

1 PERSPECTIVE

CANADA quick release plan
 PLAN SERVICE
 DWG. NO. Q-6313 SHEET 1 OF 3

- 1 perspective
- 2 front elevation
- 3 exhaust air louvers
- 4 insulated storage doors
- 5 air control dampers
- 6 fan & control room
- 7 foundation at front end is stepped down 2'-0" below sidewall foundation

SPECIFICATIONS

Ventilation system and duct design based on 15 cfm/ton. This may vary. Consult equipment supplier for exact dimensions of fan room and controls.

Unless otherwise specified, all cast-in-place concrete is to be at least 3000 psi @ 28 days, 6% air entrainment

All reinforcing steel to be at least 40,000 psi deformed bars; provide 2" concrete cover over reinforcing steel

All exposed steel to be galvanized or painted to resist corrosion from moisture

All wood indicated 'pressure-treated' is CCA pressure-treated to a net retention of 0.4 lb/ft³ (ground contact specification, CSA-080 Wood Preservation)

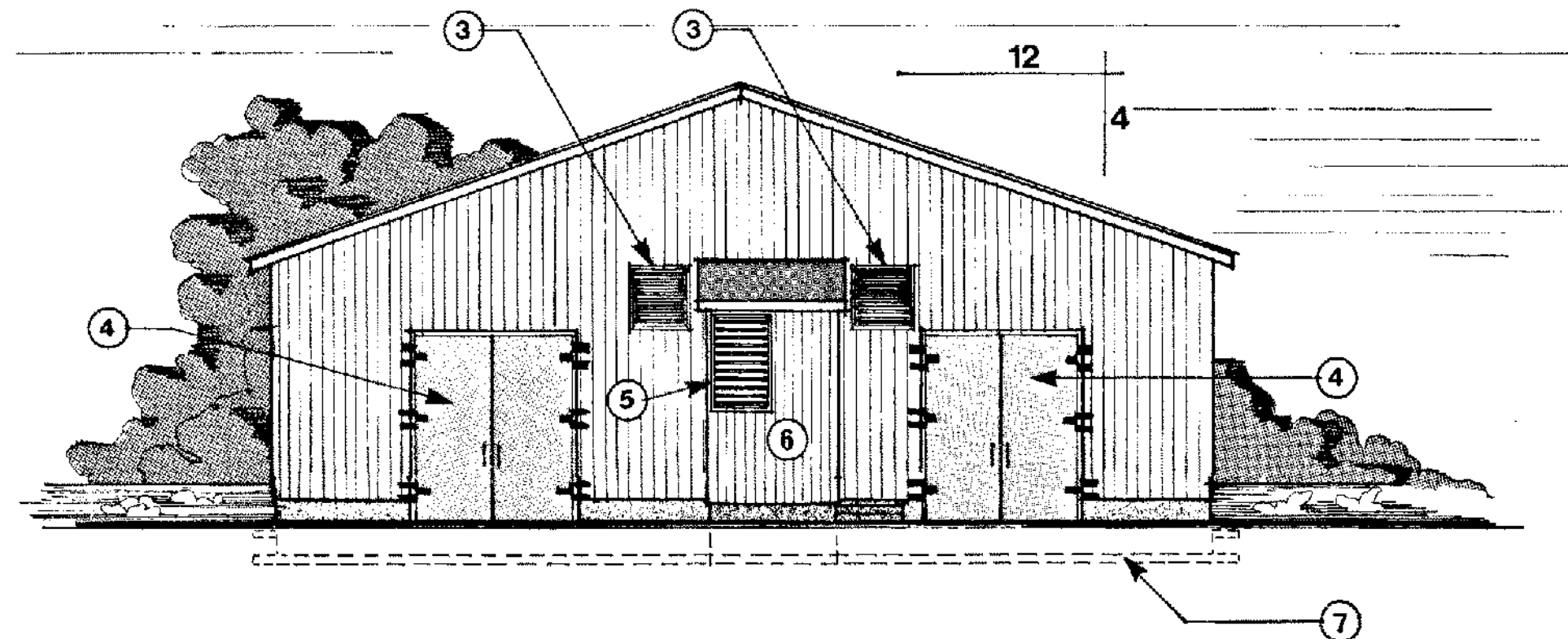
All framing lumber is No. 2 (or better), S-P-F species group, unless otherwise specified

This plan conforms to the requirements of the Canadian Farm Building Code. The user of this plan must ensure that the design criteria indicated herein will meet all local design conditions, building regulations and special requirements.

