### PLEASE NOTE:

These general notes are provided to expedite the pricing and construction of this home. Local building codes and site conditions must be reviewed and materials changed or amended as required.

The architect cannot accept responsibility for specific quantities or qualities listed herein. It is the responsibility of the builder to review there construction documents and confirm the suitability of this house for a particular building site. In addition to the items listed, the owner should select finish materials such as colors and types of paints, stains, tile, carpet, cabinets, counter tops and light fixtures. Also to be considered are the heating/cooling system, wiring plumbing and exterior sitework.

#### GENERAL NOTES

#### STRUCTURAL

Design Loads

floor & living space

floor & sleeping space

Attic Floor (1td. storage)

Balconies & Decks

Roof

Soil Bearing Capacity - assumed to be min. 1.5 tons/sq. ft.

Allowable Deflection (floor) With gypsum ceiling below No gypsum ceiling below

1/360

#### SEE TABLE \$R301.2(1) FOR FOOTNOTES

Ground Snow Load	Wind Speed (mph)	Selamic Design	Weathering	Frost Line Depth	Termite	Decay	Winter Design Temp	Ice Shield Underlayment Required	Flood Hazard	Air Freezing Index	Mean Annual Temp
Table R301.2(5)	Table R301.2(4)		Figure R301.2(3)	R403.1.4 4 ft. minimum unless engineered data shows otherwise	Figure R301.2(6)	Figure R301.2 (7)	Dry Bulb	Applicable to roofing see section R905.2.7.1	See section R322.0 and local flood maps	Applicable to shallow foundation, see table R403.3(2) 2000	See:
50 psf	123 mph	N/A	Severe	48 inches	Moderate to	Slight to	N/A	Yes			

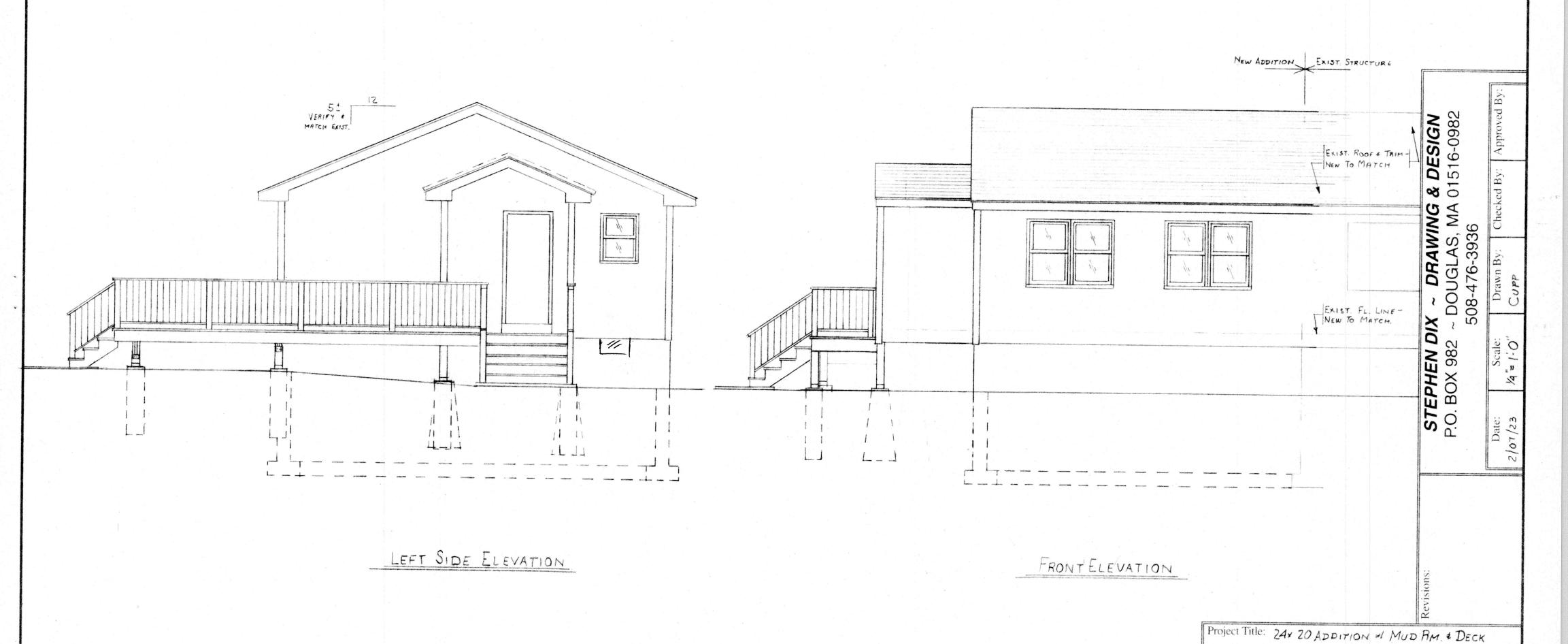
Project For: GORDON PETERS - RAU RESIDENCE

