City of Columbia Heights | *Community Development*
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Garage Handout

REQUIRED SUBMITTALS

1. Certificate of Survey – See zoning details below.
2. Plans – see details below
3. Residential permit Application

PLANS

1. Building plans (two copies) must be submitted with an application to construct a garage or garage addition.
2. Plans must be neatly drawn and to scale (at least 1/8" = 1 ft. min.). They may be on 8 ½ X 11 paper.
3. Plans must include a floor plan, cross section and elevation.
4. Plans should show the proposed size of the garage;
5. Location and size of window and door openings;
6. Size of headers over all window and door openings;
7. Size, spacing, and direction of rafters or trusses; rafter/truss connection method;
8. Size and spacing of studs;
9. The grade and species of lumber to be used;
10. The type of roof and wall sheathing used;
11. Information on siding and roofing;
12. Footing/foundation plan
13. All other pertinent information.

EASEMENTS

Garages cannot be located in a drainage or utility easement (easements are shown on your property survey).

FOUNDATIONS

Detached garages may be constructed on a thickened-edge slab. Attached garages must be constructed on a foundation extending at least 42 inches below finished grade and stepped in to the foundation of the home.

WALL CONSTRUCTION

Walls may be framed with minimum No. 3 grade studs spaced 16 or 24 inches on center. Utility grade studs may be used when supporting only a roof, spaced not more than 16 inches on center, and limited to 8 feet in height. All other studs shall be limited to ten feet in height. If a single top plate is used, rafters or trusses must be centered over studs. For walls over ten feet in height, see the Minnesota Residential Code.

ROOF TRUSSESS

Wood trusses may be used as long as they are designed to meet state snow load requirements (35lb live snow load). Trusses must be connected to walls with approved connectors. Truss design drawings must be provided.

WALL BRACING

All walls are required to be braced at each end of each wall by one of the following methods:

- Nominal 1X4 continuous diagonal braces let in to top and bottom plates and the intervening studs or approved metal straps installed in accordance with the manufacture's specifications. Braces must be installed at an angle not to exceed 60 degrees or less than 45 degrees.
- 4X8 wood structural panel sheathing not less than 5/16 inch for 16-inch stud spacing and not less than 3/8 inch for 24-inch stud spacing. Sheathing must be attached with a minimum of 6d nails at 12 inches on center.
- 4X8 structural fiberboard sheathing not less than ½ inch thick applied vertically on studs spaced 16 inches on center. Sheathing must be attached with 1½ inch galvanized roofing nails, 6d common nails, or 16 ga 1½ inch staples spaced 3 inches on center around the perimeter and 6 inches on center on intermediate studs.

When garages are fully sheathed with wood structural panel sheathing, wall segments on either side of garage openings that support light frame roofs only with roof covering dead loads of 3 psf or less shall be permitted to have a 4:1 aspect ratio. For narrower wall segments, see the detail for alternate braced wall panels adjacent to a door or window opening later in this handout.

GENERAL

Any portion of garage less than 5 feet from the property line shall be fire protected.

GARAGE DOOR STANDARDS & GARAGE DOOR OPENERS

Garage doors must meet minimum wind resistance standards and must come with a label indicating the door complies with ANSI/DASMA 108 (designed for 90 mph wind). State law requires that all automatic garage door openers sold and installed be equipped with an automatic reversing device. This means that the door must have a means to reverse the closing function if something is detected in the path of the door.

INSPECTIONS

It is the responsibility of the permit applicant to call the Building Department to arrange for the inspections. 24-hour advance notice is required. Inspections typically required for the construction of a garage are:

- Footing and foundation inspection (attached garages only) - after form work is in place but prior to pouring concrete. Property pins must be exposed.
- Slab Inspection (detached garages) – after all formwork and reinforcing is in place but prior to the pouring of concrete. Property pins must be exposed.
- Framing Inspection – after all framing and bracing is complete, rough electrical (if any) is approved, roof and weather barrier installed but prior to the application of siding.
- Final Inspection – after completion of the garage and grading (The architectural style, siding and roofing shall be compatible with the principal structure).

SMOKE ALARMS, CARBON MONOXIDE ALARMS, FIRE WALLS

Smoke alarms are required to be installed in the dwelling when an attached garage is constructed or an existing attached garage is expanded. Carbon monoxide alarms must be installed in a dwelling when any work requiring a permit occurs. A fire wall must be created between a dwelling and a garage if an attached garage is constructed or, in some cases, when an existing attached garage is expanded. Contact the Building Department for specifics.

