

Classification of building and civil engineering types for the AEC industry

by Kjell Ivar Bakkmoen
C. F. Møller Architects, Norway

This project has been carried out with support from
The National Office of Building, Technology and Administration, The Housing
Bank, Statsbygg (Public Construction and Property Management), Avinor, and
The Norwegian Defence Estates Agency

2009-05-09

Executive summary

This report is a preliminary study trying to establish the necessary knowledge and background – state of the art – preparing for the revision of the Norwegian Standard for classification of building categories (NS 3457 *Table for building categories*) and also the development of a new Norwegian Standard for classification of types of civil engineering work.

The report lists and describes the predominant classification systems for building types and their use both in Norway and internationally. In addition the report reviews a number of trans-sectorial classification systems which might be prevalent for the building and construction industry as well.

The list of classification tables is not complete and final; it is a tendency that more and more alternative tables surface as the study goes on. The tables are not reviewed in any detail and there is no evaluation trying to show that some tables are more suited than others. Furthermore the report does not explain all the terms, abbreviations and concepts used in the various tables. The main result of the study is the knowledge and understanding of the number of different tables and the diversity, in objective, scope, and level of detailing, both nationally and internationally.

The complexity and number of different systems clearly illustrates the need for harmonization or mapping between the systems if structure and classification at any time needs to be transferred across borders between nations, organizations, or classification systems. In a globalized economy this is a growing concern for the construction industry as well. The development of one global harmonized classification system seems unlikely. Consequently, there is an urgent need to establish a method to interpret and map the different classification systems. As this preliminary study shows, IFD Library appears to be the most obvious alternative available to the building and construction industry.

Internationally, there are major differences between different classification tables, and it will probably be very difficult to achieve any kind of agreement about the harmonization of classification within a reasonable time span. Thus, the international harmonization should start through IFD Library. If the IFD Library content were to include the most important classification systems and tables this might inspire and encourage new actors to consider some of the existing classification systems and tables instead of establishing new ones. With the opportunity of mapping between tables through IFD Library and the buildingSMART technology it would ultimately be far less important which system is used in a specific project or part of a project. In the long run, the awareness of other systems and tables could possibly result in some of them becoming the preferred alternatives also on an international basis. Consequently, the use of IFD Library could facilitate a development towards more harmonized international classification systems for the building and construction industry. Consequently, it is recommended that all classification work within the building industry should start with populating IFD Library for the actual scope if missing.

In order to facilitate this international development it is recommended to establish the ISO/TC 59/SC 13 Secretariat as the “Home of BIM standards” with a role as coordinator, and possibly mapping exchange for all classification tables through IFD Library, in addition to a role as coordinator for the IDM standards.

Concerning the urgent need for harmonization of the existing Norwegian Standards, this should be relatively straight-forward between NS 3457 and Kartverket/SSB/GAB, as they are already quite similar. This work should be started and carried out as a national standardization project revising the Norwegian Standard NS 3457 in order to avoid further unnecessary confusion. The Norwegian state developer Statsbygg has through an earlier study shown interest in a development in this direction.

If a new work is started to establish a new Norwegian Standard for civil engineering types, it is recommended to do a more detailed study of the most important tables listed in this report prior to starting the actual standardization work.

Table of contents

Executive summary.....	4
1 Summary	7
1.1 Background.....	7
1.2 Conclusions – Further work	9
2 Norwegian building type tables and the use of them.....	11
2.1 NS 3457 <i>Bygningstypetabell</i> (Norwegian Standard NS 3457 <i>Table for building categories</i>).....	11
2.2 Statsbygg (The Directorate of Public Construction and Property).....	11
2.3 Forsvarsbygg (Norwegian Defence Estates Agency).....	11
2.4 Statens kartverk (National Map Authority), GAB (National register for property and buildings), SSB (Statistics Norway).....	11
2.5 Statens bygningstekniske etat (BE) – Plan- og bygningsloven (National Office of Building Technology and Administration – Building act)	12
2.6 Other players in the Norwegian building industry	13
2.7 SINTEF Byggforsk (The Norwegian Building Research Institute)	13
3 International trans-sectorial classifications	14
3.1 General	14
3.2 EU: CPV – Common Procurement Vocabulary	14
3.3 EU: NACE – CPA.....	15
3.4 CPC (Central Product Classification).....	16
3.5 eCI@ss.....	16
3.6 UNSPSC	17
3.7 North American tables	17
4 International building type tables, and tables from other countries	19
4.1 Eurostat – Classifications of type of constructions (CC).....	19
4.2 Germany – German survey.....	19
4.3 The Netherlands	20
4.4 UK Uniclass.....	20
4.5 US OmniClass.....	21
4.6 Denmark DBK.....	21
4.7 Finland Tulo 90	22
4.8 Australia	22
4.9 South Africa.....	22
4.10 Other ICIS members	22
4.11 Other examples.....	22
5 International harmonization efforts	23
5.1 The SfB system – CI/SfB	23
5.2 ISO 12006-2:2001	24
5.3 IFC (Industry Foundation Classes) – IFC classes	26
5.4 ISO 12006-3 – IFD Library.....	26
5.5 Use of IFD library for documentation of and mapping between tables.....	27
5.6 Other initiatives	28
ANNEX A: Norwegian Standard NS 3457 <i>Table for building categories</i>	30
ANNEX B: EU – CPV – Common Procurement Vocabulary	32
ANNEX C: EU – NACE.....	47
ANNEX D: EU – CPA – Classification of Products by Activity	48
ANNEX E: UN – CPC – Central Product Classification.....	54
ANNEX F: CI/SfB Building types and spaces (The Netherlands)	58
ANNEX G: UK – UNICLASS Table D: Facilities.....	66
ANNEX H: UK – UNICLASS Table E: Construction entities	75
ANNEX I: UK – UNICLASS Table F: Spaces.....	78
ANNEX J: US – OmniClass – Table 11 Construction entities by function	80
ANNEX K: US – OmniClass – Table 12 Construction entities by form	82
ANNEX L: Finland – Classification of buildings.....	86
ANNEX M: Germany – BKI Bauwerkzuordnungskatalog (BWZ) (in German)	90
ANNEX N: Australia – BCA	93
ANNEX O: EU – Eurostat Classification of Types of Constructions (CC).....	94
ANNEX P: Other.....	96
ANNEX Q: Browsing in IFD library	101
ANNEX R: Denmark – DBK (in Danish)	104
ANNEX S: Norway – Statsbygg PropMan (in Norwegian)	107

ANNEX T: Norway – Statsbygg – Forslag til felles tabell for statens byggevirkosomhet (in Norwegian)	108
ANNEX U: Norway – Forsvarsbygg Bygningstyper (in Norwegian)	114
ANNEX V: Norway – Forsvarsbygg EBA (in Norwegian)	116
ANNEX W: Norway – Statens Kartverk, GAB, SSB, SOSI (in Norwegian)	117
ANNEX X: Norway – Byggforskserien: Planløsning 330.009 (in Norwegian)	123

1 Summary

1.1 Background

The project has tried to get an overview over different use of classification of building and facility types in order to give a recommendation concerning revision, development, and coordination of the Norwegian tables. The project has taken a broad approach, looking into:

- Norwegian and other national industry standards which typically have been developed in the construction industry as a tool to organize knowledge;
- more ‘official’ tables with the main purpose to collect statistics or to be used in official registers or to organize building codes or acts. This also includes international tables, typically in the European Union or the UN. These tables typically cover many trades and are developed without special knowledge about the construction industry. Construction types is only a small part of their scope and are often included through work on different construction types, not as the facilities as such;
- organization of information which is not documented as tables, but which de facto has the same importance.

It is also assessed how these tables may or should exist together with international or other national tables, directly or through using IFD Library as a mapping tool.

NS 3457 *Table for building categories* is one of the tables that have the widest national use, as it is adopted as a formal Norwegian Standard. It is used by the construction industry as well as by public property registers.

National industry tables

As the intention with this work is to harmonize practice in Norway, all building type tables in Norway have been reviewed, including:

- the official national standard; NS 3457 *Table for building categories*;
- a table used jointly by the National Map Authority, GAB (National register for property and buildings) and Statistics Norway;
- Statsbygg’s system for property registration and a proposal from an earlier attempt to make a system for all public actors;
- two tables from the Norwegian Defence Estates Agency;

The use of ‘dialects’ in these tables, e.g. implementations in cost estimate systems, has also been reviewed. There are also ad hoc enumerations of building types in the Building act or codes which have been reviewed.

Examples from other countries, which have been reviewed in this study, include:

- Uniclass (UK),
- OmniClass (USA and Canada),
- CI/SfB which is being used in the Netherlands,
- BKI (Germany),
- DBK (Denmark),
- Tulo 2000 (Finland),
- BCA (Australia).

All these tables are typically established and developed in order to organize information within the building and construction industry.

Official tables

Various official tables normally cover a much wider scope than just the building and construction industry. The only one which is specific to the construction industry is Eurostat's building type tables. In addition, the European CPV, CPA, NACE, the international CPC, eCl@ss and UNSPSC and the North American SIC and NAICS have been reviewed.

The official tables are typically established with the objective to classify various types of statistical data, organize tariffs, customs or other taxes. The main reason for including these tables in this study as well is to illustrate the large number of partly conflicting initiatives; there are a significant number of tables to relate to, some of which are part of codes and regulations. All in all this creates a great deal of confusion for all parts of the building and construction industry.

Other systems for classification of information

Similar structures are being used in many other systems that may be regarded as informal standards. Examples which are mentioned in this study include Neufert, Whole Building Design Guide, Wikipedia, and New York State Office of Real Property Services.

Initiatives to harmonize or map different classification systems

ISO/TC 59/SC 13 has developed ISO 12006-2 *Building construction – Organization of information about construction works – Part 2: Framework for classification of information*, as a framework for how classification tables in the construction industry should be organized. This standard will probably contribute toward harmonization of classification systems, as new initiatives to establish tables use this standard as reference and as a starting point and thus hopefully starts out with a shared understanding and basic structure. However, the harmonization process is expected to be slow, and the ISO 12006-2 standard does not facilitate mapping between systems and tables.

In 2008 NATSPEC Australia carried out a study with a review of Uniclass and OmniClass evaluating the level of harmonization between the two systems and their compliance with ISO 12006-2. This report provides a good starting point for carrying out similar evaluations of other tables and systems. SINTEF Byggforsk has provided an overview and mapping of the Norwegian tables concerning housing. The German Facility Management Research Institute IFBOR has developed mapping between different German tables. Both CEN and the European Commission are working with initiatives within their focus areas. The classification environment in the construction industry should obviously follow those initiatives.

Classification tables vs. Building Information Modeling / object oriented tools

There is no contradiction between classification tables and an object-oriented way of working. IFC – Industry foundation classes – has information fields and methodology for sharing this kind of information as well. There is a common understanding that classification tables have an important function as standardized views on models or objects.

However, it is also quite clear that classification tables do not give the precise identification which is necessary in order to make the information machine-readable. For this purpose it is necessary to have tools like reference libraries. Reference libraries such as IFD Library might also be used in order to map different classification tables.

Evaluation of IFD Library as a mapping tool

The project has tested and taken part in the development of a browser for IFD Library. As this study clearly shows, reference library methodology could undoubtedly provide the infrastructure for effective and dynamic mapping between classification systems and tables. This functionality might be used both

in order to respond to concrete requests for a code or a notation in another classification system, and to illustrate the hierarchy or structure in different systems. In conjunction with possible harmonization efforts it might also help in order to understand the differences between different systems.

1.2 Conclusions – Further work

General

The large number of existing tables and the existing confusion, with many active tables within a country, and the need to link them to international systems like Eurostat, illustrates the challenge of developing the one and only perfect classification table.

This strengthens the hypothesis that a reference library methodology like IFD Library is the only possible way to establish clarity, locally as well as internationally. With a reference library as a foundation it would be relatively simple to establish tables for specific uses. Different actors might then be able to continue to use their own systems linked to the library. This working method will also document all the different systems, and possibly promote some systems to be preferred and to be recognized as common tables.

Strategy for developing and maintaining classification tables in the building industry

With the perspective of developing IFD Library and facilitating mapping between classification tables, ideally all classification work within the building and construction industry should start with populating IFD Library for their scope. Then it will be possible to consider the various views to see which are necessary, and subsequently develop this or these.

With the ambition to establish the ISO/TC 59/SC 13 Secretariat as “The home of BIM standards” the secretariat should also consider providing assistance to coordinate and support classification initiatives internationally. When launching work to develop new classification tables or systems within the building and construction industry, it should be considered relevant to request some initial guidance and help from the SC 13 Secretariat. Hopefully, this would have the effect that fewer new classification tables or systems are being developed, and also help simplify the local development effort. If such efforts link to IFD Library in their finalized tables, this will give a mapping between different tables, nationally and internationally, without any extra work.

Civil engineering works tables

Many of the tables also cover civil engineering works, e.g.:

- Forsvarsbygg (The Norwegian Defence Estates Agency)
- CI/SfB
- Uniclass
- OmniClass
- DBK
- Eurostat
- NACE
- CPV
- CPA
- CPC

Before starting a standardization project with the objective to develop a new Norwegian Standard for civil engineering works types, it is recommended to do a more detailed study of the tables listed in this report in order to see whether any of them might be used as they are, or as a starting point. Also the work should start with populating IFD Library for the relevant scope.

Revision and harmonization of the Norwegian building type tables

It seems unnecessary to have NS 3457 and the tables from Statistics Norway, which are quite similar, but not identical. They are even sometimes referred to with the same name. This is obviously causing confusion. It should be a straight-forward task to harmonize those two tables by carrying out a national standardization project revising the Norwegian Standard NS 3457 in order to avoid any further confusion.

This project should also be used to establish mapping to the other Norwegian actor's tables (Statsbygg, Forsvarsbygg etc.) and possibly some of the closest or most important international tables. If this mapping is published together with the new revised standard, this should facilitate a more comprehensive harmonization process. This harmonization work might also influence other Norwegian actors to use the new revised standard or to link to it through the mapping. The Norwegian state developer Statsbygg has through an earlier study shown interest in a development in this direction.

The results of this work should of course also be used to populate IFD Library within this scope.

This project has been carried out with support from The National Office of Building, Technology and Administration, The Housing Bank, Statsbygg (Public Construction and Property Management), Avinor, and The Norwegian Defence Estates Agency.

2 Norwegian building type tables and the use of them

2.1 NS 3457 *Bygningstypetabell* (Norwegian Standard NS 3457 *Table for building categories*)

NS 3457 *Table for building categories* (published in Norwegian only) is a product of work with the registration of properties, addresses, buildings (GAB, “grunneiendommer, adresser, bygninger”). Work with the register started in 1983.

Statens kartverk (the National Map Authority) maintains the GAB. In 1995 the registration criteria of GAB were up for revision, and a committee was established to develop a Norwegian Standard. NS 3457 was a result of this effort.

The Standard specifies building types on a 2-digit level. An accompanying guide is developed to expand the system to a 3-digit level. See annex A.

2.2 Statsbygg (The Directorate of Public Construction and Property)

Statsbygg utilizes a building type classification in the property system “PropMan”. Statsbygg is using a 3-digit building code. The numbering coincides with NS 3457 for some categories, but deviates from the Standard for most categories. The table only comprises quite few building types, based on the needs of Statsbygg. It is therefore not an alternative to NS 3457. See annex S (in Norwegian only).

Statsbygg has in the past conducted a study with the aim to come up with one common table for governmental bodies. The table is based on NS 3457, and most of the deviations in the area 0 to 81 constitute further detailing of the Standard. In the area 82–84, which in the Standard comprises peripheral buildings, there are substantial deviations. Furthermore, the digit 9 is used for concrete classes, rather than being free as in the Standard. All in all it should be possible to incorporate this into the Standard. However, it has not been considered whether this serves a sound purpose. See annex T (in Norwegian only).

Statsbygg has performed a test mapping of Statsbygg PropMan, NS 3457, and OmniClass table 11. A spreadsheet aligns all the tables.

2.3 Forsvarsbygg (Norwegian Defence Estates Agency)

Forsvarsbygg has its own table, which covers both building and construction types for their activities. Their building table is to a considerable degree adapted to their building types, and it deviates from NS 3457 for all classes, even for the building types that are found both places, and where there could have been consistency.

The EBA categories constitute a higher-level classification. It differs from NS 3457 in all details. See annex U for Building types and annex V for EBA codes (in Norwegian only).

2.4 Statens kartverk (National Map Authority), GAB (National register for property and buildings), SSB (Statistics Norway)

All these bodies use a common table that is quite similar to NS 3457, but with some deviations. The system is documented as a table on SSB’s home page, in “Bygningstype 2000”, and in the National

Map Authority user manual (Matrikelklienten version 1.7). The table corresponds to NS 3457 on the 2-digit level, except 14, 15, and 63. On the 3-digit level there are more deviations, especially relating to some types of housing and schools.

The National Map Authority plays an important role in the development of the SOSI standard. The SOSI standard is used to exchange all types of map and GIS data. It has categories for the exchange of information about building and construction types. For building types it uses the table from SSB/GAB. For construction types there is a de facto classification in the standard, comprising roads, railways, and other infrastructural constructions. See annex W for the table, notes during the process, and more about SOSI (in Norwegian only).

2.5 Statens bygningstekniske etat (BE) – Plan- og bygningsloven (National Office of Building Technology and Administration – Building act)

BE does not use building type numbering in its regulatory texts or guides. However, some de facto classification is done in the form of requirements of various building types in *Veiledningen til teknisk forskrift TEK* (guide to technical regulation). In the following there are three examples (in Norwegian):

§7-22 – Table 2 Examples of enterprises (“virksomheter”) and corresponding risk classes (for fire).

Virksomhet	Risikoklasse	Virksomhet	Risikoklasse
Arbeidsbrakke	1	Kongressenter	5
Arrestlokaler	6	Kontor	2
Asylmottak (ikke transistmottak)	4	Labratorium	2
Barnehage	3	Lager	2
Barnehjem	4	Leirskoler	6
Bolig	4	Messelokaler	5
Boliger for personer med nedsatt funksjonsevne	6	Museum	5
Boligbrakke	4	Overnatningssted	6
Brannstasjon	2	Parkeringshus (to eller flere etasjer)	2
Båtnaust	1	Pleieinstitusjon	6
Carport	1	Psykiatrisk pleieinstitusjon	6
Fengsel	6	Sagbruk	1
Feriekoloni	6	Salgslokaler	5
Flyhangar	1	Selvbetjentehytter	4
Fridtidsbolig	4	Skole	3
Trafo/fordelingsstasjon	2	Skoleinternat	4
Forsamlingslokale	5	Skur	1
Fryselager	1	Sprengstoffindustrien	2
Garasje, lukket	1	Studentbolig	4
Garasje, åpen	1	Teaterlokale	5
Idrettshall	5	Trafikkterminal	5
Industri	2	Transistmottak	6
Intemat	4	Trelastopplag	1
Kinolokale	5	Tribuneanlegg for mer enn 150 personer	5
Kirke	5	Turisthytte/vandrehjem	6
Kjemiskfabrikk/kjemikalielager	2		

Categories taken from § 8-21 Table 1. Calculated annual net energy demand (kWh/m² heated BRA).

Combined net energy demand for the building shall not exceed:

Bygningsskategorie	Rammekrav kWh/m ² oppvarmet BRA år
Småhus	125 + 1600/oppvarmet BRA
Boligblokk	120
Barnehager	150
Kontorbygg	165
Skolebygg	135
Universitet/høyskole	180
Sykehus	325
Sykehjem	235
Hoteller	240
Idrettsbygg	185
Forretningsbygg	235
Kulturbygg	180
Lett industri, verksteder	185

§ 8-61 Table 1. Function control (of ventilation installations)

	Anbefalt kontrollintervall (år)
Skoler, barnehager, sykehus o.l	2
Kontorer, salgslokaler o.l	3
Boliger med mer enn to boenheter	6
En- og tomannsboliger	10

2.6 Other players in the Norwegian building industry

Holteprosjekt's cost estimate key

Holteprosjekt AS' cost estimate key utilizes SN 3457 on the 2-digit level in its building type classification.

NOIS' Calcus

The cost estimate program Calcus uses a 3-digit level. On the 1-digit level and partly on the 2-digit level Calcus is consistent with NS 3457. On the 3-digit level there is focus on the costs relating to the construction of building types rather than the classification of NS 3457.

2.7 SINTEF Byggforsk (The Norwegian Building Research Institute)

Leaf "Planløsning 330.009" of the Byggforsk series deals with term and definitions relating to dwellings. There is an overview of different designations used to describe buildings for dwelling. The designations are presented in a table grouped according to separators between dwellings. See annex X (in Norwegian only).

3 International trans-sectorial classifications

3.1 General

There are a number of classification systems in use internationally which are trans-sectorial, hence having a broad diffusion. Some of these systems are briefly described in the following clauses.

3.2 EU: CPV – Common Procurement Vocabulary

The CPV is based upon 'EC regulation no 2195/2002 and update of 28 November 2007'. A CPV code has to appear in all EU public procurement tenders. However, the CPV lacks a good set of properties, and it cannot be used for technical or simple procurement through electronic transactions. In the 2007 version it is specified in the texts that the classification relates to works with or on building types. The word 'works' is added to the name of most classes.

The structure of the CPV classification system is as follows:

1. The CPV consists of a main vocabulary and a supplementary vocabulary.
2. The main vocabulary is based on a tree structure comprising codes of up to nine digits associated with a wording that describes the supplies, works or services forming the subject of the contract.

The numerical code consists of 8 digits, subdivided as follows:

- the first two digits identify the division;
- the first three digits identify the group;
- the first four digits identify the class;
- the first five digits identify the category.

Each of the last three digits gives a greater degree of precision within each category.

A ninth digit is a control digit to verify the integrity of the code.

3. The supplementary vocabulary may be used to expand the description of the subject of a contract.

The items are made up of an alphanumeric code with a corresponding wording allowing further details to be added regarding the specific nature or destination of the goods to be purchased.

The alphanumeric code is made up of:

- a first level comprising a letter corresponding to a section;
- a second level comprising three digits which denote a subdivision;
- a fourth control digit.

More information:

<http://europa.eu/scadplus/leg/en/lvb/l22008.htm>

http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#cpv

See annex B.

3.3 EU: NACE – CPA

NACE

The **Statistical Classification of Economic Activities in the European Community** (in French: Nomenclature statistique des activités économiques dans la Communauté européenne), commonly referred to as **NACE**, is a European industry standard classification system consisting of a 6 digit code. The first four digits of the code are the same in all European countries. The fifth digit might vary from country to country and further digits are sometimes added by suppliers of databases. NACE is a comprehensive classification table. NACE Section F is Construction. The last release of NACE is documented in REGULATION (EC) No 1893/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No3037/90 as well as certain EC Regulations on specific statistical domains (Text with EEA relevance).

NACE is also used for classification within EMAS, The European eco-management and audit scheme, see http://ec.europa.eu/environment/emas/documents/nace_en.htm.

“EMAS registered sites are classified according to NACE codes. These codes represent the statistical classification of economic activities within the European Community. A full NACE code list can be found in Council Regulation No 3037/90 of 09/10/1990, OJ L 293 of 24 October 1990, as amended by the Commission Regulation (EEC) No 761/93 of 24 March 1993 and the Commission Regulation (EEC) No 29/2002. This Regulation is also referred to as Revision (Rev.) 1.1.

On 1 January 2008, the classification will change considerably when NACE Regulation 1893/2006 (Rev. 2) will have to be implemented fully. The changes will effect the classification of organizations and the scopes of verifiers, as well as statistics. The impact of the Rev. 2 on EMAs has been described in a note to the Members of the Committee established under Regulation (EC) 761/2001.” See annex C for extracts from NACE concerning construction.

(Wikipedia): NACE is equivalent to the SIC and NAICS system:

- Standard Industrial Classification
(http://en.wikipedia.org/wiki/Standard_Industrial_Classification)
- North American Industry Classification System
(http://en.wikipedia.org/wiki/North_American_Industry_Classification_System)

See chapter North American tables, further down.

CPA (Classification of Products by Activity)

The Statistical Classification of Products by Activity in the EEC (CPA).

Last release of CPA is documented in REGULATION (EC) No 451/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2008 establishing a new statistical classification of products by activity (CPA) and repealing Council Regulation (EEC) No3696/93 (Text with EEA relevance).

Both NACE and CPA may be downloaded from Eurostat;
<http://circa.europa.eu/irc/dsis/nacecpacon/info/data/en/index.htm>

CPA is almost identical with NACE, in content as well as in coding. However, CPA is considerably more detailed. Both CPA and NACE cover both buildings and civil engineering works. To a certain degree they also cover building elements and technical installations.

CPA exists in all EU languages and has a quite comprehensive table detailing what is included and what is excluded for the different classes. See annex D for extracts concerning construction and, for illustration, a short extract of the table defining what is included or excluded from the classes.

3.4 CPC (Central Product Classification)

CPC is a classification from the United Nations Statistics Division for statistical purposes.

<http://unstats.un.org/unsd/default.htm>

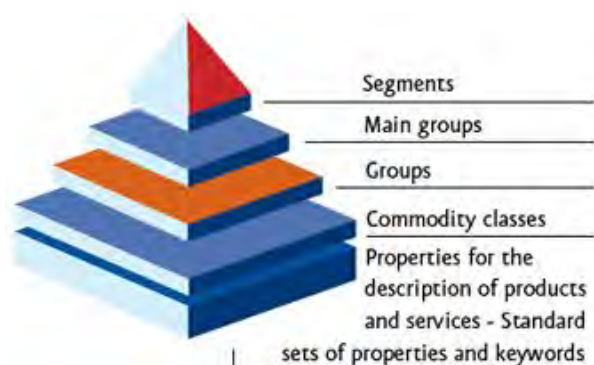
The table is comprehensive, and it has also a special part 5 for Construction. See annex E.

3.5 eCl@ss

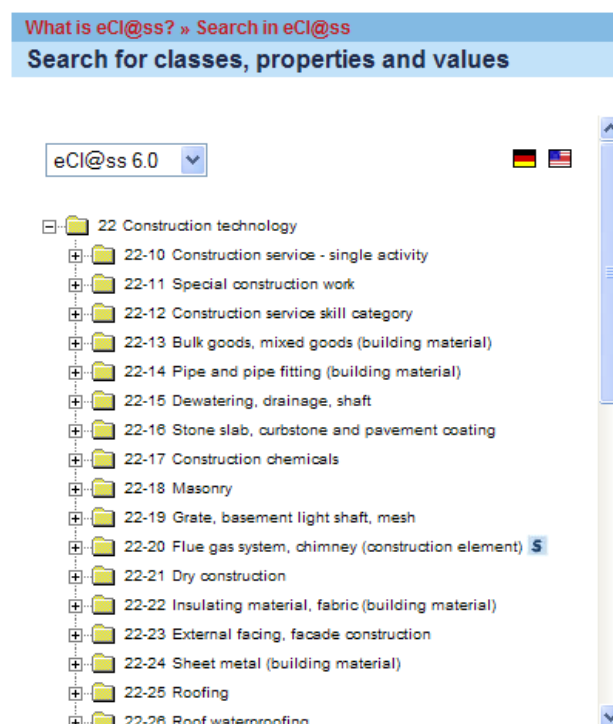
eCl@ss is a hierarchical system for grouping materials, products and services according to a logical structure with a level detail that corresponds to the product-specific properties that can be described using norm-conforming properties. eCl@ss:

- is a non-profit organization, which defines, further develops and markets the cross-industry and international classification standard of the same name;
- is supported by ordinary and supporting members from companies, associations and institutions;
- cooperates with reputable strategic partners from the standardization, norms and IT sectors and associations; is represented on national and international standardization and norms committees;
- is the partner of the German Federal Ministry of Economics and Technology

Products and services can be allocated to the four-stage, numeric eCl@ss class structure. It is aimed at construction specialists, engineers, procurement activity, catalogues etc. Information on this classification is found at: <http://www.eclass-online.com/> or <http://www.eclass.eu/>.



