



## **Patio Home with Upper Level**

**The following items are conditions for permit issuance and strict compliance is mandatory.**

1. Construction documents and a signed copy of the plan shall be kept at the site of the work, and open to inspection by the building inspector. MSBC1300.0130 subp 6
2. Provide signed rafter certifications including truss layout for trusses to be used displaying conformance with TPI 95 criteria for 35# live load design. Rafter certifications and truss layout shall be on jobsite at time of framing inspection. MSBC1309/R502.11.4
3. Gas lines shall be properly tested and witnessed by the building inspector.
  - Equipment that is not to be included in the test shall be either disconnected from the piping or isolated by blanks, blind flanges, or caps. Flanged joints at which blinds are inserted to blank off other equipment during the test shall not be required to be tested. IFGC 406.3.2
  - Where the piping system is connected to equipment or components designed for operating pressures of less than the test pressure, such equipment or equipment components shall be isolated from the piping system by disconnecting them and capping the outlet(s). IFGC 406.3.3
  - The test pressure to be used shall be no less than one and one-half times the proposed maximum working pressure, but not less than 25 psig (172 kPa gauge), irrespective of design pressure. IFGC 406.4.1
  - Test duration shall be not less than one-half hour. IFGC 406.4.2
4. Installing underground and/or infloor heat requires a building permit. Call for inspection prior to pouring concrete. (If not on original plan, an additional permit is required)
5. Windows/doors shall be installed and flashed in accordance with the manufacturer's written installation instructions. Manufacturer's written instructions shall be on jobsite at time of framing inspection. MSBC1309/ R609.1
6. All foundation walls shall be inspected prior to backfill for specific code requirements. Foundation Drainage and Foundation Waterproofing MSBC1300.0210 subp 6
7. A lathing inspection shall be made after lath, interior or exterior, is in place, but before any plastering or stone is applied. MSBC1300.0210 subp 6(g)
8. Provide 7/16" minimum roof sheathing with 24/16 panel index. Use plywood clips on all non-supported joints. MSBC1309/R503.2.1.1(1)
9. Provide exhaust fans in all bathrooms. MSBC1309/R303.3
10. A 22" x 30" attic access panel with minimum of 30" headroom over opening is required. MSBC1309/R807.1  
  
Attic access door shall be weather-stripped and insulated to a level equivalent to the insulation on the surrounding surfaces. MSBC1322/R402.2.4
11. Smoke alarms required in all areas leading to sleeping rooms and on all levels, and shall not be installed less than 3 feet from a door to a bathroom containing a bathtub or shower. MSBC1309/R314.3
12. Provide ice dam protection on all roof edges. Protection shall extend from the eave's edge to a point at least 24" inside the exterior wall line. MSBC1309/R905.2.7.1
13. No final building inspection will be conducted prior to the installation of a water meter and a remote water meter read out.

