

Field Engineering and Technology**Review of *Civil Plant Operation, Civil Construction Works, Civil Infrastructure Health, Safety and Environment, and Roadmarking* unit standards****Existing Classification**

Subfield	Domain	ID
Civil Plant Operation and Management	Civil Plant Operation	6457, 6469, 6470
Civil Works and Services	Civil Construction Works	6452, 6453, 6472, 6475, 6477, 6479, 6485, 17327, 22283, 22290, 23285
	Civil Infrastructure Health, Safety, and Environment	20874, 20875
Highway Construction and Maintenance	Roadmarking	15930

New classification

Subfield	Domain	ID
Infrastructure Works	Infrastructure Works Equipment	6457, 6469, 6470
	Generic Infrastructure Works	6452, 6472, 6475, 6477, 6479, 15930, 17327, 20875, 22283, 22290
	Generic Road Works	6485
	Infrastructure Civil Works	6453
	Infrastructure Works Health, Safety, and Environment	20874
	Infrastructure Works Equipment	23285

InfraTrain New Zealand has completed the review of the unit standards listed above.

Date new versions published

February 2011

Planned review date

December 2015

Summary

The planned review of the National Certificate in Civil Infrastructure (General Introductory Skills) [Ref: 1125] (GIS) required detailed consideration of the unit standards in the domains listed in the qualification in order to address overlaps between this qualification and other InfraTrain qualifications.

In conjunction with a review of the National Certificate in Civil Construction Supervision (Level 4) [Ref: 1324] and the National Certificate in Civil Plant Management [Ref: 0253] the infrastructure works industry redefined the industry career pathways, which led to a significant change in the classification system. The changes to subfield and domain names have impacted on all industry qualifications and unit standards. InfraTrain is managing the transfer of unit standards to new subfields and domains in stages over the next few years as the standards are required for qualification reviews. This review is one part of that process.

To ensure that all sectors of the industry participated in the reviews of these qualifications that are generic to the infrastructure industry, InfraTrain established an industry advisory group comprising representatives of all sectors and major stakeholders including: large, medium, and small companies in the industry; trainers; assessors; moderators; and training advisors. This Industry Advisory Group (IAG) met in August 2009 to establish the strategic outcomes of the review. Separate writing groups were given the task of reviewing the introductory and supervisory qualifications and the unit standards in them that were no longer fit for purpose. Each writing group contained a representative from the IAG to coordinate the reviews. Wider industry stakeholders were kept updated through the ITO's website and electronically, and were encouraged to provide feedback.

The GIS writing group met in late August 2009 to determine the qualification requirements, which were distributed widely for feedback and approved by the IAG in December 2009. In general, unit standards contained in the qualification in question were reviewed, however in some cases unit standard reviews were deferred for consideration as part of another qualification review more appropriate for these unit standards.

In January 2010 the GIS writing group met to review the selected unit standards, which were also distributed widely for comment, amended as required, and then updated to reflect the classification changes. A third writing group undertook a review of unit standard 20875 in conjunction with EXITO's review of the closely related unit standard 17695.

The outcomes of the reviews of the introductory qualification and the unit standards in it were endorsed by members of the IAG in July 2010.

Main changes

- All standards were transferred to new Infrastructure Works domains.
- All titles were amended to reference the new domains and align with content.
- Levels of standards 20875 and 22283 were amended to reflect the degree of applied knowledge.
- Credits for standards 20874 and 22290 were increased to reflect learning and assessment requirements.
- Standard 6457 was separated into two new standards to recognise different outcomes.
- Two new unit standards were written to cover knowledge and skills required at introductory level in the infrastructure industry.
- Higher level prerequisite standard 6479 was removed from entry requirements for standard 6485.
- Purpose statements were updated to match outcomes.
- Explanatory notes were updated and amended to assist interpretation of the standards.
- Outcomes were amended to align with the standard title and content.
- Evidence requirements and range statements were amended to clarify the quality of evidence required.

- Last dates for assessment were added for superseded versions of standards 6479, 6485, 20875, 22283, and 22290.

