

GOVERNING CODE	2017 PIKES PEAK REGIONAL BUILDING (2015 IBC)
SEISMIC	CATEGORY= B I = 1.00 R = 6.5 RISK = II
ULT. WIND SPEED (3-SECOND GUST)	130MPH EXPOSURE C
ROOF LOADS	DEAD 20 PSF SNOW 40 PSF
FLOOR LOADS	DEFLECTION LL=L/360 TL=L/240
DECK LOADS	DEAD 12 PSF LIVE 40 PSF
MAX. SOIL BEARING PRESSURE	1500 PSF
EQUIVALENT FLUID PRESSURE	45 PCF
NOTE: THIS ENGINEERING DESIGN ASSUMES THE LOADS AND CRITERIA LISTED ABOVE. CONTRACTOR SHALL REVIEW THE LOADS & GEOTECHNICAL REPORT AND CONTACT YORK ENGINEERING PRIOR TO CONSTRUCTION IF ANY ADJUSTMENTS ARE REQUIRED. THE LOADS ABOVE ASSUME NO RADIANT HEAT FLOORING. FOUNDATION DESIGN IS IN ACCORDANCE WITH GEOQUEST, LLC SUBSURFACE INVESTIGATION FOUNDATION RECOMMENDATIONS, PROJECT NUMBER 20-0397, DATED MAY, 19, 2020. DESIGN IS SUBJECT TO REVISION BASED ON RESULTS OF OPEN HOLE OBSERVATION.	