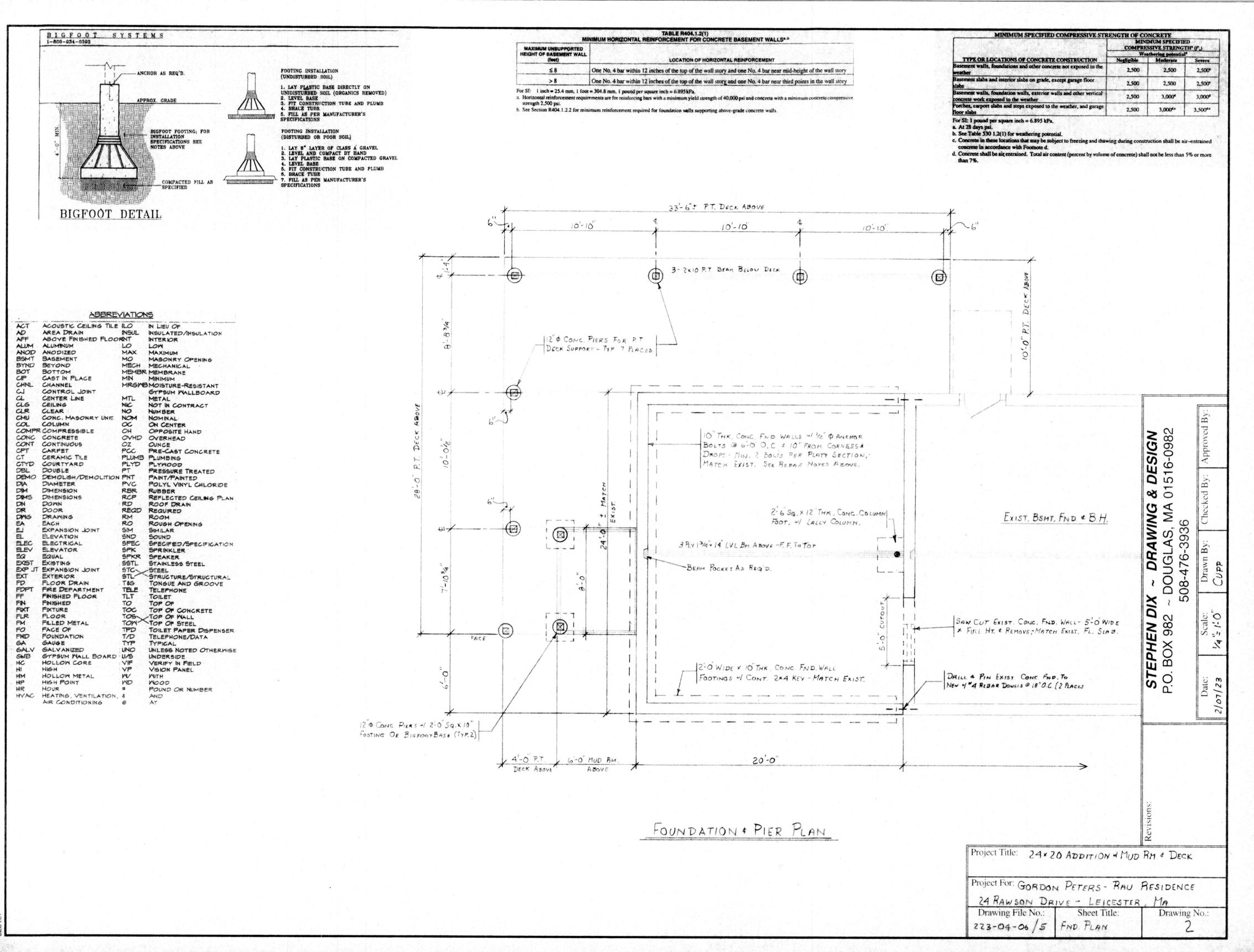
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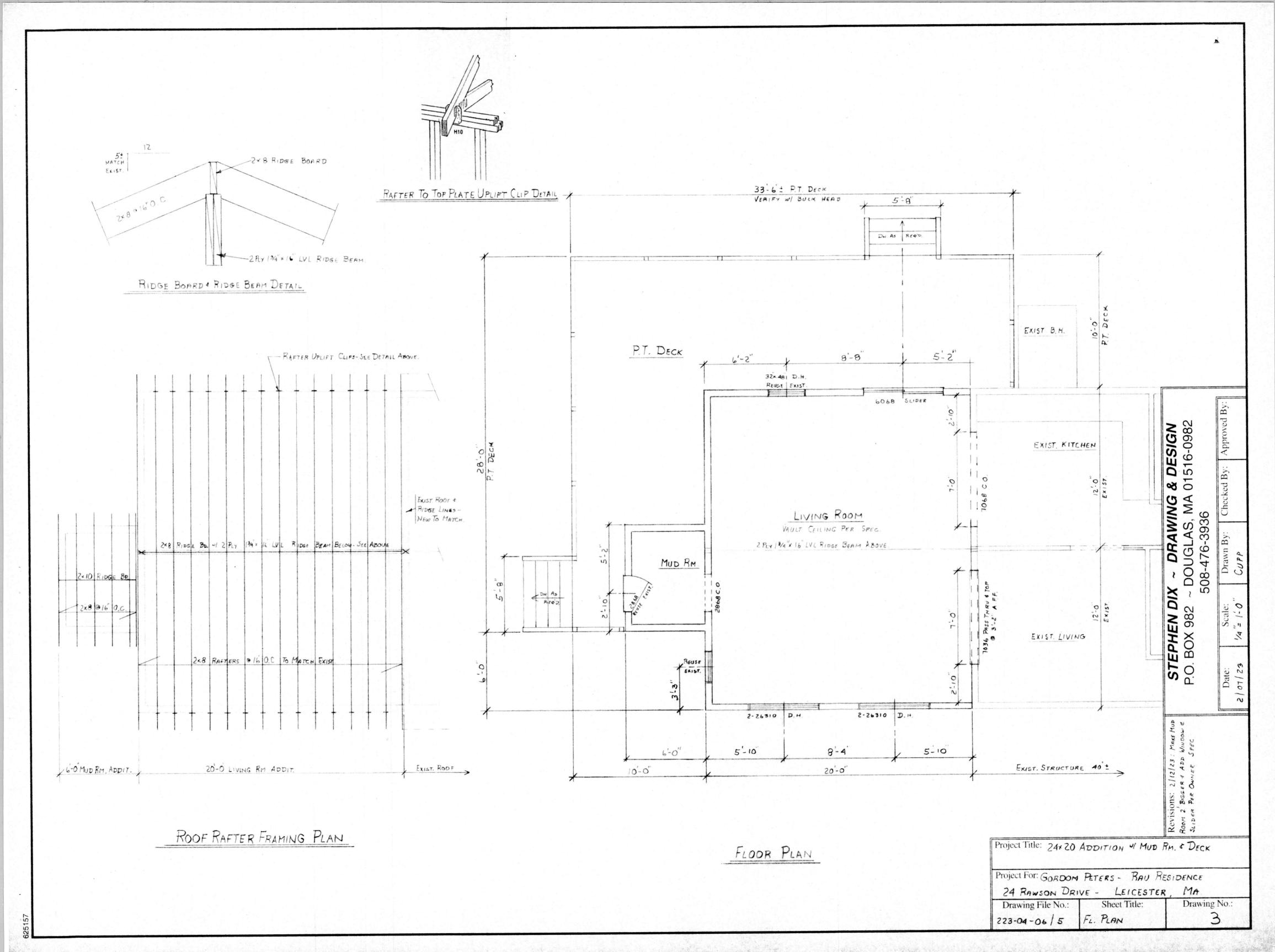
Drawing No.:

24 RAWSON DRIVE - LEICESTER, MA

223-04-06 /5 ELEVATIONS









Maximum Spans given in feet and inches

## Table 8 Wet-Service Floor Joists

Design Criteria: Deflection—limited to span in inches divided by 360 (live load only).

Strength—based on 40 or 60 pounds per square foot (psf) live load, plus 10 psf dead load.

		Size (inches) and Spacing (inches on center)											
	4		2 x 6			2 x 8			2 x 10			2 x 12	
Grade	Live Load	12"oc	16"oc	24"oc	12"oc	16"oc	24"oc	12"oc	16"oc	24"oc	12"oc	16"oc	24" oc
No. 1	40 psf	10-7	97	8-5	13-11	12-8	11-1	17-9	16-2	13-5	21-7	19-8	16-1
	60 psf	9-3	85	7-4	12-2	11-1	9-7	15-6	13-11	11-4	18-10	16-7	13-7
No. 2	40 psf	10-4	9-5	7-10	13-8	12-5	10-1	17-5	15-10	13-2	21-2	18-10	15-4
	60 psf	9-1	8-1	6-8	11-11	10-6	8-7	15-2	13-7	11-1	18-4	15-11	13-0
No. 3	40 psf	9-4	8-1	6-7	11-11	10-3	8-5	14-0	12-2	9-11	16-8	14-5	11-10
	60 psf	7-11	6-10	5-7	10-0	8-8	7-1	11-10	10-3	8-5	14-1	12-3	10-0

