# Constructing a commercial building from the ground up

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These materials are for training purposes only and are not intended for use as customer handouts.

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## Type of building

Class 5403 includes construction of commercial buildings such as offices, warehouses, manufacturing plants, retail, schools, hotels, hospitals, mixed use buildings, and residential dwellings **exceeding three stories** – such as apartments, condominiums, and town homes.

### Class 5403 - project code

To be considered a project code for carpentry repair or remodeling operations, there must be some framing or structural carpentry renovation of the premises that would ordinarily be assigned to Code 5403. Merely performing singular operations such as repairing or replacing cabinets or installing are assigned to the appropriate classifications representing their specific trades.

Class 5403 includes all of the following construction activities **when performed by the same contractor**:

- Wood or light-gauge steel framing to support the walls, floor, and roof (light-gauge is generally a thickness of 12-25 gauge)
- Stairs, doors, windows
- Insulation work, all types
- Wallboard, taping, texturing, lathing
- Wood or light-gauge steel joists, rafters, roof deck, all types of roofing materials
- Sidewall sheathing, siding; wood, vinyl, or aluminum
- Decks, wood or vinyl fencing, detached structures

However, **if specialty contractors do these activities**, a different classification may apply to the singular operation.

## General vs. specialty

In this document:

**General** = general contractor having entire contract

**Specialty** = contractor, other than the general, contracted to complete specific work at site. Examples: plumber, sheetrock, sewer, cleaning crew, etc.

General vs. specialty	General	Specialty or single activity
Wood or light-gauge steel framing to support	5403	5403
Stairs, decks, sidewall sheathing, siding	5403	5403
Insulation work, all types	5403	5479
Wallboard, taping, texturing	5403	5445
Roofing, all types	5403	5551
Doors and windows	5403	5102
Wood or vinyl fencing	5403	6400

### Governing class

The Governing Classification at a specific job or location is the classification, other than a standard exception classification (8810 Clerical, 8742 Estimating/Outside Sales, and 7380 Driver) that produces the greatest amount of payroll.

The governing class is used to determine the classification treatment of miscellaneous employees - like flaggers working for a general contractor.

For example: If excavation - class 6217 - produces the greatest amount of payroll for the jobsite, flagging payroll would be included in class 6217.

### Supervision and project managers

**Class 5606** Applies to project managers or construction superintendents having administrative or managerial responsibility for construction or erection projects



#### Class 5606 duties include:

- Office clerical work
- Outside sales work
- Public relations activities
- Exercising supervisory control through job supervisors or foremen - in the office or at jobsite
- Requires at least one level of supervision between the direct laborers and the superintendent
- Direct supervision of construction labor is not permitted.

#### Class 5606 does *not* include:

- Direct supervision of construction labor
- Construction labor
- Safety engineers
- Supervision of cleaners or other miscellaneous employees

**Supervisors or foremen** on the job are classed to what they are supervising. If this is not evident because they supervise many activities at once, they are inclusive in the governing class.

## Nonconstruction classes for contracting businesses

Class 8227 construction or erection permanent yard away from jobsites

- Storage of materials
- Maintenance of equipment
- Includes pickup of parts for the yard operation no job delivery

#### Class 8227 does not include:

- Construction employees fabricating in the shop
- Down or idle time of field workers
- Repairs done away from the premises
- Loading/unloading materials, equipment and tools, and prefabrication done by construction workers; this must be classed to the workers jobsite classification.

**Class 7380** Drivers delivering materials to jobsites are classified according to the construction class they are delivering for, if it includes drivers. Otherwise the driver is subject to class 7380. Construction workers transporting materials to the jobsite are subject to the classification that applies to their regular construction activity.

- Class 7380 applies when the job class does not include drivers and a driver exclusively delivers materials and does not work at the job site.
- Incidental driving, only to run parts and supplies from the shop to supplier and back, is included in Class 8227.

**Class 8742** before the job begins, Class 8742, Outside Estimator, applies even if the estimator might be on a roof or under a house.

Once the job begins, visits to the jobsite, other than an occasional drive-by, cannot be classified 8742 and would fall into the appropriate construction class.

**Class 8810** Clerical office employees working in an office physically separated by all other hazards. This could include a job trailer if the clerical workers are doing paperwork/computer in a room separate from supplies, tools, parts, etc.

## From the ground up

Preparing the site	General	Specialty
Surveying	5403	8602
Land clearing and excavation	6217	6217
Logging or tree removal	2702	2702
Fencing for erosion control	5403	6400
Drainage system - septic, French drain	6229	6229

**Class 6217** Excavation NOC & drivers – the removal of a couple trees and brush, and general clearing of the site using heavy equipment

**Class 2702** Logging or tree removal – applies to tree and incidental brush removal when clearing land in connection with developments where there is a substantial timber cutting involved

**Class 6400** Installation and repair of temporary or permanent fences, including those installed to prevent soil erosion. Fence installation is included in Class 5403 when completed by the prime contractor.