ONE SET OF DRAWINGS AND LEAFLETS SHOULD INCLUDE:

CPS no.	sheet no.	Title
Q-6313	-1-	Bulk Potato Storage 2500 tons - 2 bins
Q-6313	-2-	Floor Plan, Fan House Details
Q-6313	-3-	Section and Details

WARNING
 This plan may require structural and other changes to meet local site conditions, climatic loads, user requirements and applicable building regulations (such as the Canadian Farm Building Code). Before construction, the user of this plan is responsible to ensure that all required changes are made.



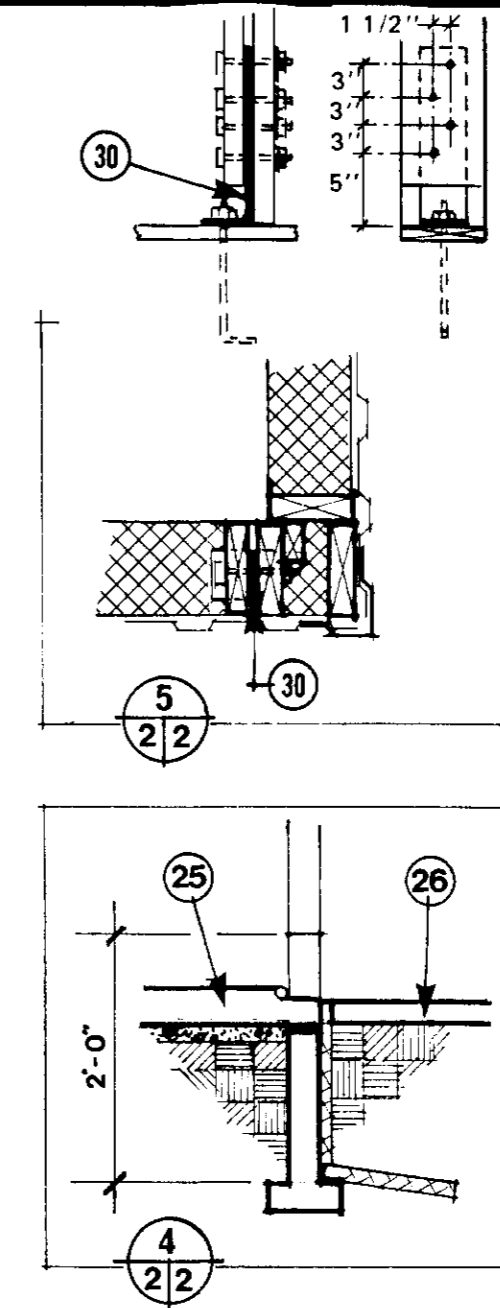
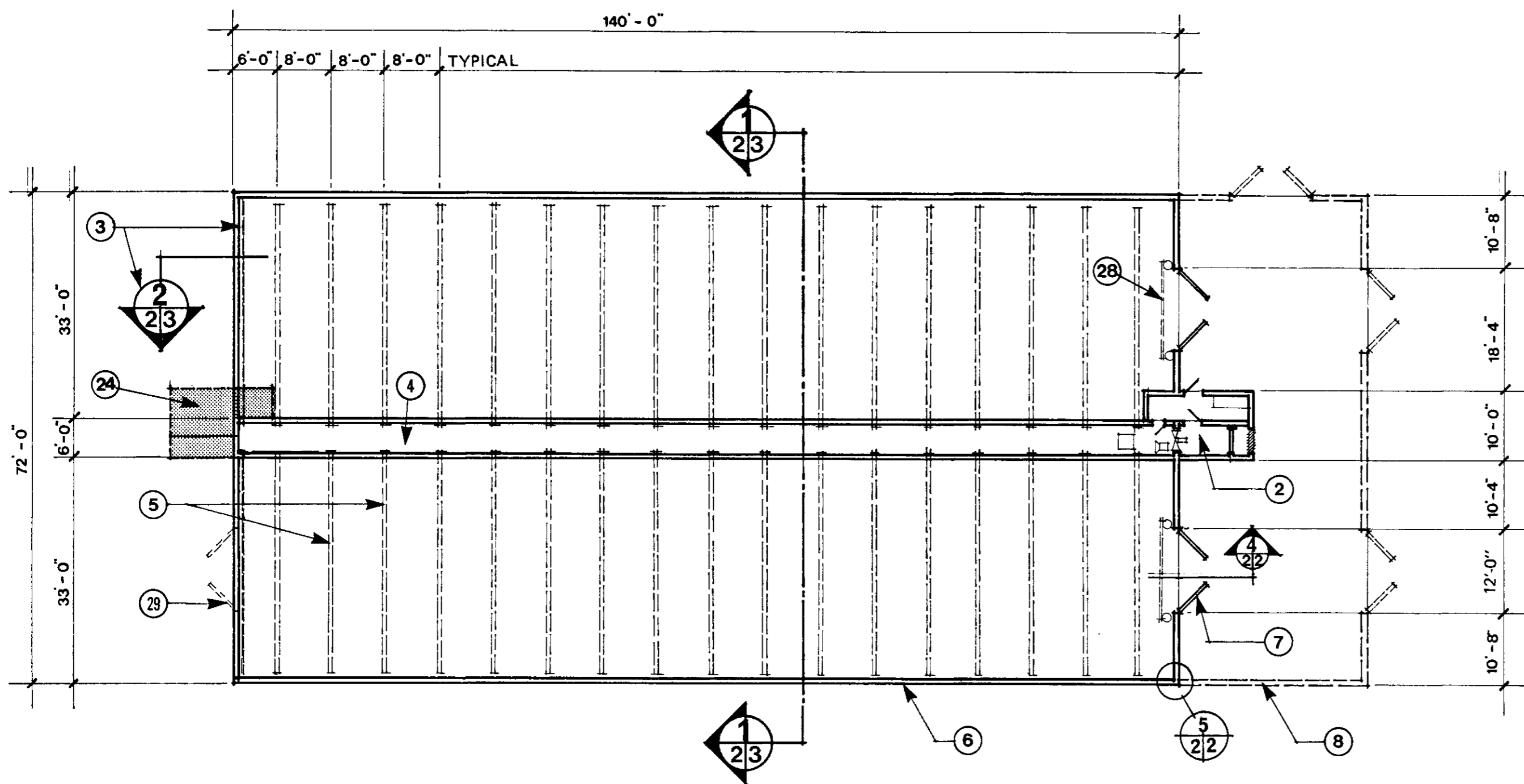
2 FRONT ELEVATION