Figure 1A: Joist Span - Deck Attached at House and Bearing Over Beam

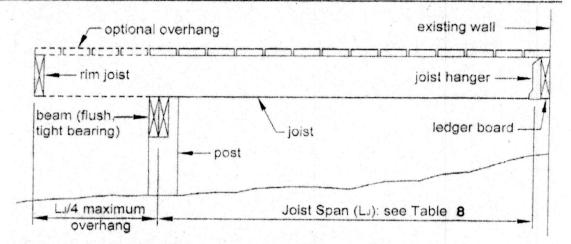
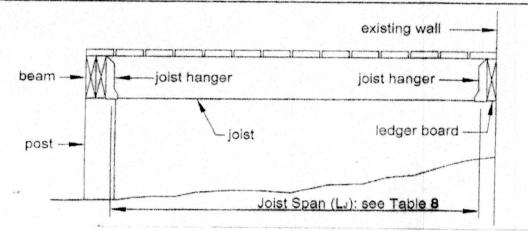
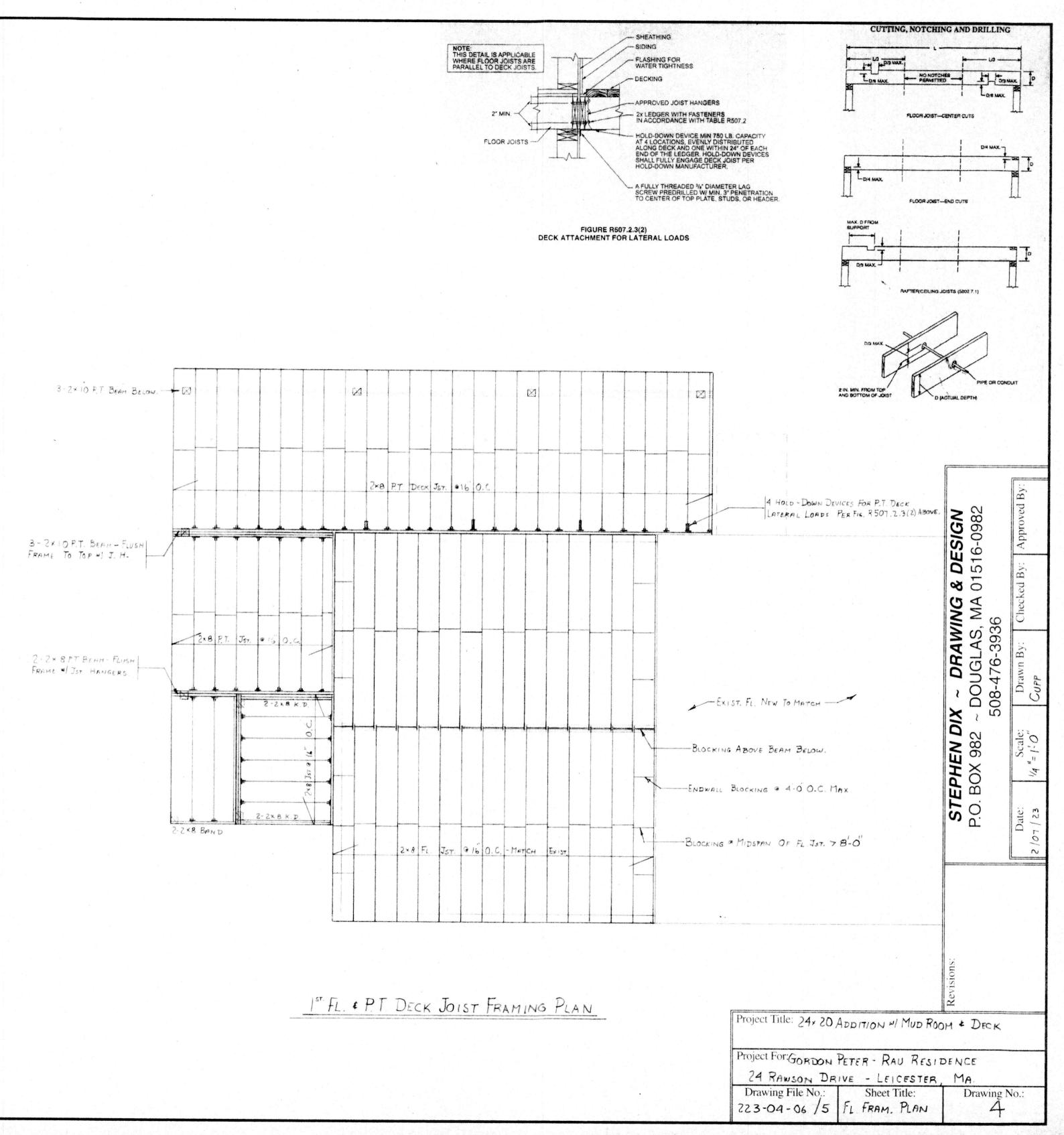
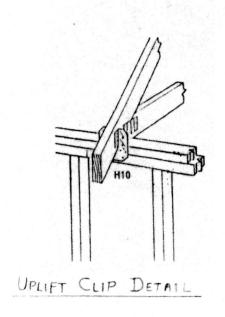
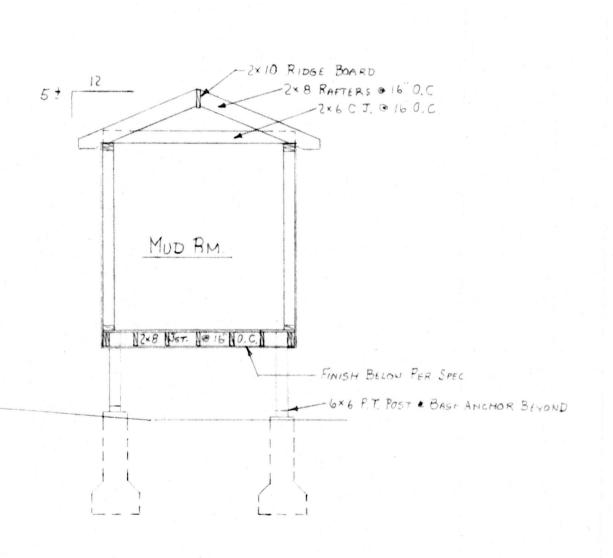