Foundation	General	Specialty
Forms, rebar, footings, pouring, finish	5213	5213
Pile driving	6003	6003
Pier drilling (not oil/gas)	5213	6204
Pouring concrete piles	5213	5213
Geo-foam in building foundation	5213	5213

#### **Class 5213**

Concrete, asphalt, and cement - laying out the foundation, walls, floors

- Setting forms
- Installing rebar and mesh
- Pouring footings, piers, posts
- Placing piers
- Pouring walls
- Placing cement block
- Tearing down forms
- Finishing concrete, all phases

### Piles and piers

**Class 6003** Pile driving – hammering piles into the ground with the use of an automatic pile driver

**Class 5213** Pier drilling (deep foundation drilling) if done by the foundation's contractor

Class 6204 Pier drilling if done by specialty drilling contractor

Concrete	General	Specialty
Ground-supported floors and slabs	5221	5221
Paving parking lots, sidewalks, driveways	5221	5221
Parking lot striping	5221	5474
Specialty contract pumper	5213	9534

**Class 5221** Concrete, asphalt, and cement - flat, ground-supported slabs or floors, driveways, sidewalks, etc. The usage of class 5221 is different for a commercial concrete than residential concrete. When doing commercial concrete a contractor can use 5213 for foundation and forms and 5221 for ground supported flatwork. For residential, all concrete is included in class 5215 unless the contractor is only doing ground-supported flat work and that would be classed 5221.

### Waterproofing or concrete repair

If completed by the concrete contractor, it is inclusive in the concrete class, 5213. If completed by a **specialty contractor** hired to do just the waterproofing, classed by how the material is applied:

Class 5474 By hand using a brush or roller

Class 5213 Sprayed on

Class 5022 Troweled on the exterior

Class 5480 Troweled on the interior

Class 5221 Injected in ground

Frame	General	Specialty
Wood, *lightweight steel studs, frame	5403	5403
Iron or steel – not over two stories (30 feet or less)	5059	5059
Iron or steel - over two stories (more than 30 feet)	5040	5040
Precast concrete beams or girders:		
Installed by steel erector (who didn't cast them)	5059/5040	5059/5040
Installed by concrete contractor (who cast them)	5213	5213
Welder	Governing class	3365
Seismic upgrades on concrete buildings	5057	5057

A story = 15 feet - measured from the lowest point above ground level to the highest point above ground level.

**Classes 5059 and 5040** shall not be assigned to the same job or location. If a building is a mix of stories, entire building is 5040.

Lightweight steel studs = 12 - 25 gauge

Floor	General	Specialty
Floor pan installation (sheetmetal)	5535	5535
Floor mesh for concrete floor	5213	5213
Concrete forms and pour	5213	5213







Exterior	General	Specialty
Mason board or masonry backer board	5403	5022
Masonry and concrete block walls	5022	5022
Exterior metal studs - nonstructural	5403	5403
Interior metal studs - nonstructural	5403	5102



Class 5403: Exterior metal studs are light-weight and non-structural. Their primary purpose is to attach exterior shell or siding. 12-25 gauge steel.

Enclosing the structure	General	Specialty
Wood, aluminum, vinyl siding	5403	5403
Brick, stone, rock, plastering, stucco, marble	5022	5022
Sheet metal siding	5535	5535
Glass attached by steel vertical strips	5462	5462
Tile and rock stuck to wall – interior or exterior	5348	5348

**Class 5022** Rock or stone installed similar to brick – usually placed stone by stone, mortered into place.

**Class 5348** Tile, rock, or stone usually attached to a wall or counter by adhesive that is applied by trowel. Class 5348 applies outdoors, provided it is strictly of a decorative or ornamental nature on existing surfaces of patios, swimming pools, or walls.

Roof	General	Specialty
Roof – including flashing	5403	5551
Gutters – sheetmetal or vinyl	5535	5535

Additions to the exterior finish	General	Specialty
Balconies, fire escapes, staircases, shutters, steel awnings – over two stories/two stories or less	5040/5059	Exterior 5040 Interior 5102
Awnings – canvas or vinyl, sheetmetal if in conjunction with canvas or vinyl	5102	5102
Awnings – sheet metal	5535	5535
Ground level steel/iron railings, tanks, building fronts	5057	5057

HVAC systems	General	Specialty
Heating, ventilation, air conditioning	5537	see below
Boiler installation	3726	3726

**Class 5537** Air conditioning, heating and refrigeration systems - installation, service and repair & drivers

- Project code covering the installation of the entire system when the contract has the entire HVAC contract
- Class 5537 does include permanent shop/yard operations.