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BULK POTATO STORAGE
2500 TONS 2 BINS

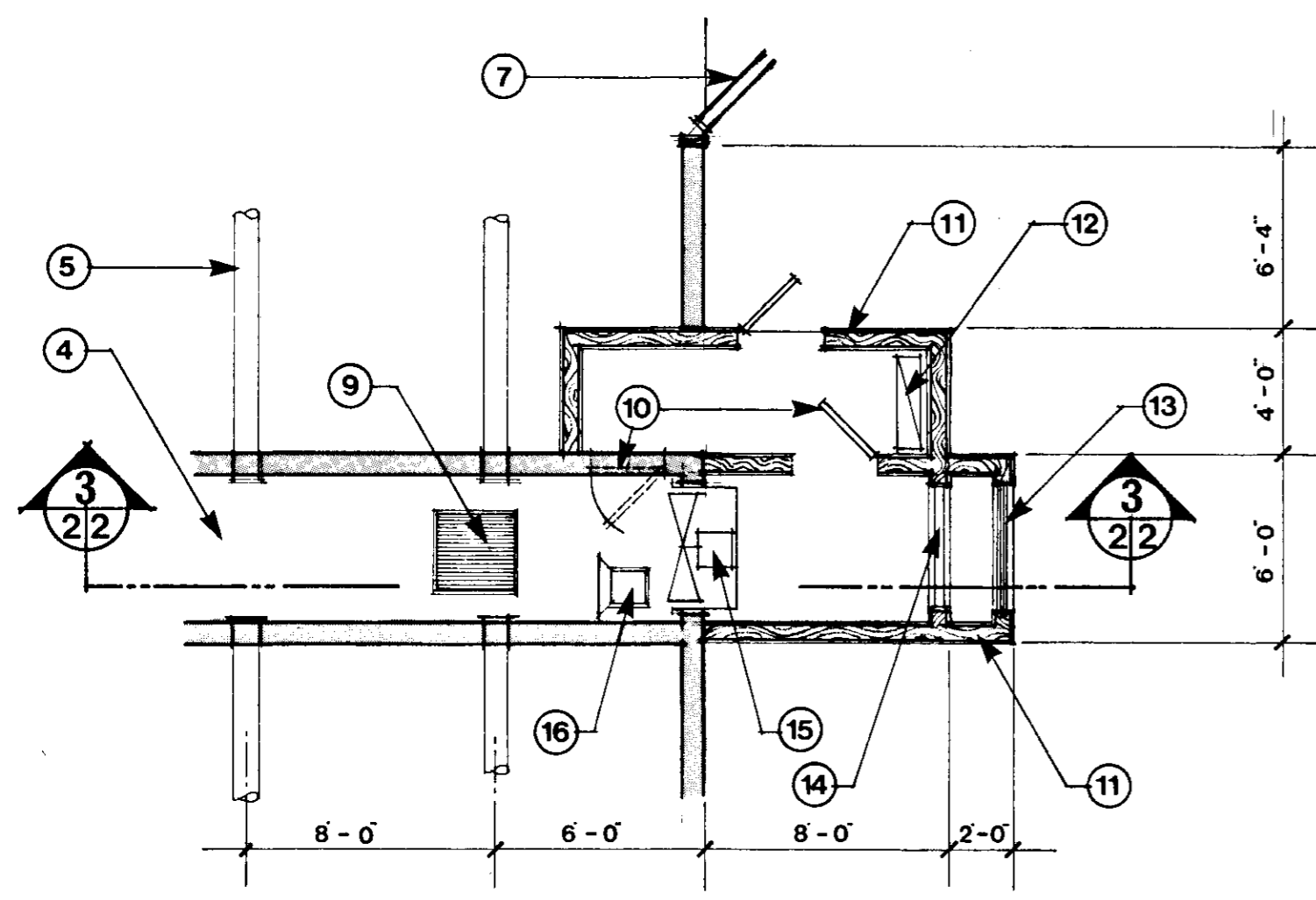
DESIGNED D. Darby	DATE NOV. 83	PLAN
DRAWN <i>JD</i>	DETAIL NO. _____ A	Q 6313
CHECKED _____	ORIGINATES ON SHEET _____ B	
SCALE _____	DRAWN ON SHEET _____ C	SHEET 1 OF 3