14. Wall section on the front of the garage less than 2'-8" wide shall be braced wall panels.(see attached) MSBC1309/R602.10
15. Approved numbers or addresses shall be provided for all new buildings in such a position as to be plainly visible and legible from the street or road fronting the property. MSBC1309/R319.1
16. **Flashing:** Approved corrosion resistant flashing shall be applied shingle fashion in such a manner as to prevent entry of water into the wall cavity or penetration of water to the building structure framing components. The flashing shall extend to the surface of the exterior wall finish. MSBC1309/R703.4
17. Lots shall be graded to drain surface water away from foundation wall. The grade shall fall a minimum of six inches (6") within the first ten feet (10'). MSBC1309/R703.4
18. Ducts, air handlers and filter boxes shall be sealed. MSBC1322/R403.2.2
19. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding three (3) air changes per hour in climate zones 3-8. Testing shall be conducted with a blower door at a pressure of two inches (2") w.g. (50 Pascals). Test can be conducted by an independent and approved third party. Test results shall be submitted to the Building Official. MSBC1322/R402.4.1.2  
Test results shall be submitted prior to a Certificate of Occupancy being issued.
20. An approved water resistive barrier, free from holes and breaks, shall be applied over studs or sheathing of all exterior walls. MSBC1309/R703.2
21. An approved vapor/soil-gas retarder with joints lapped not less than 12" shall be placed between the concrete floor and the base course/gas permeable layer. The sheeting material shall cover the entire floor area and fit tightly around all penetrations. MSBC1303.2402 subp 2
22. Radon Control: Installation of a passive sub-slab depressurization system, radon control system, to resist radon entry and prepare the building for post construction active radon mitigation is required. MSBC1303.2402
23. Provide rigid wind wash barrier/insulation dam at top plate between rafters per Minnesota Energy Code. MSBC1322/R402.2.3
24. Interior air barrier: The building thermal envelope shall be continuously sealed. Areas of potential air leakage in the thermal envelope shall be caulked, gasketed, weather-stripped or otherwise sealed. This includes all plumbing, mechanical and electrical penetrations. MSBC1322/R402.4.1.1
25. All electrical, plumbing, mechanical, and other penetrations in the interior air barrier shall be sealed. MSBC1322/R402.4.1.1 Table 1322/R402.4.1.1
26. A residential ventilation system shall be installed that is capable of delivering outdoor air to each habitable space by a forced air circulation system, separate duct system, individual inlets, or a passive opening. MSBC1322/R403.5
27. All recessed lighting shall have enclosures that are sealed or gasketed to prevent air leakage to the ceiling cavity or unconditioned space. MSBC1322/R402.4.4
28. Footings to be a minimum of 42" deep for frost. MSBC1303.1600
29. Beams shall be provided with a minimum of 1-1/2 inches of solid bearing, be notched into or rest on top of the columns, or have metal brackets that provide adequate bearing to distribute the load installed on both sides of the beams. MSBC1309/R502.6 and R606.6.3
30. The garage shall be separated from the residence and its attic area by not less than 1/2" gypsum board applied to the garage side. Where the separation is a floor/ceiling assembly the supporting structure shall be protected by not less than 1/2" gypsum board. Garages beneath habitable rooms shall be separated by not less than 5/8" Type X gypsum board. MSBC1309/R302.5 Table 302.6
31. No openings are allowed in the fire barrier except for a service door which must be a 1-3/8" thick solid wood door or a solid or honeycomb core steel door not less than 1-3/8" thick or a 20 minute fire-rated door. MSBC1309/R302.5.1

32. Entire garage area shall be covered with 1/2" gypsum board. This includes ALL walls, ceiling, beams, columns, posts and headers. Note: Trusses 24" o/c may require 5/8" gypsum board. MSBC1309/R302.5 Table 302.6
33. A monometer test on drain, waste and vent piping is required at final inspection. MPC4715.2820
34. Provide a treated bottom plate around the entire perimeter. MSBC1309/R317
35. Provide 1/2" x 10" anchor bolts at 6' o/c maximum spacing with one bolt within 12" of the end of each piece of sill plate. MSBC1309/R403.1.6
36. Roof assemblies subject to wind uplift pressures that exceed 200 lbs. shall have rafter or truss ties provided at bearing locations. This includes the overhang. MSBC1309/R802.11.1
37. Smoke alarms required in all areas leading to sleeping rooms and in each sleeping room. Smoke alarms to be interconnected with building wiring and shall be equipped with a battery backup. MSBC1309/R314.43, R314.4, R314.6
38. Carbon monoxide alarms shall be required in all single family homes and multi-family apartment units. General location requirements: within ten (10) feet of each sleeping room. MN Stat.299F.50 MSBC1309/R315  
  
Where a fuel burning appliance is located within a bedroom or it's attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
39. Building shall meet 115 mph wind load. MSBC1309 Table R301.2(1)
40. Roof shall meet 35# live load. MSBC1303.1700
41. Safety glazing shall be installed in all tub enclosures where the bottom exposed edge of the glazing is less than 60" measured vertically above any standing or walking surface. MSBC1309/R308.4.5
42. Any glazing closer than 24" to either edge of a door shall be safety glazed. MSBC1309/R308.4
43. All fuel lines shall be of an approved material, properly sized for appliances that are to be served and installed according to the International Mechanical Code or manufacturer's installation specifications. IFGC403/MSBC1346.5403
44. All mechanical equipment shall be installed per manufacturer's listed specifications. Installation manual must be on site for inspection. MSBC1346/304.1
45. Duct work not within building envelope shall be pressure tested to verify leaking of 4 CFM per 100 square feet or less. MSBC1322/R403.2.2 subp 1  
  