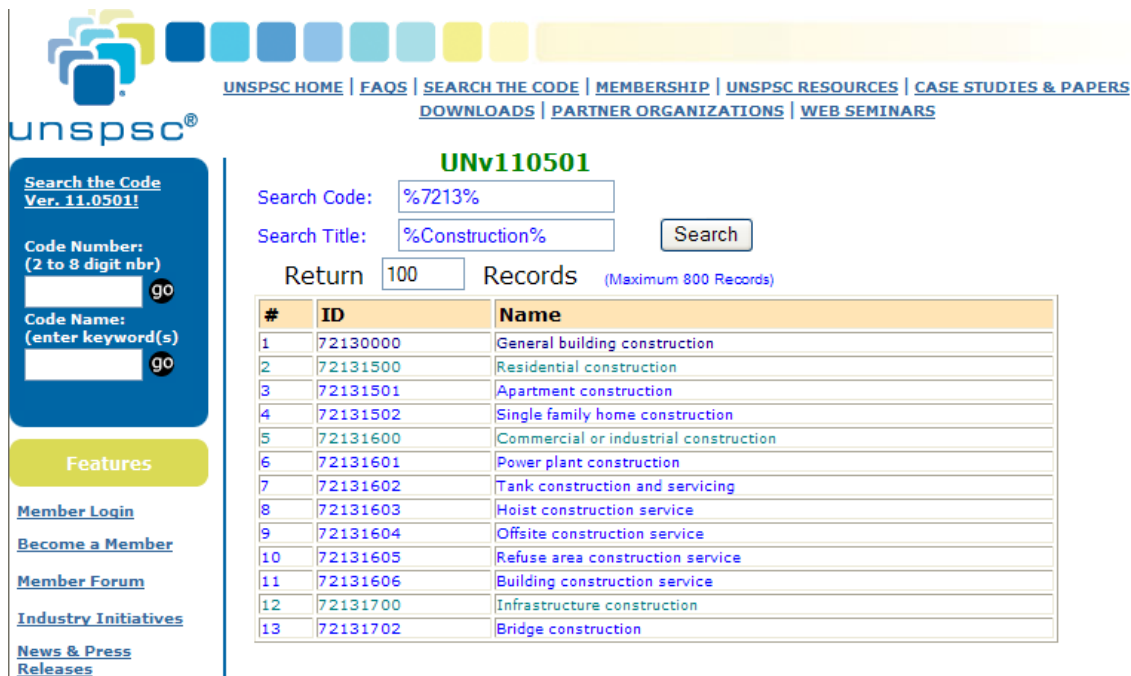
<http://www.eclass.eu/index.html/JTl2bmF2aWQIM0QzNDYzJTl2bGFuZyUzRGVuJTl2c2lkJTNEbjQ5NzIyZDkxOTFiYTEIMjZaWQlM0RuNDk3MjJkOTE5MwJhMSUyNmllM0Q=.html?no=intro&PHPSESSID=5e7d9e89ecc2065315844c25e4b19abf>



3.6 UNSPSC

The United Nations Standard Products and Services Code® (UNSPSC®).

UNSPSC is developed by the UN. It contains a section on construction, mainly section 30 (search with the keyword “construction” or “brick” in the Internet database). This classification is mainly aimed at spent analysis (financial analysis of purchases...), and it is not very useful for procurement as it has no properties. <http://www.unspsc.org/>



The screenshot shows the UNSPSC website interface. At the top, there is a navigation menu with links: UNSPSC HOME, FAQs, SEARCH THE CODE, MEMBERSHIP, UNSPSC RESOURCES, CASE STUDIES & PAPERS, DOWNLOADS, PARTNER ORGANIZATIONS, and WEB SEMINARS. The main search area displays the search results for 'UNv110501'. The search criteria are: Search Code: %7213% and Search Title: %Construction%. The results are displayed in a table with 13 rows, showing the ID and Name for each construction category. On the left side, there is a search box with fields for Code Number and Code Name, and a 'Search' button. Below the search box, there are links for Member Login, Become a Member, Member Forum, Industry Initiatives, and News & Press Releases.

#	ID	Name
1	72130000	General building construction
2	72131500	Residential construction
3	72131501	Apartment construction
4	72131502	Single family home construction
5	72131600	Commercial or industrial construction
6	72131601	Power plant construction
7	72131602	Tank construction and servicing
8	72131603	Hoist construction service
9	72131604	Offsite construction service
10	72131605	Refuse area construction service
11	72131606	Building construction service
12	72131700	Infrastructure construction
13	72131702	Bridge construction

3.7 North American tables

In North America, SIC (the Standard Industrial Classification) and NAICS (North American Industry Classification system) are used for the same purposes as NACE in the European Union.

The Standard Industrial Classification

The **Standard Industrial Classification** (abbreviated **SIC**) is a United States government system for classifying industries by a four-digit code. Established in 1937, it is being replaced by the six-digit North American Industry Classification System, which was released in 1997. However, certain government departments and agencies, such as the U.S. Securities and Exchange Commission (SEC), still use the SIC codes.

The following table is taken from the SEC’s site, which allows searching for companies by SIC code in its database of filings.¹ The acronym NEC stands for “not elsewhere classified”. (Wikipedia)

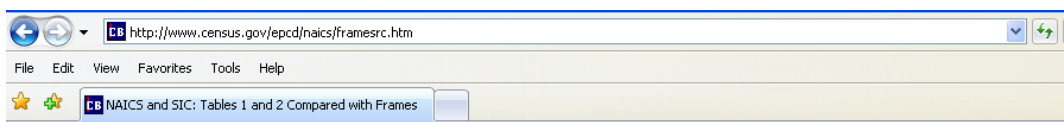
¹ http://en.wikipedia.org/wiki/Standard_Industrial_Classification#cite_note-0#cite_note-0

SIC Code	Industry Title
0100	Agricultural Production-Crops
0200	Agricultural Prod-Livestock & Animal Specialties
0700	Agricultural Services
0800	Forestry
0900	Fishing, Hunting and Trapping
1000	Metal Mining
1040	Gold and Silver Ores
1090	Miscellaneous Metal Ores
1221	Bituminous Coal & Lignite Mining
1311 ²	Crude Petroleum & Natural Gas
1381	Drilling Oil & Gas Wells
1382	Oil & Gas Field Exploration Services
1389	Oil & Gas Field Services, NEC
1400	Mining & Quarrying of Nonmetallic Minerals (No Fuels)
1520	General Bldg Contractors - Residential Bldgs
1531	Operative Builders
1540	General Bldg Contractors - Nonresidential Bldgs
1600	Heavy Construction Other Than Bldg Const - Contractors
1623	Water, Sewer, Pipeline, Comm & Power Line Construction
1700	Construction - Special Trade Contractors
1731	Electrical Work
2000	Food and Kindred Products

NAICS 2002 sectors

Sector number	Description
11	Agriculture, Forestry, Fishing and Hunting
21	Mining
22	Utilities
23	Construction
31-33	Manufacturing

² http://en.wikipedia.org/wiki/List_of_crude_petroleum_and_natural_gas_companies



Index entry	NAICS Code	U.S. NAICS Title
NAICS 23	23	Construction
NAICS 233	233	Building, Developing, and General Contracting
NAICS 2331	2331	Land Subdivision and Land Development
NAICS 23311	23311	Land Subdivision and Land Development
NAICS 233110	233110	Land Subdivision and Land Development
NAICS 2332	2332	Residential Building Construction
NAICS 23321	23321	Single Family Housing Construction
NAICS 233210	233210	Single Family Housing Construction
NAICS 23322	23322	Multifamily Housing Construction
NAICS 233220	233220	Multifamily Housing Construction
NAICS 2333	2333	Nonresidential Building Construction
NAICS 23331	23331	Manufacturing and Industrial Building Construction
NAICS 233310	233310	Manufacturing and Industrial Building Construction
NAICS 23332	23332	Commercial and Institutional Building Construction
NAICS 233320	233320	Commercial and Institutional Building Construction
NAICS 234	234	Heavy Construction

4 International building type tables, and tables from other countries

4.1 Eurostat – Classifications of type of constructions (CC).

Eurostat developed a European classification of building types “Classifications of type of constructions (CC)” more or less in parallel with the development of the Norwegian standard NS 3457 in Norway. The coding is on a 4-digit level and consists of two main groups: (1) building, and (2) Civil engineering works. The standard is used for official statistical purposes in the European Union. See annex O.

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_CLS_DLD&StrNom=CC_1998&StrLanguageCode=EN&StrLayoutCode=#

4.2 Germany – German survey

BKI is an institution established by the architects’ unions of Germany with the purpose to gather, document and publish information about building costs for finalized building projects in order to establish a basis for cost estimates for new building projects with similar functions. They have established a catalogue with building types “Bauwerkszuordnungskatalog” (BWZ) des Baukosteninformationszentrums Deutscher Architektenkammern (BKI). All buildings, for which information is added to the database are categorized according to this catalogue. See annex M.

Institute for Building Operations Research (ifbor) at Hochschule für Wirtschaft und Umwelt, Nürtingen-Geislingen University, Germany, has published a proposal for a building types table with more than 1200 different categories or entries. This table is related to other tables used in Germany, including the BWZ mentioned above, which is the most important with broadest implementation, and is a starting point for many of the others. Even though this work is not object oriented, it might be compared to the IFD Library, as it actually is mapping a number of tables against each other.

Extract from mapping table (in German):

ifBOR BZK 2007-10

Hauptgruppe	Nebengruppe	Bezeichnung	[SIBA 1978-06]	[ages 1998]	[VDI 3807-2 1998-06]	[ages 1998]	[ages 1998]	[ages 1998]	[ages 1998]	[AGES 1998]	[OFD, Koblenz]	[AGIN 3]	[BKI Bd. A 1996]	[BKI Bd. 1 1998]	[VDI 2067 Bl. 4 1982-02] (1)	[ages 1998]	[BdSt 1996]	Techem (2)	[NHK 1996]	[DIN 32835-2]
100		<i>Bauwerke</i> Parlaments-, Gerichts- und Verwaltungsgebäude	(308)	1	1000	10000		100						1000						1a
		Oberste Bundes-/Landesbehörden, Parlamente	(308)			11000		110												
		Parlamentsgebäude, Ministerien, Regierungspräsidien	(308)					111												
110		Parlamentsgebäude	(308)	11	1100									1100						
		Landtagsgebäude	(308)																	
		Präsidiumsgebäude	(308)																	
120		Gerichtsgebäude	(308)	12	1200	12000	120	120	120			120	1200							223
121		Gerichte	(308)			12100														
	10	Ordentliche Gerichte	(308)			12110														
	11	Amtsgerichte	(308)		1210	12111		120				120,1								
	12	Landgerichte	(308)		(1210)	12112		120												

This work is clearly an interesting example of how to start any kind of harmonization of different tables.

4.3 The Netherlands

The CI/SfB table for Building types and spaces is still used. See annex F.

4.4 UK Uniclass

Uniclass is a British classification system developed by NBS (National Building Specification – A RIBA subsidiary). Uniclass is a comprehensive classification system with many tables, basically in line with the recommendations of ISO 12006-2. Many of the tables use CI SfB as a starting point.

Uniclass has three tables concerning construction entities: Table D: Facilities (Basically by function, but for housing also by type, size of development, type of occupiers and owner), Table E: Construction entities (basically by physical form), Table F: Spaces (Basically by user activity, but also according to complexity, degree of enclosure and surveying standards – area measurement).

This illustrates that the classification might be developed for different views according to different criteria. The intention of Uniclass is to allow for the use of more classifications to the same facility in order to give a more specific classification.

Uniclass is an industry effort, not formalized national standardization. The tables cover both buildings and construction and infrastructure works. See annexes G-I.

4.5 US OmniClass



OmniClass is a comprehensive classification system developed by CSI (Construction Specification Institute). It is also used in Canada by CSC (Construction Specification Canada). It has a number of tables, basically in line with the principles of ISO 12006-2.

This is an industry effort, not formalized national standardization. The tables cover both buildings and construction and infrastructure works. Building types are covered by Table 11 Construction entities by function and Table 12 Construction entities by form. This is an example of how more tables may be used together to give a more specific identification of a construction entity. See annex J–K and also: <http://www.omniclass.org/>

4.6 Denmark DBK

DBK (Dansk Byggeklassifikation – Danish Building Classification) is a new Danish classification system for the construction industry made in connection with the project Digital Construction (Det Digitale Byggeri). It comprises a number of tables, basically in line with ISO 12006-2.

Tables for construction entities, buildings and rooms are documented in the report ‘DBK 2006 - Resultatdomænet 1’. It has a number of tables based on different views or criterias/aspects. It covers both buildings and civil engineering works. This is an industry effort, not formalized national standardization, but its use is actually mandatory regulated in The Public Building Act.

DBK 2006 – resultatdomænet 1	Tabeller for bebyggelser, bygninger og rum
 DET DIGITALE BYGGERI 	Kapitel
	Side : 17
	Dato : 2006-08-01
6. Tabeller	Rev. : V 1.0

6.0 Strukturer og tabeller

- 6.1 DBK-tabel 10: Bebyggelser, forekomster i produktaspektet
- 6.2 DBK-tabel 10a: Bebyggelsestyper i produktaspektet
- 6.3 DBK-tabel 11: Bebyggelser, forekomster i formaspektet
- 6.4 DBK-tabel 11a: Bebyggelsestyper i formaspektet
- 6.5 DBK-tabel 15: Bygninger, forekomster i produktaspektet
- 6.6 DBK-tabel 15a: Bygningstyper i produktaspektet
- 6.7 DBK-tabel 16: Bygninger, forekomster i formaspektet
- 6.8 DBK-tabel 16a: Bygningstyper i formaspektet
- 6.9 DBK-tabel 20: Brugsrum, forekomster i produktaspektet
- 6.10 DBK-tabel 20a: Brugsrumstyper i produktaspektet

This table (in Danish) lists the main tables for construction, buildings and rooms (tables 10 to 20) in the classification system. Tables without an ‘a’ following the number are the main tables. Tables with an ‘a’

are on a more specific level, which for some topics are quite comprehensive. The system allows the user to classify the object according to more tables, in order to achieve the best possible specification. See annex R (in Danish only).

4.7 Finland Tulo 90

The Finnish Building 90 system developed by the Building 90 group and the Finnish Building Centre was published in 1999. It is widely used by the Finnish construction community. However, the table for building types is not part of this system; it is a table from Statistics Finland. See annex L.

4.8 Australia

Australia has a short table for building types. BCA Volume 1 Section A3 Classification of Buildings and Structures. See annex N for the table.

Natspec is doing a study concerning classification systems in order to decide about the development of an Australian classification system: “Information classification systems and the Australian construction industry”. See chapter “ISO 12006-2:2001” for some results from this draft report of June 2008.

4.9 South Africa

South Africa is working to establish national standards and code of practice for the classification of construction information. They have been doing a study concerning classification systems; openUP (August 2006).

4.10 Other ICIS members

New Zealand, Switzerland, Belgium, Japan and the Czech Republic are countries which have their own classifications systems.

4.11 Other examples

General

Many information sources organize information in ways that function as de facto classification. When these have a certain impact, they need to be taken into consideration like more official, industry standards. We are listing four examples: two organizing industry knowledge, one organizing public information, and one for internal use for taxation purposes. See annex P for a listing of those four.

Neufert

This is one of the major knowledge databases or sources of information about building functions and their uses for architects (originally German). It is handling a large number of building types within its own structure. A number of similar information sources exist in other countries.

Whole building design guide

The WBDG is something like Neufert for the US, published by NIST: “The WBDG web site is offered as an assistance to the building community by the National Institute of Building Sciences (NIBS) through funding support from the Department of Defence, the NAVFAC Engineering Innovation and Criteria Office, the Army Corps of Engineers, the U.S. Air Force, the U.S. General Services Administration (GSA), the Department of Veterans Affairs, the National Aeronautics and Space Administra-

tion (NASA), and the Department of Energy, and the assistance of the Sustainable Buildings Industry Council (SBIC). A Board of Direction and Advisory Committee, consisting of representatives from over 25 participating federal agencies guide the development of the WBDG.

A building's function strongly influences its design and construction. Consequently, the WBDG provides a branch of information and guidance organized by building use types. For each general Building Type there is a discussion of the attributes and requirements of the type as well as links to information on more specific uses. Each of the specific building types is then linked to a series of Resource Pages explaining standards, technologies and emerging issues relevant to that specific use topic.

- Ammunition & Explosive Magazines
- Archives
- Aviation
- Community Services
- Educational Facilities
- Federal Courthouse
- Health Care Facilities
- Land Port of Entry
- Libraries
- Office Building
- Parking Facilities
- Research Facilities
- Warehouse”

<http://www.wbdg.org/design/buildingtypes.php>

Wikipedia

Wikipedia is becoming an important source of information. They also have information about buildings, and are listing buildings according to an internal list of building types. However, this list is different in different language versions of wikipedia.

NY ORPS Property taxation

“The New York State Office of Real Property Services (ORPS), an independent agency within the Executive Department, is responsible for overseeing the local administration of real property assessments. The agency also establishes a multitude of rates and ratios that allow for the equitable apportionment of local non-income taxes and State Aid between and within municipalities throughout the State.”

<http://www.orps.state.ny.us/>

5 International harmonization efforts

5.1 The SfB system – CI/SfB

The SfB system was the first comprehensive classification system for the construction industry. It was originally established in Sweden by “Samarbetskomitén för byggnadsfrågor” for classification and coding of the Swedish standard specification ‘Bygg-AMA’ around 1950. Over the next 20 years SfB and similar developments became models for building industry classification, specification, product information, and cost information systems throughout Europe, the USA and some other parts of the world.

During 1966 the SfB Agency UK made certain changes to the SfB system. The British version also added the letters CI as prefix to SfB after which it was referred to as the CI/SfB system to distinguish it from the International SfB tables.

The system was also internationally recognized by CIB (Commission Internationale de Batiment) in 1972. Thus the SfB system was used in different dialects in many countries, and for some types of tables it is still possible to see that they have a common origin. In the Netherlands, the CI/SfB table is still used for Building types and spaces. See annex F.

5.2 ISO 12006-2:2001

ISO TC 59/SC 13 was established in 1989 in order to respond to the need for data or information structures, which were to become a necessity with the increasing use of information technology. Work started with classification tables, which were the traditional way of organizing data. More specifically the work started with the building element tables which is important in order to organize information about buildings and the construction process. Many countries have national building element tables with great variation and diversity. Thus it soon became evident that it was difficult to unite different traditions and views across borders, and it was decided to reduce the ambitions from making an international building elements table to make a standard for the principles concerning classification in the construction industry. This led to the development of a technical report: ISO/TR 14177:1994 Classification of information in the construction industry.

In parallel object-oriented design became more common, and there was a discussion whether classification tables were out of date, and focus should be shifted to new tools in order to structure object-oriented information. After a period with discussions this led to a mutual understanding that both are necessary, and in a SC 13 meeting in 1996 it was decided to work on two tracks in parallel, formalized through the two work items ISO 12006, parts 2 and 3.

Classification tables are relevant as views of the object model. They will normally be influenced by the actual use and tradition, and they will be based on different criteria in different countries, trades, or areas of use. Thus it was concluded that this standardization work had to be a framework concerning which tables will be necessary and which criteria could be used in different tables. This led to the framework standard: ISO 12006-2:2001 *Organization of information about construction works – Part 2: Framework for classification of information*.

For the object-oriented information the allowed and relevant relations between different objects has to be defined on all levels. The standard ISO 12006-3:2007 *Organization of information about construction works – Part 3: Framework for object oriented information exchange*, was established upon experiences and development work going on in the Netherlands and Norway with the reference libraries BARBi and Lexicon in addition to experiences gathered from the STEP work in ISO/TC 184/SC 4 and IAI (International Alliance for Interoperability). This standard is now the basis for the international reference library IFD. See chapter 'ISO 12006-3 - IFD Library'.

NATSPECH in Australia has studied to what degree the classification systems in the UK (Uniclass) and the US (OmniClass) concur with the ISO 12006-2 and each other. This is a good example of a working approach for comparing different tables and could be a starting point for a possible harmonization of different national tables or development of common international tables.

(NATSPECH TECHreport Information classification systems and the Australian construction industry.)

Appendix B: The relationship of current information classification systems to international standards (Refer Appendix A for some definitions)

CI/SFB	ISO/TR 14177: 1994	ISO 12006-2:2001			Uniclass (UK)		OmniClass (North America)	
Table reference	Class	Class	Principle of specialisation	Table ref.	Table reference	Table reference	Table reference	
0- Physical environment	Facilities	Construction entity	Form	A.1	E	Construction entities	12	Construction entities by form
		Construction complex	Function or user activity	A.2, A.6	D	Facilities	11	Construction entities by function
	Spaces	Space	By degree of enclosure	A.4	F	Spaces	14	Spaces by form
1 - Elements	Elements	Construction entity part	Function or user activity	A.3, A.6	G	Elements for buildings	21	Elements (including designed elements)
			Classified by related tables for elements, designed elements and work results	A.5, A.6				
		Element	Characteristic predominating function of the construction entity	A.7				
	Work sections	Work result	Type of work	A.9	J	Work sections for buildings	22	Work results
			Classified by related table for work results	A.8	K	Work sections for civil engineering works		
		Work process	Classified by related table for work results	A.8	J	Work sections for buildings		
4 - Activities, requirements	Management	Management process	Type of process	A.10	B	Subject disciplines	32	Services
			Construction entity lifecycle stage	Overall character of processes during the stage	A.11	C	Management	31
	Project stage	Overall character of processes during the stage	A.12					
1 - Elements, 2- Constructions, forms, 3 - Materials	Construction products	Construction product	Function	A.13	L	Construction products	23	Products
4 - Activities, requirements	Construction aids	Construction aid	Function	A.14	M	Construction aid	35	Tools
		Construction agent	Discipline	A.15	B	Subject disciplines	33	Disciplines
		Construction information	Type of medium	A.16	C	Management	34	Organisational roles
2 - Constructions, forms 3 - Materials	Attributes	Property/ characteristic	Type	A.17	P	Materials	41	Materials
					N	Properties and characteristics	49	Properties
					Q	Universal Decimal Classification		

Appendix C: Degree of parity between individual tables of Uniclass and OmniClass

Acronym key: AACE = American Society of Civil Engineers AIA = American Institute of Architects AICDS = Appraisal Institute Commercial Data Standards
 ASTM = American Society for Testing and Materials CAWS = Common Arrangement of Works for building works CESMM3 = Civil Engineering Standard Method of Measurement, 3rd Edition
 CSC = Construction Specifications Canada CSI = Construction Specifications Institute EPIC = European Product Information Cooperation
 GSA = general Services Administration IBC = International Building Code ICC = International Code Council UBC = Universal Building Code
Medium Parity: Generally means the tables have similar content, but they are arranged in a different order. OmniClass has more comprehensive listings of subjects.

Uniclass (UK)	Legacy Documents (other than ISO TR 14177)	OmniClass(North America)	Legacy Documents (other than ISO 12006-2 and Uniclass)	Table Parity		
Table reference		Table reference				
A	Form of information	36	Information	AIA Information Classification System	High	
B	Subject disciplines	32	Services	AIA Information Classification System	Medium	
		33	Disciplines	AIA Information Classification System	Medium	
C	Management	31	Phases	CSI Project Resource Manual (PRM), CSC Manual of Practice, Total Cost Management Framework AACE	Medium	
		34	Organisational roles	AIA Information Classification System	Medium	
D	Facilities	11	Construction entities by function	IBC, ICC, UBC & other building code occupancy classifications, AICDS.	Medium	
E	Construction entities	12	Construction entities by form		Medium	
F	Spaces	13	Spaces by function	GSA & ICC space definitions, AICDS.	Medium	
		14	Spaces by form		Medium	
G	Elements for buildings	21	Elements (including designed elements)	UniFormat, ASTM E1557, UNIFORMAT II, various ASTM 'format' documents.	Medium	
H	Elements for civil engineering works					
J	Work sections for buildings	CAWS	22	Work results	Masterformat 2004 Edition	Low
K	Work sections for civil engineering works	CESMM3*				
L	Construction product	EPIC	23	Products	EPIC, Masterformat	High
M	Construction aids		35	Tools	AIA Information Classification System	Medium
N	Properties and characteristics		49	Properties	ISO 31-0, BS 6100, EPIC, IEEE/ASTM SI 10-1997, CI/SFB Construction Indexing Manual, IAI-NA Project Management Domain Specification project	Medium
P	Materials		41	Materials	EPIC, CI/SFB Construction Indexing Manual	Medium
Q	Universal Decimal Classification (UDC)	UDC				None

ISO/TC 59/SC 13 intends to work further with comparisons like this in order to facilitate harmonization between different tables.

5.3 IFC (Industry Foundation Classes) – IFC classes

IFC is the international industry standard made for exchange and sharing of object models in the construction industry, developed by buildingSMART International (former IAI – International Alliance for Interoperability). IFC has no classification of building types according to function, but it has an object class for buildings, IfcBuilding, which may be classified according to its complexity.

“A building is (if specified) associated to a site. A building may span over several connected or disconnected buildings. Therefore building complex provides for a collection of buildings included in a site. A building can also be decomposed in (vertical) parts, where each part defines a building section. This is defined by the composition type attribute of the supertype IfcSpatialStructureElements which is interpreted as follow:

- COMPLEX = building complex
- ELEMENT = building
- PARTIAL = building section”

To the object class IfcBuilding it might be connected propertysets, where it is separate fields for building types, which here is called ‘MarketCategory’, ‘MarketSubCategory’ and ‘Occupancy type’.

Pset_BuildingUse

Name	Property Type	Data Type	Definition
MarketCategory	IfcPropertySingelValue	IfcLabel	Category of use e.g residential, commercial, recreation etc.
MarketSubCategory	IfcPropertySingelValue	IfcLabel	Subset of category of use e.g multi-family, 2 bedroom, low prise
PlanningControlStatus	IfcPropertySingelValue	IfcLabel	Label of zoning category or class, or planning control category for the site or facility.
NarrativeText	IfcPropertySingelValue	IfcText	Added information relating to the adjacent building use that is not appropriate to the general descriptive text associated with an entity through the inherited IfcRoot.Description

Pset_BuildingCommon

Name	Property Type	Data Type	Definition
OccupancyType	IfcProperty-SingleValue	IfcLabel	Occupancy type for this building. It is defined according to the presiding national building code.

5.4 ISO 12006-3 – IFD Library

After the framework standard ISO 12006-3:2007 *Organization of information about construction works – Part 3: Framework for object oriented information exchange*, was finished, the Dutch and Norwegian initiators which had been working with the reference libraries BARBi and Lexicon, established a joint effort to build up an international reference library, IFD Library. This library is now being developed further (populated – filled in with objects) in a cooperation between Norway, the Netherlands (STABU foundation), the US (Construction Specification Institute - CSI), and Canada (Construction Specification Canada - CSC).

