



# Typical Commercial Building Construction Notes

(as applicable)

VILLAGE OF NORTHBROOK

Development & Planning Services

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*In an effort call your attention to some frequently overlooked code requirements here in Northbrook, below are some code comments that may apply to your project and may not have been included on the attached permit drawings.*

## GENERAL

<b>G1</b>	NMC 6-203 IBC 3306.5 & 7	<b>Construction Site Fencing for New Buildings &amp; Additions</b> – Provide and maintain 6' high chain link fencing around all new building sites and additions. [Construction barriers and walkways must be 8' high]
<b>G2</b>	2006 IBC 3307.1	<b>Excavation - Protection of Adjoining Property</b> – For all areas indicated as requiring protection for the surrounding/adjoining ground/paving surfaces, strictly comply with the design solution contained with the permit documents. Provide written notice (not less than 10 days prior to the scheduled starting date of the excavation) to the adjoining owners advising them that excavation will be made and that the adjoining building shall be protected.
<b>G3</b>	NM C Sec.6-205(4)	<b>Construction Portable Toilet</b> -Provide and maintain an approved portable toilet for new structure & addition construction sites (unless there is one available on the construction site). The portable toilet must be a minimum of 6 feet from all property lines.
<b>G4</b>	NMC 01-42, 6-15 (5)	<b>Dumpsters</b> - Construction debris and refuse containment shall be required for all job sites.
<b>G5</b>	NMC 19-88	<b>Address Display</b> – Provide the site address on the building with 3" high (min.) numerals.
<b>G6</b>	2006 IBC 903.1 & 903.6 amended	<b>Automatic Fire Protection (Sprinkler) System compliant with NFPA 13 is required for any new commercial building, new addition with an increase of 2000 s.f., or change of use of an existing building which increases the fire hazard. However, in no case shall the increase cause a non-sprinklered building to be greater than 4000 s.f.</b> A separate Fire Protection Permit Application submittal is required to be submitted for review and approval (see below)

## ZONING

<b>Z1</b>	Zoning Code	<b>Air Conditioning Condenser or Generator Locations</b> - Air conditioning condenser units or generators are not allowed to encroach into any required front, side or corner side yard.
<b>Z2</b>	Zoning Code 9-107 H	<b>Roof Top Unit (RTU) Screening</b> - All NEW (not replacement) RTU's are required to be screened to the top of the unit. Screening material & height must be approved by the Department of Development & Planning Services.
<b>Z3</b>	Zoning Code	<b>Parking Calculations</b> – Refer to the approved zoning documents for all parking requirements.
<b>Z4</b>	Zoning Code	<b>Zoning Setbacks</b> - Always refer to the approved zoning documents for all setback dimensions.

## CIVIL ENGINEERING

<b>CE1</b>	<b>Excavated Materials</b> - Any excavated soil/materials not to be used for backfill shall be immediately removed from the site. No on-site stockpiling of excavated materials is allowed, with the exception of topsoil for final grading purposes.
<b>CE2</b>	<b>Alteration of Existing Grades</b> - No alteration of the existing ground elevations shall be performed in order to maintain the existing drainage pattern and ensure that all tributary areas from the adjacent lots will continue to drain into the subject site.
<b>CE3</b>	<b>Disturbed Lawn in Parkways</b> - All disturbed parkway lawn areas within the public right-of-way shall be restored with 6 inches of pulverized topsoil and sod within 5 calendar days of disturbance, weather permitting. All sod must be watered as required to sustain growth.
<b>CE4</b>	<b>J.U.L.I.E.</b> - Contact J.U.L.I.E. @ 1-800-982-0123 before excavating.

## ARCHITECTURAL

<b>A1</b>	2006 IBC 1006.1 & .3	<b>Means of Egress Illumination</b> – Where required, the means of egress, including the exit discharge and all rooms with electrical panels, shall be illuminated at all times the building space served by the means of egress is occupied. In the event of a power supply failure, an emergency electrical system shall automatically illuminate required areas. The emergency power system shall provide power for duration of not less than 90 minutes and shall consist of storage batteries, unit equipment, or an on-site generator.
<b>A2</b>	2006 IBC 1011.1	<b>Exit Signs</b> – Where required, exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be that no point in a corridor is more than 100 feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. <i>[or meet exceptions]</i>
<b>A3</b>	2009 IECC 503.2.7	<b>Insulation for Ducts &amp; Piping</b> – All supply and return air ducts and plenum shall be insulated with a minimum R-5 insulation when located in unconditioned spaces and a minimum of R-8 insulation when located outside the building.
<b>A4</b>	2006 IBC 1011.3	Exit Signs – Exit signs are required at each exit door leading to an exit stairway, exit passageway and exit discharge. Exit signs must comply with accessibility requirements.