Zoning Code Info: Residential Garage Permit Requirements

A Certificate of Survey is required to be submitted and must include the following information:

1. Subject property address and Legal Description
2. Property irons, Lines and Dimensions of each lot line
3. Existing Conditions (existing easements, structures, and pavement with dimensions and setbacks shown)
4. Proposed Conditions (proposed easements, structures, and pavement with dimensions and setbacks shown)

ACCESSORY BUILDING OR STRUCTURE.

A building or structure or portion of a structure subordinate to and serving the principal structure on the same lot.

(C) Accessory uses and structures.

(1) Accessory structures, residential uses. The following standards shall regulate the construction and maintenance of residential accessory structures:

(a) Each residentially zoned parcel shall be allowed two detached accessory structures.

(b) No accessory structure shall be constructed or located within any front yard.

(c) Accessory structures for one- and two-family dwellings shall be set back a minimum of three feet from the side lot line, and a minimum of three feet from the rear lot line, a minimum of five feet from any other building or structure on the same lot, and behind the principal structure building line in the front yard.

(Attached accessory structures are subject to the same setback regulations as a principal structure for the district in which the property is located. Contact the Community Development Department to determine zoning district and applicable setbacks.)

(d) An accessory structure shall be considered an integral part of the principal structure if it is connected to the principal building by a covered passageway.

(e) An accessory structure, or any combination of accessory structures, storage sheds and attached garages, shall not exceed 1,000 square feet in area.

(f) The height of an accessory structure shall not exceed the height of the principal structure or 18 feet in height, as measured to the highest point, whichever is less.

(g) The wall height of an accessory structure shall not exceed nine feet in height.

(h) Where the natural grade of the lot is 10 feet or more above or below the established curb level at the front building setback and access from an alley is not available, an accessory structure for the storage of not more than two automobiles may be constructed within any yard, provided that at least one-half of the height is below grade level and the accessory structure is set back a minimum of 20 feet from any right-of-way.

(i) The exterior color and design of an accessory structure shall be similar to the principal structure. Corrugated metal siding and roofs shall be prohibited.

(j) The building coverage on each residential lot, including principal and accessory structures, shall not exceed 35% for lots of 6,500 square feet or less or 30% for lots with more than 6,500 square feet in area.

(k) Whenever a garage is so designed that the vehicle entry door(s) are facing a street or alley, the distance between the door(s) and the lot line shall be no less than 20 feet for lots greater than 6,500 square feet, and shall be no less than 15 feet for lots 6,500 square feet or less.

(l) Accessory structures for multiple-family dwellings shall be placed in the rear yard and shall be subject to the same height and exterior finish regulations as the principal structure for the district in which it is located, in addition to the requirements of this section.

(m) Any accessory structure capable of storing one or more motorized vehicle shall be provided with a hard-surfaced access driveway, no less than 12 feet in width, to an adjacent public street or alley, and shall be no less than 20 by 20 in size.

(n) Accessory buildings shall not be located within any utility or drainage easement.

(o) All accessory buildings over 120 square feet in area shall require a building permit from the city.

(g) Driveways. One-, two-, three- and four-family residential uses are subject to the following setback requirements:

1. Residential lots platted prior to the effective date of this section and having a lot width of 60 feet or less, shall maintain a minimum side yard setback of one foot in all districts.