Test results shall be submitted prior to a Certificate of Occupancy being issued.
46. All sleeping rooms and basements shall have one window meeting egress standards, or an exterior door.
  - 20" minimum opening in width
  - 24" minimum opening in vertical dimension
  - 5.7 square foot of opening minimum
  - 44" maximum sill height MSBC1309/R310-R310.2.2
47. All footings to bear on undisturbed non-organic soil. MSBC1309/R403.1
48. All wood in contact with concrete to be treated wood. MSBC1309/R317.1
49. All glass in doors, atrium doors and sidelights to be Category II safety glass. MSBC1309/R308.4.1
50. Install proper wind bracing. Bracing shall be designed for 115 mph wind load. MSBC1309/R301.2.1

51. Attic ventilation: The total net free ventilation area shall not be less than 1 to 150 of the area of the space ventilated except that the total area is permitted to be reduced to 1 to 300, provided at least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated no more than 3 feet below the ridge or highest point, with the balance of required ventilation provided within the bottom third of the attic space. (i.e. eaves) MSBC1309/R806.2
52. A building certificate shall be posted in a permanently visible location inside the building. MSBC1322/R401.3. Certificate shall be posted at final building inspection.
53. Post the attached Inspection Record Card on the jobsite.  
MSBC1300.0210 subp 3
54. a. The term "complete" shall include all work proposed in the approved permit. All building permits issued shall complete construction of the project within one hundred and eighty (180) days after the permit is issued, without additional approval. If at the time of application, the project is anticipated to not be completed within one hundred eighty (180) days, the applicant shall provide the project's anticipated timeline. CMS may adjust for reasonableness and approve project timelines as part of the permit review process up to five hundred and forty (540) days. Projects anticipated to exceed five hundred and forty (540) days shall seek approval from the jurisdiction's applicable governing body.  
b. A permit holder may request extensions in increments of one hundred and eighty (180) days. CMS may approve up to two extensions if CMS judges steady and continuous progress is being made. Permit holders requesting more than two extensions shall make an application for a new permit. The new permit application shall state the reason and demonstrate that circumstances were beyond the control of the permit holder.
55. This structure must comply with all portions of the Minnesota State Building Code whether noted on this plan or omitted. Failure to note any detail(s) on the plan does not remove the builder from the responsibility of complying with the Building Code. Plan review was done in accordance with the current Minnesota Building Code. Plan review does not waive any additional code compliance issues found on site. MSBC1300
56. Porches, balconies, ramps or raised floor surfaces located more than 30 inches above floor or grade shall have guards not less than 36" in height not allowing the passage of a sphere larger than 4 inches in diameter. MSBC1309/R312.1.1-R312.1.3
57. Submit engineering data for the floor trusses. Floor truss certifications shall be on jobsite at time of framing inspection.  
MSBC1309/R502.11.4
58. When enclosed, area under steps to be covered with 1/2" gypsum board. This includes ceiling, walls and underside of steps.  
MSBC1309/R302.7
59. Window Fall Protection: Window sills in a dwelling unit, where the lowest part of the opening of an operable window is located more than 72" above finished grade or surface below, the lowest part of the window opening shall be a minimum of 24" above the finish floor. MSBC 1309/R312.2.1
60. REQUIREMENTS FOR ALL STAIRS: MSBC1309/R311.7-R311.7.8.4
- |  |                             |
|--|-----------------------------|
| 1. 36" minimum width   | 6. 7¾" maximum rise         |
| 2. 10" minimum tread   | 7. Minimum of 6'8" headroom |
| 3. Use 3 – 2 x 12 stringers  | 8. Use Joist Hangers        |
| 4. Double joist around openings  |                             |
| 5. 34"-38" high continuous gripable handrail with ends returned to wall. |                             |