## ACCESSIBILITY

<b>AC1</b>	IAC 400.320 (h)	<b>Sales and Service Counters, Teller Windows, Information Counters</b> – Provide a maximum 34" high, 36" in length at all sales and service counters, teller windows, and information counters.
<b>AC2</b>	IAC 400.310 (j)(8)	<b>Door Hardware</b> – Handles, pulls, latches, locks, and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Operable parts of such hardware shall be 34" to 38" above the floor.
<b>AC3</b>	IAC 400.310(m)	<b>Sinks</b> - Faucets, lever-operated, push-type, touch-type or electronically controlled mechanisms are acceptable designs. (ADAAG 4.24.7) Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N). (ADAAG 4.24.4)
<b>AC4</b>	IAC 400.310(r)(3)	<b>Controls &amp; Operating Mechanisms - Height</b> . The highest operable part of controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges specified in <i>Section 400.220(e) and (f)</i> . Electrical and communications system receptacles on walls shall be mounted no less than 15 in. (380 mm) above the floor. <b>EXCEPTION:</b> These requirements do not apply where the use of special equipment dictates otherwise or where electrical and communications systems receptacles are not normally intended for use by building occupants. (ADAAG 4.27.3)
<b>AC5</b>	IAC 400.310(r)(4)	<b>Operation</b> . Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N). (ADAAG 4.27.4)
<b>AC6</b>	IAC 400.310(s)	<b>Alarms</b> - Where emergency warning systems or alarms are provided or required, such systems shall comply with IAC 400.310(s). Compliance for this/these system(s) is/are reviewed by the Northbrook Fire Prevention Bureau when separate fire protection permits are submitted.
<b>AC7</b>	IAC 310(n) ANSI 604.5.1 & fig. 604.7	<b>Toilet Rooms</b> –Toilet rooms are to comply with all clearances, mounting heights, fixture requirements, grab bars, etc. required and documented in the Illinois Accessibility Code and ANSI 117.1. Requirements (see code for additional requirements):• Sink - 34" high, • Water closet - 17' to 19" a.f.f., • Urinal (if req.) - elongated rim with height of 17", • Mirror bottom 40 max. a.f.f., • Grab bar – see codes, • Water temperature for lavatories shall not exceed 110°.
<b>AC8</b>	IAC 400.310(u)	<b>Signage</b> - Signage must comply with IAC requirements including height, raised character requirements and mounting location/height.

## STRUCTURAL

<b>S1</b>	2006 IBC 2303.4.1 2006 IFC 507.4 amended	<b>Floor &amp;/or Roof Trusses</b> - Have available, at time of inspection, the truss design drawings bearing the structural engineer's seal. <b>Wood Truss Buildings</b> – Provide this signage for a building with a wood truss roof: 4" red metallic "T" at both the front/rear doors and at any other location determined by the Fire Prevention Bureau Director.
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## MECHANICAL

<b>M1</b>	2006 IMC 404.3.4	<b>Test and Balance Report</b> - Prior to the final inspection, submit a letter from the architect or P.E. of record stating that they have reviewed the test and balance report and find the system in conformance with the permit drawings.
<b>M2</b>	2006 IMC 506.1	<b>Kitchen hood/duct shop drawings</b> – Submit kitchen/duct shop drawings prior to installation. Drawings to include: type of hood, duct materials, clearances to combustibles, required insulation wrap and grease duct cleanouts. A separate submittal shall be provided for the fire suppression system.

## ELECTRICAL

<b>E1</b>	2005 NEC 110.26	<b>Electric Panel Working Space</b> - Provide 36" (min.) work space in front of electric service panels.
<b>E2</b>	2005 NEC 210.8 (B)(6) amended	<b>GFCI Receptacles</b> – Provide GFCI receptacles at all bathrooms, commercial, and institutional kitchens, rooftops, at the exterior for outdoor public spaces.
<b>E3</b>	2006 IBC 1006 & 2005 NEC	<b>Night Lighting for Means of Egress</b> – If required, can be either switched lighting outlet at entry/exit, switched breaker in panel, occupancy sensors or 24 hour lighting.

## PLUMBING

<b>P1</b>	2006 IPC 608.16.7	<b>Chemical Soap Dispensers</b> – All chemical dispensing equipment with a direct connection to a potable water source shall be protected with a reduced principal backflow preventer assembly.
<b>P2</b>	2006 IPC 608.13.6 amended	<b>Vacuum Breaker</b> – When installed in a commercial space, mop sink/basin vacuum breakers shall be installed 7'-6" above the finished floor.
<b>P3</b>	2006 IPC 401.1 amended	<b>Drinking Fountains (for spaces under 5000 s.f. or 2 or fewer single user bathrooms)</b> – Drinking fountains are required per the Illinois State Plumbing Code. Whenever a drinking fountain is required by this code, bottled water or a water dispensing faucet (water station) may be substituted for a drinking fountain, provided drinking water is accessible to the public. When bottled water is provided in lieu of the drinking fountain, the bottled water must be commercially sealed in accordance with the Illinois Bottled Water Act or must comply with the Department's Public Area Sanitary Practice Code.