**Specialty contractors** who have a contract to perform only a part of the HVAC installation are separately rated. However, if they have the entire contract, but subcontract out parts, the parts they complete themselves are classed to 5537.

**Specialty contractors** having a contract for part of the HVAC install:

**Class 5535** Sheetmetal – installation of ductwork

Class 3724 Installation of furnace or air conditioning unit

Class 5183 Plumbing NOC & drivers

**Class 8601** Air flow testing and balancing of nonportable HVAC systems, as well as energy conservation consulting and audits. Does not include any construction activity

Utilities	General	Specialty
Plumbing (includes laterals in property line)	5183	5183
Electrical - interior, exterior hookup	5190	5190
Electrical - overhead exterior	7538	7538
Electrical - underground exterior	6325	6325

Generally **classes 5183 and 5190** would apply to installing from the street to the building:

#### Class 5183 Plumbing NOC

- All piping for the movement of water, gas, or steam
- Connections, fixtures, appliances, and appurtenances with regard to the water supply or drainage system
- · Connection from street to building

### Class 5190 Electrical wiring – within buildings & drivers

- Wiring within structure
- Connections from street to building
- Incidental outdoor lighting

**Class 7538** Above ground electric wiring outside the building, including pole erection, stringing of wires, installation of transformers on poles or on the outside of the building or service connections.

**Class 6325** Below ground conduit construction for parking lot and similar lighting, including the erection of light standards.

Each class includes the trenching, pipe installation, and backfill

Interior	General	Specialty
Insulation – acoustical or thermal – rolled in, sprayed in, or blown in.	5403	5479
Wallboard - hang, tape, mud, spray texture	5403	5445
Acoustical ceiling installation - suspended type	5020	5020
Acoustical ceiling installation – glue-on method	5479	5479
Window and door installation	5403	5102

Wall covering	General	Specialty
Painting – interior and exterior	5474	5474
Wallpaper	5491	5491
Interior plaster	5480	5480
Lathing – interior or exterior	5443	5443
Interior tile, stone, mosaic or marble	5348	5348

Countertops	General	Specialty
Ceramic tile, stone, marble, mosaic, precast concrete countertops	5348	5348
Concrete countertops poured in place	5221	5221
Laminated plastic, veneer, wood countertops	5437	5437

Interior finish	General	Specialty
Cabinet installation	5437	5437
Interior wood trim work (crown molding)	5437	5437
Flooring- wood, parquet (cut, sand, nail/screw)	5437	5437

Class 5437 Carpentry - installation of cabinet work or interior trim

- Installation of kitchen and other cabinets
- Installation of counter tops laminated plastic, veneer, wood, particle board, and Corian
- Installation of finish trim crown molding, wainscoting, wood hand rails, baseboard, etc.
- Wood floor installation requiring cutting, sanding, drilling, and attaching using nails, screws, or pegs



Interior flooring	General	Specialty
Carpet, vinyl, linoleum, non-ceramic tiles	5478	5478
Ceramic tile, stone, marble, or mosaic	5348	5348
Laminate or wood – glue down or interlocking	5478	5478

**Class 5478** Carpet, linoleum, vinyl, asphalt, rubber floor tile, or resilient (Pergo type) installation. Includes laminate or wood flooring that is glued down or interlocking. Includes installation of underlayment applied over the rough or subfloor.

**Class 5348** Ceramic tile, stone, marble, and mosaic installation – interior or exterior – floors, walls, countertops. These are not stacked and motared like bricks or stones, but are glued into place.

Interior equipment and fixtures	General	Specialty
Mirrors	5462	5462
Metal partitions, modular workstations, office or store shelving, showcases, hospital and restaurant equipment	5146	5146
Metal staircases, railings, warehouse shelving	5102	5102
Elevators and escalators	5160	5160
Commercial appliances - install, service, repair	5403	9519
Heavy machinery or equipment	3724	3724

**Class 3724** Heavy machinery or equipment such as heavy motors, conveyor systems, generators, converters, compressors (not related to HVAC system)

Toilets, sinks, hardware (such as doorknobs, locks, towel bars, etc.) - classified according to what speciality installs. If the plumber installs - 5183, if the finish wood carpenter installs as they are installing the cabinets - 5437, if the general's employees are installings - project code 5403.

