City of Milwaukee | DEPARTMENT OF NEIGHBORHOOD SERVICES

Commercial to Residential (UDC) Conversion

Permit & Development Center
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Permit Requirements for Commercial to Residential (UDC) Conversion Projects

Definitions & Requirements, Generally
Commercial uses include multifamily buildings. Examples include traditionally commercial spaces like retail or warehouse, and also multifamily apartment uses of 3 or more dwellings. Multifamily construction and all other commercial construction is regulated by SPS 361-366 and the 2015 International Building Code.

Residential buildings are any 1 or 2-family building. These are regulated by the WI Uniform Dwelling Code (UDC) from SPS 320-325.

Conversion means a change of use from one code system to another, like from commercial (SPS 361 et. seq.) to residential (WI UDC) projects. Typical examples are 3- and 4- unit apartments being renovated into 1 or 2-family buildings. Converted building are regulated as new residential structures, established at the time of conversion. SPS 320.04 applies the UDC to all buildings converted to 1 and 2-family uses. More complicated situations can exist in mixed-use occupancies. Plans must demonstrate UDC compliance for the entire building or seek code variances where compliance is not possible.

Conversion to Residential, being 1 or 2 dwellings under the UDC including if in mixed uses, requires an application for New Construction, Residential (record type RES-NEW). Application for any desired variances requires completion of the state forms Wisconsin Uniform Building Permit Application (WI form SBD-5823), and Petition for variance form (WI form SBD-9890X).

Submitting Plans for Alterations and New Homes:
Conversion projects must meet requirements for new homes, and may also include remodeling work and attic improvements. New work must comply with the UDC and the remodeling and attic handouts may be relevant in those situations. Please review handouts for 1 and 2-family homes on our Info Sheets page, here:
https://city.milwaukee.gov/DNS/permits/info

Evaluating a Building for Conversion to Residential
Existing structures must be evaluated for compliance with the UDC. Please see the attached listing of SPS sections and typical issues encountered and ensure plans address each point. Full compliance with the UDC is required. The attached list includes the most common topics, but is not an exhaustive repetition of the UDC.

Code Variances
Some codes may be impracticable to comply with during a conversion project. The City will consider variance applications on a case-by-case basis and given the unique circumstance of each project.

Waivers are processed locally as permit type Building Code Variance (BCV). Submit the State "Petition for Variance" form when applying for any waiver related to the UDC, and submit it directly to DNS either online or in-person.

Variances may be issued upon finding that any alternative to strict compliance provides equivalent function and safety. Variance applications showing equivalency will be considered. Certain building elements may be impossible to inspect to verify current code compliance, and inspection of foundations and roofs to confirm no defects may be suitable to demonstrate equivalent safety. Compliance with the SEWRG, particularly with ceiling height, is an available path to demonstrate equivalency.

Some topics are highly unlikely to have an equivalent that would be allowed by variance. Plans must show compliance with these provisions unless a variance is issued:

- SPS 321.03 regarding minimum number of exits.
- SPS 321.03 (6) regarding egress windows.
- SPS 321.04 (2)(e) regarding stair uniformity.
- SPS 321.08 regarding fire separation and dwelling unit separation. However, older materials like plaster may be considered as equivalent where fire rating is required. Discuss with your plan examiner.
- SPS 321.09 requiring smoke and CO detectors.
- SPS 321.29 regarding ventilation and moisture management.

All reasonable efforts should be made to comply with the UDC in all other respects. However, variances will be considered where compliance is impracticable or where equivalent levels of safety are provided. Variance applications should include any supplemental information about how the application provides equivalency to the code, how compliance may be impracticable, and how the proposal meets the intent of the code for all code elements for which compliance cannot be demonstrated.

Engineered designs may provide alternatives to prescriptive code requirements that does not require variance.

Application & Fees

Fees are assessed as for a new home construction per Milwaukee Code of Ordinance (MCO) 200-33 and MCO 81-6. Plan exam and permit fees are based on work area. The area of proposed work may be used instead of the entire building area when computing permit fees, subject to a minimum fee per the ordinance. The area of plan exam, which is generally the entire building, will be used when computing plan exam fees.

Building Code Variance (plan type BCV) applications are separate from building permit applications and are assessed separate fees per MCO 200-33.

Attachment:

"Commercial to Residential Conversion – Common Issues by Code Section"

> *Please use this attachment when reviewing projects for possible needs for variances if your plans do not demonstrate compliance with these provisions.*

