<input type="checkbox"/>
17676 Carry out a pre-drive vehicle check on a light motor vehicle, and start and shut down the vehicle	2	3		<input type="checkbox"/>
17690 Identify potential hazards of and safety precautions for working with live reticulated gas	2	6		<input type="checkbox"/>
17769 Demonstrate knowledge of general health, safety, and environmental requirements in forestry	2	6	Off-job	<input type="checkbox"/>
19201 Demonstrate knowledge of reticulated services and their location, in the water industry	3	4	6479 recommended Off-job	<input type="checkbox"/>
19205 Demonstrate knowledge of pathogens, diseases, and their control in the water industry	3	2	Off-job	<input type="checkbox"/>
19207 Enter, work in, and exit a confined space in the water industry	3	5	18426 Off-job	<input type="checkbox"/>
19213 Demonstrate knowledge of blockage clearance and wastewater maintenance	2	3	Off-job	<input type="checkbox"/>
19577 Perform measurements and calculations for agricultural contracting	2	2		<input type="checkbox"/>
19578 Describe and maintain health and safety in an agricultural contracting workplace	2	4		<input type="checkbox"/>
20455 Demonstrate basic knowledge of safety relating to bituminous materials	2	5		<input type="checkbox"/>
20456 Demonstrate first aid relating to liquid bitumen and bitumen additives	2	1		<input type="checkbox"/>
20475 Demonstrate knowledge of forestry earthworks	2	4		<input type="checkbox"/>
20477 Demonstrate knowledge of soil properties for earthworks	2	3		<input type="checkbox"/>
20624 Demonstrate knowledge of bulk earthmoving	2	4		<input type="checkbox"/>
21418 Demonstrate basic knowledge of materials, plant, and process in roadmarking	2	6		<input type="checkbox"/>
21419 Perform basic roadmarking tasks	2	6		<input type="checkbox"/>
21424 Set out simple roadmarking work	2	2		<input type="checkbox"/>
21554 Demonstrate knowledge of safety with agrichemicals	2	3		<input type="checkbox"/>
21556 Control weeds under supervision	2	2		<input type="checkbox"/>
22287 Maintain roading median strips, berms and traffic islands	2	2		<input type="checkbox"/>

Unit standard		Level	Credit	Prerequisite or comment	✓
24879	Demonstrate knowledge of concrete materials and the concrete production process	2	8		<input type="checkbox"/>
25831	Describe and hand test road construction materials in relation to compaction	2	3	Off-job compaction course recommended	<input type="checkbox"/>
25832	Use a nuclear density meter to measure compaction of soils, sands, or gravels	2	3	Off-job compaction course recommended	<input type="checkbox"/>
26050	Demonstrate knowledge of transporting fresh concrete, and transport fresh concrete in own workplace	2	3		<input type="checkbox"/>
Total elective set B credits (if required)			214		
Total elective credits (minimum of 50 required)					

### Optional strand unit standards

ONE of the following optional strands can be selected if required:

- Earthworks
- Pavement surfacing
- Roads
- Rural contracting
- Utilities

### Earthworks

Select: ☐

Select a minimum of 12 and a maximum of 20 credits.

We recommend that you select Unit Standard 17328 particularly if you do not work in a forestry environment.

Unit standard	Level	Credit	Prerequisite or comment	✓
17328 Demonstrate fundamental knowledge of earthworks	2	5		<input type="checkbox"/>
17769 Demonstrate knowledge of general health, safety, and environmental requirements in forestry	2	6	Off-job	<input type="checkbox"/>
20475 Demonstrate knowledge of forestry earthworks	2	4		<input type="checkbox"/>
20477 Demonstrate knowledge of soil properties for earthworks	2	3		<input type="checkbox"/>
20616 Demonstrate knowledge of earthworks in relation to the environment	2	4		<input type="checkbox"/>
20624 Demonstrate knowledge of bulk earthmoving	2	4		<input type="checkbox"/>
<b>TOTAL strand credits (12-20 required)</b>		<b>26</b>		



**Pavement surfacing**Select: ☐

Select a minimum of 25 and a maximum of 35 credits.

Unit standard	Level	Credit	Prerequisite or comment	✓
8021 Demonstrate knowledge of chipseal construction plant	3	5		<input type="checkbox"/>
13517 Demonstrate sweeping, chip-spreading, and associated handwork skills for chipseal surfacing	2	15	20455	<input type="checkbox"/>
13518 Demonstrate sweeping, placing, compacting, and associated handwork skills for asphalt surfacing	2	15	20455	<input type="checkbox"/>
13521 Demonstrate knowledge of the compaction of hot mix asphalt	3	5		<input type="checkbox"/>
20455 Demonstrate basic knowledge of safety relating to bituminous materials	2	5		<input type="checkbox"/>
20456 Demonstrate first aid relating to liquid bitumen and bitumen additives	2	1	20455 or 20449	<input type="checkbox"/>
<b>TOTAL strand credits (25-35 required)</b>		<b>46</b>		

**Roads**Select: ☐

Select a minimum of 12 and a maximum of 20 credits.