5.5 Use of IFD library for documentation of and mapping between tables

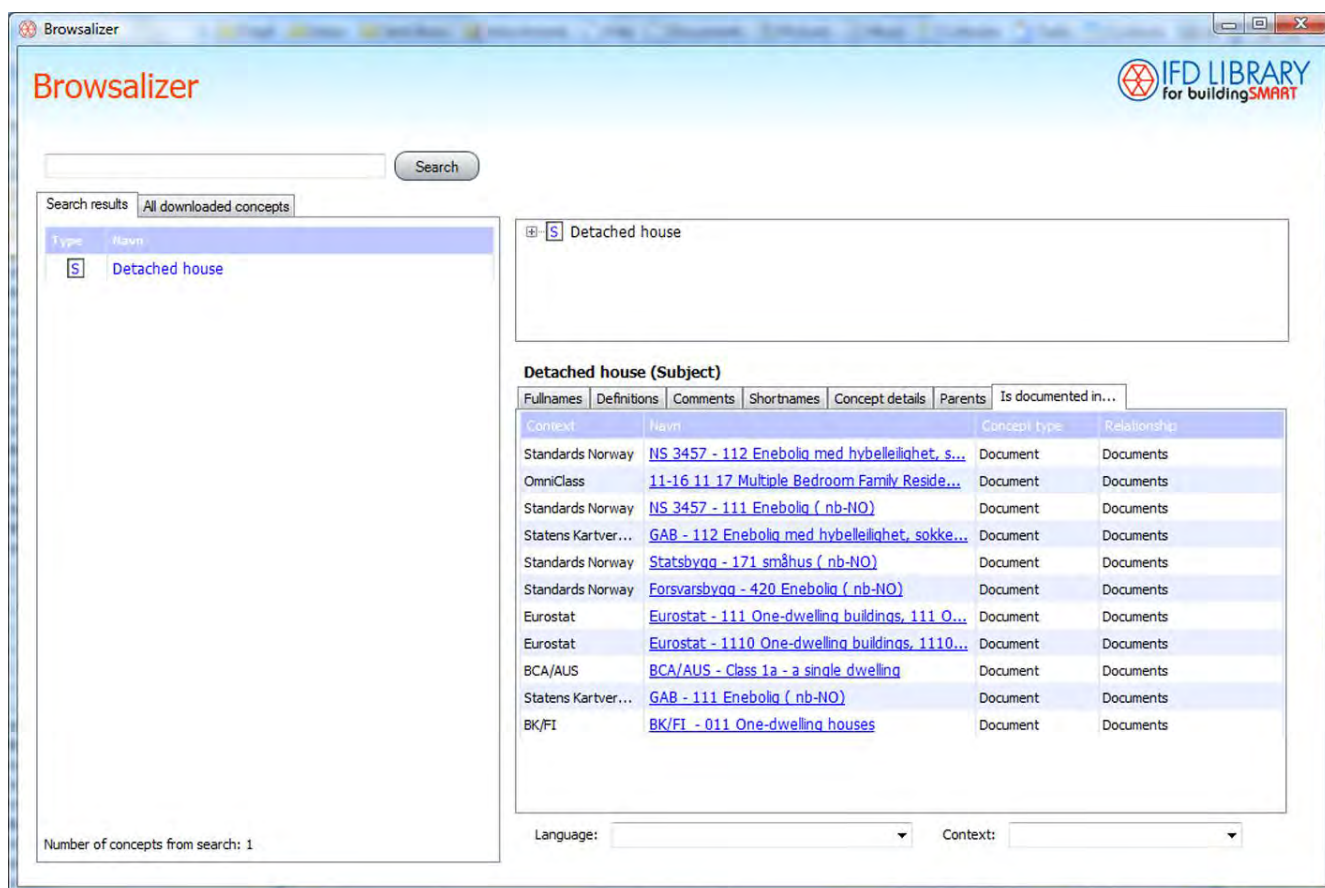
As a part of the work with this survey a test has been carried through in order to see how IFD Library may function in order to document and map tables. For this test IFD Library has been populated with extracts concerning residential buildings from the following tables: The Norwegian tables NS 3457, GAB/Kartverket, Statsbygg's propman, Forsvarsbygg, the European Eurostat, the US OmniClass, The Finish Talo 90 and the Australian BCA.

In IFD terminology the tables are documents or 'IFD documentation'. The real things are 'IFD subjects' which are documented by the 'Documentation'. Thus for the test case IFD Library also had to be populated with some building type subjects. As those subjects also have to be in some kind of structure telling something about what is a part of something or what is a collection of other parts, this involves some kind of classification of the 'truth', however, without notation. 'IFD Subjects' are collected in what is called 'IFD Bags'.

The test case illustrates that all the Building type tables handles some building types completely different from the others. For most of the building types, the tables distinguishes quite precisely between them after real physical content or function, e.g. most tables have one hotel class, one church class and one indoor swimming pool class. However, for housing, health buildings/hospitals and buildings for education many of the tables are doing a more specified classification after very different criteria. For hospitals it might be their role in the national health hierarchy like University hospital, regional hospital, local hospital, or primary care building. For buildings for education it might be based on grade like primary, secondary, high school, college, university. For housing it might be after size of building, physical type of building, whether it is connected to other buildings, type of development, number of dwellings, number of floors, type of inhabitant, type of ownership, level or service, etc. This probably illustrates that the building type tables have been used for some more specific statistical purposes for some of the building types.

In IFD library many of these criteria will typically be considered as properties instead of different classes. This illustrates that the population of IFD Library with the 'true' physical structure also is some kind of classification work where you have to decide what is the real distinction between different classes and which properties are connected to them.

As a part of the test case an IFD Library browser has been adapted to the need to browse in the different classification tables in order to see relations between the different tables. See figure on next page and annex Q. This might be considered as a test classification mapping browser. Even with the challenges mentioned above concerning representing the existing classification tables and establishing the 'true and real' building type classes, the conclusion of the test is that IFD Library is suitable for this purpose. When the right working method is established, it should be relatively simple (but labour-intensive) to populate the library. To develop browser tools as well seems feasible, but they will of course profit by competition concerning user-friendliness and their capability to visualize the structures.



For more informasjon, see annex Q.

An automatic inquiry from intelligent software, which is an important purpose for the IFD Library, has not been tested in this test case. It has been demonstrated for other topics earlier, and it is possible via the 'GUIDS' of all subjects.

The test case illustrates that there might be a challenge to serve both the automatic inquiries and the mapping, as these different functionalities might require different approaches to the population of the Library. When using it as an illustrative mapping tool it is important to see distinct structures and hierarchy without doing too much browsing. This is not important when using it for automatic inquiries.

The test case has also raised questions whether classification should be a separate concept in the IFD Library and ISO 12006 part 3. See annex Q for screen dumps from browsing in IFD library.

5.6 Other initiatives

CEN/ISSS Focus Group on Computer-sensitive product dictionaries and Classification systems (FG/CDC)

Background

Many different initiatives from standards organizations or industry are dealing with product dictionaries and classification. Interoperability of product dictionaries is beneficial both for users and dictionary providers because users could more easily exchange information across different dictionaries and dictionary providers would be able to achieve better results with less resources by sharing and reusing dictionary elements.

A CEN workshop CWA 15556-3 June 2006 ICS 35.240.50 *Product Description and Classification - Part 3: Results of development in harmonization of product classifications and in multilingual electronic catalogues and their respective data modelling* has identified 37 different classification systems.

We have indexed at least 37 different classification schemes! (As of Aug. 2003)

- UNSPSC (H)	- eCl@ss (H)
- HS (Harmonized System - H)	- CPV (European Procurement - H)
- CPC (UN Classif. - H)	- NATO (Military Procurement - H)
- NAICS (North American - H)	- NACE (Economic Activities in the EU - H)
- BEC (Broad Econ. Cat. - H)	- eOTD (ECCMA - H)
- CCIO (Commodities by Industr. Orig. - H)	- COICOP (Ind. Consumption - H)
- CN (Combined Nomenclature - H)	- ISIC (Econom. Act. - H)
- PRODCOM (Products of the EC - H)	- CPA (Class. Prod. by Activity - H)
- NIGP (Periscope - H)	- RUS (Requisite - H)
- GCI (Retail - V)	- PIDX (Oil - V)
- RNTD (Electronic comp. - V)	- IEC (Electrical, Electronic - V)
- GHS (Hazardous Chem. - V)	- Sanitary + Heating (V)
- RAPID (Agrochemicals - V)	- SEMI (Electronics - V)
- CAMPUS (Plastics - V)	- ICD-10 (Medical - V)
- ATC (Anatomical Therapeutic - V)	- PHC (Pharmaceutical - V)
- Proficlass (Construction - V)	- SNITEM (Medical Technology - V)
- etc...	

+ Environmental classifications (15 different?)

H = Horizontal = covers all goods and serv. V = Vertical = industry specific



and we are sure there are many others...

Even though those tables have been developed and are used for different purposes, it illustrates the complexity for the users, and the need for harmonization and/or mapping. CEN (The European Standardization Organization) have some initiatives on the topic.

CEN Focus Group

Building further on results achieved in the CEN/ISSS Workshop eCAT, the Focus Group wants to provide a forum for collaboration between the different groups/initiatives dealing with product dictionaries and classification. The Focus Group's main aim is to promote collaboration and synergies between different groups and initiatives dealing with product dictionaries and classification to achieve their interoperability.

Two or three workshops on dictionary interoperability issues will be organized in Europe. Web services will be experimented with identifier resolution as a light and interoperable means for exchanging information from different kinds of dictionaries.

http://www.cen.eu/CENORM/businessdomains/sectors/iss/fg_cdc.asp

European Commission workshop

The European Commission has accepted to fund a new workshop which is called "Classifications and Catalogues for the Public and Private Procurement" (CC3P). It seems as if 4 sectors will be chosen to try to harmonize the four existing classifications (CPV, eCl@ss, GPC and UNSPSC): food (particularly meat), electronics, construction (some areas) and maybe energy (gas and electricity). It is at the request of the Commission that the Construction sector has been added to the list.

ANNEX A: Norwegian Standard NS 3457 *Table for building categories*

The official standard has two levels/digits, a guidance to the standard is detailed to a three digit level. This is an unofficial translation of the two-digit level.

Notation	Name (NS 3457)
0	Multifunctional buildings
1	Residential
11	Detached housing
12	Detached housing, multiple family
13	Semi-detached housing
14	Other smallscale housing
15	Apartment building
16	Holiday house
17	Cabin, hut, camp
18	Car shed, storage
19	Other residential facilities
2	Industrial and storage facilities
21	Industrial facilities
22	Power supply facilities
23	Storage facilities
24	Fishing and agricultural facilities
29	Other industrial and storage facilities
3	Administrative and commercial facilities
31	Office facilities
32	Commercial facilities
33	Conference and congress facilities
39	Other administrative and commercial facilities
4	Transport and communication facilities
41	Handling and transportation terminals
42	Telecommunications facilities
43	Garage and hangar facilities
44	Road and vehicle supervision facilities
49	Other transport and communication facilities
5	Hotel and restaurant facilities
51	Hotel
52	Accommodation facilities
53	Restaurant facilities
59	Other hotel and restaurant facilities
6	Culture and education facilities
61	Education facilities (schools)
62	Universities and colleges facilities
63	Laboratorium facilities
64	Museum and library facilities
65	Sports facilities
66	Cultural centre

Notation	Name (NS 3457)
67	Religious facilities
69	Other culture and education facilities
7	Medical health facilities
71	Hospitals
72	Residential institutions/homes
73	Primary health care facilities
79	Other medical health facilities
8	Prisons and emergency preparedness facilities
81	Prisons
82	Emergency preparedness facilities
83	Monuments
84	Public toilet
89	Other facilities
9	Vacant

ANNEX B: EU – CPV – Common Procurement Vocabulary

CPV is based upon REGULATION (EC) No 2195/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 November 2002 on the Common Procurement Vocabulary (CPV). (Text with EEA relevance)

<http://europa.eu/scadplus/leg/en/lvb/l22008.htm>

http://ec.europa.eu/internal_market/publicprocurement/e-procurement_en.htm#cpv

Extract concerning construction:

Notation	CPV 2007: Name
45200000-9	Works for complete or part construction and civil engineering work.
45210000-2	Building construction work.
45211000-9	Construction work for multi-dwelling buildings and individual houses.
45211100-0	Construction work for houses.
45211200-1	Sheltered housing construction work.
45211300-2	Houses construction work.
45211310-5	Bathrooms construction work.
45211320-8	Porches construction work.
45211340-4	Multi-dwelling buildings construction work.
45211341-1	Flats construction work.
45211350-7	Multi-functional buildings construction work.
45211360-0	Urban development construction work.
45211370-3	Construction works for saunas.
45212000-6	Construction work for buildings relating to leisure, sports, culture, lodging and restaurants.
45212100-7	Construction work of leisure facilities.
45212110-0	Leisure centre construction work.
45212120-3	Theme park construction work.
45212130-6	Amusement park construction work.
45212140-9	Recreation installation.
45212150-2	Cinema construction work.
45212160-5	Casino construction work.
45212170-8	Entertainment building construction work.
45212171-5	Entertainment centre construction work.
45212172-2	Recreation centre construction work.
45212180-1	Ticket offices construction work.
45212190-4	Sun-protection works.
45212200-8	Construction work for sports facilities.
45212210-1	Single-purpose sports facilities construction work.
45212211-8	Ice rink construction work.
45212212-5	Construction work for swimming pool.
45212213-2	Sport markings works.
45212220-4	Multi-purpose sports facilities construction work.
45212221-1	Construction work in connection with structures for sports ground.
45212222-8	Gymnasium construction work.
45212223-5	Winter-sports facilities construction work.
45212224-2	Stadium construction work.
45212225-9	Sports hall construction work.
45212230-7	Installation of changing rooms.
45212290-5	Repair and maintenance work in connection with sports facilities.
45212300-9	Construction work for art and cultural buildings.

Notation	CPV 2007: Name
45212310-2	Construction work for buildings relating to exhibitions.
45212311-9	Art gallery construction work.
45212312-6	Exhibition centre construction work.
45212313-3	Museum construction work.
45212314-0	Historical monument or memorial construction work.
45212320-5	Construction work for buildings relating to artistic performances.
45212321-2	Auditorium construction work.
45212322-9	Theatre construction work.
45212330-8	Library construction work.
45212331-5	Multimedia library construction work.
45212340-1	Lecture hall construction work.
45212350-4	Buildings of particular historical or architectural interest.
45212351-1	Prehistoric monument construction work.
45212352-8	Industrial monument construction work.
45212353-5	Palace construction work.
45212354-2	Castle construction work.
45212360-7	Religious buildings construction work.
45212361-4	Church construction work.
45212400-0	Accommodation and restaurant buildings.
45212410-3	Construction work for lodging buildings.
45212411-0	Hotel construction work.
45212412-7	Hostel construction work.
45212413-4	Short-stay accommodation construction work.
45212420-6	Construction work for restaurants and similar facilities.
45212421-3	Restaurant construction work.
45212422-0	Canteen construction work.
45212423-7	Cafeteria construction work.
45212500-1	Kitchen or restaurant conversion.
45212600-2	Pavilion construction work.
45213000-3	Construction work for commercial buildings, warehouses and industrial buildings, buildings relating to transport.
45213100-4	Construction work for commercial buildings.
45213110-7	Shop buildings construction work.
45213111-4	Shopping centre construction work.
45213112-1	Shop units construction work.
45213120-0	Post office construction work.
45213130-3	Bank construction work.
45213140-6	Market construction work.
45213141-3	Covered market construction work.
45213142-0	Open-air market construction work.
45213150-9	Office block construction work.
45213200-5	Construction work for warehouses and industrial buildings.
45213210-8	Cold-storage installations.
45213220-1	Construction work for warehouses.
45213221-8	Warehouse stores construction work.
45213230-4	Abattoir construction work.
45213240-7	Agricultural buildings construction work.
45213241-4	Barn construction work.

Notation	CPV 2007: Name
45213242-1	Cowsheds construction work.
45213250-0	Construction work for industrial buildings.
45213251-7	Industrial units construction work.
45213252-4	Workshops construction work.
45213260-3	Stores depot construction work.
45213270-6	Construction works for recycling station.
45213280-9	Construction works for compost facility.
45213300-6	Buildings associated with transport.
45213310-9	Construction work for buildings relating to road transport.
45213311-6	Bus station construction work.
45213312-3	Car park building construction work.
45213313-0	Service-area building construction work.
45213314-7	Bus garage construction work.
45213315-4	Bus-stop shelter construction work.
45213316-1	Installation works of walkways.
45213320-2	Construction work for buildings relating to railway transport.
45213321-9	Railway station construction work.
45213322-6	Rail terminal building construction work.
45213330-5	Construction work for buildings relating to air transport.
45213331-2	Airport buildings construction work.
45213332-9	Airport control tower construction work.
45213333-6	Installation works of airport check-in counters.
45213340-8	Construction work for buildings relating to water transport.
45213341-5	Ferry terminal building construction work.
45213342-2	Ro-Ro terminal construction work.
45213350-1	Construction work for buildings relating to various means of transport.
45213351-8	Maintenance hangar construction work.
45213352-5	Service depot construction work.
45213353-2	Installation works of passenger boarding bridges.
45213400-7	Installation of staff rooms.
45214000-0	Construction work for buildings relating to education and research.
45214100-1	Construction work for kindergarten buildings.
45214200-2	Construction work for school buildings.
45214210-5	Primary school construction work.
45214220-8	Secondary school construction work.
45214230-1	Special school construction work.
45214300-3	Construction work for college buildings.
45214310-6	Vocational college construction work.
45214320-9	Technical college construction work.
45214400-4	Construction work for university buildings.
45214410-7	Polytechnic construction work.
45214420-0	Lecture theatre construction work.
45214430-3	Language laboratory construction work.
45214500-5	Construction work for buildings of further education.
45214600-6	Construction work for research buildings.
45214610-9	Laboratory building construction work.
45214620-2	Research and testing facilities construction work.
45214630-5	Scientific installations.

Notation	CPV 2007: Name
45214631-2	Installation works of cleanrooms.
45214640-8	Meteorological stations construction work.
45214700-7	Construction work for halls of residence.
45214710-0	Entrance hall construction work.
45214800-8	Training facilities building.
45215000-7	Construction work for buildings relating to health and social services, for crematoriums and public conveniences.
45215100-8	Construction work for buildings relating to health.
45215110-1	Spa construction work.
45215120-4	Special medical building construction work.
45215130-7	Clinic construction work.
45215140-0	Hospital facilities construction work.
45215141-7	Operating theatre construction work.
45215142-4	Intensive-care unit construction work.
45215143-1	Diagnostic screening room construction work.
45215144-8	Screening rooms construction work.
45215145-5	Fluoroscopy room construction work.
45215146-2	Pathology room construction work.
45215147-9	Forensic room construction work.
45215148-6	Catheter room construction work.
45215200-9	Construction work for social services buildings.
45215210-2	Construction work for subsidised residential accommodation.
45215212-6	Retirement home construction work.
45215213-3	Nursing home construction work.
45215214-0	Residential homes construction work.
45215215-7	Children's home construction work.
45215220-5	Construction work for social facilities other than subsidised residential accommodation.
45215221-2	Daycare centre construction work.
45215222-9	Civic centre construction work.
45215300-0	Construction work for crematoriums.
45215400-1	Cemetery works.
45215500-2	Public conveniences.
45216000-4	Construction work for buildings relating to law and order or emergency services and for military buildings.
45216100-5	Construction work for buildings relating to law and order or emergency services.
45216110-8	Construction work for buildings relating to law and order.
45216111-5	Police station construction work.
45216112-2	Court building construction work.
45216113-9	Prison building construction work.
45216114-6	Parliament and public assembly buildings.
45216120-1	Construction work for buildings relating to emergency services.
45216121-8	Fire station construction work.
45216122-5	Ambulance station construction work.
45216123-2	Mountain-rescue building construction work.
45216124-9	Lifeboat station construction work.
45216125-6	Emergency-services building construction work.
45216126-3	Coastguard building construction work.
45216127-0	Rescue-service station construction work.
45216128-7	Lighthouse construction work.

Notation	CPV 2007: Name
45216129-4	Protective shelters.
45216200-6	Construction work for military buildings and installations.
45216220-2	Military bunker construction work.
45216230-5	Military shelter construction work.
45216250-1	Trench defences construction work.
45217000-1	Inflatable buildings construction work.
45220000-5	Engineering works and construction works.
45221000-2	Construction work for bridges and tunnels, shafts and subways.
45221100-3	Construction work for bridges.
45221110-6	Bridge construction work.
45221111-3	Road bridge construction work.
45221112-0	Railway bridge construction work.
45221113-7	Footbridge construction work.
45221114-4	Construction work for iron bridges.
45221115-1	Construction work for steel bridges.
45221117-5	Weighbridge construction work.
45221118-2	Pipeline-carrying bridge construction work.
45221119-9	Bridge renewal construction work.
45221120-9	Viaduct construction work.
45221121-6	Road viaduct construction work.
45221122-3	Railway viaduct construction work.
45221200-4	Construction work for tunnels, shafts and subways.
45221210-7	Covered or partially-covered excavations.
45221211-4	Underpass.
45221213-8	Covered or partially-covered railway excavations.
45221214-5	Covered or partially-covered road excavations.
45221220-0	Culverts.
45221230-3	Shafts.
45221240-6	Construction work for tunnels.
45221241-3	Road tunnel construction work.
45221242-0	Railway tunnel construction work.
45221243-7	Pedestrian tunnel construction work.
45221244-4	Canal tunnel construction work.
45221245-1	Under-river tunnel construction work.
45221246-8	Undersea tunnel construction work.
45221247-5	Tunnelling works.
45221248-2	Tunnel linings construction work.
45221250-9	Underground work other than tunnels, shafts and subways.
45222000-9	Construction work for engineering works except bridges, tunnels, shafts and subways.
45222100-0	Waste-treatment plant construction work.
45222110-3	Waste disposal site construction work.
45222200-1	Engineering work for military installations.
45222300-2	Engineering work for security installations.
45223000-6	Structures construction work.
45223100-7	Assembly of metal structures.
45223110-0	Installation of metal structures.
45223200-8	Structural works.
45223210-1	Structural steelworks.

Notation	CPV 2007: Name
45223220-4	Structural shell work.
45223300-9	Parking lot construction work.
45223310-2	Underground car park construction work.
45223320-5	Park-and-ride facility construction work.
45223400-0	Radar station construction work.
45223500-1	Reinforced-concrete structures.
45223600-2	Dog kennels construction work.
45223700-3	Service area construction work.
45223710-6	Motorway service area construction work.
45223720-9	Petrol/gas stations construction work.
45223800-4	Assembly and erection of prefabricated structures.
45223810-7	Prefabricated constructions.
45223820-0	Prefabricated units and components.
45223821-7	Prefabricated units.
45223822-4	Prefabricated components.
45230000-8	Construction work for pipelines, communication and power lines, for highways, roads, airfields and railways; flatwork.
45231000-5	Construction work for pipelines, communication and power lines.
45231100-6	General construction work for pipelines.
45231110-9	Pipelaying construction work.
45231111-6	Pipeline lifting and relaying.
45231112-3	Installation of pipe system.
45231113-0	Pipeline relaying works.
45231200-7	Construction work for oil and gas pipelines.
45231210-0	Construction work for oil pipelines.
45231220-3	Construction work for gas pipelines.
45231221-0	Gas supply mains construction work.
45231222-7	Gasholder works.
45231223-4	Gas distribution ancillary work.
45231300-8	Construction work for water and sewage pipelines.
45231400-9	Construction work for electricity power lines.
45231500-0	Compressed-air pipeline work.
45231510-3	Compressed-air pipeline work for mailing system.
45231600-1	Construction work for communication lines.
45232000-2	Ancillary works for pipelines and cables.
45232100-3	Ancillary works for water pipelines.
45232120-9	Irrigation works.
45232121-6	Irrigation piping construction work.
45232130-2	Storm-water piping construction work.
45232140-5	District-heating mains construction work.
45232141-2	Heating works.
45232142-9	Heat-transfer station construction work.
45232150-8	Works related to water-distribution pipelines.
45232151-5	Water-main refurbishment construction work.
45232152-2	Pumping station construction work.
45232153-9	Construction work for water towers.
45232154-6	Construction work of elevated tanks for drinking water.
45232200-4	Ancillary works for electricity power lines.

Notation	CPV 2007: Name
45232210-7	Overhead line construction.
45232220-0	Substation construction work.
45232221-7	Transformer substation.
45232300-5	Construction and ancillary works for telephone and communication lines.
45232310-8	Construction work for telephone lines.
45232311-5	Roadside emergency telephone lines.
45232320-1	Cable broadcasting lines.
45232330-4	Erection of aerials.
45232331-1	Ancillary works for broadcasting.
45232332-8	Ancillary works for telecommunications.
45232340-7	Mobile-telephone base-stations construction work.
45232400-6	Sewer construction work.
45232410-9	Sewerage work.
45232411-6	Foul-water piping construction work.
45232420-2	Sewage work.
45232421-9	Sewage treatment works.
45232422-6	Sludge-treatment works.
45232423-3	Sewage pumping stations construction work.
45232424-0	Sewage outfall construction work.
45232430-5	Water-treatment work.
45232431-2	Wastewater pumping station.
45232440-8	Construction work for sewage pipes.
45232450-1	Drainage construction works.
45232451-8	Drainage and surface works.
45232452-5	Drainage works.
45232453-2	Drains construction work.
45232454-9	Rain-water basin construction work.
45232460-4	Sanitary works.
45232470-7	Waste transfer station.
45233000-9	Construction, foundation and surface works for highways, roads.
45233100-0	Construction work for highways, roads.
45233110-3	Motorway construction works.
45233120-6	Road construction works.
45233121-3	Main road construction works.
45233122-0	Ring road construction work.
45233123-7	Secondary road construction work.
45233124-4	Trunk road construction work.
45233125-1	Road junction construction work.
45233126-8	Grade-separated junction construction work.
45233127-5	T-junction construction work.
45233128-2	Roundabout construction work.
45233129-9	Crossroad construction work.
45233130-9	Construction work for highways.
45233131-6	Construction work for elevated highways.
45233139-3	Highway maintenance work.
45233140-2	Roadworks.
45233141-9	Road-maintenance works.
45233142-6	Road-repair works.

Notation	CPV 2007: Name
45233144-0	Overpass construction work.
45233150-5	Traffic-calming works.
45233160-8	Paths and other metalled surfaces.
45233161-5	Footpath construction work.
45233162-2	Cycle path construction work.
45233200-1	Various surface works.
45233210-4	Surface work for highways.
45233220-7	Surface work for roads.
45233221-4	Road-surface painting work.
45233222-1	Paving and asphaltting works.
45233223-8	Carriageway resurfacing works.
45233224-5	Dual carriageway construction work.
45233225-2	Single carriageway construction work.
45233226-9	Access road construction work.
45233227-6	Slip road construction work.
45233228-3	Surface coating construction work.
45233229-0	Verge maintenance work.
45233250-6	Surfacing work except for roads.
45233251-3	Resurfacing works.
45233252-0	Surface work for streets.
45233253-7	Surface work for footpaths.
45233260-9	Pedestrian ways construction work.
45233261-6	Pedestrian overpass construction work.
45233262-3	Pedestrian zone construction work.
45233270-2	Parking-lot-surface painting work.
45233280-5	Erection of road-barriers.
45233290-8	Installation of road signs.
45233291-5	Installation of bollards.
45233292-2	Installation of safety equipment.
45233293-9	Installation of street furniture.
45233294-6	Installation of road signals.
45233300-2	Foundation work for highways, roads, streets and footpaths.
45233310-5	Foundation work for highways.
45233320-8	Foundation work for roads.
45233330-1	Foundation work for streets.
45233340-4	Foundation work for footpaths.
45234000-6	Construction work for railways and cable transport systems.
45234100-7	Railway construction works.
45234110-0	Intercity railway works.
45234111-7	City railway construction work.
45234112-4	Railway depot construction work.
45234113-1	Demolition of tracks.
45234114-8	Railway embankment construction work.
45234115-5	Railway signalling works.
45234116-2	Track construction works.
45234120-3	Urban railway works.
45234121-0	Tramway works.
45234122-7	Underground railway works.

Notation	CPV 2007: Name
45234123-4	Partially underground railway works.
45234124-1	Underground passenger railway transport.
45234125-8	Underground railway station.
45234126-5	Tramline construction works.
45234127-2	Tramway depot construction work.
45234128-9	Tramway platforms construction work.
45234129-6	Urban railway track construction works.
45234130-6	Ballast construction works.
45234140-9	Level crossing construction works.
45234160-5	Catenary's construction works.
45234170-8	Locomotive-substations construction works.
45234180-1	Construction work for railways workshop.
45234181-8	Construction work for rail track sectioning cabins.
45234200-8	Cable-supported transport systems.
45234210-1	Cable-supported transport systems with cabins.
45234220-4	Construction work for ski lifts.
45234230-7	Construction work for chair lifts.
45234240-0	Funicular railway system.
45234250-3	Teleferic construction work.
45235000-3	Construction work for airfields, runways and manoeuvring surfaces.
45235100-4	Construction work for airports.
45235110-7	Construction work for airfields.
45235111-4	Airfield pavement construction work.
45235200-5	Runway construction works.
45235210-8	Runway resurfacing.
45235300-6	Construction work for aircraft-manoevring surfaces.
45235310-9	Taxiway construction work.
45235311-6	Taxiway pavement construction work.
45235320-2	Construction work for aircraft aprons.
45236000-0	Flatwork.
45236100-1	Flatwork for miscellaneous sports installations.
45236110-4	Flatwork for sports fields.
45236111-1	Flatwork for golf course.
45236112-8	Flatwork for tennis court.
45236113-5	Flatwork for racecourse.
45236114-2	Flatwork for running tracks.
45236119-7	Repair work on sports fields.
45236200-2	Flatwork for recreation installations.
45236210-5	Flatwork for children's play area.
45236220-8	Flatwork for zoo.
45236230-1	Flatwork for gardens.
45236250-7	Flatwork for parks.
45236290-9	Repair work on recreational areas.
45236300-3	Flatwork for cemeteries.
45237000-7	Stage construction works.
45240000-1	Construction work for water projects.
45241000-8	Harbour construction works.
45241100-9	Quay construction work.