FOOTING, FOUNDATION AND CONCRETE

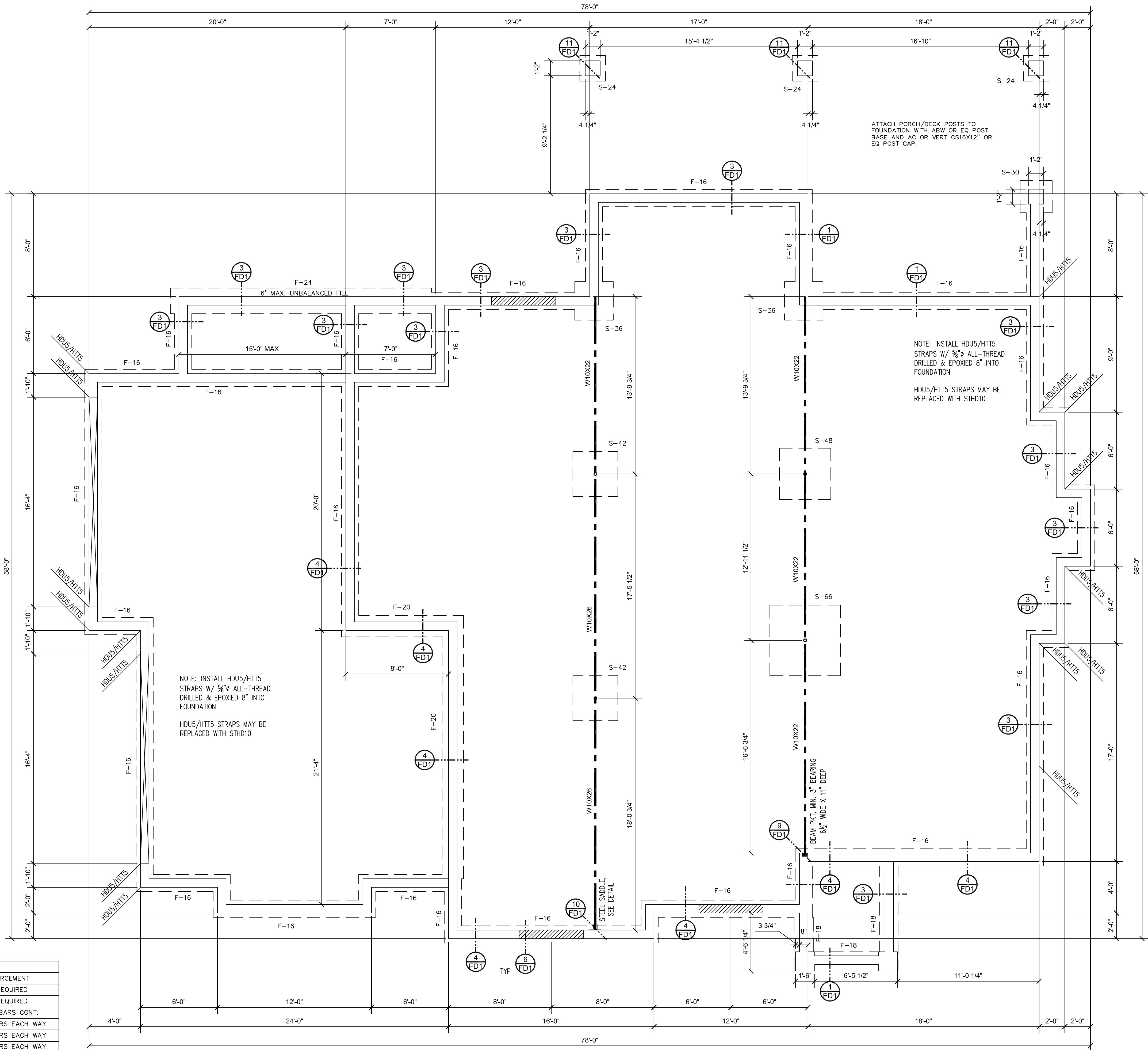
1. FOOTING DESIGN IS BASED ON ALLOWABLE SOIL BEARING PRESSURE AS PER GEOTECHNICAL REPORT, SEE PLAN. IF A PROJECT SOILS REPORT HAS BEEN COMPLETED, FOLLOW ALL REPORT RECOMMENDATIONS. FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR GRANULAR FILL COMPACTED TO 95% OF MAXIMUM DENSITY. NO FOOTINGS SHALL BE PLACED IN WATER OR ON FROZEN GROUND. ALL FOOTINGS TO BE PLACED AT MIN. BELOW LOCAL FROST DEPTH, AND BE CONTINUOUS AND MONOLITHIC POUR.
2. CHANGES IN ELEV. SHALL BE STEPPED WITH STEP HEIGHT NOT HIGHER THAN 1/2 THE STEP LENGTH AND NOT GREATER THAN 5'. NOTIFY ENGINEER IF GRADE DROPS OVER 8' IN 24' (GREATER THAN 1/3 SLOPE) SO THAT APPROPRIATE DESIGN CHANGES MAY BE MADE TO FOUNDATION AND FOOTINGS.
3. ALL FOOTINGS, FOUNDATIONS, AND INTERIOR SLABS SHALL BE NORMAL WT. CONCRETE WITH A COMPRESSIVE STRENGTH OF 2,500 PSI MIN. U.N.O. TO MEET STRENGTH REQUIREMENTS (SEE CALCS., NO SPECIAL INSPECTIONS REQUIRED U.N.O., SEE PLAN) HOWEVER, PER IRC 402.2 USE 3000 PSI CONCRETE FOR DURABILITY PURPOSES. THE WATER/CEMENT RATIO SHALL BE NO GREATER THAN .50 WITH A MINIMUM CEMENT CONTENT OF 504 LBS. PER CUBIC YARD.
4. ALL CONC. WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS REQUIRED BY ACI STANDARDS AND PRACTICES.
5. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318. REINFORCEMENT SHALL BE FREE FROM MUD AND OIL AND OTHER NON-METALLIC COATINGS THAT HAMPER BONDING CAPACITY.
6. OWNER\CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS LISTED ON THE DRAWING. VERIFICATION OF ALL SITE CONDITIONS INCLUDING SITE STABILITY IS THE RESPONSIBILITY OF OTHERS
7. ALLOW 14 DAYS FOR CONCRETE TO CURE PRIOR TO BACKFILL.
8. STRUCTURAL CONCRETE EXPOSED TO FREEZE THAW CYCLES SHALL HAVE 5% AIR ENTRAINMENT, MIN.
9. RUN FOOTINGS CONTINUOUS UNDER ALL DOOR OPENINGS, SEE PLAN.
10. SILL PLATE J-BOLTS SHALL BE A307 WITH 7" MIN. EMBEDMENT IN CONCRETE U.N.O., SEE PLAN.
11. TITEN HD BOLTS OR EPOXY THREADED RODS MAY BE USED AS SUBSTITUTION FOR SILL PLATE J-BOLTS AT SAME SIZE AND SPACING AS J-BOLTS. USE 6" TITEN HD OR WEDGE ANCHOR WITH MIN 1" EDGE DISTANCE FOR SINGLE SILL PLATE AND 8" BOLTS FOR DBL PLATE.
12. ALL FOUNDATION HOLDOWN STRAPS/ANCHORS SHALL BE ALIGNED WITH END OF SHEAR WALL ABOVE AND SHALL ATTACH TO FULL HEIGHT KING STUDS U.N.O., SEE PLAN. PROVIDE WOOD POST AT EACH HOLDOWN PER THE HOLDOWN SCHEDULE. DIMENSIONS TO HOLDOWN LOCATIONS MUST BE FIELD VERIFIED.
13. FOOTINGS TO BE CENTERED ON WALLS AND COLUMNS/POSTS U.N.O., SEE PLAN.
14. USE SIMPSON SET EPOXY FOR CONCRETE ANCHORS U.N.O., SEE PLAN. CONTINUOUS SPECIAL INSPECTIONS REQUIRED ON ALL EPOXY OPERATIONS UNLESS WAIVED BY ENGINEER AND THE BUILDING OFFICIAL.
15. LAP REBAR 48 BAR DIAMETERS U.N.O., SEE PLAN. REINFORCING IN SLABS ON GRADE MAY BE LAPPED 24". SPLICES IN BOTTOM STEEL IN CONCRETE BEAMS AND CAST IN PLACE SUSPENDED SLABS SHALL BE STAGGERED 48 BAR DIAMETERS.
16. LINTELS IN CONCRETE WALLS MAY BE AS FOLLOWS U.N.O., SEE PLAN; FOR 3'-0" MAX SPAN, 8" DEEP WITH (2) #4 BOTT. BARS, FOR 6'-0" MAX SPAN, 12" DEEP WITH (2) #4 BOTT. BARS.
17. PROVIDE (2) EDGE BARS ABOVE CONCRETE WALL OPENINGS AND (1) BAR EACH SIDE AND BELOW OPENINGS U.N.O., SEE PLAN. MATCH SIZE OF EDGE BARS WITH TYPICAL WALL REINFORCING AND PLACE WITHIN 4" OF OPENING EDGE. EXTEND BARS 48 BAR DIAMETERS PAST EDGE OF OPENING OR EXTEND AS FAR AS POSSIBLE AND PROVIDE 90° STANDARD HOOK AT END.
18. PROVIDE HORIZONTAL BAR WITHIN 3" OF TOP AND BOTT. OF WALL AND PROVIDE VERTICAL BAR AT ALL WALL CORNERS AND ENDS.

YORK ENGINEERING INC. SPECIFICATIONS IS LIMITED TO THE STRUCTURAL DESIGN OF THE MAIN SUPPORTING ELEMENTS OF THIS STRUCTURE. NO OTHER DISCIPLINES OF THIS STRUCTURE INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, PLUMBING, MECHANICAL WERE NOT REVIEWED FOR CODE COMPLIANCE OR COMPATIBILITY WITH THE DESIGN. THE PURPOSE OF THIS ENGINEERING IS TO HELP REDUCE STRUCTURAL DAMAGE AND LOSS OF LIFE DUE TO SEISMIC ACTIVITY AND/OR HIGH WIND CONDITIONS.