Figure 1B: Joist Span - Joists Attached at House and to Side of Beam

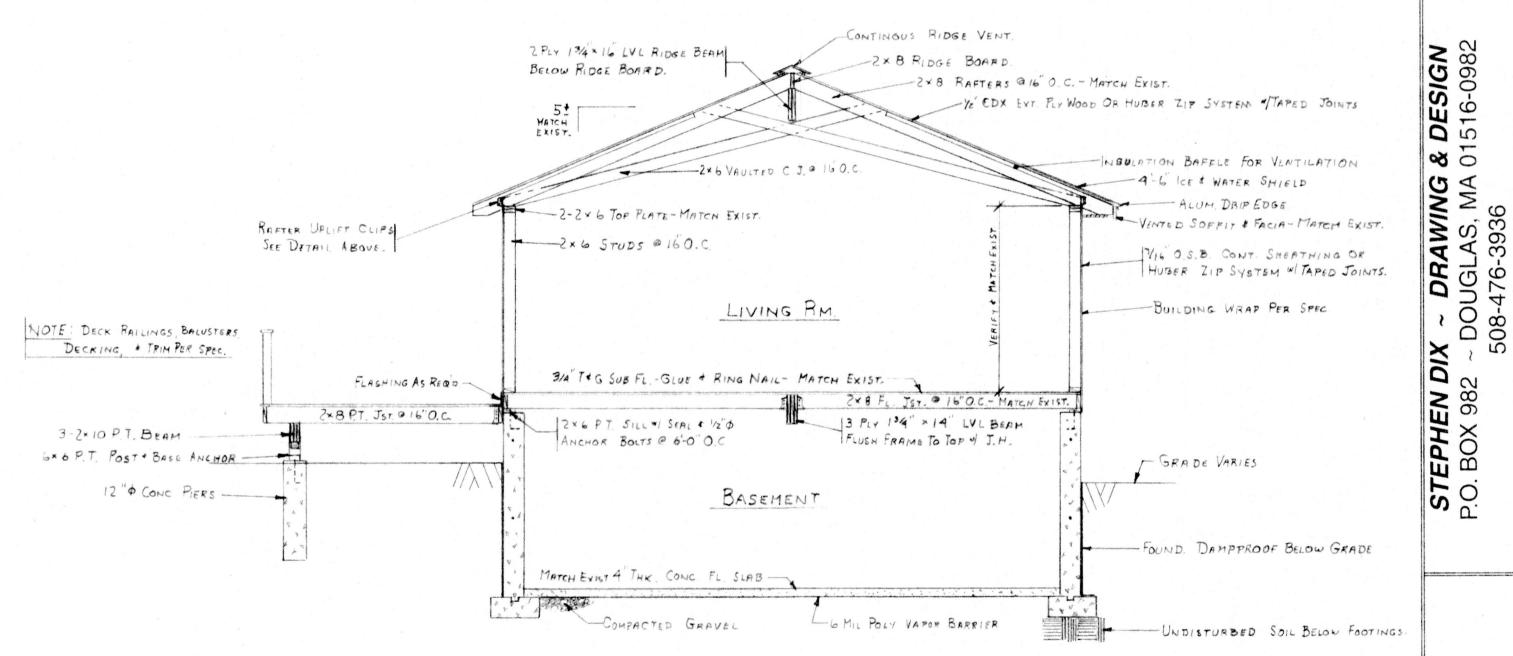












NOTE: ADDITION ENVELOP & INSULATION R' VALUES SHALL COMPLY W/ THE ICC - ZOZI IECC - SECTION RADZ ALL STATE & LOCAL AMENDMENTS.

# TYPICAL FRAMING SECTION

Project Title: 24 × 20	ADDITION W MUDI	RM, & DECK
Project For: GORDON	V PETERS - PAL	RESIDENCE
24 BAWSON D	RIVE - LEICESTE	R, MA
Drawing File No.:		Drawing No.
223-04-06 /5	SECTIONS	5

25157

#### MINIMUM REQUIREMENTS

- This document applies to single level residential wood decks only
- All lumber shall be identified by the grade mark of, or certificate of inspection issued by, an approved lumber grading or inspection bureau or agency (www.alsc.org). All lumber shall be a naturally durable species (such as Redwood or Western Cedars) or be pressure-treated with an approved process and preservative in accordance with American Wood Protection Association standards (Table 1) [R319.1 and R320.1]. All lumber in contact with the ground shall be approved preservative treated wood suitable for ground contact. [R319.1.2]
- All nails shall meet the requirements of ASTM F 1667. Wood screws shall meet the requirements of ANSI/ASME B18.6.1. Bolts and lag screws shall meet the requirements of ANSI/ASME B18.2.1.
- To resist corrosion, the following is required [R319.3]:
- · All screws, bolts, and nails for use with preservative treated wood shall be hot-dipped galvanized, stainless steel, silicon bronze or copper. Fasteners to be hot-dipped galvanized shall meet the requirements of ASTM A 153, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware, Class D for fasteners 3/8" in diameter and smaller or Class C for fasteners with diameters over 3/8".
- Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55,

#### JOIST-TO-BEAM CONNECTION

Figure 6: Joist-to-Beam Detail

Each joist shall be attached to the beam as shown in Figure 6. Joists may bear on and overhang past the beam a maximum of L<sub>1</sub>/4. Use Option 1 or Option 2 to attach the joist to the beam. Option 1 shall only be used if the deck is attached to the house with a ledger (see LEDGER ATTACHMENT REQUIREMENTS) or as shown in Figure 23. Mechanical fasteners or hurricane