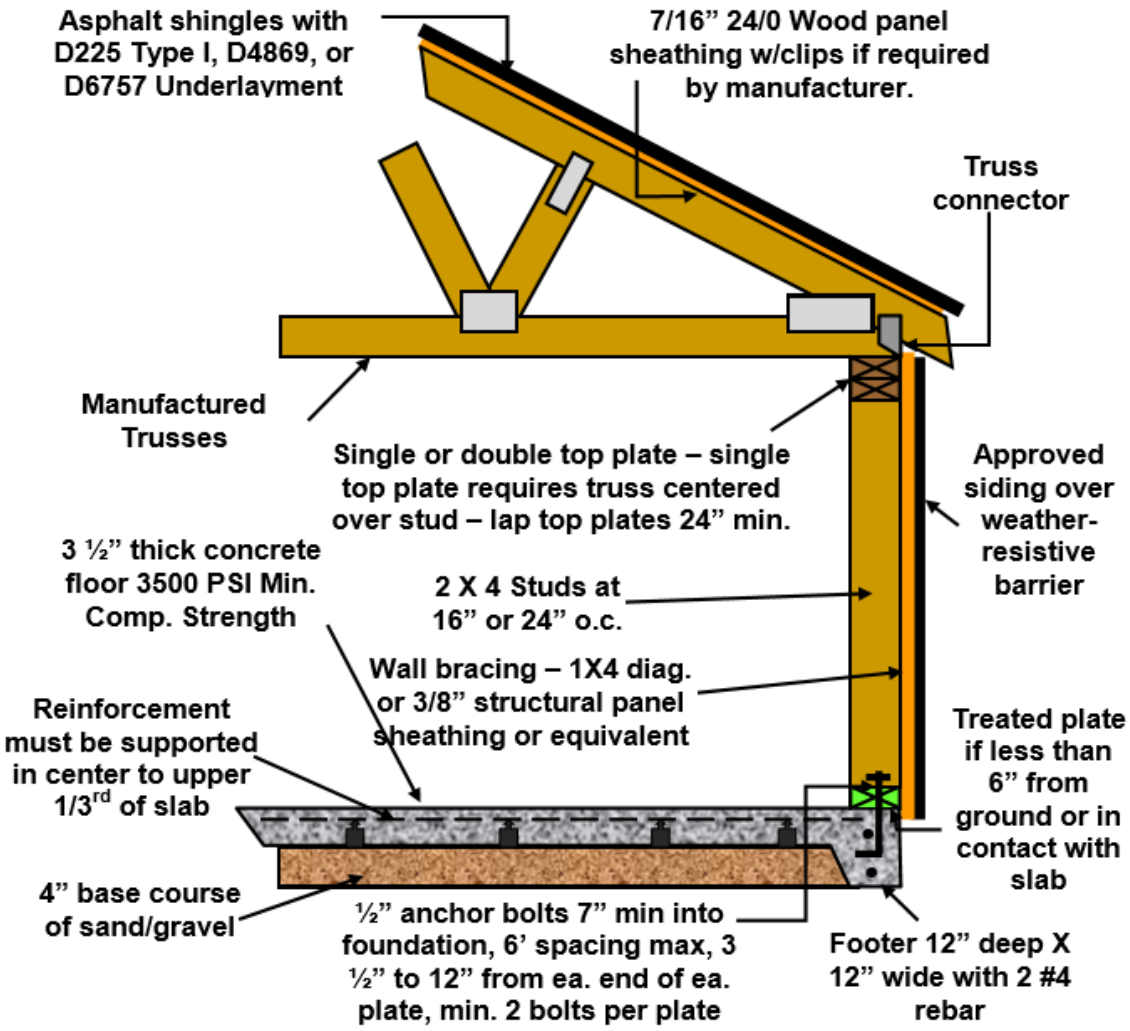
2. Residential lots platted after the effective date of this section or having a lot width greater than 60 feet shall maintain a minimum side yard setback of three feet in all districts.