## FIRE PROTECTION (where / as applicable)

<b>FP1</b>		<b>Fire Protection Systems</b> - Where there is a new or modified fire protection system, submit a separate fire protection permit application for review by the Fire Prevention Bureau. Be aware that no open ceiling inspections can take place until that permit has been issued.
<b>FP2</b>	2006 IFC 906.5.1 amend.	<b>Fire Extinguishers</b> - Provide type A10BC fire extinguishers at all exterior door locations and access to an extinguisher every 75 feet minimum.
<b>FP3</b>	IFC Section 906.3	<b>Fire Extinguishers</b> - Provide fire extinguisher(s) of the ABC Dry Chemical type with a classification rating of not less than 2A 10BC. The extinguisher(s) shall be mounted on the wall, visible, and within 5 ft of every exit and with 75ft of travel distance.
<b>FP4</b>	NFPA 10	<b>Fire Extinguishers</b> - All cooking and food preparation centers are required to shall have at least one fire extinguisher listed specifically for cooking operations. This extinguisher is to have a minimum classification rating of a K classification or 20 BC (where grease is not present).
<b>FP5</b>		<b>Fire Extinguishers</b> - Portable fire extinguishers not exceeding 40 lbs. shall be installed so that the handle is located not more than 5-feet (60 inches) above the floor, and fire extinguishers exceeding 40 lbs. shall be installed so that the handle is located not more than 3.5 feet (42 inches) above the floor. The clearance between the floor and extinguisher shall be more than 4 inches.
<b>FP6</b>	2006 IFC 913.6 amended	<b>Sprinkler- Fire Pump Room</b> - At new sprinkler/fire pump rooms, a 2-hour (minimum) rated enclosure, an automatic fire suppression system, an exterior door at grade and an interior access door are required. When below grade, the room shall be accessed by a 2-hour rated corridor immediately adjacent to a rated stairwell enclosure.
<b>FP7</b>		<b>New Underground Water Mains</b> - If a new water main is installed, provide a certificate that all underground mains have been flushed, tested, and chlorinated before connection to the sprinkler system per NFPA 24, Table 10.10.2.1.3. The flush shall be witnessed by the Fire Department.
<b>FP8</b>		<b>Door Bolts</b> - Manually operated edge or surface mounted flush bolts and surface bolts are prohibited.
<b>FP9</b>		<b>Fire Extinguishers</b> - A stairway and floor number sign, designating the floor level, shall be provided at each floor landing in interior vertical exit enclosures connecting more than three levels. This sign shall be located 5 feet above the finished floor.
<b>FP10</b>		<b>Room Signage</b> - Label all exterior doors to rooms containing fire protection system controls/sprinkler risers/fire pumps as: "FACP" (for Fire Alarm Control Panel Room), "Sprinkler Room", "Sprinkler Pump Room".
<b>FP11</b>		<b>Room Signage</b> - Label all interior doors to rooms containing electrical panels/equipment, mechanical equipment, elevator equipment as: "Electrical Room", "Mechanical Room", "Elevator Mechanical Room".
<b>FP12</b>		Provide two labeled sets of master keys for any tenant space to be place in a secure Knox box.
<b>FP13</b>	IFC 505.1	<b>Address Labeling</b> - All buildings shall have approved address numbers, building numbers, or approved building identification placed in a position legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).

## TREE

<b>T1</b>	NMC 25-14	<b>Tree Protection</b> - The contractor shall provide and maintain tree protection in accordance with the approved tree preservation plan and tree protection detail provided herein and in accordance with all local requirements for all parkway and private trees on the subject lot that will be within the limits of the proposed work, access to the site, storage of material, etc... The tree fencing shall remain intact during the entire duration of the construction project. For any reason during the project, the tree protection fencing needs to be moved, the Tree Preservation Officer is to be contacted at 847-272-5050 ext. 4215.
<b>T2</b>		Before performing work on any Village owned right-of-way, contact the Village Forester at Public Works 847- 272-4711 ext. 3203 to find out if you will be required to post monies for any parkway trees that may be affected by the proposed work.

## CONSTRUCTION & DEMOLITION DEBRIS RECYCLING

<b>CD1</b>	NMC 08-53	<b>Construction and Demolition Debris Recycling Program</b> – If this project falls within the following categories: <ul style="list-style-type: none"><li>• Construction of new structures of 2,000 square feet or more of gross floor area;</li><li>• Renovations of 10,000 square feet or more of gross floor area;</li><li>• Demolition of 1,500 square feet or more of gross floor area; then Construction &amp; Demolition Debris Recycling will be a condition of your permit. Please contact Jim Baxa, D&amp;PS, @ 847 272-5050, ext. 4255, for documentation required.</li></ul>
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