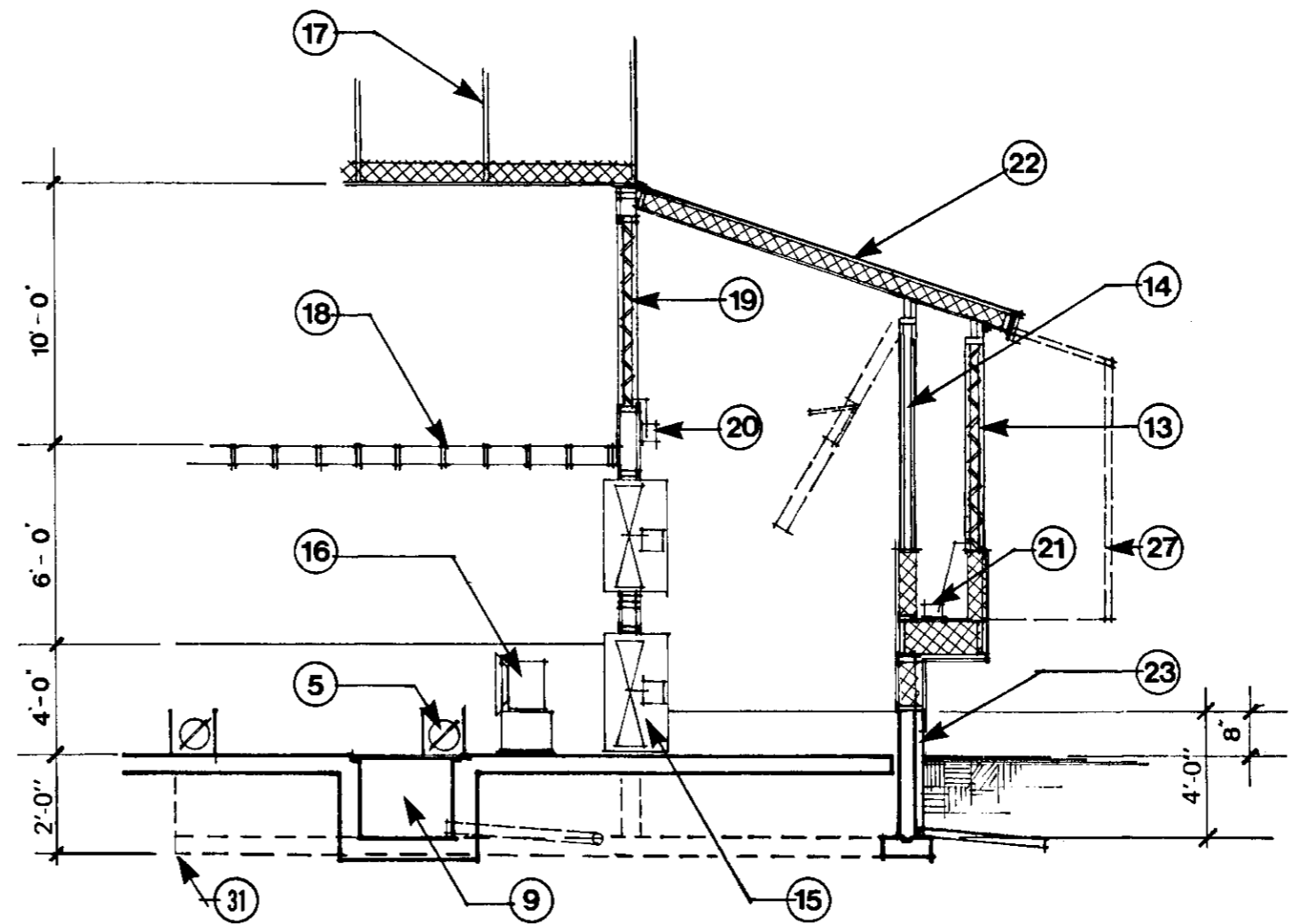
- 1 floor plan
- 2 fan & control room plan
- 3 ventilation duct at rear wall (optional)
- 4 main air plenum
- 5 lateral ducts 12" diameter at 8'-0" oc or 15" diameter at 10'-0" oc; corrugated metal or P.V.C.
- 6 exterior stud wall details
- 7 12'-0" insulated storage doors
- 8 optional grading and handling room addition (requires clear span trusses or beam support at midspan)
- 9 sump with removable grate; use solid-handling sump pump, or sloped drain
- 10 access doors
- 11 fan house walls: 2" x 8" insulated stud frame construction
- 12 control panel
- 13 48" x 72" fresh air dampers (or equivalent)
- 14 48" x 72" insulated panel; isolates fresh air dampers 13 from humid air in cold weather; 12" x 16" door within panel for winter air flow
- 15 fan: 37,000 cfm (approximate) at 1 1/4" w.g. (or use 2 smaller fans)
- 16 humidifier, approx. 15 gal/hr
- 17 roof trusses and ceiling system (details sheet 3)
- 18 2" x 4" plenum wall bracing and walkway
- 19 48" x 96" return air dampers (or equivalent)
- 20 damper motor (unheated)
- 21 damper motor c/w heated gear case
- 22 2" x 8" rafters at 24" oc; R28 batt insulation
- 23 rigid foundation perimeter insulation
- 24 optional location for fan housing
- 25 concrete floor, slope 3" towards plenum
- 26 floating concrete apron (subject to frost heave)
- 27 optional hood over fresh air dampers
- 28 bulkhead system across storage doors
- 29 optional doors for access
- 30 3/16" x 4" x 18" steel hold down strap at corners & both sides of 7, 4 - 1/2" bolts to corner studs, 1 - 5/8" anchor bolt to foundation
- 31 limit of step-down sidewall footings (frost protection)