3. The creation of a joint driveway use between adjoining property owners shall require a conditional use permit.

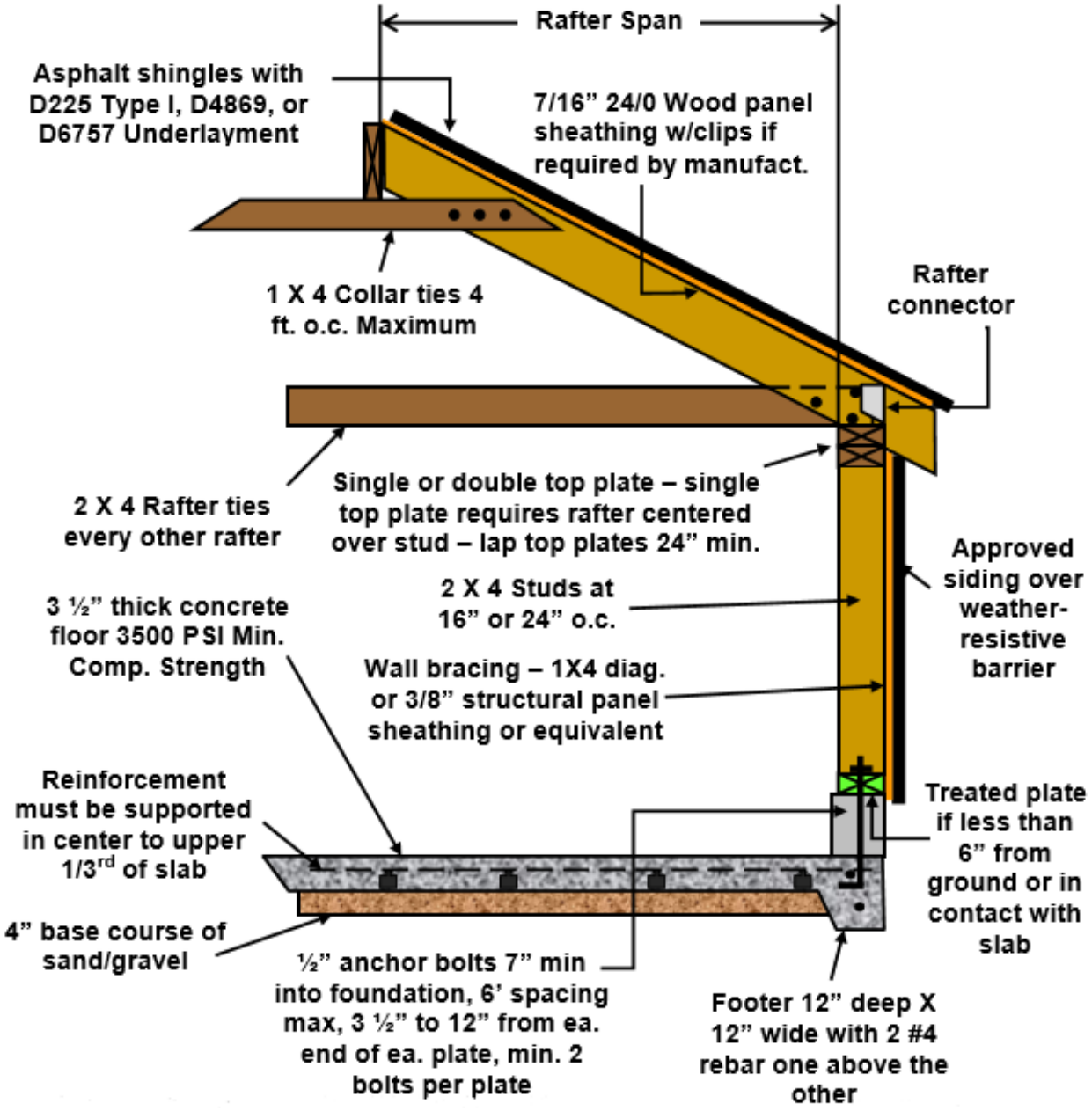
(h) Residential driveway locations. Driveways may only lead directly to, or be contiguous to driveways leading to, and attached or detached garage.

(i) Minimum driveway widths. In all zoning districts, driveways shall be no less than 12 feet in width.

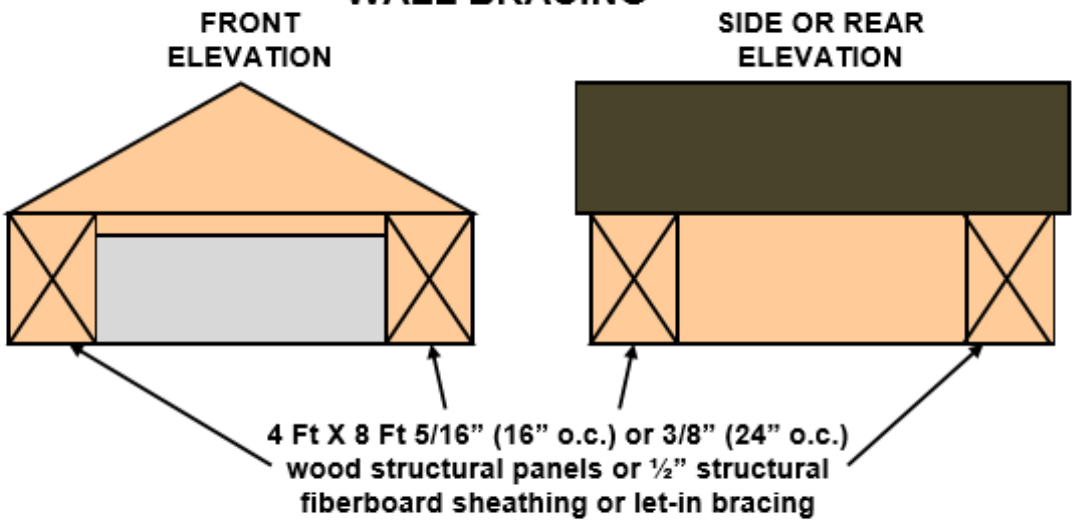
HEADER SIZES FOR GARAGES 20, 24, AND 28 FT WIDE						
	20 Ft WIDE		24 Ft WIDE		28 Ft WIDE	
Span	Header Size	# Jack Studs	Header Size	# Jack Studs	Header Size	# Jack Studs
Up to 3 ft	2-2X4	1	2-2X4	1	2-2X6	1
Up to 4 ft	2-2X6	1	2-2X6	1	2-2X6	1
Up to 6 ft	2-2X8	2	2-2X10	2	2-2X10	2
Up to 7 ft	2-2X10	2	2-2X12	2	2-2X12	2
Up to 8 ft	2-2X12	2	3-2X10	2	3-2X10	2
Up to 9 ft	3-2X10	2	3-2X12	2	3-2X12	2
Up to 10 ft	3-2X12	2	4-2X12	2	4-2X12	2
Up to 12 ft	4-2X12	2	*EWPR		*EWPR	
Over 12 ft	*EWPR		*EWPR		*EWPR	
*Engineered wood product required						