Notation	CPV 2007: Name
45241200-0	Offshore terminal in situ construction work.
45241300-1	Pier construction work.
45241400-2	Dock construction work.
45241500-3	Wharf construction work.
45241600-4	Installation of port lighting equipment.
45242000-5	Waterside leisure facilities construction work.
45242100-6	Water-sports facilities construction work.
45242110-9	Launchway construction work.
45242200-7	Marina construction work.
45242210-0	Yacht harbour construction work.
45243000-2	Coastal-defence works.
45243100-3	Cliff-protection works.
45243110-6	Cliff-stabilisation works.
45243200-4	Breakwater construction work.
45243300-5	Sea wall construction work.
45243400-6	Beach-consolidation works.
45243500-7	Sea defences construction work.
45243510-0	Embankment works.
45243600-8	Quay wall construction work.
45244000-9	Marine construction works.
45244100-0	Marine installations.
45244200-1	Jetties.
45245000-6	Dredging and pumping works for water treatment plant installations.
45246000-3	River regulation and flood control works.
45246100-4	River-wall construction.
45246200-5	Riverbank protection works.
45246400-7	Flood-prevention works.
45246410-0	Flood-defences maintenance works.
45246500-8	Promenade construction work.
45246510-1	Boardwalk construction work.
45247000-0	Construction work for dams, canals, irrigation channels and aqueducts.
45247100-1	Construction work for waterways.
45247110-4	Canal construction.
45247111-1	Irrigation channel construction work.
45247112-8	Drainage canal construction work.
45247120-7	Waterways except canals.
45247130-0	Aqueduct construction work.
45247200-2	Construction work for dams and similar fixed structures.
45247210-5	Dam construction work.
45247211-2	Dam wall construction work.
45247212-9	Dam-reinforcement works.
45247220-8	Weir construction work.
45247230-1	Dyke construction work.
45247240-4	Static barrage construction work.
45247270-3	Reservoir construction works.
45248000-7	Construction work for hydro-mechanical structures.
45248100-8	Canal locks construction work.
45248200-9	Dry docks construction work.

Notation	CPV 2007: Name
45248300-0	Construction work for floating docks.
45248400-1	Landing stages construction work.
45248500-2	Movable barrages construction work.
45250000-4	Construction works for plants, mining and manufacturing and for buildings relating to the oil and gas industry.
45251000-1	Construction works for power plants and heating plants.
45251100-2	Construction work for power plant.
45251110-5	Nuclear-power station construction work.
45251111-2	Construction work for nuclear reactors.
45251120-8	Hydro-electric plant construction work.
45251140-4	Thermal power plant construction work.
45251141-1	Geothermal power station construction work.
45251142-8	Wood-fired power station construction work.
45251143-5	Compressed-air generating plant construction work.
45251150-7	Construction work for cooling towers.
45251160-0	Wind-power installation works.
45251200-3	Heating plant construction work.
45251220-9	Cogeneration plant construction work.
45251230-2	Steam-generation plant construction work.
45251240-5	Landfill-gas electricity generating plant construction work.
45251250-8	District-heating plant construction work.
45252000-8	Construction works for sewage treatment plants, purification plants and refuse incineration plants.
45252100-9	Sewage-treatment plant construction work.
45252110-2	Mobile plant construction work.
45252120-5	Water-treatment plant construction work.
45252121-2	Sedimentation installations.
45252122-9	Sewage digesters.
45252123-6	Screening installations.
45252124-3	Dredging and pumping works.
45252125-0	Rock-dumping work.
45252126-7	Drinking-water treatment plant construction work.
45252127-4	Wastewater treatment plant construction work.
45252130-8	Sewage plant equipment.
45252140-1	Sludge-dewatering plant construction work.
45252150-4	Coal-handling plant construction work.
45252200-0	Purification plant equipment.
45252210-3	Water purification plant construction work.
45252300-1	Refuse-incineration plant construction work.
45253000-5	Construction work for chemical-processing plant.
45253100-6	Demineralisation plant construction work.
45253200-7	Desulphurisation plant construction work.
45253300-8	Distilling or rectifying plant construction work.
45253310-1	Water-distillation plants construction work.
45253320-4	Alcohol-distillation plants construction work.
45253400-9	Construction work for petrochemical plant.
45253500-0	Construction work for pharmaceutical plant.
45253600-1	Deionisation plant construction work.
45253700-2	Digestion plant construction work.

Notation	CPV 2007: Name
45253800-3	Composting plant construction work.
45254000-2	Construction work for mining and manufacturing.
45254100-3	Construction work for mining.
45254110-6	Pithead construction work.
45254200-4	Construction work for manufacturing plant.
45255000-9	Construction work for the oil and gas industry.
45255100-0	Construction work for production platforms.
45255110-3	Wells construction work.
45255120-6	Platforms facilities construction work.
45255121-3	Topside facilities construction work.
45255200-1	Oil refinery construction work.
45255210-4	Oil terminal construction work.
45255300-2	Gas terminal construction work.
45255400-3	Fabrication work.
45255410-6	Offshore fabrication work.
45255420-9	Onshore fabrication work.
45255430-2	Demolition of oil platforms.
45255500-4	Drilling and exploration work.
45255600-5	Coiled-tubing wellwork.
45255700-6	Coal-gasification plant construction work.
45255800-7	Gas-production plant construction work.
45259000-7	Repair and maintenance of plant.
45259100-8	Wastewater-plant repair and maintenance work.
45259200-9	Purification-plant repair and maintenance work.
45259300-0	Heating-plant repair and maintenance work.
45259900-6	Plant upgrade work.

The original CPV version (2002) had mapping tables between CPV and:

- the Statistical Classification of Products by Activity in the EEC (CPA),
- the Provisional Central Product Classification (CPC Prov.) of the United Nations,
- the General Industrial Classification of Economic Activities within the European Communities (NACE Rev. 1)
- the Combined Nomenclature (CN) are set out in Annexes II, III, IV and V respectively.

All those classification systems have been revised through the last years.

- A few faximiles from the mapping tables in the old versions is included under here to illustrate the relation between the tables.

NACE – CPV

16.12.2002

EN

Official Journal of the European Communities

389

NACE Rev. 1 Section F — Construction				CPV	
Division	Group	Class	Description	CPV Code	Description
	45.2		Building of complete constructions or parts thereof; civil engineering	45200000-9	Works for complete or part construction and civil engineering work
		45.21	General construction of buildings and civil engineering works	45210000-2	Building construction work
				45211000-9	Construction work for multi-dwelling buildings and individual houses
				45211100-0	Construction work for houses
				45211200-1	Sheltered housing
				45211300-2	Houses
				45211310-5	Bathrooms
				45211320-8	Porches
				45211340-4	Multi-dwelling buildings
				45211341-1	Flats
				45211350-7	Multi-functional buildings
				45211360-0	Urban development
				45212000-6	Construction work for buildings relating to leisure, sports, culture, lodging and restaurants
				45212100-7	Construction work of leisure facilities

CN – CPV

70 Glass and glassware	5801-5803+5806+6001+ 7019[.4+.5]	17140000-5	Special fabrics
	7003-7005	26110000-2	Glass
	7003-7005	26111000-9	Sheet glass
	7003	26111100-0	Unworked glass
	7005	26111200-1	Float glass

16.12.2002

EN

Official Journal of the European Communities

451

CN		CPV	
Chapter	CN Code	CPV Code	Description
	7003-7005	26111300-2	Curtain-wall glazing
	7003-7009	26120000-5	Flat glass
	7006-7009	26121000-2	Shaped flat glass
	7007	26121200-4	Safety glass

The new tables also include a mapping table between the old and the new version.

CPV code 2003	Description 2003	CPV code 2007	Description 2007
45210000-2	Building construction work.	45210000-2	Building construction work.
45211000-9	Construction work for multi-dwelling buildings and individual houses.	45211000-9	Construction work for multi-dwelling buildings and individual houses.
45211100-0	Construction work for houses.	45211100-0	Construction work for houses.
45211200-1	Sheltered housing.	45211200-1	Sheltered housing construction work.
45211300-2	Houses.	45211300-2	Houses construction work.
45211310-5	Bathrooms.	45211310-5	Bathrooms construction work.
45211320-8	Porches.	45211320-8	Porches construction work.
45211340-4	Multi-dwelling buildings.	45211340-4	Multi-dwelling buildings construction work.
45211341-1	Flats.	45211341-1	Flats construction work.
45211350-7	Multi-functional buildings.	45211350-7	Multi-functional buildings construction work.
45211360-0	Urban development.	45211360-0	Urban development construction work.
45212000-6	Construction work for buildings relating to leisure, sports, culture, lodging and restaurants.	45212000-6	Construction work for buildings relating to leisure, sports, culture, lodging and restaurants.
45212100-7	Construction work of leisure facilities.	45212100-7	Construction work of leisure facilities.
45212110-0	Leisure centre.	45212110-0	Leisure centre construction work.
45212120-3	Theme park.	45212120-3	Theme park construction work.
45212130-6	Amusement park.	45212130-6	Amusement park construction work.
45212140-9	Recreation installation.	45212140-9	Recreation installation.
45212150-2	Cinema.	45212150-2	Cinema construction work.
45212160-5	Casino.	45212160-5	Casino construction work.

CPV is also available on the Internet with searching facilities: <http://www.cpvclassification.com/>

Common Procurement Vocabulary

Search in the classification

- 45000000-7 Construction work
 - 45100000-8 Site preparation work
 - 45200000-9 Works for complete or part construction and civil engineering work
 - 45210000-2 Building construction work
 - 45211000-9 Construction work for multi-dwelling buildings and individual houses**
 - 45211100-0 Construction work for houses
 - 45211200-1 Sheltered housing
 - 45211300-2 Houses
 - 45212000-6 Construction work for buildings relating to leisure, sports, culture, lodging and restaurants
 - 45213000-3 Construction work for commercial buildings, warehouses and industrial buildings, buildings relating to transport
 - 45214000-0 Construction work for buildings relating to education and research
 - 45215000-7 Construction work for buildings relating to health and social services, for crematoriums and public conveniences
 - 45216000-4 Construction work for buildings relating to law and order or emergency services and for military buildings
 - 45220000-5 Engineering works and construction works
 - 45230000-8 Construction work for pipelines, communication and power lines, for highways, roads, airfields and railways; flatwork
 - 45240000-1 Construction work for water projects
 - 45250000-4 Construction works for plants, mining and manufacturing and for buildings relating to the oil and gas industry
 - 45260000-7 Roof works and other special trade construction works
 - 45300000-0 Building installation work
 - 45400000-1 Building completion work
 - 45500000-2 Hire of construction and civil engineering machinery and equipment with operator
- 50000000-5 Repair, maintenance and installation services
- 52000000-9 Retail trade services
- 55000000-0 Hotel and restaurant services
- 60000000-8 Land transport services and transport via pipeline services
- 61000000-5 Water transport services

Legends

= Example companies available

= Click to expand the tree

= Click to shrink to tree

Select your language here

English v

What is CPV?

Download the CPV classification in your language here

Proodle
www.proodle.com

Visit the official SIMAP site for more information about CPV

ANNEX C: EU – NACE

The **Statistical Classification of Economic Activities in the European Community** (in French: Nomenclature statistique des activités économiques dans la Communauté européenne), commonly referred to as **NACE**.

Extract concerning construction:

NACE_REV_2_CODE	NACE_REV_2_DESCRIPTION
41	Construction of buildings
41.1	Development of building projects
41.10	Development of building projects
41.2	Construction of residential and non-residential buildings
41.20	Construction of residential and non-residential buildings
42	Civil engineering
42.1	Construction of roads and railways
42.11	Construction of roads and motorways
42.12	Construction of railways and underground railways
42.13	Construction of bridges and tunnels
42.2	Construction of utility projects
42.21	Construction of utility projects for fluids
42.22	Construction of utility projects for electricity and telecommunications
42.9	Construction of other civil engineering projects
42.91	Construction of water projects
42.99	Construction of other civil engineering projects n.e.c.
43	Specialised construction activities
43.1	Demolition and site preparation
43.11	Demolition
43.12	Site preparation
43.13	Test drilling and boring
43.2	Electrical, plumbing and other construction installation activities
43.21	Electrical installation
43.22	Plumbing, heat and air-conditioning installation
43.29	Other construction installation
43.3	Building completion and finishing
43.31	Plastering
43.32	Joinery installation
43.33	Floor and wall covering
43.34	Painting and glazing
43.39	Other building completion and finishing
43.9	Other specialised construction activities
43.91	Roofing activities
43.99	Other specialised construction activities n.e.c.

ANNEX D: EU – CPA – Classification of Products by Activity

The Statistical Classification of Products by Activity in the EEC (CPA).

Extract concerning construction:

CPA_2008_CODE	CPA_2008_DESCRIPTION
F	CONSTRUCTIONS AND CONSTRUCTION WORKS
41	Buildings and building construction works
41.0	Buildings and building construction works
41.00	Buildings and building construction works
41.00.1	Residential buildings
41.00.10	Residential buildings
41.00.2	Non-residential buildings
41.00.20	Non-residential buildings
41.00.3	Construction works for residential buildings (new works, additions, alterations and renovation works)
41.00.30	Construction works for residential buildings (new works, additions, alterations and renovation works)
41.00.4	Construction works for non-residential buildings (new works, additions, alterations and renovation works)
41.00.40	Construction works for non-residential buildings (new works, additions, alterations and renovation works)
42	Constructions and construction works for civil engineering
42.1	Roads and railways; construction works for roads and railways
42.11	Roads and motorways; construction works for roads and motorways
42.11.1	Motorways, roads, streets and other vehicular or pedestrian ways and airfield runways
42.11.10	Motorways, roads, streets and other vehicular or pedestrian ways and airfield runways
42.11.2	Construction works for motorways, roads, streets and other vehicular or pedestrian ways and airfield runways
42.11.20	Construction works for motorways, roads, streets and other vehicular or pedestrian ways and airfield runways
42.12	Railways and underground railways; construction works for railways and underground railways
42.12.1	Railways and underground railways
42.12.10	Railways and underground railways
42.12.2	Construction works for railways and underground railways
42.12.20	Construction works for railways and underground railways
42.13	Bridges and tunnels; construction works for bridges and tunnels
42.13.1	Bridges and tunnels
42.13.10	Bridges and tunnels
42.13.2	Construction works for bridges and tunnels
42.13.20	Construction works for bridges and tunnels
42.2	Constructions and construction works for utility projects
42.21	Constructions and construction works for utility projects for fluids
42.21.1	Utility constructions for fluids
42.21.11	Long-distance pipelines for fluids
42.21.12	Local pipelines for fluids
42.21.13	Irrigation systems (canals); water main and line constructions; water treatment plants, sewage disposal plants and pumping stations
42.21.2	Construction works for utility projects for fluids

CPA_2008_CODE	CPA_2008_DESCRIPTION
42.21.21	Construction works for long-distance pipelines
42.21.22	Construction works for local pipelines, including ancillary works
42.21.23	Construction works for irrigation systems (canals), water mains and lines, water treatment plants, sewage disposal plants and pumping stations
42.21.24	Water well drilling and septic system installation works
42.22	Constructions and construction works for utility projects for electricity and telecommunications
42.22.1	Utility constructions for electricity and telecommunications
42.22.11	Long-distance electricity power lines and communication lines
42.22.12	Local electricity power lines and communication lines
42.22.13	Power plants
42.22.2	Construction works for utility projects for electricity and telecommunications
42.22.21	Construction works for long-distance electricity power lines and communication lines
42.22.22	Construction works for local electricity power lines and communication lines
42.22.23	Construction works for power plants
42.9	Constructions and construction works for other civil engineering projects
42.91	Constructions and construction works for water projects
42.91.1	Coastal and port constructions, dams, locks and related hydro-mechanical structures
42.22.2	Construction works for utility projects for electricity and telecommunications
42.22.21	Construction works for long-distance electricity power lines and communication lines
42.22.22	Construction works for local electricity power lines and communication lines
42.22.23	Construction works for power plants
42.9	Constructions and construction works for other civil engineering projects
42.91	Constructions and construction works for water projects
42.91.1	Coastal and port constructions, dams, locks and related hydro-mechanical structures
42.22.2	Construction works for utility projects for electricity and telecommunications
42.22.21	Construction works for long-distance electricity power lines and communication lines
42.22.22	Construction works for local electricity power lines and communication lines
42.22.23	Construction works for power plants
42.9	Constructions and construction works for other civil engineering projects
42.91	Constructions and construction works for water projects
42.91.1	Coastal and port constructions, dams, locks and related hydro-mechanical structures
42.91.10	Coastal and port constructions, dams, locks and related hydro-mechanical structures
42.91.2	Construction works for coastal and port constructions, dams, locks and related hydro-mechanical structures
42.91.20	Construction works for coastal and port constructions, dams, locks and related hydro-mechanical structures
42.99	Constructions and construction works for other civil engineering projects n.e.c.
42.99.1	Other civil engineering constructions
42.99.11	Mining and manufacturing constructions
42.99.12	Sport and recreation constructions
42.99.19	Other civil engineering constructions n.e.c.
42.99.2	Construction works for other civil engineering constructions
42.99.21	Construction works for mining and manufacturing
42.99.22	Construction works for structures of outdoor stadia and sport grounds
42.99.29	Construction works for civil engineering constructions n.e.c.
43	Specialised construction works

CPA_2008_CODE	CPA_2008_DESCRIPTION
43.1	Demolition and site preparation works
43.11	Demolition works
43.11	Demolition works
43.11.1	Demolition works
43.11.10	Demolition works
43.12	Site preparation works
43.12.1	Site preparation works
43.12.11	Soil and land preparation works; clearance works
43.12.12	Excavating and earthmoving works
43.13	Test drilling and boring works
43.13.1	Test drilling and boring works
43.13.10	Test drilling and boring works
43.2	Electrical, plumbing and other construction installation works
43.21	Electrical installation works
43.21.1	Electrical installation works
43.21.10	Electrical installation works
43.22	Plumbing, heat and air-conditioning installation works
43.22.1	Water plumbing, drain laying, heating, ventilation and air conditioning installation works
43.22.11	Water plumbing and drain laying works
43.22.12	Heating, ventilation and air conditioning installation works
43.22.2	Gas fitting installation works
43.22.20	Gas fitting installation works
43.29	Other construction installation works
43.29.1	Other construction installation works
43.29.11	Insulation works
43.29.12	Fencing and railing installation works
43.29.19	Other installation works n.e.c.
43.3	Building completion and finishing works
43.31	Plastering works
43.31.1	Plastering works
43.31.10	Plastering works
43.32	Joinery installation works
43.32.1	Joinery installation works
43.32.10	Joinery installation works
43.33	Floor and wall covering works
43.33.1	Tiling works
43.33.10	Tiling works
43.33.2	Other floor laying and covering, wall covering and wall papering works
43.33.21	Terrazzo, marble, granite and slate works
43.33.29	Other floor laying and covering, wall covering and wall papering works n.e.c.
43.34	Painting and glazing works
43.34.1	Painting works
43.34.10	Painting works
43.34.2	Glazing works
43.34.20	Glazing works
43.39	Other building completion and finishing works
43.39.1	Other building completion and finishing works
43.39.11	Ornamentation fitting works
43.39.19	Other building completion and finishing works n.e.c.

CPA_2008_CODE	CPA_2008_DESCRIPTION
43.9	Other specialised construction works
43.91	Roofing works
43.91.1	Roofing works
43.91.11	Roof framing works
43.91.19	Other roofing works
43.99	Other specialised construction works n.e.c.
43.99.1	Waterproofing works
43.99.10	Waterproofing works
43.99.2	Scaffolding works
43.99.20	Scaffolding works
43.99.3	Pile driving works; foundation works
43.99.30	Pile driving works; foundation works
43.99.4	Concreting works
43.99.40	Concreting works
43.99.5	Structural steel components erection works
43.99.50	Structural steel components erection works
43.99.6	Masonry and bricklaying works
43.99.60	Masonry and bricklaying works
43.99.7	Assembly and erection works of prefabricated constructions
43.99.70	Assembly and erection works of prefabricated constructions
43.99.9	Specialised construction works n.e.c.
43.99.90	Specialised construction works n.e.c.

Short extract illustrating how CPA defines what is included and excluded from the different classes

CPA_2008_Code	CPA_2008_Description	CPA_2008_Inclusions	CPA_2008_Includes _Also	CPA_2008_Exclusions
F	CONSTRUCTIONS AND CONSTRUCTION WORKS			
41	Buildings and building construction works			
41.00.2	Non-residential buildings			
41.00.20	Non-residential buildings	This subcategory in- cludes: - buildings used to house warehousing activities and the pro- duction and assembly activities of industrial establishments - factories, plants and workshops - buildings used, primar- ily occupied with, or engaged in commerce or work		

CPA_2008_Code	CPA_2008_Description	CPA_2008_Inclusions	CPA_2008_Includes _Also	CPA_2008_Exclusions
41.00.30	Construction works for residential buildings (new works, additions, alterations and renovation works)			This subcategory excludes: - construction of special concrete or steel frameworks for buildings, see 43.99.40, 43.99.50
41.00.4	Construction works for non-residential buildings (new works, additions, alterations and renovation works)			
41.00.40	Construction works for non-residential buildings (new works, additions, alterations and renovation works)	This subcategory includes: - construction works for warehouses and industrial buildings (e.g. for manufacturing), light industrial buildings and agricultural buildings - construction works for commercial or administrative buildings such as office building		This subcategory excludes: - construction works for mining and manufacturing other than buildings, see 42.99.21
41.00.40	Construction works for non-residential buildings (new works, additions, alterations and renovation works)	This subcategory includes: - construction works for warehouses and industrial buildings (e.g. for manufacturing), light industrial buildings and agricultural buildings - construction works for commercial or administrative buildings such as office building		This subcategory excludes: - construction works for mining and manufacturing other than buildings, see 42.99.21
42	Constructions and construction works for civil engineering		This division also includes development of civil engineering projects.	This division excludes development of building projects, see 41.00
42.1	Roads and railways; construction works for roads and railways			
42.11	Roads and motorways; construction works for roads and motorways			
42.11.1	Motorways, roads, streets and other vehicular or pedestrian ways and air-field runways			

CPA_2008_Code	CPA_2008_Description	CPA_2008_Inclusions	CPA_2008_Includes _Also	CPA_2008_ Exclusions
42.11.10	Motorways, roads, streets and other vehicular or pedestrian ways and air-field runways	This subcategory includes: - motorways (except elevated motorways), roads, streets and other vehicular and pedestrian ways - guard rails and surfaced parking areas, driveways, vehicular and pedestrian underpasses and overpasses, and bicycle paths - airfie		This subcategory excludes: - elevated motorways, see 42.13.10 - highway tunnels, see 42.13.10

ANNEX E: UN – CPC – Central Product Classification

CPC exists in four versions: CPC Prov (Provisional Central Product Classification), CPC ver. 1, ver 1.1 and ver. 2.

<http://unstats.un.org/unsd/cr/registry/cpc-2.asp>

Extract for construction from ver. 2:

Notation	CPC: Name
5	Constructions and construction services
53	Constructions
531	Buildings
5311	Residential buildings
53111	One- and two-dwelling residential buildings
53112	Multi-dwelling residential buildings
5312	Non-residential buildings
53121	Industrial buildings
53122	Commercial buildings
53129	Other non-residential buildings
532	Civil engineering works
5321	Highways (except elevated highways), streets, roads, railways and airfield runways
53211	Highways (except elevated highways), streets and roads
53212	Railways
53213	Airfield runways
5322	Bridges, elevated highways and tunnels
53221	Bridges and elevated highways
53222	Tunnels
5323	Harbours, waterways, dams, irrigation and other waterworks
53231	Aqueducts and other water supply conduits, except pipelines
53232	Harbours, waterways and related facilities
53233	Dams
53234	Irrigation and flood control waterworks
5324	Long-distance pipelines, communication and power lines (cables)
53241	Long-distance pipelines
53242	Long-distance communication and power lines (cables)
5325	Local pipelines and cables and related works
53251	Local pipelines
53252	Local cables and related works
53253	Sewage and water treatment plants
5326	Mines and industrial plants
53261	Mining constructions
53262	Power plants
53269	Other constructions for manufacturing
5327	Outdoor sport and recreation facilities
53270	Outdoor sport and recreation facilities
5329	Other civil engineering works
53290	Other civil engineering works
54	Construction services
541	General construction services of buildings
5411	General construction services of residential buildings
54111	General construction services of one- and two-dwelling residential buildings
54112	General construction services of multi-dwelling residential buildings
5412	General construction services of non-residential buildings

Notation	CPC: Name
54121	General construction services of industrial buildings
54122	General construction services of commercial buildings
54129	General construction services of other non-residential buildings
542	General construction services of civil engineering works
5421	General construction services of highways (except elevated highways), streets, roads, railways and airfield runways
54211	General construction services of highways (except elevated highways), streets and roads
54212	General construction services of railways
54213	General construction services of airfield runways
5422	General construction services of bridges, elevated highways and tunnels
54221	General construction services of bridges and elevated highways
54222	General construction services of tunnels
5423	General construction services of harbours, waterways, dams, water mains and lines, irrigation and other waterworks
54231	General construction services of aqueducts and other water supply conduits, except pipelines
54232	General construction services of harbours and similar waterworks
54233	General construction services of dams
54234	General construction services of irrigation and flood control waterworks
5424	General construction services of long-distance pipelines, communication and power lines (cables)
54241	General construction services of long-distance pipelines
54242	General construction services of long-distance communication and power lines (cables)
5425	General construction services of local pipelines and cables and related works
54251	General construction services of local pipelines
54252	General construction services of local cables and related works
54253	General construction services of sewage and water treatment plants
5426	General construction services of mines and industrial plants
54261	General construction services of mines
54262	General construction services of power plants
54269	General construction services of other industrial plants
5427	General construction services of outdoor sport and recreation facilities
54270	General construction services of outdoor sport and recreation facilities
5429	General construction services of other civil engineering works
54290	General construction services of other civil engineering works
543	Site preparation services
5431	Demolition services
54310	Demolition services
5432	Site formation and clearance services
54320	Site formation and clearance services
5433	Excavating and earthmoving services
54330	Excavating and earthmoving services
5434	Water well drilling and septic system installation services
54341	Water well drilling services
54342	Septic system installation services
544	Assembly and erection of prefabricated constructions
5440	Assembly and erection of prefabricated constructions
54400	Assembly and erection of prefabricated constructions
545	Special trade construction services
5451	Pile driving and foundation services
54511	Pile driving services

Notation	CPC: Name
54512	Foundation services
5452	Construction framing services
54521	Building framing services
54522	Roof framing services
5453	Roofing and waterproofing services
54530	Roofing and waterproofing services
5454	Concrete services
54540	Concrete services
5455	Structural steel erection services
54550	Structural steel erection services
5456	Masonry services
54560	Masonry services
5457	Scaffolding services
54570	Scaffolding services
5459	Other special trade construction services
54590	Other special trade construction services
546	Installation services
5461	Electrical installation services
54611	Electrical wiring and fitting services
54612	Fire alarm installation services
54613	Burglar alarm system installation services
54614	Residential antenna installation services
54619	Other electrical installation services
5462	Water plumbing and drain laying services
54621	Water plumbing services
54622	Drain laying services
5463	Heating, ventilation and air conditioning equipment installation services
54631	Heating equipment installation services
54632	Ventilation and air conditioning equipment installation services
5464	Gas fitting installation services
54640	Gas fitting installation services
5465	Insulation services
54650	Insulation services
5469	Other installation services
54691	Lift and escalator installation services
54699	Other installation services n.e.c.
547	Building completion and finishing services
5471	Glazing services
54710	Glazing services
5472	Plastering services
54720	Plastering services
5473	Painting services
54730	Painting services
5474	Floor and wall tiling services
54740	Floor and wall tiling services
5475	Other floor laying, wall covering and wall papering services
54750	Other floor laying, wall covering and wall papering services
5476	Joinery and carpentry services
54760	Joinery and carpentry services
5477	Fencing and railing services

Notation	CPC: Name
54770	Fencing and railing services
5479	Other building completion and finishing services
54790	Other building completion and finishing services

ANNEX F: CI/SfB Building types and spaces (The Netherlands)

In the Netherlands the CI/SfB table for building types is still used.