1 FLOOR PLAN

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2 FAN ROOM



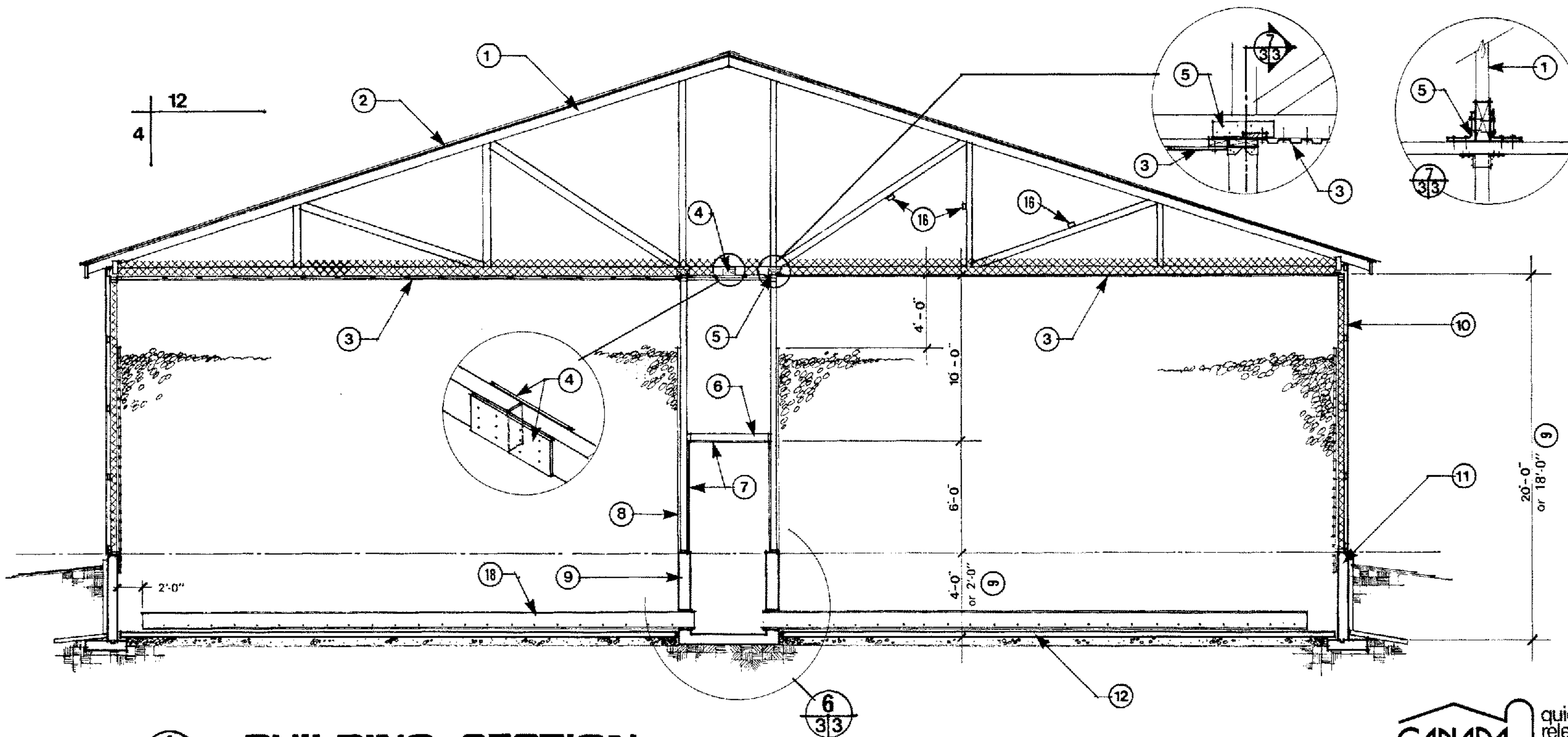
3 SECTION

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FLOOR PLAN, FAN HOUSE DETAILS

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CHECKED _____	ORIGINATES ON SHEET _____ B	
SCALE _____	DRAWN ON SHEET _____ C	SHEET 2 OF _____