NOTE: THIS ENGINEERING ASSUMES THAT THE CLEARANCE & SETBACK REQUIREMENTS LISTED IN IRC SECTION R403.1.7 ARE MET. IF THESE PROVISIONS ARE NOT MET, CONTACT THE ENGINEER FOR FURTHER DESIGN.

NOTE: THIS ENGINEERING ASSUMES THAT THE SITE IS STABLE HAVING NO GLOBAL STABILITY CONCERNS OR HAZARDS. IF THIS IS NOT TRUE, CONTACT SOILS ENGINEER AND PROVIDE SOILS/SLOPE STABILITY REPORT TO YORK ENGINEERING FOR REVIEW AND FURTHER DESIGN.

FOOTING SCHEDULE:				
TYPE	WIDTH	LENGTH	THICK	REINFORCEMENT
F-16	16"	CONT.	8"	NOT REQUIRED
F-18	18"	CONT.	8"	NOT REQUIRED
F-20	20"	CONT.	8"	(2) # 4 BARS CONT.
S-24	24"	24"	10"	(3) # 4 BARS EACH WAY
S-30	30"	30"	10"	(3) # 4 BARS EACH WAY
S-36	36"	36"	10"	(4) # 4 BARS EACH WAY
S-42	42"	42"	12"	(5) # 4 BARS EACH WAY
S-48	48"	48"	12"	(6) # 4 BARS EACH WAY
S-66	66"	66"	12"	(8) # 4 BARS EACH WAY
NOTE: FOOTING REINFORCEMENT IN THIS SCHEDULE AND NOTED ON PLANS IS BOTTOM REINFORCING U.N.O. AND SHALL BE PLACED IN BOTTOM 1/2 OF FOOTING THICKNESS, WITH 3" CONCRETE CLEAR COVER, MIN.				



# FOOTING/FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

Released for Permit  
11/19/2020 9:15 AM  
CONSTRUCTION



GJ GARDNER HOMES – MONUMENT  
LACHAT RESIDENCE  
19089 MALMSBURY COURT  
MONUMENT, CO

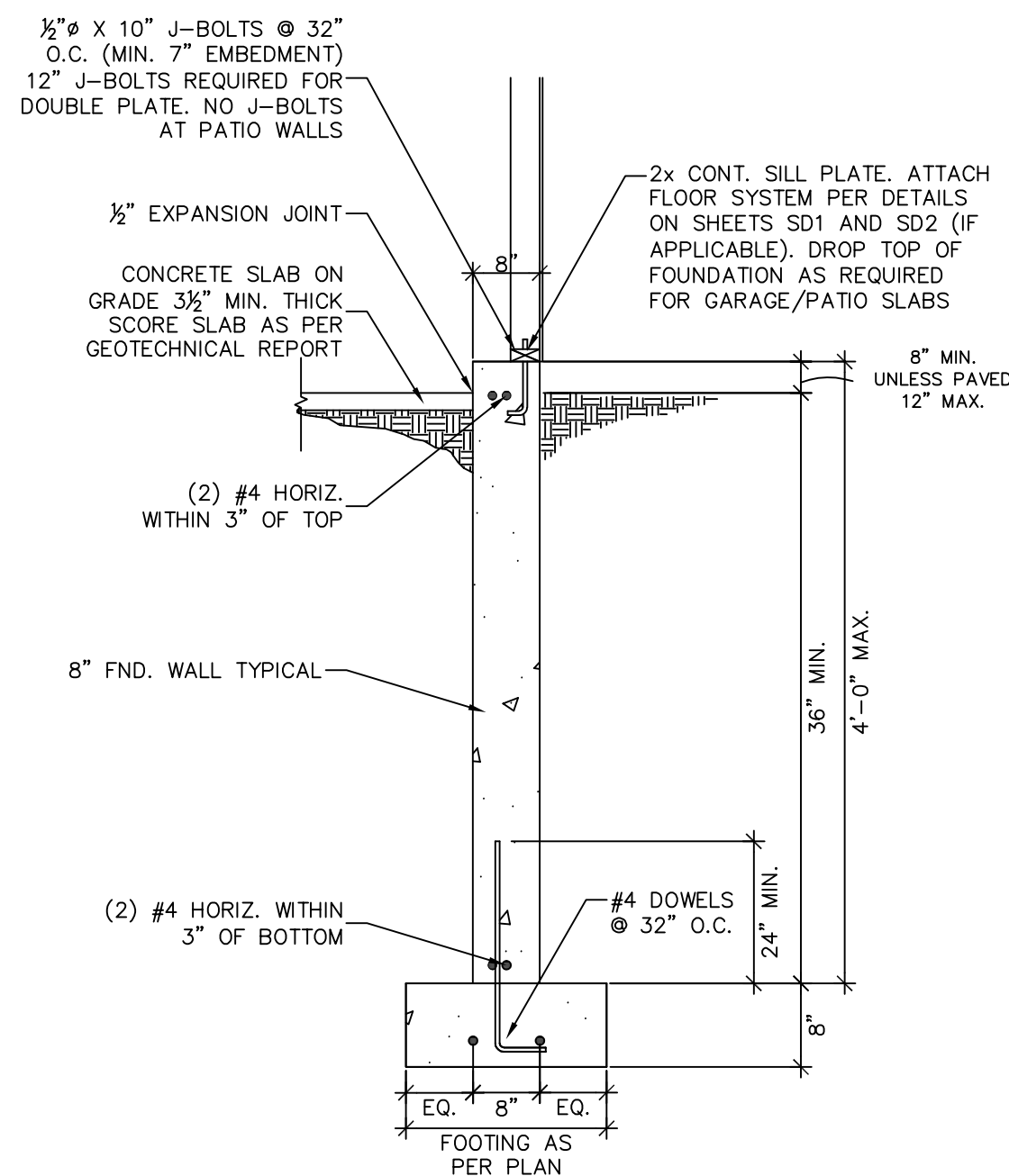
York Engineering

Structural Design and Analysis  
7955 E Arapahoe Ct  
Centennial, Colorado 80112  
(720) 990-5900