United Kingdom CI/SfB – Table 0: Physical environment

The table is down to 4 levels and contains building types, construction and civil engineering works.
Extract on 3rd level.

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
0	Physical environment
1	Utilities, civil engineering facilities
11	Rail transport facilities
111	Surface, overhead railways
112	Underground railways
113	Other railways (track operated transport)
114	Embarkation facilities
116	Rail vehicle control facilities
117	Rail vehicle storage, repair facilities
12	Road transport facilities
121	Motorways, autobahns
122	Other motor roads
123	Other roads
124	Embarkation facilities
125	Carparks, parking bays, street parking, loading bays
126	Road vehicle control facilities
127	Road vehicle storage, repair facilities
13	Water transport facilities
131	Maritime water transport facilities, incl. coastal, ocean
133	Inland water transport facilities, incl. canal, non-tidal river, lake transport
134	Embarkation facilities
136	Boat control facilities
137	Boat storage, repair facilities
14	Air transport facilities, other transport facilities
141	Airport facilities, incl. aerodromes (air fields)
142	Heliports, VTOL facilities
144	Embarkation facilities
146	Aircraft control facilities
147	Aircraft storage, repair facilities
148	Other types, parts of air transport facilities
15	Communications facilities
151	Broadcasting facilities
152	Radio facilities
153	Television facilities
154	Telephone, telegraph facilities
156	Lines facilities; micro-wave beam, laser beam, radio wave facilities, transm.fac
157	Postal communications facilities
16	Power supply, mineral supply facilities
161	Heat supply facilities

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
162	Electricity supply facilities
163	Mechanical power supply facilities
164	Oil (petroleum) extraction, supply facilities
165	Gas extraction, supply facilities
166	Solid fuel extraction, supply facilities
167	Other mineral extraction, supply facilities
17	Water supply; disposal facilities
171	Water supply facilities
174	Sewage disposal facilities
175	Refuse disposal facilities
176	Mineral waste disposal facilities
177	Disposal of the dead
18	Other utilities, civil engineering facilities
181	Tunnels, subways, underpasses, culverts, pipelines
182	Bridges
183	Towers and other vertical engineering structures
184	Bulk goods storage facilities
185	Land reclamation
186	Land retention facilities
187	Water retention and flow control
2	Industrial facilities 26 agricultural facilities
261	Forestry facilities, shelter belt facilities
262	Fishing facilities, fisheries
263	Farming facilities
264	Horticultural (market gardening) facilities
265	Livestock facilities
268	Other types, parts of agricultural facilities
27	Manufacturing facilities
273	Food, drink, tobacco industries
274	Chemicals and allied industries
275	Engineering industries, metal industries
276	Textile, clothing industries
277	Clay, cement, timber industries
278	Construction industry
28	Other industrial facilities
281	Heavy industry facilities
282	Factories
284	Industrial storage facilities
285	Industrial process facilities
288	Other types, parts of industrial facilities
3	Administrative, commercial, protective, service facilities
31	Official administrative facilities, law courts
311	International legislative and administrative facilities
312	National legislative and administrative facilities
314	Regional and local legislative and administrative facilities

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
315	Local offices of government departments
316	Official representation facilities
317	Law courts
318	Other types, parts of official administrative facilities
32	Office facilities
32A	drawing offices, design offices, studios
32B	art, photographic studios
32C	professional offices, executive offices, offices of national industries + other
32D	Landscaped offices (Burolandschaft)
33	Commercial facilities
331	Mixed commercial developments
335	Insurance facilities
336	Building societies
337	Investment facilities
338	Other types, parts of commercial facilities
34	Trading facilities, shops
341	Wholesaling facilities, auction rooms
342	Shopping centres incl. local centres, shopping arcades, markets
343	Department stores
344	Hypermarkets, supermarkets
345	Self-service shops, corner shops, shops by goods sold
346	Service shops
348	Dealers, other types, parts of trading facilities
37	Protective service facilities
371	Coastguard, lifeboat stations
372	Fire protection facilities
373	Ambulance facilities
374	Civil law, criminal law enforcement facilities
375	Defence facilities
376	Prisons (gaols, jails, penitentiaries)
4	Health, welfare facilities
41	Hospital facilities, hospitals
411	Teaching hospitals incl. postgraduate teaching centres
412	general hospitals, GP hospitals, cottage hospitals
413	Mental, psychiatric
414	Ear, nose and throat, dental, heart, other types by part of body
415	Maternity, gynaecological
416	Paediatric (children); geriatric (old people)
417	Hospital facilities by technique
418	Other types, parts of hospital facilities
42	Other medical facilities
421	Health centres, health clubs
422	Clinics
423	Surgeries incl. group practices, doctors' surgeries, consulting rooms
424	Special centres, clinics, surgeries

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
426	First aid posts incl. emergency and field posts
427	Medical research facilities
428	Other types, parts of medical facilities
44	Welfare facilities, homes
442	Nursing homes, convalescent homes, sanatoria
443	Chronic invalids, addicts
444	Mentally handicapped
445	Physically handicapped, other welfare facilities by condition of user
446	Orphanages, nurseries (creches)
447	Old people's homes, other welfare facilities by age of user
448	Other types, parts of welfare facilities
46	Animal welfare facilities
461	Veterinary hospitals
462	Animal clinics, dispensaries
463	Animal clipping and pedicuring facilities
464	Animal rearing and living facilities
5	Recreational facilities 51 refreshment facilities
511	Canteens, refectories
512	restaurants
515	Cafes, snack bars, coffee bars, milk bars
517	Public houses, bars, taverns, beer gardens, tap rooms, licensed premises
518	Other types, parts of refreshment facilities
52	Entertainment facilities
521	Entertainment arenas; dance halls, ballrooms, discotheques
522	Musical facilities
523	Operatic facilities
524	Drama facilities
525	Cinemas
526	Circuses, circus rings
528	Other types, parts of entertainment facilities
53	Social recreation facilities
532	Community centres
534	Clubs
536	Residential clubs
537	Commercial clubs, night clubs
538	Other types, parts of social recreation facilities
54	Aquatic sports facilities
541	Covered swimming pools
543	Open air swimming pools, lidos
544	Other types, parts of swimming facilities
546	Boating facilities
548	Other types, parts of aquatic sports facilities
56	Sports facilities
561	Sports centres
562	Sports halls

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
563	Bowling alleys (tenpin bowling alleys)
564	Stadia
565	Equestrian facilities, Shooting facilities
566	Bowling greens, golf courses
567	Air sports facilities, Winter sports facilities
568	Other types, parts of sports facilities
58	Other recreational facilities
581	Gambling facilities, casinos
582	Amusement arcades
583	fairgrounds, funfairs, showgrounds
585	Play facilities
587	Parks, leisure gardens
588	Other types, parts of recreational facilities
6	Religious facilities
61	Religious center facilities
61A	Episcopal places, deaneries, pastoral centres, ecumenical centres
62	Cathedrals
62A	Chapter houses, cathedral treasuries
63	Churches, chapels
63A	churches, church halls, chapels, chantries
64	Mission halls, meeting houses
65	Temples mosques, synagogues
66	Convents 66 Aresidential religious facilities eg: monasteries, nunneries, abbeys + other
67	Funerary facilities, shrines
67A	Crematoria, cemeteries (grave yards)
67B	Funeral vaults
67C	Tombs, mausoleums
67D	Shrines, feretory spaces, relics spaces, reliquaries
68	Other religious facilities
68A	Chancels incl. sancturaries, choirs, altars
68B	Transepts
68C	Crypts
68D	Watching galleries
68E	Belfries
68F	Side chapels
68G	Baptisteries
68H	Confessing facilities
68J	Preaching facilities
68K	Sacramental facilities
68L	Ambulatory facilities incl. cloisters, aisles, retrochoirs
68M	Vestries, sacristies
7	Educational, scientific, information facilities
71	Schools facilities
711	Nursery schools, classrooms
712	Primary schools

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
713	Secondary schools (high schools)
714	Sixth form colleges, centres
717	Special schools
718	Other types, parts of school facilities
72	Universities, colleges, other educations facilities
721	Universities incl. technological universities, university colleges
722	Polytechnics, technical colleges, colleges of education, further education, art
724	Academies
725	Other specialist colleges
727	Adult education facilities
728	Other types, parts of higher education facilities
729	Other types, parts of education facilities, facilities common to 71/72
73	Scientific facilities
731	Research facilities
732	Laboratory facilities
737	Observatories, recording stations
738	Other types, parts of scientific facilities
75	Exhibition, display facilities
751	Botanical gardens; herbaria; zoos
753	Aviaries
755	Aquaria
756	Museums, planetariums
757	Art galleries, facilities for special display
758	Other types, parts of exhibition, display facilities
76	Information facilities, libraries
761	National libraries
762	Public libraries incl. commercial lending libraries
764	Information facilities by special subject
765	Information facilities by form of material
766	Data processing facilities
767	Record offices, archives, patent offices
768	Other types, parts of information facilities
78	Other educational, scientific, information facilities
8	Residential facilities
81	Housing
811	Single storey
812	Two storey
814	Three and four storey
815	Five storeys and over
816	Flats (apartments)
817	Maisonettes
818	Other types, parts of housing facilities
82	One-off housing units, houses
82A	Individually designed houses
84	Special housing facilities

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
841	Caretakers, wardens' houses
843	Old people's housing incl. sheltered housing
847	Single persons' housing
848	Other types, parts of special housing units
85	Communal residential facilities
852	Hotels
853	Motels 854 Guesthouses
856	Hostels
858	Other types, parts of communal residential facilities
86	Historical residential facilities
86A	castles, chateaux, keeps, fortified houses, town houses (historical)
87	Temporary, mobile residential facilities
87A	Temporary housing units, 'half way housing' for families being re-housed
87B	House-boats
87C	Caravans (residential)
88	Other residential facilities
88A	Living facilities eg: living rooms
9	Common facilities, other facilities
91	Circulation, assembly facilities
913	Access, egress facilities
914	Movement facilities
915	Materials handling (movement) facilities
916	Assembly facilities
917	Special assembly facilities
918	Other types, parts of assembly, circulation facilities
92	Rest, work facilities
921	Rest facilities incl. rest/work facilities
922	Relaxation facilities
923	Work facilities, work places, work stations
926	Facilities for particular skills
928	Other types, parts of rest, work facilities
93	Culinary facilities
931	Culinary facilities
932	Washing-up facilities
934	Food preparation, cooking facilities
935	Culinary storage facilities
938	Other types, parts of culinary facilities
94	Sanitary, hygiene facilities
941	Lavatories (toilets, conveniences, latrines) incl. public facilities
942	Bathrooms, bath houses, slipper baths, sauna baths, Turkish baths
944	Water closets, urinals (as space)
947	Dressing, changing rooms
948	Other types, parts of sanitary, hygiene facilities
95	Cleaning, maintenance facilities
951	Washing facilities

Notation	Netherlands: CI SFB – Table 0: Physical environment: Name
952	Laundries (wash houses)
953	Ironing, drying, airing facilities
955	Utility rooms
958	Other types, parts of cleaning, maintenance facilities
96	Storage facilities
961	Cloakrooms, luggage rooms, stock rooms
963	Sheds
964	Liquids storage facilities
965	Cold storage facilities (as spaces)
966	Hot storage facilities (as spaces)
967	Secure storage facilities
968	Other types, parts of storage facilities
97	Processing, plant, control facilities
971	Power supply, heat supply, cold supply facilities
972	Water supply facilities
973	waste disposal facilities
975	Control and communications facilities
978	Other types, parts of processing facilities
98	Other types of facilities, buildings
981	High rise buildings, medium rise, low rise buildings
982	Detached buildings; semi detached buildings; linked buildings; terrace +other
983	Demountable, floating, temporary, mobile buildings
984	Monuments, ornamental buildings, sculptures
986	Historical buildings
987	Buildings by particular architects, engineers; the general concept of shelter
988	Other types of facilities
99	Parts of facilities; other aspects of the physical environment; archit
992	Blocks; compartments; departments
993	Storeys (horizontal divisions)
994	Wings, bays, core; rooms incl. halls, cubicles, booths
995	Facades, external aspects
996	Covered spaces
997	Spaces; internal spaces, interior design
998	External spaces, landscape design; environmental features
999	Architecture as a fine art

ANNEX G: UK – UNICLASS Table D: Facilities

Down to 5 levels (3rd level shown). Based on table 0 of CI/SfB.

Notation	UK – UNICLASS Table D Facilities: Name -
D	Facilities
D1	Utilities, civil engineering facilities
D11	Rail transport facilities
D11:E5	Rail bridges
D111	Conventional heavy railways
D112	Underground railways, light rail transit systems
D113	Other railways, cable transport, guided vehicle systems
D114	Embarkation facilities for rail transport
D115	Permanent way/track
D116	Rail vehicle control facilities
D117	Rail vehicle storage/repair facilities
D119	Other rail transport facilities
D12	Road transport facilities
D12:E5	Road bridges
D121	Motorways
D122	Other motor roads
D123	Roads other than motor roads
D124	Embarkation facilities for road transport
D125	Car parks, parking facilities
D126	Road vehicle service, storage and repair facilities
D127	Traffic calming constructions, road vehicle control facilities
D128	Carriageways, paved parts, etc.
D13	Water transport and protection facilities
D13:E5	Aqueducts
D131	Ship sheltering and berthing facilities, harbours, docks
D132	Port facilities, ports
D133	Boat control facilities, general
D134	Canals
D136	Offshore structures, platforms
D137	Protective works
D137:B5	Coastal planning
D137:E32	Sea walls
D14	Air transport facilities
D141	Airports
D142	Aerodromes etc.
D143	Airport management and control facilities
D144	Runway, taxiway and apron facilities
D145	Airport services facilities
D146	Embarkation facilities, terminals
D149	Other air transport facilities
D15	Communications facilities
D151	General broadcasting facilities

Notation	UK – UNICLASS Table D Facilities: Name -
D152	Radio facilities
D153	Television facilities
D154	Telephone, telegraph facilities
D156	Other telecommunications facilities
D157	Postal communications facilities
D159	Other communications facilities
D16	Power supply, mineral supply facilities
D161	Electricity generation
D162	Combined heat and power generating stations
D163	Electricity transmission and supply facilities
D164	Non-electrical power generation and supply
D165	Oil (petroleum) extraction, supply facilities
D166	Gas extraction, supply facilities
D167	Solid fuel extraction, supply facilities
D168	Mineral extraction, supply facilities
D169	Other power supply, mineral supply facilities
D17	Public health, water engineering facilities
D171	Water supply facilities
D171/4	Public health facilities
D172	Wet waste facilities
D173	Refuse disposal facilities
D174	Mineral waste disposal facilities
D175	Reservoirs
D176	Spillways, energy dissipating works
D177	Weirs, barrages
D178	Irrigation/land drainage facilities
D179	Other public health facilities
D2	Industrial facilities
D26	Agricultural facilities
D261	Forestry facilities
D262	Fishing facilities
D263	Farming facilities
D264	Horticultural (market gardening) facilities
D265	Livestock facilities
D268	Miscellaneous agricultural facilities
D27	Manufacturing facilities by type of industry
D272	Construction industry
D273	Food, drink, tobacco industries
D274	Chemical and allied industries
D275	Engineering industries, metal industries
D276	Textile/clothing industries
D277	Clay/cement/timber industries
D279	Other manufacturing, production facilities by type of industry
D28	Manufacturing facilities by type of premises
D281	Heavy industry facilities

Notation	UK – UNICLASS Table D Facilities: Name -
D282	Factories
D283	Light industrial facilities, business parks for light industry
D284	Industrial warehouses, storage facilities
D285	Industrial process facilities
D286	Industrial repair facilities
D287	Distribution centres
D289	Other industrial facilities
D3	Administrative, commercial, protective service facilities
D31	Official administrative facilities, law courts
D311	International legislative and administrative facilities
D312	National legislative and administrative facilities
D314	Regional and local legislative and administrative facilities
D315	Local offices of government departments
D316	Official representation facilities
D317	Law courts
D319	Other official administrative facilities
D32	Office facilities
D321	Business parks consisting of office buildings
D322	Purpose built office facilities
D323	Office facilities built speculatively
D324	Open-plan office facilities, landscaped office facilities, bürolandschaft
D325	Traditional office facilities
D327	Art/design studios, drawing offices
D329	Other office facilities
D33	Commercial facilities
D334	High street banks, building societies
D335	Insurance facilities
D337	Investment facilities
D339	Other commercial facilities
D34	Trading facilities, shops
D341	Wholesaling, auction and market facilities, etc.
D342	Shopping centres, malls and arcades
D343	Department stores
D344	Supermarkets, food superstores
D345	High street shops
D346	Corner shops, kiosks
D347	Retail facilities by type of goods sold
D348	Dealers, merchants
D37	Protective service facilities
D371	Rescue/aid facilities
D374	Police stations, law enforcement facilities
D375	Military facilities
D376	Detention, secure facilities, prisons
D379	Other protective service facilities
D4	Medical, health, welfare facilities

Notation	UK – UNICLASS Table D Facilities: Name -
D4:D73	Medical/pharmaceutical research facilities
D41	Medical facilities (hospitals)
D411	Tertiary, teaching hospitals
D412	District general hospitals
D413	Other types of hospitals, units connected with hospitals
D414	Core hospital facilities
D415	Specialised hospital facilities by part of body
D416	Other specialised hospital facilities
D417	Auxiliary/service hospital facilities
D419	Other hospital facilities, hospitals
D42	Primary health care facilities
D421	Health centres
D422	Specialised clinics
D423	Premises for GP practices
D424	Dental surgeries
D425	Sick bays
D426	First aid posts
D427	Special centres
D428	Parts of primary health care facilities
D429	Other primary health care facilities
D44	Welfare facilities, homes
D441	Day centres, welfare consultation centres
D442	Residential institutions/homes
D446	By age of user
D447	By other characteristics of user
D448	Parts of welfare facilities
D46	Animal welfare facilities
D461	Veterinary hospitals
D462	Animal clinics, dispensaries
D463	Animal clipping and pedicuring facilities
D464	Animal rearing and living facilities
D465	Quarantine facilities
D469	Other animal welfare facilities
D5	Recreational facilities
D51	Refreshment and culinary facilities
D511	Canteens, refectories
D512	Restaurants, cafés, snack bars, coffee bars, tea shops
D513	Fast food restaurants, take-aways
D515	Public houses etc.
D517	Dining rooms
D518	Food preparation, storage facilities, kitchens
D52	Entertainment facilities
D521	Entertainment arenas
D522	Dancing, musical facilities
D524	Drama, operatic, concert facilities

Notation	UK – UNICLASS Table D Facilities: Name -
D525	Leisure boxes, family entertainment venues, cinemas
D526	Circuses
D527	Entertainment production facilities
D529	Other entertainment facilities
D53	Social recreation facilities
D532	Community centres
D534	Clubs (non residential, non-commercial)
D536	Residential clubs
D537	Commercial clubs, night clubs
D539	Other social recreation facilities
D54	Swimming facilities
D54:E832	Swimming pools with retractable roofs
D54:F73	Outdoor swimming pools
D54:F75	Indoor swimming pools
D541	Swimming facilities
D542	Leisure pool facilities
D543	Diving facilities
D544	Hydrotherapy facilities
D545	Lido facilities
D546	Pool itself
D547	Slides, flumes, diving boards, wave generation, etc.
D549	Other swimming pool and related facilities
D56	Sports facilities
D561	Stadia, arenas, complexes
D562	Leisure centres, sports hall facilities
D563	Sports grounds, small-scale spectator sport facilities, playing fields
D564	Spectator facilities for sports
D565	Practice/training facilities
D567	Sports facilities by type of sport
D568	Facilities/areas for the playing of the sport itself
D569	Other sports facilities
D58	Amusement, play, tourist facilities
D581	Gambling facilities
D583	Amusement facilities
D584	Tourist facilities
D585	Play facilities
D586	Field study centres, outdoor activity centres
D587	Parks, gardens
D589	Other amusement, play, tourist facilities
D59	Other recreational facilities
D6	Religious facilities
D61	Religious centre facilities
D611	Episcopal palaces
D612	Deaneries
D613	Pastoral centres

Notation	UK – UNICLASS Table D Facilities: Name -
D614	Ecumenical centres
D62	Cathedrals
D621	Chapter houses
D622	Cathedral treasuries
D63	Churches, chapels
D631	Chancels
D632	Naves, transepts
D633	Crypts
D634	Galleries
D635	Side chapels, baptisteries, confessing facilities, preaching facilities, sacramental facilities
D636	Ambulatory facilities
D637	Spires, towers, belfries, campanili
D638	Vestries
D639	Other parts of Christian worship facilities, churches
D64	Mission halls, meeting houses
D65	Non-Christian places of worship
D651	Temples
D652	Mosques
D653	Synagogues
D654	Non-Christian religious meeting places
D659	Parts of non-Christian worship facilities
D66	Residential religious facilities
D661	Convents
D662	Abbeys, monasteries, nunneries, priories, friaries
D663	Retreat centres
D67	Funerary facilities, shrines, mortuaries
D671	Mortuaries, morgues
D672	Crematoria
D673	Cemeteries (graveyards)
D674	Tombs, mausoleums, funeral vaults, shrines, reliquaries
D676	Gardens of remembrance, remembrance pavilions
D677	Funeral parlours, chapels of rest
D679	Other funerary facilities
D69	Other religious facilities
D7	Educational, scientific, information facilities
D71	Education facilities (schools)
D711	Nursery schools
D712	Primary schools
D713	Secondary schools
D714	Sixth form colleges, tertiary colleges
D717	Schools for special needs groups
D718	Parts of education facilities
D719	Other education facilities
D72	Further education facilities
D721	Universities

Notation	UK – UNICLASS Table D Facilities: Name -
D722	Polytechnics, technical colleges, general colleges of further education
D723	Colleges of education
D724	Colleges of art and design
D725	Colleges/academies of music, drama, dance
D726	Adult education facilities
D727	Learned societies
D728	Parts of further education facilities
D729	Other further education facilities
D73	Scientific, computing facilities (laboratories)
D73:D4	Medical/pharmaceutical research facilities
D73:D417	Hospital laboratories, analysis facilities
D731	Computing facilities, computer rooms
D732	Clean rooms
D733	Instrument rooms
D736	Photography facilities
D737	Observatories, recording stations
D739	Other scientific facilities
D74	Assembly, meeting facilities
D741	Conference centres
D742	Trade centres
D75	Exhibition, display facilities
D751	Botanical gardens, herbaria, zoos
D752	Aviaries
D753	Aquaria, oceanaria
D754	Museums, planetariums
D755	Art galleries, facilities for the display of art
D756	Centres for general exhibitions
D757	Centres for special kinds of exhibitions
D759	Other exhibition/display facilities
D76	Information/study facilities (libraries)
D761	National libraries
D762	Public libraries
D763	University, college, school libraries
D764	Information facilities by special subject
D765	Information facilities by form of material
D766	Company libraries, special libraries
D767	Record offices, archives, patent offices
D768	Commercial lending libraries, subscription libraries
D769	Parts of information facilities
D79	Other educational etc. facilities
D8	Residential facilities
D81	Domestic residential facilities, housing
D811	Housing by type
D811:E811	Bungalows
D811:E821	Detached housing

Notation	UK – UNICLASS Table D Facilities: Name -
D811:E822	Semi-detached housing
D811:E824	Terraced housing
D813	Housing by size of development
D814	Housing by occupier
D815	Housing by owner
D819	Other domestic residential facilities
D82	Relaxation facilities, living rooms
D83	Sleeping facilities, bedrooms
D85	Communal residential facilities
D852	Hotels
D853	Motels
D854	Guesthouses
D855	Hostels
D856	Halls of residence
D857	Foyer buildings
D858	Parts of communal residential facilities
D859	Other communal residential facilities
D86	Historical residential facilities
D861	Castles
D862	Chateaux
D863	Fortified houses
D864	Other historical houses
D868	Parts of historical residential facilities
D87	Temporary, mobile residential facilities
D89	Other residential facilities
D9	Other facilities
D91	Circulation
D92	Reception, waiting facilities
D94	Sanitary, changing facilities
D941	Lavatories, public conveniences
D942	Bathrooms, washing facilities
D943	Saunas, Turkish baths, etc.
D945	Changing, dressing facilities
D95	Cleaning, maintenance facilities
D951	Laundries
D96	Storage facilities
D961	General purpose storage facilities, cloakrooms, luggage rooms, stock rooms, waste storage facilities
D962	Domestic garages, sheds, etc.
D963	Liquid storage
D964	Hot storage
D965	Cold storage
D966	Secure storage
D97	Plant, control facilities
D971	Plant rooms

Notation	UK – UNICLASS Table D Facilities: Name -
D972	Control rooms
D973	Services facilities

ANNEX H: UK – UNICLASS Table E: Construction entities

Notation	UK – UNICLASS Table E: Construction entities: Name
E	Construction entities
E:N246	Earthquake resistant structures
E0	Construction complexes
E1	Pavements and landscaping
E11	Pavements, permanent ways
E111	Rigid pavements
E112	Rigid composite pavements
E113	Flexible pavements
E114	Flexible composite pavements
E12	Hard landscaping
E13	Soft landscaping
E2	Tunnels, shafts, cuttings
E21	Tunnels
E211	Adits
E212	Pilot tunnels
E213	Immersed tube tunnels
E214	Headings
E22	Shafts
E23	Cuttings
E3	Embankments, retaining walls, etc.
E31	Embankments
E32	Retaining/protecting walls
E32:D137	Sea walls
E321	Retaining walls
E322	Protecting walls
E33	Dams
E331	Embankment dams
E3311	Earth dams
E3312	Rock fill dams
E3313	Hydraulic fill dams
E332	Gravity dams
E3321	Gabion dams
E3322	Crib dams
E333	Gravity arch dams
E334	Arch dams
E335	Buttress dams
E3351	Arch buttress dams
E3352	Flat slab buttress dams
E3353	Solid head buttress dams
E4	Tanks, silos, etc.
E41	Containers for gases
E41:D1664	Gasometers/gasholders
E42	Tanks for liquids
E42:D1711	Water tanks, water towers
E43	Silos
E43:D2681	Silos for agricultural storage
E5	Bridges, viaducts
E5:N246	Earthquake resistant bridges

Notation	UK – UNICLASS Table E: Construction entities: Name
E51	Bridges by material of construction
E511	Steel girder bridges
E5111	Steel simple beam bridges
E5112	Steel lattice girder bridges
E5113	Steel truss bridges
E5114	Steel box girder bridges
E512	Concrete girder bridges
E5121	Post-tensioned concrete girder bridges
E5122	Pre-tensioned concrete girder bridges
E5123	Concrete girder bridges with no pre-stressing
E513	Wooden bridges
E514	Masonry bridges
E518	Composite bridges
E519	Other
E52	Simple span bridges
E52/6	Bridges by structural means of support
E53	Cantilever bridges
E54	Cable stayed bridges
E55	Suspension bridges
E56	Arch bridges
E561	Masonry arch bridges
E562	Concrete arch bridges
E563	Steel arch bridges
E57	Movable bridges
E571	Drawbridges
E572	Bascules
E573	Vertical lift bridges
E574	Swing bridges
E575	Retractable bridges
E576	Floating bridges
E577	Transporter bridges
E58	Bridges by what carried
E581	Foot bridges
E582	Bridges carrying buildings
E583	Bridges carrying pipes or cables
E59	Bridges by geometry/scale, other types of bridges
E591	Skew bridges
E592	Curved bridges
E593	Large span bridges
E594	Multi-span bridges
E595	Through-girder bridges
E599	Other types of bridges
E6	Towers, superstructures (excluding building
E61	Towers
E62	Gantries
E63	Chimneys (free standing)
E64	Cooling towers
E65	Lattice towers, pylons
E66	Masts
E7	Pipelines, ducts, cables and channels