Interior systems	General	Specialty
Burglar and fire alarm installation	7605	7605
Sound and intercom systems	5190	9516
Wet or dry interior fire protection systems	5188	5188

Landscape	General	Specialty
Excavation and place large rocks	6217	6217
Landscaping – soil, plants, etc.	0042	0042
Underground sprinkler install	5183	5183
Brick or stone <b>walls</b>	5022	5022
Brick or stone paver, or poured concrete <b>walks</b>	5221	5221
Artificial turf	0042	0042
Deck - wood, plastic	5403	5403
Fence – anything but stone/brick	5403	6400
Concrete retaining walls	5213	5213

**Class 6217** Excavation – changing the existing terrain or contour of the land. This could include making the area level, pushing it into a pile to create a hill or berm, or making changes in the elevation. This work is usually done at the beginning of a project, but can be done anytime, including towards completion to finalize the landscape.

**Class 0042** Landscaping is site beautification work and is typically performed as a finishing operation towards the end of the job. It includes, but is not limited to:

- Enhancing the soil with the addition of nutrients and/or fertilizer
- Spreading of top soil prior to installing plants or sod
- Digging holes necessary to install plants for new installations
- Installing plants as part of a landscaping operation, not a maintenance operation
- Placement of ground cover (soil, mulch, or decorative stones)

The key difference between classes 6217 and 0042 is the earth moving operations. Landscaping operations included in class 0042 do not change the contour of the land.

Ponds	General	Specialty
Small rigid plastic form, simple pump	0042	0042
Excavation and place large rocks	6217	6217
Install rubber lining	5102	5102
Cemented or mortared rocks/bricks	5022	5022
Cement sides/floor	5223	5223
Plumbing and pump	5183	5183
Landscaping – plants, rocks	0042	0042

**Class 0042** Small ponds that are installed by the landscaper – hand-dug, use rigid plastic formed liner, and a simple pump - are inclusive in the landscape gardening class.

Class 6217 Excavation NOC & drivers – includes excavation for larger ponds

Class 5102 Synthetic rubber or liner installation placed in bottom of pond

Class 5022 Brick or rock, mortared or cemented in place around pond

Class 5223 Concrete siding, bottom – similar to a swimming pool

Class 5183 Plumbing and pump installation for small residential ponds

**Class 6325** Trenching and piping for large ponds

Solar	General	Specialty
Solar panel (and satellite dish) installation – roof or ground	3724	3724
Solar panel plumbing	5183	5183
Solar panel electrical wiring	5190	5190
Solar roofing tile installation	5551	5551

Cleanup	General	Specialty
Construction cleaning	See below	5610
Punch list	Class of activity	
Final cleaning – move in ready	5403	9014

Construction **cleaning** is inclusive in the class assigned to what is being cleaned up. For instance, cleaning up after mortaring a brick wall would be inclusive in class 5022.

If cleanup includes areas where several types of work are being cleaned up, the governing class for the project should be used.

Final cleanup, which may involve removing stickers, washing windows, vacuuming, wiping down surfaces, etc., is included in the project **class 5403** if completed by the general's employees, or **class 9014** if completed by a janitorial-type subcontractor.

**Class 5610** applies to businesses that provide cleaners, timekeepers, and watch guards at construction, erection, or wrecking sites. **Punch list work is not included in Class 5610.** This class applies to construction risks only if payroll for the cleaners, timekeepers, and watch guards **exceeds all** other construction classification payroll (except 5606) at the same job or location.

**A punch list** is a document usually completed at the end of construction listing items a contractor must complete to finalize construction. These may include incomplete or incorrect installations, or incidental damage to finishes, material, or structures. Each punch list activity should be classified according to the type of work needed. For instance, class 5437 repairing wood trim, class 5474 painting, class 5403 general contractor employee fixing drywall or 5445 for the subcontract drywaller completing the repair, class 5215 repair concrete, etc.

Street and road	General	Specialty
Rock excavation (drilling/blasting)	5508	5508
Subsurface work	5507	5507
Subgrade through paving, curbs	5506	5506
Roadside beautification	0042	0042
Flaggers	Governing class*	7720

<sup>\*</sup>Remember, the governing class is the class with the most payroll on the job.

Class 5508 Street or road construction: Rock excavation & drivers

- When roadbed is laid on, or adjacent to, mass rock formations, removed by drilling and blasting (no tunneling)
- Includes portable crusher operations associated with the blasted rock

Class 5507 Street or road construction: Subsurface work & drivers

- Surveying
- Moving-in operations
- Clearing the right of way
- Earth excavation
- Rock and dirt removal (no blasting)
- Filing and grading to the sub-base
- Flagging
- Small bridges or culverts (clearance less than 10 feet and terminal abutment distance less than 20 feet)

Class 5506 Street or road construction: Paving or repaving & drivers

- Flexible base
- Stabilized base
- Laying the pavement
- Finishing and trimming the shoulder
- Placing the curbs
- Erecting guard rails, fences, and retaining walls
- Painting lines unless done by specialty contractor

**Class 7720** Specialty flagging contractors – *specialty contractor* hired to only do the flagging