S1

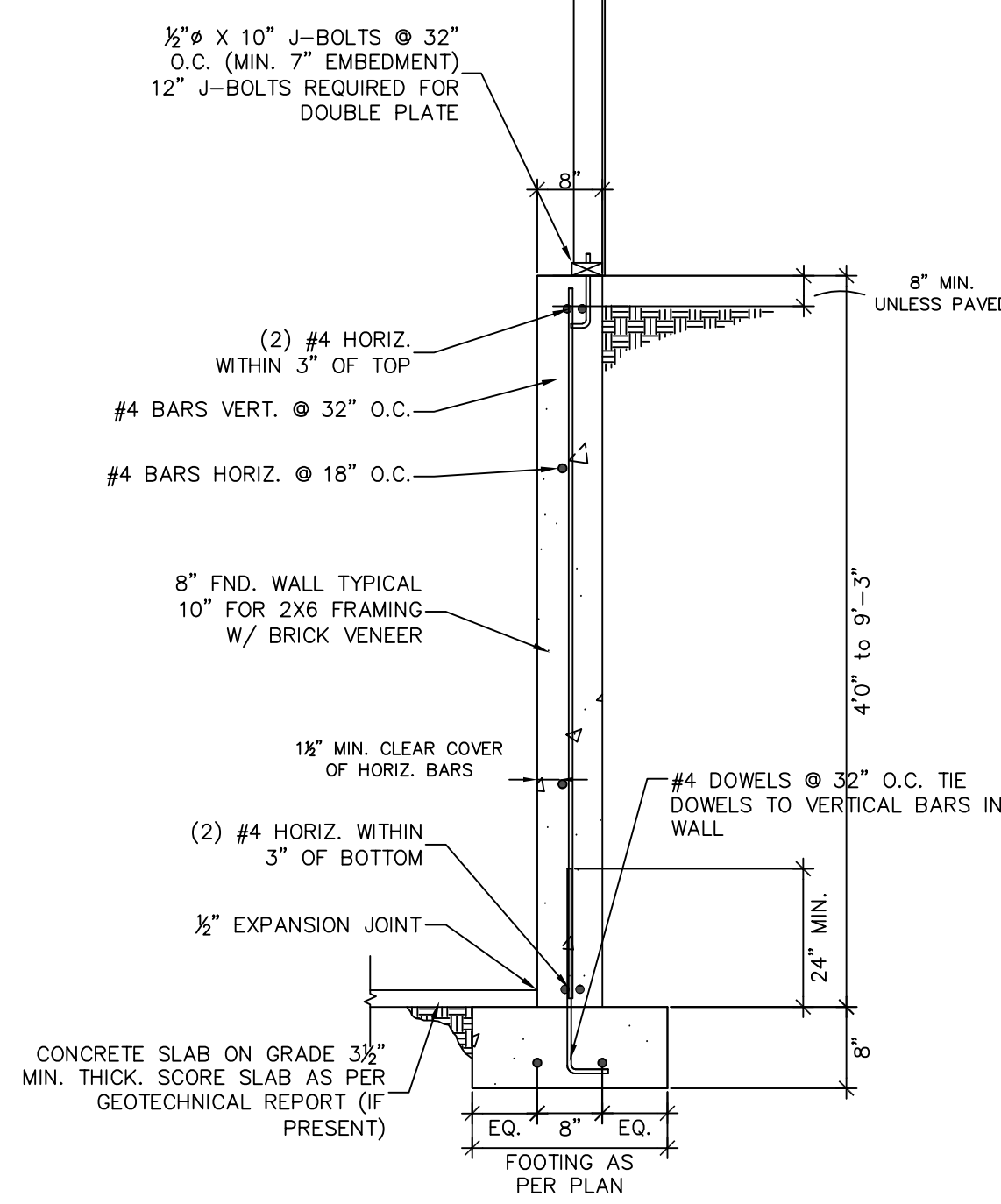


NOTE: WALL MUST BE BACKFILLED ON BOTH SIDES ONLY



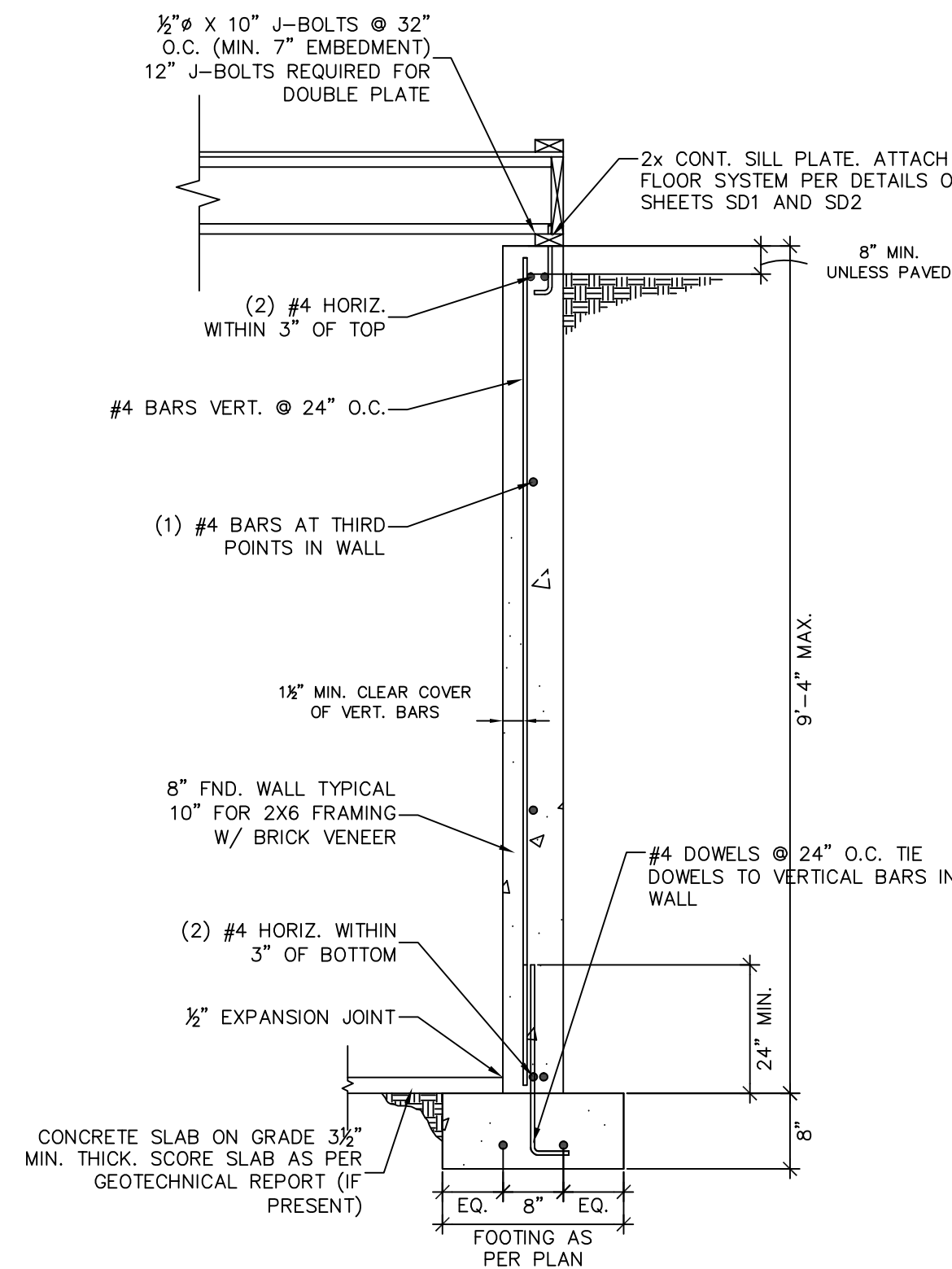
1 4' FOUNDATION WALL BACKFILLED  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES

NOTE: ALL FOUNDATION STEPS SHALL BE 2'0" MINIMUM.



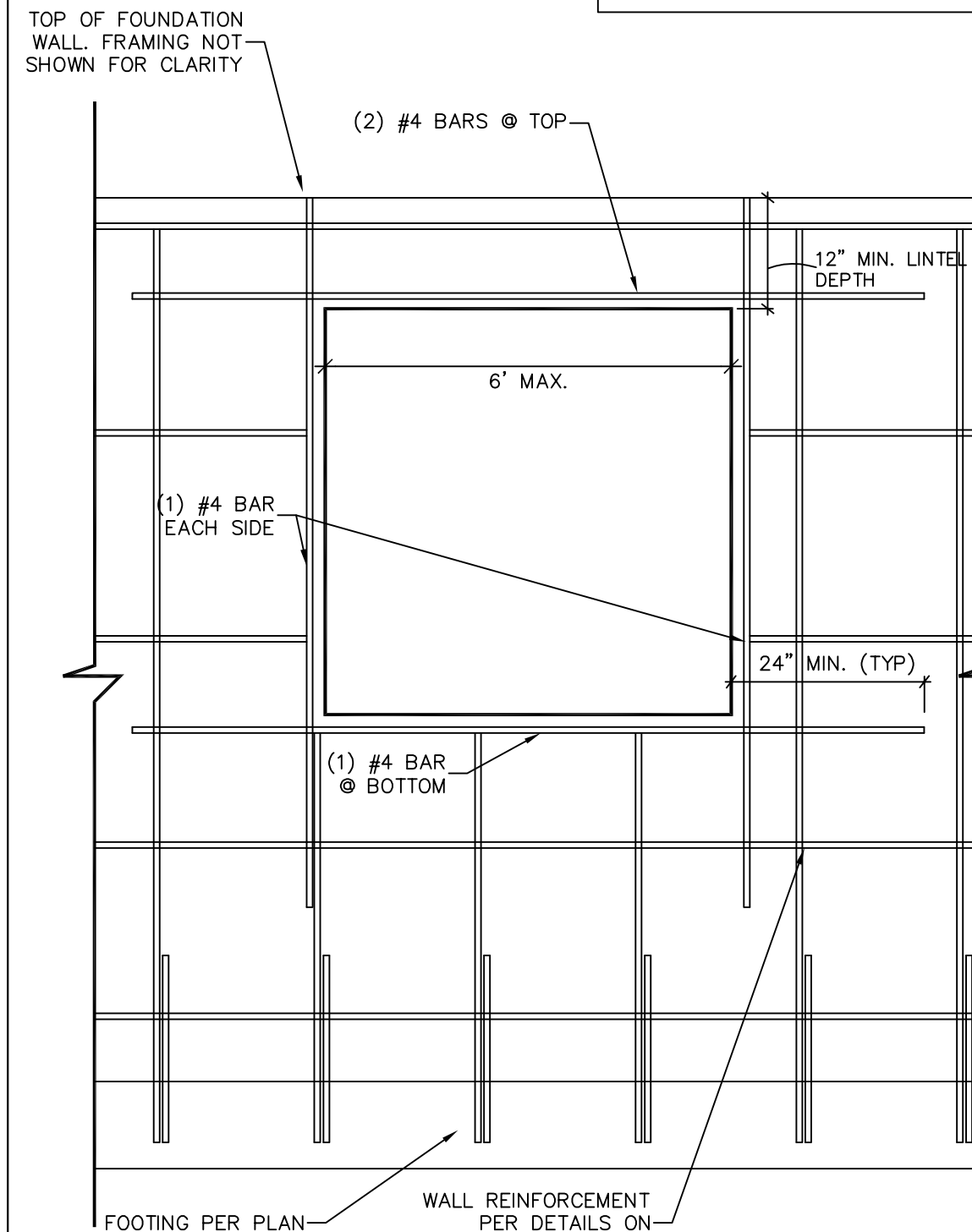
3 STEPPED FOUNDATION WALL  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES

NOTE: ALL FOUNDATION STEPS SHALL BE 2'0" MINIMUM.