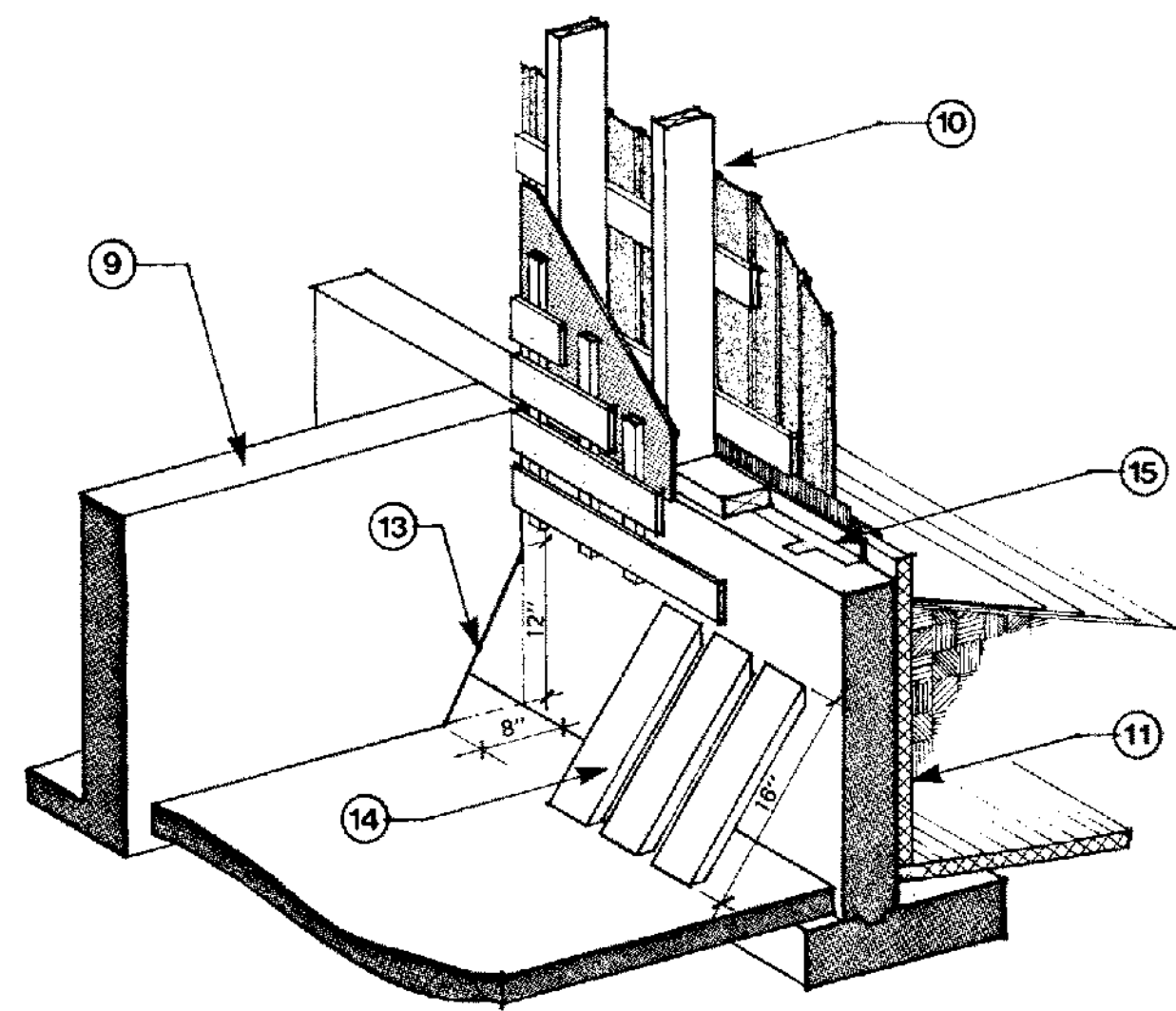


- 1 single slope roof trusses @ 4'-0" oc, or to suit local roof snow + dead loads; increase lower chord members and joints for 1500 lb extra force due to potato pressure
- 2 steel roofing on 2" x 4" purlins
- 3 steel or plywood diaphragm ceiling; optional ceiling types
R40 attic insulation, 6 mil. polyethylene vapor barrier
- 4 plywood or galvanized metal connectors for truss splice
- 5 8" x 12" x 20 ga. galvanized metal connector each side of truss; nail with 7 - 1 1/2" roofing nails per connection
- 6 2" x 4" plenum wall bracing and walkway, CCA pressure treated
- 7 3/8" fir plywood plenum wall and ceiling lining
- 8 2" x 8" CCA-treated studs @ 16" oc, or 2" x 8" Douglas Fir studs butt-soaked in copper naphthanate preservative
- 9 plenum foundation 4'-0" high, gives 20'-0" ceiling; or 2'-0" high gives 18'-0" ceiling
- 10 exterior wall using 16'-0" studs
- 11 insulated exterior foundation 4'-0" or 2'-0" high; for cold climates add horizontal 2" x 24" perimeter insulation on packed sand, to top of footing
- 12 5" concrete floor with 6x6 welded wire mesh over compacted gravel base, slope 3" to plenum
- 13 triangular duct opening
- 14 optional 2" plank duct at rear wall
- 15 continuous 3"x 3 1/2" angle-iron base anchor
- 16 continuous stiffeners as required by truss manufacturer
- 17 CCA pressure treated bottom plate
- 18 lateral ducts; 12" or 15" diameter with 2 rows of 1 1/2" air holes at 10" oc, locate 45° from bottom of duct
- 19 5/8" x 12" anchor bolts at 4'-0" oc
- 20 vertical reinforcing; 15M rods 8" oc for 4'-0" high wall, 16" oc for 2'-0" high wall, see 9; must avoid duct opening
- 21 vertical reinforcing; 15M rods at 16" oc
- 22 horizontal reinforcing; 15M rods at 21" oc
- 23 plenum floor reinforcing; 15M rods at 16" oc
- 24 plywood air control slide