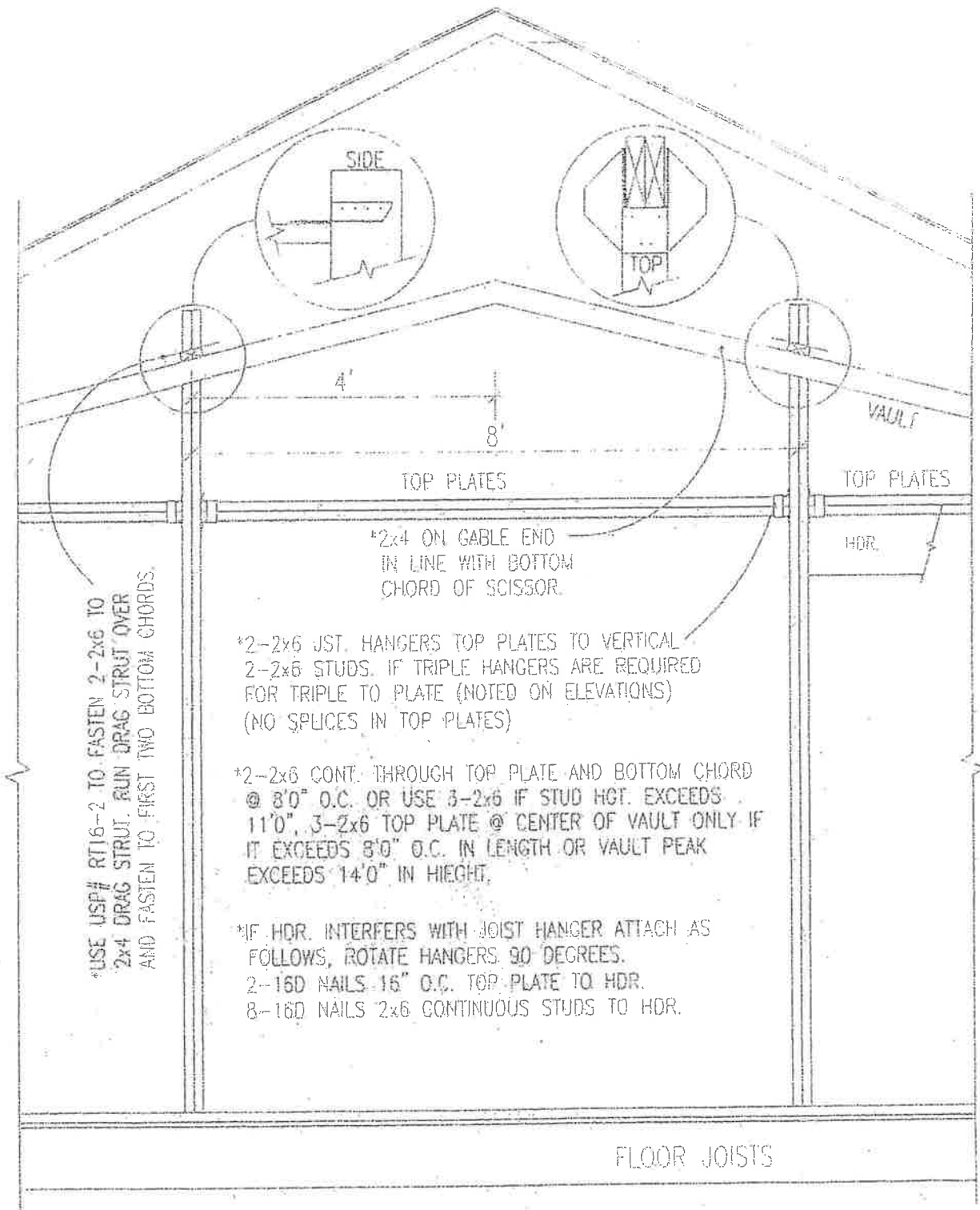
Open risers are permitted, provided that the opening between treads does not permit the passage of a four inch (4") diameter sphere.

The greatest riser height and tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch.

Guards on stairs shall not be less than 34" in height measured vertically from the nosing of the treads. MSBC1309/R312.1.2 exception #1

Nothing four and three-eighth inches (4-3/8") or more in diameter shall pass through the guards (on stairways).  
MSBC1309/R312.1.3