3-8d common OPTION 1

toe nails

shall only be

used if deck

is attached

to house

JOIST HANGERS

(2 on one side

OPTION 2\*

\*\*see manufacturer's recommendations for additional requirements

- All hardware (joist hangers, cast-in-place post anchors, etc.) shall be galvanized or shall be stainless steel. Hardware to be hot-dipped prior to fabrication shall meet ASTM A 653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process, G-185 coating. Hardware to be hot-dipped galvanized after fabrication shall meet ASTM A123, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- Fasteners and connectors exposed to, and located within 300 feet of, a salt water shoreline shall be stainless steel grade 304 or 316.
- Other coated or non-ferrous fasteners or hardware shall be as approved by the authority having jurisdiction.
- 5. Decks supporting hot tubs are beyond the scope of
- 6. This document does not apply to decks which will experience snow loads, snow drift loads, or sliding snow loads that exceed 40 psf. This document does not address lateral loads on decks such as wind or
- 7. Flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch thickness or approved non-metallic material [R703.8].
- 8. Decks shall not be used or occupied until final inspection and approval is obtained.
- 9. This document is not intended to preclude the use of other construction methods or materials not shown

clips used as shown in Option 2 must have a minimum capacity of 100 lbs in both uplift and lateral load directions. Joists may also attach to the side of the beam with joist hangers per Option 3 (however, joists shall not be attached to opposite sides of the same beam). See JOIST HANGERS for more information. Hangers, clips, and mechanical fasteners shall be galvanized (see MINIMUM REQUIREMENTS).

- top of beam and joist

joist hanger with inside flanges -

must be at same

OPTION 3"

Figure 7: Typical Joist Hangers

\* RIM JOIST REQUIREMENTS Figure 10: Alternate Approved Post-to-Beam

Attach a continuous rim joist to the ends of joists as shown in Figure 11. Attach decking to the rim joist as shown in Figure 11. For more decking attachment requirements, see DECKING REQUIREMENTS.

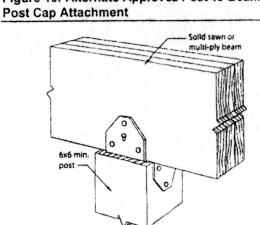
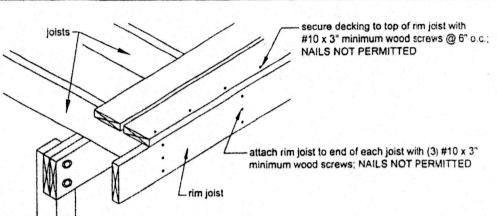


Figure 11: Rim Joist Connection Details



#### LEDGER BOARD FASTENERS

Deck ledger connection to band joist or rim board. The connection between a deck ledger and a 2-inch nominal lumber band joist (1-1/2" actual) or EWP rim board bearing on a sill plate or wall plate shall be

constructed with 1/2" lag screws or bolts with washers per Table 5 and Figure 19 (see MINIMUM REQUIREMENTS). Only those fasteners noted below are permitted. LEAD ANCHORS ARE PROHIBITED.

Table 5. Fastener Spacing for a Southern Pine, Douglas Fir-Larch, or Hem-Fir Deck Ledger and a 2-inch Nominal Solid-Sawn Spruce-Pine-Fir7.9 Band Joist or EWP Rim Board®

(Deck Live Load = 40 ps Joist Span	Rim Board or Band Joist	6'-0" and less	6'-1" to 8'-0"	8'-1" to 10'-0"	10'-1" to 12'-0"	12'-1' to 14'-0'	14'-1" to 16'-0"	16'-1" to 18'-0"	
Connection Details	On-Center Spacing of Fasteners <sup>45</sup>								
15/32" maximum sheathing	1" EWP <sup>6</sup>	24"	18"	14"	12"	10"	9"	8"	
	1- <sup>1</sup> / <sub>8</sub> " EWP <sup>6</sup>	28"	21"	16"	14"	12"	10"	9"	
	1-½" Lumber <sup>7,9</sup>	30"	23"	18"	15"	13"	11"	10"	
15/32" maximum sheathing	1" EWP <sup>6</sup>	24"	18"	14"	12"	10"	9"	8"	
	1- <sup>1</sup> / <sub>8</sub> " EWP <sup>6</sup>	28"	21"	16"	14"	12"	10"	9"	
	1-½" Lumber <sup>7.9</sup>	36"	36"	34"	29"	24"	21"	19"	
½" diameter bolt with	1" EWP <sup>6</sup>	24"	18"	14"	12"	10"	9"	8"	
15/ <sub>32</sub> " maximum sheathing and	1- <sup>1</sup> / <sub>8</sub> " EWP <sup>6</sup>	28"	21"	16"	14"	12"	10"	9"	
½" stacked washers <sup>2,8</sup>	1-½" Lumber <sup>7,9</sup>	36"	36"	29"	24"	21"	18"	16"	

The tip of the lag screw shall fully extend beyond the inside face of the band joist.

The maximum gap between the face of the ledger board and face of the wall sheathing shall be 1/2" Ledgers shall be flashed or caulked to prevent water from contacting the house band joist (see Figures 14, 15, and 16).

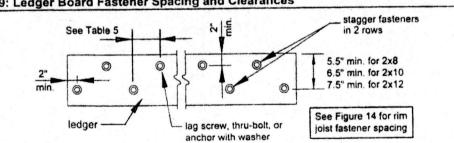
Lag screws and bolts shall be staggered per Figure 19.