Asphalt shingles with D225 Type I, D4869, or D6757 Underlayment
7/16" 24/0 Wood panel sheathing w/clips if required by manufacturer.
Truss connector
Manufactured Trusses
Single or double top plate – single top plate requires truss centered over stud – lap top plates 24" min.
Approved siding over weather-resistive barrier
3 ½" thick concrete floor 3500 PSI Min. Comp. Strength
2 X 4 Studs at 16" or 24" o.c.
Wall bracing – 1X4 diag. or 3/8" structural panel sheathing or equivalent
Reinforcement must be supported in center to upper 1/3rd of slab
Treated plate if less than 6" from ground or in contact with slab
4" base course of sand/gravel
½" anchor bolts 7" min into foundation, 6' spacing max, 3 ½" to 12" from ea. end of ea. plate, min. 2 bolts per plate
Footer 12" deep X 12" wide with 2 #4 rebar

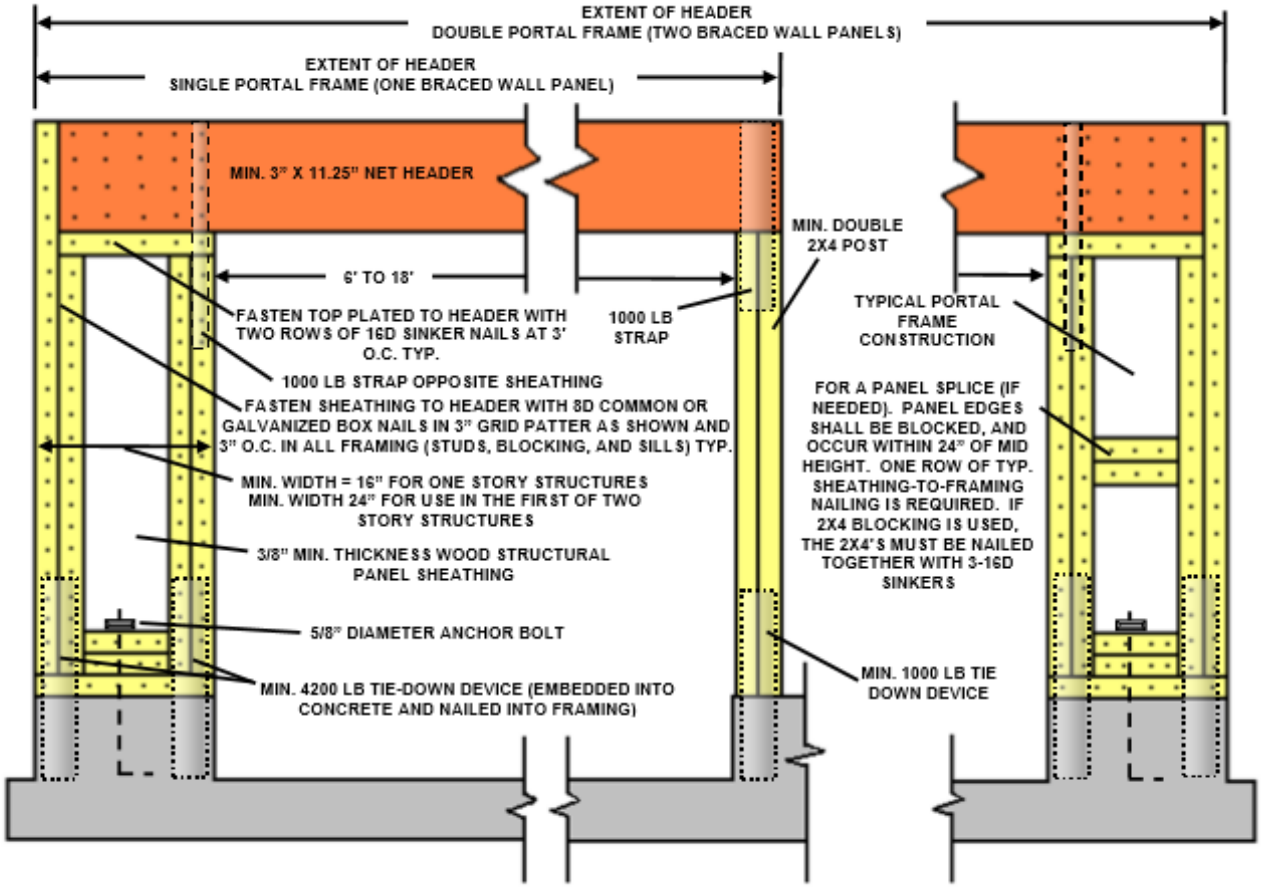
RAFTER SPANS FOR #2 HEM FIR AND SPF					
		2 x 4	2 x 6	2 x 8	2 x 10
12" o.c.	Hem Fir	7'5"	11'1"	14'0"	17'2"
	SPF	7'8"	11'3"	14'3"	17'5"
16" o.c.	Hem Fir	6'7"	9'7"	12'2"	14'10"
	SPF	6'8"	9'9"	12'4"	15'1"
24" o.c.	Hem Fir	5'4"	7'10"	9'11"	12'1"
	SPF	5'5"	7'11"	10'1"	12'4"