# VAULTED END WALL DETAIL



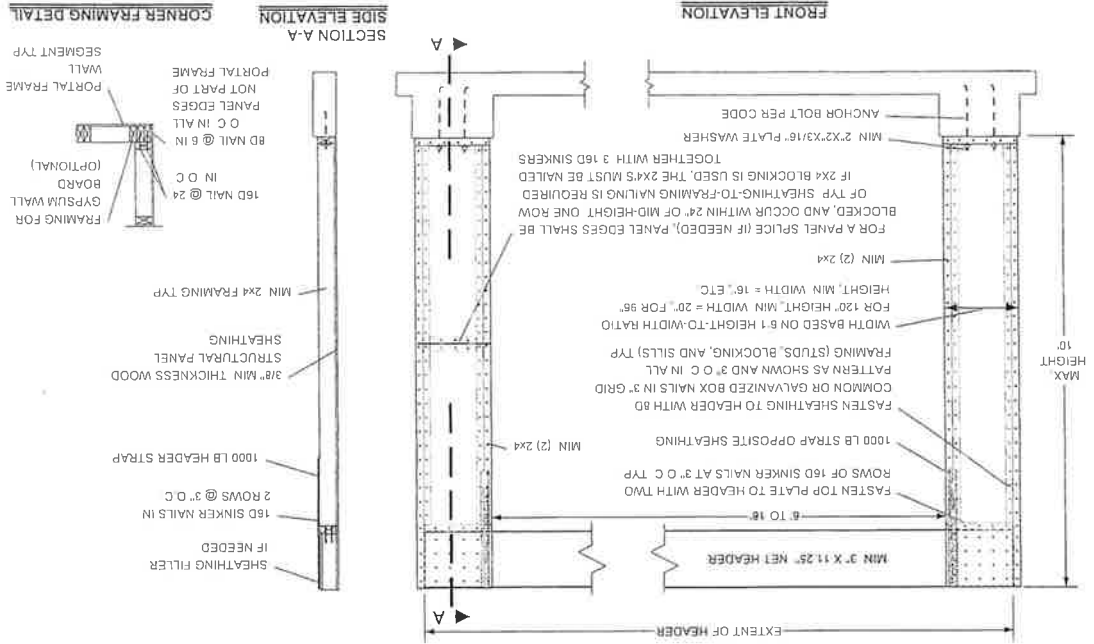
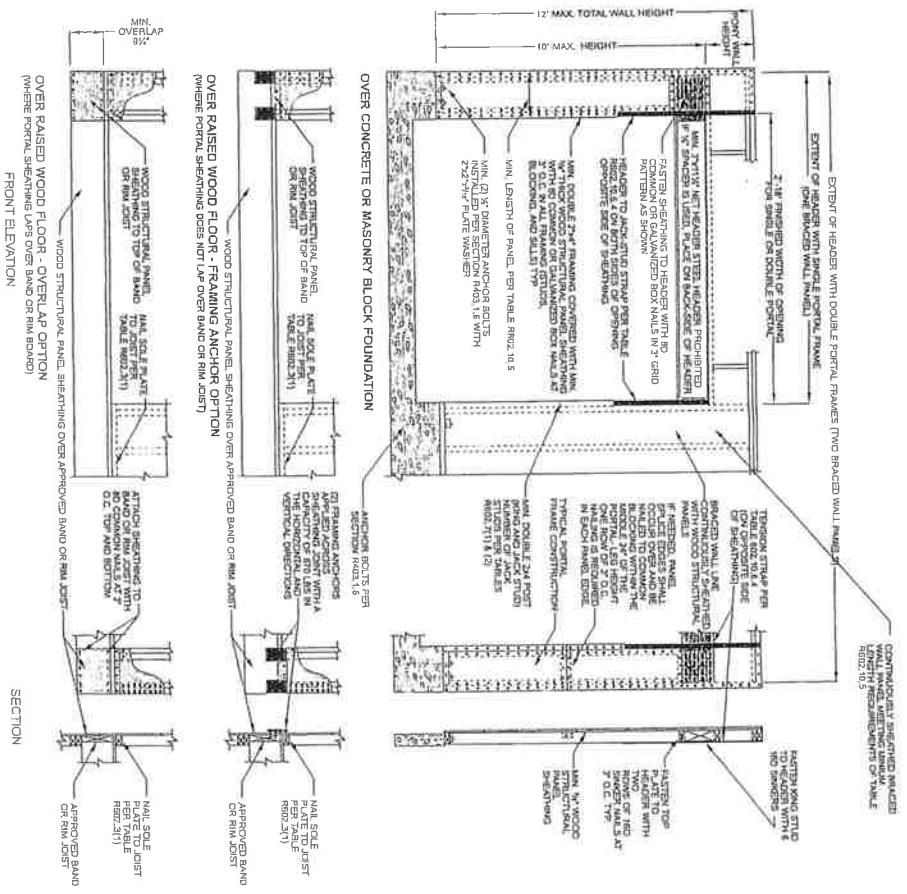