Notation	UK – UNICLASS Table E: Construction entities: Name
E71	Pipelines
E71:E75	Trenches for pipelines
E72	Cables, power lines
E73	Ducts
E731	Duct networks
E732	Jointing chambers
E733	Cable tunnels
E734	Cable ways
E74	Manholes, chambers
E75	Channels, trenches, ditches, etc.
E8	Buildings
E81	Buildings defined by height/number of storeys
E811	Single storey buildings
E812	Two storey buildings
E813	Three storey buildings
E819	Tall buildings, skyscrapers
E82	Buildings defined by relationship with adjacent buildings
E821	Detached buildings
E822	Semi-detached buildings
E823	Linked/lean-to buildings
E824	Terraces/parades
E825	Infill buildings
E826	Buildings constructed over something, air rights buildings
E83	Buildings defined by special form of construction
E831	Buildings with cable tensioned fabric roofs
E832	Buildings with retractable roofs
E833	Long-span, large volume buildings, supersheds
E834	System-built buildings, volumetric buildings
E84	Intelligent buildings
E85	Mobile, demountable, temporary, floating buildings
E851	Mobile buildings
E852	Demountable buildings
E853	Temporary buildings
E854	Floating buildings
E86	Underground buildings
E89	Other types of buildings

ANNEX I: UK – UNICLASS Table F: Spaces

Notation	UK – UNICLASS Table F Spaces: Name -
F	Spaces
F:D32	Office space
F:D34	Trading space
F:D41	Medical space
F:D44	Welfare space
F:D56	Sports space
F:D6	Religious space
F:D76	Information/study space
F1	Compound spaces of buildings, zones
F1/F4	Building spaces according to complexity/scale
F11	Semi-independent parts of a building, blocks
F12	Vertically divided parts of buildings
F121	Wings
F122	Bays
F123	Core
F13	Horizontally divided parts of buildings, storeys
F131	Sub-basement
F132	Basement
F133	Semi-basement
F134	Ground floor
F135	Mezzanine floor
F136	First floor and above, but below highest floor
F13601	First floor
F13602	Second floor
F13603	Third floor
F13610	Tenth floor
F13611	Eleventh floor
F13699	Ninety-ninth floor
F137	Highest floor
F138	Space beneath a sloping roof, attic
F139	Space on top of a flat roof
F19	Other compound spaces, zones
F191	User functional departments
F2	Rooms
F2:D32	Office room
F2:D76	Study room
F3	Circulation spaces
F311	Porches
F314	Entrance halls, foyers
F317	Atria
F321	Central halls, lobbies
F324	Stairs, lift shafts, escalators
F327	Corridors
F331	Internal balconies, galleries
F332	External balconies
F334	Gangways
F337	Covered ways
F338	Cloisters

Notation	UK – UNICLASS Table F Spaces: Name -
F341	Passages, alleys
F344	Crawlways
F351	Air locks
F399	Other circulation spaces
F4	Building sub-spaces
F41	Activity space
F42	Working space
F43	Occupied space
F44	Alcoves, niches
F45	Incidental space, voids
F5	Internal spaces of buildings
F5/F6	Building spaces according to whether they are internal or external
F6	External spaces of buildings
F61	Courtyards, forecourts
F62	Basement areas
F63	Dry areas
F64	Light wells
F65	Terraces
F651	Verandahs
F7	Building spaces by degree and type of enclosure
F71	Free space
F72	Open space
F73	Not covered, enclosed space
F731	Partly covered
F74	Covered, not enclosed space
F75	Fully enclosed space
F8	Miscellaneous spaces, other spaces
F81	Fire compartments
F82	Protected space
F83	Private space
F84	Public space
F85	Danger area
F89	Other spaces
F9	Building space analysed
F91	Building space analysed according to ISO 9836:1992
F911	Usable area
F912	Circulation area
F913	Services area
F914	Structural element area
F919	Gross area
F92	Building space analysed according to RICS and ISVA Code of measuring practice
F921	Net Internal Area

ANNEX J: US – OmniClass – Table 11 Construction entities by function

“The *OmniClass* Construction Classification System (known as OmniClass™ or OCCS) is a new classification system for the construction industry. OmniClass is useful for many applications, from organizing library materials, product literature, and project information, to providing a classification structure for electronic databases. It incorporates other extant systems currently in use as the basis of many of its Tables – MasterFormat™ for work results, UniFormat for elements, and EPIC (Electronic Product Information Cooperation) for structuring products.”

OmniClass is developed by CSI (Construction Specification Institute) and is also used in Canada by CSC (Construction Specification Canada).

Table 11 - Construction Entities by Function

The table has 3-4 levels (2.nd level shown)

Notation	US – OmniClass: Name
11-11 00 00	Assembly
11-11 11 00	Convention and Exhibition
11-11 21 00	Entertainment
11-12 00 00	Learning
11-12 11 00	Daycare and Preschool
11-12 21 00	K through 12
11-12 24 00	Higher Education
11-12 27 00	Research Facilities
11-13 00 00	Public service
11-13 11 00	Government
11-13 21 00	Military
11-13 24 00	Health
11-13 27 00	Public welfare
11-13 31 00	Death
11-14 00 00	Cultural
11-14 11 00	Libraries
11-14 21 00	Museums
11-14 24 00	Religious
11-14 99 00	Other cultural
11-15 00 00	Recreation
11-15 11 00	Outdoor
11-15 21 00	Indoor
11-16 00 00	Residence
11-16 11 11	Single Family
11-16 21 16	Multible Family
11-16 24 00	Hotel
11-16 27 00	Dormitories
11-16 31 00	Special Care Residences
11-17 00 00	Commercial
11-17 11 00	Offices
11-17 21 00	Exchanges and Markets
11-17 24 00	Retail and Commercial

Notation	US – OmniClass: Name
11-17 27 00	Mixed Commerce
11-21 00 00	Production
11-21 11 00	Manufacturing
11-21 21 00	Agricultural
11-21 24 00	Mineral Extraction
11-21 27 00	Craft
11-24 00 00	Storage
11-24 11 00	Dry
11-24 21 00	Enviromentally Controlled
11-24 24 00	Hazardous Storage
11-24 99 00	Other Storage
11-41 00 00	Water Management
11-41 11 00	Water Holding/Collection
11-41 21 00	Water Distribution
11-41 24 00	Water Treatment
11-41 27 00	Special Water Production
11-42 00 00	Energy Managment
11-42 11 00	Energy Production
11-42 21 00	Energy Distribution Nodes
11-42 24 00	Energy Storage
11-42 27 00	Energy Distribution
11-43 00 00	Waste Managment
11-43 11 00	Waste Collection and Holding
11-43 21 00	Waste Processing
11-44 00 00	Information Managment
11-44 11 00	Information Nodes
11-44 21 00	Information Distribution
11-51 00 00	Transportation Terminals
11-51 11 00	Aerospace
11-51 21 00	Marine
11-51 24 00	Rail
11-51 27 00	Motor Vehicle
11-51 31 00	Vehicle Maintenance and Parking facilities
11-52 00 00	Transportation Routes
11-52 11 00	Roadways
11-52 21 00	Railways
11-52 24 00	Bridges
11-90 00 00	Mixed use Facilities

ANNEX K: US – OmniClass – Table 12 Construction entities by form

OmniClass™ **Table 12 - Construction Entities by Form**

Number	Title
12-11 24 00	Mixed-Form Buildings
12-11 99 00	Other Buildings
12-14 00 00	Non-Building Structures
12-14 11 00	Ornamental Structures
12-14 11 11	Monument
12-14 11 14	Sculpture
12-14 11 17	Fountain
12-14 11 99	Other Ornamental Structures
12-14 14 00	Bridges
12-14 14 11	Trabeated Bridge (Note: Made of beams and girders)
12-14 14 14	Arch Bridge
12-14 14 17	Truss Bridge
12-14 14 21	Cable-Stayed Bridge
12-14 14 24	Suspension Bridge
12-14 14 99	Other Bridges
12-14 17 00	Platforms and Piers
12-14 17 11	Platform
12-14 17 14	Pier
12-14 17 17	Viaduct
12-14 17 99	Other Platforms and Piers
12-14 21 00	Tanks
12-14 21 11	Silo
12-14 21 14	Crib
12-14 21 17	Liquid Storage Tank
12-14 21 21	Gas Storage Tank
12-14 21 99	Other Tanks
12-14 24 00	Towers
12-14 24 11	Mast
12-14 24 14	Derrick
12-14 24 17	Gantry
12-14 24 21	Chimney Stack
12-14 24 24	Tower
12-14 24 99	Other Towers
12-14 27 00	Buried and Submerged Structures
12-14 27 11	Subterranean Vertical Shaft
12-14 27 14	Horizontal Tunnel
12-14 27 17	Subterranean Duct Bank
12-14 27 99	Other Buried and Submerged Structures
12-14 31 00	Elevated Linear Structures
12-14 31 11	Elevated Line
12-14 31 14	Elevated Pipe Line
12-14 31 99	Other Elevated Linear Structures

Number	Title
12-14 99 00	Other Non-Building Structures
12-17 00 00	Movable Structures
12-17 11 00	Temporary Movable Structures
12-17 11 11	Temporary Platform
12-17 11 12	Temporary Staging
12-17 11 14	Temporary Building
12-17 11 17	Tent (Includes: Canopy)
12-17 11 99	Other Temporary Movable Structures
12-17 14 00	Moving Structures
12-17 14 11	Track-Based Moving Structure
12-17 14 14	Wheel-Based Moving Structure
12-17 14 17	Cable-Based Moving Structure
12-17 14 99	Other Moving Structures
12-17 17 00	Floating Structures
12-17 17 11	Ships
12-17 17 14	Barges
12-17 17 17	Fixed-Location Floating Structure
12-17 17 99	Other Floating Structures
12-17 21 00	Orbiting Structures
12-17 21 11	Space Station
12-17 21 99	Other Orbiting Structures
12-17 99 00	Other Movable Structures
12-21 00 00	Land Forms
12-21 11 00	Pavements and Tracks
12-21 11 11	Pavement
12-21 11 14	Tracks
12-21 11 99	Other Pavements and Tracks
12-21 14 00	Retaining Forms
12-21 14 11	Retaining Wall
12-21 14 14	Embankment (Includes: Berm)
12-21 14 17	Terrace
12-21 14 21	Dam
12-21 14 99	Other Retaining Forms
12-21 17 00	Cuttings and Excavations
12-21 17 11	Pit
12-21 17 14	Trench
12-21 17 17	Channel
12-21 17 99	Other Cuttings/Excavations
12-21 21 00	Plantings
12-21 21 11	Planting Bed
12-21 21 14	Garden
12-21 21 17	Planting Field
12-21 21 21	Orchard

Number	Title
12-21 21 24	Forest
12-21 21 99	Other Plantings
12-21 99 00 Other Land Forms	
12-24 00 00 Water Forms	
12-24 11 00 Centralized Water Forms	
12-24 11 11	Pond
12-24 11 14	Reservoir
12-24 11 17	Lake
12-24 11 21	Sea
12-24 11 24	Ocean
12-24 11 99	Other Centralized Water Forms
12-24 14 00 Linear Water Forms	
12-24 14 11	Creek
12-24 14 14	Aqueduct
12-24 14 17	Canal
12-24 14 21	Stream
12-24 14 24	River
12-24 14 99	Other Linear Water Forms
12-24 99 00 Other Water Forms	
12-24 17 11	Bay
12-24 17 14	Inlet
12-27 00 00 Construction Entity Groupings	
12-27 17 00 Campus	
12-27 17 11	Education Campus
12-27 17 14	Compound
12-27 17 17	Base
12-27 17 21	Complex
12-27 17 24	Airport
12-27 17 99	Other Campus
12-27 21 00 Districts	
12-27 21 11	City Block
12-27 21 14	District
12-27 21 17	Neighborhood
12-27 21 21	Quarter
12-27 21 24	Sector
12-27 21 27	Reservation
12-27 21 99	Other Districts
12-27 24 00 Municipalities	
12-27 24 11	Hamlet
12-27 24 14	Village
12-27 24 17	Town
12-27 24 21	Suburb
12-27 24 24	City
12-27 24 27	Metropolitan Area
12-27 24 99	Other Municipalities

OmniClass™**Table 12 - Construction Entities by Form**

Number	Title
12-27 27 00	Regions
12-27 27 11	County
12-27 27 14	Region
12-27 27 99	Other Regions
12-27 31 00	Territories
12-27 31 11	Territory
12-27 31 14	State
12-27 31 17	Province
12-27 31 21	Nation
12-27 31 24	Theater
12-27 31 99	Other Territories

End of Table 12

ANNEX L: Finland – Classification of buildings

Statistics Finland

http://www.tilastokeskus.fi/meta/luokitukset/rakennus/001-1994/index_en.html

Classification of Buildings 1994

Notation	Finland – Classification of Buildings 1994: Name
A	Residential buildings
01	Detached and semi-detached houses
011	One-dwelling houses
012	Two-dwelling houses
013	Other detached and semi-detached houses
02	Attached houses
021	Rowhouses
022	Terraced houses
03	Blocks of flats
032	Balcony-access blocks
039	Other blocks of flats
B	Free-time residential buildings
04	Free-time residential buildings
041	Free-time residential buildings
C	Commercial buildings
11	Wholesale and retail trade buildings
111	Shopping halls
112	Shops, department stores and shopping centres
119	Other wholesale and retail trade buildings
12	Hotel buildings
121	Hotels, etc.
123	Holiday, rest and recreation homes
124	Rental holiday cottages and flats
129	Other hotel buildings
13	Residential buildings for communities
131	Residences for communities, etc.
139	Other residential buildings for communities
14	Restaurants and other similar buildings
141	Restaurants and other similar buildings
D	Office buildings
15	Office buildings
151	Office buildings
E	Transport and communications buildings
16	Transport and communications buildings
161	Rail and bus stations, air and harbour terminals
162	Vehicle depots and service buildings

Notation	Finland – Classification of Buildings 1994: Name
163	Car parks
164	Communications buildings
169	Other transport and communications buildings
F	Buildings for institutional care
21	Health care buildings
211	General hospitals
213	Other hospitals
214	Health centres
215	Specialised health care buildings
219	Other health care buildings
22	Social welfare buildings
221	Old-age homes
222	Children's homes, reform schools
223	Nursing homes for the mentally retarded
229	Other social welfare buildings
23	Other social service buildings
231	Children's day care centres
239	Social service buildings n.e.c.
24	Prisons
241	Prisons
G	Assembly buildings
31	Theatres and concert halls
311	Theatres, opera houses, concert halls and congress centres
312	Cinema halls
32	Libraries, museums and exhibition halls
322	Libraries and archives
323	Museums and art galleries
324	Exhibition halls
33	Association and club buildings, etc.
331	Association and club buildings, etc.
34	Buildings of religious communities
341	Churches, chapels, monasteries, convents and prayerhouses
342	Parish halls
349	Other buildings of religious communities
35	Buildings for sports and physical exercise
351	Indoor ice rinks
352	Indoor swimming pools
353	Indoor tennis, squash and badminton courts
354	Gymnasia and other sports halls
359	Other buildings for sports and physical exercise
36	Other assembly buildings
369	Other assembly buildings

Notation	Finland – Classification of Buildings 1994: Name
H	Educational buildings
51	General education buildings
511	General education buildings
52	Vocational education buildings
521	Vocational education buildings
53	University and research institute buildings
531	University buildings
532	Research institute buildings
54	Other educational buildings
541	Educational buildings of organisations, unions, employers, etc.
549	Educational buildings n.e.c.
J	Industrial buildings
61	Buildings for energy supply, etc.
611	Power stations
613	Public utility buildings
69	Industrial production buildings
691	Manufacturing plants
692	Workshops for industry and small-scale industry
699	Other industrial production buildings
K	Warehouses
71	Warehouses
711	Industrial warehouses
712	Commercial warehouses
719	Other warehouses
L	Fire fighting and rescue service buildings
72	Fire fighting and rescue service buildings
721	Fire stations
722	Civil defence shelters
729	Other fire fighting and rescue service buildings
M	Agricultural buildings
81	Livestock buildings
811	Cowsheds, pighouses, hen-houses, etc.
819	Animal shelters, harness horse stables, maneges, etc.
89	Other agricultural buildings
891	Grain drying and storage buildings
892	Greenhouses
893	Fur farms
899	Other buildings in agriculture, forestry and fishing
N	Other buildings
93	Other buildings

Notation	Finland – Classification of Buildings 1994: Name
931	Sauna buildings
941	Outbuildings
999	Buildings n.e.c

ANNEX M: Germany – BKI Bauwerkzuordnungskatalog (BWZ) (in German)

Notation	Germany – BKI: Name
1000	parlaments-, gerichts-,verwaltungsgebäude
1100	parlamentsgebäude
1200	gerichtsgebäude
1300	verwaltungsgebäude
1310	verwaltungsgebäude normaler techn. ausstatt.
1311	finanzämter
1312	versorgungsämter
1313	arbeitsämter
1320	verwaltungsgebäude höherer techn. ausstatt.
1321	eichämter
1330	gesundheitsämter
1340	polizeidienstgebäude
1350	rechenzentren
2000	gebäude für wissenschaftl. lehre u. forsch.
2100	hörsaalgebäude
2200	institutsgebäude für lehre u. forschung
2200	lehre und forschung, institutsgebäude
2300	institutsgebäude für forschung u. unters.
3000	gebäude des gesundheitswesens
3100	gebäude für untersuchung u. behandlung
3200	krankenhäuser, universitätskliniken
3300	sonderkrankenhäuser
3400	pflegeheime
3500	gebäude für rehabilitation
3600	gebäude für erholung
3700	gebäude für kur, genesung
4000	schulen
4100	allgemeinbildende schulen
4200	berufliche schulen
4300	sonderschulen
4400	kindertagesstätten
4500	weiterbildungseinrichtungen
5000	sportbauten
5100	hallen (ohne schwimmbhallen)
5200	schwimmbhallen
5300	gebäude für sportplatz u. freibadanl.
5400	sportplatzanlagen(aussenanlagen)

Notation	Germany – BKI: Name
5500	aussenanlagen für freibadanlagen
5500	freibadanlagen(aussenanlagen)
5600	sondersportanlagen
6000	wohnbauten u.gemeinschaftsstätten
6100	wohnhäuser
6110	einfamilienhäuser
6113	reihenhäuser
6120	mehrfamilienhäuser
6130	behelfswohngebäude
6200	wohnheime
6210	altenwohnheime
6220	personalwohnheime
6230	studentenwohnheime
6240	behindertenwohnheime
6250	sportlerwohnheime
6260	schülerwohnheime
6300	gemeinschaftsunterkünfte
6400	betreuungseinrichtungen
6500	verpflegungseinrichtungen
6600	beherbergungsstätten
7000	gebäude für gewerbe, handel, lager- u. garage
7100	industr. produktionsstätten u. labors
7200	geschäftshäuser, läden
7300	betriebs- u. werkstätten
7400	betriebsgebäude für landwirtschaft
7500	bank- u. postfilialen,gewerbl. rz
7600	gebäude öffentl. bereichsdienste
7700	lager- u. versandgebäude
7800	hoch- u. tiefgaragen
8000	bauwerke für technische zwecke
8100	bauwerke für energieerzeugung
8200	bauwerke für lenkung,steuerung, überw
8300	versorgegebäude elektr., wärme, kälte, gas, öl
8400	bauwerke u. anlagen für vers. mit wasser
8500	bauwerke u. anlagen für abwasserbeseitigung
8600	bauwerke für abfallbeseitigung
8700	straßen, wege, plätze, gehwege
8800	wasserbauten, hafenanlagen
8900	sonderbauwerke, lärmschutzbauten, meßstationen
9000	gebäude anderer art
9100	gebäude für kulturelle u. musische zwecke

Notation	Germany – BKI: Name
9110	sakralbauten
9120	ausstellungsgebäude
9130	bibliotheksgebäude
9140	veranstaltungsgebäude
9150	gemeinschaftshäuser für kultur
9160	burgen
9160	schlösser
9160	türme
9200	empfangsgebäude bei verkehrsanlagen
9300	gebäude für tierhaltung
9310	tierhaltung (ausstell. u. forschung)
9320	sonstige gebäude für tierhaltung
9400	gebäude für pflanzenhaltung
9410	pflanzenhaltung (austellung u. forschung)
9420	sonstige gebäude für pflanzenhaltung
9500	schutzbauwerke, schutzbauten
9600	justizvollzugsanstalten
9610	zellengebäude
9620	freigängerhäuser
9630	sonstige gebäude in justizvollzugsanst.
9700	friedhofsanlagen

ANNEX N: Australia – BCA

2 digit level

Volume 1 Section A3 Classification of Buildings and Structures

Notation	Australia – BCA: Name
Class 1a	a single dwelling.
Class 1b	a boarding house, guest house, hostel or the like.
Class 2	a building containing two or more sole-occupancy units each being a separate dwelling.
Class 3	a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons.
Class 4	a dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.
Class 5	an office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.
Class 6	a shop or other building for the sale of goods by retail or the supply of services direct to the public.
Class 7a	a carpark
Class 7b	a building for storage or display of goods or produce for the sale by wholesale.
Class 8	a laboratory or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing, or cleaning of goods or produce is carried on for trade, sale or gain.
Class 9a	a health-care building, including those parts of the building set aside as a laboratory.
Class 9b	an assembly building, including a trade workshop, laboratory or the like in a primary or secondary school, but excluding any other parts of the building that are of another class.
Class 9c	an aged care building.
Class 10a	a non-habitable building being a private garage, carport, shed or the like.
Class 10b	a structure being a fence, mast, antenna, retaining or free-standing wall, swimming pool or the like.

ANNEX O: EU – Eurostat Classification of Types of Constructions (CC)

The table is from 1988.

4 digit level:

Notation/Code	EU – Eurostat: Name/Description
1	Buildings
11	Residential buildings
111	One-dwelling buildings
1110	One-dwelling buildings
112	Two- and more dwelling buildings
1121	Two-dwelling buildings
1122	Three- and more dwelling buildings
113	Residences for communities
1130	Residences for communities
12	Non-residential buildings
121	Hotels and similar buildings
1211	Hotel buildings
1212	Other short-stay accommodation buildings
122	Office buildings
1220	Office buildings
123	Wholesale and retail trade buildings
1230	Wholesale and retail trade buildings
124	Traffic and communication buildings
1241	Communication buildings, stations, terminals and associated buildings
1242	Garage buildings
125	Industrial buildings and warehouses
1251	Industrial buildings
1252	Reservoirs, silos and warehouses
126	Public entertainment, education, hospital or institutional care buildings
1261	Public entertainment buildings
1262	Museums and libraries
1263	School, university and research buildings
1264	Hospital or institutional care buildings
1265	Sports halls
127	Other non-residential buildings
1271	Non-residential farm buildings
1272	Buildings used as places of worship and for religious activities
1273	Historic or protected monuments
1274	Other buildings not elsewhere classified
2	Civil engineering works
21	Transport infrastructures
211	Highways, streets and roads
2111	Highways
2112	Streets and roads
212	Railways

Notation/Code	EU – Eurostat: Name/Description
2121	Long-distance railways
2122	Urban railways
213	Airfield runways
2130	Airfield runways
214	Bridges, elevated highways, tunnels and subways
2141	Bridges and elevated highways
2142	Tunnels and subways
215	Harbours, waterways, dams and other waterworks
2151	Harbours and navigable canals
2152	Dams
2153	Aqueducts, irrigation and cultivation waterworks
22	Pipelines, communication and electricity lines
221	Long-distance pipelines, communication and electricity lines
2211	Long-distance oil and gas pipelines
2212	Long-distance water pipelines
2213	Long-distance telecommunication lines
2214	Long-distance electricity lines
222	Local pipelines and cables
2221	Local gas supply lines
2222	Local water supply pipelines
2223	Local waste water pipelines
2224	Local electricity and telecommunication cables
23	Complex constructions on industrial sites
230	Complex constructions on industrial sites
2301	Constructions for mining or extraction
2302	Power plant constructions
2303	Chemical plant constructions
2304	Heavy industrial plants, not elsewhere classified
24	Other civil engineering works
241	Sport and recreation constructions
2411	Sports grounds
2412	Other sport and recreation constructions
242	Other civil engineering works not elsewhere classified
2420	Other civil engineering works not elsewhere classified

ANNEX P: Other

Neufert - Architects data Third edition

	Houses and residential buildings
	Educational and research buildings
	Office buildings
	Arcades
	Retail outlets
	Workshop and industrial buildings
	Agricultural buildings
	Public transport
	Designing for vehicles
	Airports
	Fire stations
	Restaurants
	Hotels/ Motels
	Zoos and aquariums
	Theatres / cinemas
	Sport and recreation
	Healthcare buildings
	Places of worship
	Cemeteries and crematoria

New York State Office of Real Property Service–ORPS

1 digit level	
100	Agricultural
200	Residential
300	Vacant Land
400	Commercial
500	Recreation & Entertainment
600	Community Services
700	Industrial
800	Public Services
900	Wild, Forested, Conservation Lands & Public Parks

Wikipedia

Wikipedia have lists of buildings types, however different in different national editions.

Top level structure in the Norwegian and the English editions.

Norwegian wikipedia in Norwegian = English translation	International (english) Wikipedia
http://no.wikipedia.org/wiki/Liste_over_bygningstyper	http://en.wikipedia.org/wiki/List_of_building_types
1 Boliger = Residential	1 Agricultural buildings
2 Forsvarsbygninger = Military buildings	2 Commercial buildings
3 Industribygninger = Industrial buildings	3 Residential Buildings
4 Kommersielle bygninger = Commercial buildings	4 Educational buildings
5 Landbruksbygninger = Agricultural buildings	5 Government buildings
6 Offentlige bygninger = Government buildings	6 Industrial buildings
7 Kulturbygninger = Cultural buildings	7 Military buildings
8 Idrettshaller = Sports halls	8 Parking and storage
9 Undervisningsbygninger = Educational buildings	9 Religious buildings
10 Parkering og lagring = Parking and storage	10 Transit stations
11 Religiøse bygg = Religious buildings	11 Other
12 Stasjonsbygg = Transport terminals	
13 Andre = Other	

Full list in the English edition of Wikipedia.