Unit standard	Level	Credit	Prerequisite or comment	✓
6485 Install hand rails or sight rails on roads	2	4		<input type="checkbox"/>
11304 Maintain road by repairing chipsealed surfaces	2	3		<input type="checkbox"/>
11305 Adjust the height of surface boxes for roading maintenance	2	3		<input type="checkbox"/>
11306 Restore pavement using stabilisation techniques	2	5		<input type="checkbox"/>
11307 Maintain road bridge surface and furniture	2	5		<input type="checkbox"/>
11308 Maintain road bridge waterways	2	3		<input type="checkbox"/>
11309 Maintain road by manually cleaning and repairing open drainage system	3	7		<input type="checkbox"/>
11313 Maintain footpath in road reserve	3	5		<input type="checkbox"/>
11315 Maintain road reserve by removing detritus and litter	2	3		<input type="checkbox"/>
11317 Install and maintain roadside amenities	2	3		<input type="checkbox"/>

Unit standard	Level	Credit	Prerequisite or comment	✓
11319 Trim and remove vegetation for roading maintenance	2	2		<input type="checkbox"/>
15930 Locate work sites using route data system, maps and plans	2	3		<input type="checkbox"/>
21418 Demonstrate basic knowledge of materials, plant, and process in roadmarking	2	6		<input type="checkbox"/>
21419 Perform basic roadmarking tasks	2	6		<input type="checkbox"/>
21424 Set out simple roadmarking work	2	2		<input type="checkbox"/>
22287 Maintain roading median strips, berms and traffic islands	2	2		<input type="checkbox"/>
25831 Describe and hand test road construction materials in relation to compaction	2	3	Recommended off-job course	<input type="checkbox"/>
25832 Use a nuclear density meter to measure compaction of soils, sands, or gravels	2	3	Recommended off-job course	<input type="checkbox"/>
<b>TOTAL strand credits (12-20 required)</b>		<b>68</b>		

## Rural contracting

Select: ☐

Select a minimum of 12 and a maximum of 20 credits.

Unit standard	Level	Credit	Prerequisite or comment	✓
3466 Apply risk reduction techniques and strategies while driving	3	4	Full driver licence with appropriate class for the vehicle being driven required.	<input type="checkbox"/>
3471 Tow a light simple trailer	2	1	Full driver licence with appropriate class for the vehicle being driven required.	<input type="checkbox"/>
6255 Drive a wheel tractor towing a heavy load	3	3	19044 & 24552	<input type="checkbox"/>
17676 Carry out a pre-drive vehicle check on a light motor vehicle, and start and shut down the vehicle	2	3		<input type="checkbox"/>
19044 Describe the legal requirements and occupational hazards associated with tractor use	2	2		<input type="checkbox"/>
19577 Perform measurements and calculations for agricultural contracting	2	2		<input type="checkbox"/>
19578 Describe and maintain health and safety in an agricultural contracting workplace	2	4		<input type="checkbox"/>
21554 Demonstrate knowledge of safety with agrichemicals	2	3		<input type="checkbox"/>
21556 Control weeds under supervision	2	2		<input type="checkbox"/>
24552 Check and drive a basic wheel tractor with an attached implement on flat terrain	2	5	19044	<input type="checkbox"/>
<b>TOTAL strand credits (12-20 required)</b>		<b>29</b>		

**Utilities****Select:** ☐

Select a minimum of 12 and maximum of 20 credits.

Unit standard	Level	Credit	Prerequisite or comment	✓
9631 Use personal protection equipment in a petrochemical workplace	2	2		<input type="checkbox"/>
11326 Interpret symbols, signs, and terminology specific to a gas distribution network	2	2		<input type="checkbox"/>
17690 Identify potential hazards of and safety precautions for working with live reticulated gas	2	6		<input type="checkbox"/>
19201 Demonstrate knowledge of reticulated services and their location, in the water industry	3	4	6479 Off-job	<input type="checkbox"/>
19205 Demonstrate knowledge of pathogens, diseases, and their control in the water industry	3	2	Off-job	<input type="checkbox"/>
19207 Enter, work in, and exit a confined space in the water industry	3	5	18426 Off-job	<input type="checkbox"/>
19213 Demonstrate knowledge of blockage clearance and wastewater maintenance	2	3	Off-job	<input type="checkbox"/>
19675 Operate a road saw	2	4		<input type="checkbox"/>
24879 Demonstrate knowledge of concrete materials and the concrete production process	2	8		<input type="checkbox"/>
26050 Demonstrate knowledge of transporting fresh concrete, and transport fresh concrete in own workplace	2	3		<input type="checkbox"/>
<b>TOTAL strand credits (12-20 required)</b>		<b>39</b>		

**TRAINING ADVISOR CHECK: All credit totals meet qualification requirements**☐