1 BUILDING SECTION

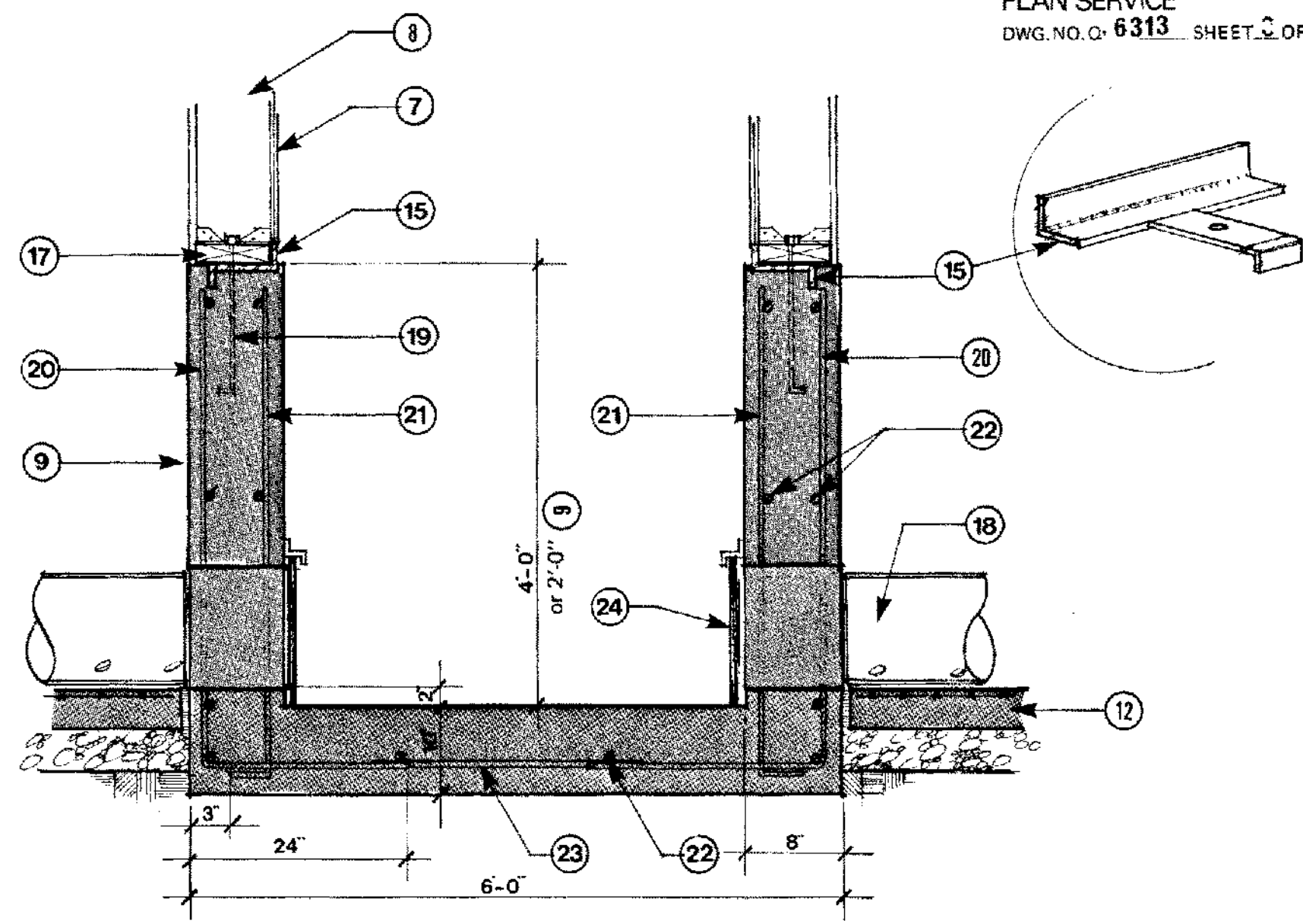
1
2/3

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2 END WALL DETAIL

2
2/3



6 PLENUM FOUNDATION DETAIL

6
3/3

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SECTION & DETAILS

DESIGNED D. Darby	DATE NOV. 83	PLAN
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CHECKED _____	SHEET _____ B	
SCALE _____	DRAWN ON SHEET _____ C	SHEET 3 OF 3