The Category C unit standard will expire at the end of December 2012

Impact on existing accreditations

Current Accreditation for			Accreditation extended to		
Nature of accreditation	Classification or ID	Level	Nature of accreditation	Classification or ID	Level
Subfield	Civil Plant Operation and Management	3+	Domain	Infrastructure Works Equipment	2
Subfield	Civil Works and Services	3+	Domain	Generic Infrastructure Works	3
Subfield	Civil Works and Services	3+	Domain	Infrastructure Civil Works	2
Subfield	Civil Works and Services	3+	Domain	Infrastructure Works Equipment	2
Subfield	Civil Works and Services	3+	Domain	Civil Infrastructure Works Health, Safety, and Environment	3
Subfield	Highway Construction and Maintenance	3+	Domain	Generic Road Works	2
Domain	Civil Construction Works	3+	Domain	Generic Infrastructure Works	3
Domain	Civil Construction Works	2+	Domain	Generic Infrastructure Works	2
Domain	Civil Construction Works	2+	Domain	Infrastructure Civil Works	2
Domain	Civil Construction Works	2+	Domain	Infrastructure Works Equipment	2
Domain	Civil Infrastructure Health, Safety, and Environment	3+	Domain	Infrastructure Works Health, Safety, and Environment	3
Domain	Civil Plant Operation	2+	Domain	Infrastructure Works Equipment	2
Domain	Roadmarking	4	Standard	15930	2
Standard	6457	2	Standard	26717, 26718	2

Impact on registered qualifications

Key to type of impact	
Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

The following InfraTrain qualifications are impacted by the outcome of this review and will be updated when they are reviewed between 2010 and 2013. The standards that generated the status *Affected* are listed in **bold**.

Ref	Qualification Title	ID
0228	National Certificate in Rural Contracting (Introductory Skills)	6469
0229	National Certificate in Agrichemical Application with strands in Livestock External Parasites, Total Vegetation Control, Aquatic, Broadacre, and Brush	6469
0230	National Certificate in Agricultural Contracting with optional strands in Crop Production, Fencing, Harvesting, Land Development, Mechanical Vegetation Control, Transport, and Zero Tillage	6479
0465	National Certificate in Pavement Surfacing (Application) (Level 2) with strands in Asphalt, and Chipseal	6452, 6470, 6477, 17327
1000	National Certificate in Civil Works and Services (Road Opening - Trenching) with optional strands in Electricity Supply, Gas Distribution, and Water Services	6457 , 6470, 6472, 6475, 6477, 6479
1001	National Certificate in Civil Works and Services (Road Opening - Site Co-ordination)	6457 , 6470, 6472, 6475, 6477, 6479
1085	National Certificate in Demolition (Introductory Skills) (Level 2)	6457 , 6469, 6470, 17327
1086	National Certificate in Demolition (Equipment Operator) (Level 3) with optional strands in Crane, and Winch	6479
1087	National Certificate in Demolition (Site Supervisor) (Level 4)	6479
1178	National Certificate in Civil Infrastructure Health, Safety, and Environment (Operations) (Level 3)	6479, 17327, 20874, 20875
1179	National Certificate in Civil Infrastructure Health, Safety, and Environment (Supervision)	20875
1282	National Certificate in Infrastructure Works (Infrastructure Pipelaying) with an optional strand in Gas Distribution Pipelaying	6452, 6457 , 6469, 6472, 6475, 6479, 17327, 20875 , 23285
1301	National Certificate in Roadmarking (Assistant) with optional strands in Piloting, Raised Pavement Markers, Thermoplastics, and Transport	6452, 6469, 6475, 17327
1303	National Certificate in Roadmarking (Operator) with strands in A-Type Applicator; and B-Type Applicator; and with optional strands in Raised Pavement Markers; Temporary Traffic Management on Level 2 and 3 Roads; and Transport	15930
1324	National Certificate in Civil Construction Supervision (Level 4)	22290
1325	National Certificate in Civil Plant Operation with strands in Culverts and Drainage Systems, Earthworks, Road Construction, and Road Maintenance	6479, 17327, 22290
1326	National Certificate in Civil Construction Works with strands in Concrete Kerb and Channel; Concrete Work; Culverts and Drainage Systems; Interlocking Paving; Retaining Structures; Road Construction; Road Maintenance; Road Safety Barrier; Roadside Amenities; and Traffic Signage	6452, 6453, 6457 , 6469, 6470, 6472, 6475, 6477, 6479, 6485, 17327, 20875 , 22290
1428	National Certificate in Pavement Surfacing (Plant Operation) (Level 3)	6452, 17327

The following table identifies qualifications developed by other SSBs that are impacted by the outcome of this review. The SSBs have been advised that the qualifications require revision. The standard that generated the status *Affected* is listed in **bold**.

Ref	Qualification Title	Classification or ID	SSB Name
0962	National Certificate in Water Reticulation (Service Person) (Level 3) with strands in Water, and Wastewater	6453, 6457 , 6475, 6477, 6479	Agriculture ITO
1259	National Certificate in Water Reticulation (Supervisor) (Level 4) with strands in Water, and Wastewater	6479	
0799	National Certificate in Blaster Coating (Level 2) with optional strands in Confined Spaces; and Height and Traffic Safety	6457	NZ Extractive Industries Training Organisation
1022	National Certificate in Gas Network Construction (Service Laying) (Level 3)	6457 , 6470	
0934	National Certificate in Stevedoring and Ports Industry (Log Handling and Ship Loading) (Level 3)	6475	Tranzqual ITO

Transition

All candidates currently in training for expiring standard 6457 are advised to transfer to one or both of the replacement standards 26717 and 26718.

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Engineering and Technology > Civil Plant Operation and Management > Civil Plant Operation

Engineering and Technology > Infrastructure Works > Infrastructure Works Equipment

ID	Title	Level	Credit	Review Category
6457	Use generator and compressor for civil construction	2	2	C
26717	Use a generator on an infrastructure works site	2	1	
26718	Use a compressor on an infrastructure works site	2	1	
6469	Maintain small plant and equipment on civil construction works Maintain small machinery used on an infrastructure works site	1	2	B

ID	Title	Level	Credit	Review Category
6470	Operate a handheld pavement breaker Use a handheld pavement breaker	2	4	B

Engineering and Technology > Civil Works and Services

Engineering and Technology > Infrastructure Works

ID	Domain	Title	Level	Credit	Review Category
6452	Civil Construction Works Generic Infrastructure Works	Maintain, transport, and store temporary roadwork signs for civil construction works Maintain, transport, and store equipment used for temporary traffic management	2	3	B
6453	Civil Construction Works Infrastructure Civil Works	Demonstrate knowledge of civil construction works Demonstrate knowledge of infrastructure civil works	2	3	B
6472	Civil Construction Works Generic Infrastructure Works	Carry out manual excavation for civil construction works Carry out manual excavation for infrastructure works	1	2	B
6475	Civil Construction Works Generic Infrastructure Works	Maintain records for civil construction work Describe and complete work records for infrastructure works	2	2	B
6477	Civil Construction Works Generic Infrastructure Works	Hand-spread materials and assist mechanical compacting plant on civil construction works Identify, hand spread, and assist in compacting materials for infrastructure works	1	3	B
6479	Civil Construction Works Generic Infrastructure Works	Locate and identify services on civil construction sites Locate and identify services for infrastructure works	3	4 5	B
6485	Civil Construction Works Generic Road Works	Install hand rails or sight rails on civil construction works Install hand rail or sight rail for road	2	4	B

ID	Domain	Title	Level	Credit	Review Category
17327	Civil Construction Works Generic Infrastructure Works	Communicate on civil construction sites Apply communication skills on an infrastructure works site	2	3	B
20874	Civil Infrastructure Health, Safety, and Environment Infrastructure Works Health, Safety, and Environment	Demonstrate knowledge of health and fitness for civil infrastructure personnel Demonstrate knowledge of health and fitness for infrastructure works personnel	3	5 7	B
20875	Civil Infrastructure Health, Safety, and Environment Generic Infrastructure Works	Demonstrate knowledge of slinging, lifting, and placing with an excavator or loader Demonstrate knowledge of slinging, lifting, moving, and placing loads with an excavator or loader	3 2	5	B
22283	Civil Construction Works Generic Infrastructure Works	Identify the occupational areas and structures associated with the NZ civil infrastructure industry Demonstrate knowledge of occupational areas and structures in the New Zealand infrastructure works industry	1 2	2	B
22290	Civil Construction Works Generic Infrastructure Works	Demonstrate knowledge of quality assurance requirements on civil construction works Demonstrate knowledge of and carry out infrastructure works quality assurance requirements	3	3 5	B
23285	Civil Construction Works Infrastructure Works Equipment	Use and care for hand tools used for infrastructure pipelaying Use and care for hand tools used for infrastructure works	2	2	B

Engineering and Technology > Highway Construction and Maintenance > Roadmarking

Engineering and Technology > Infrastructure Works > Generic Road Works

ID	Title	Level	Credit	Review Category
15930	Locate roadmarking sites using maps and plans Locate work sites using route data system, maps, and plans	2	3	B

Engineering and Technology > Infrastructure Works > Generic Infrastructure Works

ID	Title	Level	Credit	Review Category
26719	Lay interlocking pavers for infrastructure works under supervision	2	6	New

Engineering and Technology > Infrastructure Works > Infrastructure Works Health, Safety, and Environment

ID	Title	Level	Credit	Review Category
26720	Describe health, safety, and environmental care at an infrastructure works site	2	2	New