Deck ledgers shall be minimum 2x8 pressure-preservative-treated No.2 grade lumber, or other approved materials as established by standard engineering practice. When solid-sawn pressure-preservative-treated deck ledgers are attached to engineered wood products (minimum 1" thick wood structural panel band joist or structural composite lumber including laminated veneer lumber), the ledger attachment shall be designed in accordance with accepted engineering practice. Tabulated values based on 300 lbs and 350 lbs for 1" and 1-1/a" EWP

A minimum 1"x91/2" Douglas fir-larch laminated veneer lumber rim board shall be permitted in lieu of the 2" nominal band joist. Wood structural panel sheathing, gypsum board sheathing, or foam sheathing not exceeding one inch thickness shall be permitted. The maximum distance between the face of the ledger board and the face of the band joist shall be one inch.

Fastener spacing also applies to southern pine, Douglas fir-larch, and hem-fir band joists

# Figure 19: Ledger Board Fastener Spacing and Clearances



#### **Table 3A: Joist Hanger Download Capacity**

Joist hangers, as shown in Figure 7, shall each have a

minimum download capacity in accordance with Table

3A. The joist hanger shall be selected from an approved

manufacturer's product data based on the dimensions of

Use joist hangers with inside flanges when clearances to

the edge of the beam or ledger board dictate. Do not use

the joist or header it is carrying. Joist hangers shall be

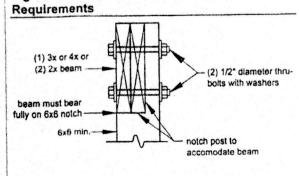
galvanized (see MINIMUM REQUIREMENTS).

clip angles or brackets to support joists.

Joist Size	Minimum Capacity, Ibs					
2x8	600					
2x10	700					
2x12	800					

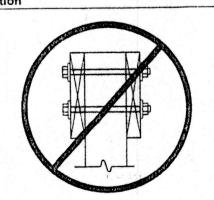
POST REQUIREMENTS [R407] All deck post sizes shall be 6x6 (nominal) or larger, and the maximum height shall be 14'-0" measured to the underside of the beam. Posts shall be centered on footings. Cut ends of posts shall be field treated with an approved preservative (such as copper naphthenate) [R402.1.2]. The beam shall be attached to the post by

Figure 8: Post-to-Beam Attachment



notching the 6x6 as shown in Figure 8 or by providing an approved post cap to connect the beam and post as shown in Figure 10. All 3-ply beams shall be connected to the post by a post cap. All thru-bolts shall have washers at the bolt head and nut. Attachment of the beam to the side of the post without notching is prohibited (see Figure 9).

Figure 9: Prohibited Post-to-Beam Attachment Condition



Thru-Bolts Thru-bolts shall have a diameter of 1/2". Pilot holes for

thru-bolts shall be 17/32" to 9/16" in diameter. Thru-bolts require washers at the bolt head and nut. Expansion and Adhesive Anchors

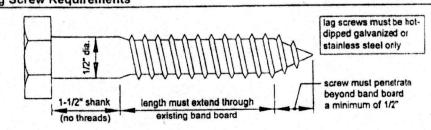
Use approved expansion or adhesive anchors when attaching a ledger board to a concrete or solid masonry wall as shown in Figure 15 or a hollow masonry wall with a grouted cell as shown in Figure 16. Expansion and adhesive anchor bolts shall have a diameter of 1/2".

Minimum embedment length shall be per the manufacturer's recommendations. All anchors must have

Lag Screws Lag screws shall have a diameter of 1/2" (see MINIMUM REQUIREMENTS). Lag screws may be used only when the field conditions conform to those shown in Figure 14. See Figure 20 for lag screw length and shank

requirements. All lag screws shall be installed with

## Figure 20: Lag Screw Requirements



washers.

Lag screw installation requirements: Each lag screw shall have pilot holes drilled as follows: 1) Drill a 1/2" diameter hole in the ledger board, 2) Drill a 3/16" diameter hole into the band board of the existing house. DO NOT DRILL A 1/3" DIAMETER HOLE INTO THE BAND BOARD.

The threaded portion of the lag screw shall be inserted into the pilot hole by turning, DO NOT DRIVE LAG SCREWS WITH A HAMMER. Use soap or a woodcompatible lubricant as required to facilitate tightening. Each lag screw shall be thoroughly tightened (snug but not over-tightened to avoid wood damage).

#### Figure 14: General Attachment of Ledger Board to Band Joist or Rim Board

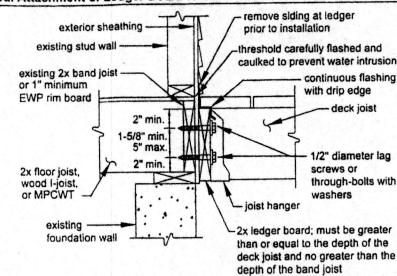
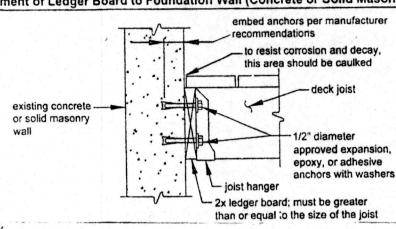
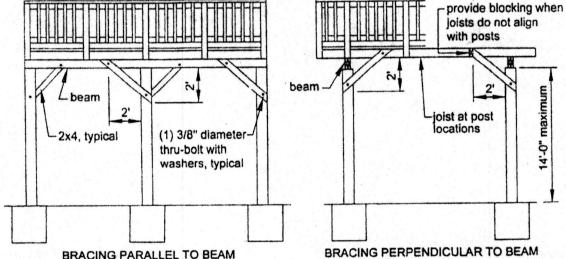


Figure 15: Attachment of Ledger Board to Foundation Wall (Concrete or Solid Masonry



Decks greater than 2 feet above grade shall be provided with diagonal bracing.

#### Figure 22: Diagonal Bracing Requirements



**BRACING PARALLEL TO BEAM** 

Diagonal Bracing: Provide diagonal bracing both parallel and perpendicular to the beam at each post as shown in Figure 22. When parallel to the beam, the bracing shall be bolted to the post at one end and beam at the other. When perpendicular to the beam, the bracing shall be bolted to the post at one end and a joist or blocking between joists at the other. When a joist does not align with the bracing location, provide blocking between the next adjacent joists. Decks attached to the house do not require diagonal bracing perpendicular to the house.

Attachment to House: Attach the deck rim joist to the existing house exterior wall as shown in Figure 23 for a

All decks greater than 30" above grade are required to

have a guard [R312.1] - one example is shown in Figure

24. Other methods and materials may be used for guard

DO NOT NOTCH

construction when approved by the authority having

GUARD REQUIREMENTS

Figure 24: Example Guard Detail

Figure 23: Attachment of Free-Standing Deck to House for Deck Stability

fasteners @ 16" o.c.

-6'-0" maximum spacing -

- 2x6 or 5/4 board

nings shall not allow

the passage of a 4"

existing wall stud, band joist, or concrete or

staggered

free-standing deck or attach the deck ledger to the house as shown in Figures 14, 15, or 16. The wall must be . sheathed with minimum 3/8" wood structural panel sheathing. Use lag screws or thru-bolts when fastening to an existing band joist or wall stud; use expansion anchors or epoxy anchors when fastening to concrete or masonry. DO NOT ATTACH TO BRICK VENEERS. VERIFY THIS CONDITION IN THE FIELD PRIOR TO UTILIZING THIS METHOD. Fasteners shall be 16" on center and staggered in 2 rows for free-standing decks. Flashing over the rim joist is required and must be installed in accordance with the flashing provisions in the LEDGER ATTACHMENT REQUIREMENTS.

with drip edge

-2x2 baluster, typica

post-frame ring shank nalls with 0.135" nominal diameter

# stair guard is required for stairs with a total rise of 30" or more; see GUARD REQUIREMENTS for Triangular opening shall Openings for required guards on thenot permit the passage sides of stair treads shall not allow

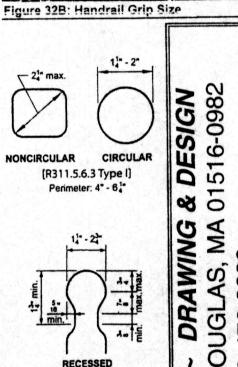
of a 6" diameter sphere

Figure 30: Stair Guard Requirements

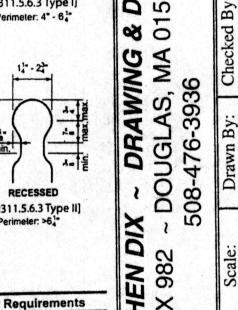
#### STAIR HANDRAIL REQUIREMENTS

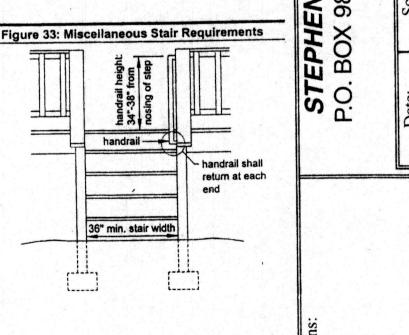
a sphere 4-3/8" to pass through.

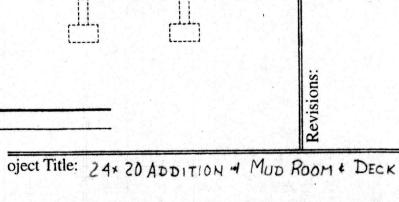
All stairs with 4 or more risers shall have a handrail on at least one side (see Figure 32A) [R311.5.6]. The handrail height measured vertically from the sloped plane adjoining the tread nosing shall be not less than 34 inches and not more than 38 inches (see Figure 30) [R311.5.6.1]. Handrails shall be graspable and shall be composed of decay-resistant and/or corrosion resistant material. Handrails shall be Type I, Type II, or provide equivalent graspability (see Figure 32B). Type I shall have a perimeter dimension of at least 4" and not greater than 6-1/4". Type II rails with a perimeter greater than 6-14" shall provide a graspable finger recess area on both sides of the profile [R311.5.6.3]. All shapes shall have a smooth surface with no sharp corners. Handrails shall run continuously from a point directly over the lowest riser to a point directly over the highest riser and shall return to the guard at each end (see Figure 33). Handrails may be interrupted by guard posts at a turn in the stair [R311.5.6.2].



# RECESSED [R311.5.6.3 Type II]







attach to guard post with oject For: GORDON PETERS - RAU RESIDENCE (2)8d common nalls or 24 RAWSON DRIVE - LEICESTER, MA. (2)#8 wood screws on Sheet Title: Drawing No.: 223-04-06/5 DECK DETAILS attach balusters at top and bottom