Building types from Wikipedia – English edition	
	Building types Retrieved from " http://en.wikipedia.org/wiki/List_of_building_types "
1	Agricultural buildings
	Barn
	Chicken coop or chickenhouse
	Greenhouse
	Silo
	Stable
	Storm cellar
	Tide mill
	Root cellar
	Hayloft
	Farmhouse
	Well house
	Shed
	Grainery
	Watermill
	Wind mill
	Horse mill
	Pigpen or sty
2	Commercial buildings
	Bank
	Bar
	Pub
	Brothel

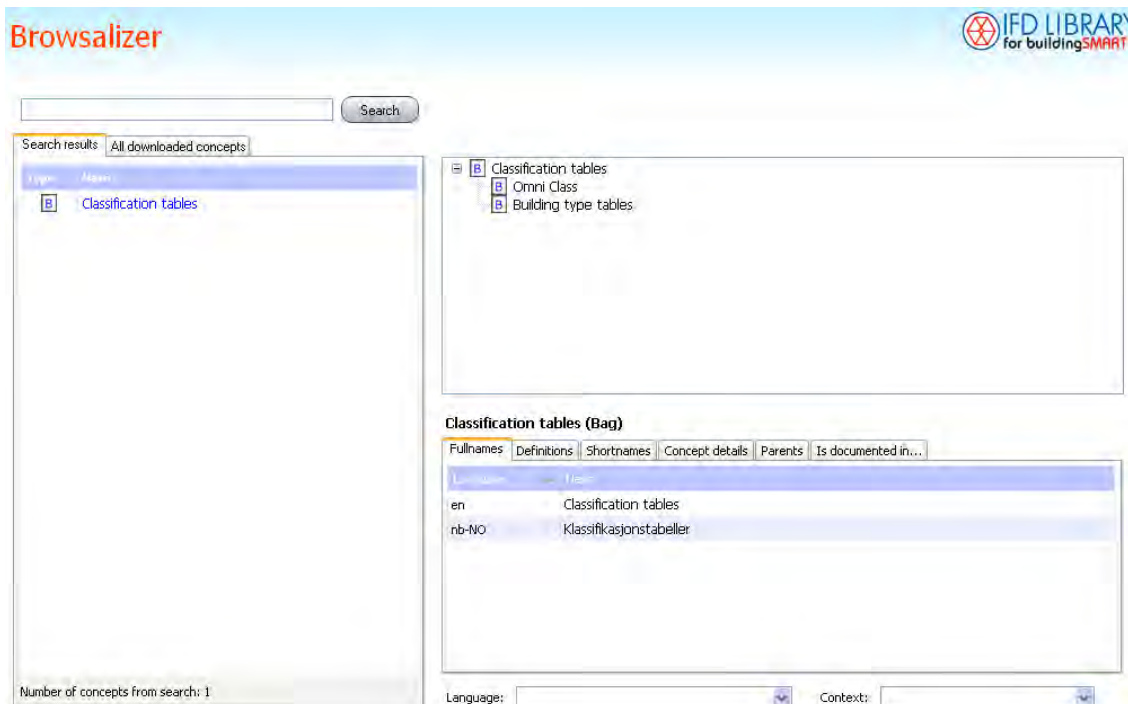
Building types from Wikipedia – English edition	
	Casino
	Coffee house
	Convention center
	Forum
	Gas station
	Hotel
	Motel
	Market
	Nightclub
	Jazz club
	Office building
	Restaurant
	Skyscraper
	Shop
	Shopping mall
	Stock exchange
	Store
	Supermarket
	Warehouse
	NNPC TOWER
3	Residential Buildings
	Apartment block
	Asylum
	Condominium
	Dormitory
	Duplex
	House - see List of house types
	Nursing home
	see also: List of types of lodging
4	Educational buildings
	College
	Classroom Building
	Dormitory
	Gymnasium
	Students' union
	School
	Library
	Museum
	Art gallery
	Theater
	Amphitheater
	Concert hall
	Movie theater
	Opera house
	Symphony
	University

	Building types from Wikipedia – English edition
5	Government buildings
	Capitol
	City hall
	Consulate
	Courthouse
	Embassy
	Fire station
	Palace
	Parliament
	Police station
	Post office
	Prison
6	Industrial buildings
	Brewery
	Factory
	Foundry
	Mining
	Power plant
	Refinery
	Mill
7	Military buildings
	Barracks
	Bunker
	Blockhouse
	Castle
	Citadel
	City gate
	Defensive wall
	Fort
	Fortification
	Tower
8	Parking and storage
	Aircraft hangar
	Barn
	Boathouse
	Garage
	Shed
	Storage silo
	Warehouse
9	Religious buildings
	Church
	Basilica
	Cathedral
	Duomo
	Chapel
	Oratory

Building types from Wikipedia – English edition	
	Martyrium
	Mosque
	Mihrab
	Imambargah
	Monastery
	Mithraeum
	Fire Temple
	Pyramid
	Shrine
	Synagogue
	Temple
	Pagoda
	Gurdwara
10	Transit stations
	Airport terminal
	Bus station
	Metro (subway, underground) station
	Train station
	Signal box
11	Other
	Aqueduct
	Folly
	Bathhouse
	Hospital
	Low-energy buildings
	Stadium
	Arena
	Marina
	Triumphal arch

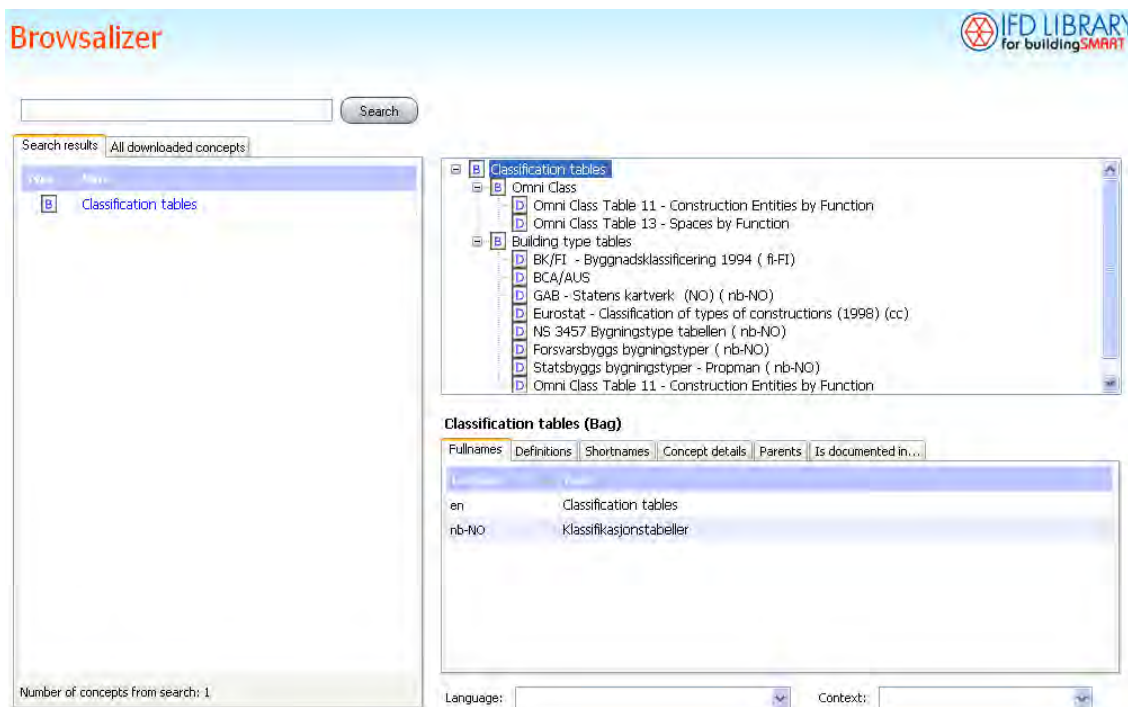
ANNEX Q: Browsing in IFD library

IFD library might be populated with documentation objects in addition to the real objects (IFD Subjects). As an illustration of how this works, IFD library has been populated with some typical building types and how they are documented in different building type tables. The following screen dumps illustrate what this looks like in IFD library through one of the available IFD Library Browsers.



The screenshot shows the 'Browsalizer' interface with a search bar and a 'Search' button. The search results are displayed in a list on the left, showing 'Classification tables' with a 'B' icon. The main area shows a tree view of the search results, with 'Classification tables' expanded to show 'Omni Class' and 'Building type tables'. Below the tree view is a table titled 'Classification tables (Bag)' with columns for 'Fullnames', 'Definitions', 'Shortnames', 'Concept details', 'Parents', and 'Is documented in...'. The table contains two rows: 'en Classification tables' and 'nb-NO Klassifikasjonstabeller'. At the bottom, there are fields for 'Language' and 'Context'.

A search for classification tables finds different classification table systems. They are marked with a 'B' for 'Bag' which is the IFD Library term for a collection of subjects or documents.



The screenshot shows the 'Browsalizer' interface with a search bar and a 'Search' button. The search results are displayed in a list on the left, showing 'Classification tables' with a 'B' icon. The main area shows a tree view of the search results, with 'Classification tables' expanded to show 'Omni Class' and 'Building type tables'. The 'Omni Class' folder is expanded to show a list of tables: 'Omni Class Table 11 - Construction Entities by Function', 'Omni Class Table 13 - Spaces by Function', and 'Building type tables'. The 'Building type tables' folder is expanded to show a list of tables: 'BK/FI - Byggnadsklassifisering 1994 (fi-FI)', 'BCA/AUS', 'GAB - Statens kartverk: (NO) (nb-NO)', 'Eurostat - Classification of types of constructions (1998) (cc)', 'NS 3457 Bygningstype tabellen (nb-NO)', 'Forsvarsbyggs bygningstyper (nb-NO)', 'Statsbyggs bygningstyper - Propman (nb-NO)', and 'Omni Class Table 11 - Construction Entities by Function'. Below the tree view is a table titled 'Classification tables (Bag)' with columns for 'Fullnames', 'Definitions', 'Shortnames', 'Concept details', 'Parents', and 'Is documented in...'. The table contains two rows: 'en Classification tables' and 'nb-NO Klassifikasjonstabeller'. At the bottom, there are fields for 'Language' and 'Context'.

Select 'OmniClass' and see different OmniClass tables, select 'Building type tables' and see all building type tables included in the test. They are all marked with a 'D' for 'Document'.

Browsalizer



Search results: All downloaded concepts

Type	Navn
B	Classification tables

Number of concepts from search: 1

- Building type tables
 - BK/FI - Byggnadsklassifisering 1994 (fi-FI)
 - BCA/AUS
 - GAB - Statens kartverk (NO) (nb-NO)
 - Eurostat - Classification of types of constructions (1998) (cc)
 - NS 3457 Bygningstype tabellen (nb-NO)
 - NS 3457 - 1 Boligbygning (nb-NO)
 - NS 3457 - 11 Enebolig (nb-NO)
 - NS 3457 - 111 Enebolig (nb-NO)
 - S Detached house**
 - P Has bachelor flat
 - NS 3457 - 112 Enebolig med hybelleilighet, sokkelleilighet o.l (nb-NO)
 - NS 3457 - 19 Annen boligbygning (nb-NO)

Detached house (Subject)

Fullnames	Definitions	Shortnames	Concept details	Parents	Is documented in...
Context	Navn			Concept type	Relationship
Standards Norway	NS 3457 - 111 Enebolig (nb-NO)			Document	Documents
Standards Norway	NS 3457 - 112 Enebolig med hybelleiligh...			Document	Documents
OmniClass	11-16 11 17 Multiple Bedroom Family ...			Document	Documents
Standards Norway	BK/FI - 011 One-dwelling houses			Document	Documents
Standards Norway	Statsbygga - 171 småhus (nb-NO)			Document	Documents
Standards Norway	Forsvarsbygga - 420 Enebolig (nb-NO)			Document	Documents
Eurostat	Eurostat - 111 One-dwelling buildings...			Document	Documents

Language: Context:

Browse in the NS 3457 hierarchy and find the subject 'Detached house' marked with a 'S' for subject. See how it is documented (classified) in the different building type tables or see it's parents.

Browsalizer



Search results: All downloaded concepts

Type	Navn
B	Building types
B	Building type tables

Number of concepts from search: 2

- Omni Class Table 11 - Construction Entities by Function
 - Assembly Facilities
 - Learning Facilities
 - Public Service Facilities
 - Cultural Facilities
 - Recreation Facilities
 - Residences
 - Single Family Residences
 - Studio Family Residence
 - One-Bedroom Family Residence
 - 11-16 11 17 Multiple Bedroom Family Residence
 - S Detached house**
 - P Has bachelor flat

Detached house (Subject)

Fullnames	Definitions	Shortnames	Concept details	Parents	Is documented in...
Context	Navn			Concept type	Relationship
Standards Norway	NS 3457 - 111 Enebolig (nb-NO)			Document	Documents
Standards Norway	NS 3457 - 112 Enebolig med hybelleiligh...			Document	Documents
OmniClass	11-16 11 17 Multiple Bedroom Family ...			Document	Documents
Standards Norway	BK/FI - 011 One-dwelling houses			Document	Documents
Standards Norway	Statsbygga - 171 småhus (nb-NO)			Document	Documents
Standards Norway	Forsvarsbygga - 420 Enebolig (nb-NO)			Document	Documents
Eurostat	Eurostat - 111 One-dwelling buildings...			Document	Documents

Language: Context:

Move over to OmniClass table 11 and see the OmniClass hierarchy for the same subject 'Detached house'. The documentation and its parents are necessarily the same as this is the same subject, but the hierarchy is different. In this way it is possible to browse/move in and between the different tables just to find classification in another system. Software that makes automatic inquiries will of course use the GUIDS for the different subjects and not their name. Thus it might not be important how the names of the document classes are written, but there is still a job to do concerning the use of full names and short names in order to make the browsing as self explaining as possible.

Browsalizer IFD LIBRARY
for buildingSMART

Search:

Search results: All downloaded concepts

TYPE	NAME
B	Building type tables
B	Building types

- B Building types
 - S Outhouse
 - S Semi-detached house
 - S Terrace house
 - S Saeter cottage
 - S Row house
 - S Boat-house
 - S Chain house
 - S Cabin
 - S Garage, car park
 - S Holiday home
 - S Detached house
 - P Has bachelor flat

Detached house (Subject)

Fullnames	Definitions	Shortnames	Concept details	Parents	Is documented in...
Standards Norway	Building types			Bag	Collects
Standards Norway	NS 3457 - 112 Enebolig med hybelstille...			Document	Documents
OmniClass	11-16 11 17 Multiple Bedroom Family ...			Document	Documents
Standards Norway	NS 3457 - 111 Enebolig (nb-NO)			Document	Documents
Standards Norway	BK/FI - 011 One-dwelling houses			Document	Documents
Standards Norway	Statsbygga - 171 småhus (nb-NO)			Document	Documents
Standards Norway	Forsvarsbygga - 420 Enebolig (nb-NO)			Document	Documents

Number of concepts from search: 2

Language: Context:

The alternative approach is to search for the real thing (the IFD Subject) instead of the documentation. This screen illustrates the result for a search of 'Building type*'. This search finds both the 'real' building types and the documentation of building types in building type tables. They are both 'Bags' as they are both collections of respectively building type subjects and building type documents. While looking into the Bag 'Building types', we see all the building type subjects. When we look into the subject 'Detached house', this is of course the same subject as we found under NS 3457 and OmniClass table 11, and we'll see the same parents.

ANNEX R: Denmark – DBK (in Danish)

The following is facsimiles of some of the tables; tables 10, 11, 15, 16 and 20.

DBK-tabel 10: Bebyggelser, forekomster i produktaspektet - - - -

Rev. : V 1.0

Bebyggelse eller infrastrukturel enhed med den karakteristiske funktion:

- 10 Beboelse og ophold
- 11 Administration og kontor anvendelse
- 12 Servicevirksomhed og forvaltning
- 13 Industriel produktion og reparation
- 14 Forsyning og bortskaffelse
- 15 Landbrugs- og fødevarerproduktion
- 16 Lagring og opbevaring
- 17 Transport
- 18 Detailhandel og vareudstilling
- 19 Hotel og restaurationsvirksomhed
- 20 Kulturelle formål
- 21 Religiøse formål
- 22 Sportslige formål
- 23 Forlystelsesformål
- 24 Undervisning og forskning
- 25 Sygdomsbehandling, pleje og omsorg
- 26 Kommunikation

Links til produkt-typetabeller for bebyggelser

- Beboelse og ophold
- Administration og kontor anvendelse
- Servicevirksomhed og forvaltning
- Industriel produktion og reparation
- Forsyning og bortskaffelse
- Landbrugs- og fødevarerproduktion
- Lagring og opbevaring
- Transport
- Detailhandel og vareudstilling
- Hotel og restaurationsvirksomhed
- Kulturelle formål
- Religiøse formål
- Sportslige formål
- Forlystelsesformål
- Undervisning og forskning
- Sygdomsbehandling, pleje og omsorg
- Kommunikation

DBK-tabel 11: Bebyggelser, forekomster i formaspektet # # # #

Rev. : V 1.0

Bebyggelse eller infrastrukturel enhed med den karakteristiske form:

- ####10 Efter bebyggelses organisering
- ####11 Efter bebyggelseshøjde
- ####12 Efter bebyggelseshøjde og organisering

Links til form-typetabeller for bebyggelser

- Efter bygningers organisering
- Efter bygningshøjder
- Efter bygningshøjder og organisering

**Bygning eller anlæg med
den karakteristiske funktion:**

- 10 Beboelse og ophold
- 11 Administration og kontor anvendelse
- 12 Servicevirksomhed og forvaltning
- 13 Industriel produktion og reparation
- 14 Forsyning og bortskaffelse
- 15 Landbrugs- og fødevarerproduktion
- 16 Lagring og opbevaring
- 17 Transport
- 18 Detailhandel og vareudstilling
- 19 Hotel og restaurationsvirksomhed
- 20 Kulturelle formål
- 21 Religiøse formål
- 22 Sportslige formål
- 23 Forlystelsesformål
- 24 Undervisning og forskning
- 25 Sygdomsbehandling, pleje og omsorg
- 26 Kommunikation

**Links til produkt-typetabeller
for bygninger**

- Beboelse og ophold
- Administration og kontor anvendelse
- Servicevirksomhed og forvaltning
- Industriel produktion og reparation
- Forsyning og bortskaffelse
- Landbrugs- og fødevarerproduktion
- Lagring og opbevaring
- Transport
- Detailhandel og vareudstilling
- Hotel og restaurationsvirksomhed
- Kulturelle formål
- Religiøse formål
- Sportslige formål
- Forlystelsesformål
- Undervisning og forskning
- Sygdomsbehandling, pleje og omsorg
- Kommunikation

**Bygning eller anlæg med
den karakteristiske form:**

- ###10 Efter bygningskrop
- ###11 Efter bygningsstruktur

**Links til form-typetabeller
for bygninger**

- Efter bygningskrop
- Efter bygningsstruktur

**Brugsrum med den
karakteristiske funktion:**

- 10 Beboelse og ophold
- 11 Hygiejne og personlig pleje
- 12 Tøjvask og -behandling
- 13 Opbevaring af fødevarer
- 14 Tilberedning og anretning af føde
- 15 Servering og indtagelse af mad
- 16 Undervisning og forskning
- 17 Religiøs aktivitet
- 18 Leg, sport og motion
- 19 Udstilling, fremførelse og forlystelse
- 20 Møde og forsamling
- 21 Sygdomsbehandling og pleje
- 22 Pasning og omsorg
- 23 Industri og reparation
- 24 Energiproduktion, forsyning og bortskaffelse
- 25 Landbrugsproduktion
- 26 Service, forvaltning og tjenestydelse
- 27 Ordens- og retshåndhævelse
- 28 Opbevaring og lagring
- 29 Transportaktiviteter
- 30 Adgang, modtagelse og fordeling
- 31 Bygningers indretning og drift
- 70 Uderum

**Links til produkt-typetabler
for brugsrum**

- Beboelse og ophold
- Hygiejne og personlig pleje
- Tøjvask og -behandling
- Opbevaring af fødevarer
- Tilberedning og anretning af føde
- Servering og indtagelse af mad
- Undervisning og forskning
- Religiøs aktivitet
- Leg, sport og motion
- Udstilling, fremførelse og forlystelse
- Møde og forsamling
- Sygdomsbehandling og pleje
- Pasning og omsorg
- Industri og reparation
- Energiproduktion, forsyning og bortskaffelse
- Landbrugsproduktion
- Service, forvaltning og tjenestydelse
- Ordens- og retshåndhævelse
- Opbevaring og lagring
- Transportaktiviteter
- Adgang, modtagelse og fordeling
- Bygningers indretning og drift
- Uderum

ANNEX S: Norway – Statsbygg PropMan (in Norwegian)

Benyttes i Statsbyggs eiendomssystem

Nr	Navn
100	BOLIG
170	HYTTE/FRITIDSHUS
171	SMÅHUS
200	JORD/SKOGBRUKSBYGNING
411	ADMINISTRASJONS/KONTORBYGG
441	GARASJE/LAGER/UTHUS
491	TRAFIKKSTASJON (TIDL. BILTILSYN)
493	POSTTERMINALER
500	HOTELL- OG RESTAURANTBYGG
600	BYGG FOR OFF./PRIV.TJENESTE
610	UNDERVISNINGSBYGG
613	FORSKN./SKOLEBYGG PRIMÆRN.
614	SPES.SKOLER/DIV. SKOLEBYGG
615	KULTURBYGG (MUSEER M.M)
681	FENGSELSBYGG
800	FJELLANLEGG/TILFLUKTSROM
971	NASJONALE MINNESMERKER
980	AMBASSADER
981	AMBASSADEANLEGG
982	AMBASSADER-EMBETSBOLIG
983	AMBASSADER-TJENESTEBOLIG
984	AMBASSADER-KONTORBYGG
1200	SPESIELLE BYGG
1201	KONGELIGE BYGG
1202	INSTITUSJONSBYGG

<http://www.hands.no/losninger/hands>

ANNEX T: Norway – Statsbygg – Forslag til felles tabell for statens byggevirksomhet (in Norwegian)

Bygningstypetabell for statens byggevirksomhet

BT-S

Bygningstypetabell for statens byggevirksomhet

BT-S

Oppdelingen er basert på NS 3457 Bygningstypetabell så langt denne passer, men modifisert i nødvendig grad for å karakterisere typiske bygningskategorier i statlig byggevirksomhet bedre, slik at bruk av kategoriene *x* og *Ann* ...bygning kategoriene i NS 3457 reduseres til et minimum.

- 0 GENERELLE BYGNINGER**
- 01 Flerfunksjonsbygning**
- 02 Generelt tettbygg med vertikal infrastruktur**
- 03 Generelt tettbygg uten vertikal infrastruktur**
- 04 Generelt råbygg**
- 09 Annen generell bygning**

- 1 BOLIGBYGNING**
- 11 Enebolig**
- 111 Enebolig
- 112 Enebolig med hybelleilighet, sokkelleilighet o.l
- 12 Tomannsbolig**
- 121 Tomannsbolig, vertikaldelt
- 122 Tomannsbolig, horisontaldelt
- 13 Rekkehus og kjedehus**
- 131 Rekkehus med tre og fire leiligheter
- 132 Rekkehus med fem leiligheter eller flere
- 133 Kjedehus inkl. atriumshus med inntil fire leiligheter
- 134 Kjedehus inkl. atriumshus med fem leiligheter eller flere
- 14 Andre småhus**
- 141 Andre småhus med tre og fire leiligheter
- 15 Boligblokk**
- 151 Boligblokk på to etasjer
- 152 Boligblokk på tre og fire etasjer
- 153 Boligblokk på fem etasjer eller over
- 154 Bygård
- 16 Fritidsbolig**
- 161 Hytter
- 162 Sommerhus
- 163 Landsteder
- 17 Køie, seterhus o.a.**
- 171 Køie
- 172 Seterhus
- 173 Sekundærbolig i reindrift
- 174 Bygninger for krafflag
- 175 Rorbu for yrkesfiske
- 176 Fjellstue
- 177 Ødestue
- 18 Boliggarasje og uthus**
- 181 Garasje, uthus, naust knyttet til bolig
- 182 Garasje, uthus, naust knyttet til fritidsbolig
- 19 Annen boligbygning**
- 191 Boligbrakker, temporært
- 192 Boligbrakker, semipermanent

- 2 INDUSTRI- OG LAGERBYGNING**
- 21 Industribygning**
- 211 Fabrikbygning
- 212 Verkstedbygning
- 213 Produksjonshall
- 214 Bygning for renseanlegg
- 215 Bygning for avfallshåndtering, miljøstasjon o.l.
- 216 Bygning for pengeproduksjon o.l.
- 219 Annen industribygning
- 22 Energiforsyningsbygning**
- 221 Kraftstasjon, kraftverk (>15 000 kVA)
- 222 Mindre kraftstasjon/kraftverk
- 223 Transformatorstasjon (>10 000 kVA)
- 224 Mindre transformatorstasjon, transformatoriosk
- 225 Energisentral (fjernvarme/-kjøling, olje, el, bio, sol, vind, bølge o.a.)
- 226 Nettstasjon o.l.
- 229 Annen energiforsyningsbygning
- 23 Lagerbygning**
- 231 Lagerhall
- 232 Kjøle- og fryselager
- 233 Silobygning
- 234 Deponi, lager for spesialavfall o.l.
- 239 Annen lagerbygning
- 24 Fiskeri- og landbruksbygning**
- 241 Hus for dyr, fôrlager, strølager, landbrukssilo, tørke
- 242 Landbruksgarasje/redskapshus
- 243 Veksthus og gartneri
- 244 Driftsbygning for firske og fangst, inkl oppdrettsanlegg
- 245 Naust/redskapshus
- 246 Stutteri, kennel o.l.
- 249 Annen fiskeri- og landsbruksbygning
- 29 Annen industri- og lagerbygning**
- 3 KONTOR- OG FORRETNINGSBYGNING**
- 31 Kontorbygning**
- 311 Kontor- og administrasjonsbygning, rådhus
- 312 Bankbygning, posthus
- 313 Radio- og TV-hus
- 319 Annen kontorbygning
- 32 Forretningsbygning**
- 321 Kjøpesenter, varehus
- 322 Butikkbygning
- 323 Bensinstasjon
- 324 Storkiosk o.l.
- 329 Annen forretningsbygning
- 33 Messe- og kongressbygning**
- 331 Bygning for messer, utstillinger, kongresser og konferanser
- 39 Annen kontor- og forretningsbygning**
- 4 SAMFERDSELS- OG KOMMUNIKASJONSBYGNING**
- 41 Ekspedisjons- og terminalbygning**
- 411 Ekspedisjonsbygning, flyterminal, kontrolltårn
- 412 Jernbane- og T-banestasjon
- 413 Rutebilstasjon, bussterminal, leskur
- 414 Fergeterminal

415	Godsterminal
416	Postterminal
419	Annen ekspedisjons- og tertminalbygning
42	Telekommunikasjonsbygning
421	Telebygning, telefonkiosk
422	Radiolinkstasjon
423	TV- og FM-/DAB-stasjon (hovedsenterstasjon), omformerstasjon
424	AM-stasjon (kortbølgestasjon o.l.)
425	Basestasjon o.l. for mobilkommunikasjon (GSM o.l.)
426	Jordstasjon for satellittkommunikasjon
429	Annen telekommunikasjonsbygning
43	Garasje- og hangarbygning
431	Parkeringshus
432	Bussgarasje, trikkehall, lokomotivhall
433	Flyhangar
439	Annen garasje- og hangarbygning
44	Veg- og biltilsynsbygning
441	Biltilsynsbygning (veg- og trafikkstasjon)
442	Driftssentral for vegvesenet
443	Vakt-/bombygning, bilykt o.l.
449	Annen veg- og biltilsynsbygning
49	Annen samferdsels- og kommunikasjonsbygning
5	HOTEL- OG RESTAURANTBYGNING
51	Hotelbygning
511	Hotelbygning
512	Motelbygning
519	Annen hotelbygning
52	Bygning for overnatting
521	Hospits, pensjonat
522	Vandrerhjem, feriehjem/-koloni, camping- og utleiehytte, torbu
523	Kaserne
529	Annen bygning for overnatting
53	Restaurantbygning
531	Restaurantbygning, kafébygning
532	Sentralkjøkken, kantinekjøkken
533	Gatekjøkken, kioskbygning
539	Annen restaurantbygning
59	Annen hotel- og restaurantbygning
6	UNDERVISNINGS-, FORSKNINGS- OG KULTURBYGNING MV.
61	Skolebygning
611	Barnehage, lekepark
612	Grunnskole
613	Videregående skole
614	Leirskole
615	Spesialskele
619	Annen skolebygning
62	Universitets- og hogskolebygning
621	Bygning med integrerte funksjoner, auditorium, lesesal mv.
622	Bygning primært for forskningsvirksomhet, forskningspark o.l.
623	Bygning primært for prenumundervisning
624	Bygning primært for gruppe-, kollokvie-, og lab-undervisning samt for selvstudium
625	Bygning primært for fakultetsadministrasjon o.l.
626	Bygning primært for campus støttefunksjoner o.l.