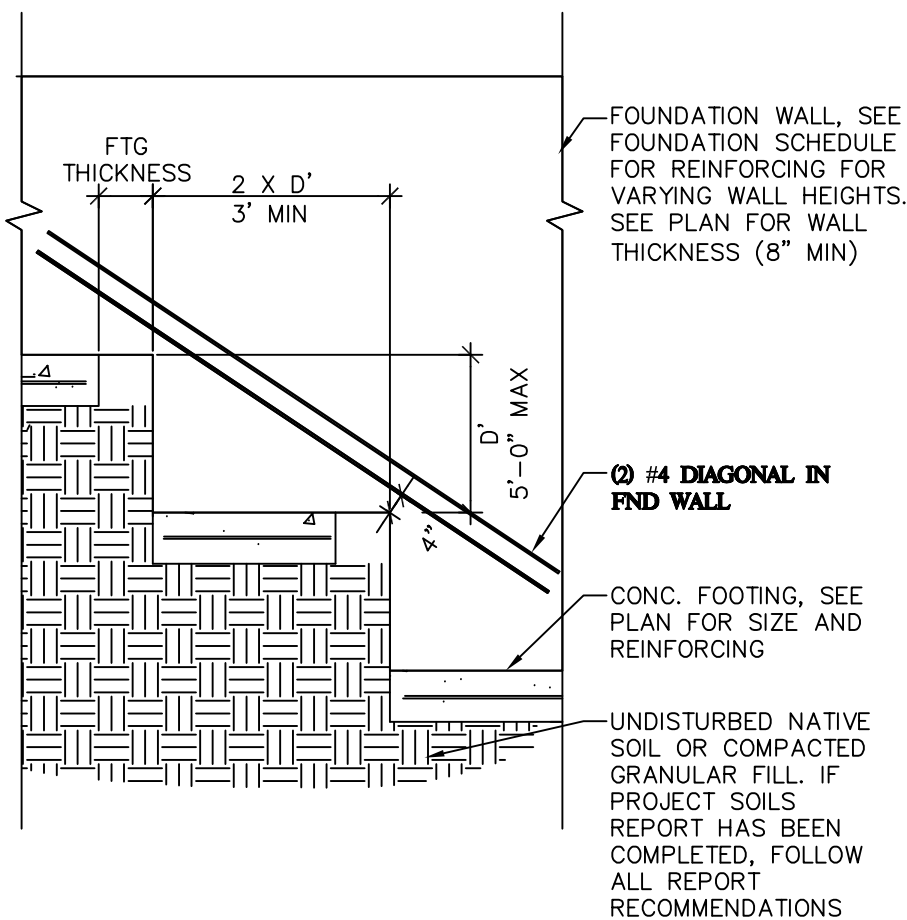


4 FULL-HEIGHT FOUNDATION WALL  
NTS  
USE ONLY IF CALLED OUT ON PLANS

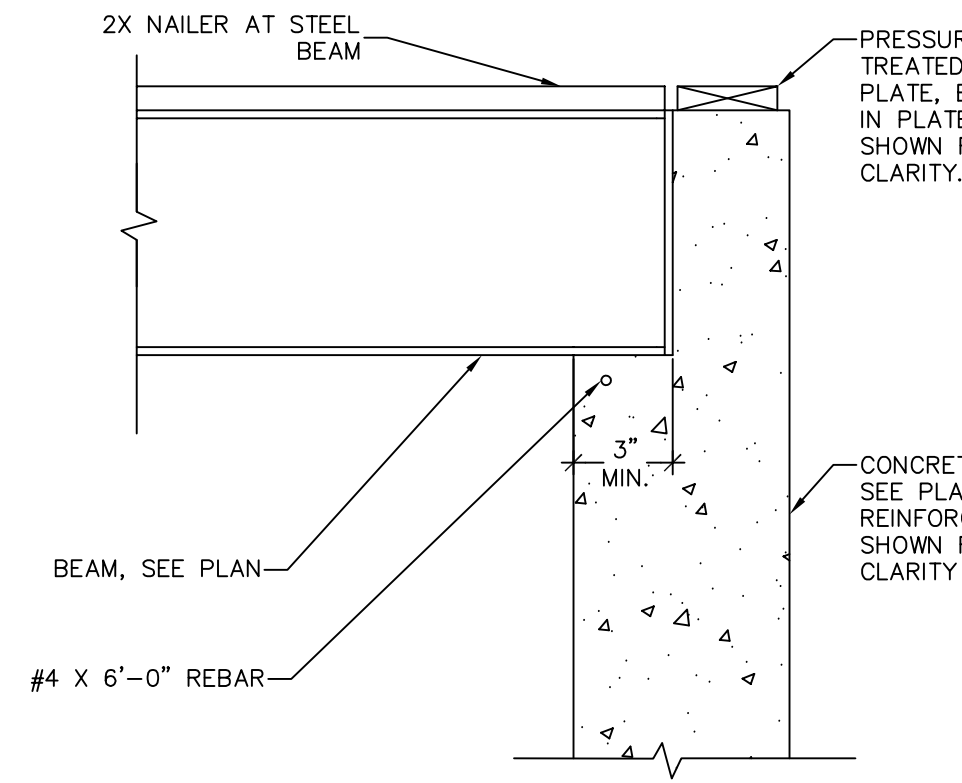
NOTE: BARS SHALL BE PLACED WITHIN 2" OF THE OPENING AND EXTEND 24" BEYOND THE EDGE OF THE OPENING