Figure 1. Recommended construction details for APA portal frame bracing without hold-downs

Form TT-077A

BRACED WALL PANEL



WALL CONSTRUCTION

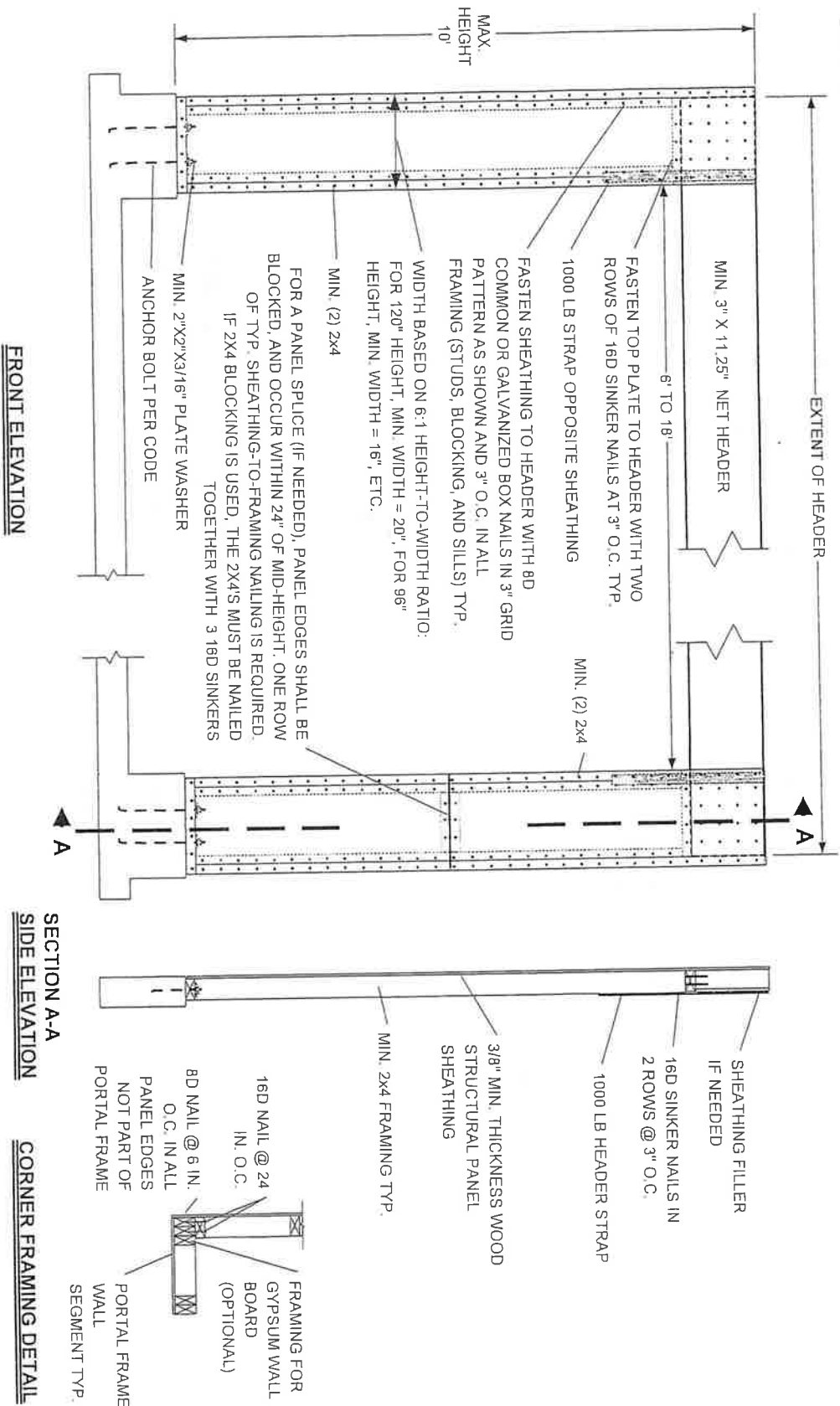
FIGURE R602.10.6.4  
 METHOD CS-PF—CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION

For ST: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

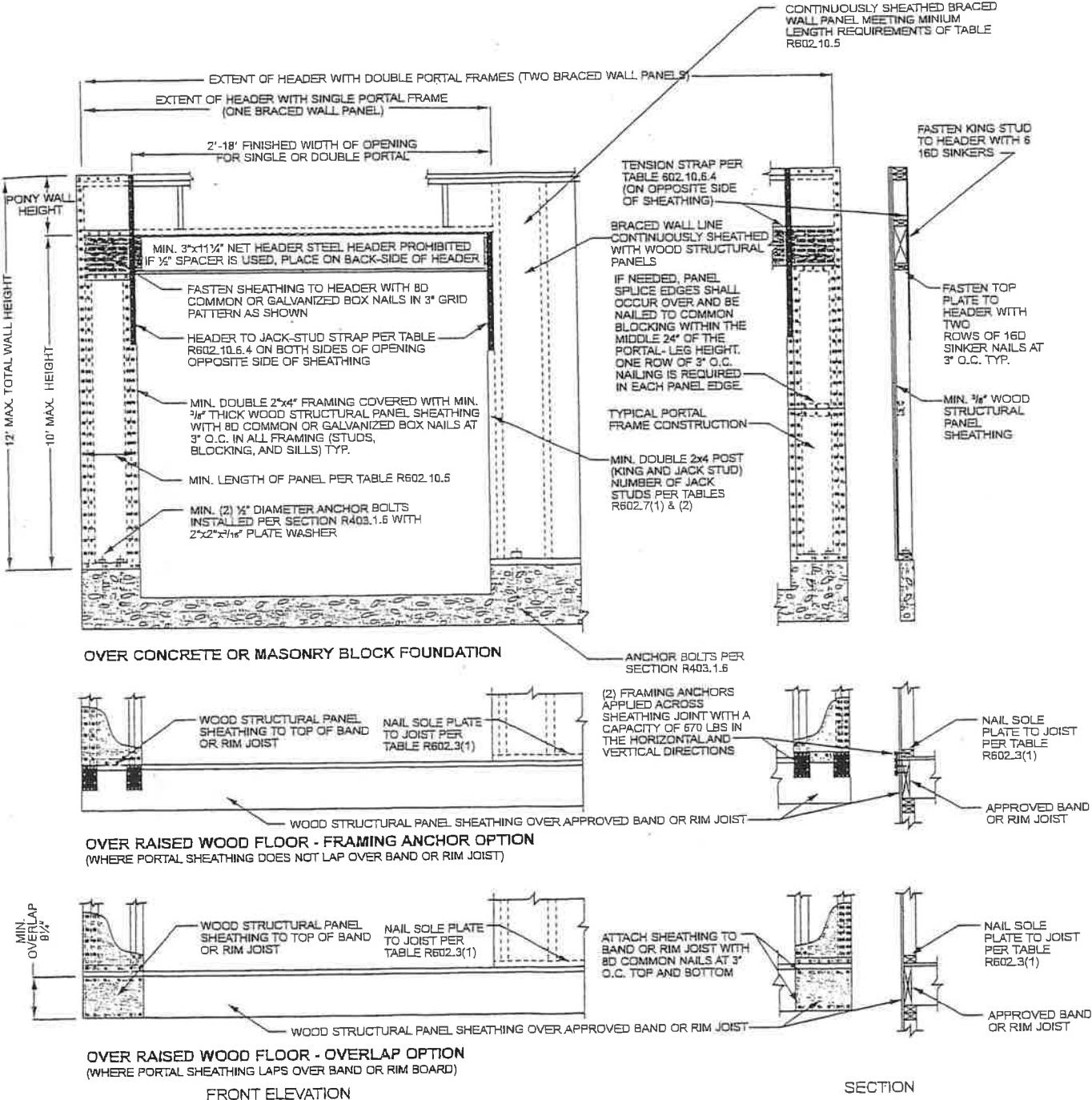
# BRACED WALL PANEL

Form TT-077A

Figure 1. Recommended construction details for APA portal frame bracing without hold-downs



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For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE R602.10.6.4  
METHOD CS-PF—CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION