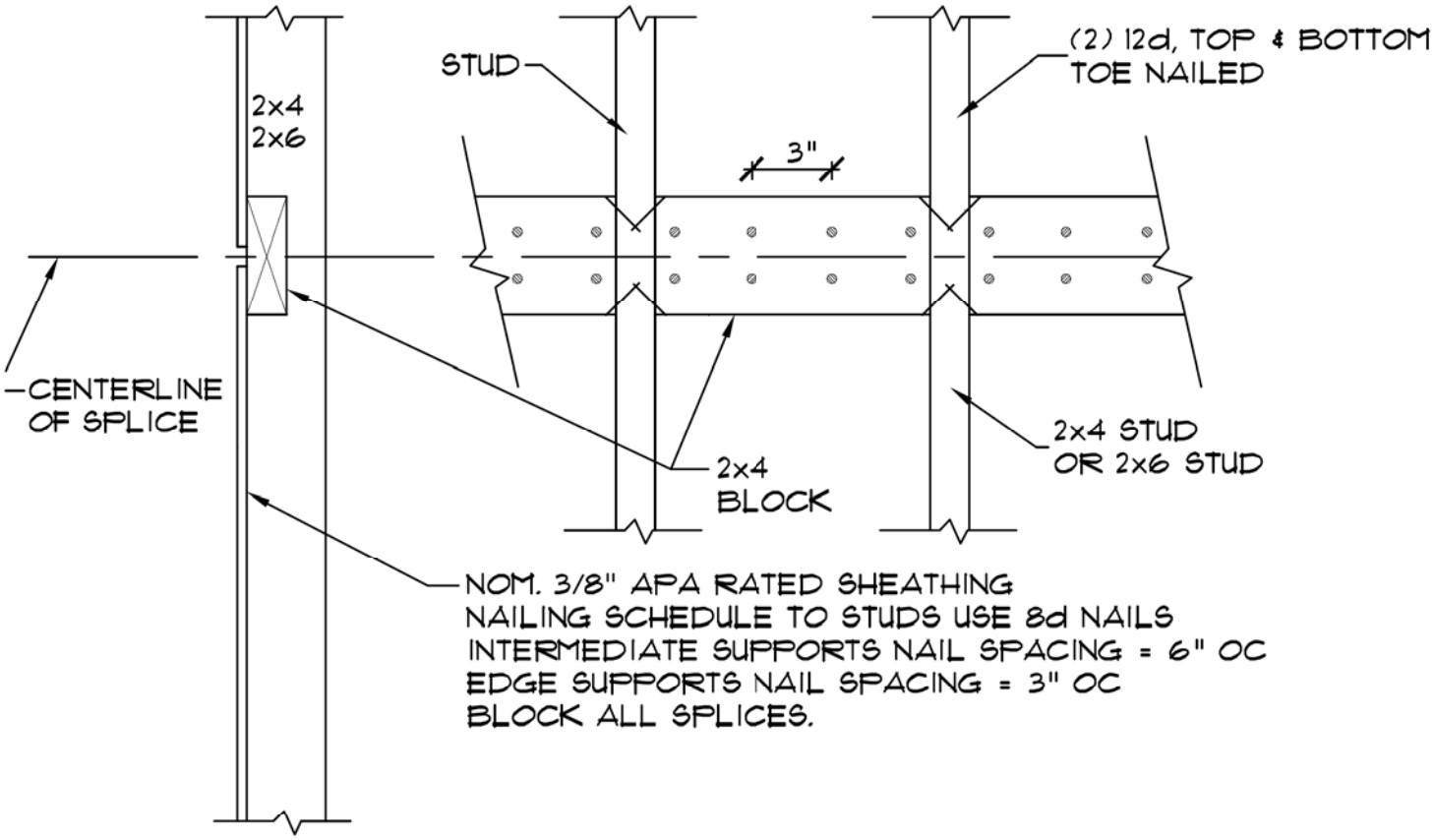
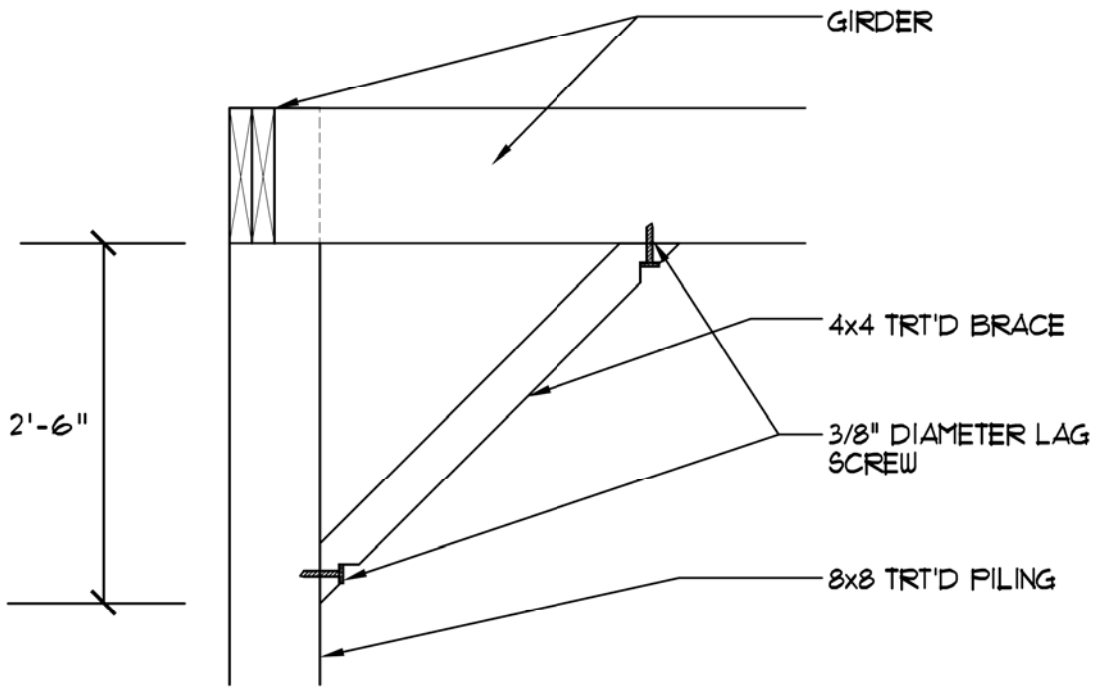


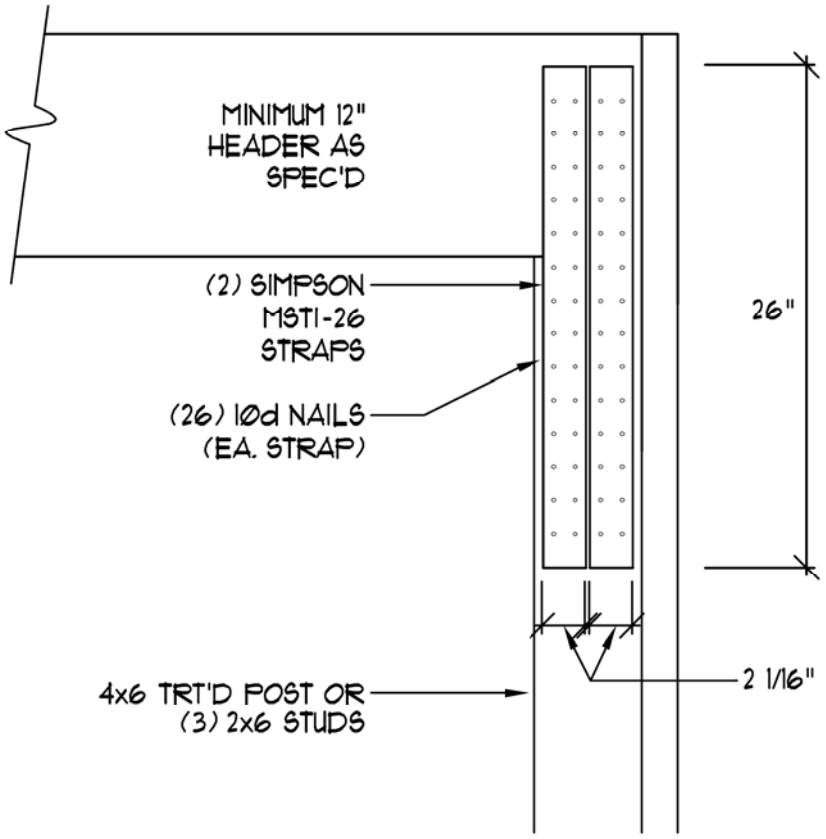
(A) BLOCKING DETAIL

NTS

BLOCKING DETAIL FOR HORIZONTAL OR VERTICAL ORIENTATION OF APA RATED SHEATHING

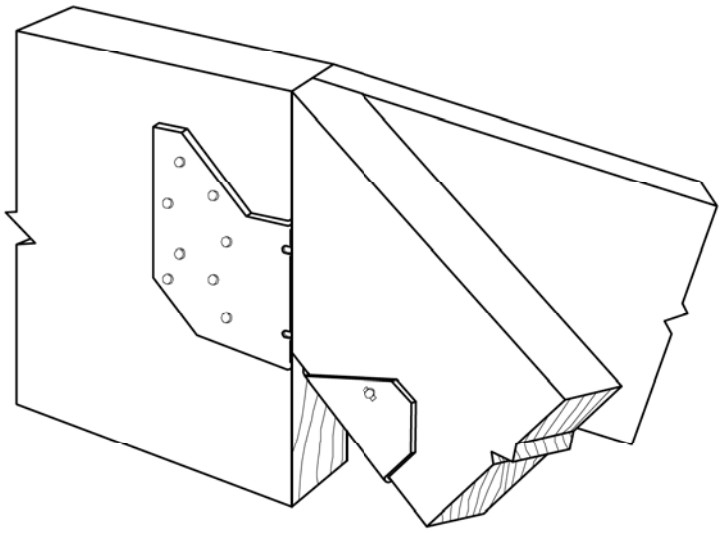


(A) "Y" - BRACE DETAIL



(A) GARAGE HEADER HOLD DOWN

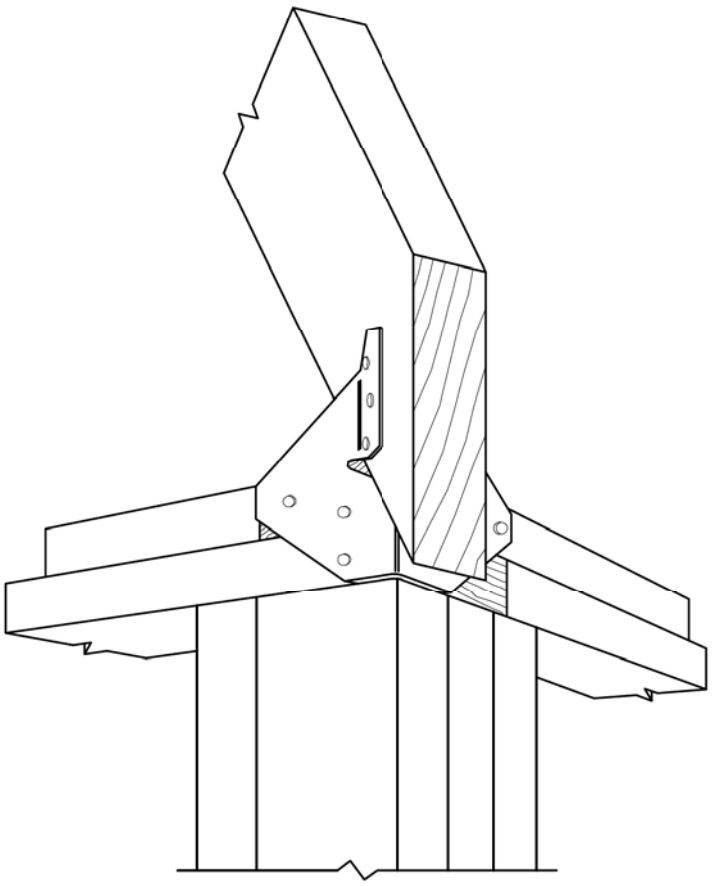
130 MPH NTS



(A) SIMPSON HRC CONNECTOR

HIP/RIDGE CONNECTION
130 MPH

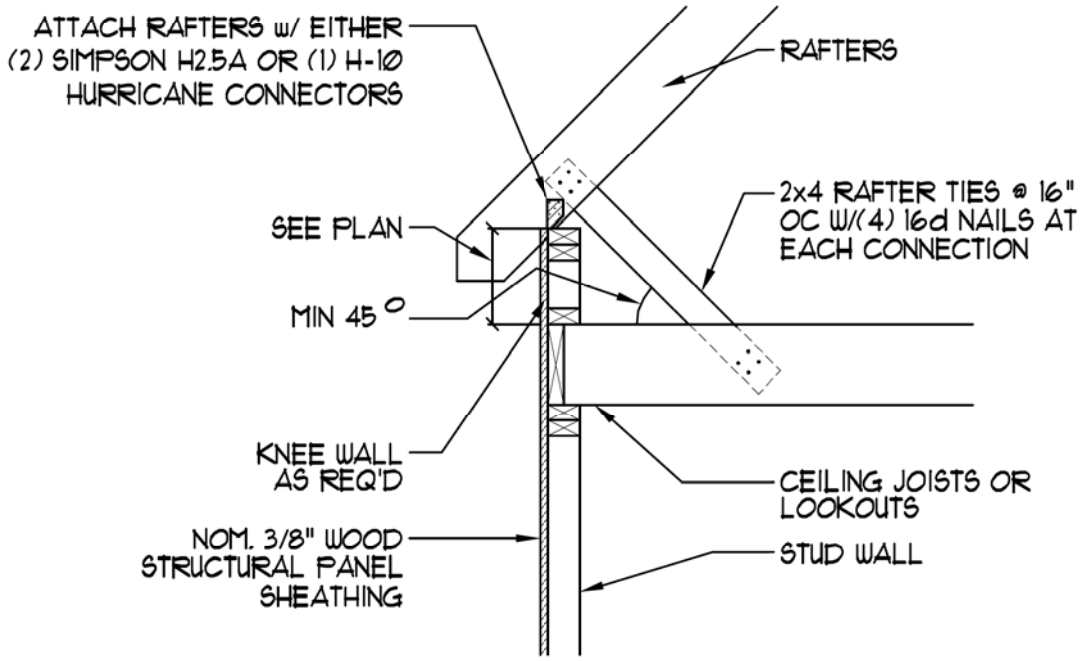
NTS



(A) HCP SIMPSON CONNECTOR

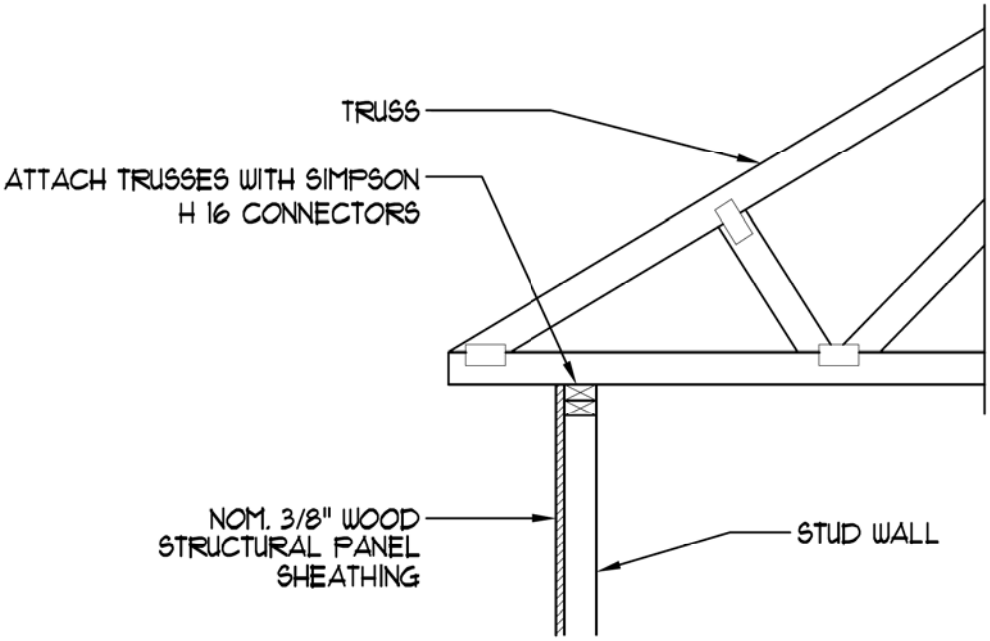
HIP CORNER PLATE
130 MPH

NTS



(A) TYP. RAFTER BEARING

130 MPH NTS



(A) TYP. TRUSS BEARING

130 MPH NTS

GROUND LEVEL STRUCTURAL NOTES:

1. GIRDERS TO BE (2) 2x12 SYP #2 TYP. (UNO).
   ALL EXPOSED GIRDERS TO BE TREATED.
2. ALL PILINGS TO BE 8 x 8 TRT TYP. (UNO)
3. "X" DESIGNATES CROSS BRACING BETWEEN PILINGS.
   REFER TO STRUCTURAL NOTES.
4. "<" DESIGNATES "Y" BRACING.
5. EXTERIOR SHEATHING TO BE ATTACHED PER
   BLOCKING DETAIL
6. STRUCTURE DESIGNED FOR FIRST HABITABLE FLOOR
   LEVEL TO BE LOCATED ABOVE BASE FLOOD ELEV.
   IF WALLS ARE TO BE LOCATED BELOW THIS LEVEL,
   THEY SHALL NOT TRANSMIT WAVE FORCES TO
   PILINGS. ANY ROOMS BELOW BASE FLOOD ELEV.
   ARE FOR PARKING OR STORAGE ONLY.
7. (2) 1.75 X 11.875 LVL GIRDER (TRT IF EXPOSED)
8. 1/2" X 11" STEEL FLITCH BEAM
9. SIMPSON HU 212-2 (MAX.)
10. HU 412 (MAX.)

FOUNDATION STRUCTURAL NOTES:

(110 MPH WIND ZONE)

1. (3) 2 x 10 SPF #2 GIRDER, TYPICAL UNO.

2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW MASONRY	SOLID MASONRY
8 x 16	UP TO 32" HIGH	UP TO 5'-0" HIGH
12 x 16	UP TO 48" HIGH	UP TO 9'-0" HIGH
16 x 16	UP TO 64" HIGH	UP TO 12'-0" HIGH
24 x 24	UP TO 96" HIGH	

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:

DEPTH: 8" - UP TO 2-1/2 STORY
10" - 3 STORY

WIDTH: SIDING (OR EQUAL)
- 16" - UP TO 2-1/2 STORY
- 18" - 3 STORY

BRICK VENEER
- 16" - 1 STORY
- 20" - 2 STORY
- 24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R4404.1.1
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 4'-0" CENTERS (15" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 4404.1)

4. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

5. ABBREVIATIONS:

"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST

6. (4) 2x10 SPF # 2 GIRDER

STRUCTURAL NOTES

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE STATE RESIDENTIAL CODE (IRC)- EDITION (WITH SPECIAL CONSIDERATION TO CHAPTER HIGH WIND ZONES AND COASTAL AND FLOOD PLAIN CONSTRUCTION STANDARDS AND THE WOOD FRAME CONTRUCTION MANUAL PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3. DESIGN LOADS

	LIVE LOAD	DEAD LOAD	DEFLECTION
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH PERMANENT STAIR	40	10	L/360
ATTIC WITH OUT PERMANENT STAIR	20	10	L/360
ATTIC WITH OUT STORAGE	10	10	L/240
STAIRS	40	10	L/360
EXTERIOR BALCONIES	60	10	L/360
DECKS	40	10	L/360
GUARDRAILS AND HANDRAILS	200	--	----
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
SNOW	20	--	----

WIND LOAD (BASED ON 130 MPH WIND VELOCITY & EXPOSURE C)

4. WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE THE LENGTH OF BRACED PANELS SHALL BE DETERMINED BY SECTION LATERAL BRACING SHALL BE SATISFIED PER METHOD 3 BY CONTINUOSLY SHEATHING WALLS WITH STRUCTURAL SHEATHING PER TABLE NOTE THAT ANY SPECIFIC BRACED WALL DETAIL SHALL BE INSTALLED AS SPECIFIED.

5. ALL RAFTERS SHALL BE SECURED AT WALL PLATE WITH METAL TIE AND AT RIDGE WITH 2 X 6 COLLAR TIES WITH (4) 10D NAILS PER CONNECTION.

6. STRUCTURAL SHEATHING SHALL BE NOMINAL 3/8" APA RATED SHEATHING ATTACHED TO STUDS WITH 8D NAILS AT 3" CENTERS AT PANEL EDGES AND AT 6" CENTERS AT INTERMEDIATE SUPPORTS. ALL PANEL EDGES SHALL BE SUPPORTED BY BLOCKING. SEE BLOCKING DETAIL FOR FURTHER NOTES. INSTALL SHEATHING PER SECTION

7. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.

8. ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTUAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAINSURFACE WATER AWAY FROM FOUNDATION WALLS.

9. ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2 (Fb=975 PSI). PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (Fc(perp) = 425 PSI - MIN).

10. EXPOSED GIRDERS SHALL BE SYP #2 TREATED PER CODE SECTION

11. PILES SHALL BE SYP #2 TREATED (PER CODE SECTION PILES SHALL BE DRIVEN TO MINIMUM DEPTH OF 8'-0" BELOW GRADE OR AS NATURAL GRADE OR SOIL CONDITIONS REQUIRE PER CODE SECTION ALL PILES TO HAVE A CAPACITY OF 10 KIPS. CAPACITY OF PILES THAT EXCEED 10 KIPS SHALL BE NOTED ON PLANS.

12. CROSS BRACING BETWEEN PILES IS NOTED WITH AN "X" ON THE PLANS. USE 2"x 10" BRACING AND CONNECT EACH BRACE TO PILE WITH (2) 3/4" DIA. GALVANIZED BOLTS.

13. ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO).

14. L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10 PSI.
P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10 PSI.
L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

15. ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH

16. ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.

17. REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60.

18. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

19. BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).

20. THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF.

NOTE: INTERIOR BRACED WALL:
ATTACH GYPSUM WALL BOARD ON EACH SIDE WITH 5d COOLER NAILS (OR EQUIVALENT) AT 7" OC. INSTALL SINGLE TRUSS ON WALL AND ATTACH TO WALL TOP PLATE WITH SIMPSON STC TRUSS CLIPS AT 16" OC. ATTACH WALL BOTTOM PLATE TO FOUNDATION. FOR SLAB: USE 1/2" DIAMETER ANCHOR BOLTS AT 3'-0" OC. FOR CRAWL: NAIL BOTTOM PLATE TO SOLID BLOCKING WITH (2) 16d NAILS AT 16" OC.

NOTE: INTERIOR BRACED WALL:
ATTACH GYPSUM WALL BOARD ON EACH SIDE WITH 5d COOLER NAILS (OR EQUIVALENT) AT 7" OC. ATTACH TRUSSES TO WALL TOP PLATE WITH SIMPSON STC TRUSS CLIPS. ATTACH WALL BOTTOM PLATE TO FOUNDATION. FOR SLAB: USE 1/2" DIAMETER ANCHOR BOLTS AT 3'-0" OC. FOR CRAWL: NAIL BOTTOM PLATE TO SOLID BLOCKING WITH (2) 16d NAILS AT 16" OC.

ROOF FRAMING NOTES:

(130 MPH WIND ZONE)

① 2x8 RAFTERS @ 16" O.C. WITH 2X10 RIDGE, U.N.O.

② (2)2x10 OR 1.75x11.875 LVL HIP. (2)2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER ATTACH HIPS TO WALL WITH EITHER SIMPSON "MTS12" STRAP OR "HCP" CONNECTORS.

③ (2)2x10 OR 1.75x9.25 LVL VALLEY. DO NOT SPLICE VALLEYS. ATTACH VALLEYS TO WALL WITH SIMPSON "MTS12" STRAP, OR EQUAL.

④ 1.75x11.875 LVL VALLEY. ATTACH VALLEYS TO WALL WITH SIMPSON "MTS12" STRAP, OR EQUAL.

⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE

⑥ 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, U.N.O.

⑦ 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE, U.N.O.

⑧ EXTEND RIDGE ± 12"

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH ALL RAFTERS WITH HURRICANE CLIPS: (2) SIMPSON "H2.5A" OR (1) SIMPSON "H-10 A", TYP.
- ATTACH ROOF TRUSSES W/ SIMPSON "H-16" CONNECTORS.
- ATTACH VAULTED RAFTERS W/ HURRICANE CLIPS: SIMPSON "H-5" OR EQUIV.

ROOF FRAMING NOTES:

(140 MPH WIND ZONE)

① 2x8 RAFTERS @ 16" O.C. W/ 2x10 RIDGE U.N.O.

② (2) 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER
ATTACH HIPS WITH EITHER SIMPSON "MTS12" STRAPS OR "HCP" CONNECTORS.

③ (2) 2x10 OR 1.75x9.25 LVL VALLEY.
ATTACH VALLEYS TO WALL W/ SIMPSON MTS12 STRAP OR EQUAL.

④ 1.75x11.875 LVL VALLEY
DO NOT SPLICE VALLEYS
ATTACH VELLEYS TO WALL W/ SIMPSON MTS12 STRAP OR EQUAL.

⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE

⑥ 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE

⑦ 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE

⑧ ETEND RIDGE +/- 12"

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-5" OR EQUIVALENT
- ATTACH ALL RAFTERS W/ HURRICANE CLIPS: (2) SIMPSON H2.5A OR (1) SIMPSON H-10A.
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-5" OR EQUIVALENT
- ATTACH ALL ROOF TRUSSES W/ SIMPSON H-16 CONNECTORS.

ROOF FRAMING NOTES:

(110 MPH WIND ZONE)

① RAFTERS TO BE 2x8 @ 16" O.C. WITH 2x10 RIDGE, U.N.O.

② (2) 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER ATTACH HIPS AT WALLS WITH EITHER SIMPSON "MTS12" STRAP OR "HCP" CONNECTORS.

③ (2) 2x10 OR 1.75x9.25 LVL VALLEY. DO NOT SPLICE VALLEYS ATTACH VALLEYS TO WALL W/ SIMPSON MTS12 STRAP OR EQUAL.

④ 1.75x11.875 LVL VALLEY ATTACH VALLEYS TO WALL W/ SIMPSON MTS12 STRAP OR EQUAL.

⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE

⑥ 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, U.N.O.

⑦ 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE, U.N.O.

⑧ EXTEND RIDGE +/- 12"

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH ALL RAFTERS WITH HURRICANE CLIPS: USE (2) SIMPSON "H2.5A" OR (1) SIMPSON "H-10A" OR EQUIVALENT, TYP.
- ATTACH VAULTED RAFTERS W/ HURRICANE CLIPS: SIMPSON H-5 OR EQUIV.
- ATTACH ROOF TRUSSES W/ SIMPSON H-16 CONNECTOR.

ROOF FRAMING NOTES:

(130 MPH WIND ZONE) - SC

① 2x8 RAFTERS @ 16" O.C. W/ 2x10 RIDGE, UNO.

② (2) 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER
ATTACH HIPS WITH EITHER SIMPSON "MTS12" STRAPS OR "HCP" CONNECTORS.

③ (2) 2x10 OR 1.75x9.25 LVL VALLEY.
DO NOT SPLICE VALLEYS
ATTACH VALLEYS TO WALL W/ SIMPSON MTS12 STRAP OR EQUAL.

④ 1.75x11.875 LVL VALLEY
ATTACH VALLEYS TO WALL W/ SIMPSON MTS12 STRAP OR EQUAL.

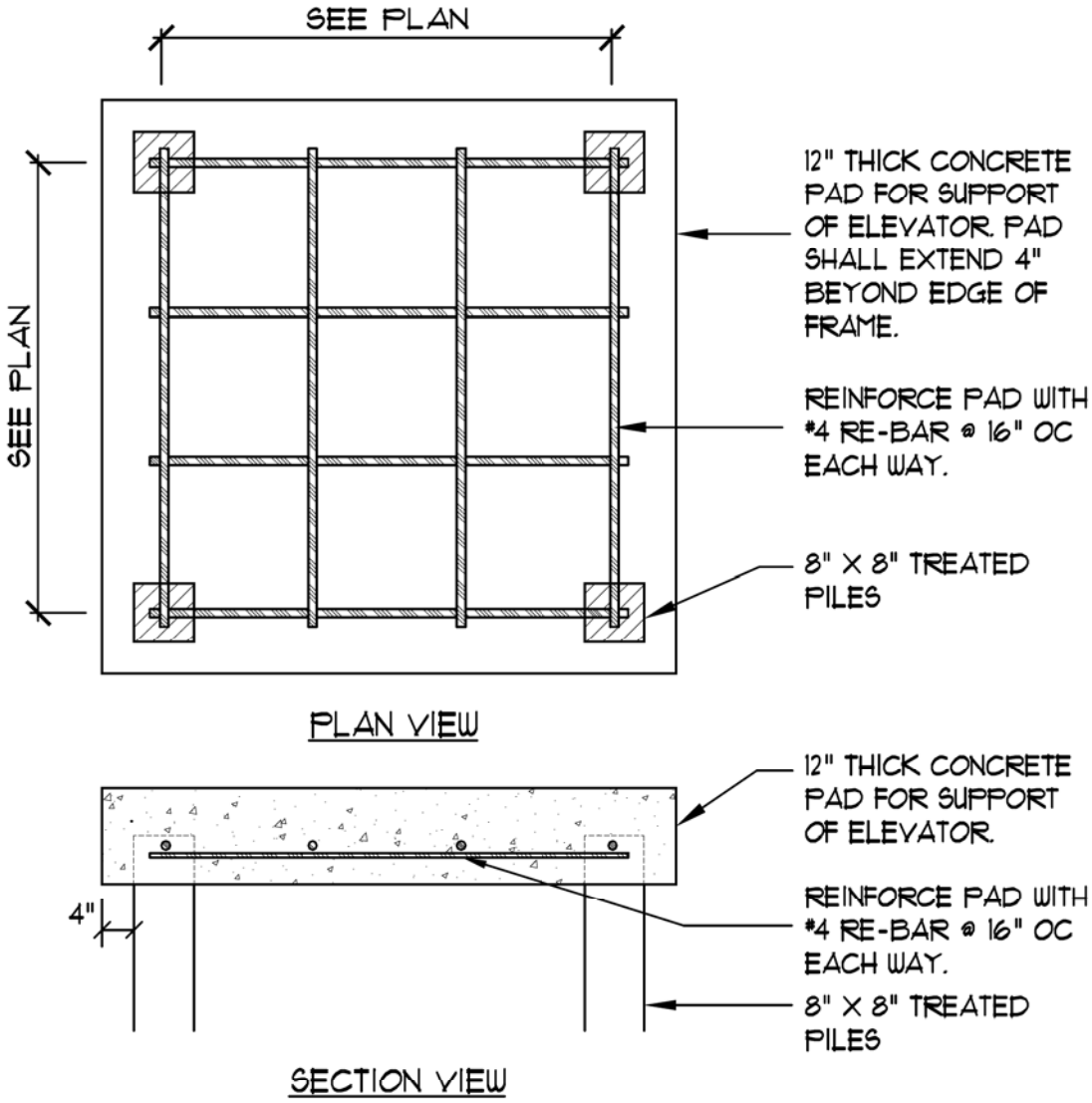
⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE

⑥ 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE

⑦ 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE

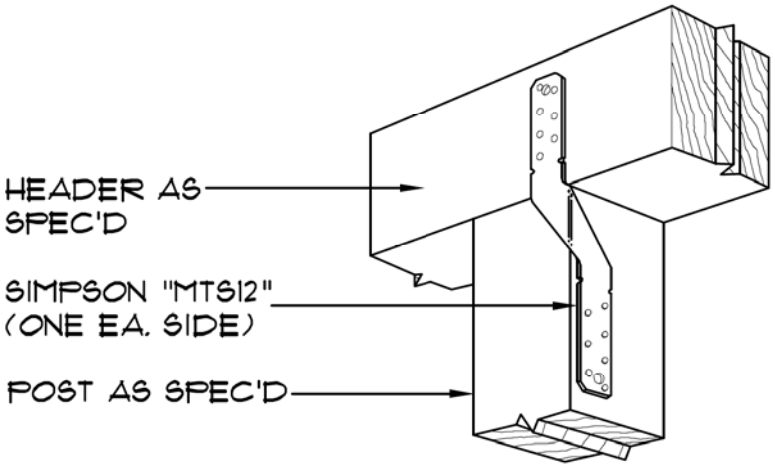
⑧ EXTEND RIDGE +/- 12"

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH ALL RAFTERS W/ HURRICANE CLIPS: (2) SIMPSON H2.5 OR (1) SIMPSON H-10A.
- ATTACH VAULTED RAFTERS W/ HURRICANE CLIPS: SIMPSON H-5 OR EQIUV.
- ATTAHC ROOF TRUSSES W/ SIMPSON H-16 CONNECTORS.



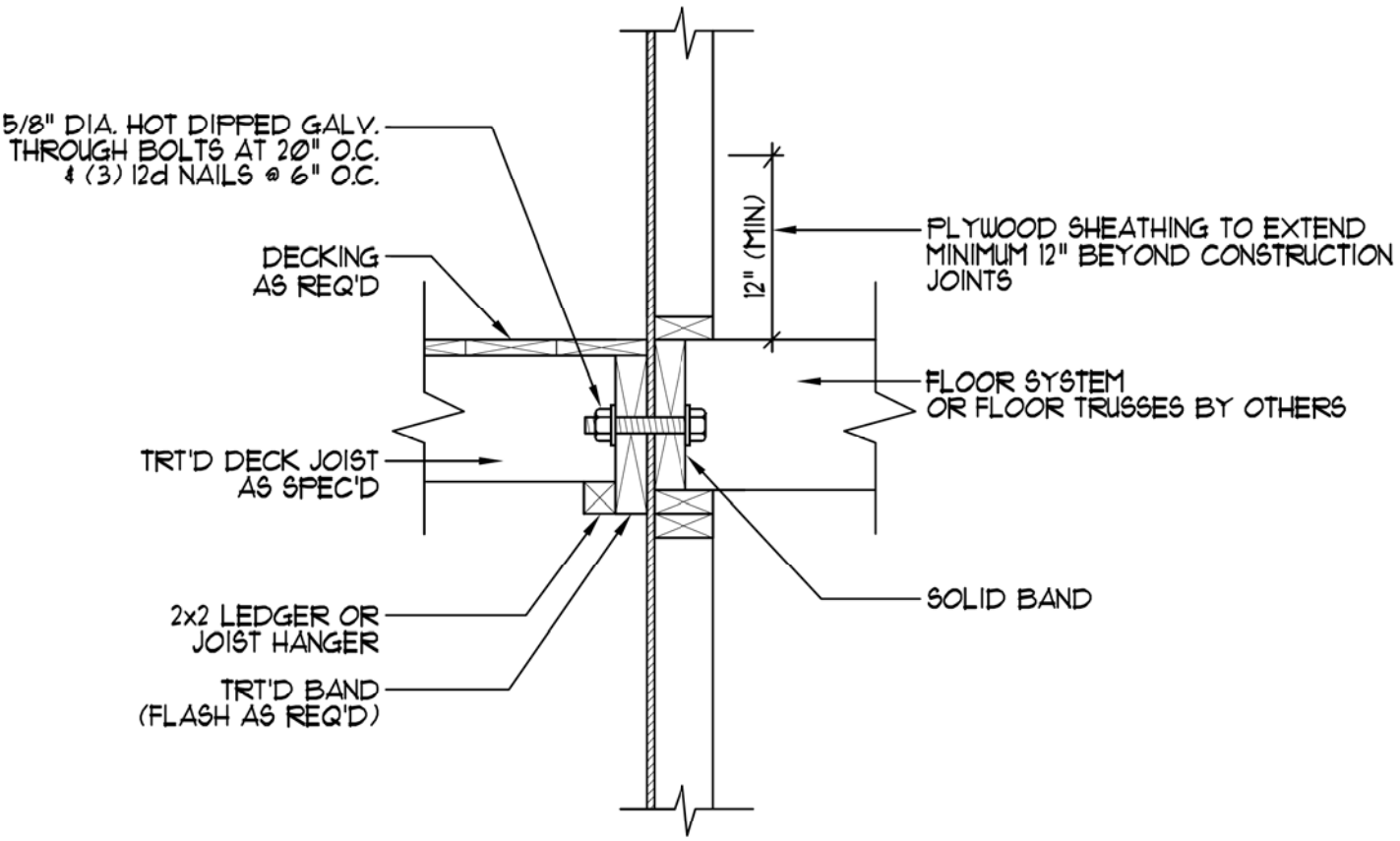
(A) ELEVATOR PAD ON PILES

130 MPH NTS



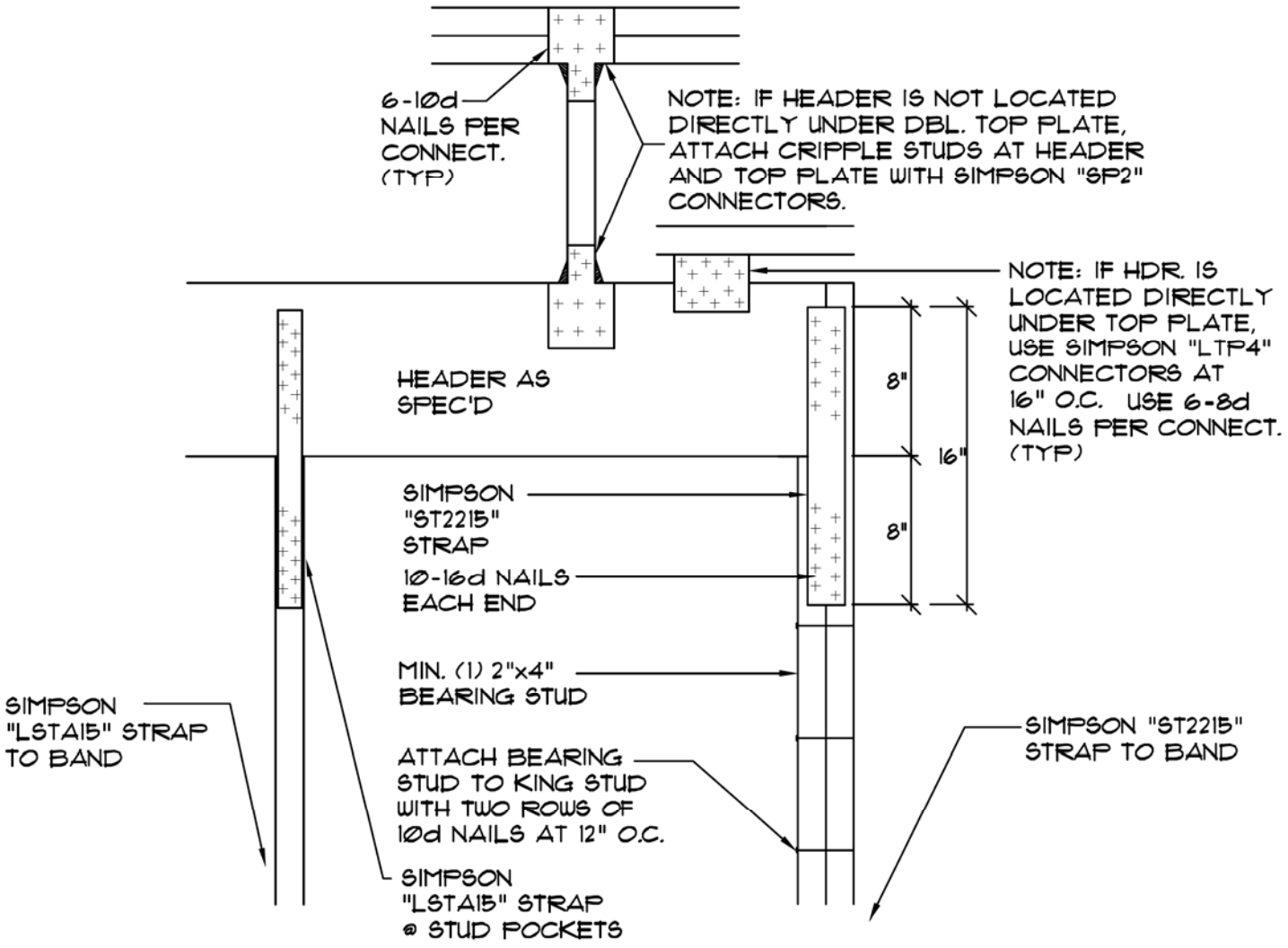
(A) HEADER ATTACHMENT AT PORCH

130 MPH NTS



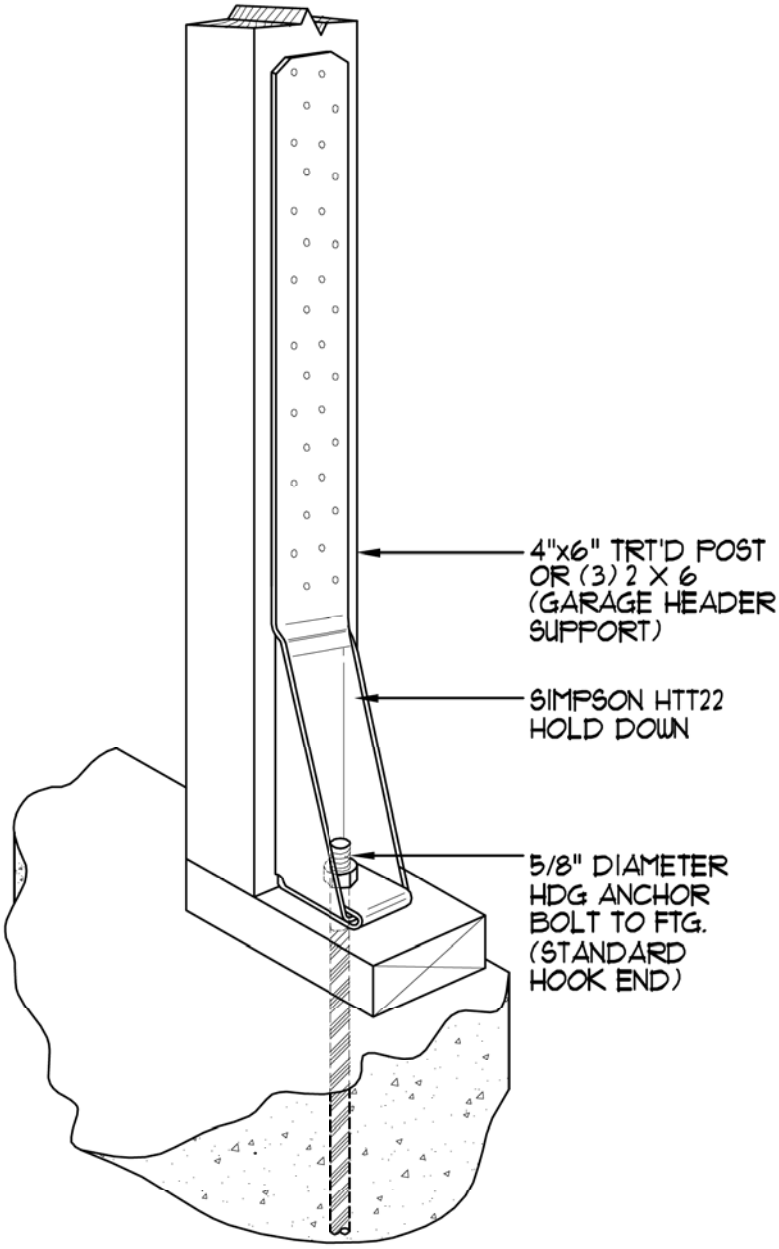
(A) DECK ATTACHMENT

130 MPH NTS



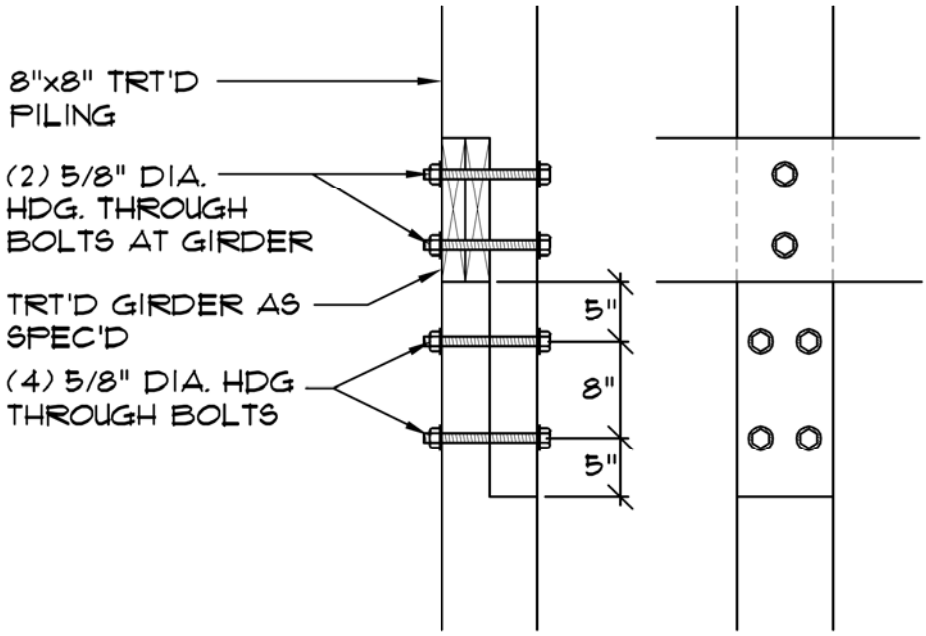
(A) HEADER STRAP-ELEV.

NTS



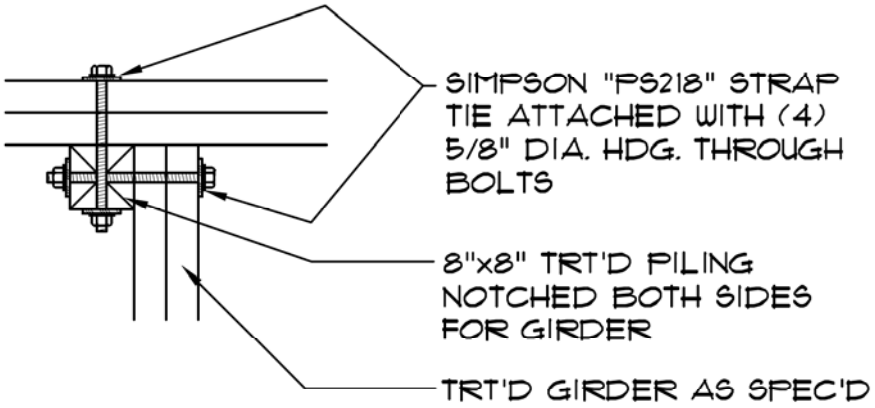
(A) HOLD DOWN AT GARAGE DOOR HEADER SUPPORT

130 MPH NTS



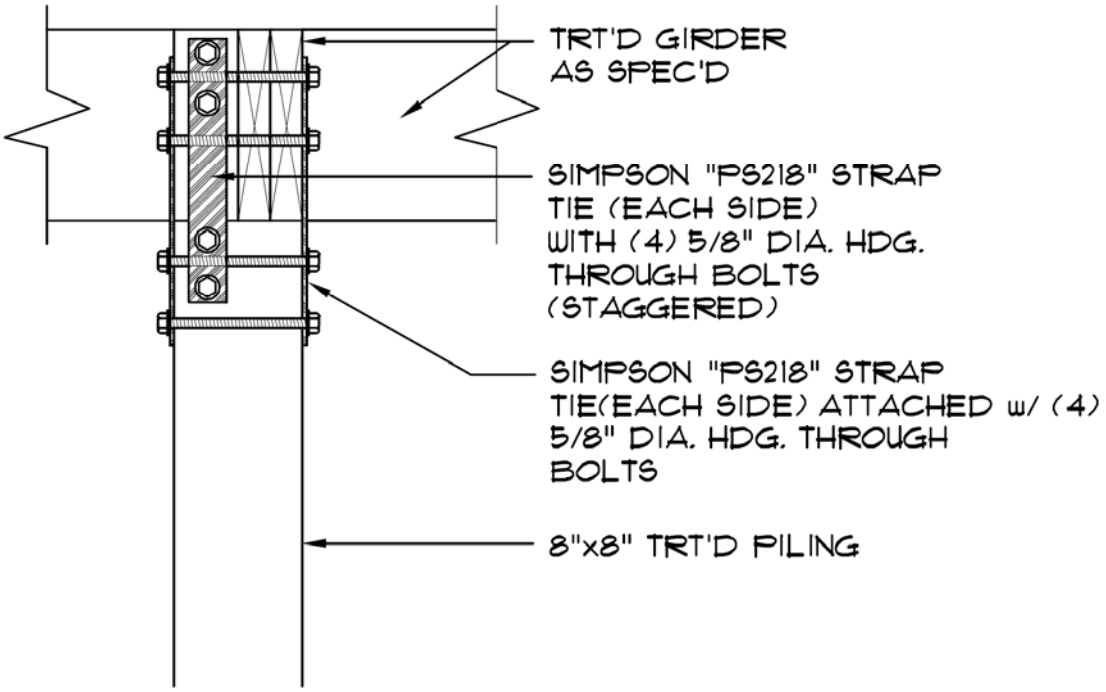
(A) PILE SPLICE @ GIRDER

130 MPH NTS



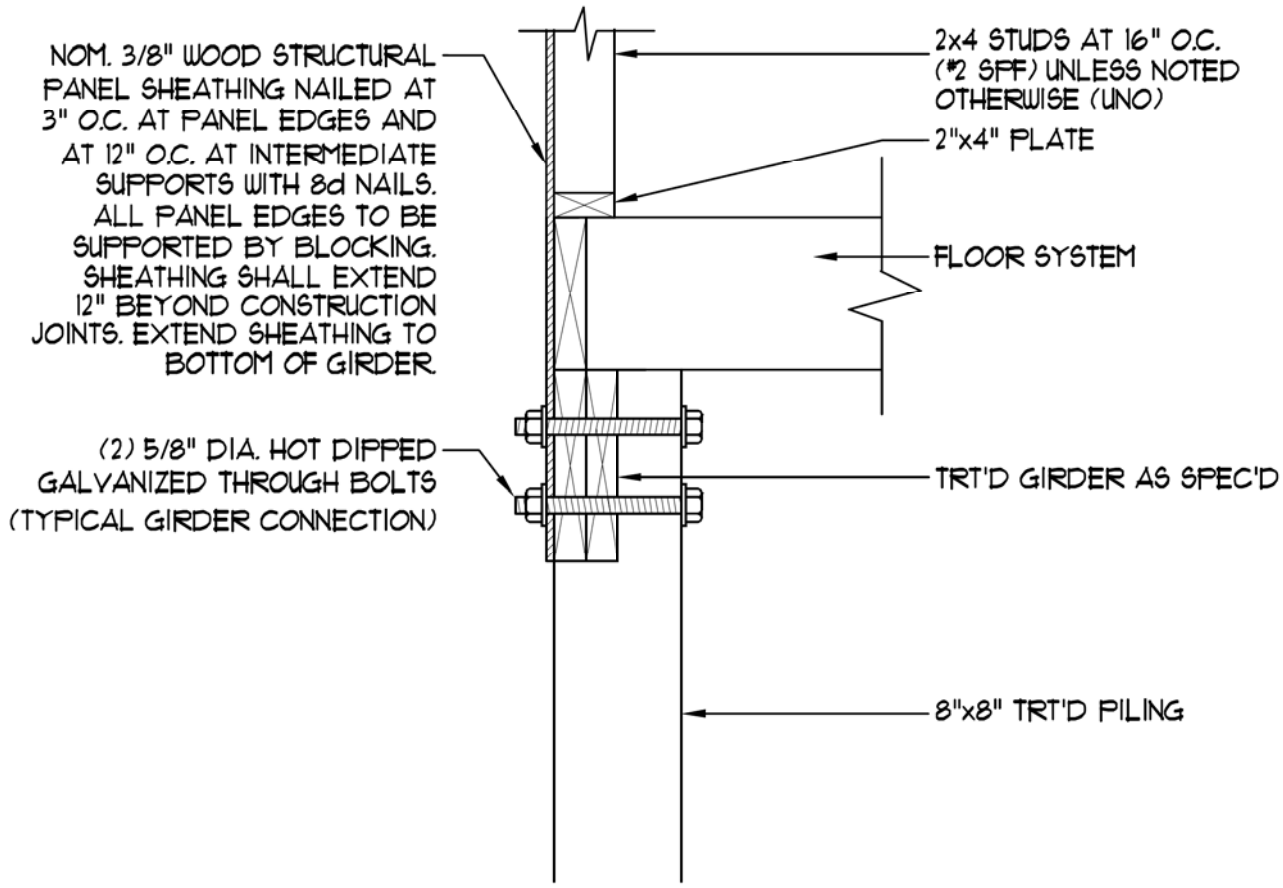
PLAN VIEW

N.T.S.



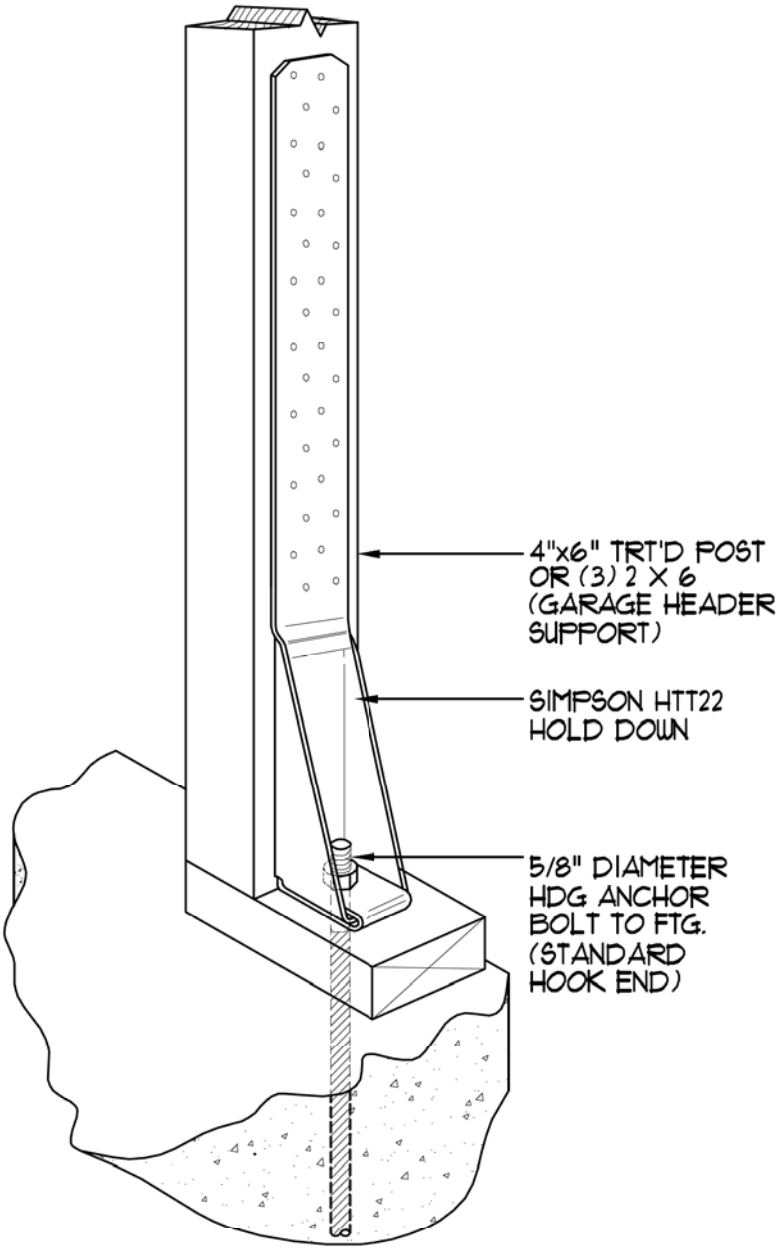
(A) DOUBLE NOTCHED PILE

130 MPH NTS



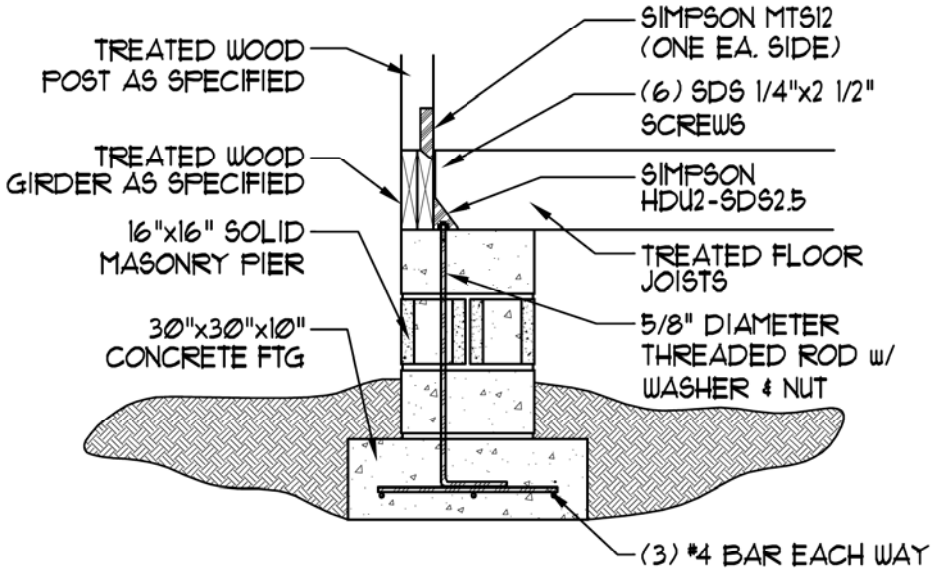
(A) TYP. PILE/GIRDER CONNECTION

130 MPH NTS



(A) HOLD DOWN AT GARAGE DOOR HEADER SUPPORT

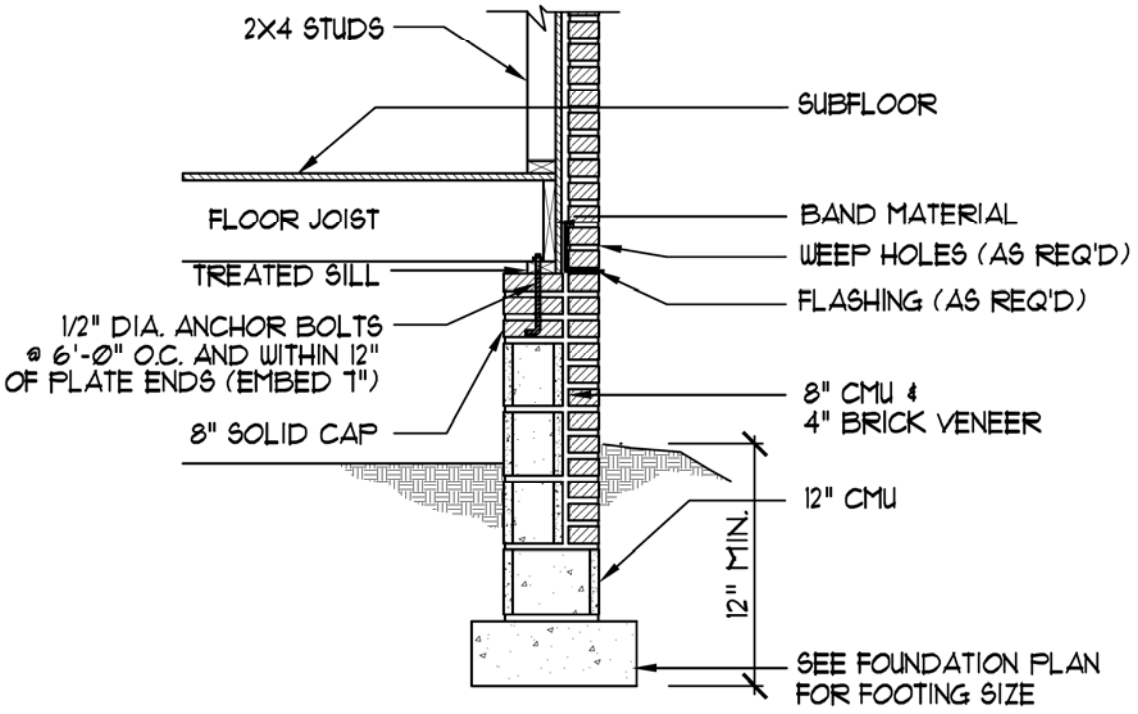
130 MPH NTS



(A) PORCH POST @ PIER

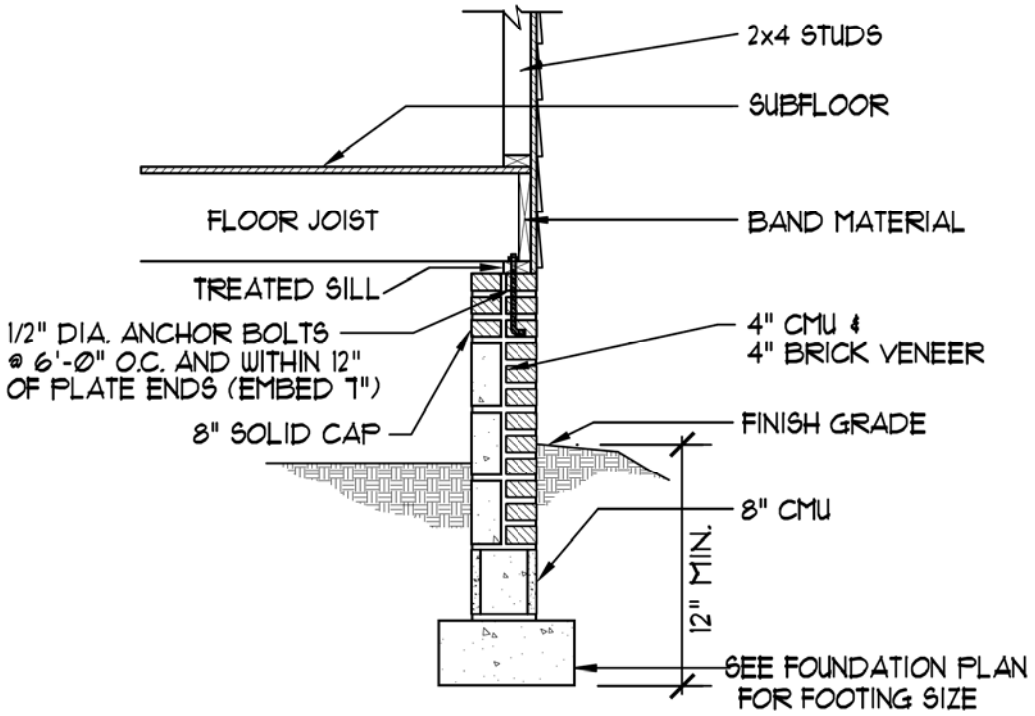
130 MPH NTS

NOTE: INTERIOR BRACED WALL:
ATTACH GYPSUM WALL BOARD ON EACH SIDE WITH 5d COOLER NAILS (OR EQUIVALENT) AT 7" OC. ATTACH TRUSSES TO WALL TOP PLATE WITH SIMPSON STC TRUSS CLIPS. ATTACH WALL BOTTOM PLATE TO FOUNDATION. FOR SLAB: USE 1/2" DIAMETER ANCHOR BOLTS AT 3'-0" OC. FOR CRAWL: NAIL BOTTOM PLATE TO SOLID BLOCKING WITH (2) 16d NAILS AT 16" OC.



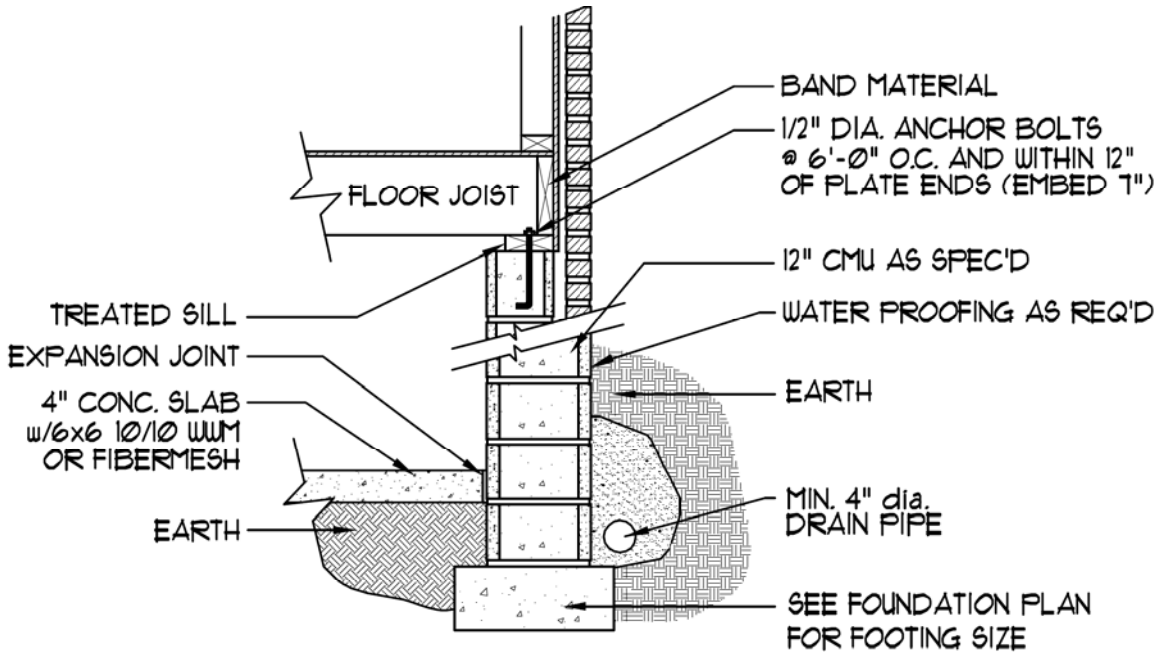
(A) CRAWL SECTION

NTS



A CRAWL SECTION

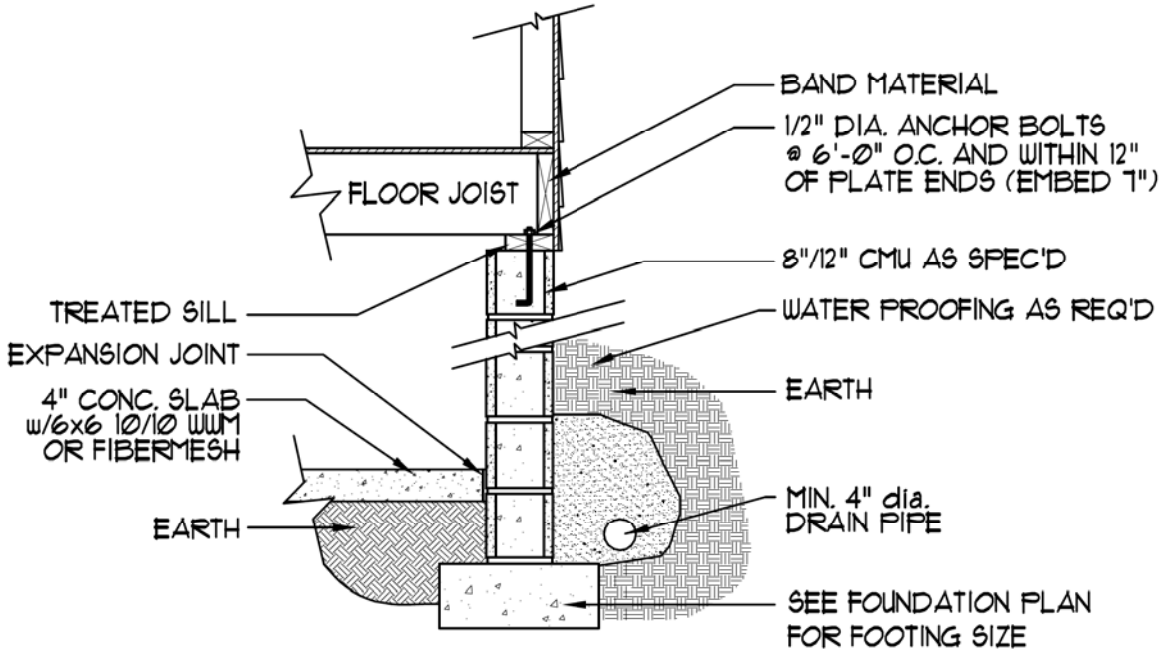
NTS



(A) BASEMENT FOUNDATION

NTS

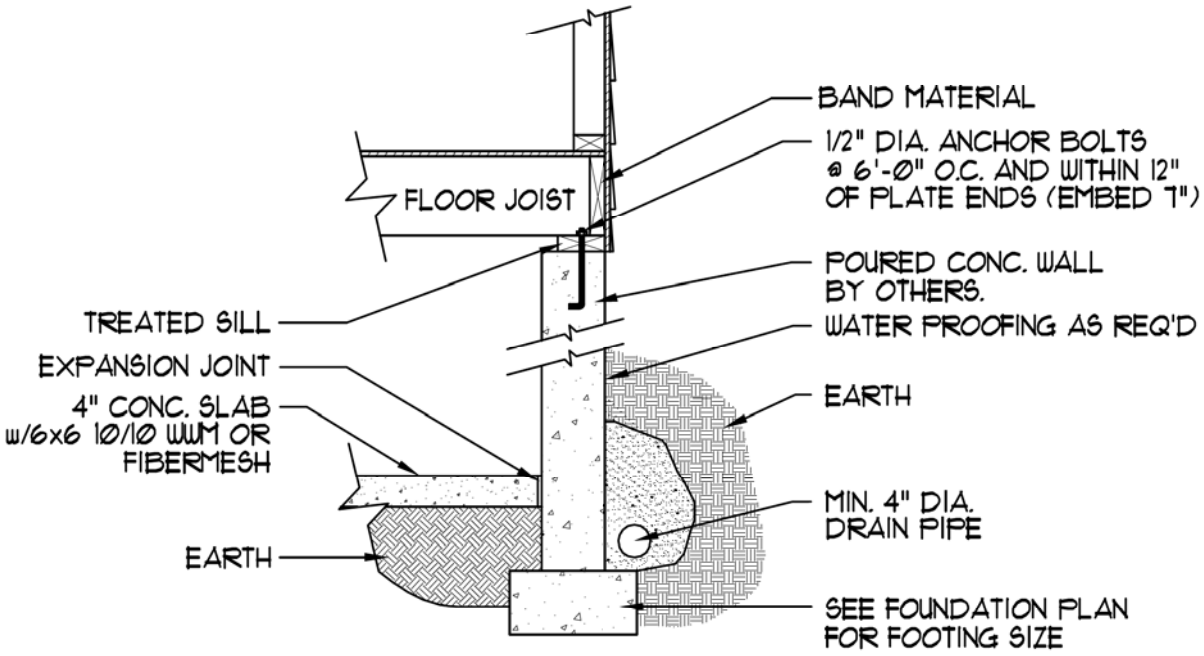
SEE R404.1.1 (1-4) FOR HEIGHT AND REINFORCING REQUIREMENTS



(A) BASEMENT FOUNDATION

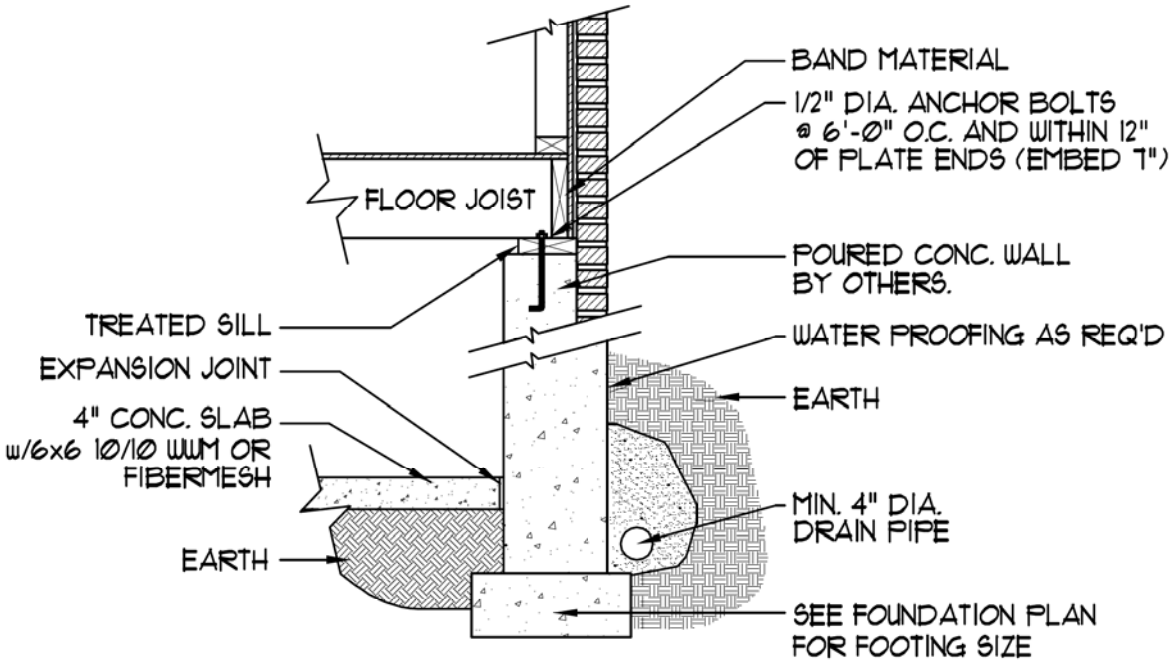
SEE R404.1.1 (1-4) FOR HEIGHT AND REINFORCING REQUIREMENTS

NTS



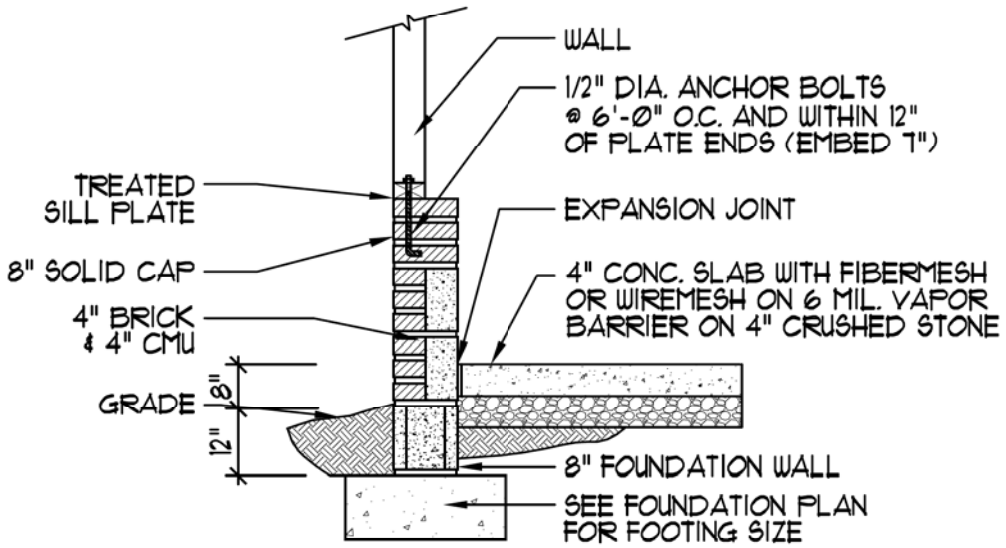
(A) BASEMENT FOUNDATION

NTS



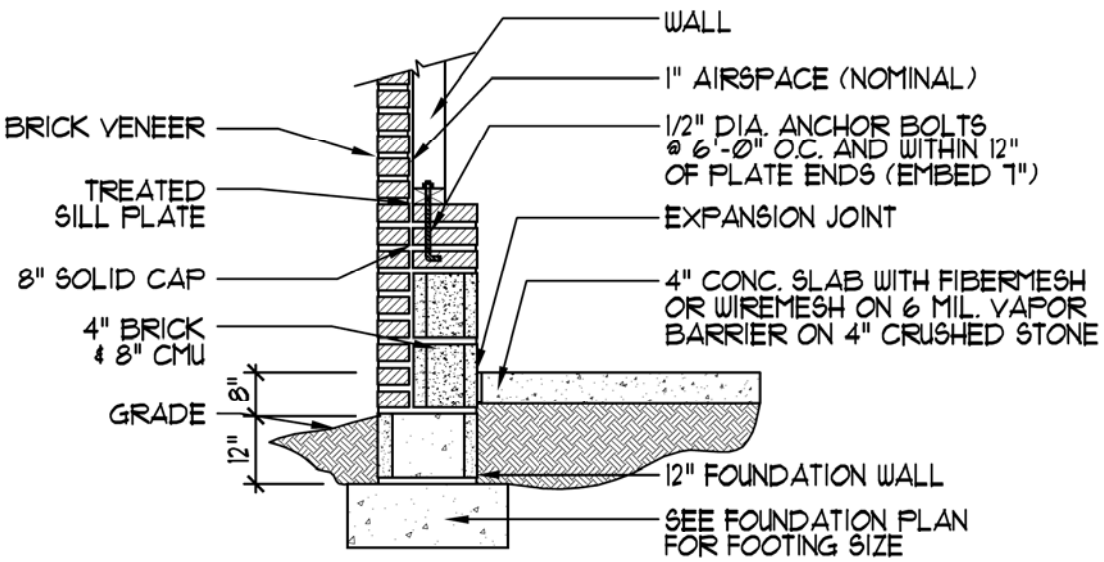
(A) BASEMENT FOUNDATION

NTS



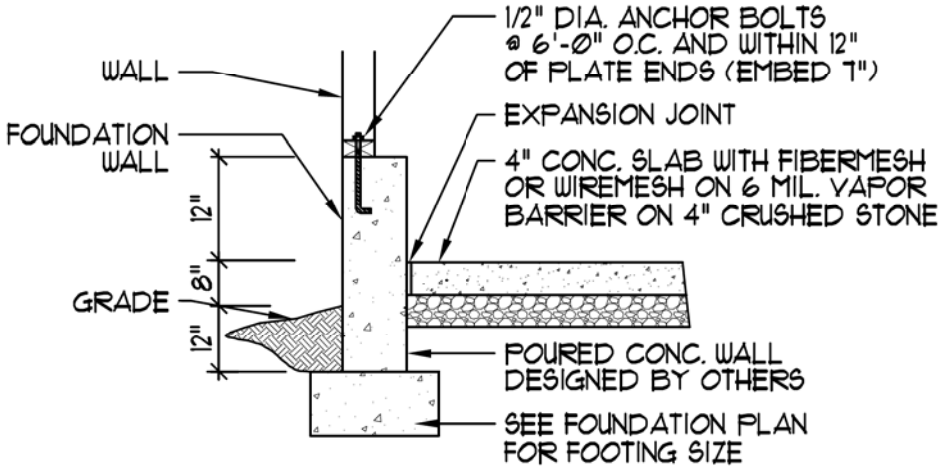
(A) GARAGE SLAB

NTS



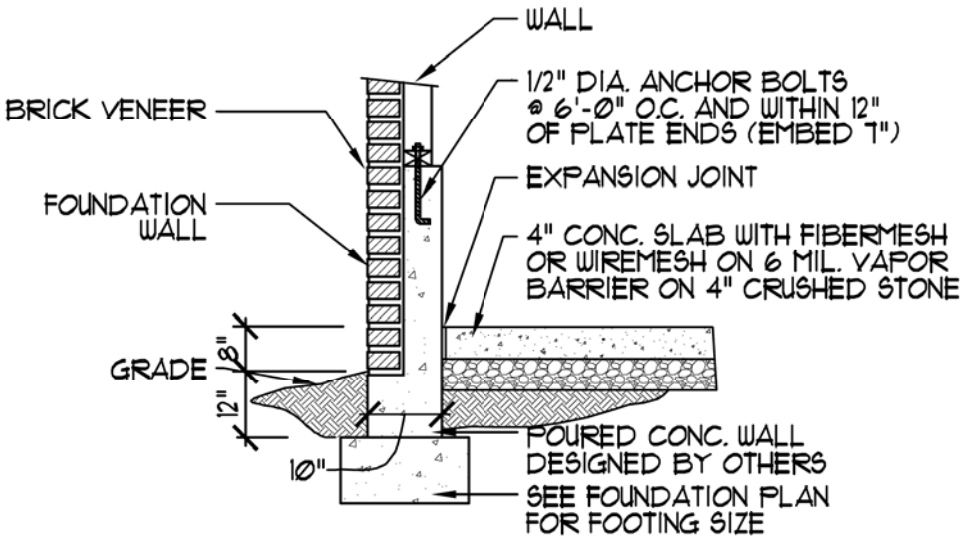
(A) GARAGE SLAB

NTS



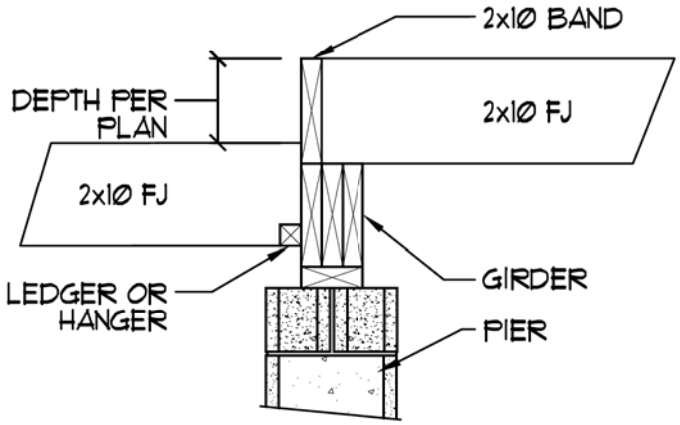
(A) GARAGE SLAB

NTS



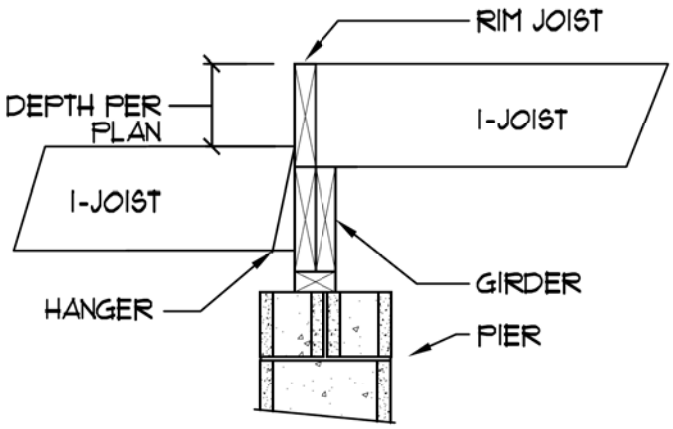
(A) GARAGE SLAB

NTS



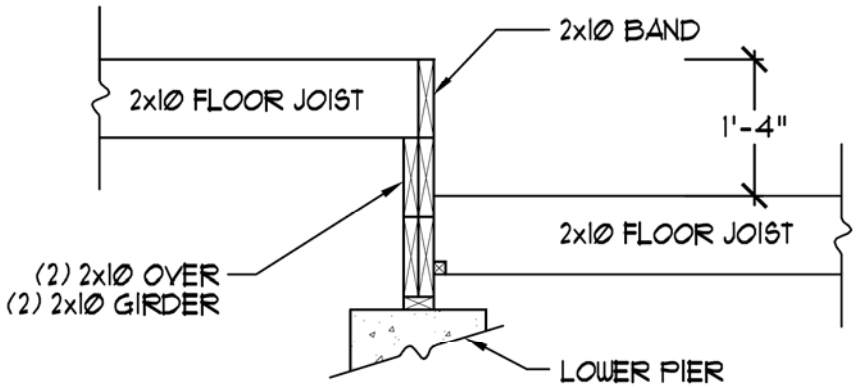
(A) DROPPED FLOOR DETAIL

NTS



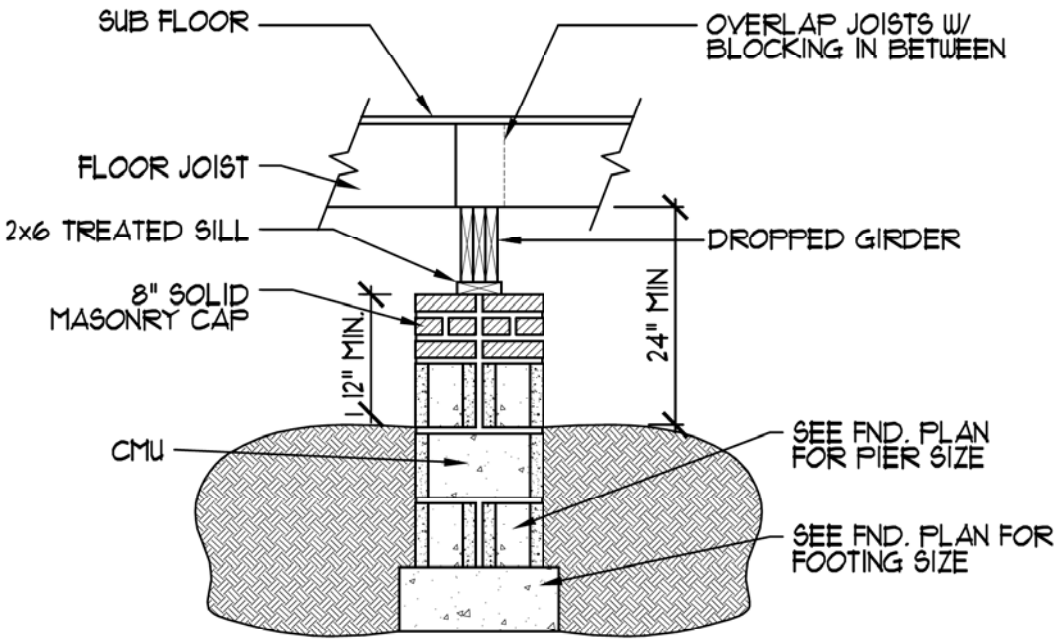
(A) DROPPED FLOOR DETAIL

NTS



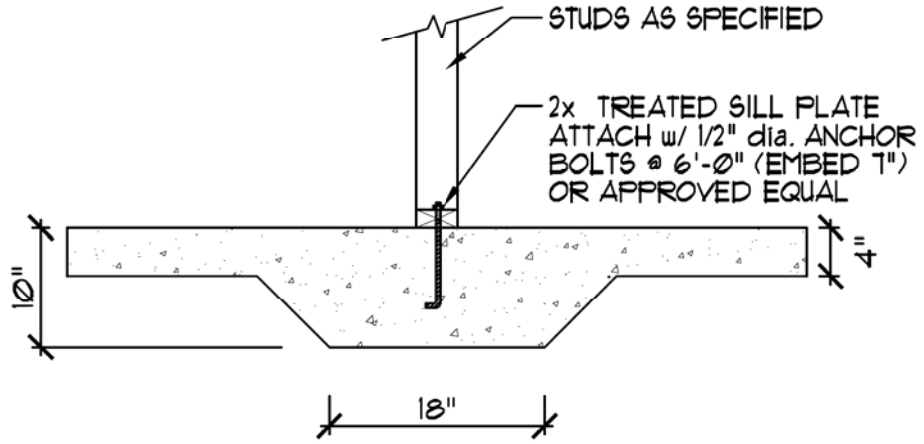
(A) DROPPED FLOOR DETAIL

NTS



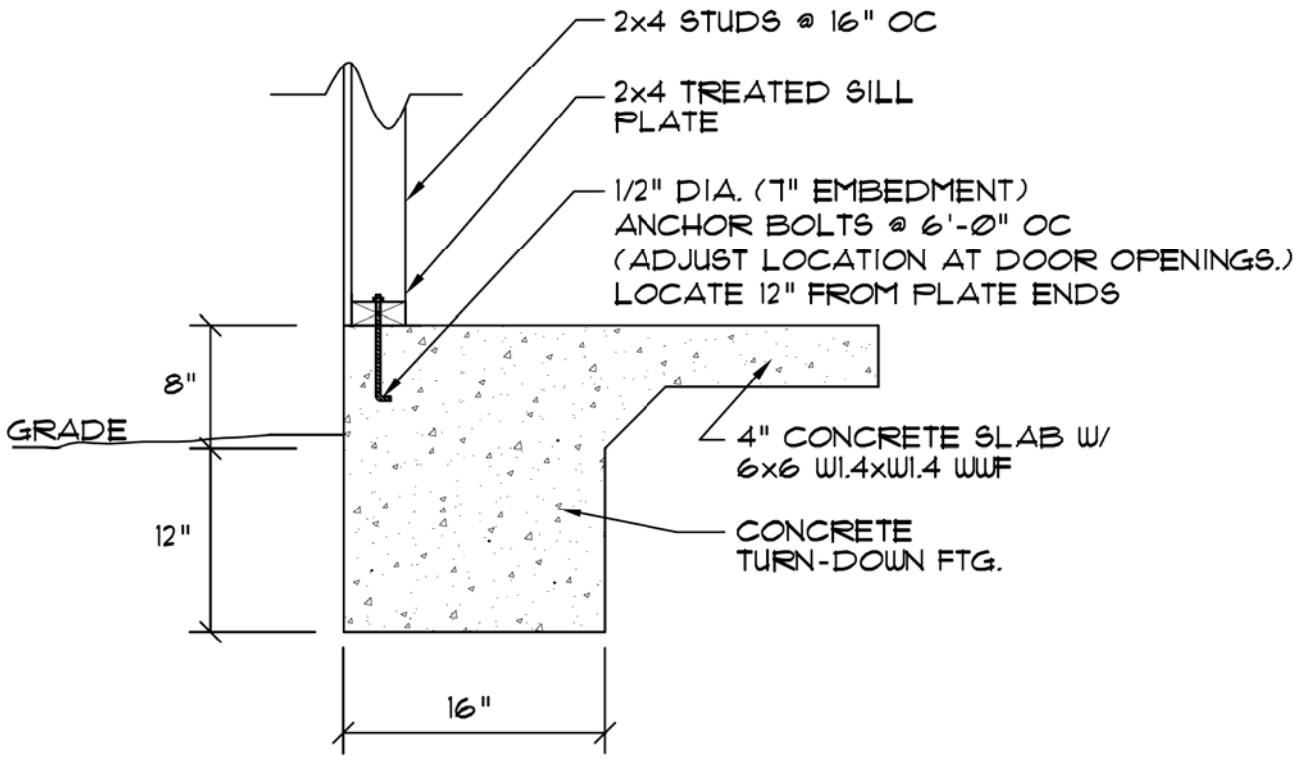
(A) DROPPED GIRDER

NTS



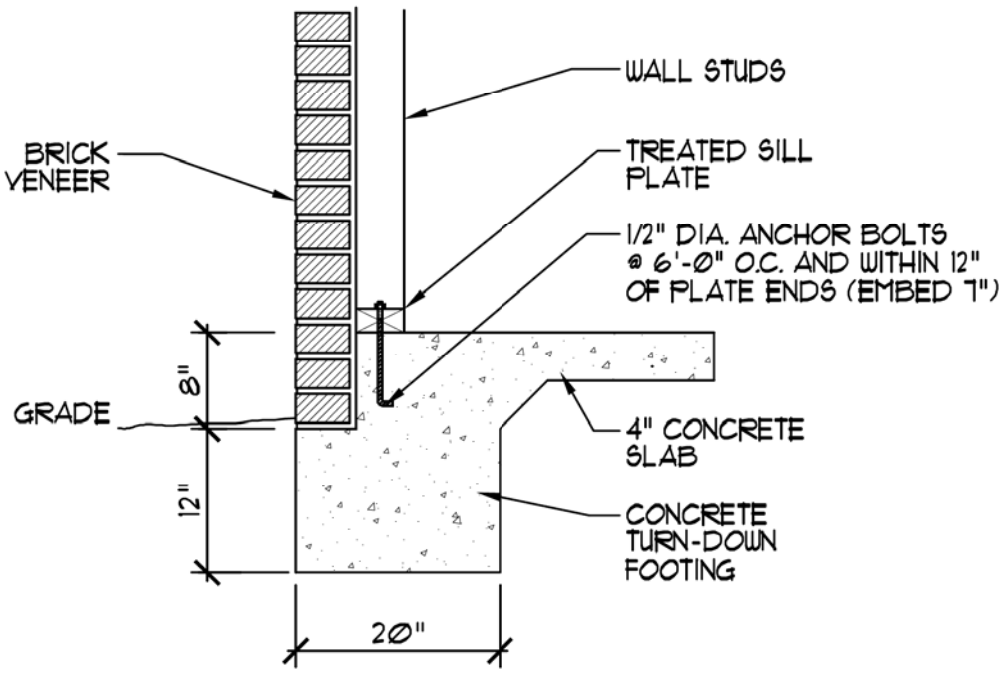
(A) TYPICAL THICKENED SLAB

NTS



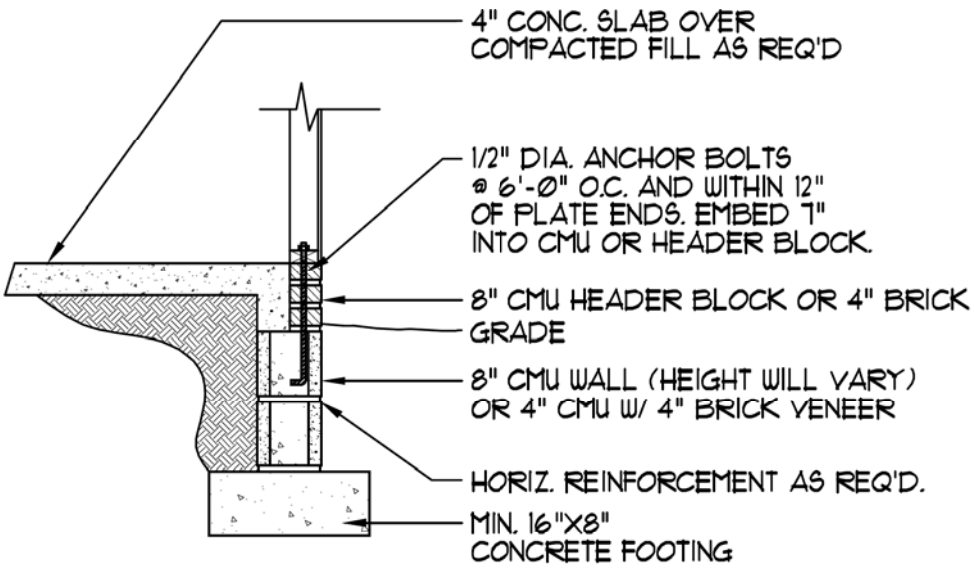
(A) TURN DOWN SLAB FOOTING

NTS



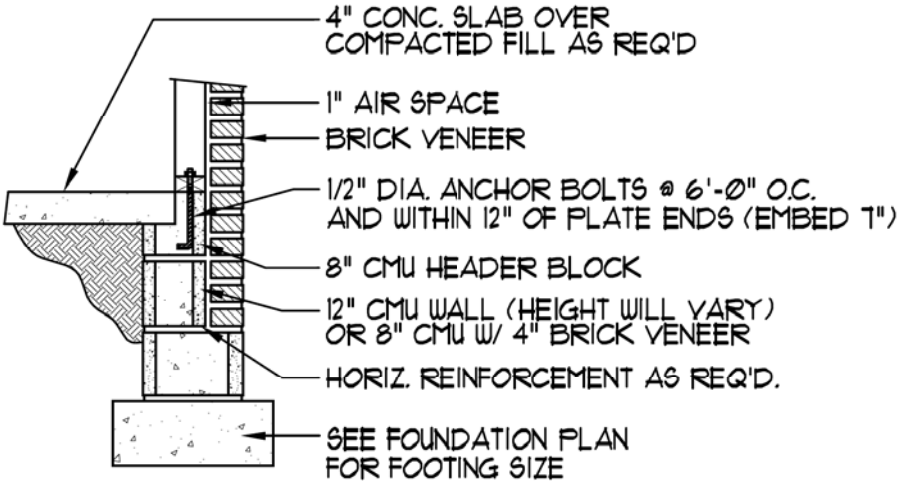
(A) TURN DOWN SLAB FOOTING

(BRICK VENEER) NTS



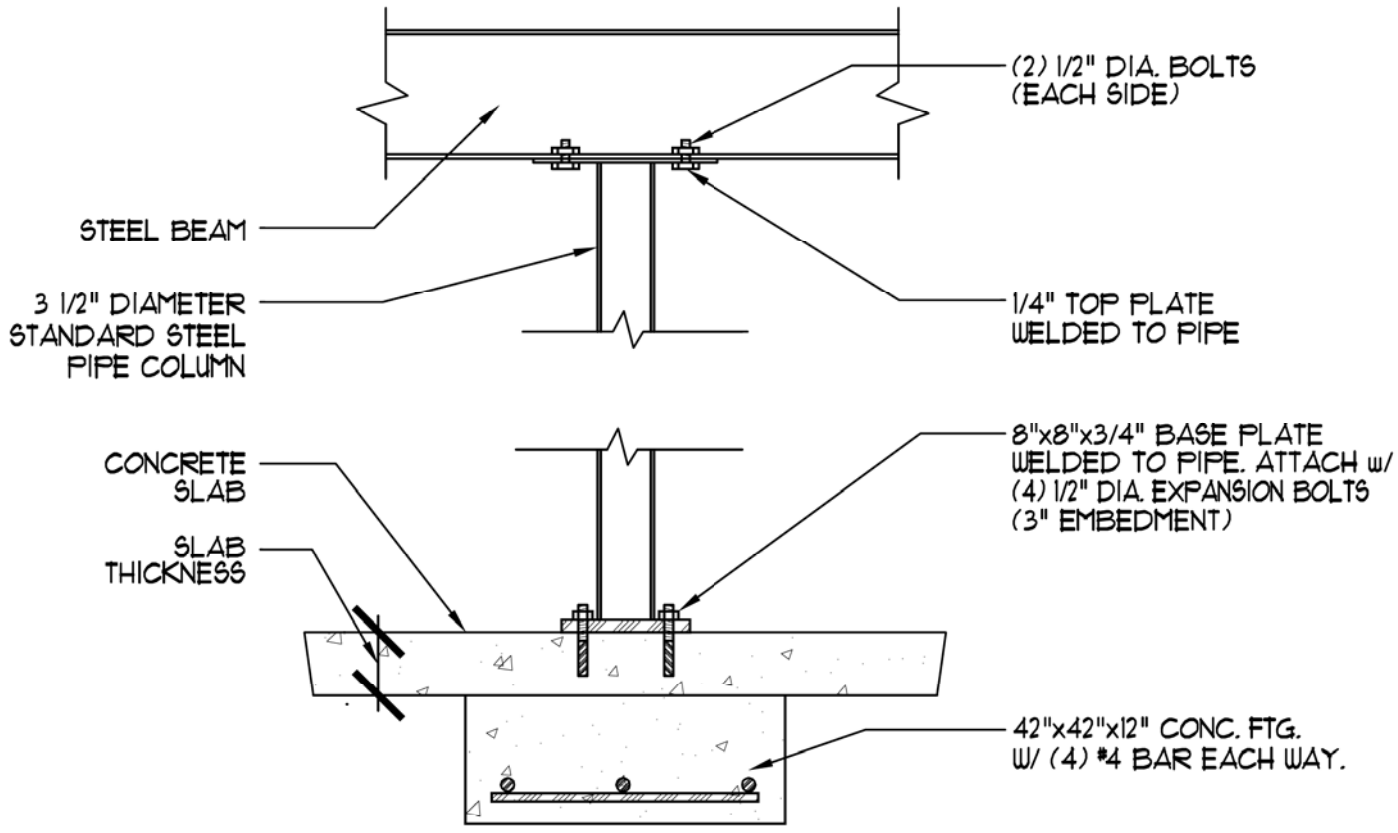
(A) SLAB FND. W/ SIDING

N.T.S.



(A) SLAB FOUNDATION

N.T.S.

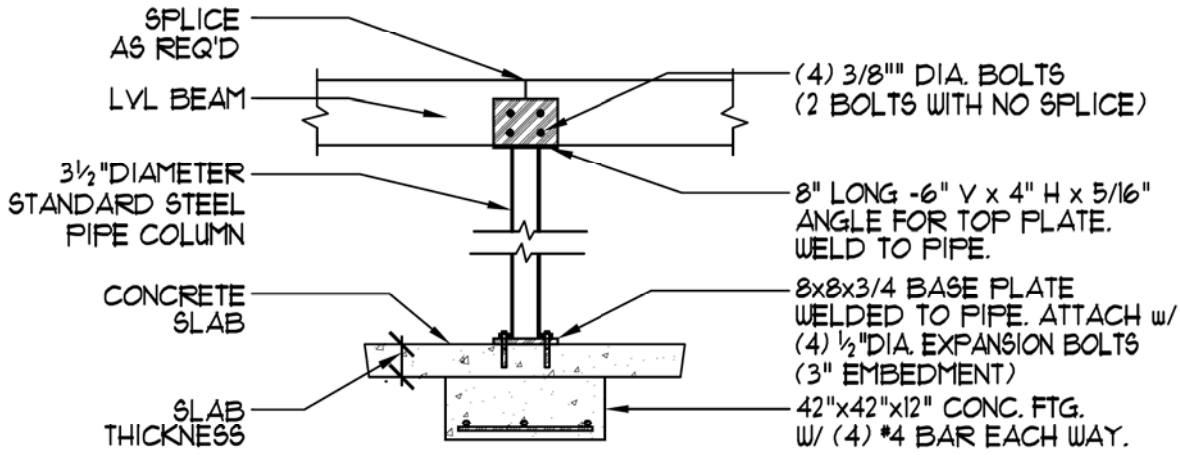


OPTION #1:
FOOTING AND SLAB MAY BE COMBINED FOR ONE POUR

OPTION #2:
EMBED PLATE INTO SLAB TO BEAR ON TOP OF FOOTING. ANCHOR BOLTS NOT REQUIRED

(A) TYPICAL PIPE COLUMN

(STEEL GIRDER) NTS.

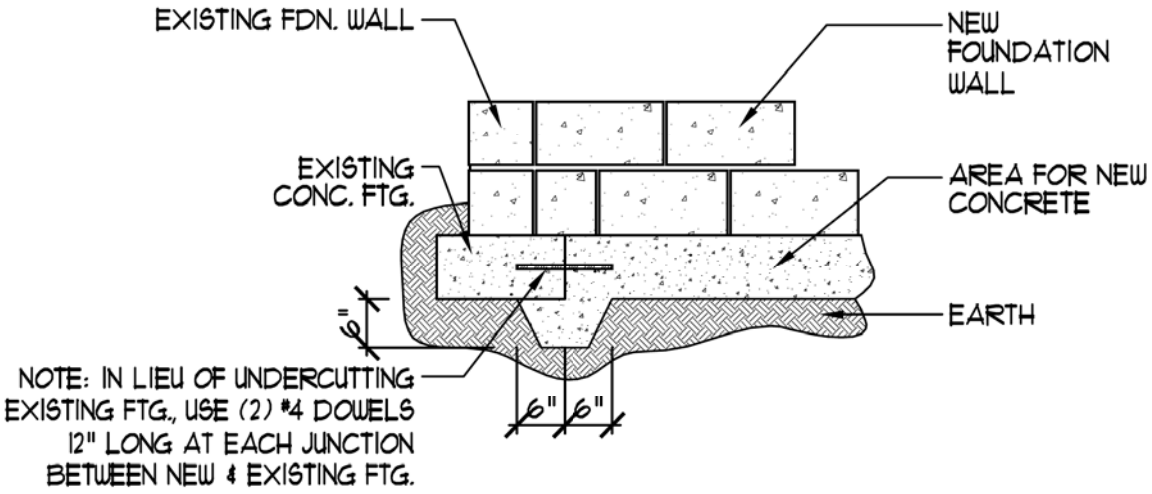


OPTION #1:
FOOTING AND SLAB MAY BE
COMBINED FOR ONE POUR

OPTION #2:
EMBED PLATE INTO SLAB TO BEAR
ON TOP OF FOOTING. ANCHOR BOLTS
NOT REQUIRED

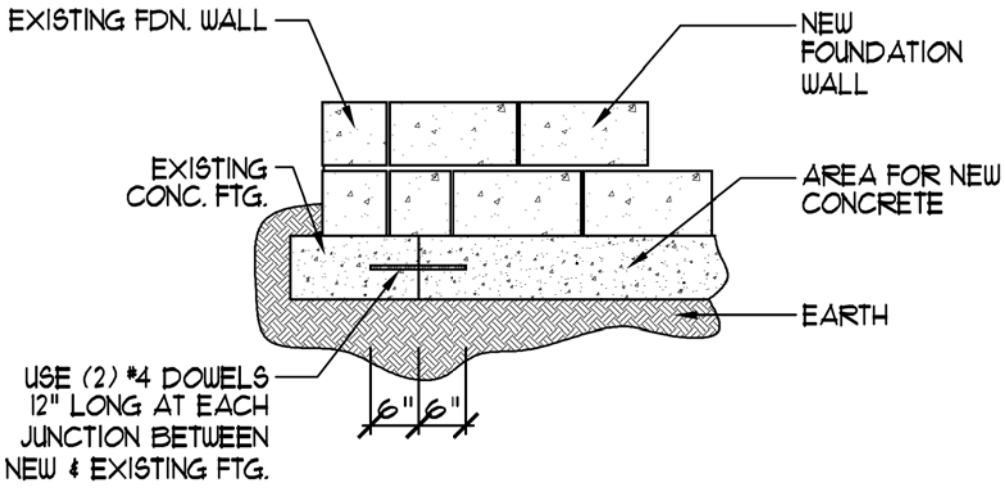
(A) TYPICAL PIPE COLUMN

(STEEL GIRDER) NTS.



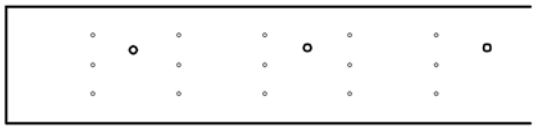
(A) NEW/EXISTING FOUNDATION WALL

(NTS)



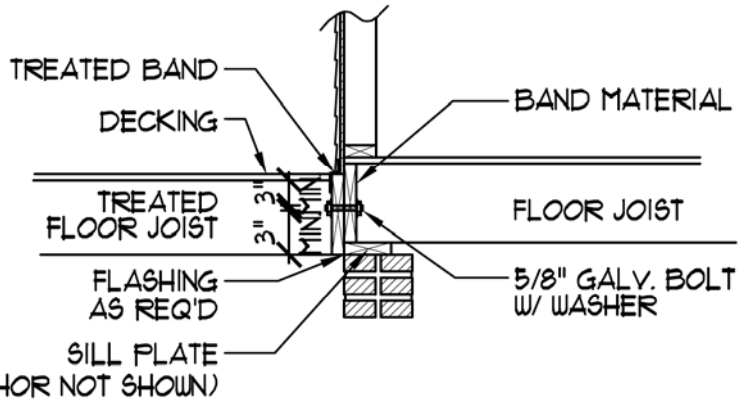
(A) NEW/EXISTING FOUNDATION WALL

(NTS)



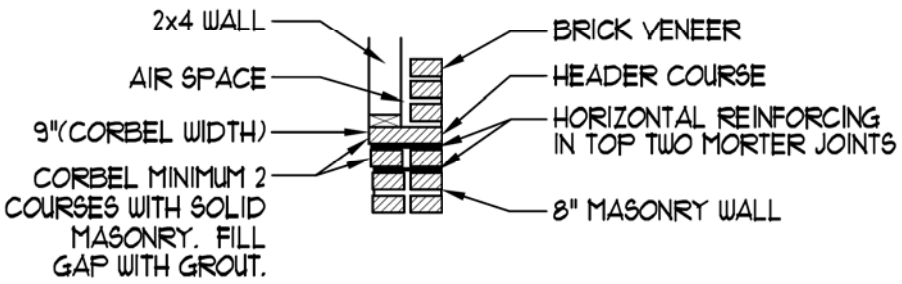
(3) 12d GALV. NAILS @ 6" O.C. AND
5/8"dia. GALV. BOLTS W/ WASHER @ 20" O.C.

FOR BRICK VENEER STRUCTURES:
5/8"dia. GALV. BOLTS W/ WASHER @ 16" O.C.



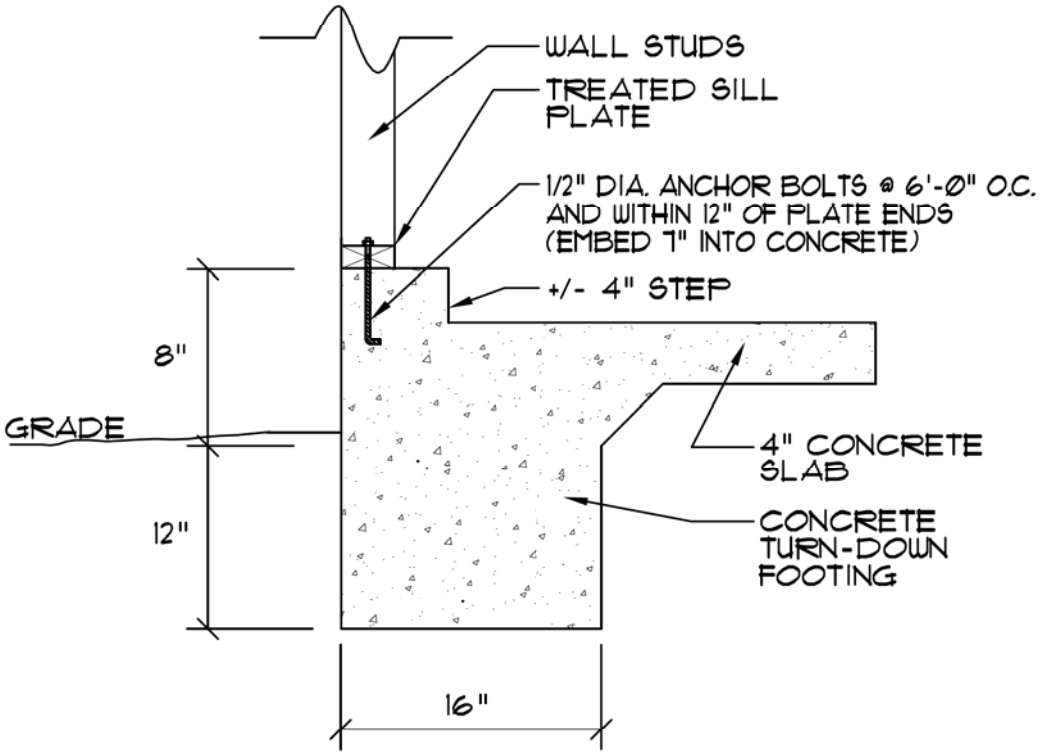
(A) DECK ATTACHMENT DETAIL

NTS



(A) CORBEL DETAIL

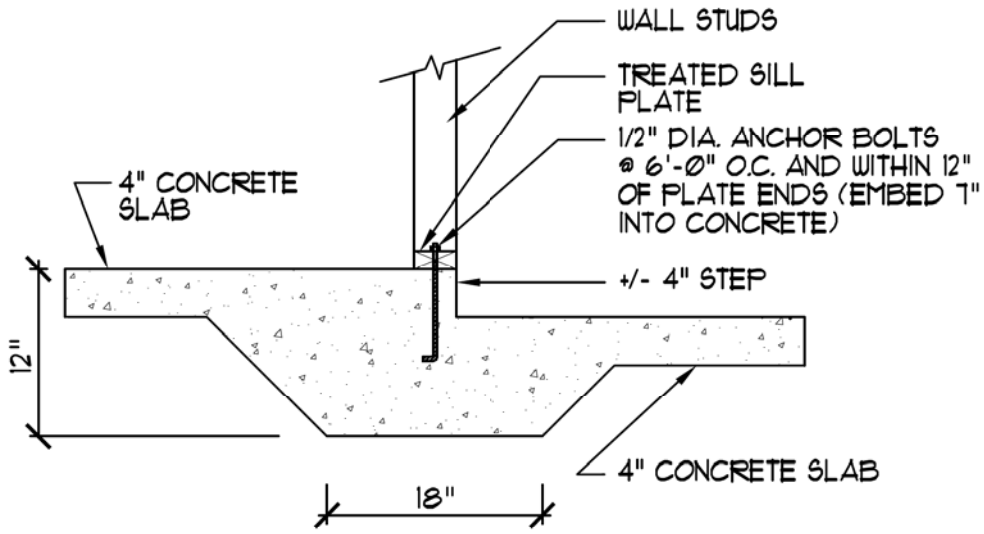
(R606.3) NTS



(A) TURN DOWN SLAB @ GARAGE

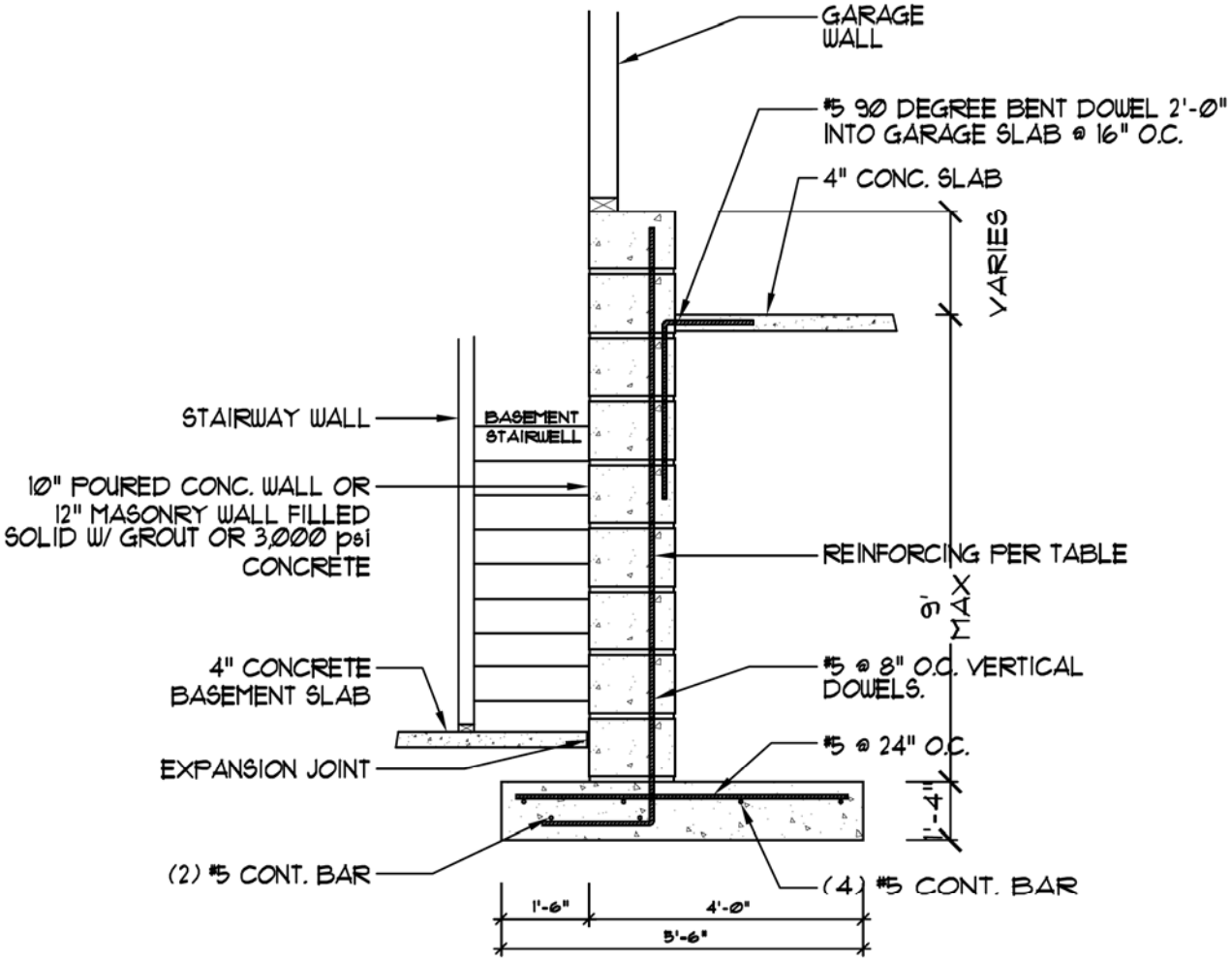
(SIDING)

NTS



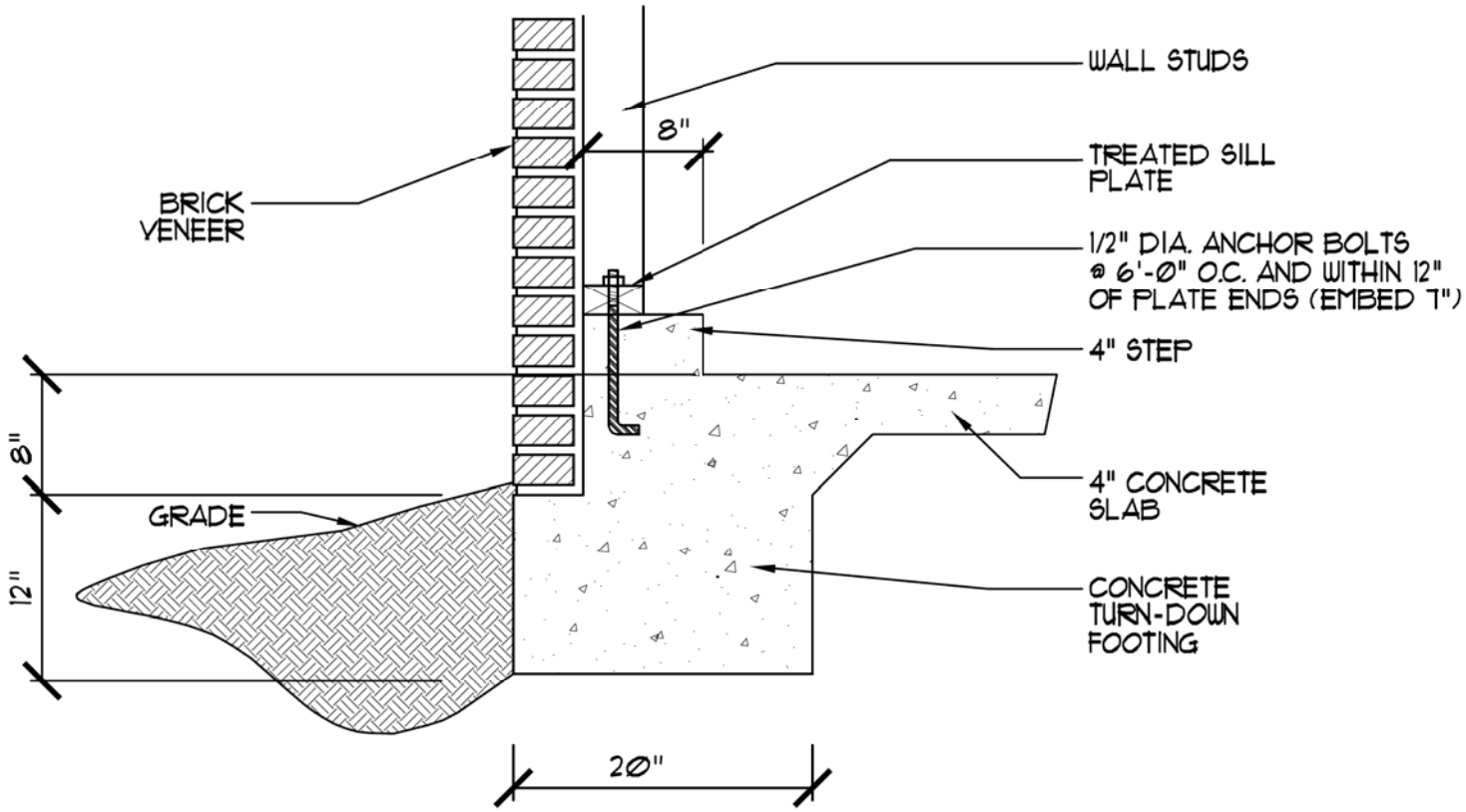
(A) TYPICAL THICKENED SLAB

NTS



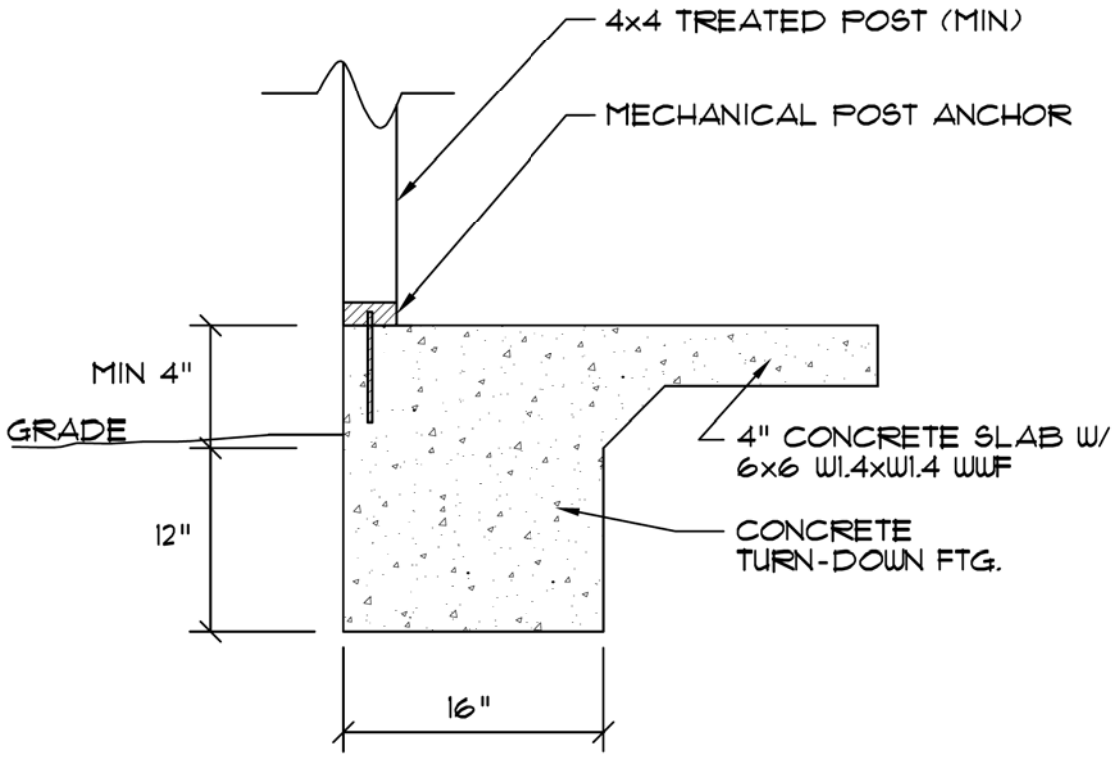
(A) BASEMENT WALL @ GARAGE / BASEMENT STAIR

NTS



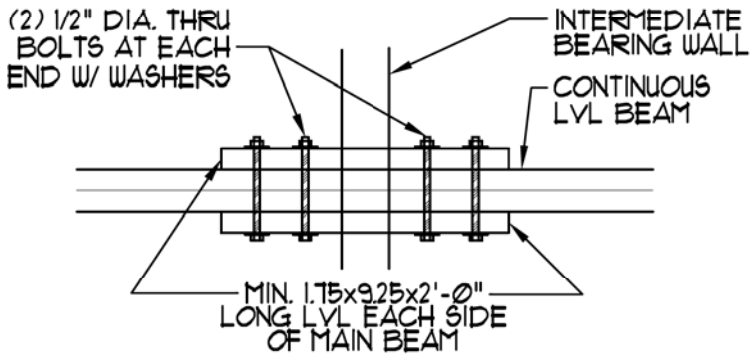
(A) TURN DOWN SLAB FOOTING

(BRICK VENEER) NTS



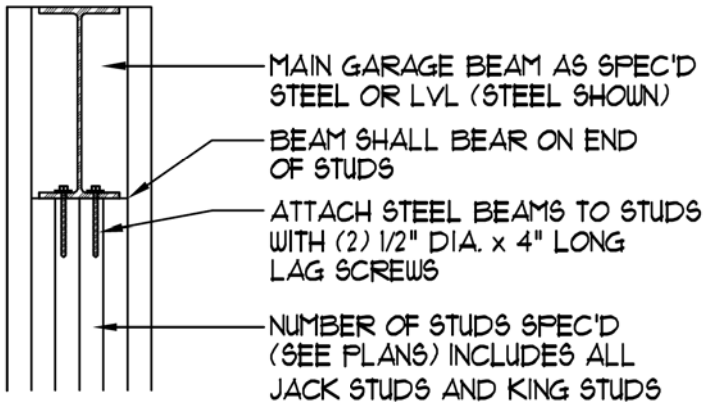
(A) TURN DOWN SLAB FOOTING AT PORCH

NTS



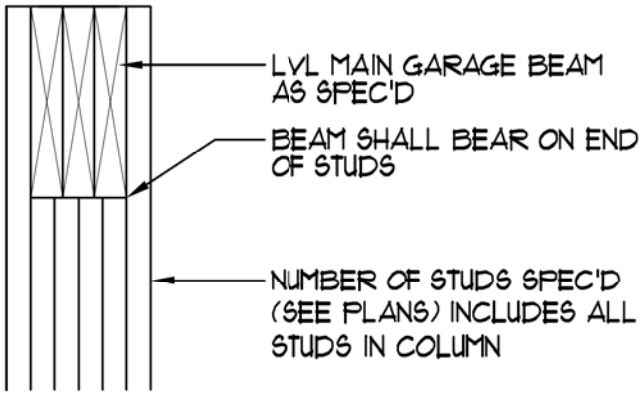
(A) BEARING REINFORCEMENT DETAIL

NTS



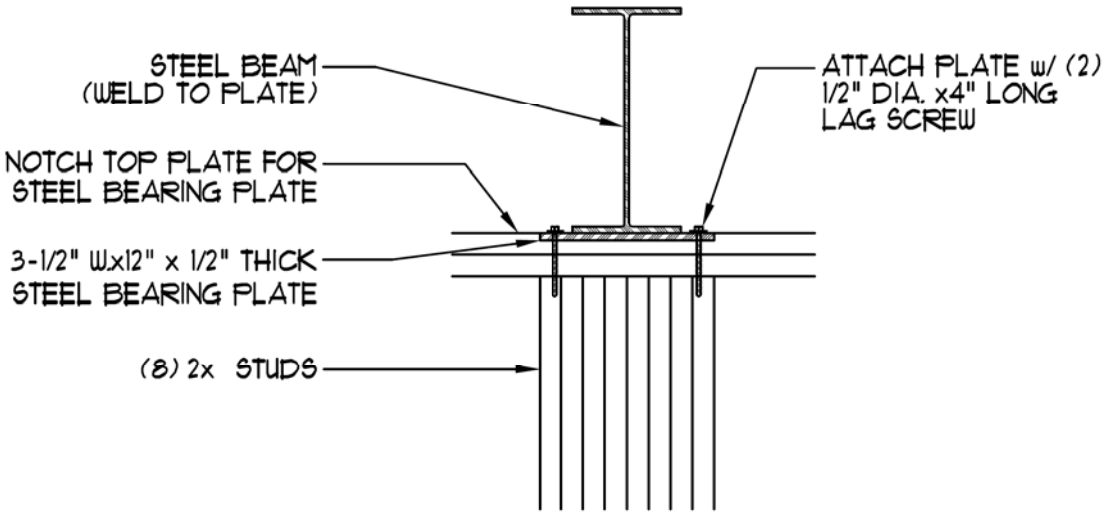
(A) TYP. GARAGE BEAM BEARING

NTS



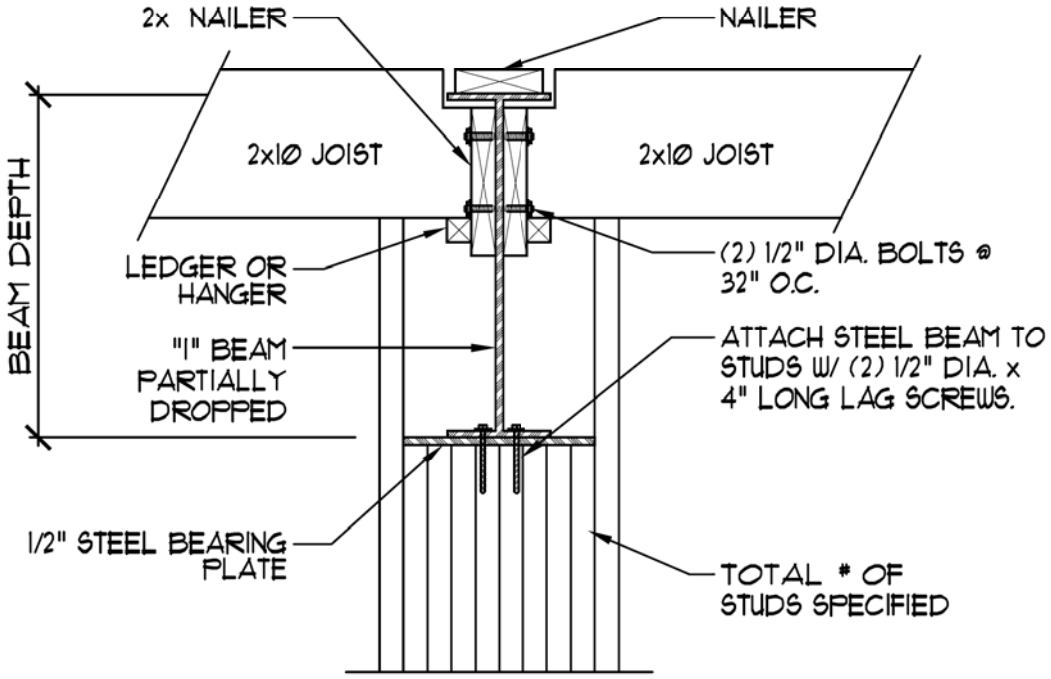
(A) TYP. GARAGE BEAM BEARING

NTS



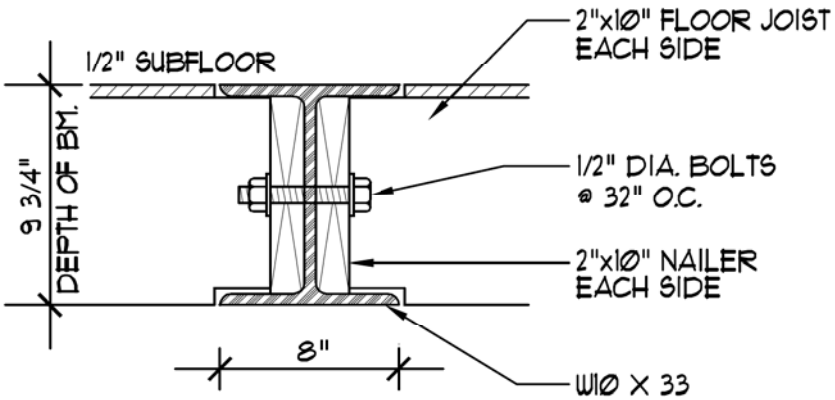
(A) STEEL BEARING PLATE

NTS



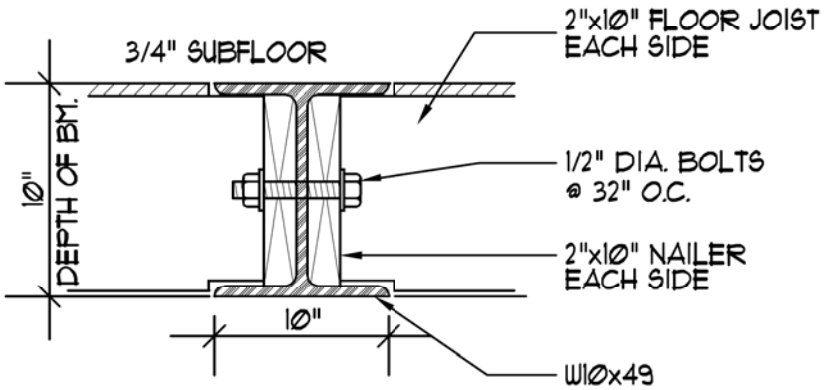
(A) GARAGE BEAM BEARING

TOP FLUSH NTS



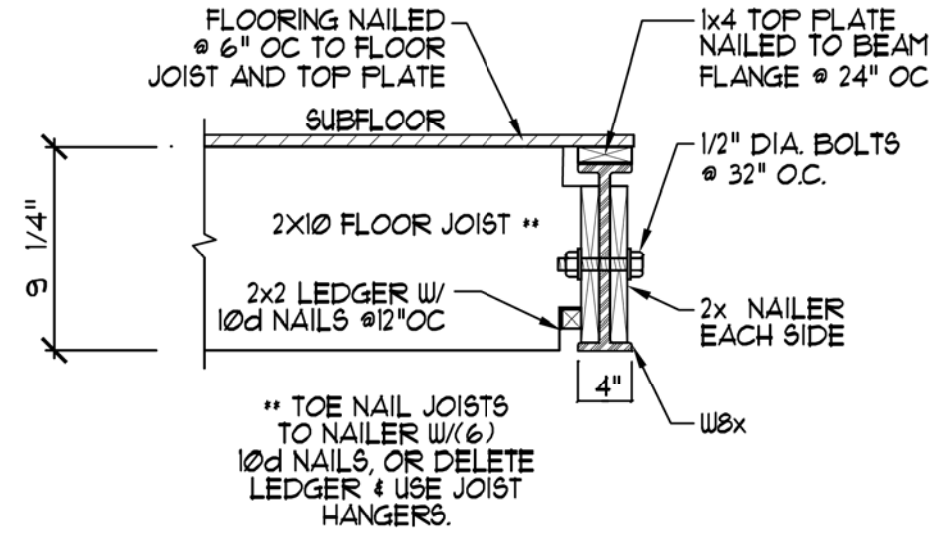
(A) W10x33 SECTION-ELEVATION

NTS



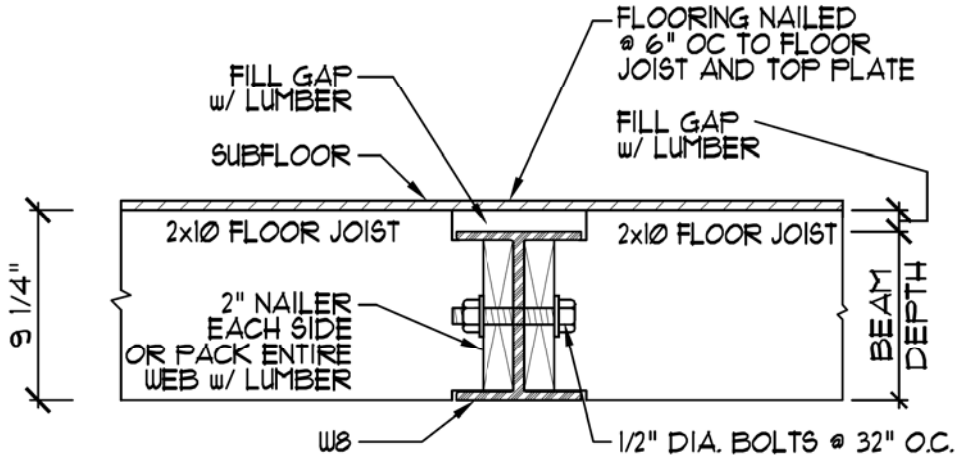
(A) W10x49 BEAM SECTION

NTS



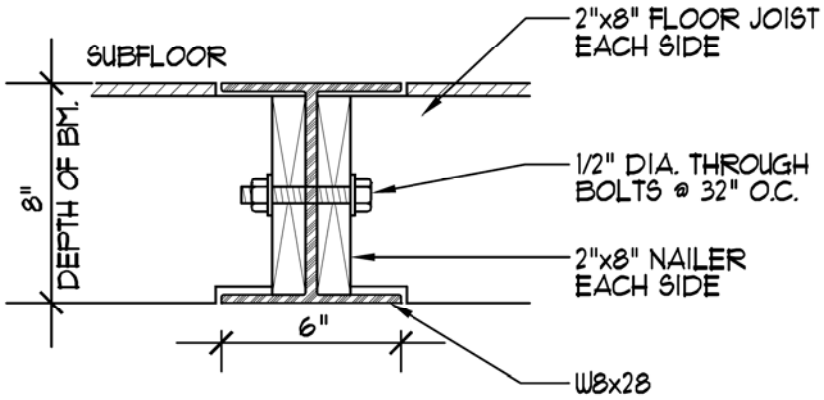
(A) W8x BEAM SECTION

(4" FLANGE) NTS



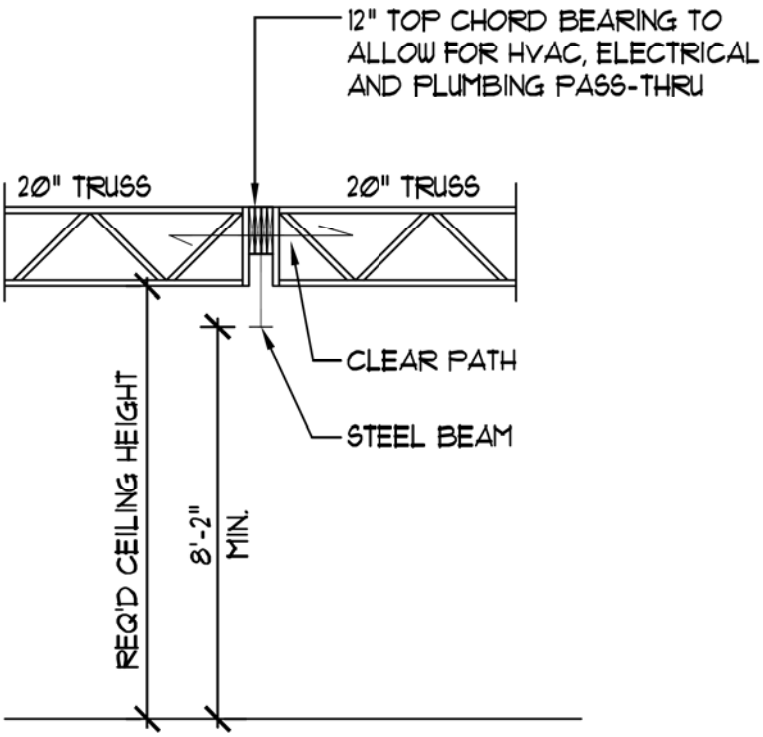
(A) W8 BEAM SECTION

NTS



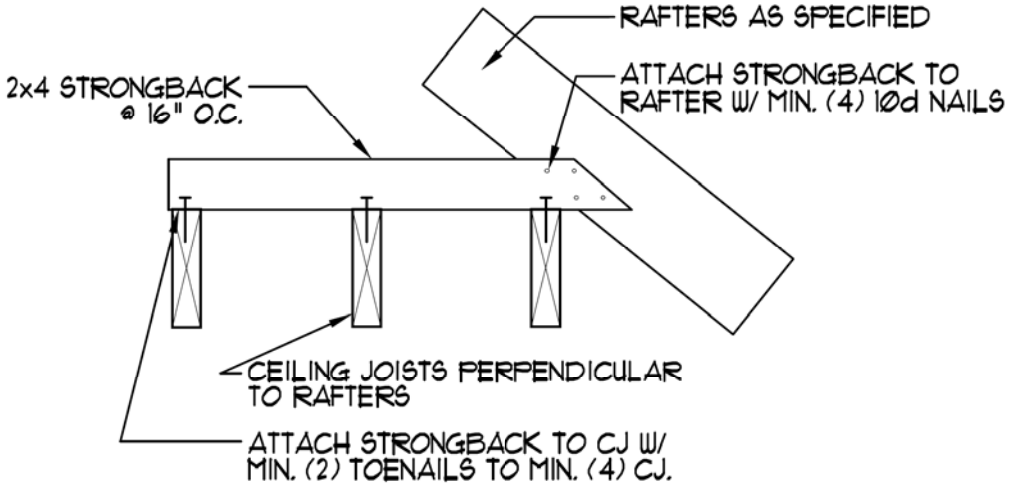
(A) W8x28 BEAM SECTION

NTS



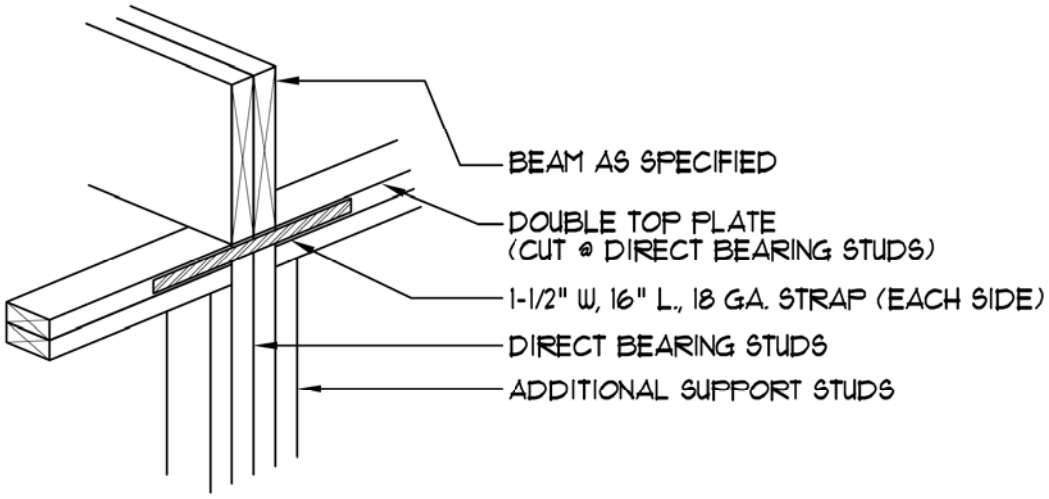
(A) BEAM DETAIL

NTS



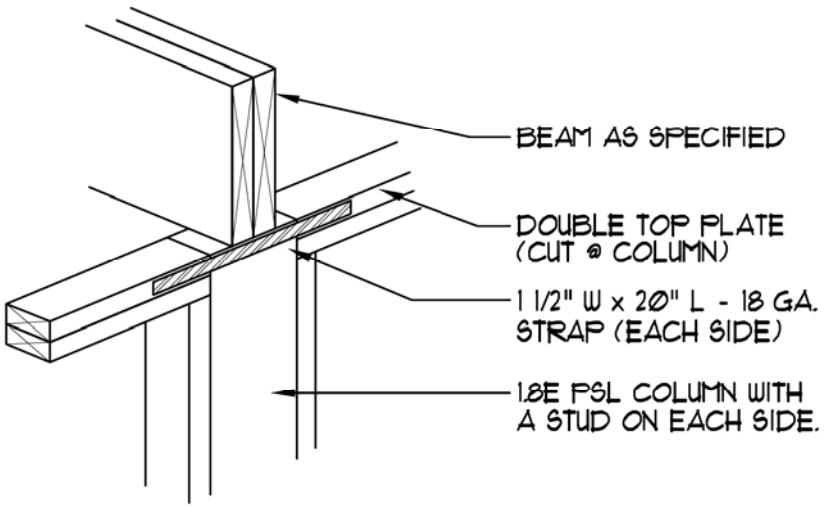
(A) STRONGBACK DETAIL

NTS



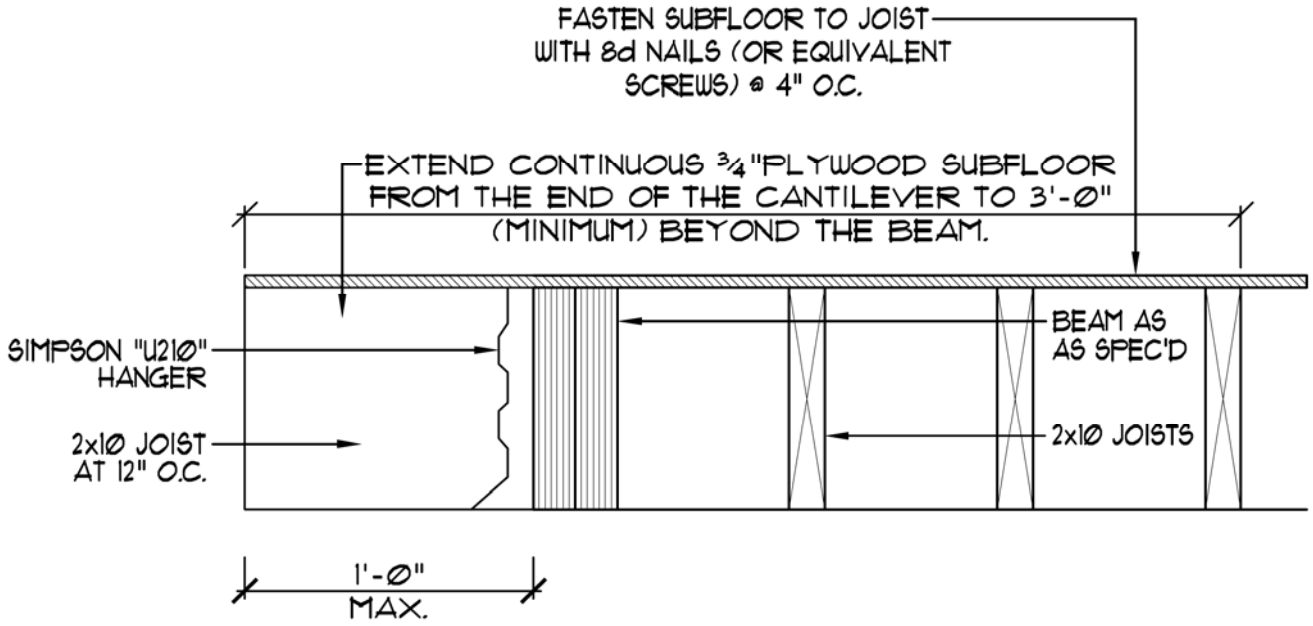
(A) DIRECT STUD BEARING

NTS



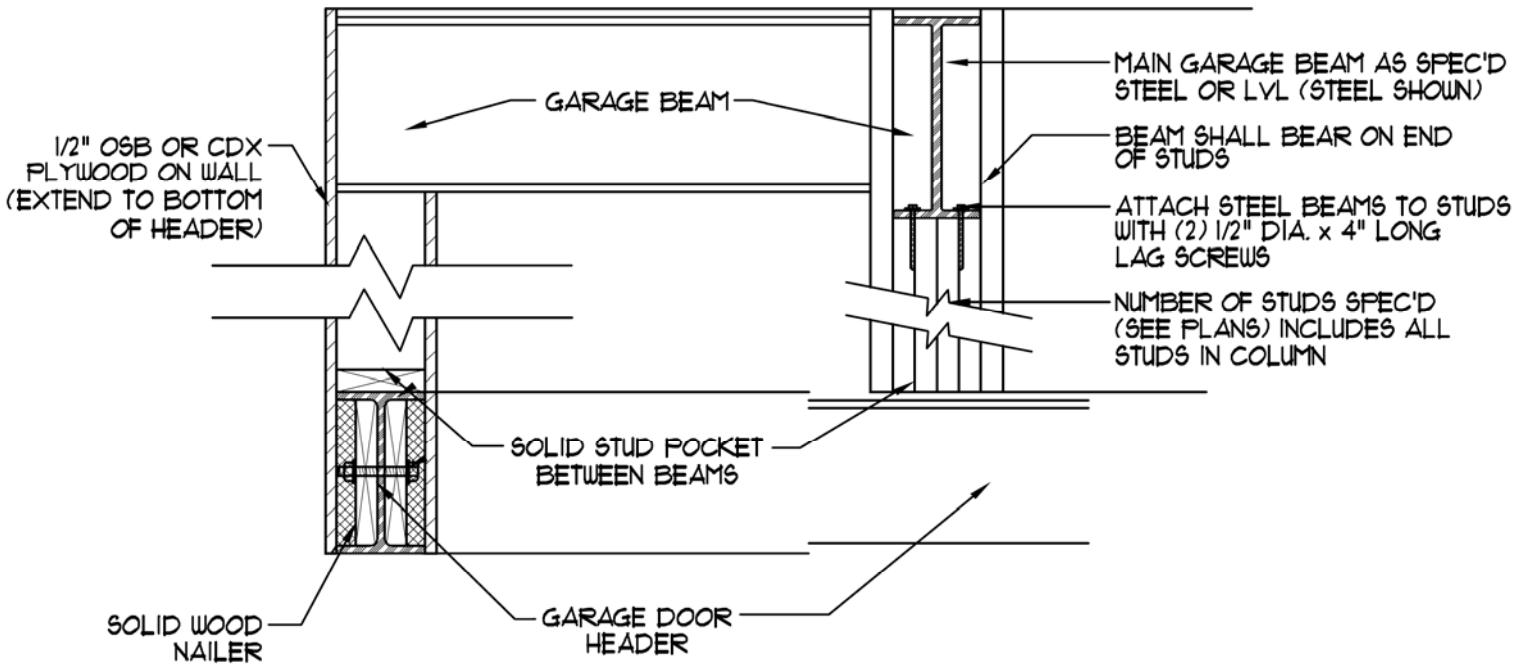
(A) DIRECT BEAM BEARING

NTS



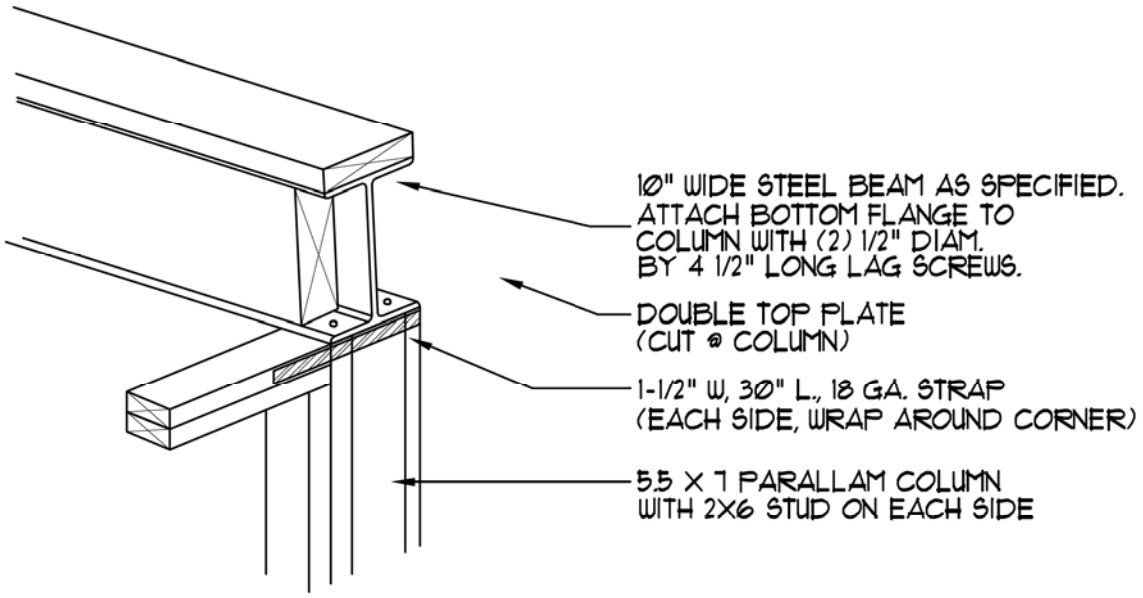
(A) SECTION AT BALCONY

NTS



(A) BEAM SUPPORT DETAIL

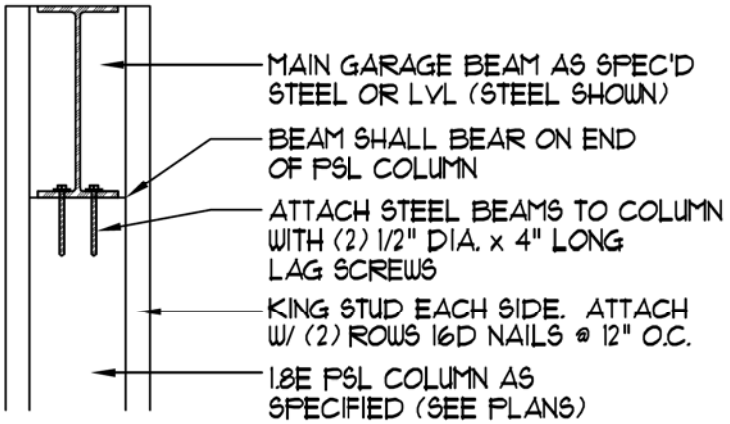
NTS



(A) DIRECT STEEL BEAM BEARING ON PSL COLUMN AT WALL CORNER

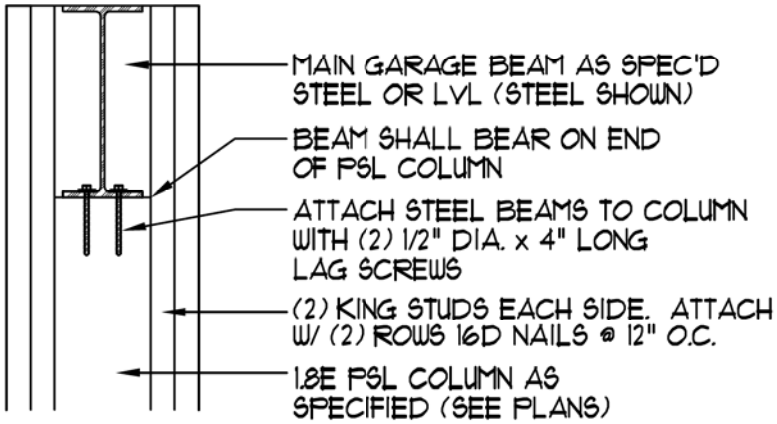
PSL COLUMN

NTS



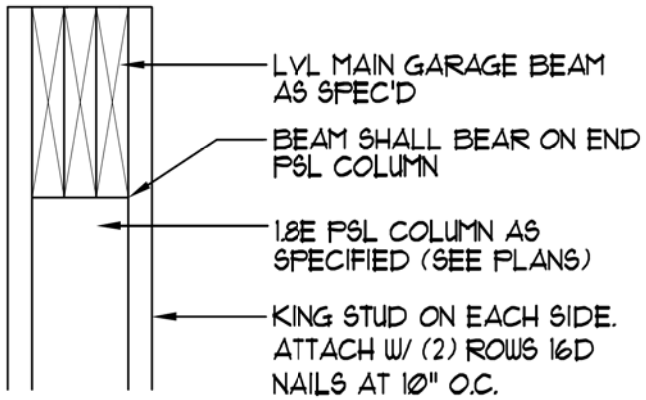
(A) TYP. GARAGE BEAM BEARING

NTS



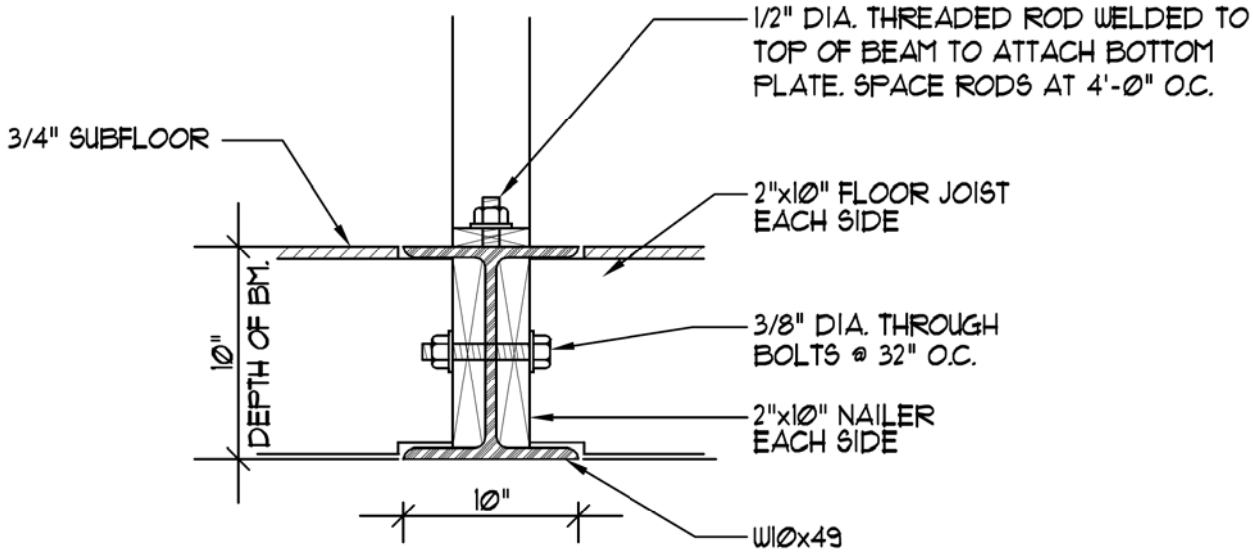
(A) TYP. GARAGE BEAM BEARING

NTS



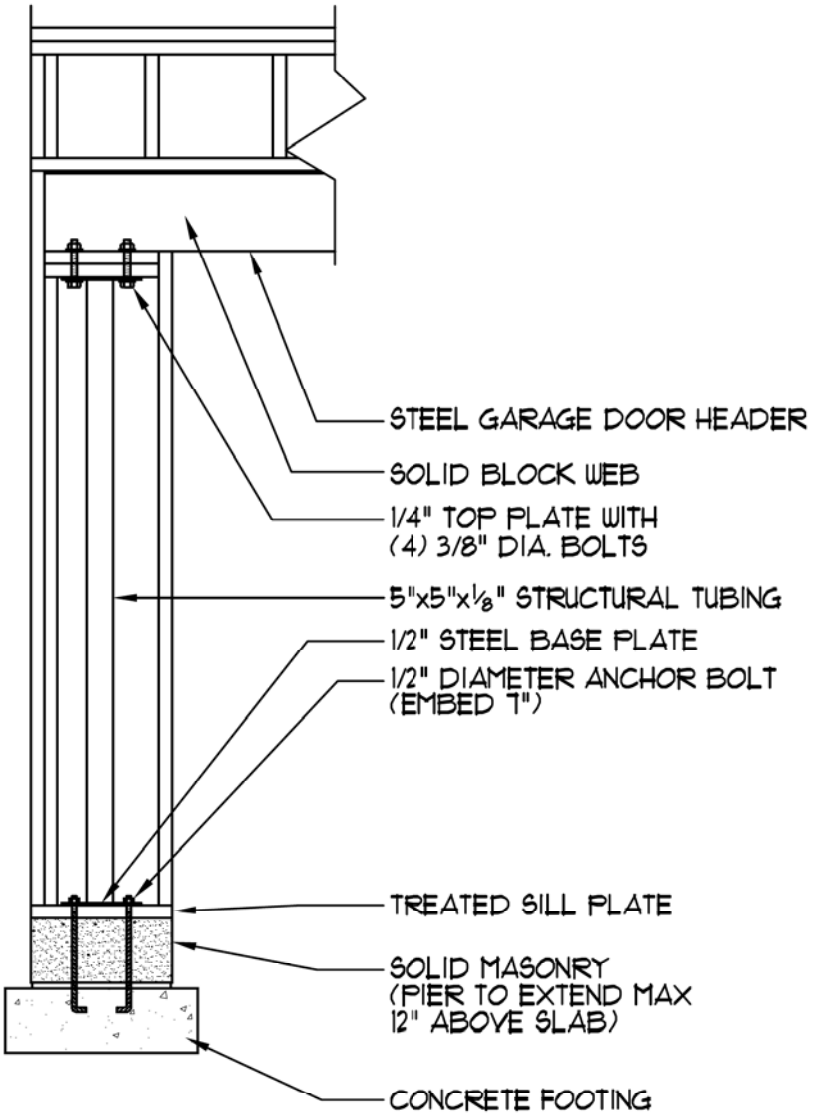
(A) TYP. GARAGE BEAM BEARING

NTS

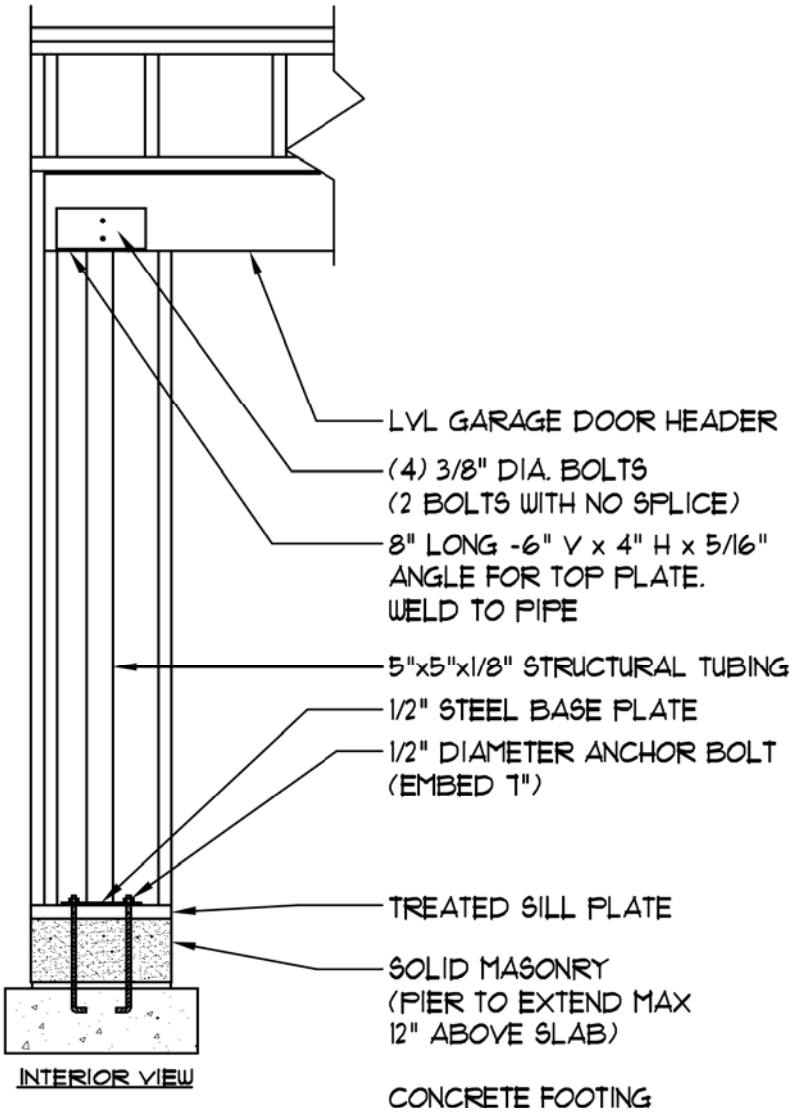


(A) W10x49 BEAM SECTION

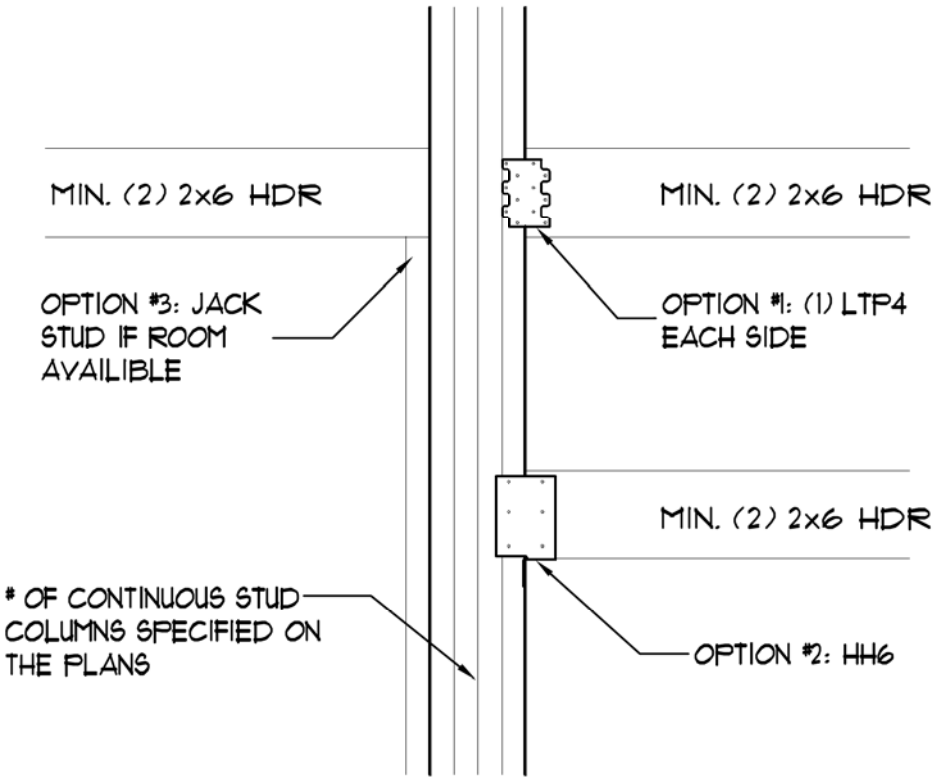
NTS



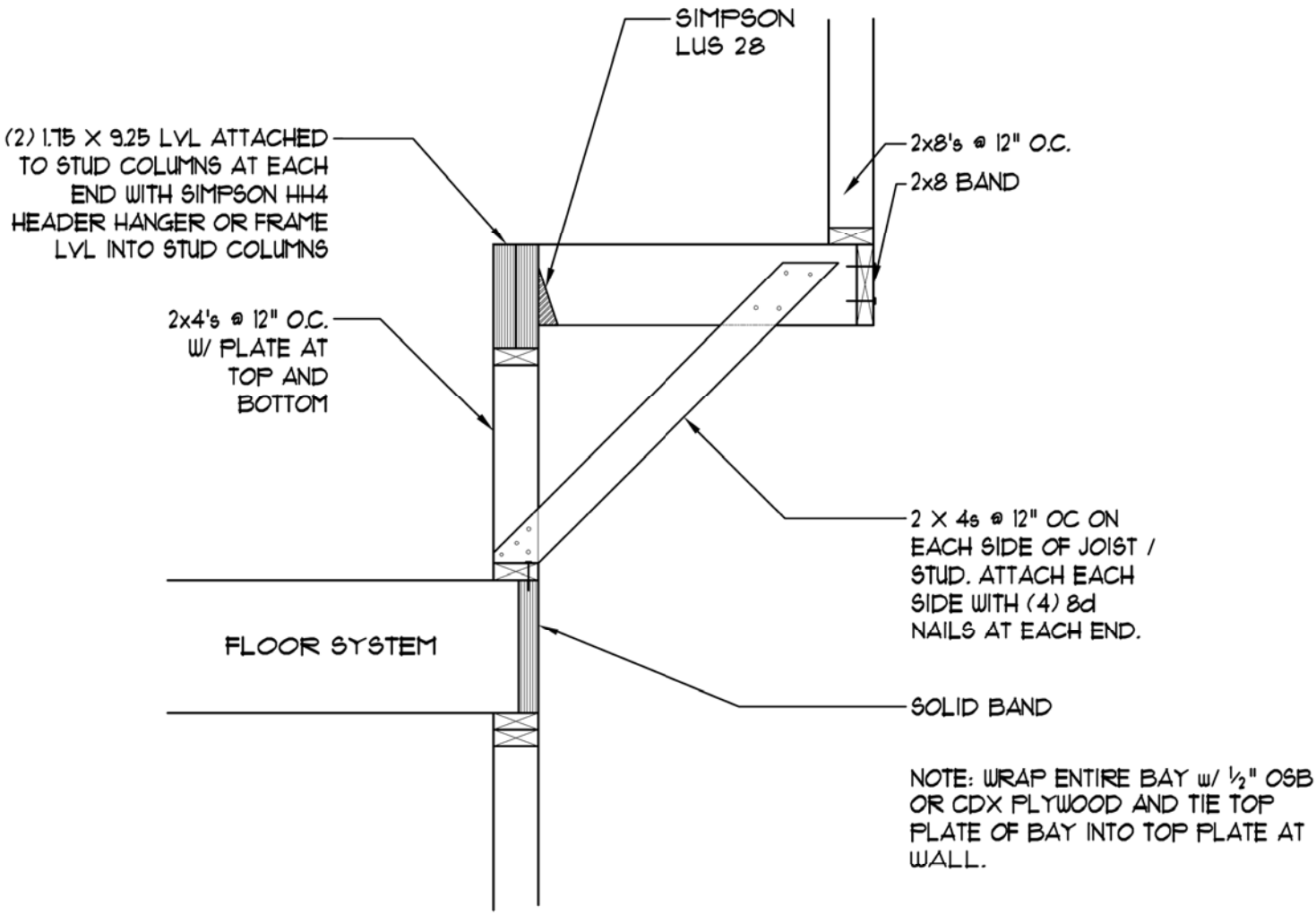
(A) STEEL COLUMN DETAIL



(A) STEEL COLUMN DETAIL

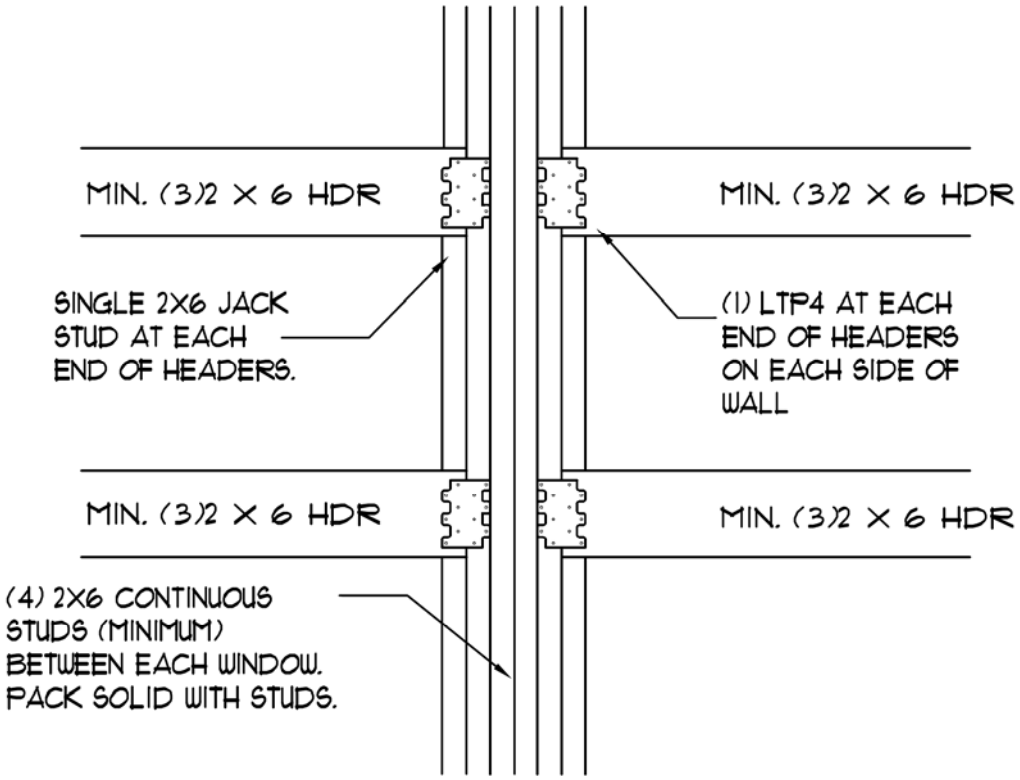


(A) BALLOON FRAME WALL / HEADER DETAIL

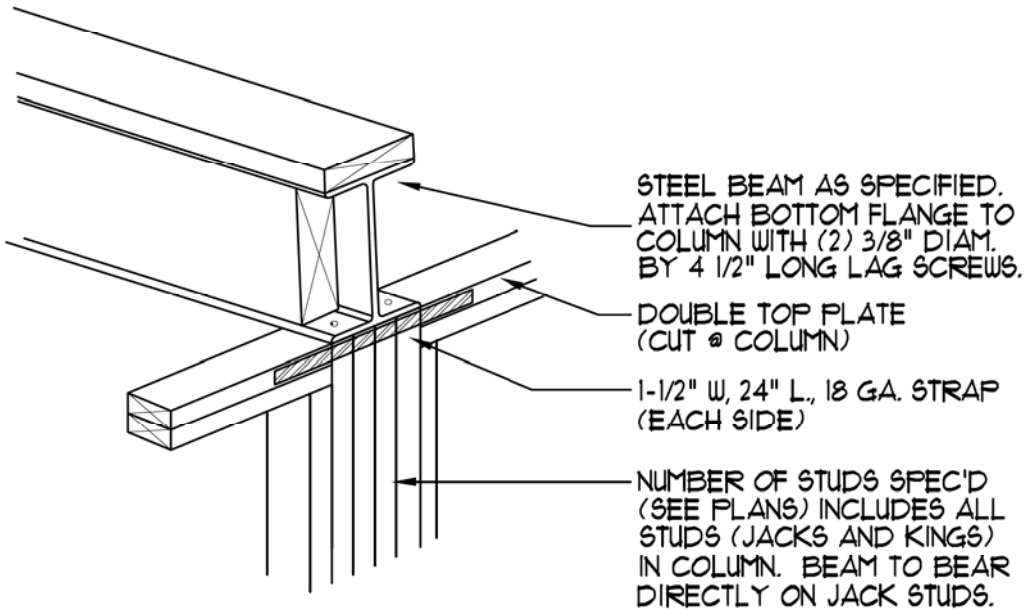


(A) BAY DETAIL

NTS

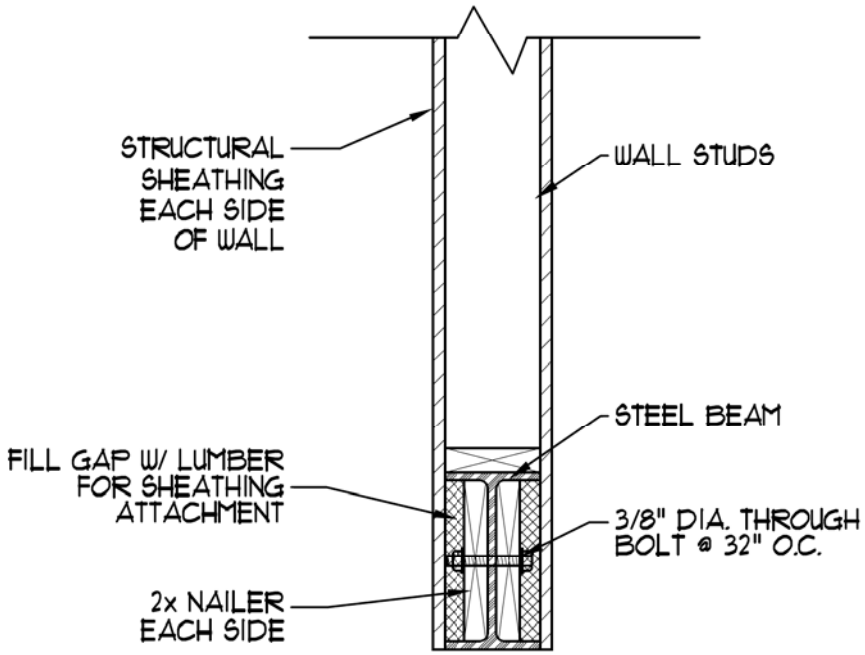


(A) BALLOON FRAME WALL / HEADER DETAIL



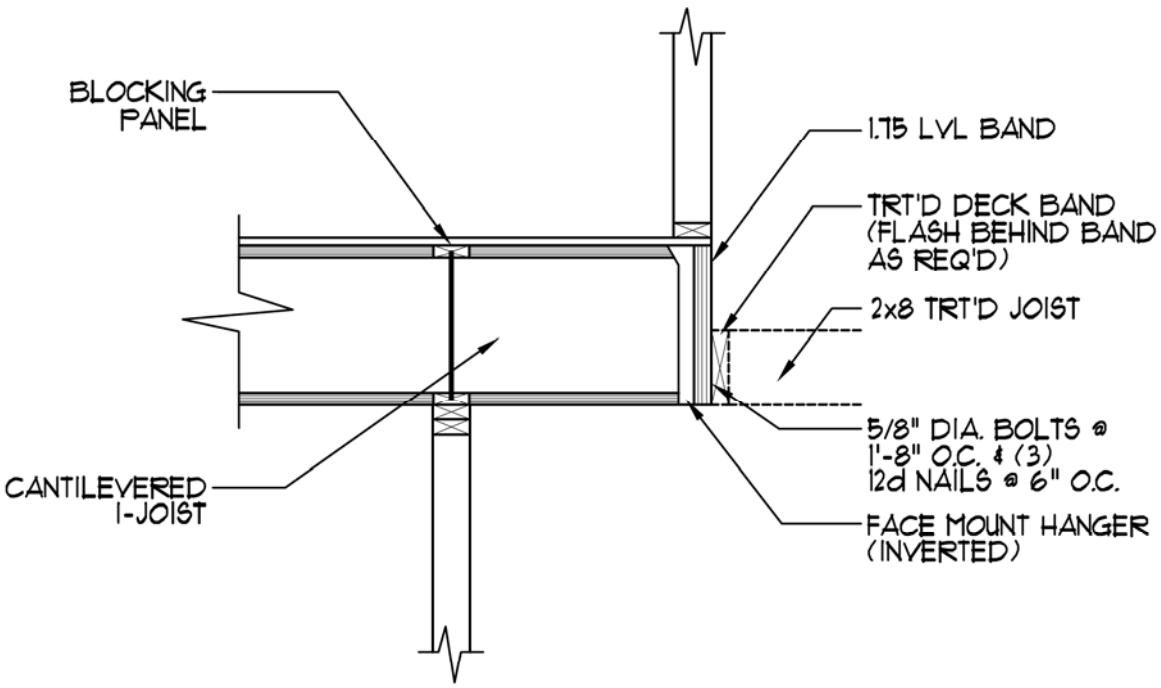
(A) DIRECT BEAM BEARING

NTS



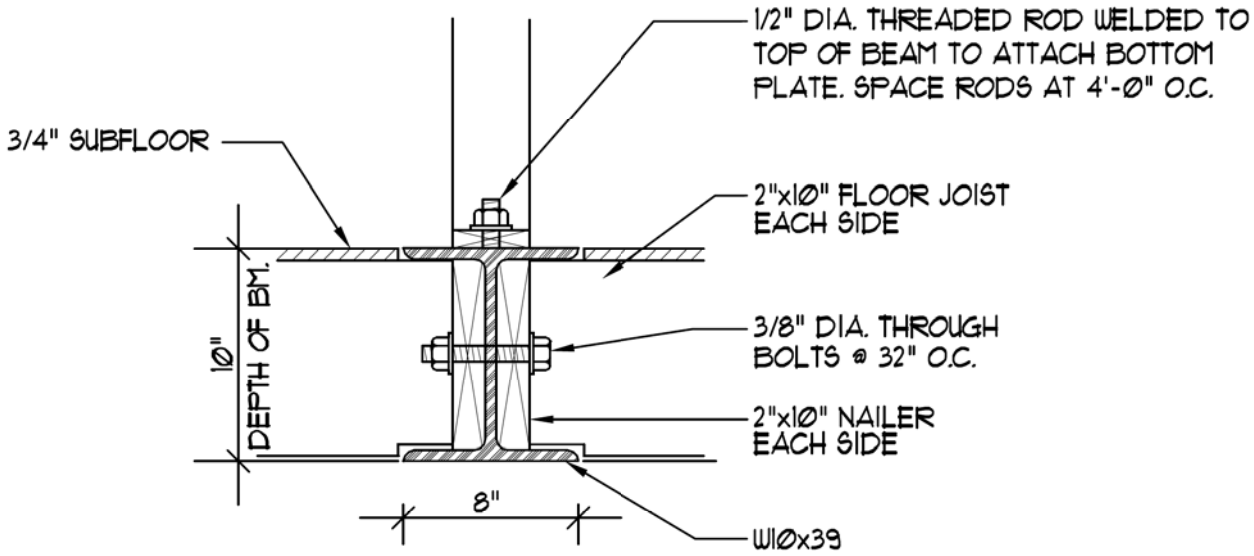
(A) GARAGE DOOR HEADER

NTS



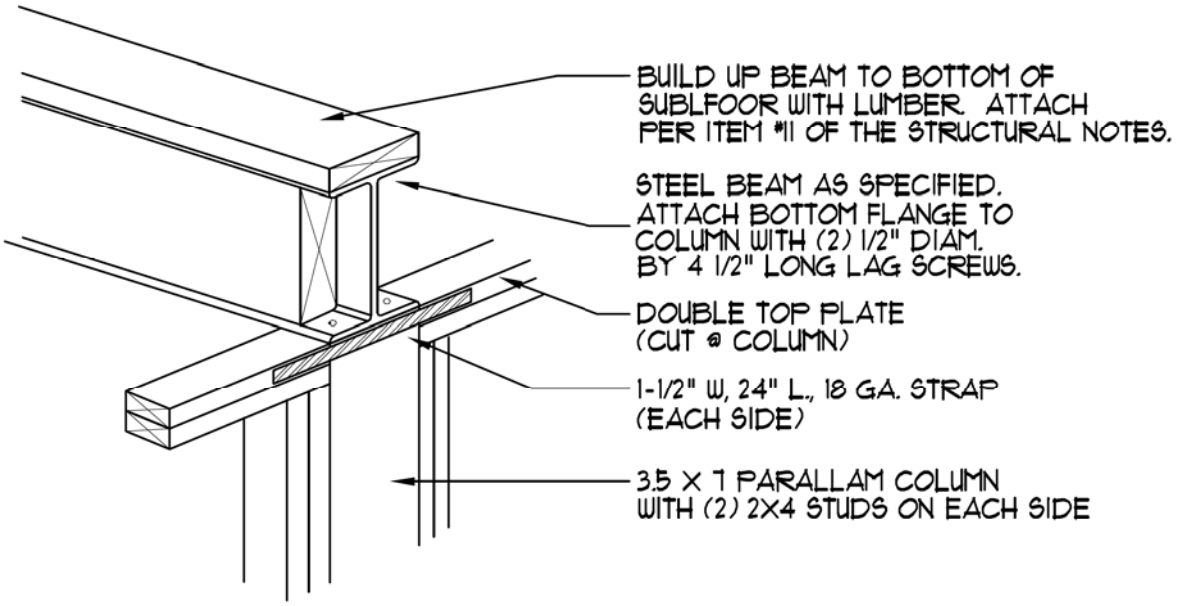
(A) CANTILEVERED DECK DETAIL

NTS



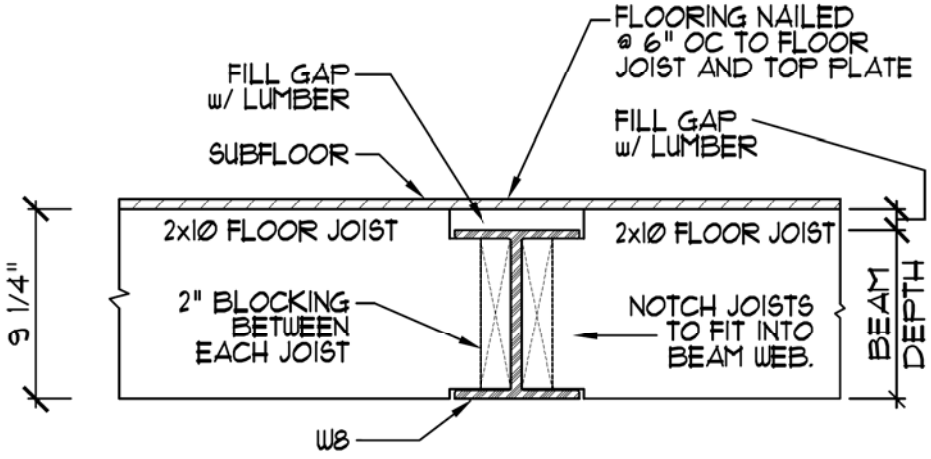
(A) W10x39 BEAM SECTION

NTS



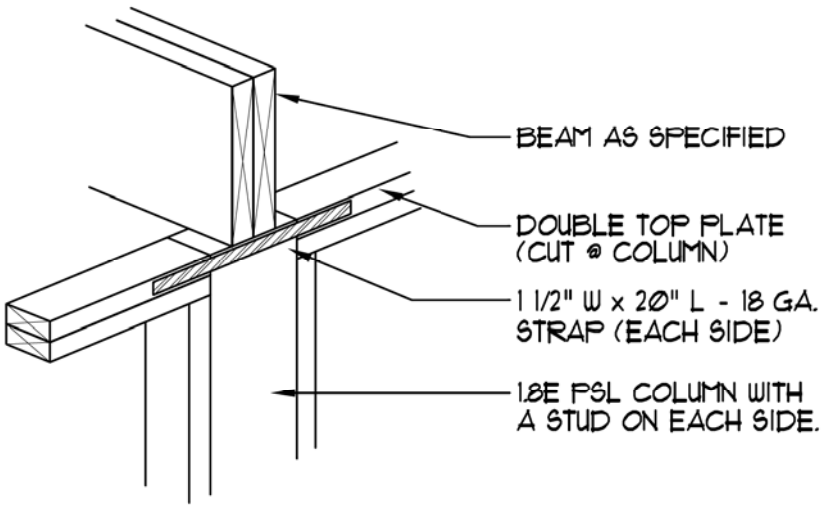
(A) DIRECT BEAM BEARING

PSL COLUMN NTS



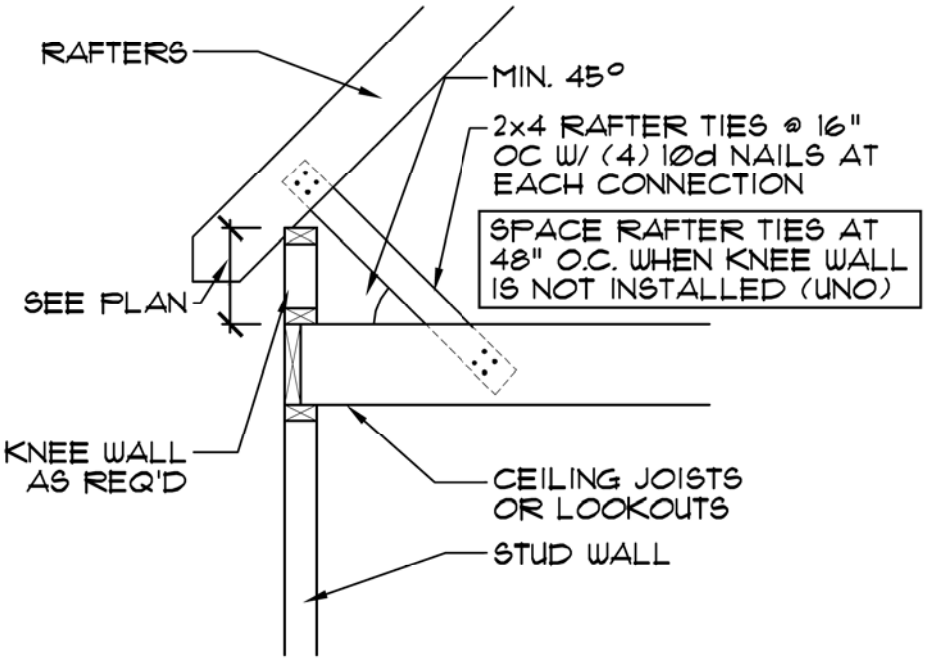
(A) W8 BEAM SECTION w/ BLOCKING

NTS



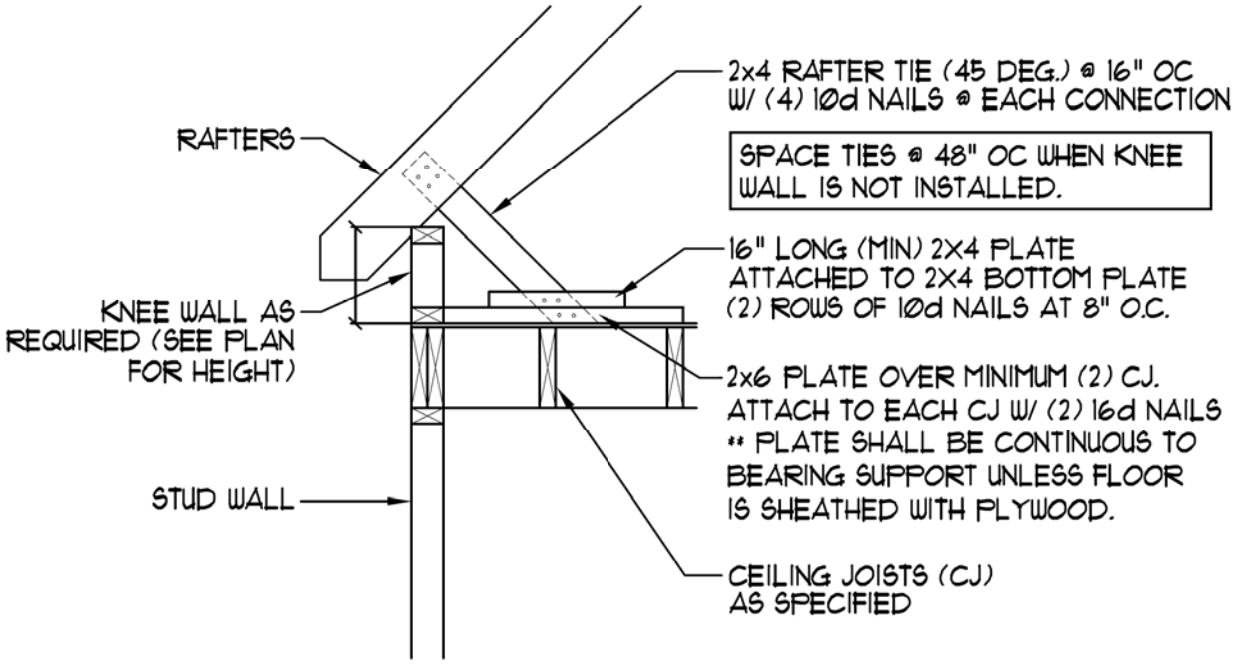
(A) DIRECT BEAM BEARING

NTS



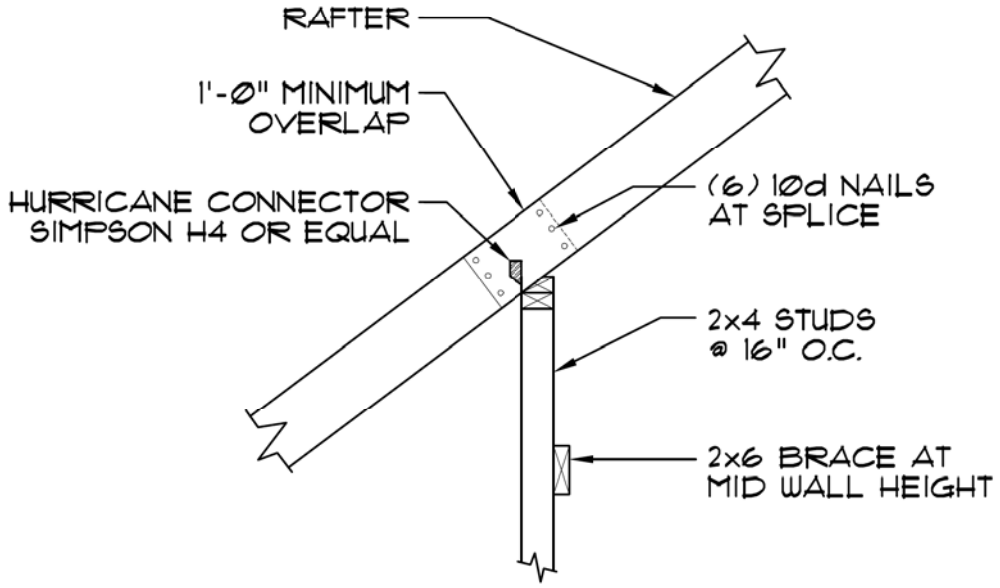
(A) RAFTER TIE DOWN (TYP)

NTS.



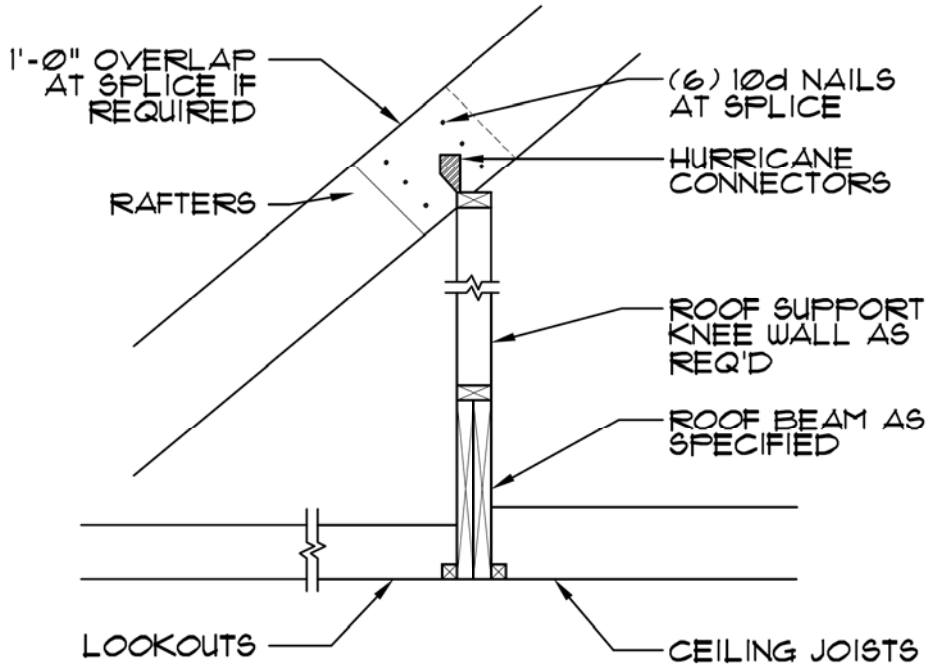
(A) RAFTER TIE DOWN (TYP)

(RAFTERS PERPENDICULAR TO JOISTS) NTS.



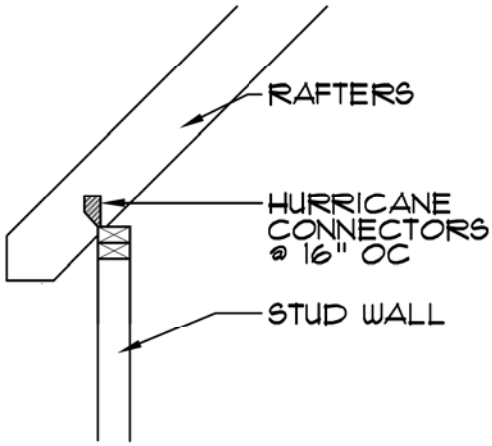
(A) TYPICAL RAFTER SPLICE ON ATTIC KNEEWALL

NTS



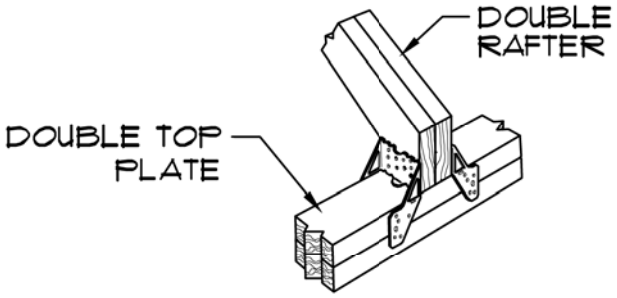
(A) ROOF BEAM

NTS.



A RAFTER TIE @ VAULT

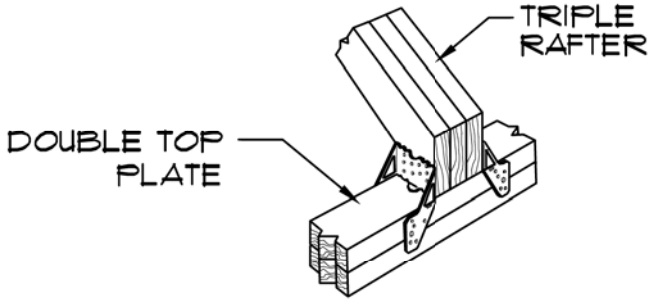
NTS.



SIMPSON STRONG-TIE "TBE"

(A) DBL. RAFTER ATTACHMENT

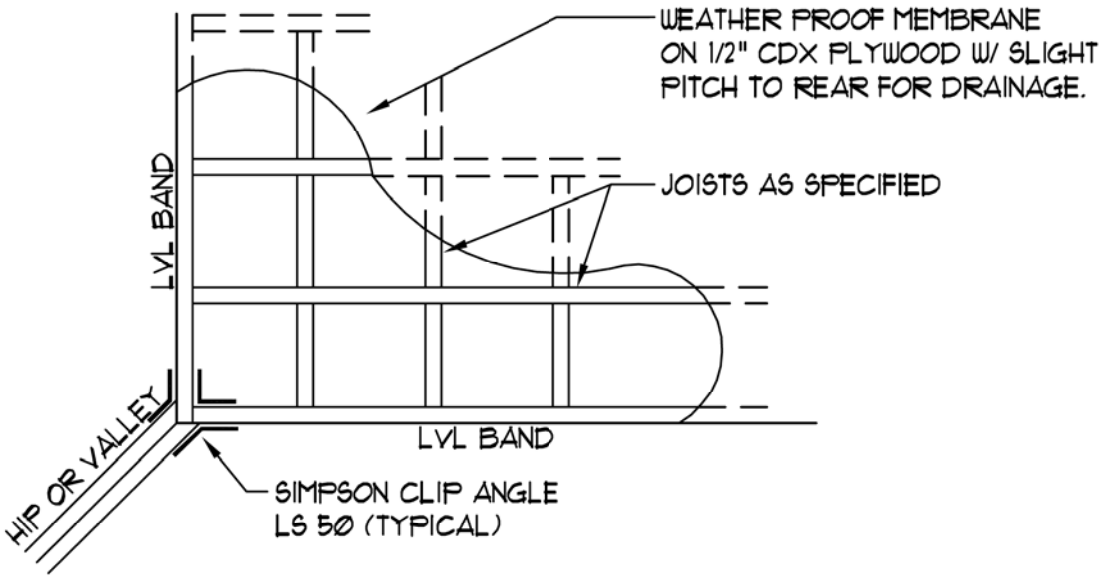
NTS



SIMPSON STRONG-TIE "TBE"

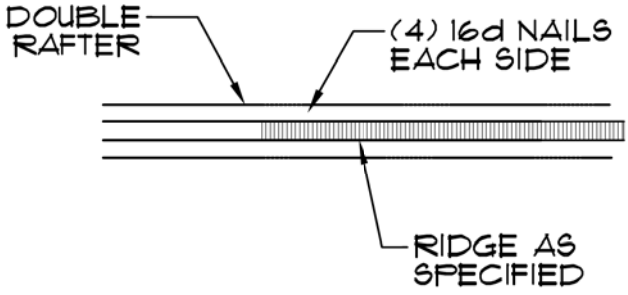
(A) TRIPLE RAFTER ATTACHMENT

NTS

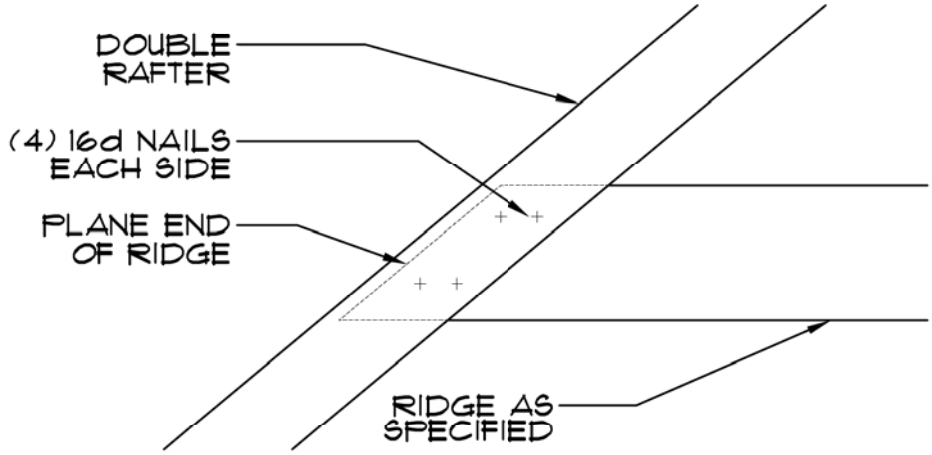


(A) TYPICAL FLAT ROOF DETAIL

NTS



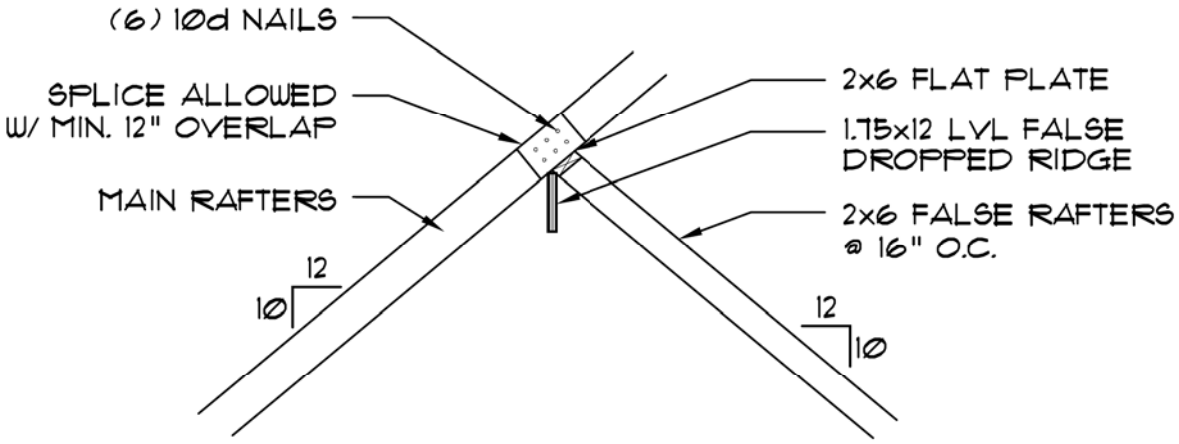
PLAN VIEW



ELEVATION

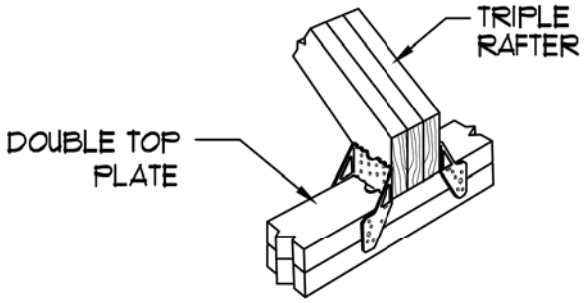
(A) RIDGE/DBL. RAFTER CONNECTION

NTS



(A) FALSE RIDGE SPLICE

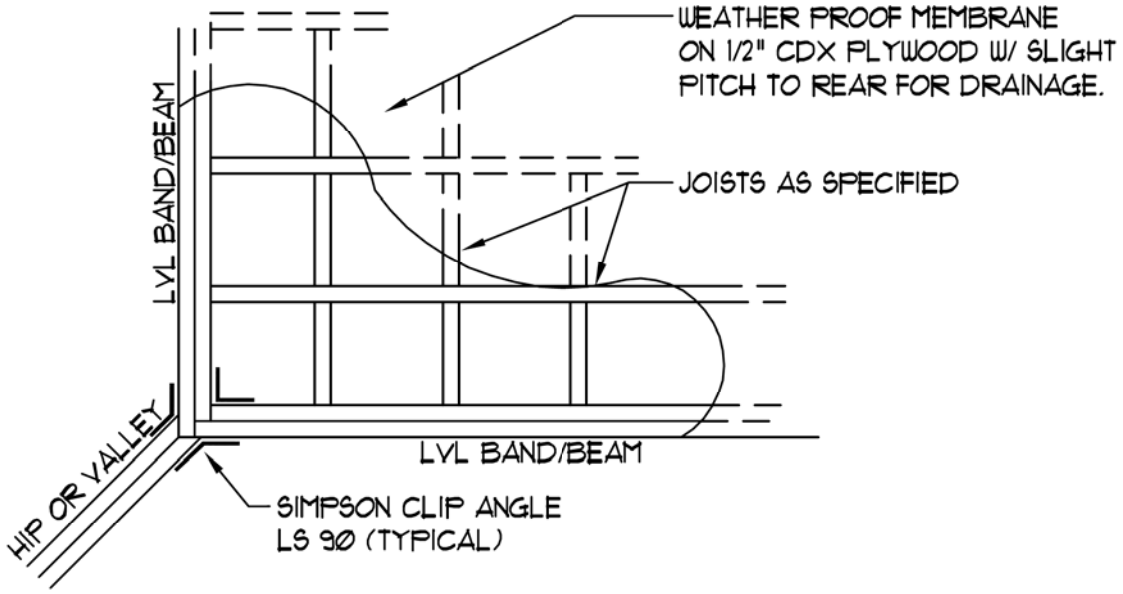
N.T.S.



SIMPSON STRONG-TIE "TBE"

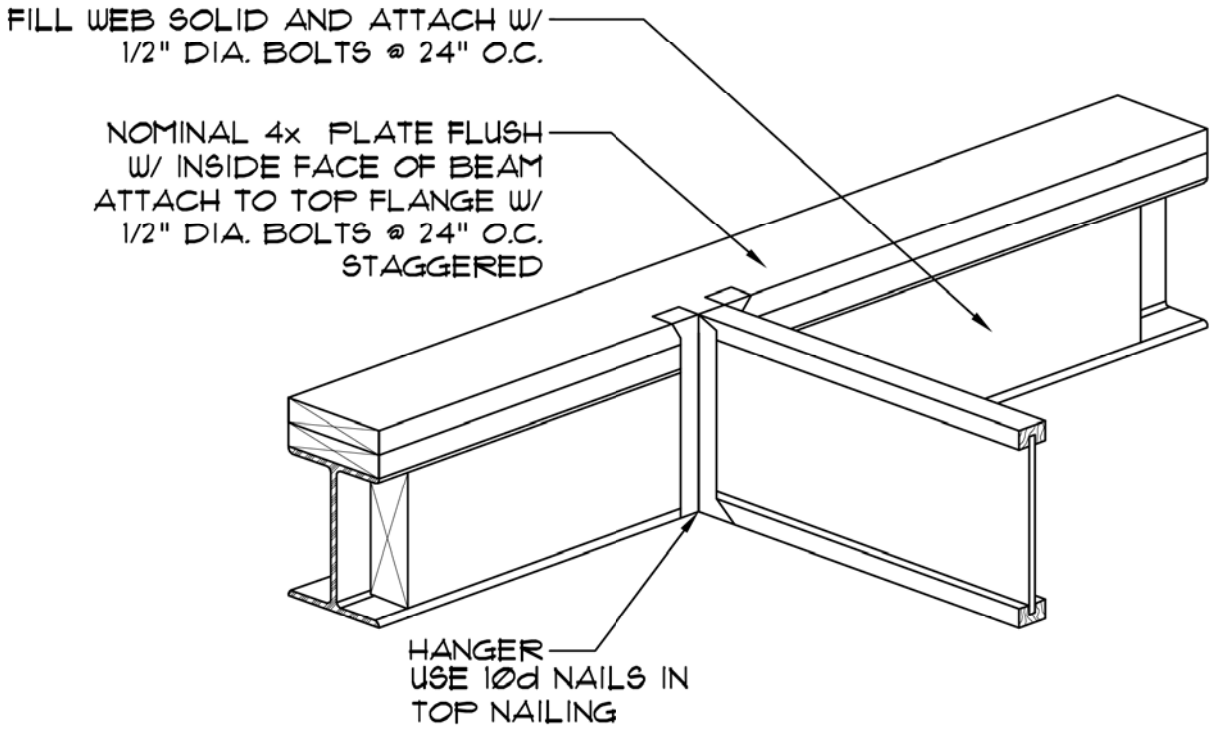
(A) TRIPLE RAFTER ATTACHMENT

NTS



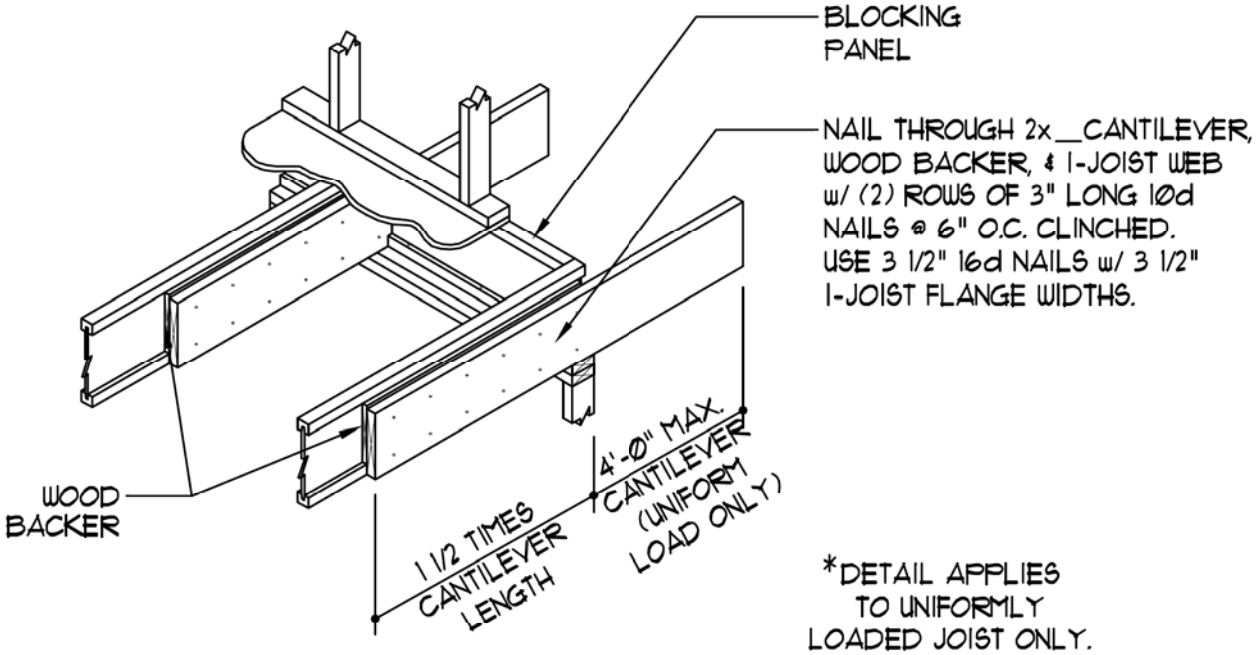
(A) TYPICAL FLAT ROOF DETAIL

NTS



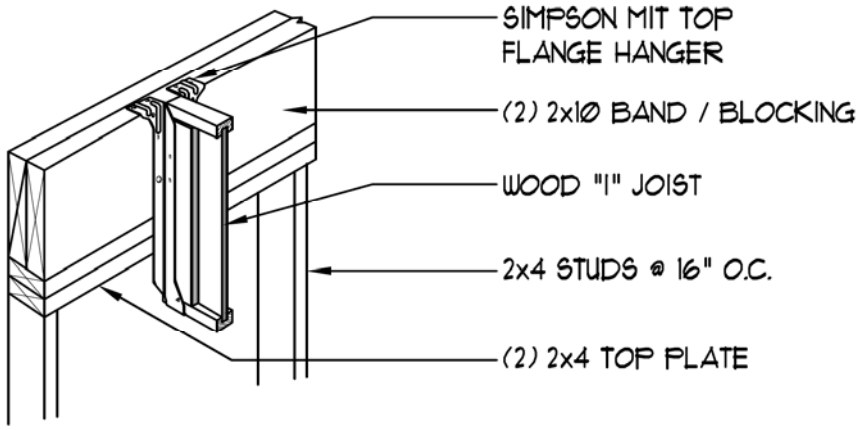
(A) 11|11 JOIST @ STEEL BEAM

NTS



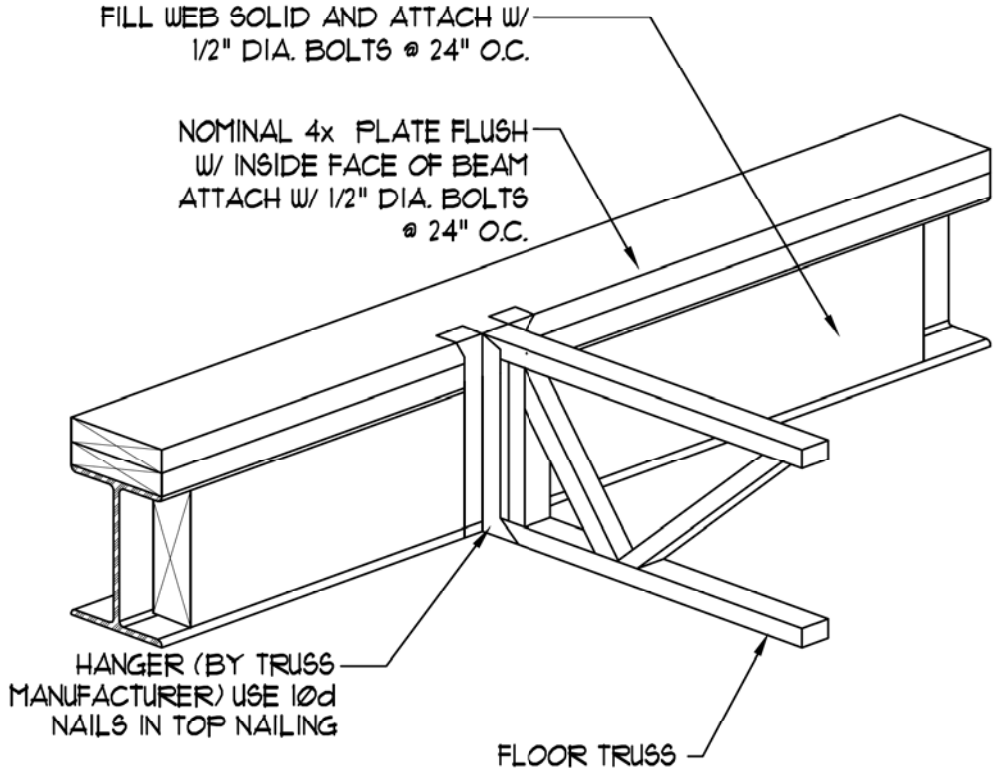
(A) "I" JOIST - CANTILEVER DETAIL

NTS



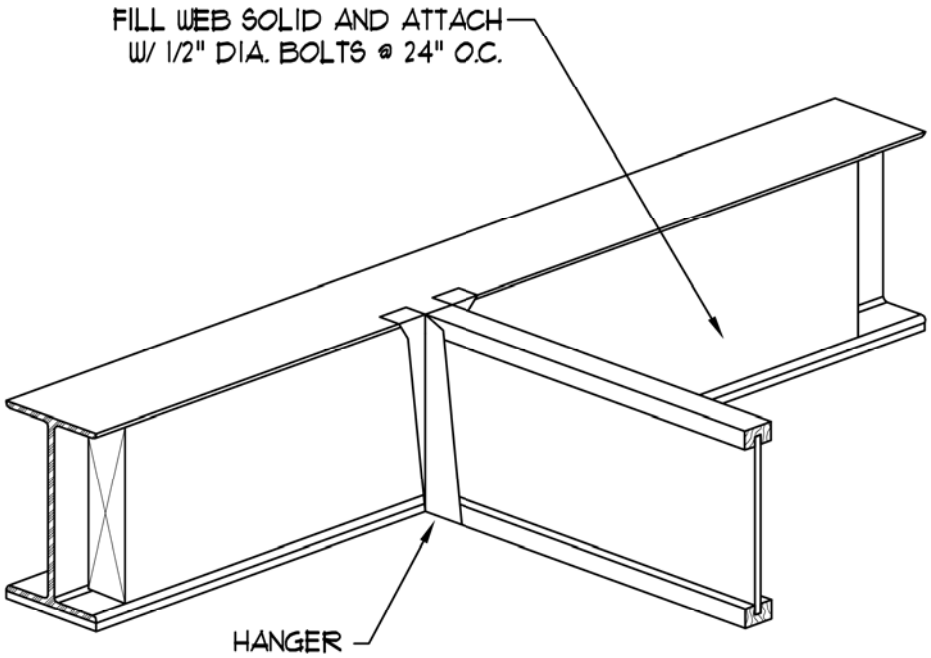
(A) "I" JOIST BEARING AT BAND

NTS



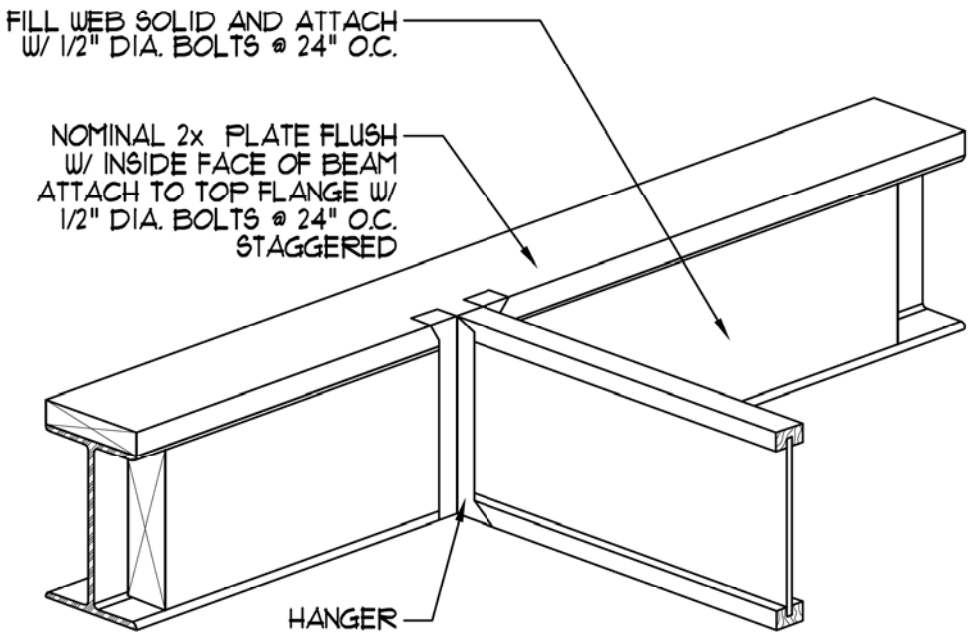
(A) FLOOR TRUSS @ STEEL BEAM

NTS



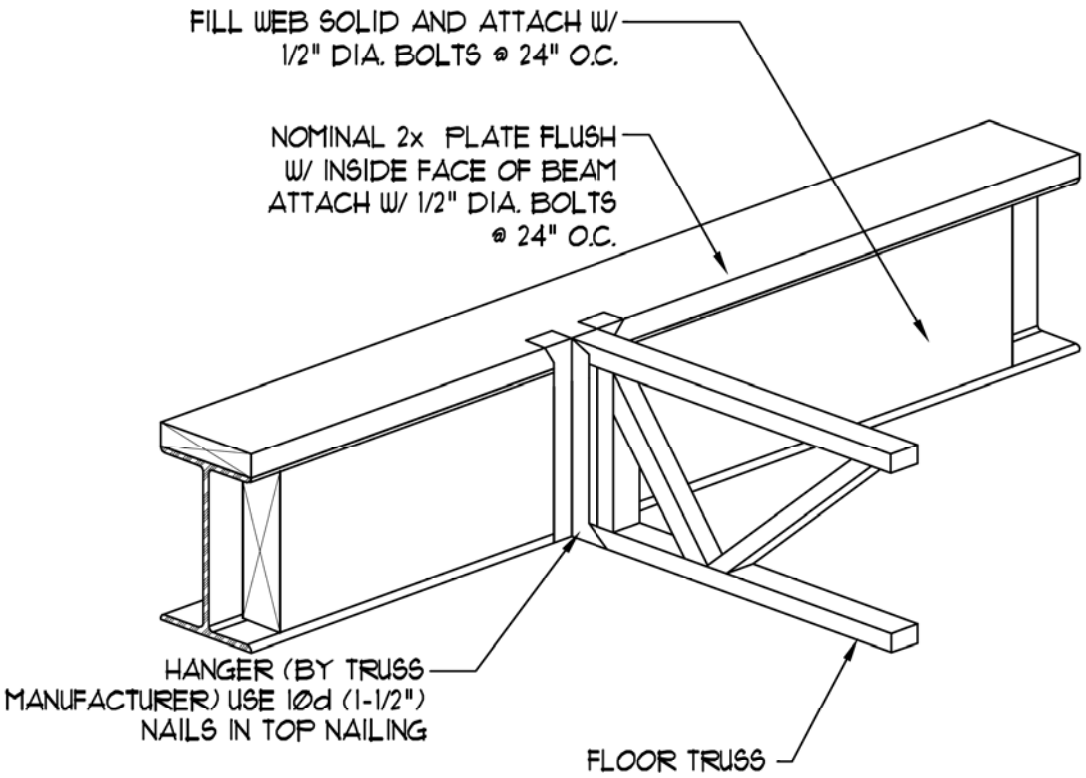
(A) "I" JOIST @ STEEL BEAM

TOP FLUSH W/ STEEL BEAM NTS



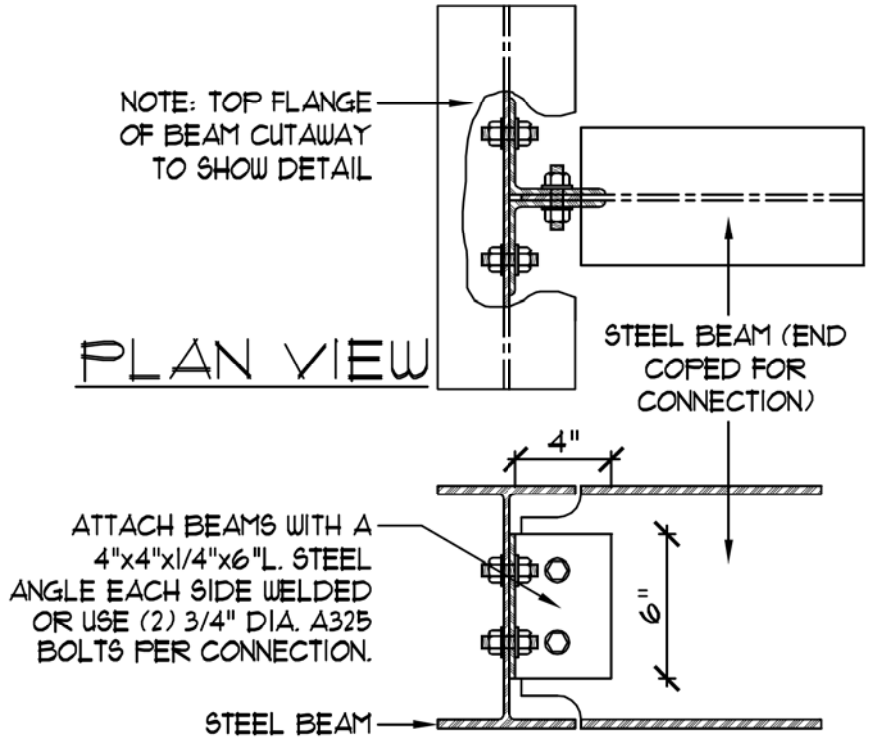
(A) "I" JOIST @ STEEL BEAM

NTS



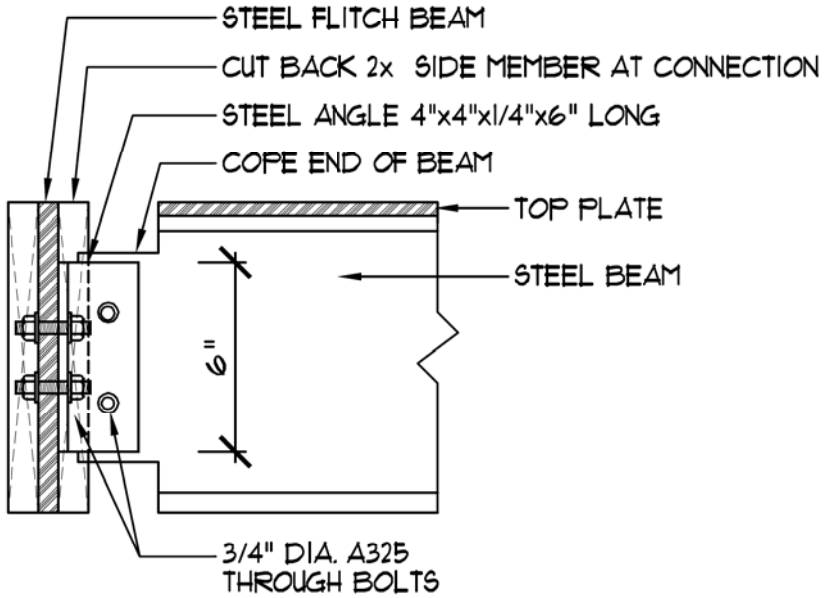
(A) FLOOR TRUSS @ STEEL BEAM

NTS



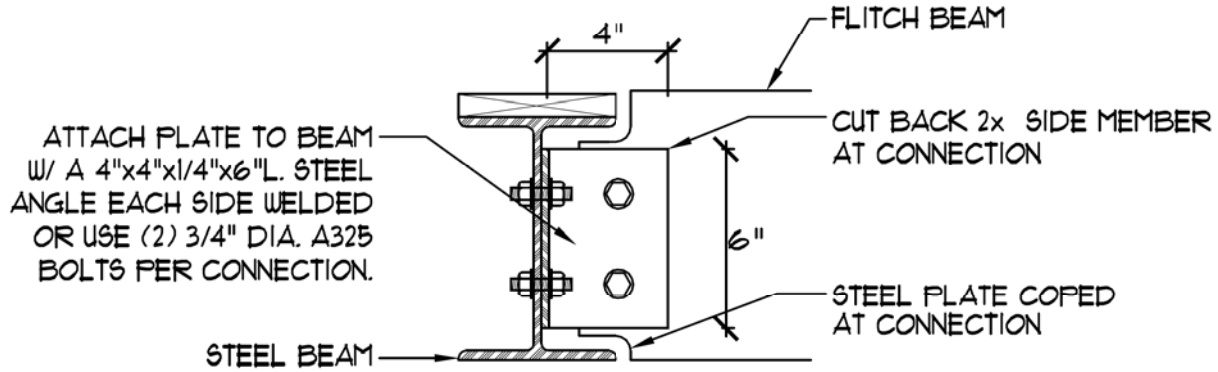
(A) TYPICAL BEAM CONNECTION DETAIL

NTS



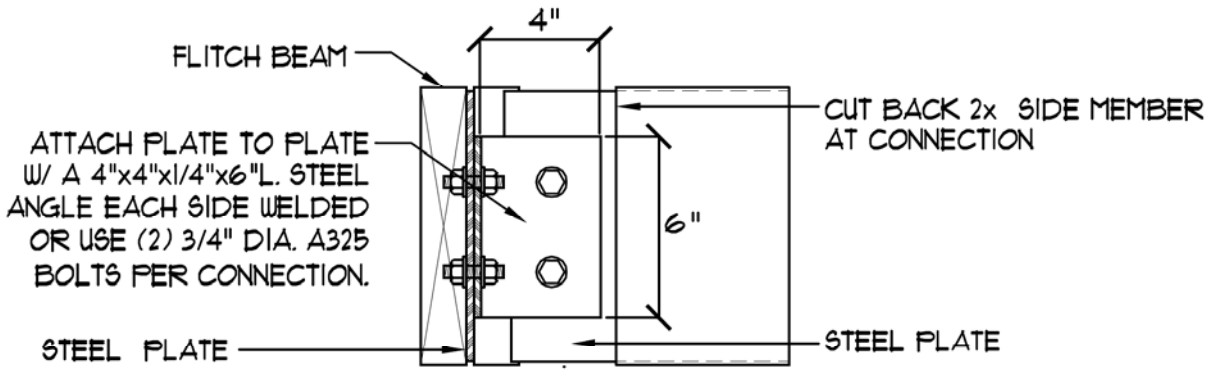
(A) 8" I-BEAM TO FLITCH BEAM

NTS



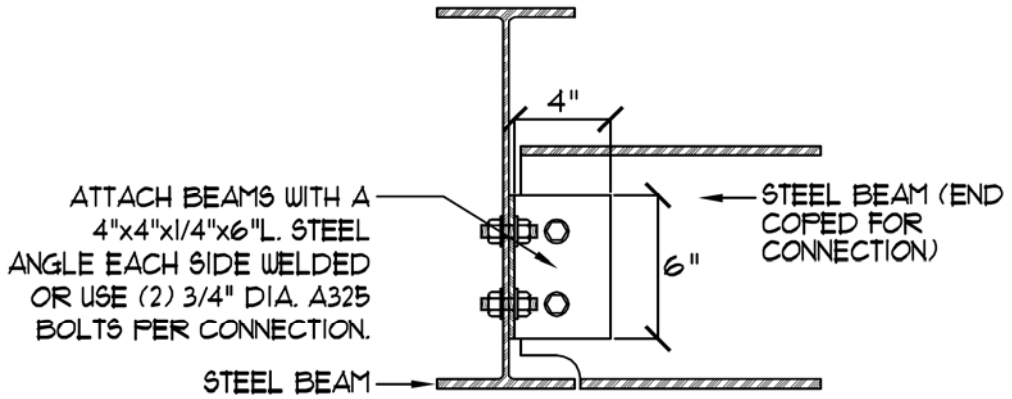
(A) FLITCH BEAM TO I-BEAM CONNECTION

NTS



(A) FLITCH BEAM TO FLITCH BEAM CONNECTION

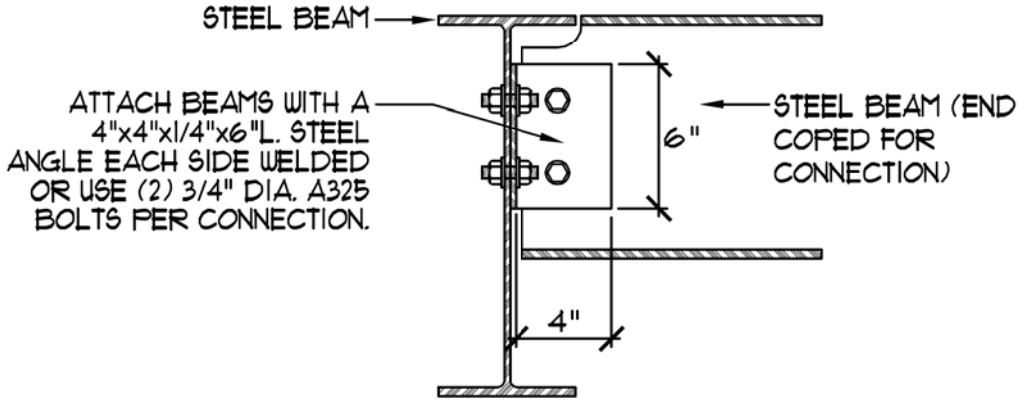
NTS



(A) BEAM CONNECTION DETAIL

(BOTTOM FLUSH)

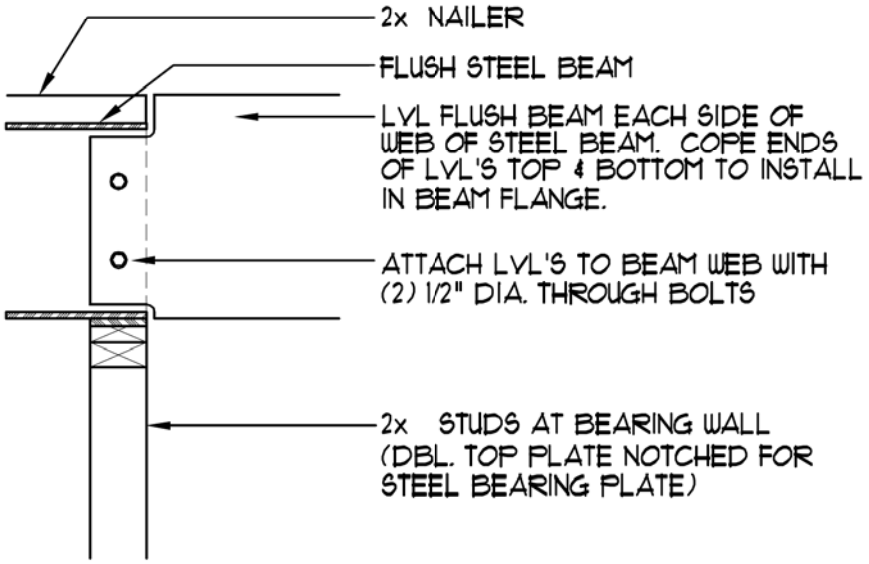
NTS



(A) BEAM CONNECTION DETAIL

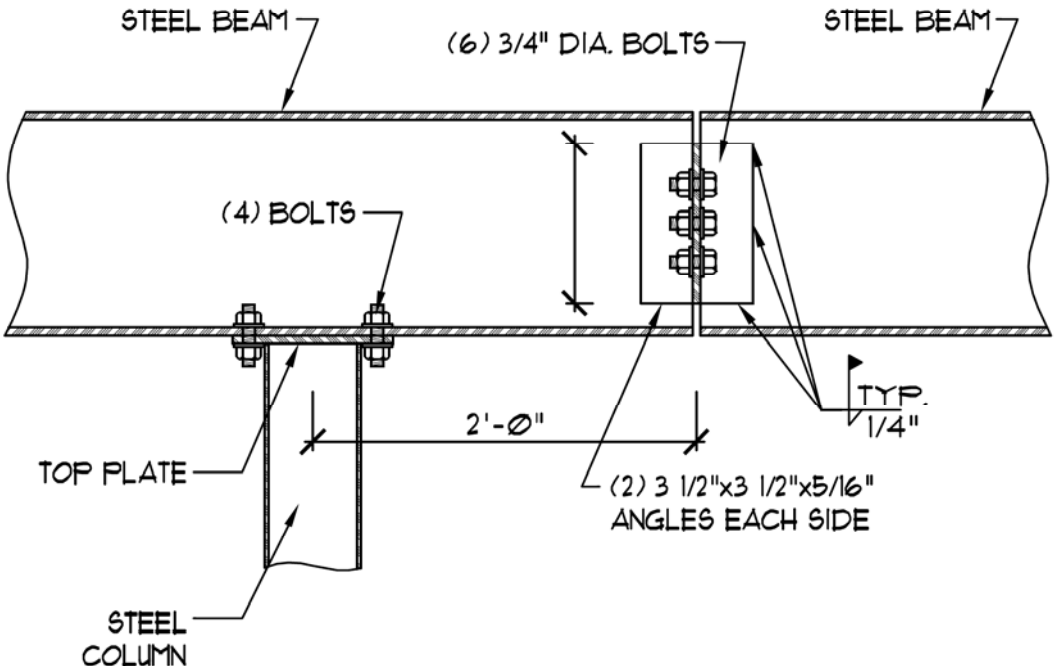
(TOP FLUSH)

NTS



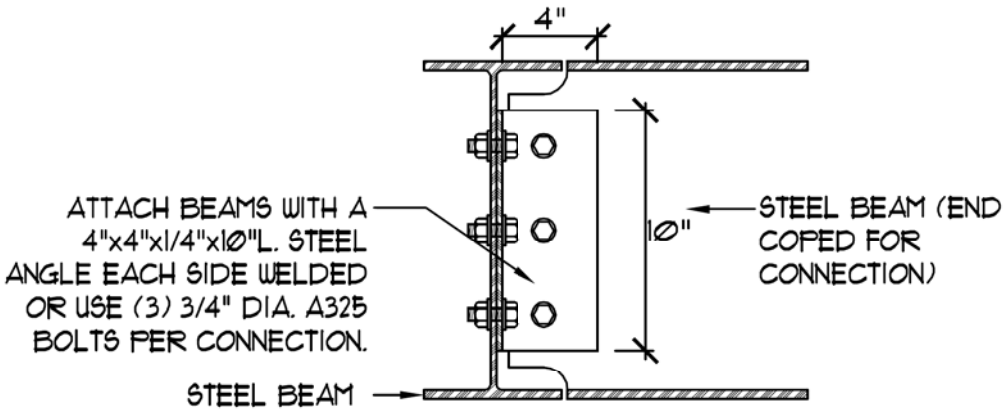
(A) STEEL BEAM/LVL CONNECTION

NTS



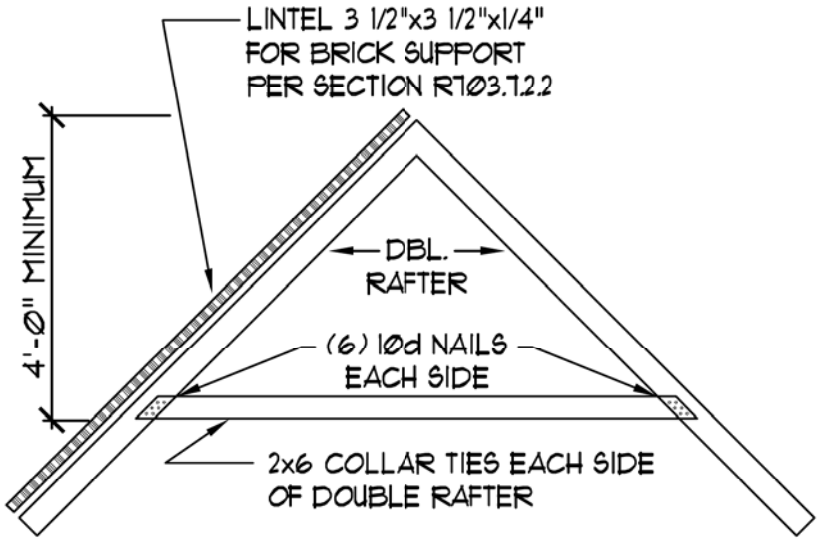
(A) I-BEAM SPLICE DETAIL

NTS



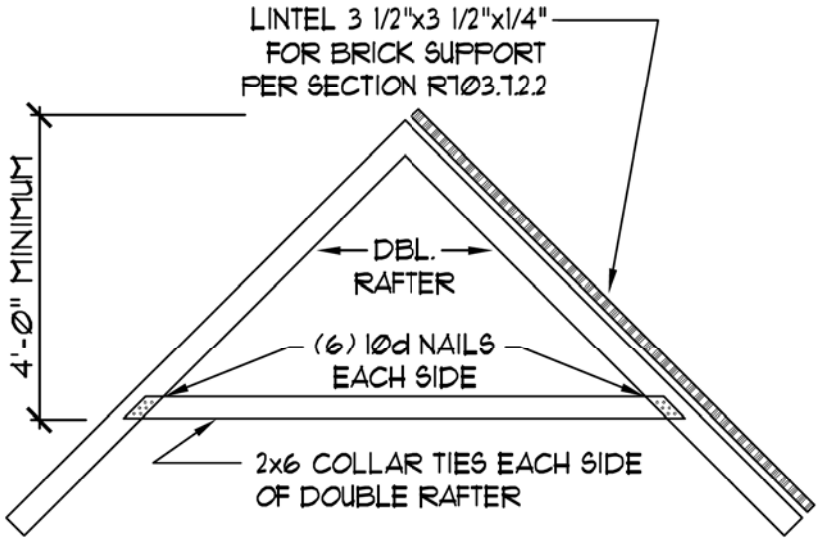
(A) BEAM CONNECTION DETAIL

(THREE BOLTS) NTS



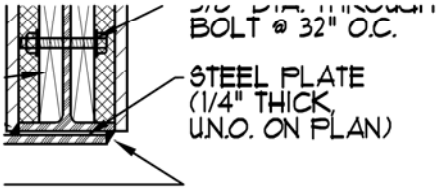
(A) LINTEL ON GABLE

NTS



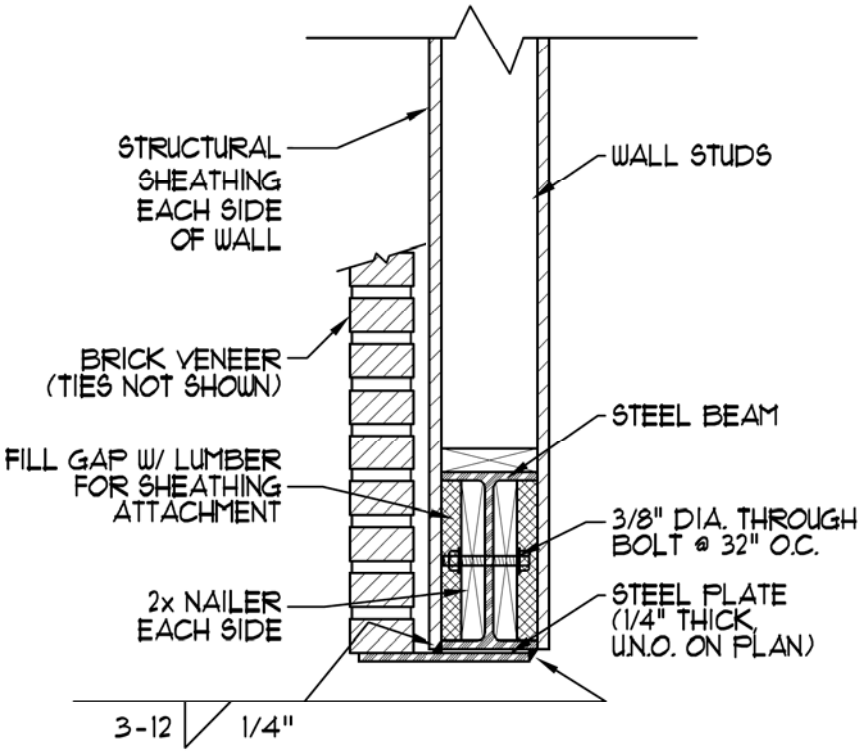
(A) LINTEL ON GABLE

NTS



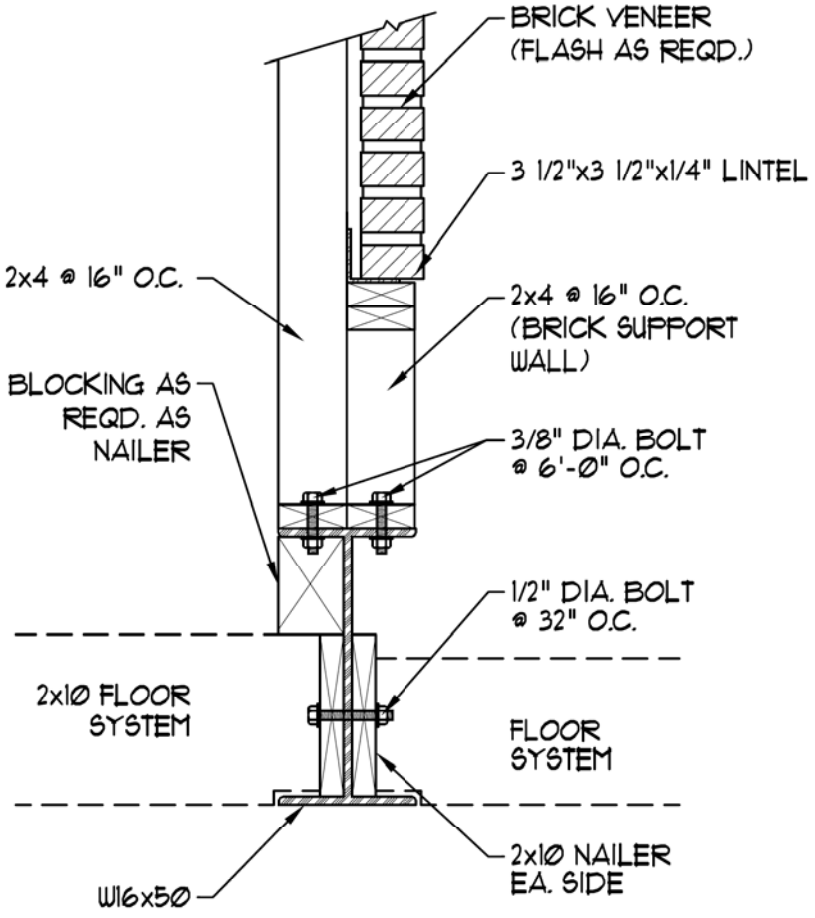
EAM W/ PLATE

NTS



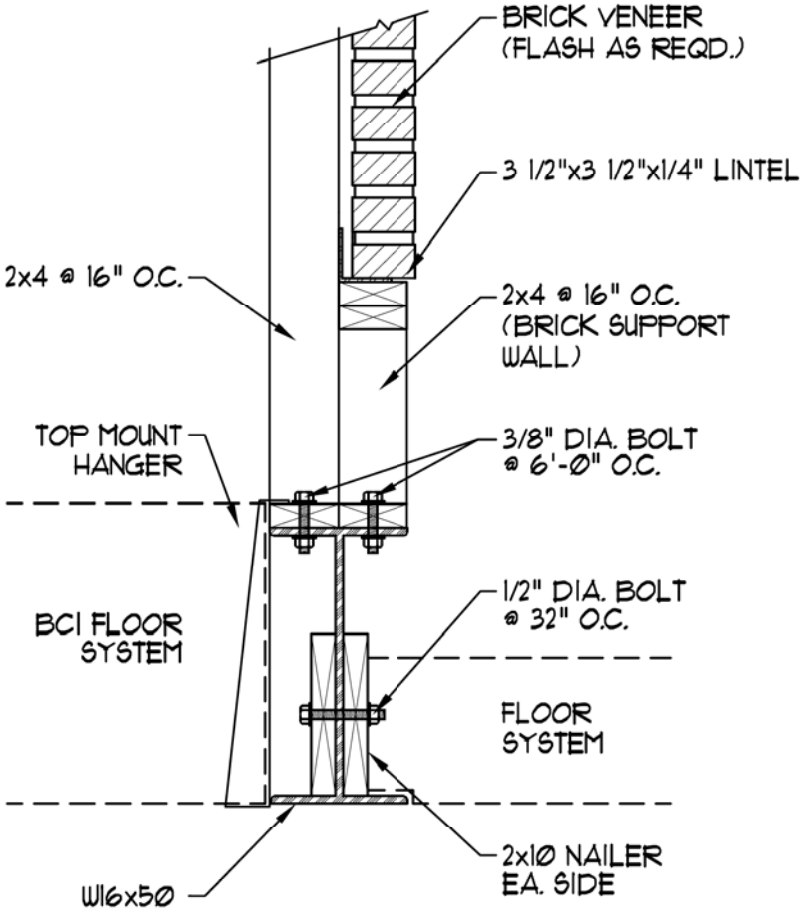
(A) GARAGE BEAM W/ PLATE

NTS



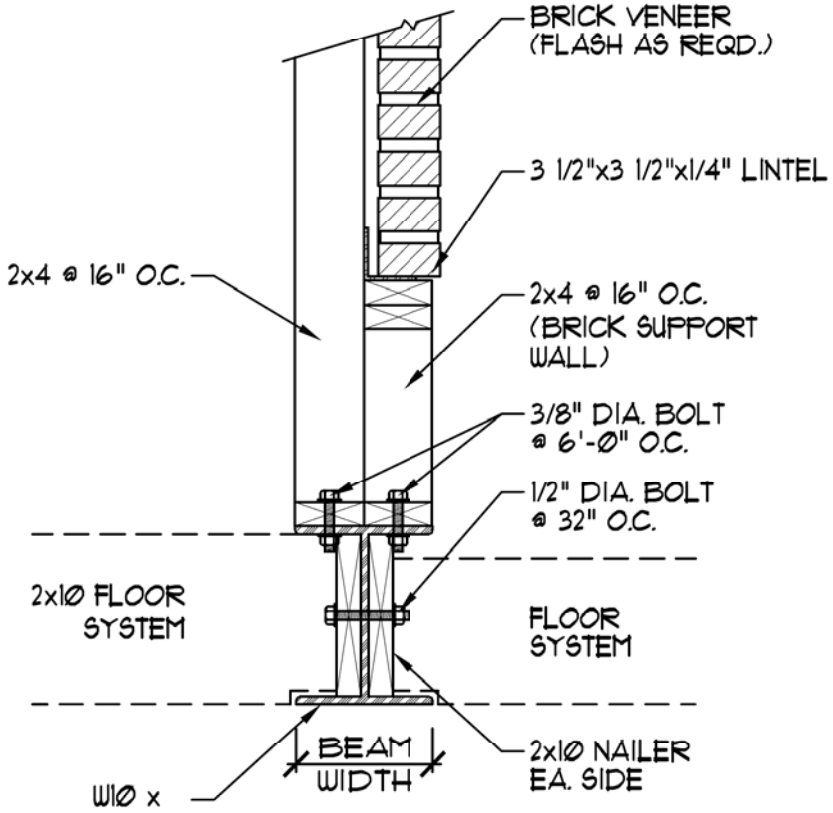
(A) BEAM DETAIL

NTS



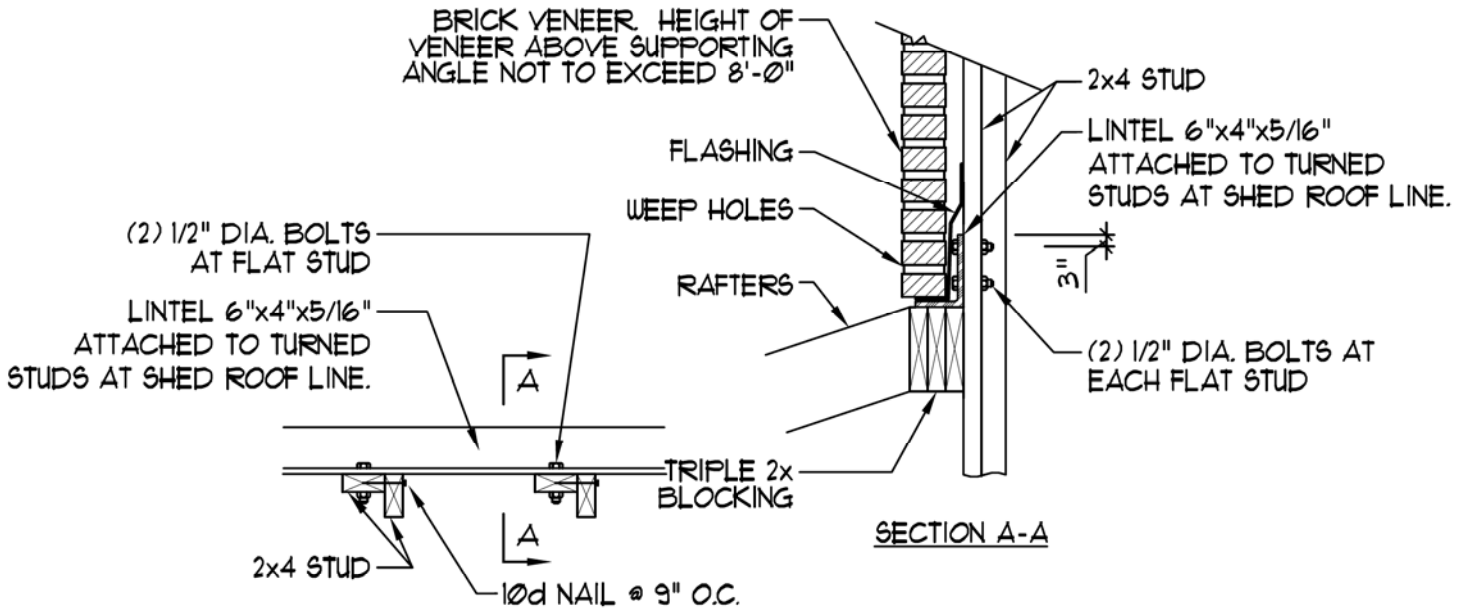
(A) BEAM DETAIL

NTS



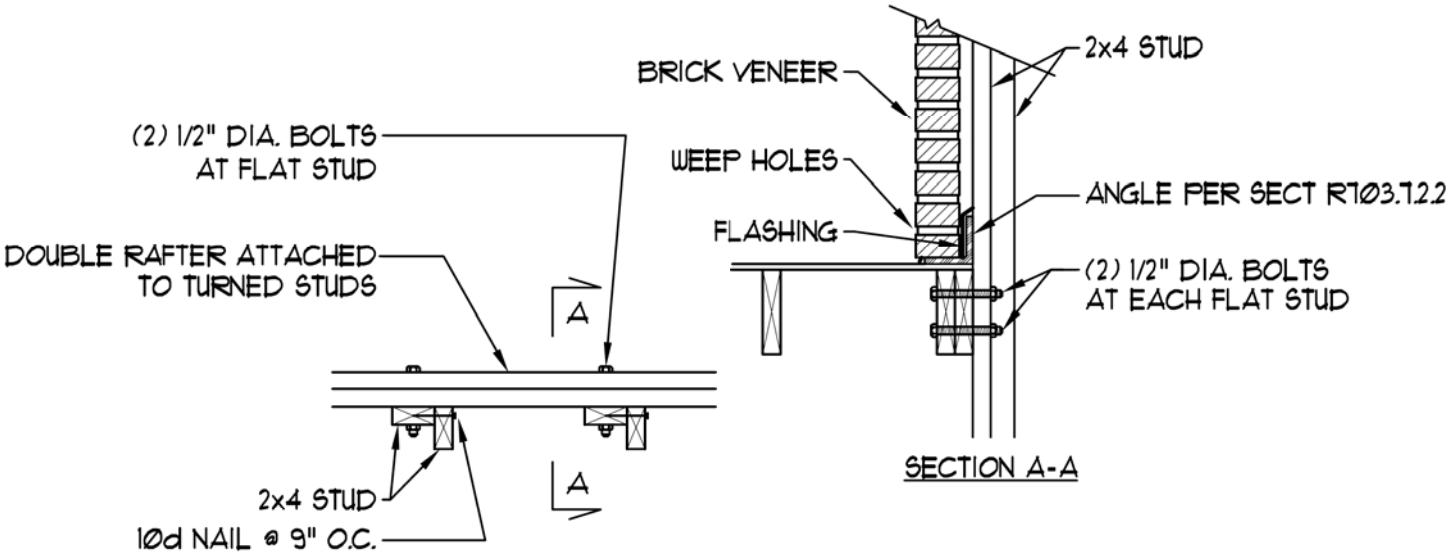
(A) BEAM DETAIL

NTS



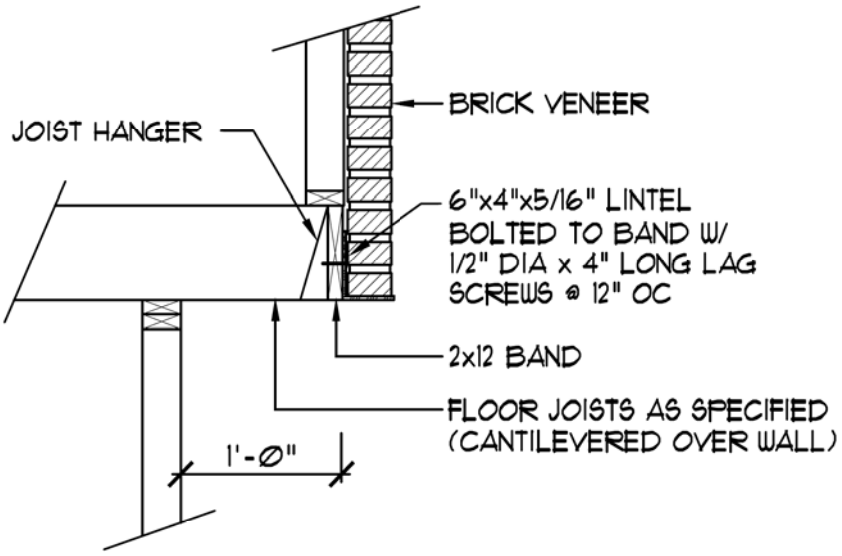
(A) LINTEL DETAIL

NTS



(A) LINTEL ON GABLE

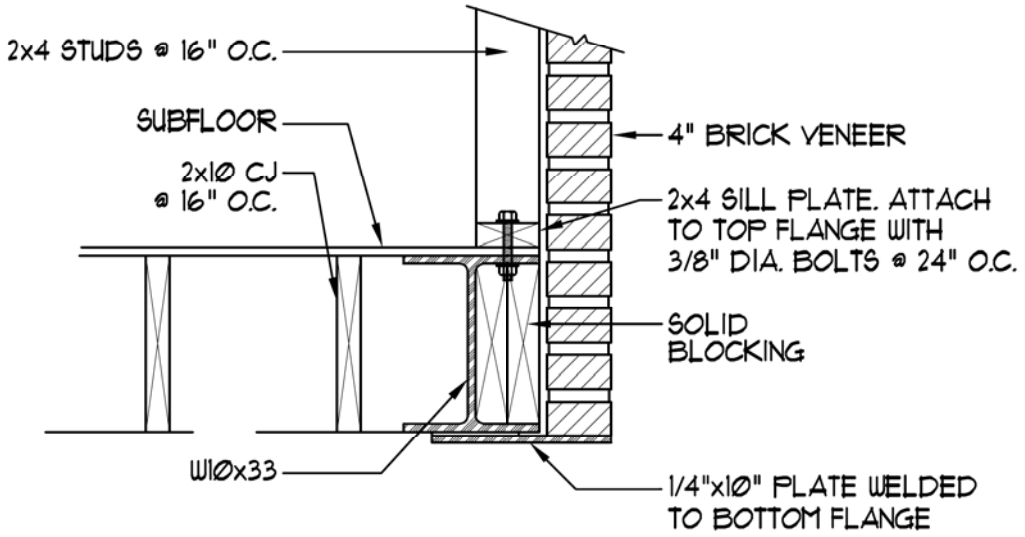
N.T.S.



(A) SECTION DETAIL

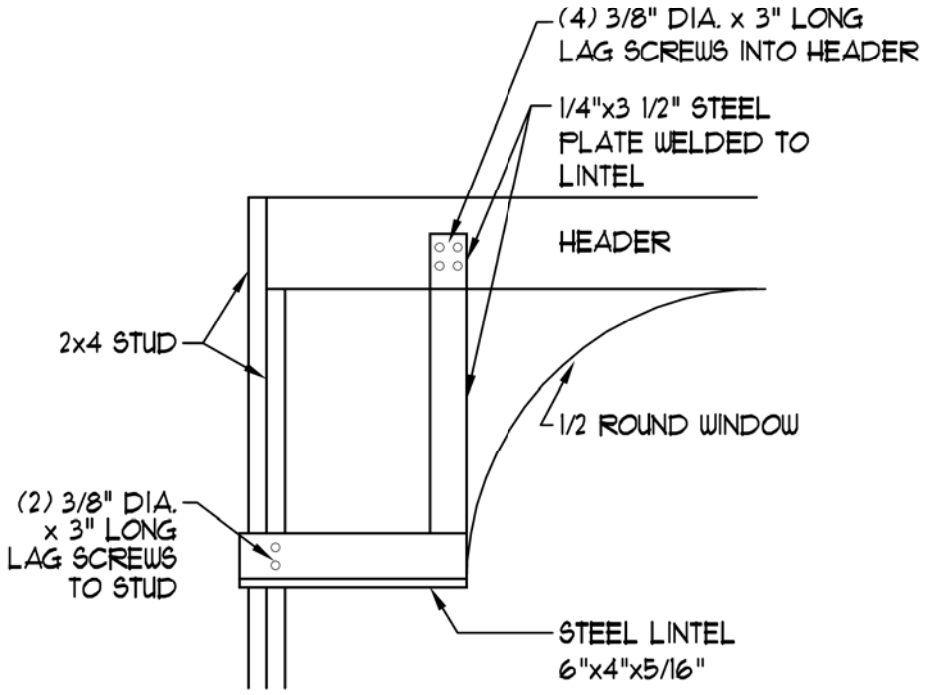
CANTILEVERED FLOOR JOIST W/ BRICK ABOVE

(NTS)



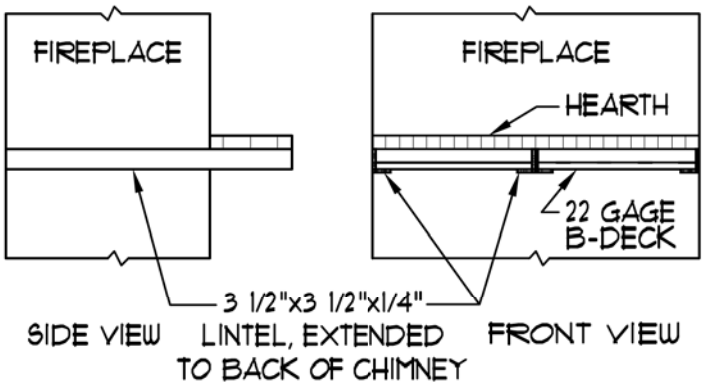
(A) OFFSET BEAM @ BRICK

NTS



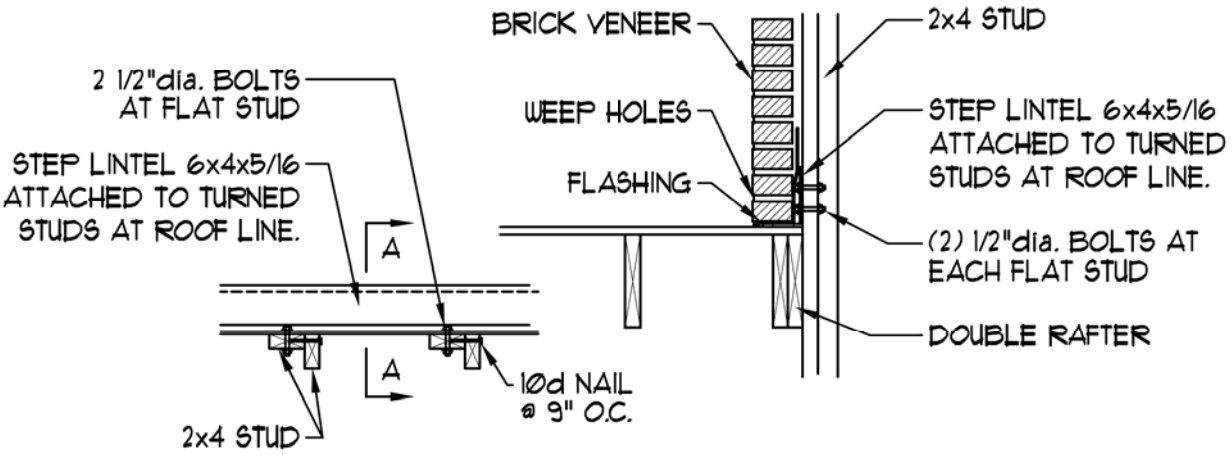
(A) LINTEL DETAIL @ 1/2 ROUND WINDOW

NTS



(A) OPT. SUSPENDED HEARTH

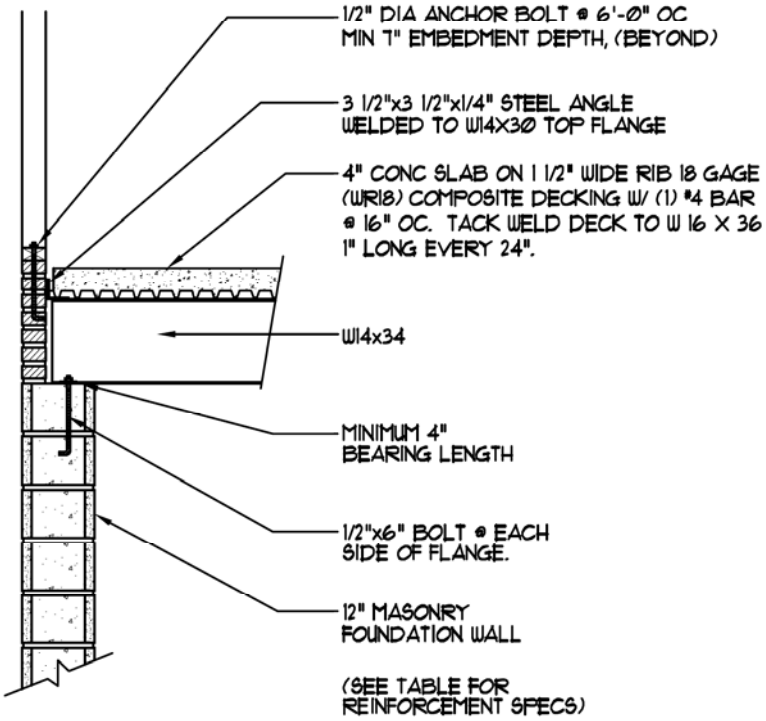
(NTS)



SECTION A-A

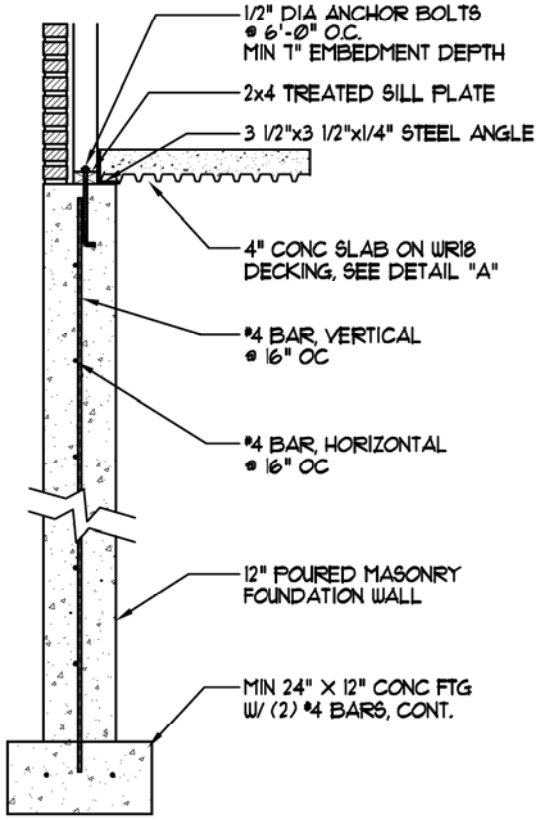
(A) LINTEL ON GABLE

N.T.S.



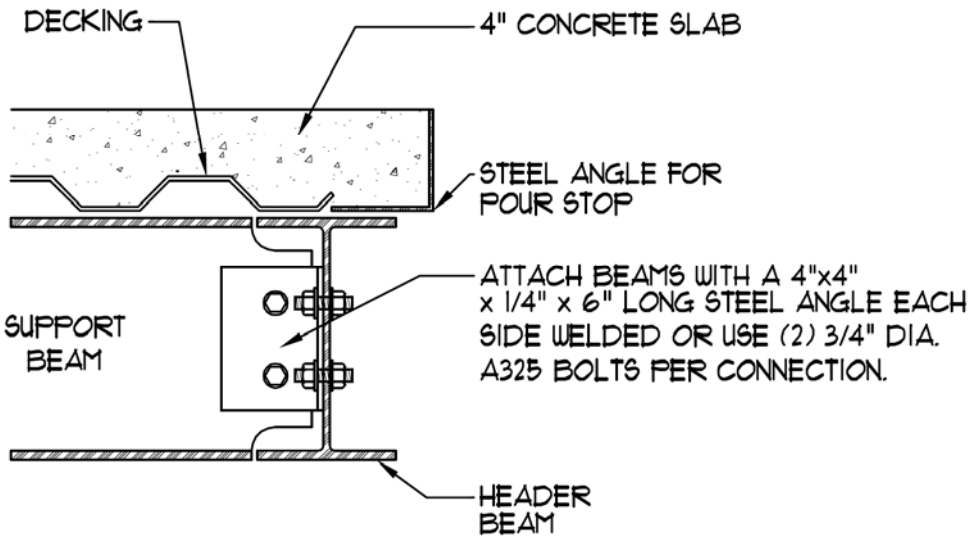
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



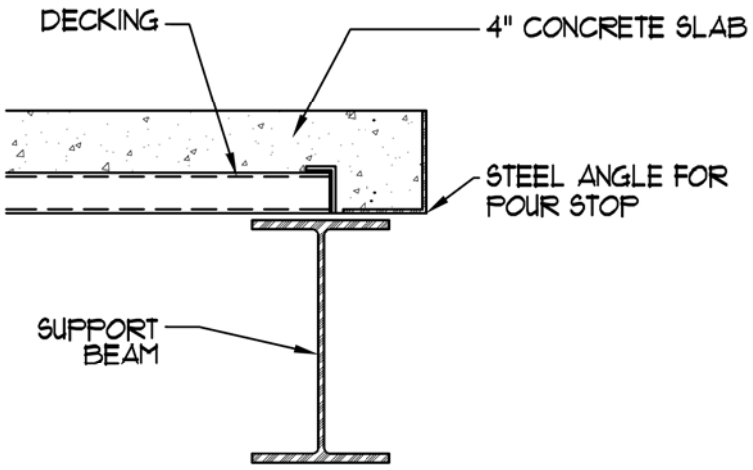
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



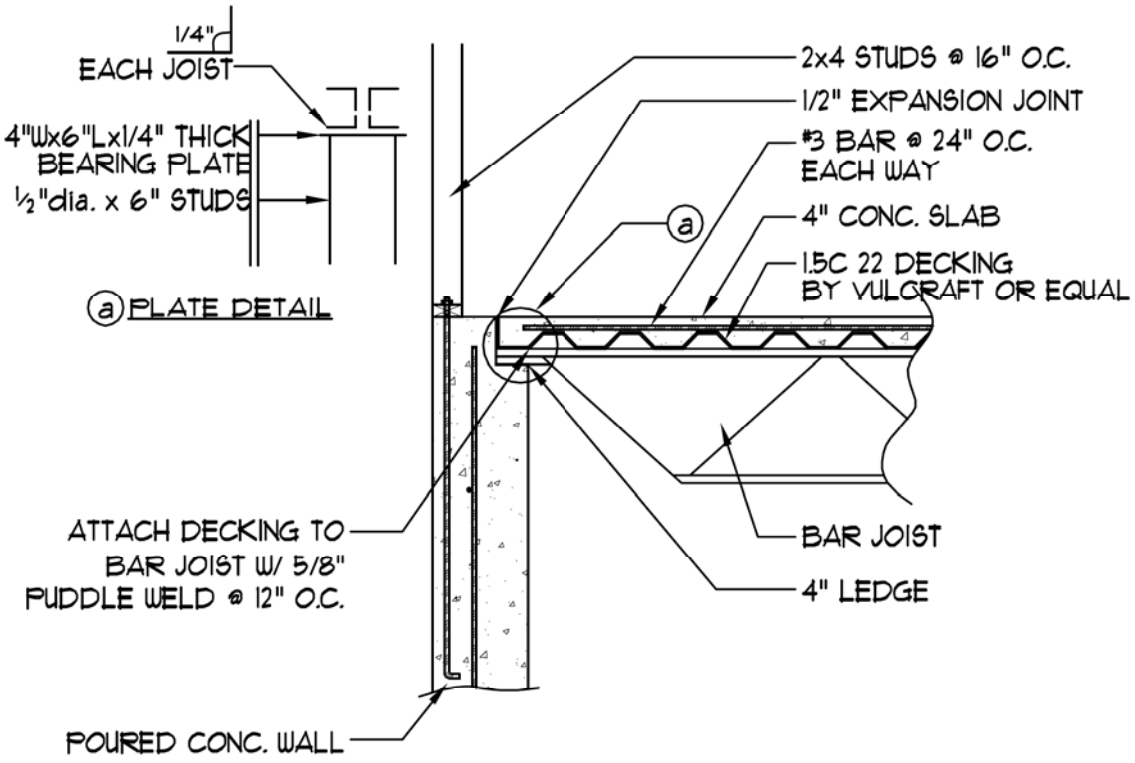
(A) DECKING DETAIL

(POUR STOP @ SIDE) N.T.S.

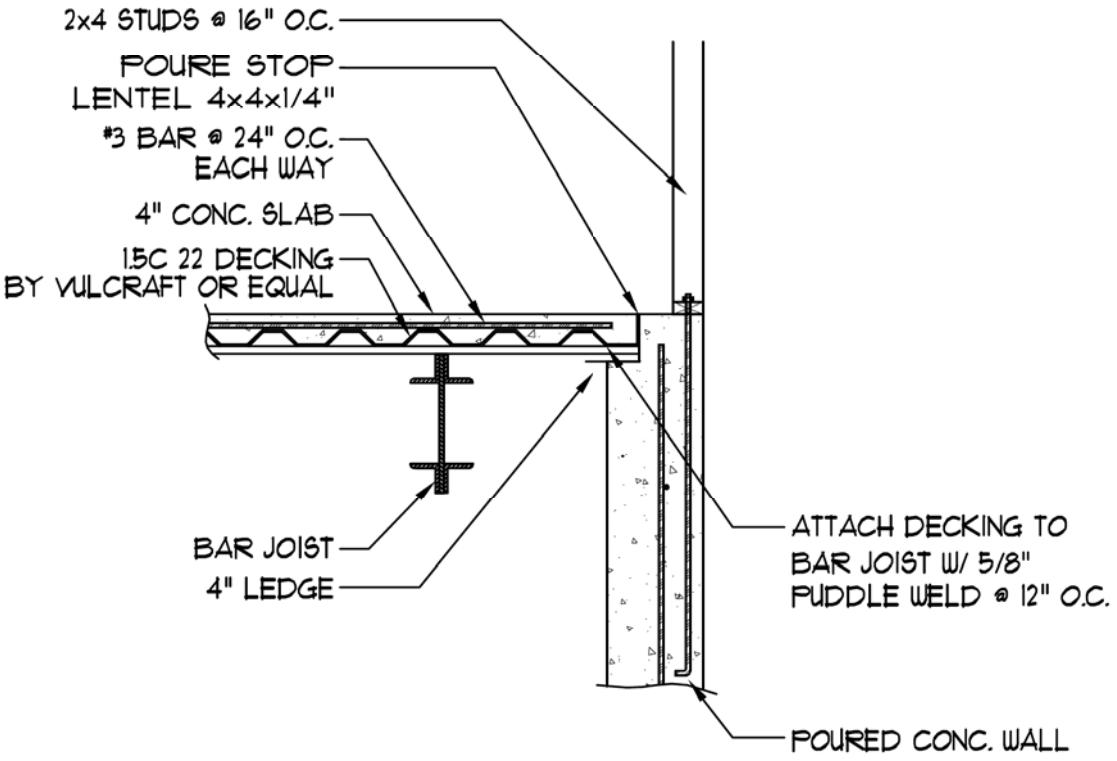


(A) DECKING DETAIL

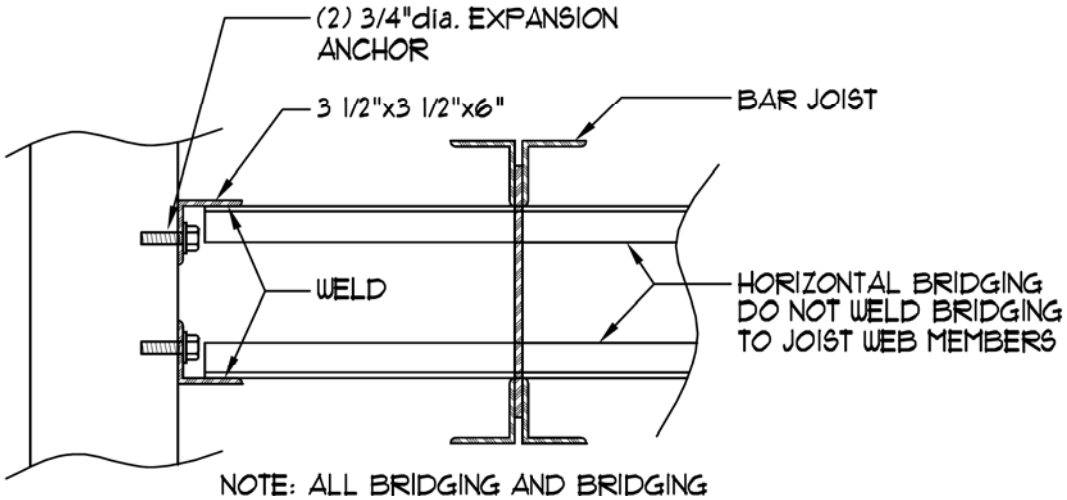
(POUR STOP @ END) N.T.S.



Ⓐ SUSPENDED GARAGE SLAB

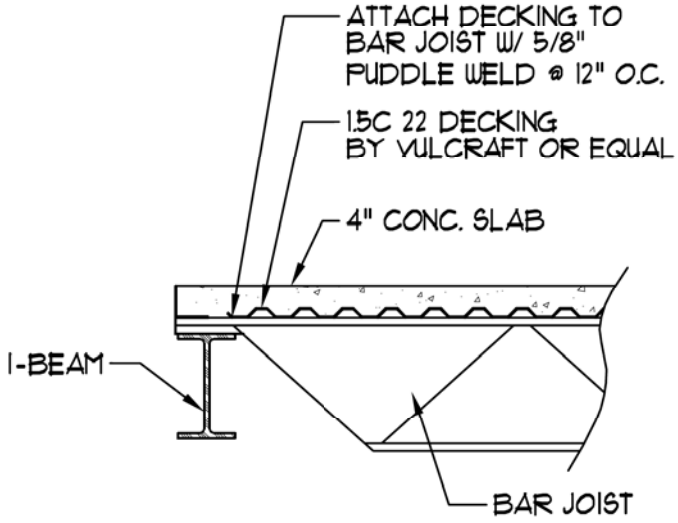


(A) SUSPENDED GARAGE SLAB

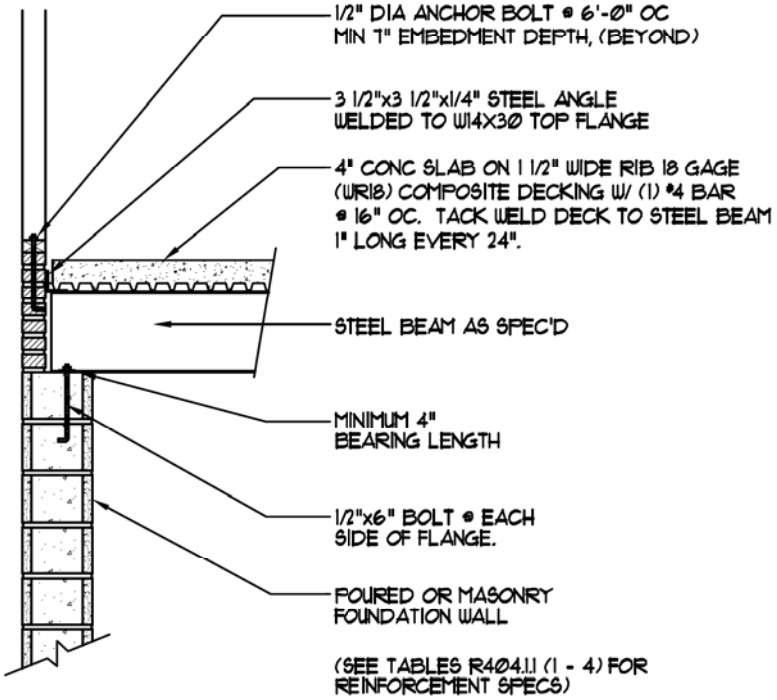


NOTE: ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE BAR JOIST.

(A) HORIZONTAL BRIDGING

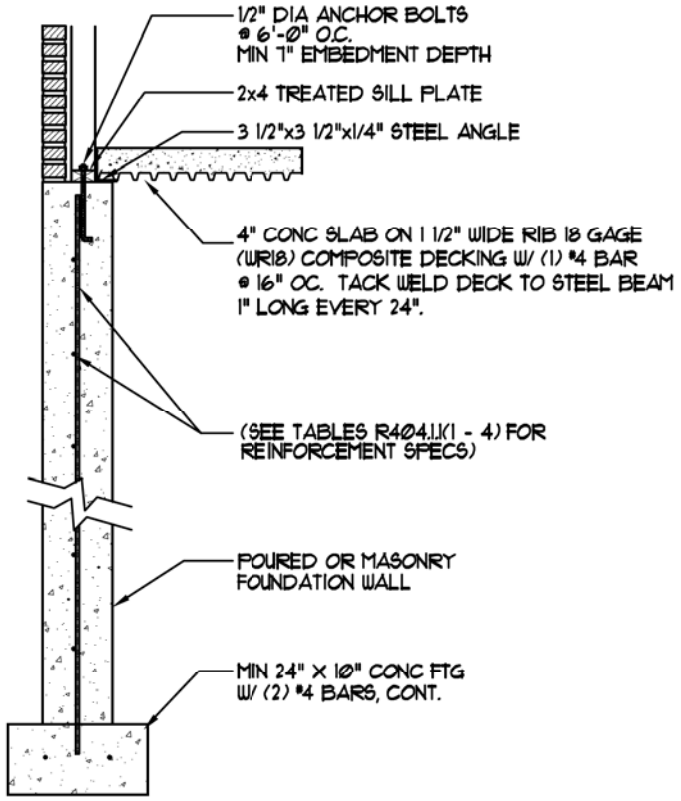


(A) SUSPENDED PORCH SLAB



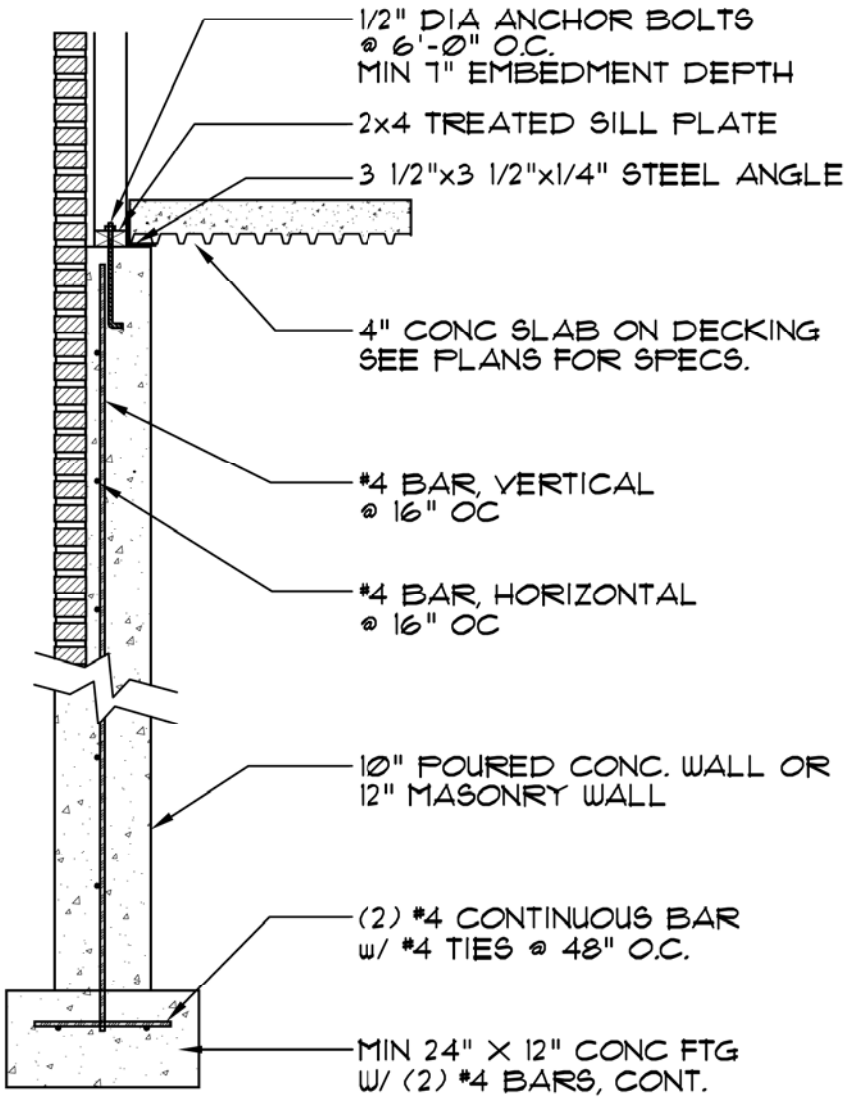
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



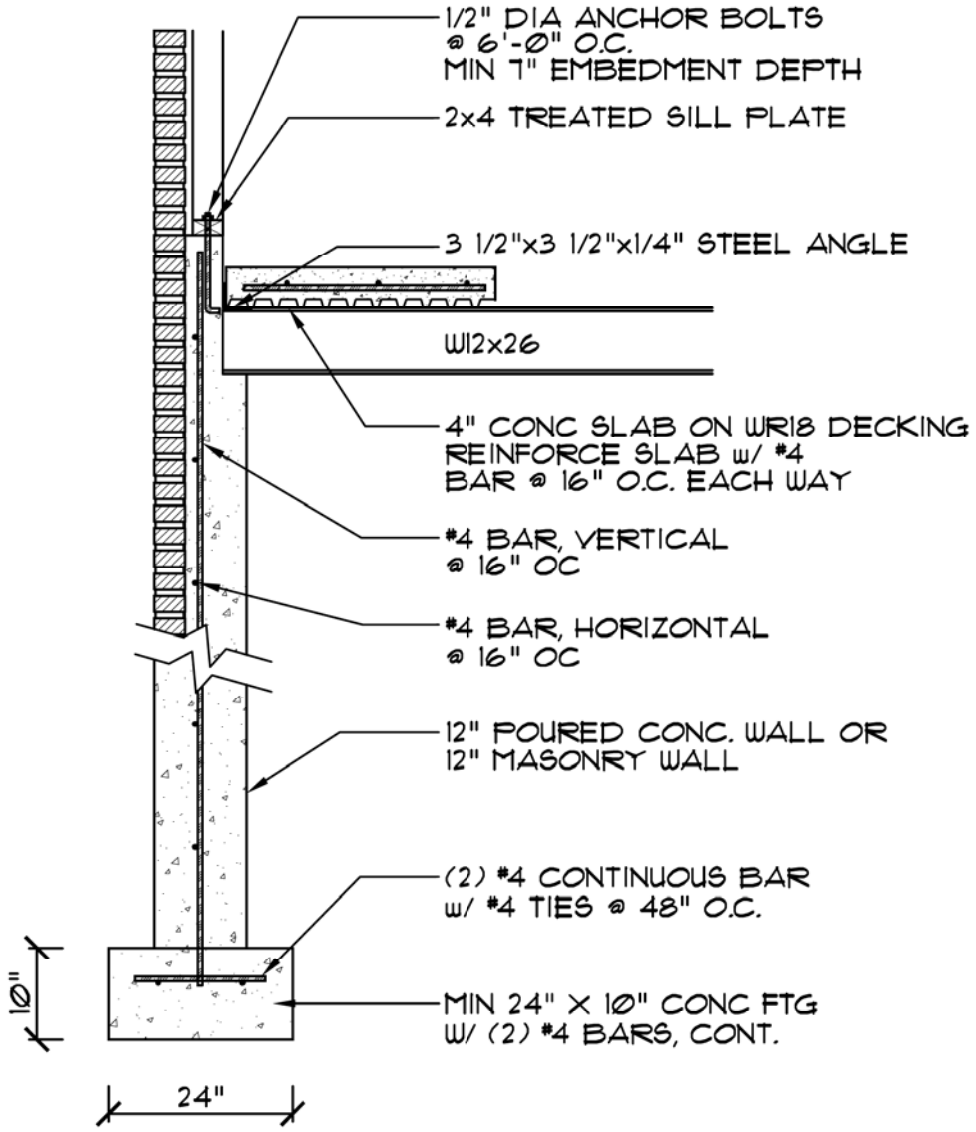
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



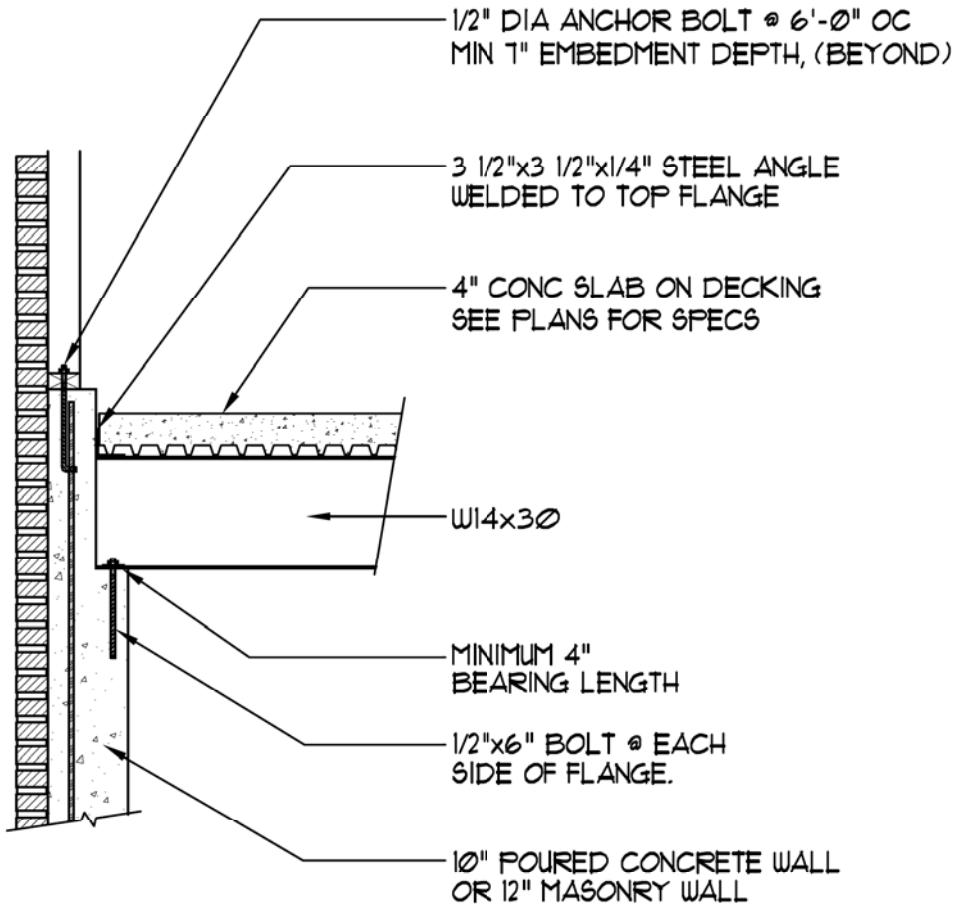
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



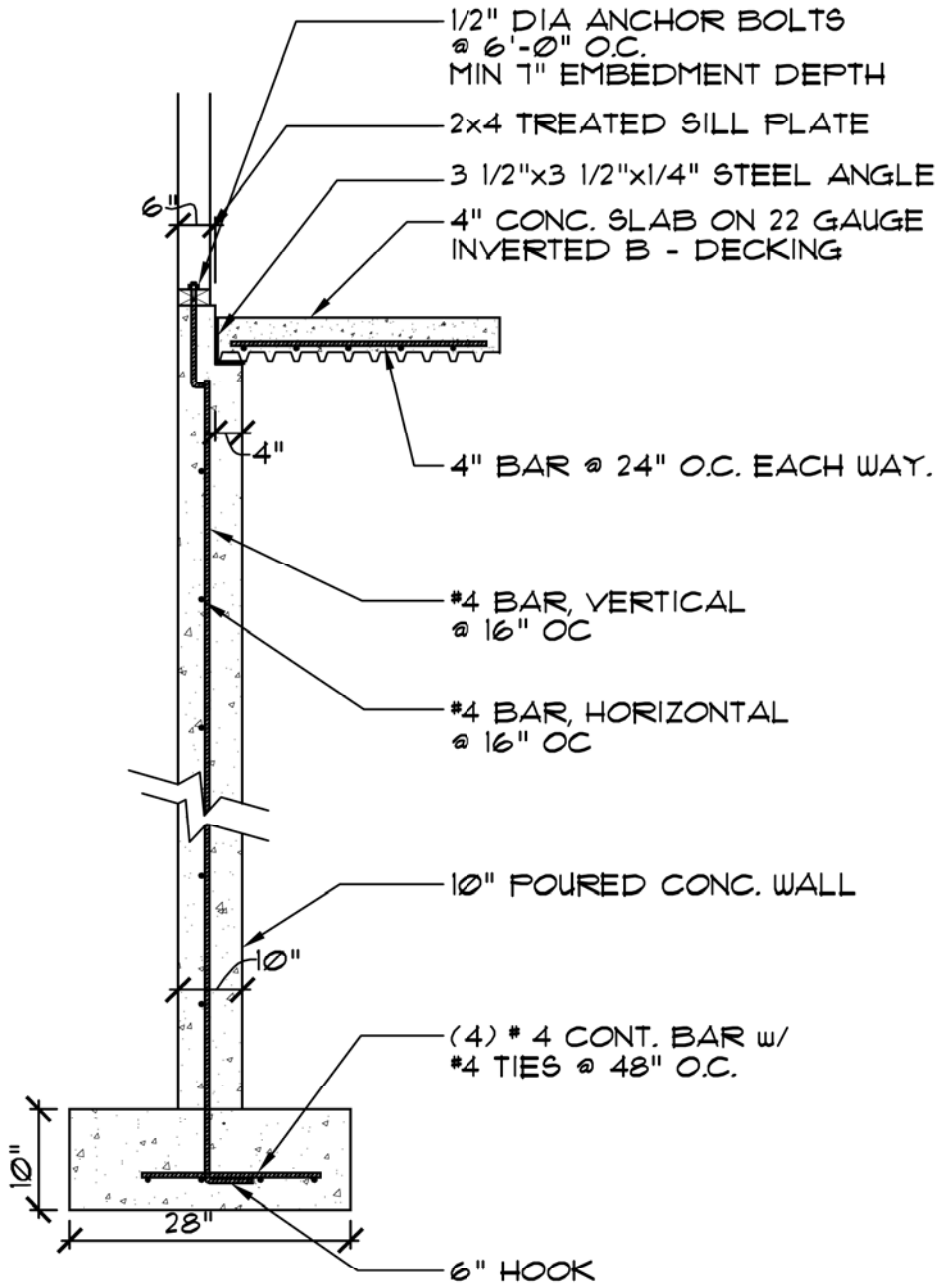
(A) SUSPENDED SLAB @ GARAGE BASEMENT WALL

NTS



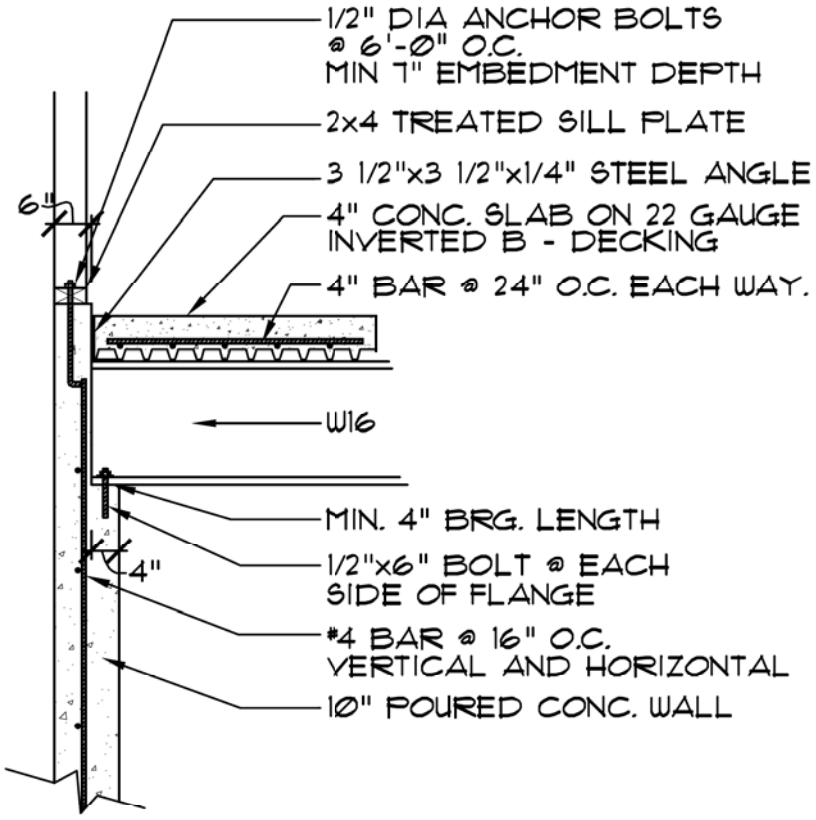
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



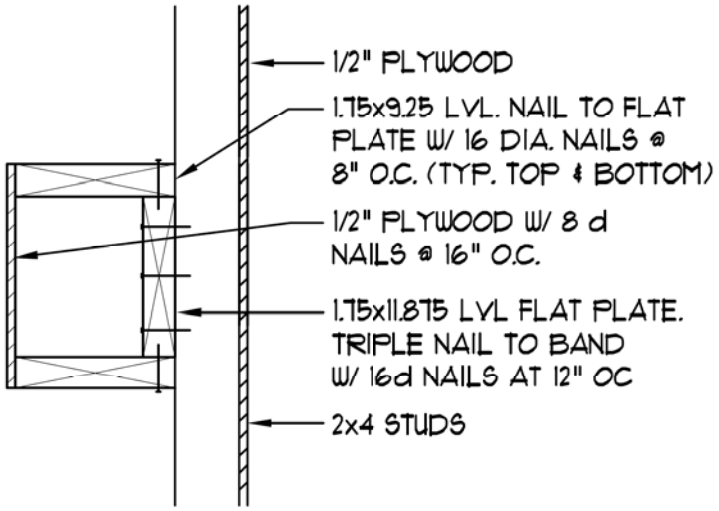
(A) SUSPENDED SLAB @ GARAGE WALL CONC. WALL W/ SIDING

NTS



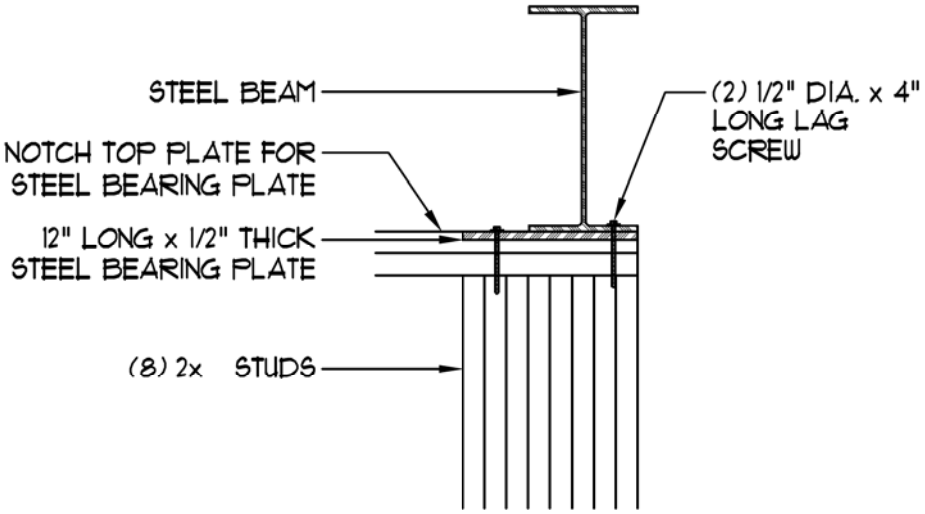
(A) SUSPENDED SLAB @ GARAGE WALL CONC. WALL W/ SIDING

NTS



(A) PLANT SHELF

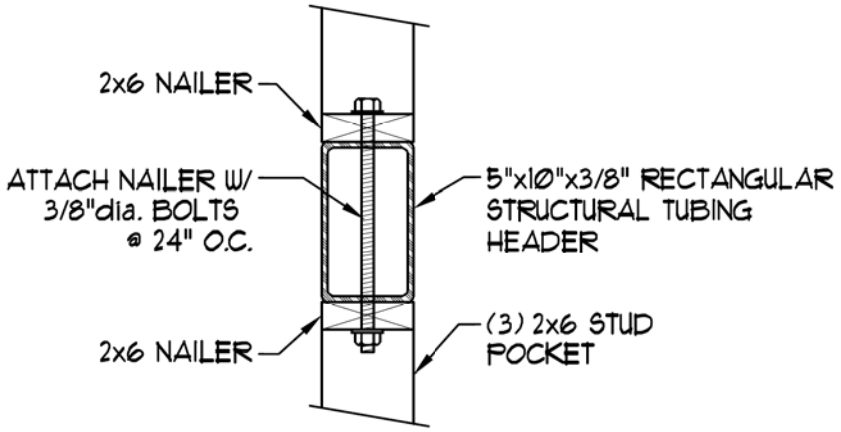
NTS



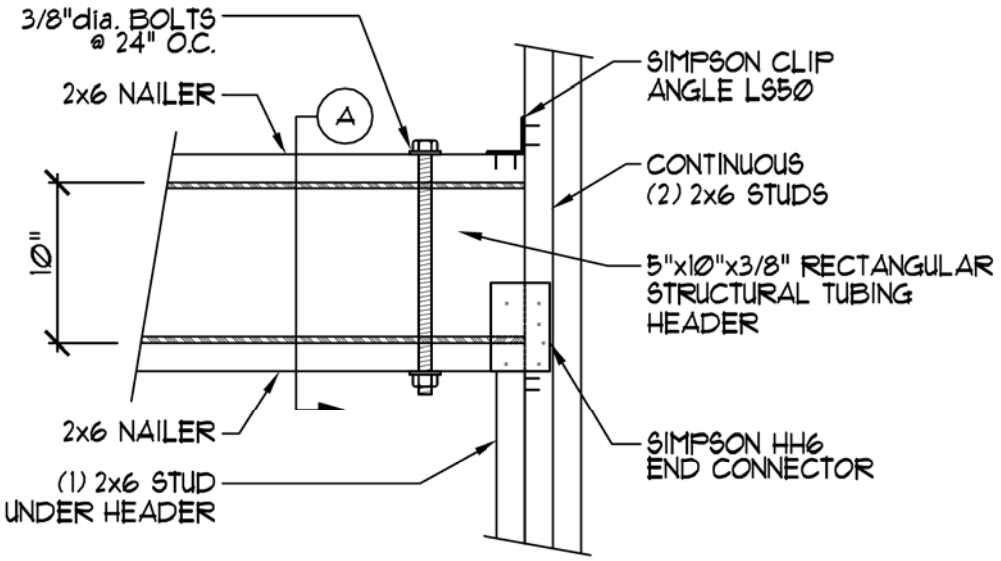
(A) STEEL BEARING PLATE

AT CORNER

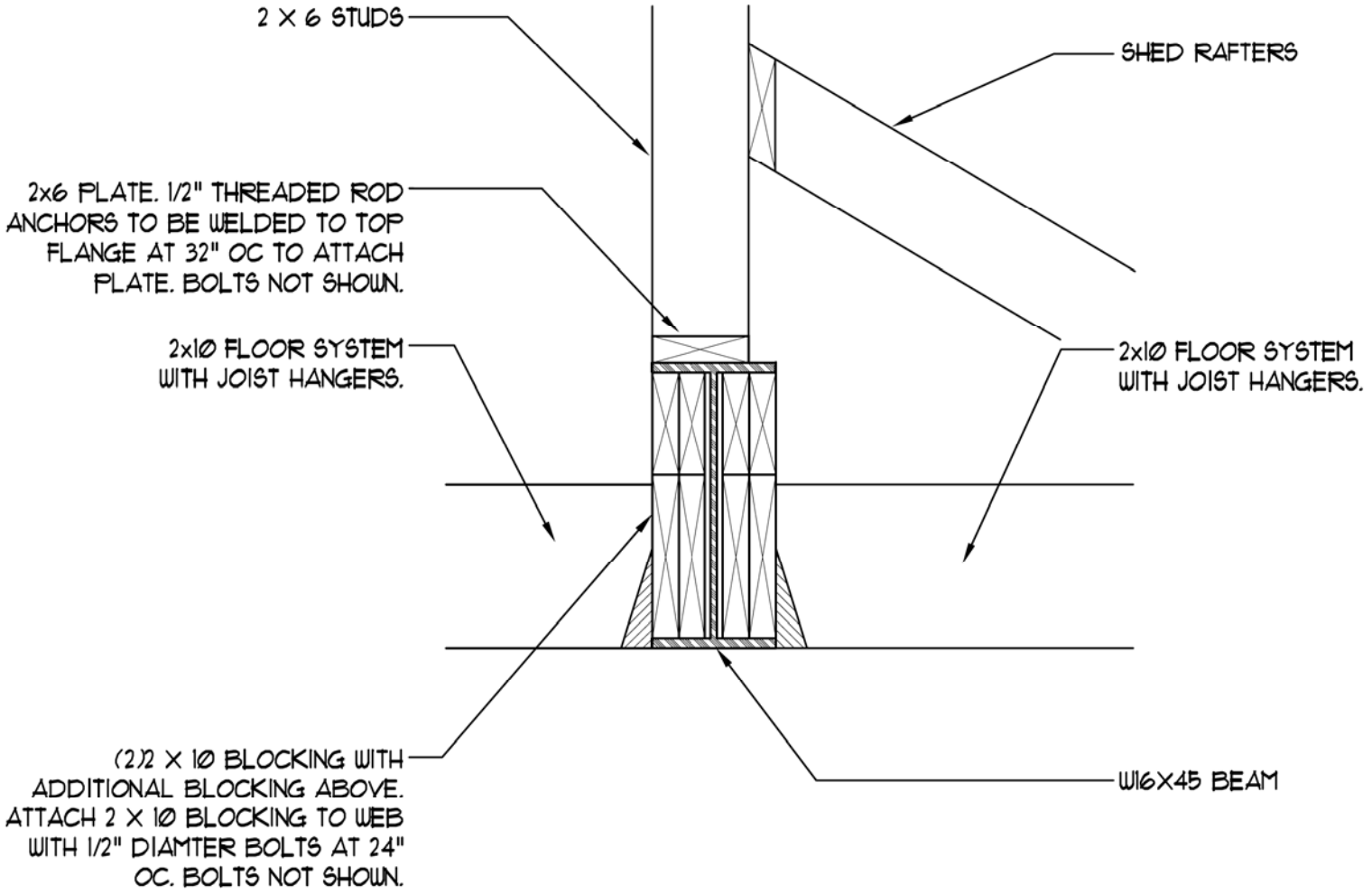
NTS



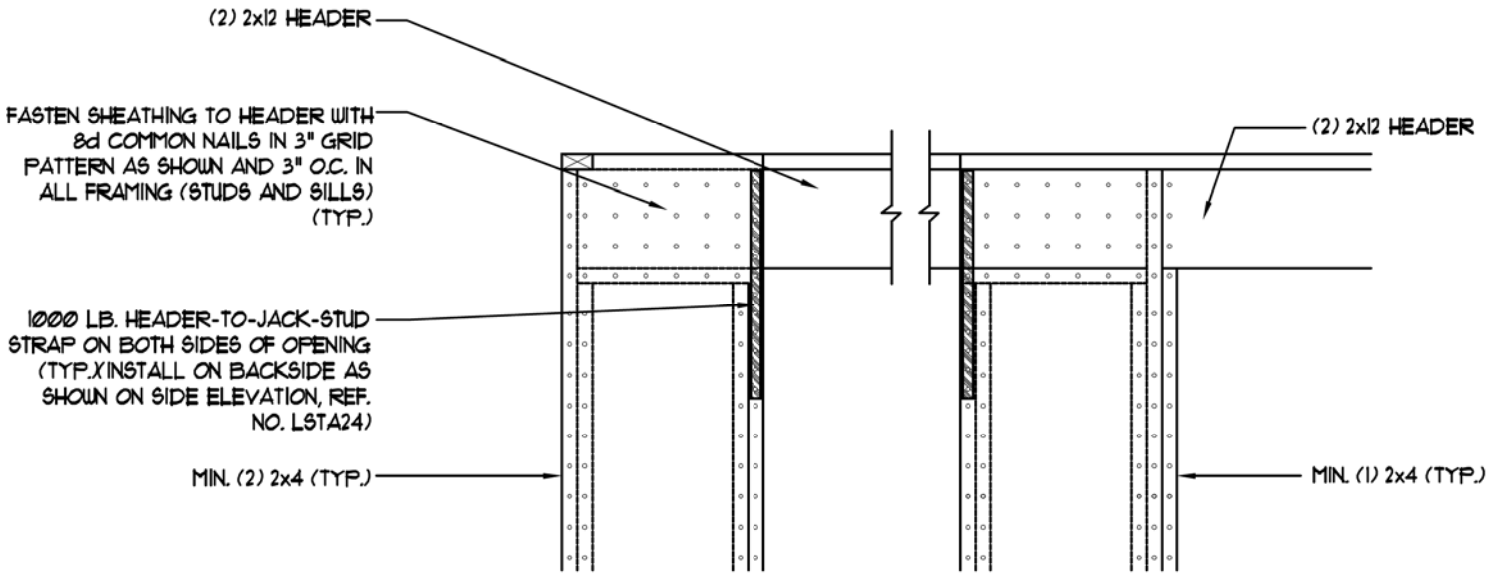
A SECTION
NTS

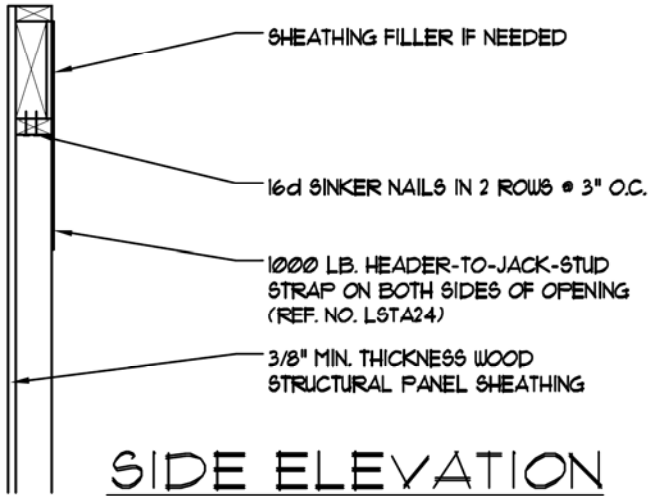


A HEADER PROFILE
NTS



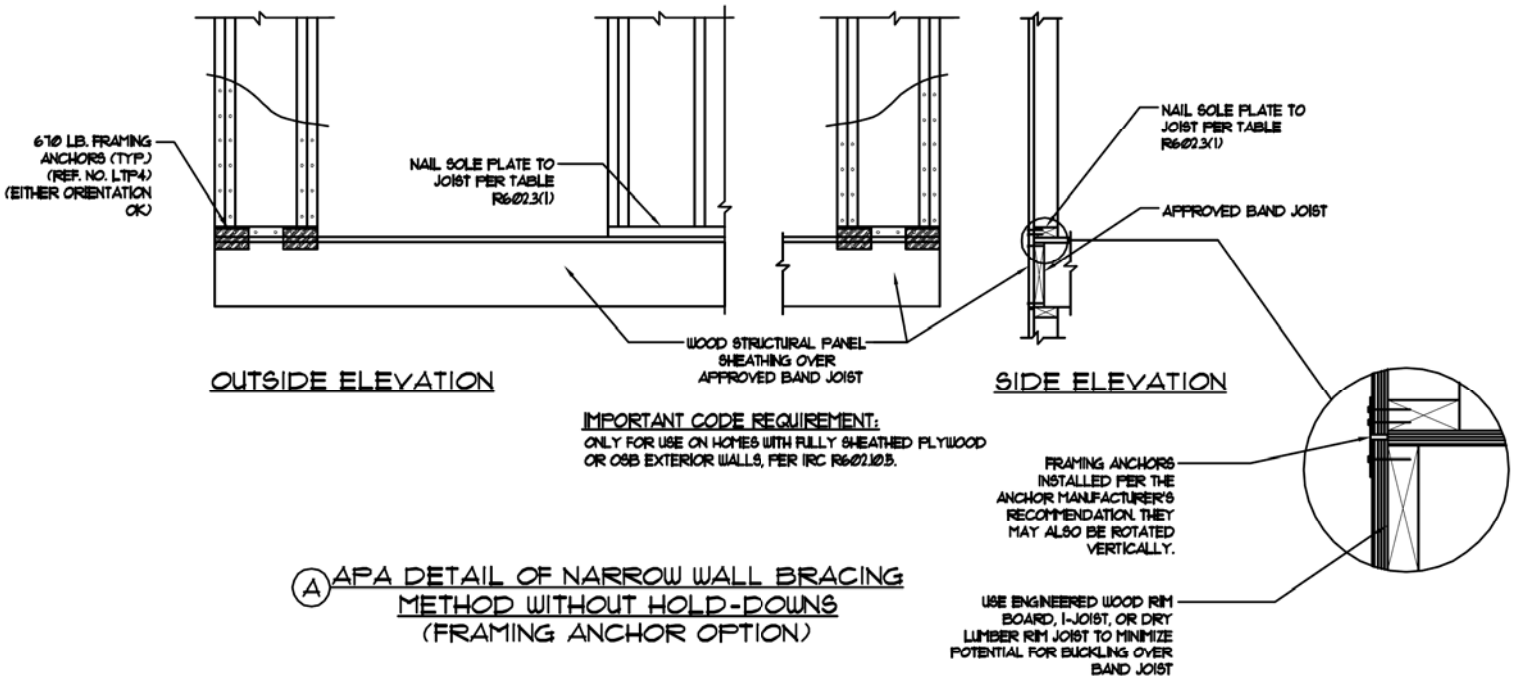
(A) BEAM SECTION



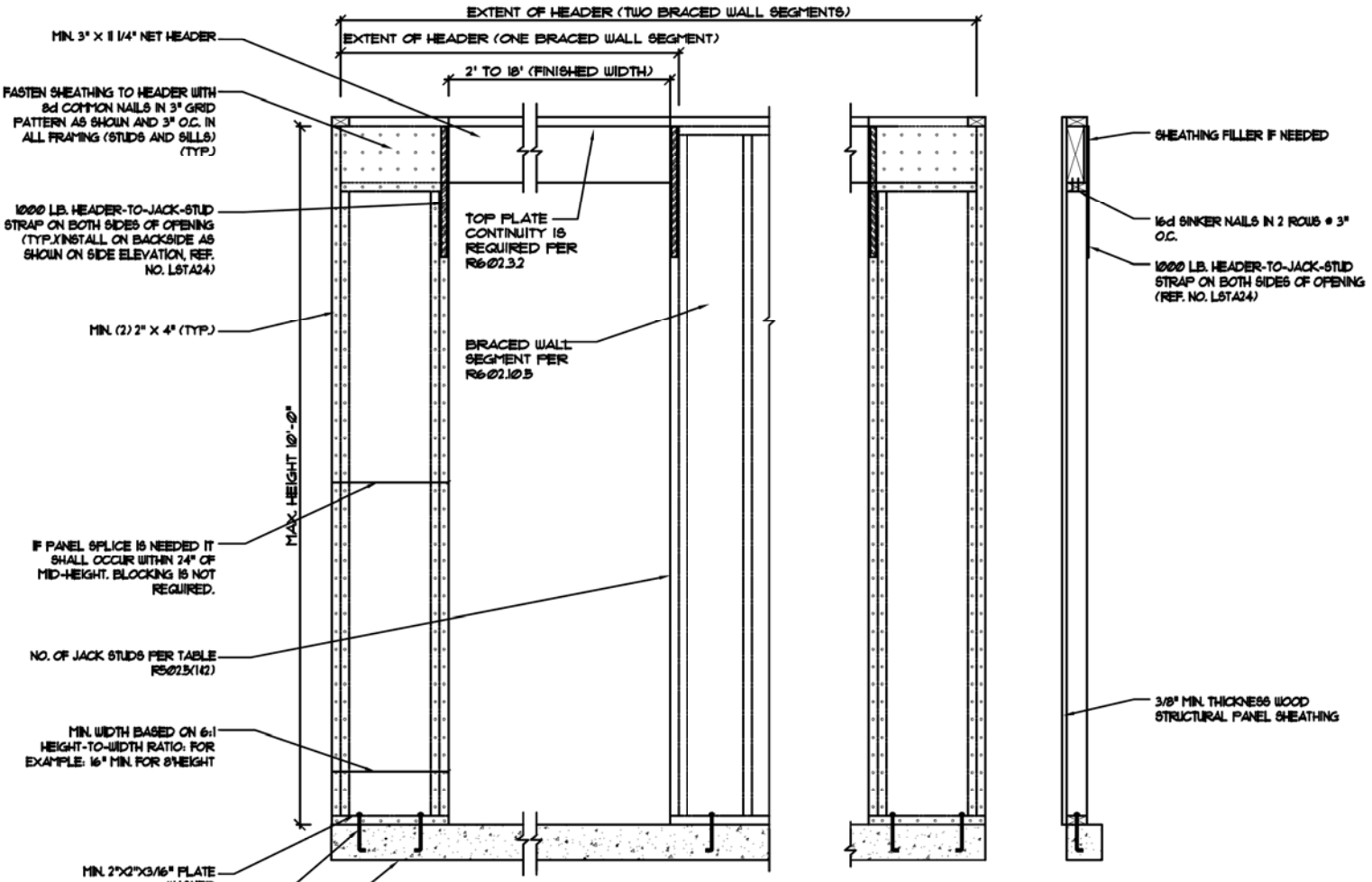


SIDE ELEVATION

(A) APA DETAIL OF NARROW WALL BRACING METHOD WITHOUT HOLD-DOWNS



(A) APA DETAIL OF NARROW WALL BRACING METHOD WITHOUT HOLD-DOWNS (FRAMING ANCHOR OPTION)

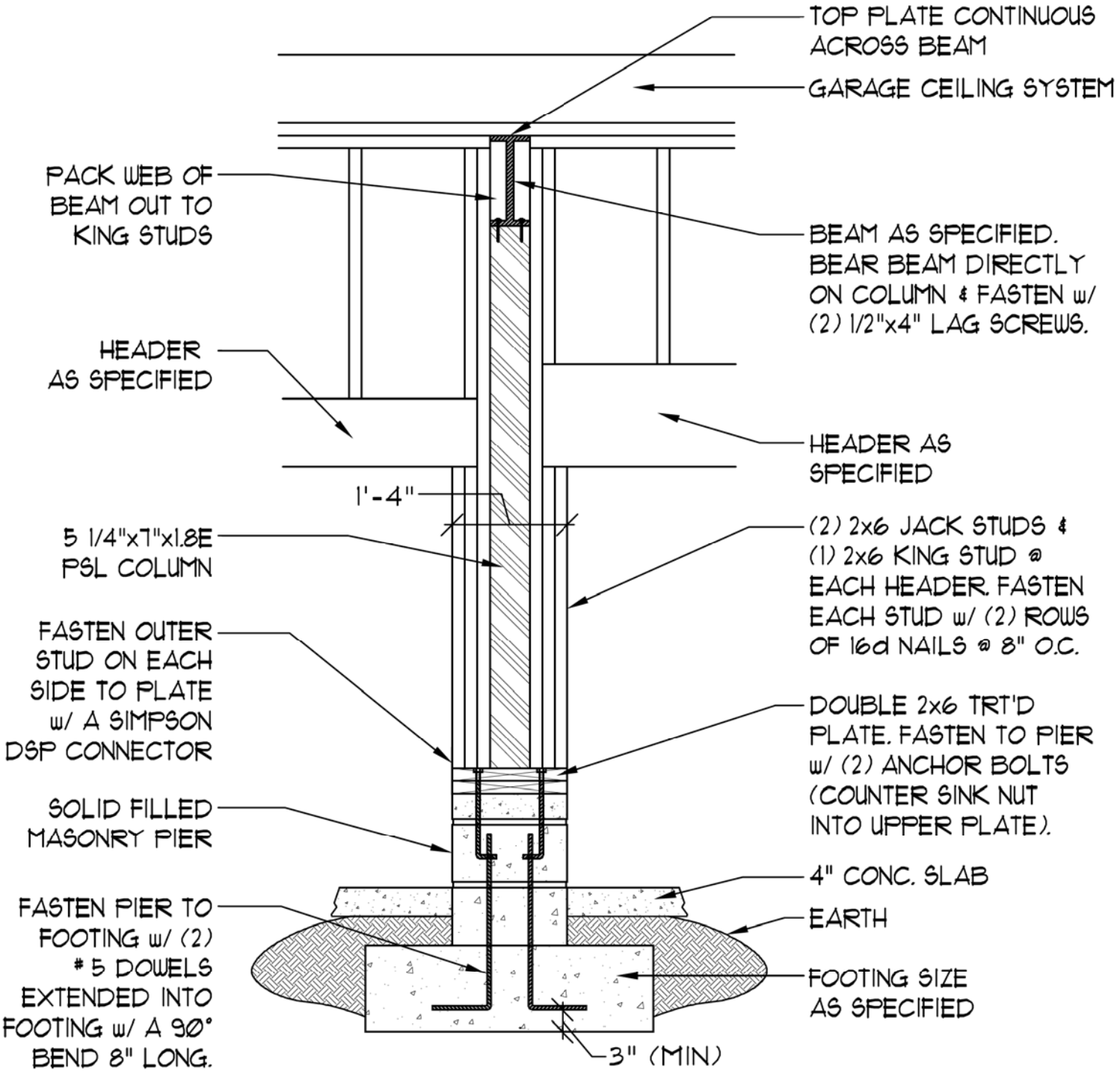


OUTSIDE ELEVATION

SIDE ELEVATION

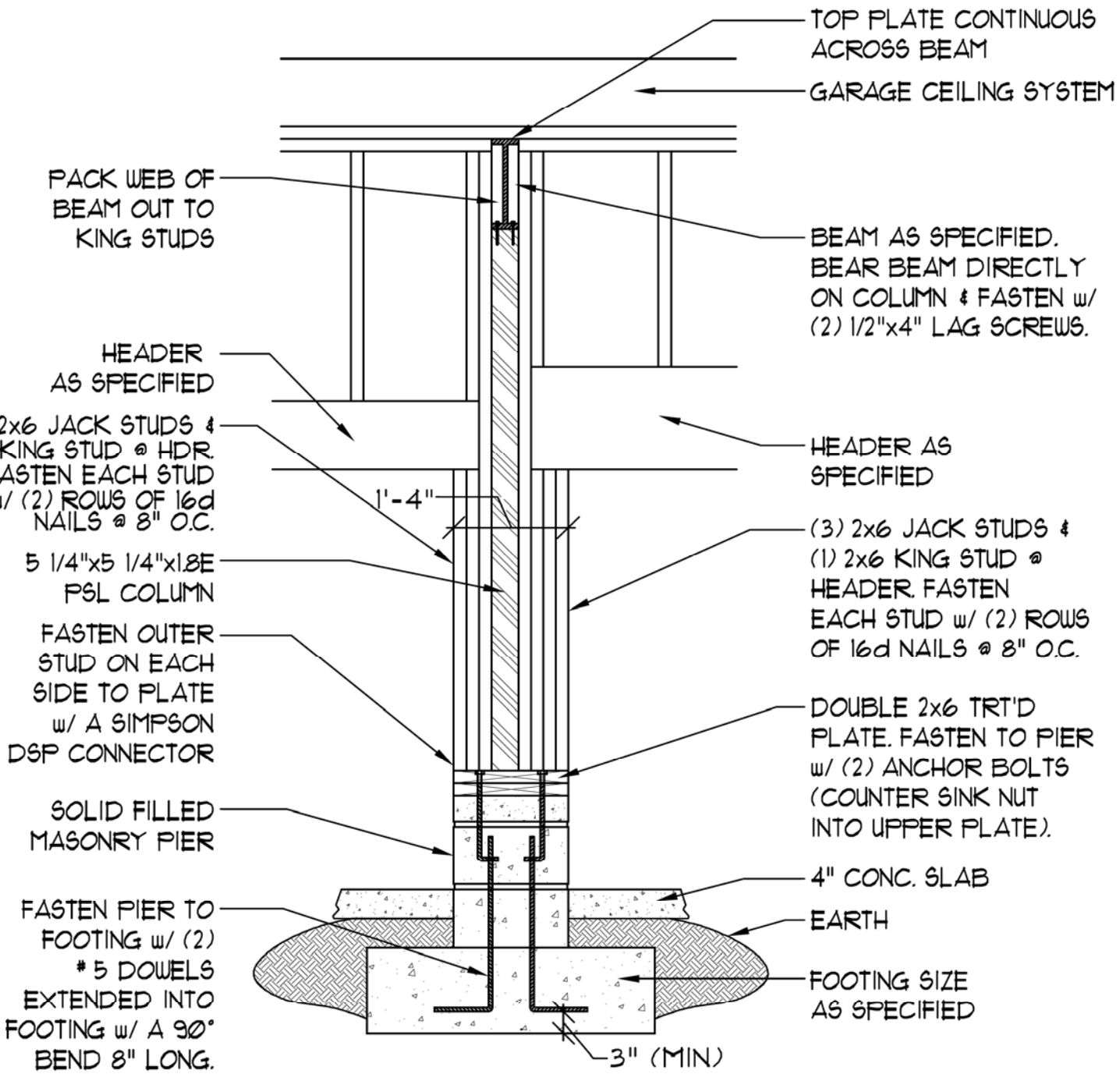
IMPORTANT CODE REQUIREMENT:
ONLY FOR USE ON HOMES WITH FULLY SHEATHED PLYWOOD OR OSB EXTERIOR WALLS, PER IRC R602.10.3.

(A) APA DETAIL OF NARROW WALL BRACING METHOD WITHOUT HOLD-DOWNS (DETAIL 1 OF 3)



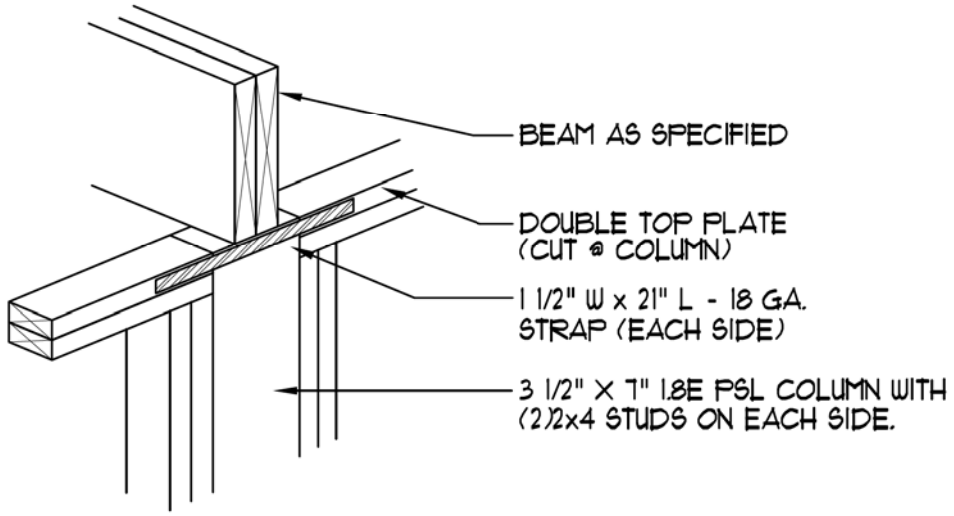
(A) GARAGE WALL DETAIL

(NTS)



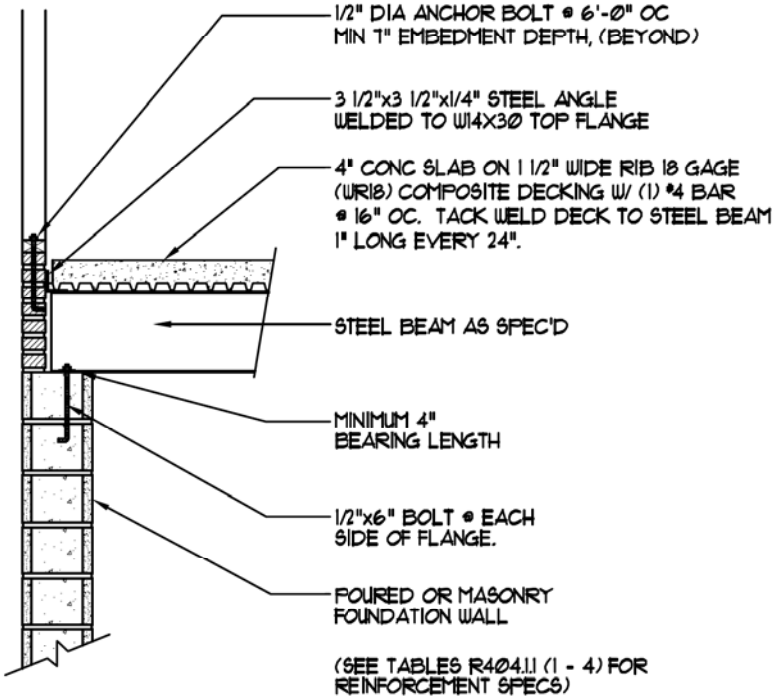
(A) GARAGE WALL DETAIL

(NTS)



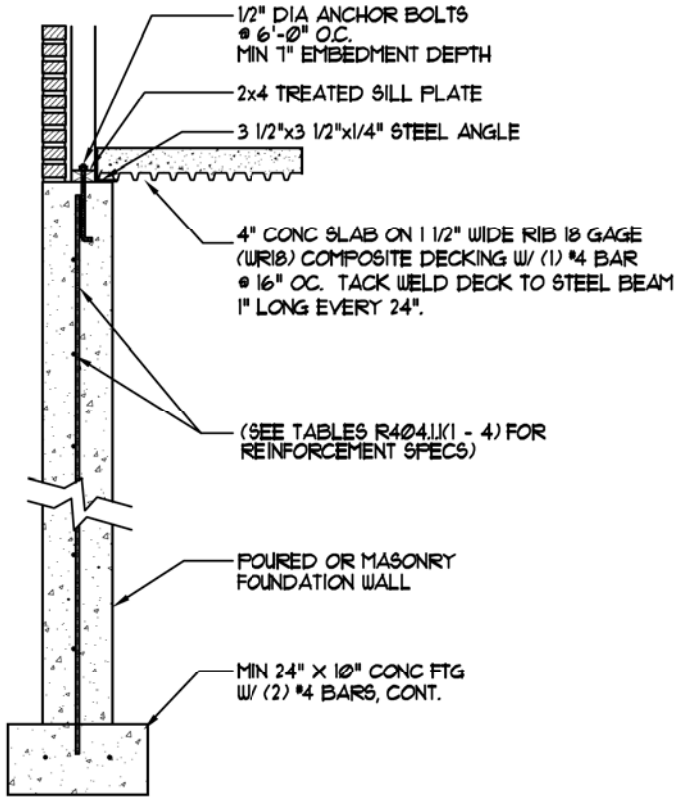
(A) DIRECT BEAM BEARING

NTS



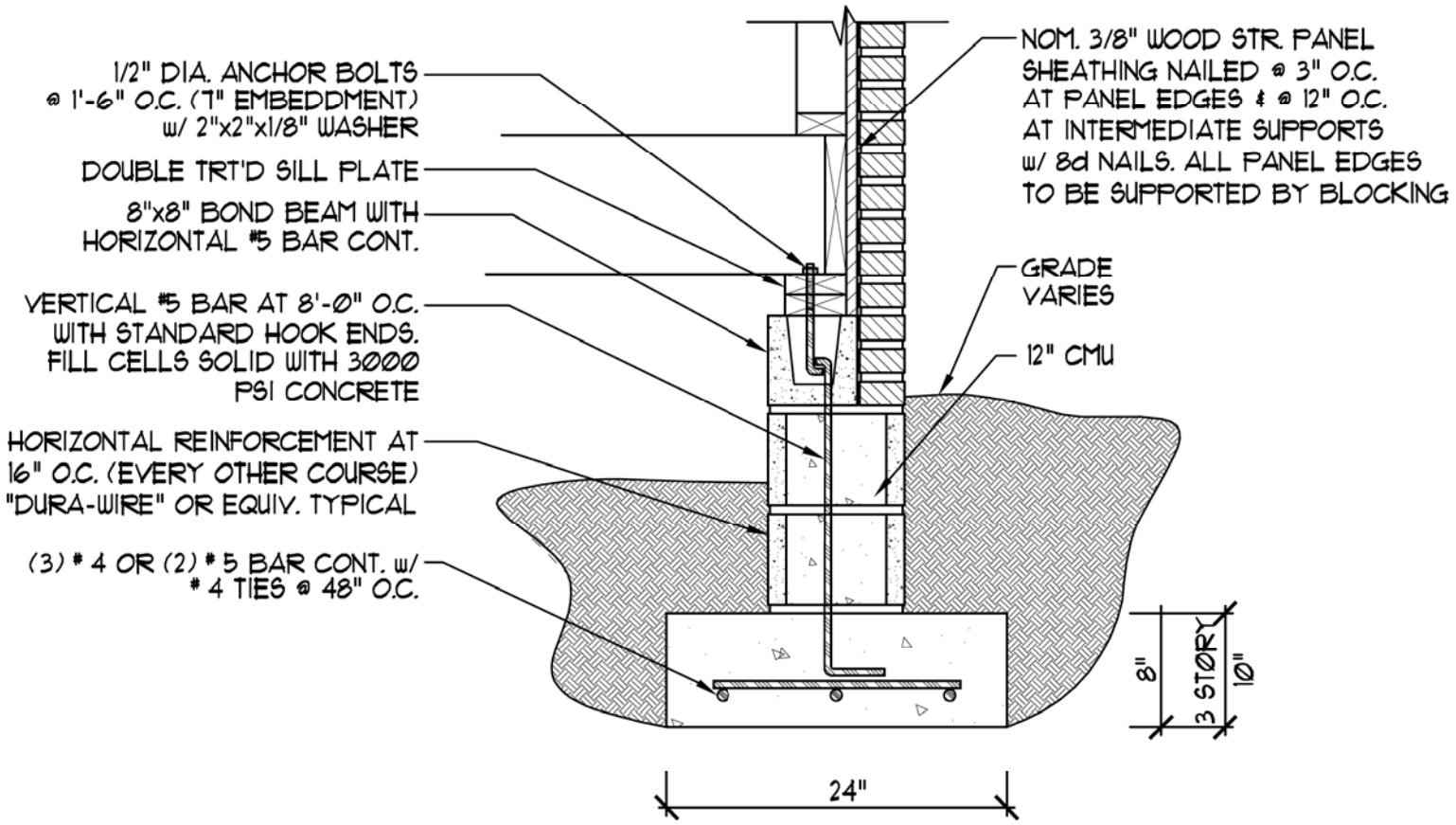
(A) SUSPENDED SLAB @ GARAGE WALL

NTS



(A) SUSPENDED SLAB @ GARAGE WALL

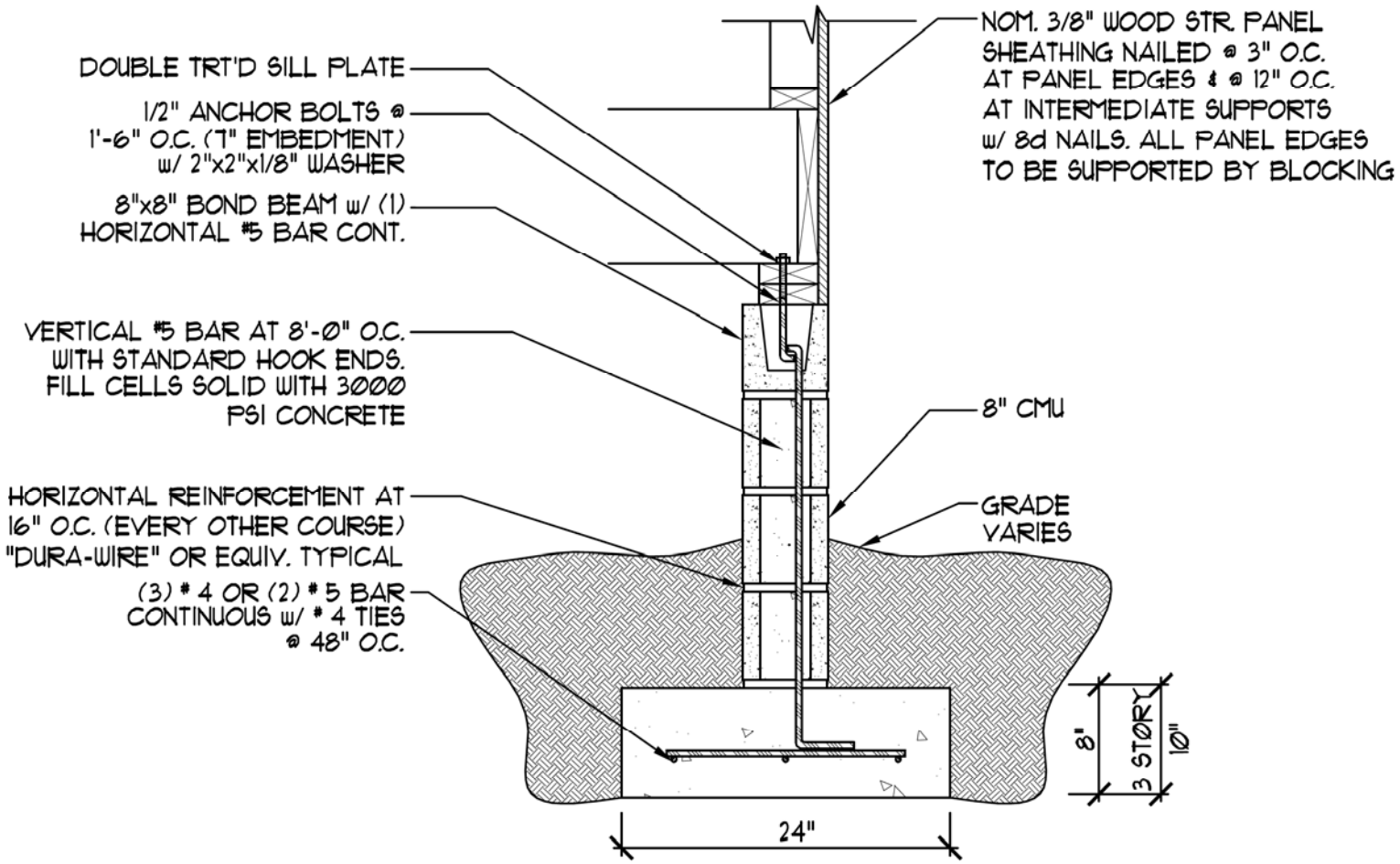
NTS



(A) CRAWL SECTION W/ BOND BEAM-BRICK

130 MPH

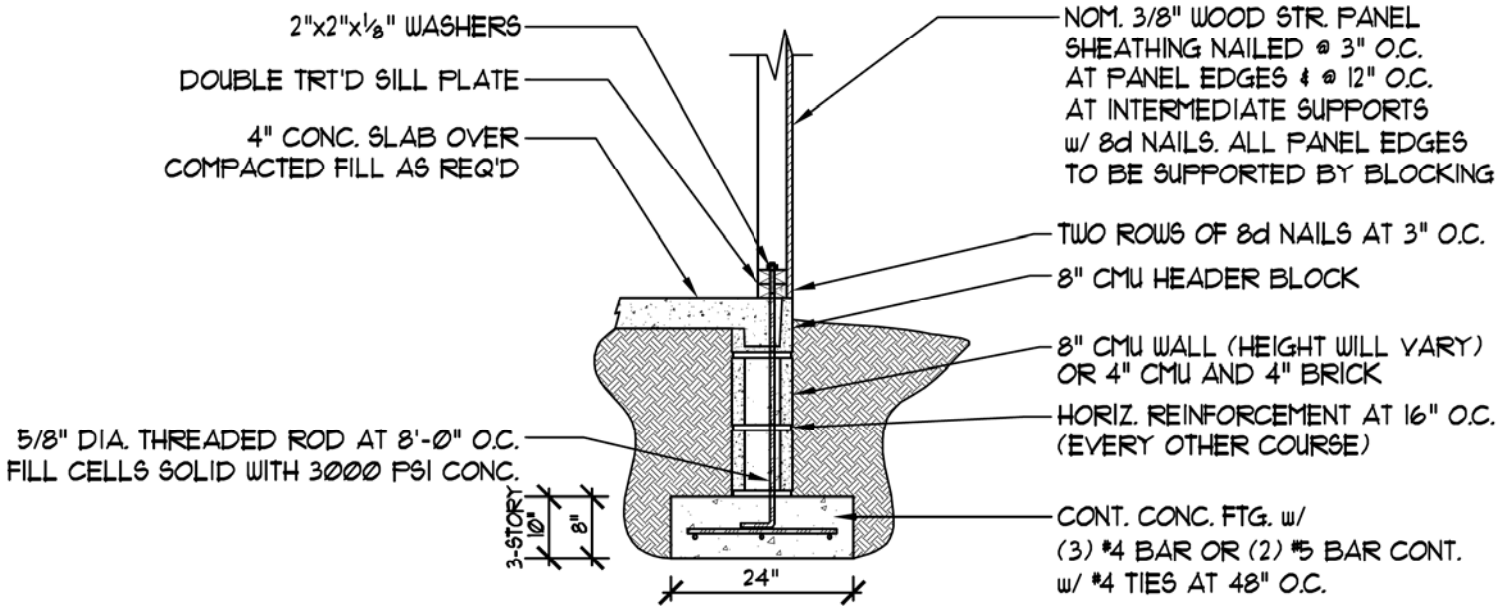
NTS



(A) CRAWL SECTION w/ BOND BEAM

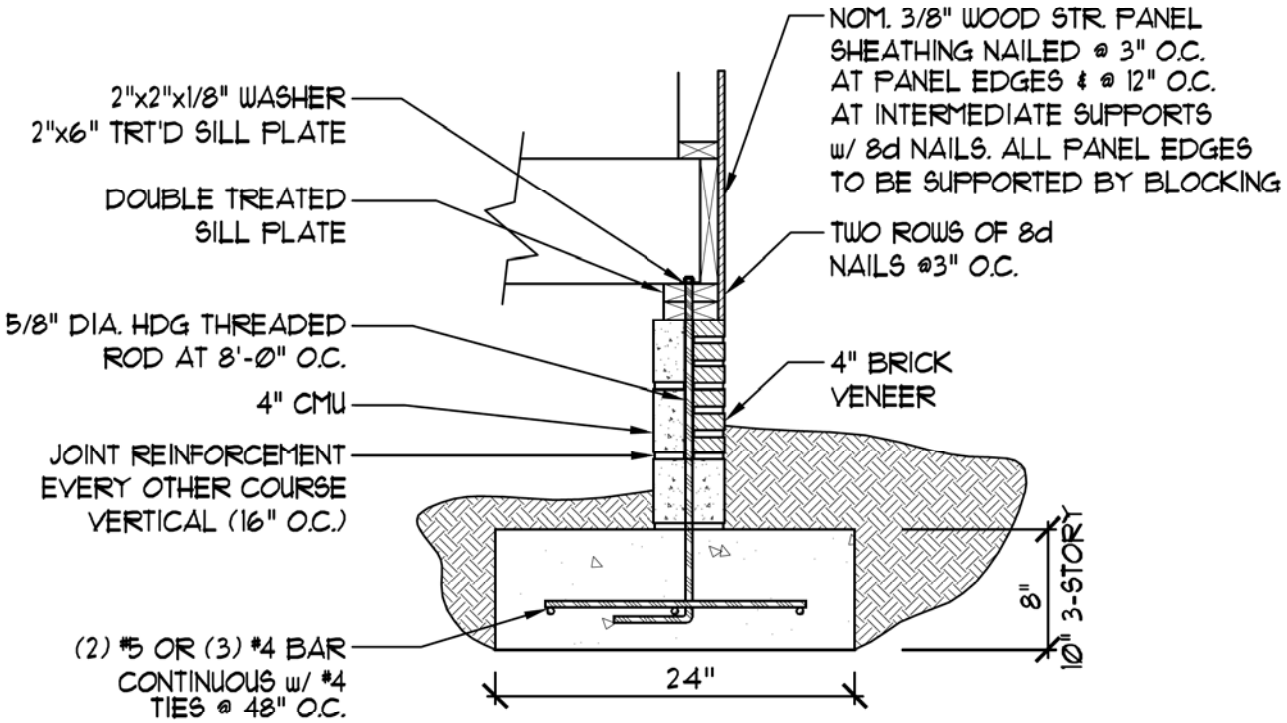
130 MPH

NTS



(A) STEM WALL SLAB

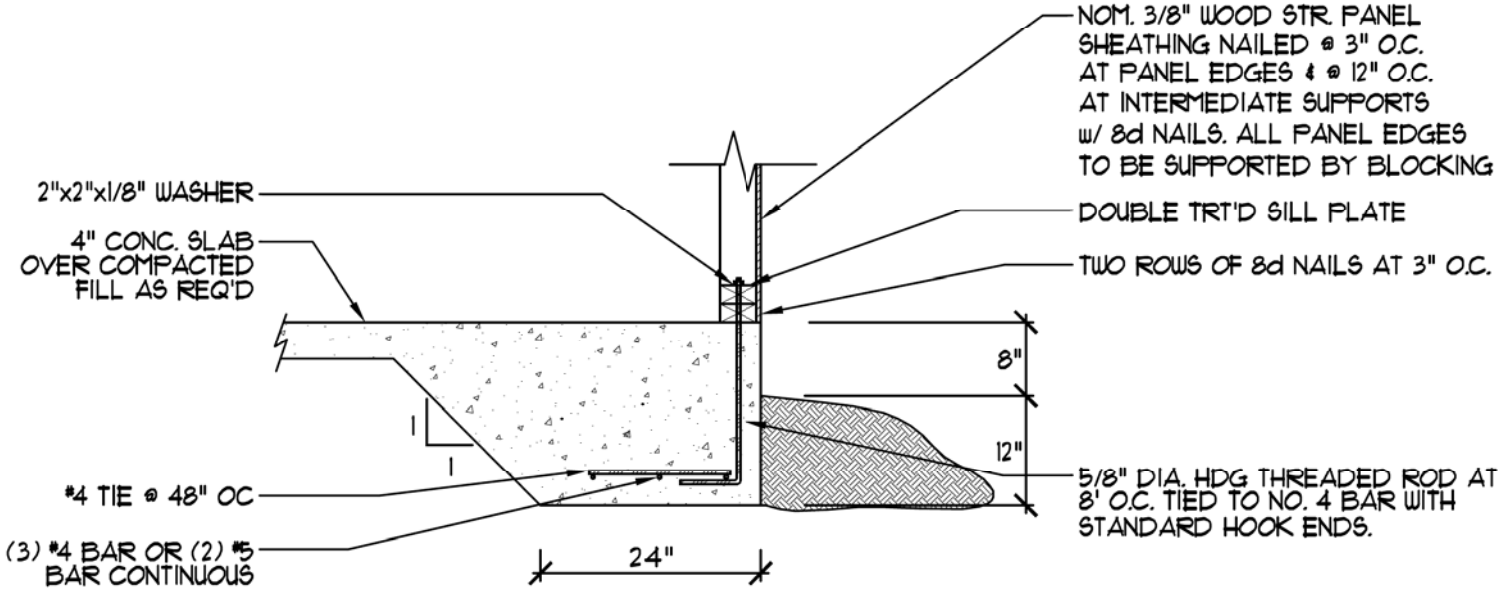
130 MPH NTS



(A) CRAWL SECTION w/ OUT BOND BEAM

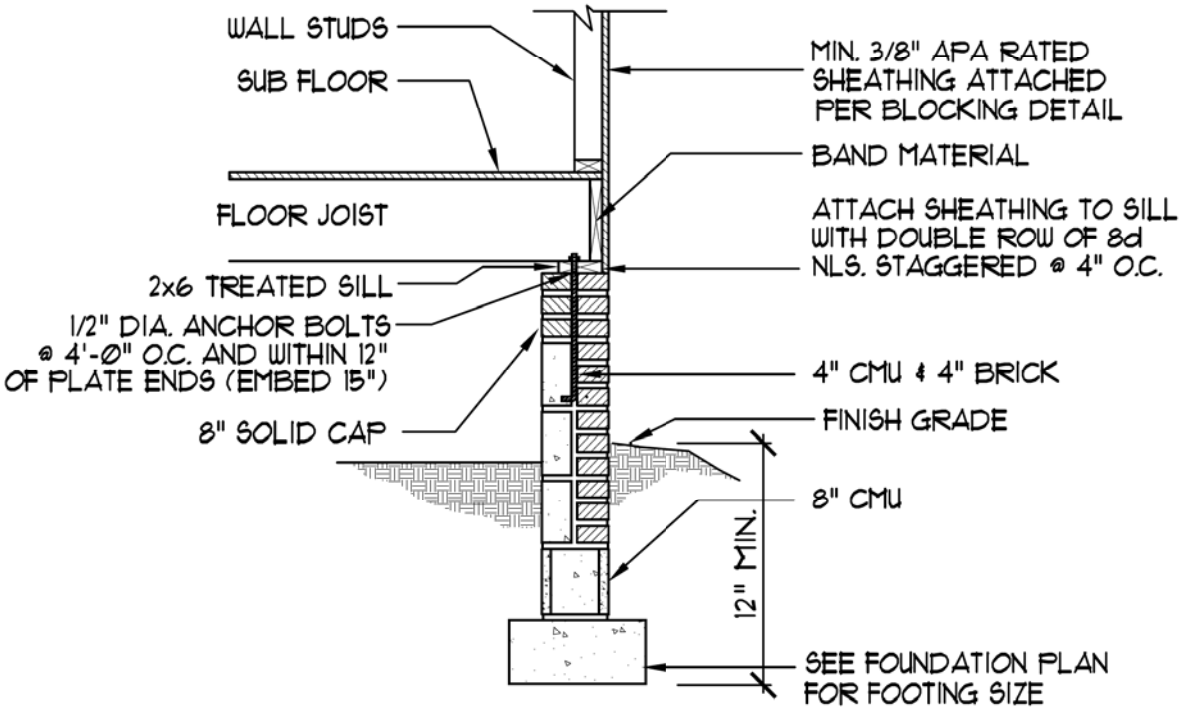
130 MPH

NTS



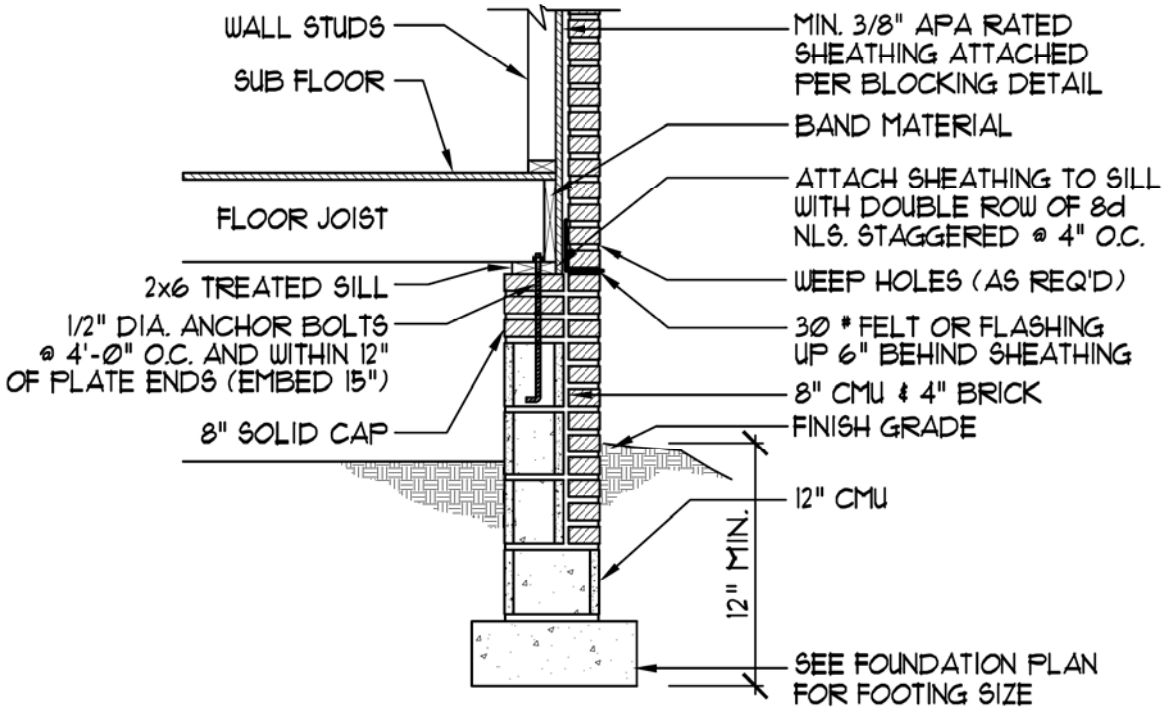
(A) TURN-DOWN SLAB

130 MPH NTS



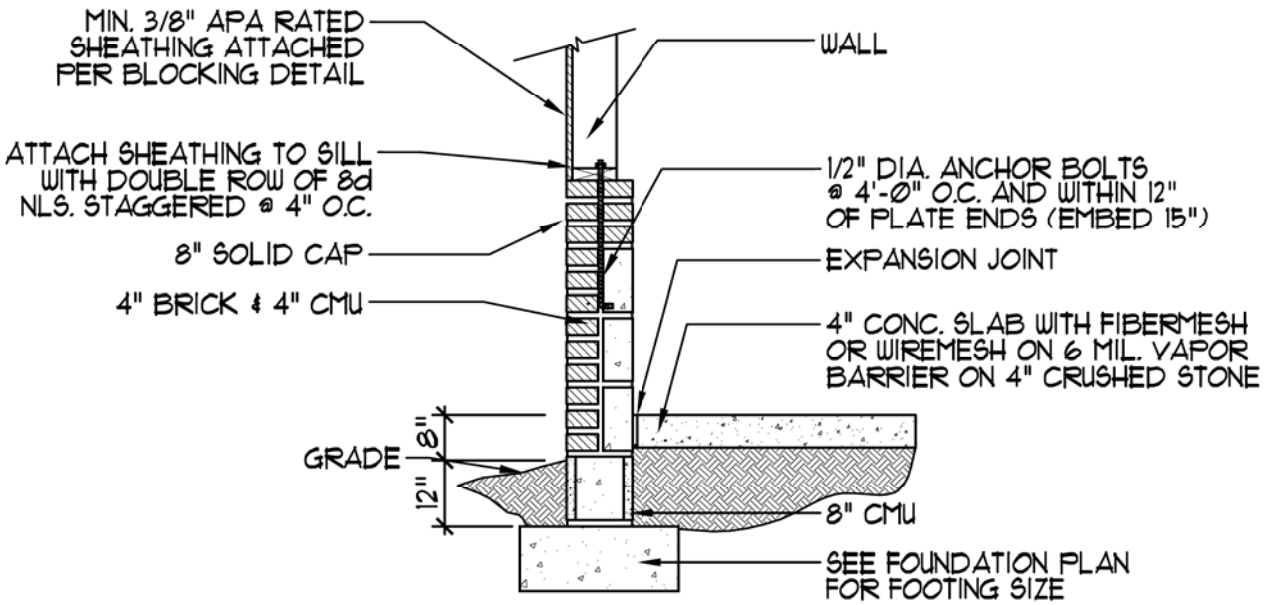
(A) CRAWL SECTION

NTS



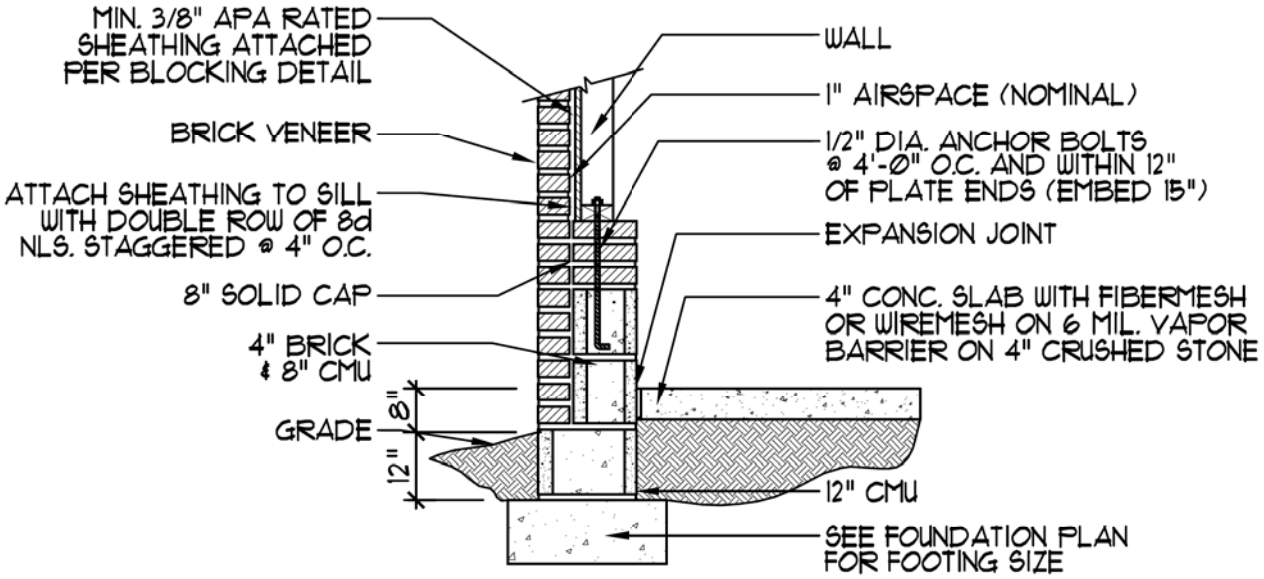
(A) CRAWL SECTION

NTS



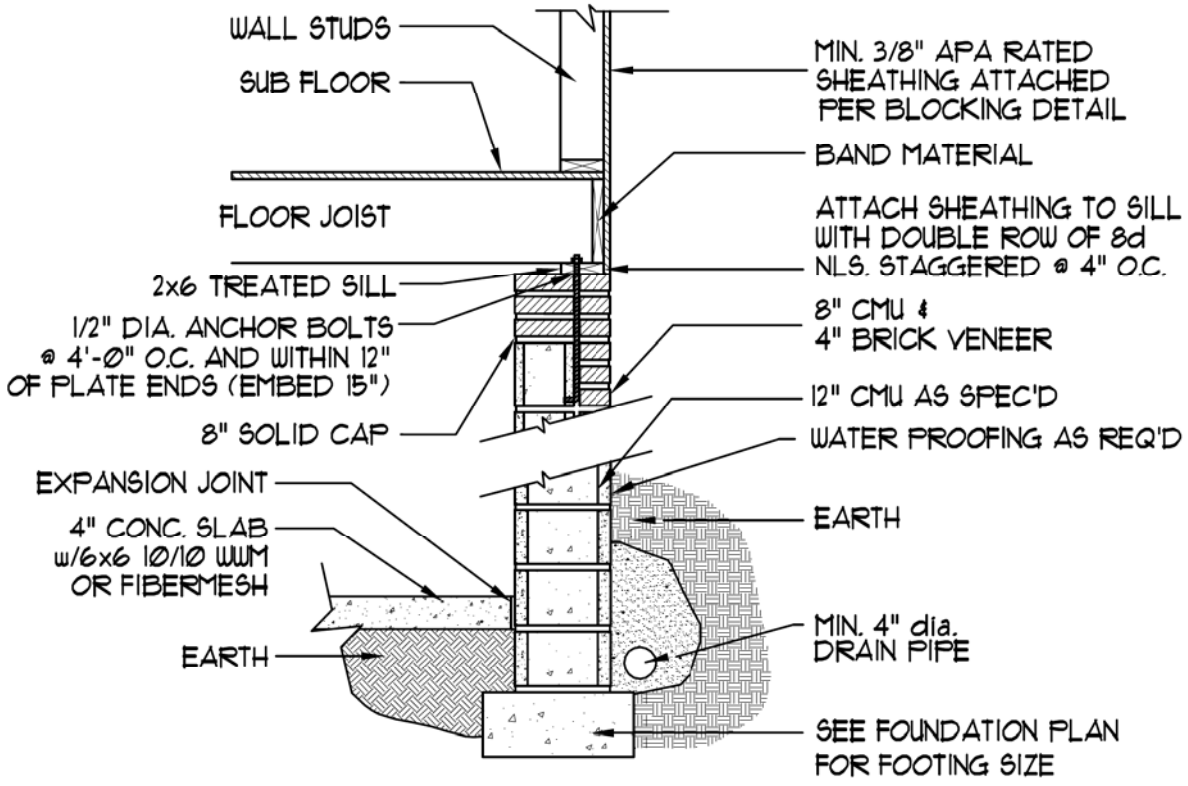
(A) GARAGE SLAB

NTS



(A) GARAGE SLAB

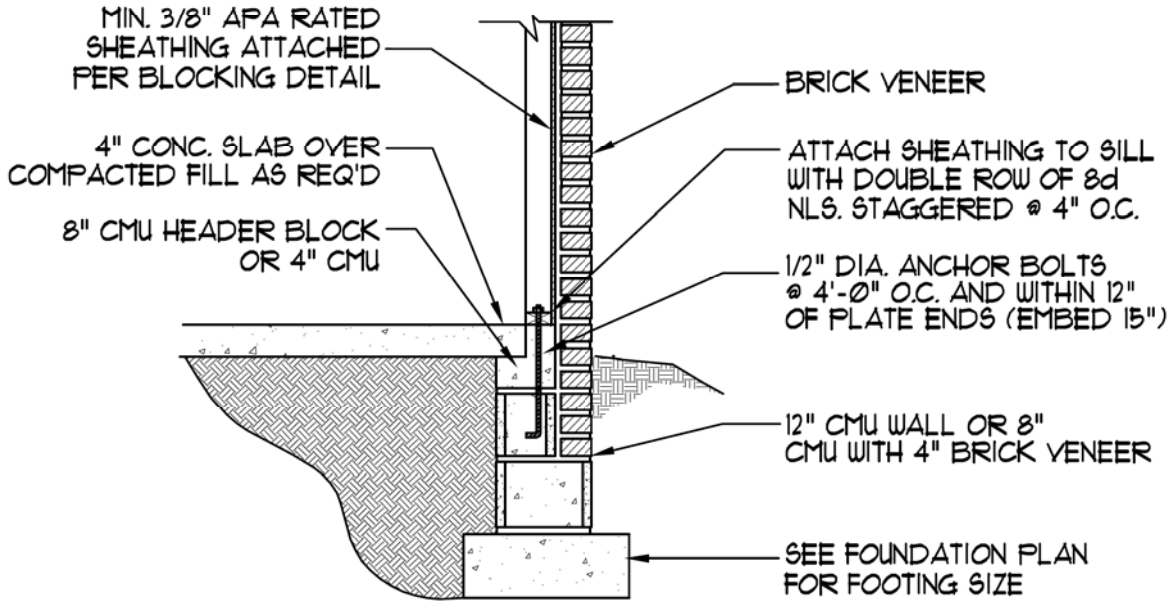
NTS



(A) BASEMENT FOUNDATION

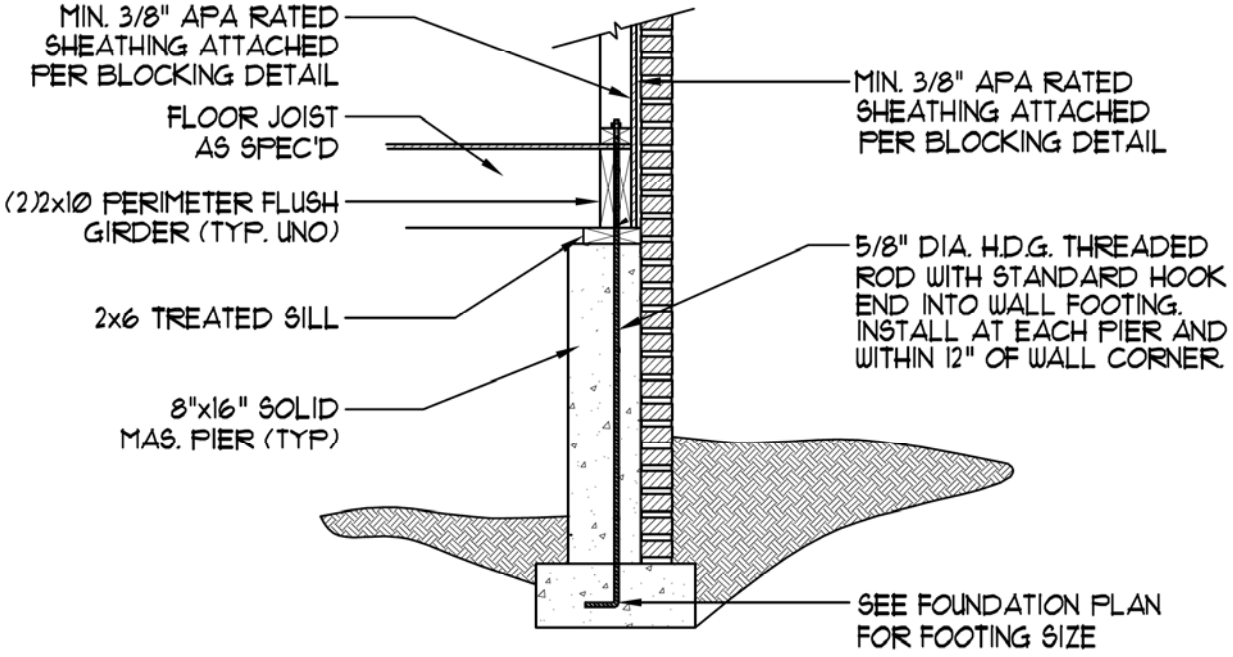
SEE R404.1.1 (1-4) FOR HEIGHT AND REINFORCING REQUIREMENTS

NTS



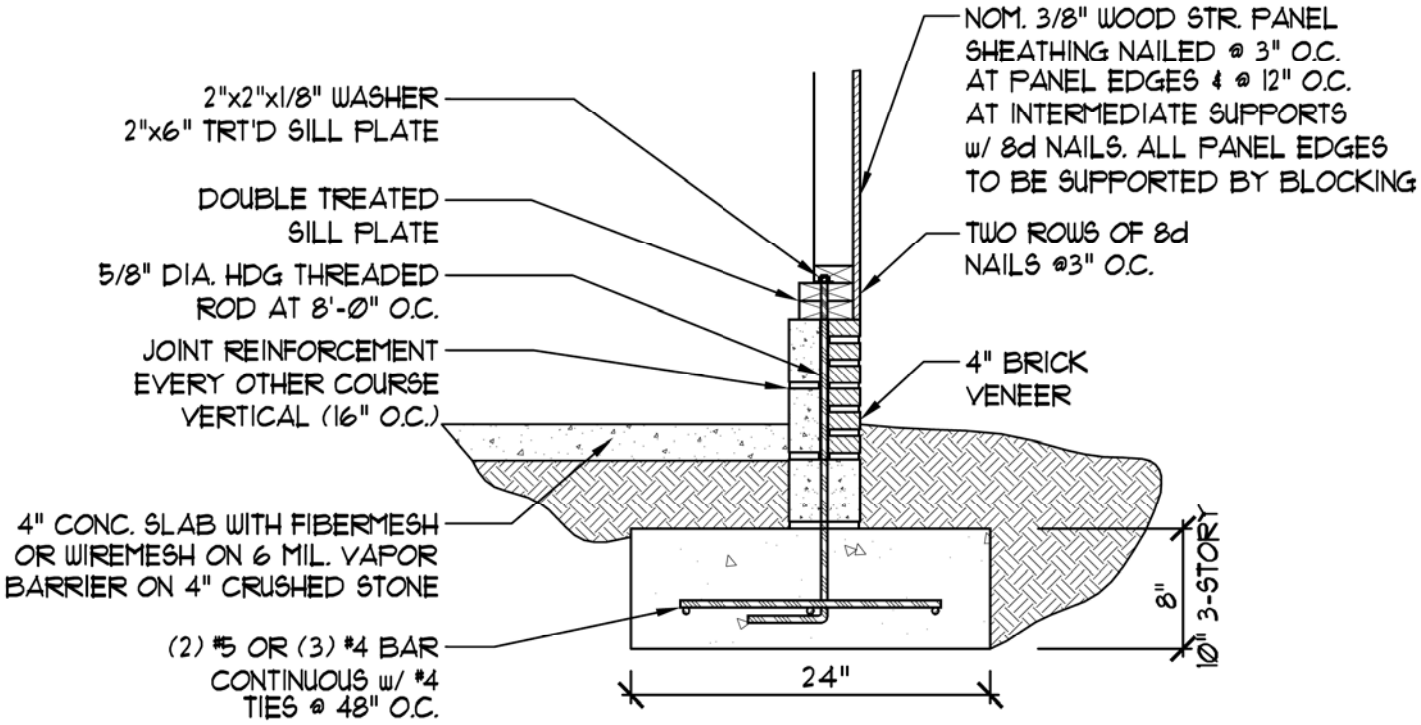
(A) SLAB FOUNDATION

N.T.S.



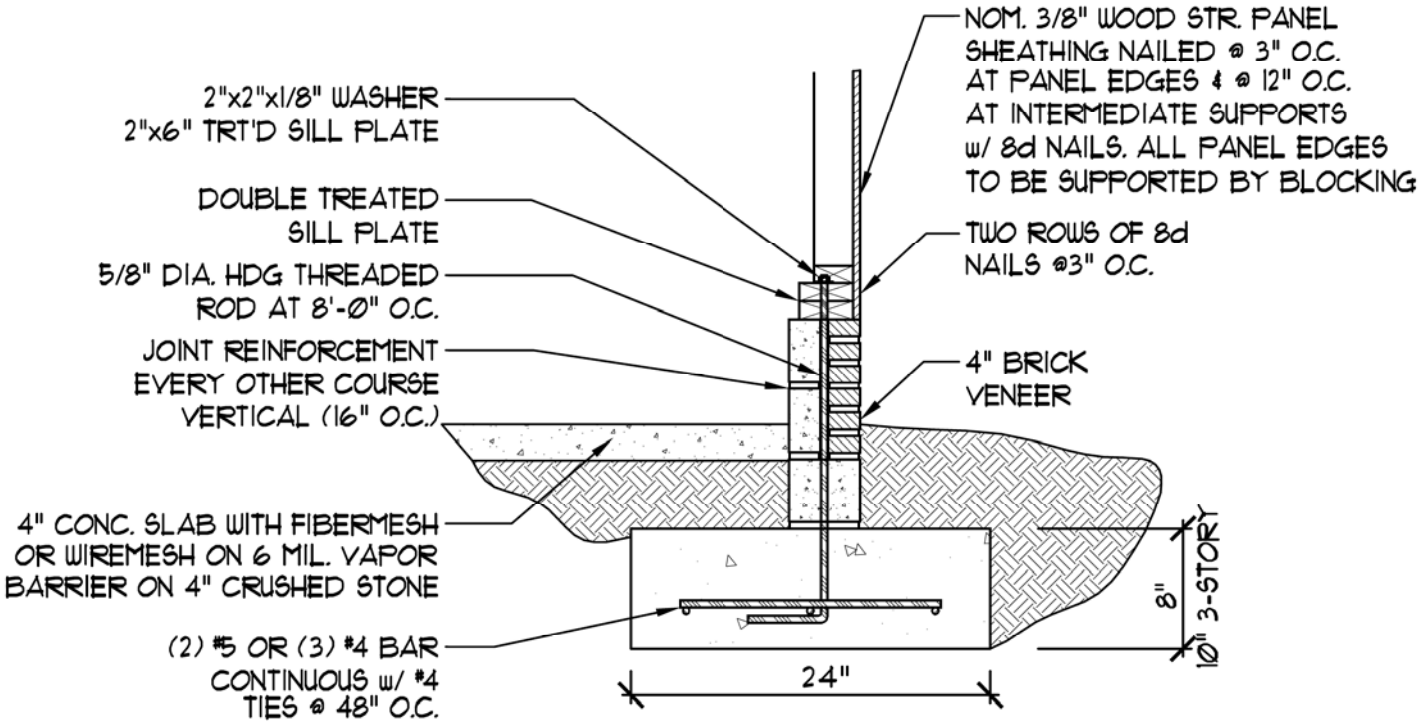
(A) PIER & CURTAIN FOUNDATION

NTS



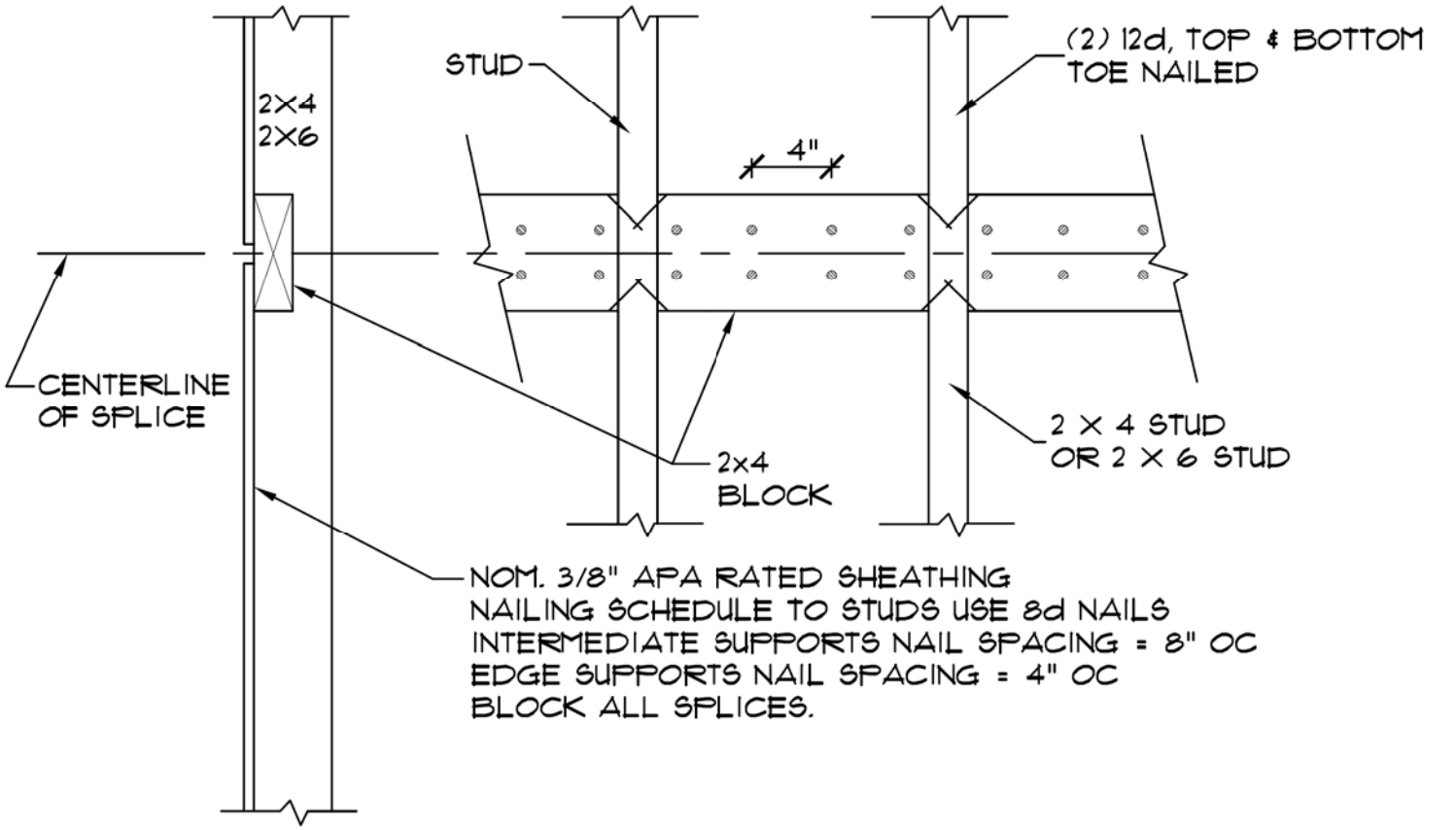
(A) GARAGE w/ SIDING - NO BOND BEAM

130 MPH NTS



(A) GARAGE w/ SIDING - NO BOND BEAM

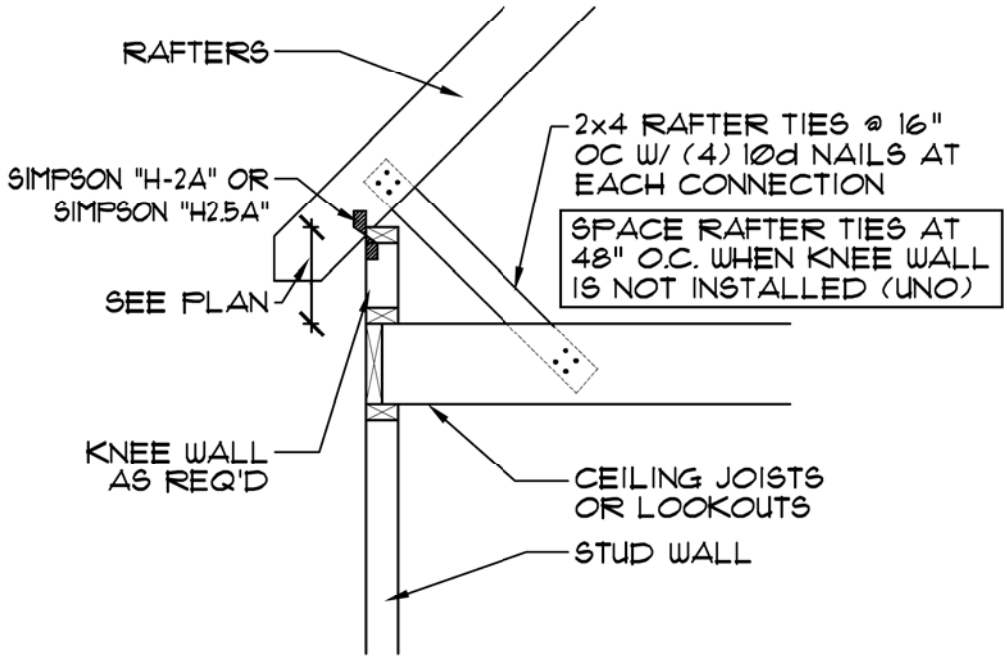
130 MPH NTS



(A) BLOCKING DETAIL

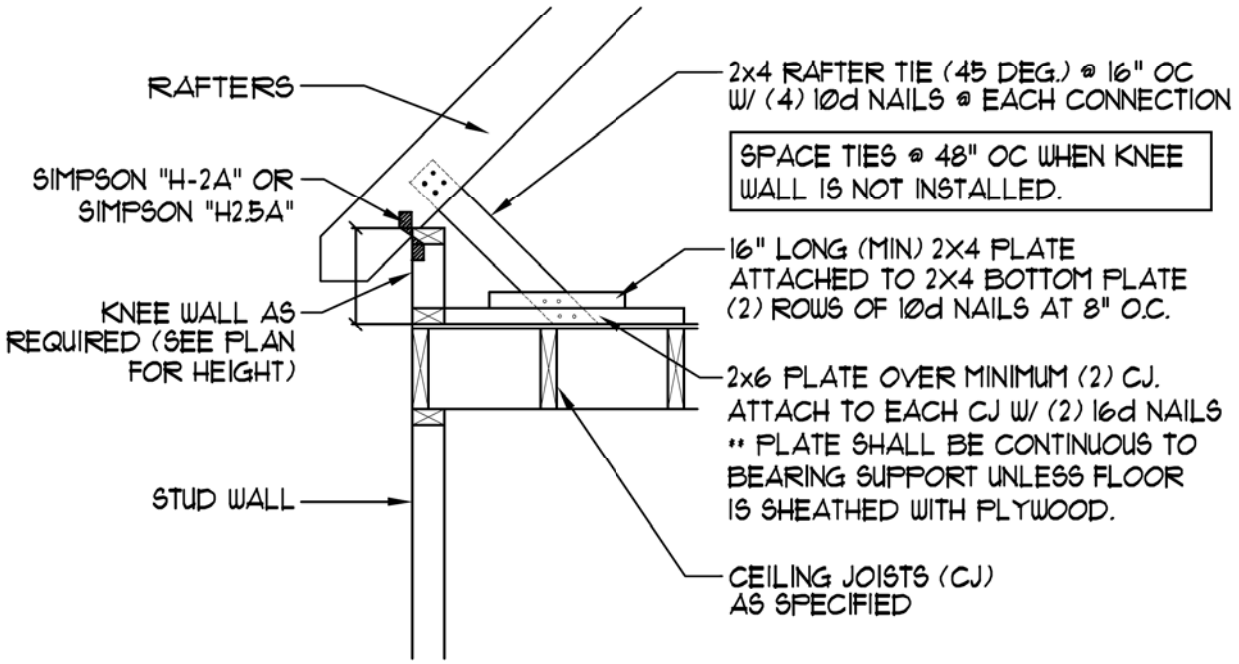
NTS

110 MPH ZONE BLOCKING DETAIL FOR
HORIZNONTAL OR VERTICAL ORIENTATION
OF APA RATED SHEATHING



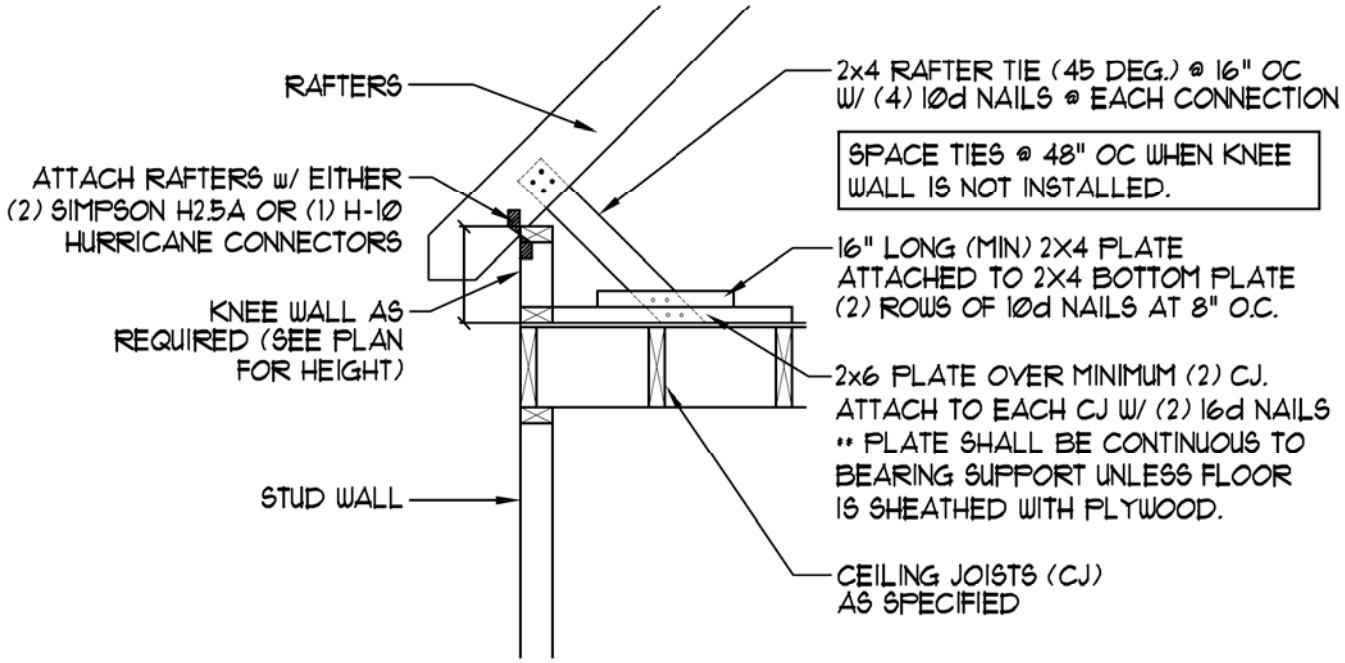
(A) RAFTER TIE DOWN (TYP)

(110 MPH) NTS.



(B) RAFTER TIE DOWN (TYP)

(110 MPH) (RAFTERS PERPENDICULAR TO JOISTS) NTS.



(B) RAFTER TIE DOWN (TYP)

(130 MPH)(RAFTER TIE PERPENDICULAR) NTS.

FOUNDATION STRUCTURAL NOTES:

(110 MPH WIND ZONE)

1. (3) 2 x 10 SPF #2 GIRDER, TYPICAL UNO.

2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW MASONRY	SOLID MASONRY
8 x 16	UP TO 32" HIGH	UP TO 5'-0" HIGH
12 x 16	UP TO 48" HIGH	UP TO 9'-0" HIGH
16 x 16	UP TO 64" HIGH	UP TO 12'-0" HIGH
24 x 24	UP TO 96" HIGH	

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:

DEPTH: 8" - UP TO 2-1/2 STORY
10" - 3 STORY

WIDTH: SIDING (OR EQUAL)
- 16" - UP TO 2-1/2 STORY
- 18" - 3 STORY

BRICK VENEER
- 16" - 1 STORY
- 20" - 2 STORY
- 24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO RESIDENTIAL CODE TABLE
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 4'-0" CENTERS (15" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 4404.1)

4 "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

5 ABBREVIATIONS:

"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST

6. (4) 2x10 SPF # 2 GIRDER

FOUNDATION STRUCTURAL NOTES:

(120 & 130 MPH WIND ZONE)

1. (3) 2x10 SPF #2 GIRDER, TYPICAL UNO.

2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HOLLOW MASONRY	SOLID MASONRY
8x16	UP TO 32" HIGH	UP TO 5'-0" HIGH
12x16	UP TO 48" HIGH	UP TO 9'-0" HIGH
16x16	UP TO 64" HIGH	UP TO 12'-0" HIGH
24x24	UP TO 96" HIGH	

WITH 30"x30"x10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:

   DEPTH: 8" - UP TO 2-1/2 STORY
   10" - 3 STORY

   WIDTH: MIN. 24" (UNO)

   ** REINFORCE W/ (3) #4 OR (2) #5 BAR
   (3" BOTTOM COVER)

   ** FOR FOUNDATION WALL HEIGHT AND BACK FILL REQUIREMENTS REFER TO CODE TABLES ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

4. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND. TYPICAL.

STRUCTURAL NOTES

1) ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2006 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3) DESIGN LOADS (R301.4)

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH PERMANENT STAIR	40	10	L/360
ATTIC WITH OUT PERMANENT STAIR	20	10	L/360
ATTIC WITH OUT STORAGE	10	10	L/240
STAIRS	40	--	L/360
EXTERIOR BALCONIES	60	10	L/360
DECKS	40	10	L/360
GUARDRAILS AND HANDRAILS	200	--	----
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
SNOW	20	--	----

WIND LOAD (BASED ON 110 MPH WIND VELOCITY & EXPOSURE B)

4) WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION R602.10.3.
THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE R602.10.3.
THE LENGTH OF BRACED PANELS SHALL BE DETERMINED BY SECTION R602.10.4.
LATERAL BRACING SHALL BE SATISFIED PER METHOD 3 BY CONTINUOUSLY SHEATHING WALLS WITH STRUCTURAL SHEATHING PER TABLE R602.3.
NOTE THAT ANY SPECIFIC BRACED WALL DETAIL SHALL BE INSTALLED AS SPECIFIED.

5) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.

6) ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTUAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAINSURFACE WATER AWAY FROM FOUNDATION WALLS.

7) ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2 (Fb=975 PSI).

8) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO).

9) L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10^6 PSI.
P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10^6 PSI.
L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10^6 PSI.
INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

10) ALL TRUSS DRAWINGS, I-JOIST LAYOUTS, OR ANY OTHER SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED BY SOUTHERN ENGINEERS, P.A. PRIOR TO THE START OF CONSTRUCTION.

11) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. .
ALL STEEL TUBING SHALL BE ASTM A500.

12) REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60.

13) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

14) BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).

15) ALL RAFTERS SHALL BE SECURED AT WALL PLATE WITH METAL TIE AND AT RIDGE WITH 2x6 COLLAR TIES WITH (4) 10D NAILS PER CONNECTION.

16) STRUCTURAL SHEATHING SHALL BE 7/16" APA RATED SHEATHING ATTACHED TO STUDS WITH 8D NAILS AT 3" CENTERS AT PANEL EDGES AND AT 6" CENTERS AT INTERMEDIATE SUPPORTS. ALL PANEL EDGES SHALL BE SUPPORTED BY BLOCKING. SEE BLOCKING DETAIL FOR FURTHER NOTES.

ROOF FRAMING NOTES:

(110 MPH WIND ZONE)

① RAFTERS TO BE 2x8 @ 16" O.C. WITH 2x10 RIDGE, U.N.O.

② (2) 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER
ATTACH HIPS AT WALLS WITH EITHER SIMPSON "MTS12" STRAP OR "HCP" CONNECTORS.

③ (2) 2x10 OR 1.75x9.25 LVL VALLEY.
DO NOT SPLICE VALLEYS
ATTACH VALLEYS TO WALL W/
SIMPSON MTS12 STRAP OR EQUAL.

④ 1.75x11.875 LVL VALLEY
ATTACH VALLEYS TO WALL W/
SIMPSON MTS12 STRAP OR EQUAL.

⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE

⑥ 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, U.N.O.

⑦ 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE, U.N.O.

⑧ EXTEND RIDGE +/- 12"

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH ALL RAFTERS WITH HURRICANE CLIPS: USE SIMPSON "H2A" OR SIMPSON "H-2.5A" OR EQUIVALENT, TYP.
- ATTACH ROOF TRUSSES W/ SIMPSON H-16 CONNECTOR.

STRUCTURAL DESIGN BY:

P.A.

PROJECT #

- Engineers seal applies only to structural components on this document. Seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.
- Any deviations or discrepancies on plans are to be brought to the immediate attention of Failure to do so will void liability
- Seal is valid for projects permitted one year from date of seal.

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- Unit plans valid only when accompanied by sealed building foundation plans and standard detail sheets.

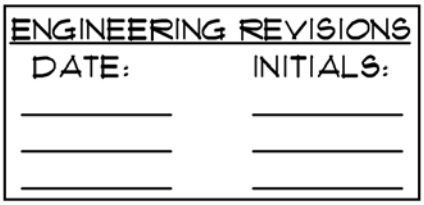
REFER TO "SD" SHEET(S)
FOR STANDARD DETAILS
AND STRUCTURAL NOTES.

THIS DOCUMENT ORIGINALLY ISSUED
AND SEALED BY XXXX
XXXXXONXXXXX
THIS MEDIA SHALL NOT BE
CONSIDERED A CERTIFIED DOCUMENT.

THIS DOCUMENT ORIGINALLY ISSUED AND
SEALED BY , PE
ON XX/XX/XX
THIS MEDIA SHALL NOT BE CONSIDERED
A CERTIFIED DOCUMENT.

THIS DOCUMENT ORIGINALLY ISSUED AND
SEALED BY , P.E.
ON XX/XX/XX
THIS MEDIA SHALL NOT BE CONSIDERED
A CERTIFIED DOCUMENT.

NOTE: DETAILS WITH A 'D' REFERENCE (EX. "D-F10") ARE FOR ARCHITECTURAL REPRESENTATIONS ONLY. REFER TO "SD" SHEET(S) FOR STRUCTURAL DETAILS.


ENGINEERING REVISIONS
DATE:
INITIALS:

REFER TO SHEET # FOR
STRUCTURAL NOTES.

FOUNDATION STRUCTURAL NOTES:

(100 MPH WIND ZONE)

(1) (3) 2 x 10 SPF #2 GIRDER, TYPICAL UNO.

(2) CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW MASONRY	SOLID MASONRY
8 x 16	UP TO 32" HIGH	UP TO 5'-0" HIGH
12 x 16	UP TO 48" HIGH	UP TO 9'-0" HIGH
16 x 16	UP TO 64" HIGH	UP TO 12'-0" HIGH
24 x 24	UP TO 96" HIGH	

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

(3) WALL FOOTING AS FOLLOWS:

DEPTH: 8" - UP TO 2-1/2 STORY
10" - 3 STORY

WIDTH: SIDING (OR EQUAL)
- 16" - UP TO 2-1/2 STORY
- 18" - 3 STORY

BRICK VENEER
- 16" - 1 STORY
- 20" - 2 STORY
- 24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO RESIDENTIAL CODE TABLE
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)

4 "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

5 ABBREVIATIONS:

"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST

(6) (4) 2 x 10 SPF #2 GIRDER.

FOUNDATION STRUCTURAL NOTES:

(100 MPH WIND ZONE)

1. (2) 1.75x9.25 LVL GIRDER, TYPICAL UNO.

2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW MASONRY	SOLID MASONRY
8 x 16	UP TO 32" HIGH	UP TO 5'-0" HIGH
12 x 16	UP TO 48" HIGH	UP TO 9'-0" HIGH
16 x 16	UP TO 64" HIGH	UP TO 12'-0" HIGH
24 x 24	UP TO 96" HIGH	

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:

DEPTH: 8" - UP TO 2-1/2 STORY
10" - 3 STORY

WIDTH: SIDING (OR EQUAL) - 18"

BRICK - 20" - UP TO 2-1/2 STORY
- 24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R404.1.1 (1 THRU 4)
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)

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(100 MPH WIND ZONE)

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WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

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10" - 3 STORY

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BRICK - 20" - UP TO 2-1/2 STORY
- 24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO RESIDENTIAL CODE TABLE
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)

4. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

5. ABBREVIATIONS:

"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST

WOOD I-JOIST OPTION
(40 PSF LIVE LOAD)

2x10s SPECIFIED	WOOD I-JOIST SPACING			
	L/360 (LLΔ)	MAX. SPAN.	L/480 (LLΔ)	MAX. SPAN.
SPF #2 @ 16" OC	19.2" OC	16'-2"	16" OC	15'-5"
SYP #2 @ 16" OC	19.2" OC	16'-2"	12" OC	16'-11"
SPF #2 @ 12" OC	16" OC	17'-1"	12" OC	16'-11"

WOOD I-JOISTS SHALL BE 9-1/2" DEPTH AND ONE OF THE FOLLOWING

** TJI 230 BY TJM

** BC 5000 BY BC

** WI-40 BY GP

1. ALL WOOD I-JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS
2. SUPPORT MEMBERS (IE. BEAMS & GIRDERS) ARE ACCEPTABLE FOR BOTH SIMPLE AND MULTI-SPAN JOISTS.
3. 11-7/8" OR DEEPER WOOD I-JOISTS OF THE SAME SERIES AND MANUFACTURER MAY BE USED IN LIEU OF 9-1/2" DEPTH.
4. OPTION TABLE APPLIES TO ALL FLOORS DESIGNED FOR 40 PSF LIVE LOAD OR LESS.

BASEMENT WALL REQUIREMENTS:

TABLE I (100 MPH)

1. FOR MASONRY OR POURED CONCRETE WALL REINFORCEMENT REQUIREMENTS REFER TO RESIDENTIAL CODE TABLE
2. ALL CORNERS SHALL BE REINFORCED WITH 4'-0" LONG HORIZ. BAR AT EVERY COURSE.
3. LAP BAR JOINTS A MINIMUM OF 1'-0".
4. EXTEND BAR INTO FOOTING WITH A 90 DEGREE BEND 1'-0" LONG.
5. CAUTION SHALL BE TAKEN DURING BACK FILLING TO NOT EXERT ADDITIONAL PRESSURE ON THE FOUNDATION WALL.
6. IF UNSTABLE SOIL IS PRESENT, CONTACT GEOTECHNICAL ENGINEER.
7. SEE FOUNDATION PLAN FOR FOOTING REQUIREMENTS.
8. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO WALL OR FOUNDATION. BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE 3 STUDS OR MORE DOWN TO FOUNDATION.
9. ABBREVIATIONS:
   "SJ" = SINGLE JOIST
   "DJ" = DOUBLE JOISTS
   "TJ" = TRIPLE JOISTS

PIER & CURTAIN FOUNDATION:

1. (2) 2x10 BAND ON A 4" PIER AND CURTAIN WALL PER SECTION R4041.5.1
2. PIERS SHALL BE MAX. 6'-0" O.C.
3. 8" FND, WALL SHALL BE INSTALLED ADJACENT TO SLABS, PORCHES, GARAGES, AND BELOW PT. LOADS.

FOUNDATION VENT CALCULATIONS:

THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF CRAWL SPACE. REFER TO SECTION R408 FOR EXEPTIONS. SIZE, QUANTITY, AND LOCATION OF VENTS BY BUILDER BASED ON CALCULATIONS: ±???? SQUARE FEET OF CRAWL SPACE DIVIDED BY 150 = ???? SQUARE FEET REQUIRED

NOTE: FOR FOUNDATION WALL HEIGHT, THICKNESS, AND BACKFILL REQUIREMENTS, REFER TO TABLE

4" CONC. SLAB
w/ FIBERMESH OR WIREMESH
ON 6 MIL VAPOR BARRIER
ON 4" CRUSHED STONE.

NOTE ASSUMED SOIL BEARING CAPACITY = 2000 PSF CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED

2x4 STUDS @ 12" O.C. OR
2x6 STUDS @ 16" O.C. ON
18"x10" THICKENED SLAB

MASONRY PIER ON 24"x24"x8"
CONCRETE FTG. (TYP.)

4x4 P.T. POST ON 16"x16"x8"
CONCRETE FTG. (TYP). BRACE
POSTS PER APPENDIX M.

6x6 P.T. POST ON 24"x24"x8"
CONCRETE FTG. (TYP). BRACE
POSTS PER APPENDIX M.

24"x24"x10"
CONC. LUG FTG.

30"x30"x10"
CONC. LUG FTG.

3 1/2"dia. STANDARD STEEL PIPE COLUMN
w/ 6"x6"x1/4" TOP PLATE AND 8"x8"x1/2"
BOTTOM PLATE WELDED TO PIPE. MINIMUM 42"x
42"x12" CONCRETE FOOTING. ATTACH BASE
PLATE TO SLAB WITH FOUR 1/2"dia. x 6"
LONG SLEEVE ANCHORS.

22 GA. INVERTED "B" DECKING
FOR SLAB SUPPORT. PROVIDE
MIN. 2" BEARING LENGTH EA. END

4" CONCRETE SLAB w/
FIBERMESH OR WIREMESH
ON 6MIL VAPOR BARRIER
ON 4" CRUSHED STONE.
INSTALL CONTROL JOINTS
ON 15'-0"x15'-0" GRID.

SUPERIOR WALL NOTES:
1. "SUPERIOR WALLS" SHALL BE DESIGNED TO SUPPORT THE HOUSE FRAMING AND ALL DEAD AND LIVE LOADS IMPOSED ON THE FOUNDATION BY THE HOUSE. THE DESIGN SHALL BE SEALED BY THE WALL MANUFACTURER.
2. "SUPERIOR WALLS" DESIGN SHALL INCORPORATE ALL STRUCTURAL COMPONENETS BELOW THE FLOOR FRAMING, INCLUDING FOOTINGS, WALL ANCHORAGE, BRACING ALL CONNECTIONS, WATERPROOFING, ETC.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
4. ALL PRODUCT SUPPORT SHALL BE PROVIDED BY THE MANUFACTURER.
4. POINT LOADS THAT EXCEED 4000 LBS ARE NOTED ON THE FOUNDATION PLAN.

HEADER AND COLUMN NOTES

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE (2) 2x6 (MIN), UNLESS NOTED OTHERWISE.
- THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN.

HEADER SCHEDULE

1	(2) 2X6
2	(2) 2X8
3	(2) 2X10
4	3.5 X 9.25 LSL
5	(3) 2X6
6	(3) 2X8
7	(3) 2X10

FOR HEADERS NOT SHOWN:
(2) 2x6

HEADER SCHEDULE

1	(2) 2X6
2	(2) 2X8
3	(2) 2X10
4	3.5 X 9.25 LSL
5	(3) 2X6
6	(3) 2X8
7	(3) 2X10

FOR HEADERS NOT SHOWN:
(2) 2x6

HEADER AND COLUMN NOTES

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE (2)2X6 (MIN), UNLESS NOTED OTHERWISE.
- THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. COLUMNS CONSISTING OF (7) OR MORE STUDS SHALL BE WRAPPED WITH 22-GAUGE METAL STRAPS AT 24" O.C.

TRUSS SYSTEM REQUIREMENTS

1. TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED STRUCTURAL PLANS. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH

2. TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.

3. ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).

4. ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

* INSTALL 'I' JOISTS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
* MULTI-SPAN JOIST WHENEVER POSSIBLE.

INSTALL 1/2" OSB OR CDX PLYWOOD
SHEATHING UP TO 4'-0" HIGH ABOVE OPENING.

BALLOON FRAME WALL w/ 2x6 STUDS @ 12" OC. ATTACH CONTINUOUS STUD COLUMNS TO TOP AND BOTTOM PLATES WITH SIMPSON LS50 CLIP ANGLES. INSTALL MIN. (2)2x6 HEADER BETWEEN UPPER AND LOWER WINDOWS. ATTACH HEADERS TO CONTINUOUS STUD COLUMNS WITH SIMPSON HH6 HEADER HANGERS OR (2) SIMPSON LTP4 FRAMING ANCHORS. (NOTE THAT ADDITIONAL JACK STUDS MAY BE INSTALLED IN LIEU OF HEADER HANGERS)

BALLOON FRAME GABLE END WALL WITH 2x4 STUDS AT 12" OC. INSTALL SCISSOR TRUSS ON GABLE END AND INSTALL 1/2" CDX OR OSB PLYWOOD ON WALL, OVERLAPPING JOINT BETWEEN STUDS AND TRUSS.

BALLOON FRAME WALL w/ 2x6 STUDS @ 16" OC, OR DOUBLE 2 x 4 STUDS @ 16" OC. DOUBLE 2 x 4 STUDS SHALL BE NAILED TOGETHER AND MAY BE SPLICED w/ MIN. 8'-0"OVERLAP AT CENTER. INSTALL 1/2" CDX OR OSB STRUCTURAL SHEATHING ON WALL.

BALLOON FRAME WALL w/ 2x6 STUDS @ 12" OC. INSTALL 1/2" CDX OR OSB STRUCTURAL SHEATHING ON WALL.

ATTACH HEADER
TO VALLEY w/(2)
3/8"ϕ LAG SCREWS
AT EACH END.

4x4 TRT'D POST (OR EQUIVALENT) ATTACH RAFTERS AT PORCH WITH HURRICANE CONNECTORS (SIMPSON H2.5 OR EQUIV.) ATTACH HEADER TO POST AND POST TO BASE WITH POST CAP AND/OR BASE

FOR STIFFER FLOOR,
SPACE JOISTS AT 12" OC
OR USE SYP #2 LUMBER.

NOTE: TO ENSURE PLUMB WALL ALIGNMENT, DO NOT PERMANENTLY ATTACH RAFTERS TO WALL UNTIL ROOF SHEATHING HAS BEEN ATTACHED. PROVIDE TEMPORARY RAFTER ATTACHMENT AND WALL BRACING AS REQUIRED.

ADJUST GARAGE SLAB
ELEVATION AS NECESSARY
TO PROVIDE HEAD
CLEARANCE AT BEAM.

STRUCTURAL NOTES

1) ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3) DESIGN LOADS (R301.4)

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH PERMANENT STAIR	40	10	L/360
ATTIC WITH OUT PERMANENT STAIR	20	10	L/360
ATTIC WITH OUT STORAGE	10	10	L/240
STAIRS	40	--	L/360
EXTERIOR BALCONIES	60	10	L/360
DECKS	40	10	L/360
GUARDRAILS AND HANDRAILS	200	--	----
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
SNOW	20	--	----

WIND LOAD (BASED ON 100 MPH WIND VELOCITY & EXPOSURE B)

4) WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION
THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE
THE LENGTH OF BRACED PANELS SHALL BE DETERMINED BY SECTION
LATERAL BRACING SHALL BE SATISFIED PER METHOD 3 BY CONTINUOUSLY SHEATHING WALLS WITH STRUCTURAL SHEATHING PER SECTION
NOTE THAT ANY SPECIFIC BRACED WALL DETAIL SHALL BE INSTALLED AS SPECIFIED.

5) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.

6) ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTUAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAINSURFACE WATER AWAY FROM FOUNDATION WALLS.

7) ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP #2 (Fb=975 PSI). PLATE MATERIAL MAY BE SPF #3 OR SYP #3 ($F_{c\perp}$ = 425 PSI - MIN.).

8) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO).

9) LVL SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10^6 PSI.
PSL SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10^6 PSI.
LSL SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10^6 PSI.
INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

10) ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.

11) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. .
ALL STEEL TUBING SHALL BE ASTM A500.

12) REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60.

13) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

14) BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).

15) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF.

16) THE POSITIVE AND NEGATIVE DESIGN PRESSURES REQUIRED FOR ANY ROOF OR WALL CLADDING APPLICATION NOT SPECIFICALLY ADDRESSED IN THE STATE RESIDENTIAL CODE - EDITION SHALL BE AS FOLLOWS:

ROOF:
45.4 PSF - 2.25:12 PITCH OR LESS
34.8 PSF - 2.25:12 TO 7:12 PITCH
21 PSF - 7:12 TO 12:12 PITCH

WALLS:
24.1 PSF - WALLS

STRUCTURAL NOTES

1) ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM AND FOOTINGS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE STATE RESIDENTIAL CODE - EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3) DESIGN LOADS (R301.4)

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH PERMANENT STAIR	40	10	L/360
ATTIC WITH OUT PERMANENT STAIR	20	10	L/360
ATTIC WITH OUT STORAGE	10	10	L/240
STAIRS	40	--	L/360
EXTERIOR BALCONIES	60	10	L/360
DECKS	40	10	L/360
GUARDRAILS AND HANDRAILS	200	--	----
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
SNOW	20	--	----

WIND LOAD (BASED ON 100 MPH WIND VELOCITY & EXPOSURE B)

4) WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION
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5) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.

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9) L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10^6 PSI.
P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10^6 PSI.
L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10^6 PSI.
INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

10) ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.

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ALL STEEL TUBING SHALL BE ASTM A500.

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- 34.8 PSF - 2.25:12 TO 7:12 PITCH
- 21 PSF - 7:12 TO 12:12 PITCH

WALLS:
- 24.1 PSF - WALLS

STRUCTURAL NOTES

1) ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE STATE RESIDENTIAL CODE - EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK: NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

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	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH STORAGE	20	10	L/240
ATTIC WITH OUT STORAGE	10	10	L/360
STAIRS	40	--	L/360
EXTERIOR BALCONIES	60	10	L/360
DECKS	40	10	L/360
GUARDRAILS AND HANDRAILS	200	--	----
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
SNOW	20	--	----

WIND LOAD (BASED ON 100 MPH WIND VELOCITY & EXPOSURE B)

4) WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION
THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE
THE LENGTH OF BRACED PANELS SHALL BE DETERMINED BY SECTION
LATERAL BRACING SHALL BE SATISFIED PER METHOD 3 BY CONTINUOUSLY SHEATHING WALLS WITH STRUCTURAL SHEATHING PER TABLE R602.3.
NOTE THAT ANY SPECIFIC BRACED WALL DETAIL SHALL BE INSTALLED AS SPECIFIED.

5) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2

6) ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO).

7) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO).

8) L.V.L. SHALL BE LAMINATED VENEER LUMBER OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING PROPERTIES: Fb = 2800 PSI, Fv = 285 PSI, E = 1,900,000 PSI.
INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

9) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. .

10) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

11) BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).

12) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF.

13) THE POSITIVE AND NEGATIVE DESIGN PRESSURES REQUIRED FOR ANY ROOF OR WALL CLADDING APPLICATION NOT SPECIFICALLY ADDRESSED IN THE STATE RESIDENTIAL CODE - EDITION SHALL BE AS FOLLOWS:

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34.8 PSF - 2.25:12 TO 7:12 PITCH
21 PSF - 7:12 TO 12:12 PITCH

WALLS:
24.1 PSF - WALLS

STRUCTURAL NOTES

1) ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE - 2003 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3) DESIGN LOADS (R301.4)

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH PERMANENT STAIR	40	10	L/360
ATTIC WITH OUT PERMANENT STAIR	20	10	L/360
ATTIC WITH OUT STORAGE	10	10	L/240
STAIRS	40	--	L/360
EXTERIOR BALCONIES	60	10	L/360
DECKS	40	10	L/360
GUARDRAILS AND HANDRAILS	200	--	----
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
SNOW	20	--	----

WIND LOAD (BASED ON 100 MPH WIND VELOCITY & EXPOSURE B)

4) WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION R602.10.3.
THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE R602.10.1.
THE LENGTH OF BRACED PANELS SHALL BE DETERMINED BY SECTION R602.10.4.

5) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.

6) ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTUAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAINSURFACE WATER AWAY FROM FOUNDATION WALLS.

7) ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2 (Fb=975 PSI). PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (Fc(perp) = 425 PSI - MIN).

8) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO).

9) L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10^6 PSI.
P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10^6 PSI.
L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10^6 PSI.
INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

10) ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.

11) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. .
ALL STEEL TUBING SHALL BE ASTM A500.

12) REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60.

13) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

14) BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).

15) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF.

16) THE POSITIVE AND NEGATIVE DESIGN PRESSURES REQUIRED FOR ANY ROOF OR WALL CLADDING APPLICATION NOT SPECIFICALLY ADDRESSED IN THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2006 EDITION SHALL BE AS FOLLOWS:

ROOF:
45.4 PSF - 2.25:12 PITCH OR LESS
34.8 PSF - 2.25:12 TO 7:12 PITCH
21 PSF - 7:12 TO 12:12 PITCH

WALLS:
24.1 PSF - WALLS

ATTACH DOUBLE STUD POCKETS TO TOP AND BOTTOM PLATES WITH SIMPSON DSP - STUD PLATE TIES.

ATTACH DOUBLE STUD POCKETS TO TOP AND BOTTOM PLATES WITH SIMPSON DSP - STUD PLATE TIES.

SHEATH OUTER AND INNER FACE
OF ENTIRE GARAGE ENTRY WALL WITH
MINIMUM 3/8" OSB OR CDX PLYWOOD.

NOTE 1:
ADJUST WINDOW/DOOR LAYOUT TO PROVIDE
PLGTH LONG PANEL AT THESE LOCATIONS.
PANEL LENGTH MAY BE REDUCED TO
RLGTH , PROVIDED 3/8" OSB IS APPLIED
TO INSIDE AND OUTSIDE OF WALL.

SHEATH OUTER AND INNER
FACE OF ENTIRE WALL w/ MIN.
3/8" OSB OR CDX PLYWOOD.

INSTALL 2X4 COLLAR TIES AT 32" O.C. (MAX) DIRECTLY BELOW THE RIDGE OR FASTEN EVERY OTHER RAFTER TO THE RIDGE WITH A SIMPSON L50.

ROOF FRAMING NOTES:

(100 MPH WIND ZONE)

① ALL RAFTERS TO BE 2x8 @ 16" O.C. WITH 2x10 RIDGE, UNO.

② (2) 2x10 OR 1.75x11.875 LVL HIP. (2) 2x10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP AT CENTER

③ (2) 2x10 OR 1.75x9.25 LVL VALLEY. DO NOT SPLICE VALLEYS

④ 1.75x11.875 LVL VALLEY

⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE

⑥ 2x6 RAFTERS @ 16" O.C. W/ 2x8 RIDGE, UNO.

⑦ 2x10 RAFTERS @ 16" O.C. W/ 2x12 RIDGE, UNO.

⑧ EXTEND RIDGE 12" BEYOND INTERSECTION

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "■" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-5" OR EQUIVALENT

ATTIC VENTILATION REQUIREMENT

CSQFT SQ.FT. OF CEILING / 150 =

ASQFT SQ.FT. OF ATTIC VENT REQUIRED.

DOUBLE ROOF TRUSS
TO SUPPORT BRICK
VENEER. INSTALL PER
SECTION

WOOD "I" JOISTS SHALL BE
ONE OF THE FOLLOWING:

** TJI 210 BY TJM
** LPI 20 PLUS BY LP
** WI-40 BY GP

* ALL WOOD "I" JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

WOOD "I" JOISTS SHALL BE
ONE OF THE FOLLOWING:

** TJI 230 BY TJM
** LPI 32 PLUS BY LP
** WI-60 BY GP

* ALL WOOD "I" JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

ENGINEERED FLOOR SYSTEM:

11 7/8" WOOD I - JOISTS
AT 19.2 OC (U.N.O)

USE ONE OF THE FOLLOWING:

** TJI 230 BY TJM
** AJS-20 BY BC
**BFI-40x BY BFS

16" I-JOIST SHALL BE:

** TJI 230 BY TJM
** AJS-20 BY BC
** BFI-60 BY BFS

(SEE PLAN FOR SPACING)

INSTALL JOISTS ACCORDING
TO MANUFACTURER'S SPECIFICATIONS

ENGINEERED FLOOR SYSTEM:

11 7/8" WOOD I - JOISTS
AT 19.2 OC (U.N.O)
USE ONE OF THE FOLLOWING:

** TJI 230 BY TJM

** WI-40 BY GP

INSTALL JOISTS ACCORDING
TO MANUFACTURER'S SPECIFICATIONS

CHIMNEY TO HAVE CONTINUOUS
BEARING TO FOUNDATION. CONSTRUCT
CHASE WITH 2x4 STUDS @ 12" OC, WITH (2)
STUDS AT EACH CORNER (STAGGER
STUD SPLICES). WRAP CHASES WITH 1/2"
STRUCTURAL SHEATHING (ABOVE ROOF).
BOLT LINTEL 6x4x5/16" TO STUD WITH (2)
ROWS OF 3/8" DIA. x 3" LONG LAG SCREWS

STEP LINTEL 3½" x 3½" x ¼" ON A
DOUBLE RAFTER. ATTACH DOUBLE
RAFTER TO WALL STUDS W/ (2) ROWS OF
3/8"dia. x 6" LONG LAG SCREWS @ 16" O.C.

STEP LINTEL 6"x4"x5/16"
BOLTED TO EACH WALL STUD w/
(2) ROWS OF 3/8"ϕ x 3" LONG
LAG SCREWS @ 16" O.C.

WITH LINTEL 6"x4"x5/16".
ATTACH LINTEL TO LVL WITH
1/2" DIA. BOLTS @ 16" OC.

NOTE: NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. COLUMNS CONISTING OF (7) OR MORE STUDS SHALL BE FASTENED WITH EITHER ½" DIAM. BOLTS 24" O.C. OR WRAPPED WITH 22-GAUGE METAL STRAPS AT 24" O.C.

STRUCTURAL DESIGN BY:

PROJECT # 9-

- Engineers seal applies only to structural components on this document. Seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.
- Any deviations or discrepancies on plans are to be brought to the immediate attention of Failure to do so will void liability
- Seal is valid for a project permitted one year from date of seal.
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