SPS Code Section	Topic	Specific Code Deficiency or Typical Problem
320.04(4)	Change of Use	If converted from another purpose (even multi-family) it shall comply with this code as if new
320.04(1)	New Dwellings - MEPs	If any heating, a/c, plumbing or electrical systems are installed or exist they shall comply with this code
321.02(1)(d)(1)	Concrete	ACI Standard 318, Building Code Requirements for Structural Concrete
321.03	Exits	The number of exits from a given floor may not comply
321.03(6)	Egress Windows	Windows often fixed or too small.
321.04	Stairs	General Items (See also f - open risers, or g - walking surface)
321.04(2)(a)	Stair Width	Width Less than 36", 26" for spiral stairs (Or handrail projection > 4.5")
321.04(2)(b)	Stair riser height	Risers Less Than 8" (9.5" in Spiral Stairs)
321.04(2)(c)	Tread depth.	Tread depth less than required for rectangular (9"), Spiral (7"), or Winder Treads non-compliant
321.04(2)(d)	Stair headroom	Headroom less than 76" over length of stairway, landings, and 36" beyond top & bottom.
321.04(2)(e)	Uniformity	Max and Min Riser and Tread Depth vary by more than 3/8"
321.04.(4)(a & b)	Landings	Landings not meeting min. size requirements.
321.04.(4)(c)	Doors at Landings	Landing not provided or undersized for door swing
321.05	Natural Light and Ventilation	Insufficient natural light and Ventilation
321.06	Ceiling Height	Less than 7' for 50% of the floor area, or 7' for specific locations in toilet rooms.
321.07	Attics and crawl spaces	Insufficient access size
321.08(1)	Fire separation	Wall within 3’ of property line
321.08(2)	Dwelling Unit Separation	Fire rated assemblies not rated. 3/4 Hr. fire rated assembly required.
321.085 (1)	Exterior wall framing 2x6 balloon framed construction.	Fire blocking needed at floor lines
321.09	Smoke & CO Detection	Hardwiring required. Battery only not permitted in new construction. CO detectors often missing.
321.10 (2)	Protection against decay and termites.	No treated lumber indicated on plans or details provided. Joists and sill plates not pressure treated or missing a vapor barrier below them.
321.10(5)	Fasteners	Appropriate fasteners required for preservative treated wood and fire-retardant-treated wood.
321.11	Foam Plastic	Foam plastic shall be separated from interior space by a compliant thermal barrier.
321.12	Drainage	Grade must slope away from house. 0.5 inch per foot slope for 10 feet minimum or other adequate drainage.
321.14(2)	Excavations for footings and foundations	Soils are difficult to verify for existing structures. Must be undisturbed or compacted soil, free of organic material. Presumed adequate if no foundation issues are visible.
321.15 (2)(a)	Continuous footings	The minimum width of the footing on each side of the foundation wall is difficult to verify.
321.15 (2) (b)	Footings	Compliance with minimum size requirements is difficult to verify.
321.16	Frost Protection	The foundation depth below grade is difficult to verify. Frost protection depth may not meet 48 inch requirement.
321.17	Foundation tile or pipe installation	Often drain tiles and sumps are not present. There is an exception in the code.
321.18(1)c(3)	Anchor bolts	Verify spacing when possible. Often unable to verify. Not practical to verify depth.
321.18 (1)(d)(1)	Floor Framing	Shall be fastened to the sill plate. May be hard to access.
321.18(3)(a)	Damp proofing	Difficult to install on existing backfilled foundations.

SPS Code Section	Topic	Specific Code Deficiency or Typical Problem
321.18(2)(a) & (3)(b)	Foundation Thickness	Compliance with minimum size requirements is difficult to verify.
321.18(3)(b) 2	Vertical–reinforcing steel	Unable to verify. Any wall deflection must be evaluated by a professional and repaired.
321.2	Concrete floors	Minimum thickness of 3", verification of existing not required. Any replacement must comply.
321.22	Floor Joists	The joists may be undersized, the grade species not known, or inaccessible.
Table 321.22-A1	Basement beam	Undersized for prescriptive method, or not visible; evaluate for safety on plans.
321.22 (8)	Floor sheathing	Unknown material/dimensions
321.25 (6)	Basement piers	Unapproved post material. Evaluate for safety on plans.
321.25 (8)(c)(6)	Wall bracing	No Bracing provided in older homes or impractical to verify.
321.225 (1)	Decks	Deck materials and construction sometimes unknown, stair dimensions and construction unknown, guard and handrail heights, placement, and attachment unknown.
321.27 (1) (b)	Roof framing applicability of tables	Unknown species of lumber, length of rafter, engineering not provided
321.27 (4) 2	Collar ties	Must be indicated on plans and provided if not present.
321.27 (3)	Uplift and Suction Forces	Details, fastener schedules, engineering not provided. Provide ties where necessary.
321.27 (4) (b)	Ridge Boards	Some older homes have no ridge boards or ridge beams. Analyze for safety on plans if missing.
CH 322	Energy	Energy calculations are required. Code requires R-10 insulation around the foundation, however RES-check can be used if the prescriptive method is not followed.
322.29	Ventilation and Moisture Control	Existing attic may have insufficient venting. Document on plans.
322.32(6)	Basement Walls	Older basements often lack insulation completely.
322.32 (7).	Box sill and rim joist spaces	Lack of Insulation.
322.38	Vapor retarders	Vapor barrier missing or impractial to verify.
323.04	Sizing	All equipment should be listed and provided to the inspector.
323.07	Mechanical Ducts	The existing duct work may require alteration or replacement to evenly and adequately supply building.
323.02	Energy	Outdoor air design temperatures for heat loss calculations shall be taken from the figure in the UDC Appendix
323.02(3)b	Balancing	Older systems may need to be balanced. Note on plans.
323.02(3)(b)2.	Air Intake Sizing	Calculations required with HVAC permits.
CH 324	Electrical	Existing and replacement systems to comply with MCO and UDC. Contact WE-Energies (Rob Radmer as of 7/2024) to remove a meter.
CH 325	Plumbing	Existing and replacement systems to comply with MCO and UDC. Contact DNS Plumbing Inspection with specific questions.