WALL BRACING

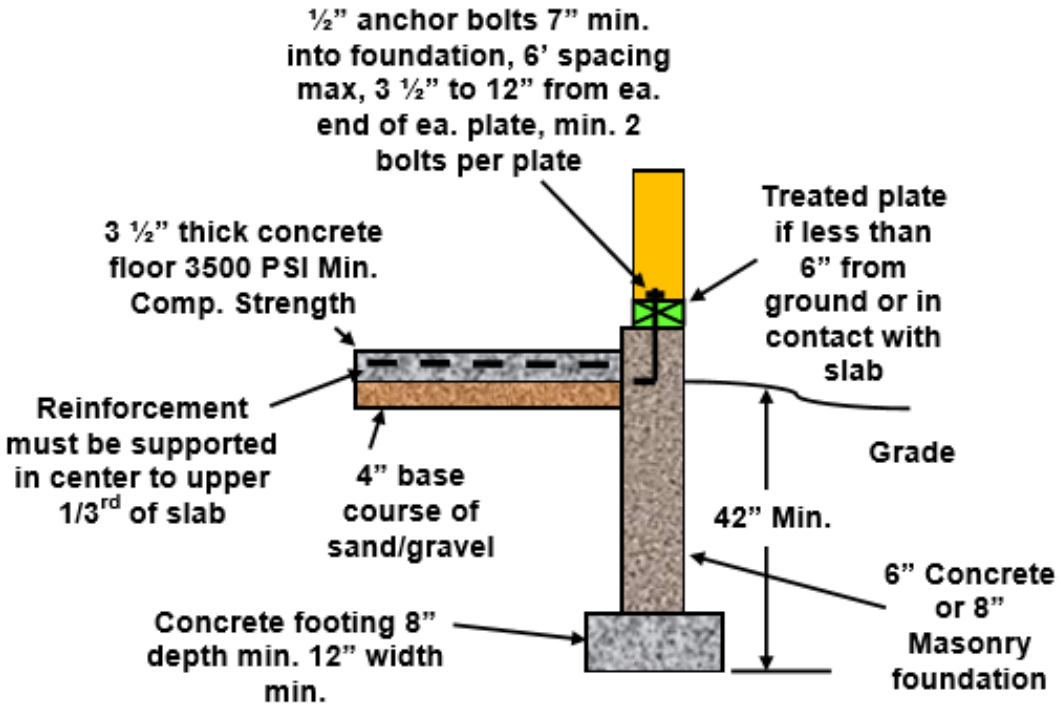


WALL BRACING FOR NARROW WALLS



ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING

FOUNDATION DETAIL FOR ATTACHED GARAGE



SEPARATION WALL DETAIL FOR ATTACHED GARAGE