627	Kompetansesenter (utøvelse av spesiell faglig spisskompetanse)
629	Annen universitets- og høyskolebygning
63	Laboratoriebygning
631	Tørre laboratorier
632	Våte laboratorier (stor andel våtromsaktiviteter)
633	Skjermede laboratorier (krav til elektromagnetisk skjerming)
634	Rene laboratorier (renromskrav mht støv)
635	Beskyttede laboratorier (krav til epidemisk smittebeskyttelse)
636	Spesiallaboratorium (flere typer spesialkrav)
639	Annen laboratoriebygning
64	Museums- og biblioteksbygning
641	Museum, kunstgalleri
642	Bibliotek, mediatek
643	Zoologisk og botanisk hage
644	Arkiv- og magasinbygning
649	Annen museums- og biblioteksbygning
65	Idretts- og fritidsbygning
651	Idrettshall, gymnastikksal
652	Ishall
653	Svømmehall
654	Tribune og idrettsgarderobe
655	Helsestudio
656	Idrettssanlegg for utendørsidrett, større idrettskompleks
657	Fritidspark, aktivitetspark o.l.
658	Annen idretts- og fritidsbygning
66	Kulturbygning
661	Kinobygning, filmsenter, multimediasenter o.l.
662	Teaterbygning, opera, balletscene
663	Konserthus, konserthall
664	Kulturhus med flere funksjoner
665	Revyscene o.l.
666	Samfunnshus, grendehus, o.l.
667	Distotek, nattklubb, ungdomsklubb o.l.
669	Annen kulturbygning
67	Kirkebygning og annen livssynsbygning
671	Sentrale kirkebygg (domkirker, bispegårder mv.)
672	Kirke, kapell, menighetshus, kirkegård
673	Bedehus o.l.
674	Krematorium
675	Prestegårder o.l.
676	Synagoge, moské, tempel mv.
677	Kloster
678	Bygning for ikke-religiøse livssyn
679	Annen kirke- og livssynsbygning
69	Annen undervisnings-, forsknings- og kulturbygning mv.
7	HELSE- OG SOSIALBYGG
71	Sykehus
711	Lokalsykehus
712	Sentralsykehus
713	Regionsykehus, universitetssykehus
714	Spesialsykehus
719	Annet sykehus
72	Sykehjem mv.
721	Sykehjem

722	Bo- og behandlingssenter
723	Rehabiliteringsinstitusjon
729	Annet sykehjem mv.
73	Primærhelsebygning
731	Klinikk
732	Helse- og sosialsenter, helsestasjon
733	Kurbad
739	Annen primærhelsebygning
74	Helse- og sosialrettede støttefunksjoner
741	Sykehotel
742	Apotek
743	Medisinaldepot
749	Andre helse- og sosialrettede støttefunksjoner
75	Dyrehelse
751	Veterinærbygning
752	Smådyrklinikk (hund, katt, mindre kjæledyr)
753	Smådyrisolat mv.
759	Annen dyrehelsebygning
79	Annen helse- og sosialbygning
8	JUSTIS- OG BEREDSKAPSBYGNING
81	Fengselsbygning
811	Landsfengsel
812	Kretsfengsel
813	Hjelpefengsel
814	Arbeidkoloni
815	Spesialfengsel
819	Annen fengselsbygning
82	Politibygning
821	Politistasjon ved politikammer
822	Lenmannskontor
823	Politifaglig spesialfunksjon
829	Annen politibygning
83	Domstolsbygning
831	Høyesterettsbygning
832	Tinghus (samlede rettsfunksjoner)
833	Rettssted (lagmannsrett, by-/herredsrett, spesialrett mv)
839	Annen domstolsbygning
84	Tollbygning
841	Tollstasjon
842	Grensestasjon
843	Tollfaglig spesialfunksjon
849	Annen tollbygning
84	Beredskapsbygning
841	Brannstasjon mv.
842	Ambulansestasjon
843	Nødnummersentral (håndtering av 110, 112, 113)
844	Redningsentral, håndtering av helikoptertjeneste
845	Fyrstasjon, losstasjon
846	Stasjon for radarovervåking av fly- og/eller skipstrafikk
847	Meteorologisk stasjon, værstasjon, ishavsstasjon mv.
848	Tilluftsom/bunker
849	Annen beredskapsbygning
85	Bygninger offshore
851	Produksjonsbygning

852	Hotel- og restaurantbygning
853	Bygning for offshore støttefunksjon
859	Annen bygning offshore
89	Annen justis- og beredskapsbygning
891	Justisbygg med flere funksjoner (f.eks politi og tinghus samlet)
892	Beredskapsbygning med flere funksjoner (f.eks brannvakt, politivakt, legevakt)
893	Mottak for asylsøkere og flyktninger mv.
9	SPESIELLE BYGNINGER
91	Representasjonsbygning
911	Slott, kongelige residenser og feriesteder
912	Parlamentar
913	Ambassader, konsulater, offentlige utenlandske representasjoner mv.
914	Offentlige representasjoner i polarområdene
915	Privat representasjonsbygning
919	Andre representasjonsbygninger
92	Historisk bygning
921	Festningsverk og borger mv.
922	Ruiner og fornminner mv.
929	Andre historiske bygninger
93	Monument mv.
931	Statuer, konstruksjoner mv.
939	Andre monumenter mv.
94	Offentlig fellesbygg
941	Offentlig toalett
942	Offentlig bad
949	Annet offentlig fellesbygg
99	Annen spesiell bygning

ANNEX U: Norway – Forsvarsbygg Bygningstyper (in Norwegian)

Btypnr	Forsvarsbygg: Byggtyper
100	Administrasjon/Kontorbygg
110	Vakt og arrest
120	Museer
200	Undervisning
210	Forskning og utvikling
220	Idrettshall
230	Ekserserhaller
300	Sanitet
305	Sanitærbygg
310	Messer
320	Velferd
325	Barnehage
330	Spredte hytter
400	Befalsforlegning
410	Mannskapsforlegning
420	Enebolig
430	Atrium/terasse-/kjedehus
440	Rekkehus/vertikaldelt bolig
450	Horisontaldelt bolig
460	Boligblokk/andre
470	Boliggarasje
500	Våpen-/kjøretøyverksteder
505	Verkstedhall i fjell
510	Øvrige verksteder
520	Varmgarasje
525	Kaldgarasje
530	Hangar
535	Shelter
540	Båthus
550	Varmlager
555	Kaldlager
560	Ammolager
565	Moblager
570	Kasun
580	Depotbygg, bemannet
590	Proviantmagasin
595	Værskjul/Skur
600	Veg, bro og tunnel
610	Plass og grøntanlegg
620	Transportbane
630	Vann, avløp og renovasjon

Btypnr	Forsvarsbygg: Byggtyper
640	El-anlegg
650	Varme
660	Samband
670	Drivstoff
680	Gjerde
690	Alarmanlegg
700	Brannstasjon
710	Brannøvingsområde
720	Skytefelt og skytebane
730	Øvningsområde
740	Idrettsanlegg
750	Kai og dokk
760	Rullebane, taksebane og plattform
770	Navigasjons- og innflygn.-anlegg
780	Observasjon
800	Festningsanlegg
810	Kommandoplass
820	Fjellanlegg - bemannet
830	Stillings-/sperranlegg
840	Tilfluktsrom
890	Øvrige bygg/anlegg

ANNEX V: Norway – Forsvarsbygg EBA (in Norwegian)

EBA-nr	EBA-kategori
EBA01	Administrasjons- og stabsanlegg
EBA02	Velferds- og fritidsanlegg
EBA03	Forlegninger og messer
EBA04	Boliger
EBA05	Lager- og vedlikeholdsanlegg
EBA06	Basisanlegg
EBA07	Utdannings- og øvingsanlegg
EBA08	Strids- og forsvarsanlegg
EBA09	Andre EBA

ANNEX W: Norway – Statens Kartverk, GAB, SSB, SOSI (in Norwegian)

Notation	Statens Kartverk, GAB, SSB: Name
1	Bolig
11	Enebolig
111	Enebolig
112	Enebolig med hybelleilighet, sokkelleilighet o.l.
113	Våningshus
12	Tomannsbolig
121	Tomannsbolig, vertikaldelt
122	Tomannsbolig, horisontaldelt
123	Våningshus, tomannsbolig, vertikaldelt
124	Våningshus, tomannsbolig, horisontaldelt
13	Rekkehus, kjedehus, andre småhus
131	Rekkehus
133	Kjedehus inkl. atriumhus
135	Terrassehus
136	Andre småhus med 3 boliger eller flere
14	Store boligbygg
141	Store frittliggende boligbygg på 2 etasjer
142	Store frittliggende boligbygg på 3 og 4 etasjer
143	Store frittliggende boligbygg på 5 etasjer eller over
144	Store sammenbygde boligbygg på 2 etasjer
145	Store sammenbygde boligbygg på 3 og 4 etasjer
146	Store sammenbygde boligbygg på 5 etasjer og over
15	Bygning for bofellesskap
151	Bo- og servicesenter
152	Studenthjem/studentboliger
159	Annen bygning for bofellesskap
16	Fritidsbolig
161	Fritidsbygning (hytter, sommerhus o.l.)
162	Helårsbolig benyttet som fritidsbolig
163	Våningshus benyttet som fritidsbolig
17	Koie, seterhus og lignende
171	Seterhus, sel, rorbu o.l.
172	Skogs- og utmarkskoie, gamle
18	Garasje og uthus til bolig
181	Garasje, uthus, anneks knyttet til bolig
182	Garasje, uthus, anneks knyttet til fritidsbolig
183	Naust, båthus, sjøbu
19	Annen boligbygning
193	Boligbrakker
199	Annen boligbygning (f.eks. sekundærbolig reindrift)
2	Industri og lagerbygning
21	Industribygning
211	Fabrikkbygning
212	Verkstedbygning
214	Bygning for renseanlegg
216	Bygning for vannforsyning, bl.a. pumpestasjon
219	Annen industribygning

Notation	Statens Kartverk, GAB, SSB: Name
22	Energiforsyningsbygning
221	Kraftstasjon (>15 000 kVA)
223	Transformatorstasjon (>10 000 kVA)
229	Annen energiforsyningsbygning
23	Lagerbygning
231	Lagerhall
232	Kjøle- og fryselager
233	Silobygning
239	Annen lagerbygning
24	Fiskeri- og landbruksbygning
241	Hus for dyr, förlager, strølager, frukt- og grønnsakslager, landbrukssilo, høy-/korn tørke
243	Veksthus
244	Driftsbygning for fiske og fangst, inkl. oppdrettsanlegg
245	Naust/redskapshus for fiske
248	Annen fiskeri- og fangstbygning
249	Annen landbruksbygning
3	Kontor- og forretningsbygning
31	Kontorbygning
311	Kontor- og administrasjonsbygning, rådhus
312	Bankbygning, posthus
313	Mediebygning
319	Annen kontorbygning
32	Forretningsbygning
321	Kjøpesenter, varehus
322	Butikkbygning
323	Bensinstasjon
329	Annen forretningsbygning
330	Messe- og kongressbygning
4	Samferdsels- og kommunikasjonsbygning
41	Ekspedisjonsbygning, terminal
411	Ekspedisjonsbygning, flyterminal, kontrolltårn
412	Jernbane- og T-banestasjon
415	Godsterminal
416	Postterminal
419	Annen ekspedisjons- og terminalbygning
42	Telekommunikasjonsbygning
429	Telekommunikasjonsbygning
43	Garasje- og hangarbygning
431	Parkeringshus
439	Annen garasje- hangarbygning
44	Veg- og trafikktilsynsbygning
441	Trafikktilsynsbygning
449	Annen veg- og trafikktilsynsbygning
5	Hotell- og restaurantbygning
51	Hotellbygning
511	Hotellbygning
512	Motellbygning
519	Annen hotellbygning
52	Bygning for overnatting
521	Hospits, pensjonat

Notation	Statens Kartverk, GAB, SSB: Name
522	Vandrerhjem, feriehjem/-koloni, turisthytte
523	Appartement
524	Campinghytte/utleiehytte
529	Annen bygning for overnatting
53	Restaurantbygning
531	Restaurantbygning, kafébygning
532	Sentralkjøkken, kantinebygning
533	Gatekjøkken, kioskbygning
539	Annen restaurantbygning
6	Kultur- og forskningsbygning
61	Skolebygning
611	Lekepark
612	Barnehage
613	Barneskole
614	Ungdomsskole
615	Kombinert barne- og ungdomsskole
616	Videregående skole
619	Annen skolebygning
62	Universitet- og høyskolebygning
621	Universitets- og høyskolebygning med integrerte funksjoner, auditorium, lesesal o.a.
623	Laboratoriebygning
629	Annen universitets-, høyskole- og forskningsbygning
64	Museums- og biblioteksbygning
641	Museum, kunstgalleri
642	Bibliotek, mediatek
643	Zoologisk og botanisk hage
649	Annen museums- og bibliotekbygning
65	Idrettsbygning
651	Idrettshall
652	Ishall
653	Svømmehall
654	Tribune og idrettsgarderobe
655	Helsestudio
659	Annen idrettsbygning
66	Kulturhus
661	Kinobygning, teaterbygning, opera/konserthus
662	Samfunnshus, grendehus
663	Diskotek
669	Annet kulturhus
67	Bygning for religiøse aktiviteter
671	Kirke, kapell
672	Bedehus, menighetshus
673	Krematorium, gravkapell, bårhus
674	Synagoge, moské
675	Kloster
679	Annen bygning for religiøse aktiviteter
7	Helsebygning
71	Sykehus
719	Sykehus
72	Sykehjem

Notation	Statens Kartverk, GAB, SSB: Name
721	Sykehjem
722	Bo- og behandlingssenter, aldershjem
723	Rehabiliteringsinstitusjon, kurbad
729	Annet sykehjem
73	Primærhelsebygning
731	Klinikk, legekontor/-senter/-vakt
732	Helse- og sosialsenter, helsestasjon
739	Annen primærhelsebygning
8	Fengsel, beredskapsbygning
81	Fengselsbygning
819	Fengselsbygning
82	Beredskapsbygning
821	Politistasjon
822	Brannstasjon, ambulansestasjon
823	Fyrstasjon, losstasjon
824	Stasjon for radarovervåking av fly- og/eller skipstrafikk
825	Tilfluktsrom/bunker
829	Annen beredskapsbygning
830	Monument
840	Offentlig toalett

Statens kartverk

Statens kartverk tlf: 32 11 81 00

Kontakter mht. GAB: Knut Holter. Mht. bygningstyper: Rolf Bakken.

SOSI er dokumentert på http://www.statkart.no/IPS/filestore/Geovekst/Produktspesifikasjon_FKB_-_/5-Bygning010707.pdf

Statens kartverk har registrert 3,5 millioner bygninger i Norge med en størrelse over 15 m² og systematisert disse med individuelle nummer. I Statens kartverk sitt hierarki for kategorisering av bygninger er bygningsnummer etterfulgt av bruksenhet. Bygningsnummeret er et 8 sifferet nummer for hver enkelt bygning som er et rent løpenummer. Dette utdeles i serier for de ulike kommunene.

Ingen andre funksjoner enn bolig er videre underdelt. Bolig er underdelt med bruksareal og antall rom.

Bruker NS 3457 uten avvik på 1 sifret nivå. Noen avvik på 2 sifret og 3-sifret nivå, spesielt for 1 boliger.

Dersom NS 3457 skal revideres kan man tenke seg en struktur som harmonerer med BIM tankegangen hvor bygningstypetabellen inngår som et ledd i et større hierarki. En tenkt oppdeling kan være:

Geografisk lokasjon (kommunennummer, grunnkrets?) – Bygningsnummer - Bygningstype – Rom (space) - Bygningsdeler.

Bakken kunne informere om at Statens Kartverk har til vurdering om de skal påta seg et vertskap i forhold til BIM.

Bygningsregisteret - GAB

Bygningene i GAB klassifiseres etter type. Bygningstype er fastlagt etter hvilken funksjon bygningen skal ha, f.eks. boligbygg eller industribygg. Kombinerte bygninger er gruppert etter den funksjon som har størst andel av bygningens bruksareal. Bygninger med stor boligandel klassifiseres alltid som boligbygninger. Oversikt over klassifikasjonssystemet for bygningstyper i GAB, se vedlegg i Bloch 2002-4. Bygningstyper er gitt i Registeringsinstruks for GAB.

Med basis i delingsloven og i et godt samarbeid med kommunene, er det i Norge etablert et tilnærmet komplett register over grunneiendommer, adresser og bygninger (GAB). Her finner du informasjon om bygningsregisteret.

Beskrivelse

Bygningsregisteret er et register over alle bygninger i Norge, over 3,5 millioner bygg. Registeret oppdateres daglig og/eller månedlig gjennom den kommunale byggesaksbehandlingen. Dersom du mottar en byggetillatelse fra kommunen, blir dette også rapportert til bygningsregisteret via kommunens egne saksbehandlingsrutiner. På denne måten samles alle opplysningene om bygninger i det sentrale registeret, som er en del av et større eiendomsinformasjonssystem GAB (grunneiendom, adresse, bygning). Denne type informasjon har stor betydning for ulike næringer som entreprenører, finans- og eiendomsmarked, stat og kommune for ulike planleggingsformål og nasjonal statistikk.

Bygningsregisteret inneholder bl.a opplysninger om:

- gårds-, bruks-, feste og seksjonsnummer
- tiltakshaver/eier/hjemmelshaver og adresse
- hva slags bygning, bruksformål
- koordinat for byggets geografiske plassering, kartreferanse
- type vannforsyning
- type oppvarming
- antall etasjer og arealer

Denne informasjonen er hjemlet i lov og underlagt konsesjon fra Datatilsynet.

Ansvar

- Miljøvern departementet har den overordnede politiske og økonomiske styring.
- Statens kartverk har det faglige og administrative ansvaret i forhold til registrering av informasjon i registeret.
- Kommunene har ansvar for å melde inn til eiendomsregisteret ved: - godkjenning av nybygg, tilbygg eller påbygg - igangsetting av nybygg, tilbygg eller påbygg - når bygning eller påbygg/tilbygg blir tatt i bruk - når bygning blir endret på en slik måte at det krever ajourføring av registeret - når bygning blir revet, går tapt ved brann, naturkatastrofe eller annen måte

Hjemmel og forskrift

Bygningsregisteret er en del av eiendomsinformasjonssystemet GAB (grunneiendom, adresse, bygning). Rapporteringen til GAB er hjemlet i Delingsloven av 23. juni 1978 nr.70 §4-1, 4 ledd med utdypende bestemmelser kap. 14.4 i forskrift av 19. oktober 1979. Alle bygg med bruksareal over 15m² som behandles etter Plan- og bygningslovens §93 eller §86 a skal meldes til GAB. Påbygg/tilbygg under 15m² skal meldes dersom de inneholder egen boligenhet.

Leveranser/brukere/Datautveksling

Informasjonen benyttes særlig av Kommunene i deres behov for plan -regulering og avgiftsberegning. Privat byggenæring for planlegging og rekrutteringsbehov. Statistisk sentralbyrå for ulike nasjonale statistikker, finans/bank og eiendomsomsetnings -bransje.

Kartverkets strategi

Videreutvikle bygningsregisteret som det nasjonale registeret for bygningsinformasjon.

Historie

Bygningsregisteret ble en del av GAB i 1983 og inneholdt i utgangspunktet ikke bygninger fra før dette. I 1993 ble MABYGG- prosjektet iverksatt som en massiv registrering av alle bygninger over 15m² i hele landet. I 1995 ble også Riksantikvarens SEFRAK-register (SEKretariatet For Registrering Av Faste Kulturminner i Norge), samordnet med Bygningsregisteret i GAB slik at registeret i dag fremstår som det sentrale Bygningsregisteret i Norge.

Konvertering til nytt eiendomsregister

Fra og med 5. november 2007 ble kommunene overført puljevis fra Grunneiendoms-, Adresse- og Bygningsregisteret (GAB) til det nye eiendomsregisteret, Matrikkelen. Etter planen skal alle kommuner være overført i løpet av februar 2009. I forbindelse med konverteringen vil det kunne oppstå økte forsinkelser i registreringen for kommunene det gjelder. Oversikt over hvilke kommuner som til en hver tid blir overført, finnes i Statens kartverks plan for iverksetting av Matrikkelen.

Statistisk sentralbyrå

Statistisk sentralbyrå tlf: 21090000

Kontakter mht. bygningstyper: Arild Thomassen

Bygningstype 2000: <http://www3.ssb.no/stabas/ItemsFrames.asp?ID=4222302&Language=nb>

Gyldig fra: 2000-01-01

Sist oppdatert: 2006-11-29

Lovhjemmel: Forordning (EF) nr 1165/98

Basert på: NS 3457

Standarden viser inndeling av bygninger etter hva slags funksjon bygningen skal ha. Kombinerte bygninger, for eksempel kombinerte bolig- og forretningsbygninger, lager- og produksjonsbygninger o.a. er gruppert etter den funksjonen som har størst del av bruksarealet i bygningen.

SSB benytter seg av standarden for bygningstyper, primært boligseksjonen, i sitt statistiske arbeid. Under følger eksempel på undersøkelser hvor bygningstype er en faktor for statistikken:

- Selveide boliger. Forholdet mellom ligningsverdi og salgssum etter type bolig og region

<http://www.ssb.no/emner/05/03/sbolig/tab-2007-01-25-02.html>

- Boligtype og eierform for husholdninger

http://statbank.ssb.no/statistikkbanken/Default_FR.asp?PXSid=0&nvl=true&PLanguage=0&tilside=selectvarval/define.asp&Tabellid=05265

SOSI (fra <http://www.statkart.no/standard/sosi/html/sosi.htm>)

Mandat

SOSI-standarden ble første gang utgitt i 1987 (Versjon 1.0). Standarden revideres og utvikles kontinuerlig. Det foretas en tilnærming til internasjonale standarder som er under utvikling. Utgivelse av neste versjon vil avhenge av brukernes behov, samt takten på utvikling av internasjonale standarder. Ansvarlig enhet i Kartverket: NGIS. Henvendelser kan også rettes til de enkelte divisjoner og regionkontorer.

SOSI-standarden omhandler teknikk for datadefinisjoner av geografisk informasjon, herunder standardiserte beskrivelser av geometri og topologi, datakvalitet, koordinatsystemer, metadata i form av informasjon om eier, oppløsning på data, områdeavgrensning osv. Den omfatter også konkrete databeskrivelser for ulike datatyper eller anvendelsesområder, noe som utgjør en vesentlig del av omfanget.

I utgangspunktet er selve det formelle formatet ikke bundet til geodata, og slett ikke bare til koordinatdata. Det er et helt generelt format som kan tenkes brukt i en rekke sammenhenger, f.eks. til å representere økonomiske og statistiske data like gjerne som geodata. Dette er i seg selv et nødvendig utgangspunkt for geodata favner i dag svært vidt, f.eks. fra administrative data og persondata i GAB til koordinatdata for høydekurver i topografiske kart. Det er således ikke lett å si hvilke egenskaper geodata-begrepet vil omfatte til enhver tid. Likevel er det som defineres her et standardformat for digitale geodata, og det skyldes at våre standardelementer og konvensjoner som er pålagt formatet, bare sikter inn på denne spesielle sektor. SOSI-formatet vil kunne brukes på forskjellige måter, som rent utvekslingsformat, som rådataformat eller som permanent lagringsformat.

ANNEX X: Norway – Byggforskserien: Planløsning 330.009 (in Norwegian)

Byggforskseriens blad «Planløsning 330.009», omhandler termer og definisjoner for boliger. Det har en oversikt over ulike betegnelser, som benyttes for å beskrive boligbygninger. De har stilt opp disse i en tabell hvor de selv velger å gruppere de forskjellige boligtypene etter hvordan naboskillene er.

Utdrag fra bladet:

“Samme type hus eller bolig kan få ulike betegnelser avhengig av hvem som karakteriserer dem. Formålet med å bruke betegnelsene varierer, og dermed påvirkes språkbruken. Andre årsaker er variasjoner i lokal språkbruk eller at gamle og nye betegnelser brukes om hverandre. I hovedsak kan man si at:

- offentlige etater, som Husbanken, benytter betegnelser av stor betydning for saksbehandling
- politikere og eiendomsmeglere bruker honnørord som fremmer omsetningen og strekker ofte betegnelsene lengre enn Byggforsk mener det er belegg for (byvilla i stedet for blokk, enebolig der det er mulig)
- boligkjøpere og andre lekfolk ofte bruker betegnelsene ureflektert og lar seg påvirke av nye betegnelser
- planleggere og arkitekter bruker betegnelser som har konsekvenser for det som planlegges
- statistikere, banker og finansinstitutter satser på kontinuitet i tallmaterialet og opprettholder gamle betegnelser, også der de er lite presise

Tabell 14: Ulike kilder og deres betegnelser på varianter av hustyper

Definisjonen til Byggforsk	Naboskiller	Statistisk Sentralbyrå med kodenummer GAB-registeret	NS 3457 med kodenummer	Husbanken	Norges eiendoms-megler-forbund	Dagligtale Annonser	Maksimal ønskelig tetthet (bolig per dekar)
Frittliggende enebolig Tettstilt enebolig	Bygninger uten felles naboskiller	111 Enebolig 113 Våningshus	11 Enebolig	Enebolig	Enebolig	Enebolig Småhus	1,0
Kjedehus sammenbygd med garasjer, boder o.l.		133 Kjedefus, inntil 4 boliger	13 Rekkehus og kjedefus			Kjedet enebolig Småhus	2,0
Enebolig med sekundærbolig	Bygninger med horisontale naboskiller	112 Enebolig med hybel, sokkelleilighet 124 Våningshus, tomannsbolig, horisontaldelt	11 Enebolig	Horisontaldelt tomannsbolig		Enebolig Småhus	2,0
Horisontaldelt tomannsbolig		122 Tomannsbolig, horisontaldelt 124 Våningshus, tomannsbolig, horisontaldelt	12 Tomannsbolig		Delt bolig	Tomannsbolig Småhus	1,5
Vertikaldelt tomannsbolig	Bygninger med vertikale naboskiller	121 Tomannsbolig, vertikaldelt 123 Våningshus, tomannsbolig, vertikaldelt		Vertikaldelt tomannsbolig			1,5
Rekkehus Atriumhus		131 Rekkehus med 3–4 boliger 132 Rekkehus med flere boliger 133 Atriumhus, inntil 4 boliger	13 Rekkehus og kjedefus	Rekkehus		Rekkehus Småhus	3,0
Terrassehus	Bygninger med horisontale (og vertikale) naboskiller	–	15 Boligblokk, eventuelt: 19 Annen boligbygning	Terrassehus	Terrassehus	Terrassehus Terrassert blokk	–
Lavblokk eller byvilla Korsdelt firemannsbolig	Bygninger med horisontale og vertikale naboskiller	136 Andre småhus med 3 boliger eller flere 141 Stort frittliggende boligbygg på 2 etasjer 142 – på 3 og 4 etasjer 144 Store sammen-	14 Andre småhus	Andre småhus eller Andre hus	Delt bolig	Leilighet Byvilla Firemannsbolig	3,0

		bygde boligbygg på 2 etasjer 145 – på 3 og 4 etasjer					
Blokk, punkt- hus, skive- blokk, terras- seblokk		141 Stort frittliggen- de boligbygg på 2 etasjer 142 – på 3 og 4 etasjer 143 – på 5 etasjer eller mer	15 Boligblokk	Blokk, høy- hus	Leilighet	Leilighet Byvilla	–
		144 Store sammen- bygde boligbygg på 2 etasjer 145 – på 3 og 4 etasjer 146 – på 5 etasjer eller mer					

Betegnelser som ikke anbefales brukt

Bolighus på gårdsbruk blir ofte kalt våningshus. Denne betegnelsen kan være flertydig – for eksempel kan den innbefatte både enebolig og tomannsbolig. Den er derfor upresis og lite hensiktsmessig ved bruk i statistikk eller ved byggemeldinger, registreringer mv.

Andre betegnelser på enebolig, som villa (egentlig: landlig beliggende (sommer)bolig for lavadel eller byborgere, oftest med hage-/parkanlegg og gårdsdrift) eller bungalow (egentlig: lite, enetasjes bolighus med stor, overdekket terrasse i bengalsk (indisk) stil), passer dårlig på dagens bebyggelse og er i stor grad gått ut av bruk.

Eldre reguleringsplaner har benyttet betegnelser som «villamessig bebyggelse». Dette er ofte tolket som eneboliger og tomannsboliger.” Utdrag slutt.