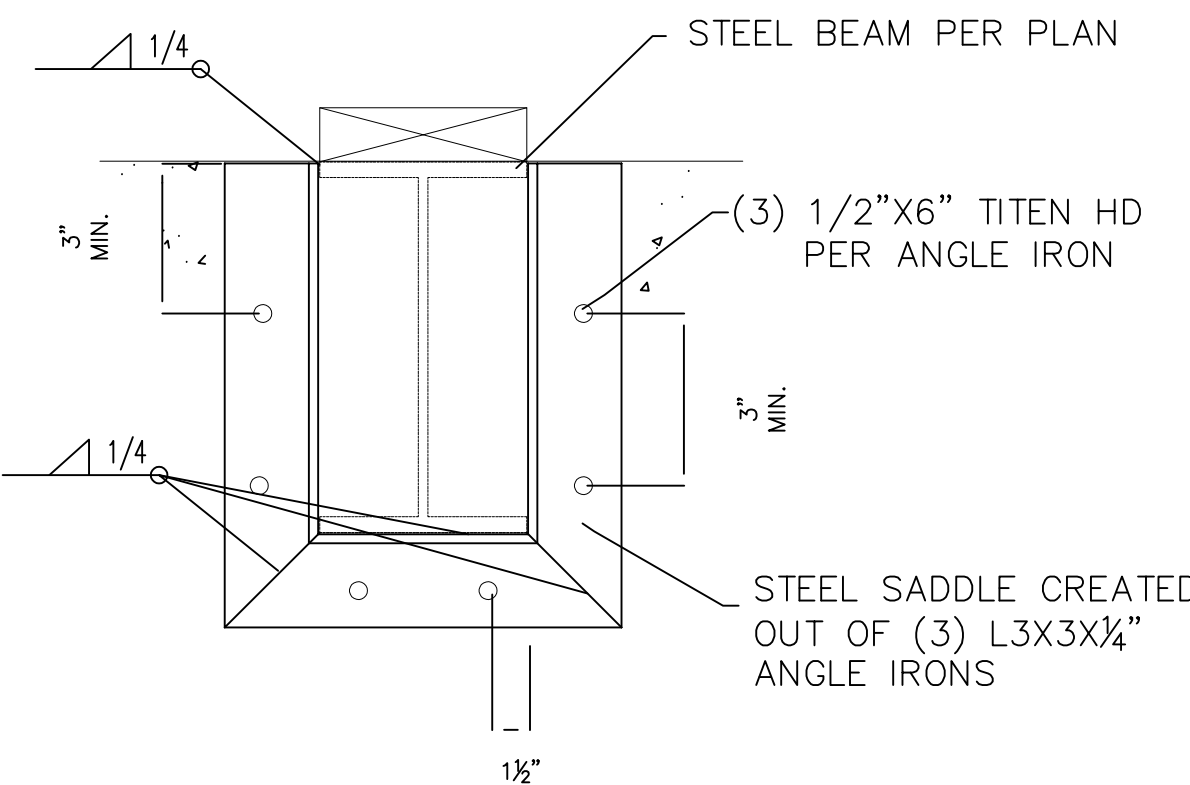
6 REINFORCEMENT AROUND OPENINGS  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES



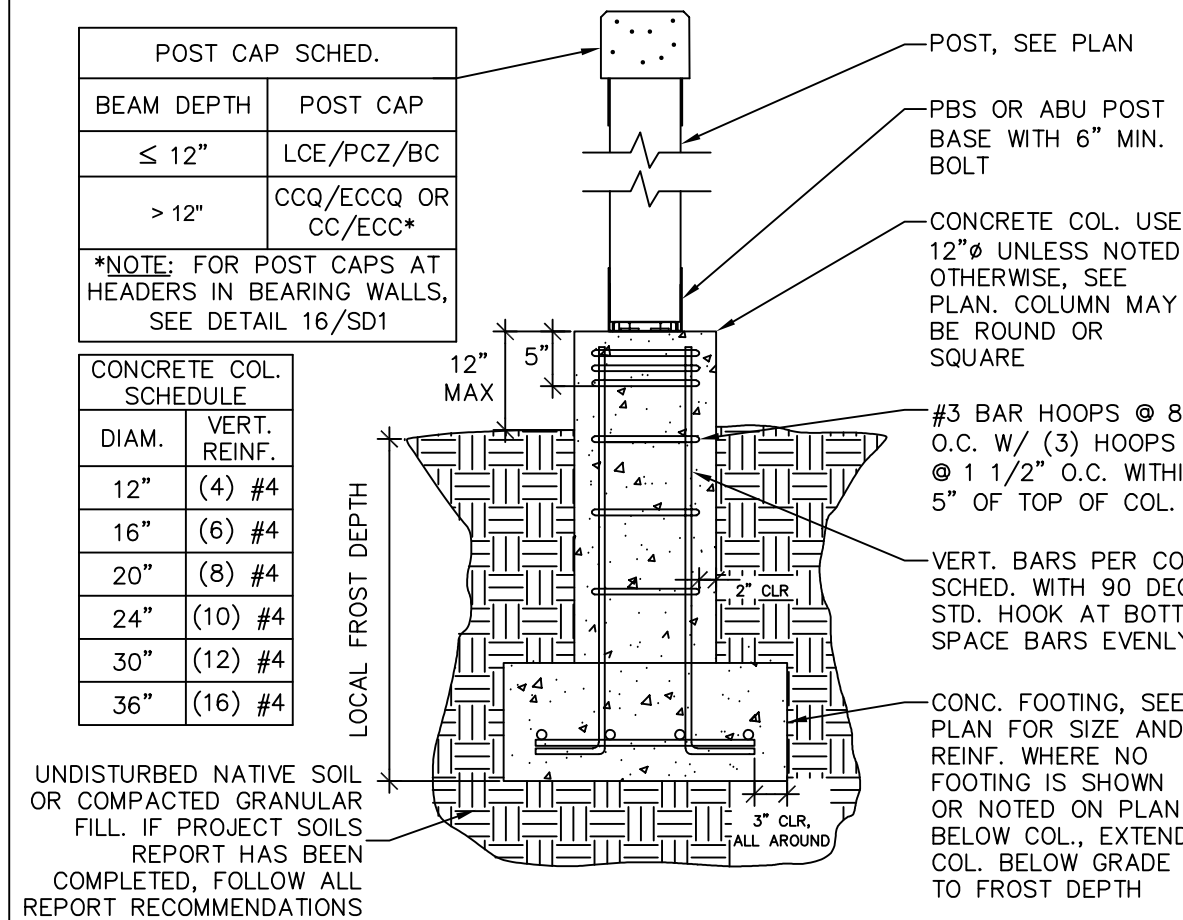
7 FOOTING STEP  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES



9 BEAM POCKET IN CONCRETE WALL  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES



10 STEEL BEAM SADDLE  
NTS



11 ISOLATED WOOD POST AT CONCRETE COLUMN  
NTS  
TYPICAL DETAIL, USE WHEN APPLIES



S2



CONTRACTOR AND ALL SUB-CONTRACTORS SHALL FOLLOW ALL STANDARD BUILDING CODES, PRACTICES, AND REQUIREMENTS AS LISTED IN THE IRC. CONTRACTOR TO VERIFY ALL DIMENSIONS, SPANS, & CONDITIONS AND NOTIFY ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES PRIOR TO CONSTRUCTION. IF DISCREPANCIES ARE FOUND, THE MORE STRINGENT SPECIFICATION SHALL BE FOLLOWED. DIMENSIONS SHOWN ARE BASED ON ARCHITECTURAL DRAWINGS PROVIDED TO YORK ENGINEERING. IF DISCREPANCIES EXIST, DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS SHALL BE FOLLOWED. CONTRACTOR SHALL ASSURE THAT ALL MATERIALS ARE USED PER MANUFACTURER RECOMMENDATIONS.

#### SHEATHING NOTES

1. STAGGER ROOF AND FLOOR SHEATHING JOINTS. SEE ROOF SHEATHING LAYOUT DETAIL.
2. INSTALL ROOF AND FLOOR SHEATHING WITH LONG DIMENSION PERPENDICULAR TO TRUSSES/JOISTS U.N.O., SEE PLAN. SHEATHING INSTALLED WITH LONG DIMENSION PARALLEL TO JOISTS/TRUSSES SHALL BE 5 PLY PLYWOOD CONFORMING TO APA STANDARD PS-1.
3. NAILS SHALL BE 1/2" MIN FROM SHEATHING EDGE.
4. ALL FLOOR AND ROOF SHEATHING PIECES SHALL BE 48" X 48" MIN.
5. PROVIDE EDGE NAILING AT ALL SUPPORTED AND BLOCKED PANEL EDGES AND PER DETAILS.

**WALL SHEATHING:** 7/16" APA RATED 24/16 MIN. U.N.O., SEE PLAN. ALL EXTERIOR WALLS AND VERTICAL SURFACES SHALL BE SHEATHED WITH SHEATHING MANUFACTURED WITH EXTERIOR GLUE. SEE PLANS AND SHEAR WALL SCHEDULE FOR NAILING REQUIREMENTS.

**ROOF SHEATHING:** 7/16" APA RATED 24/16 MIN. WITH 8d NAILS AT 6" O.C. EDGE NAILING AND 12" O.C. FIELD NAILING FOR ROOF SNOW LOAD LESS THAN OR EQUAL TO 40 PSF. FOR ROOF SNOW LOAD GREATER THAN 40 PSF USE 5/8" APA RATED 40/20 MIN. WITH 10d NAILS AT 6" O.C. EDGE NAILING AND 12" O.C. FIELD NAILING U.N.O. SEE PLAN.

**FLOOR SHEATHING:** 3/4" T&G APA RATED 40/20 MIN. (48/24 WHEN FLOOR TRUSSES/JOISTS ARE AT 24" O.C.) WITH 8d NAILS AT 6" O.C. EDGE NAILING AND 12" O.C. FIELD NAILING U.N.O., SEE PLAN. GLUE SHEATHING TO JOISTS/TRUSSES WITH ADHESIVE CONFORMING TO APA SPECIFICATIONS.

#### EXTERIOR WALL SHEATHING NOTES

UNLESS NOTED OTHERWISE, SHEET ALL EXTERIOR WALLS WITH 7/8" OSB SHEETING. FASTEN TO STUDS WITH 8d NAILS @ 4" O.C. EDGE 12" O.C. FIELD OR 16g STAPLES AT HALF SPACING. BLOCK ALL PANEL EDGES

#### FRAMING NOTES

1. SILL PLATE J-BOLTS SHALL HAVE A 1" STANDARD WASHER AT EACH BOLT. IF SLOTTED WASHER IS USED, ADD CUT WASHER.
2. ALL FOUNDATION HOLDOWN STRAPS/ANCHORS SHALL BE ALIGNED WITH END OF SHEAR WALL AND/OR INTER LEVEL STRAP ABOVE (WHERE OCCURS) AND SHALL ATTACH TO FULL HEIGHT KING STUDS U.N.O., SEE PLAN. PROVIDE WOOD POST AT EACH HOLDOWN PER THE HOLDOWN SCHEDULE.
3. STRAPS CALLED OUT ON FLOOR AND FLOOR FRAMING PLANS ARE VERTICAL INTER LEVEL STRAPS AND SHALL BE CENTERED ON RIM BOARD AND ALIGNED WITH END OF SHEAR WALL ABOVE AND ATTACHED TO FULL HEIGHT KING STUDS UNLESS NOTED OR SHOWN OTHERWISE, SEE PLANS.
4. WALL DBL TOP PLATES SHALL BE 2X MIN. AND SHALL LAP 36" AT ALL SPLICES WITH (12) 16d NAILS STAGGERED EACH SIDE OF SPLICE U.N.O. SEE PLAN. WHERE PLATES DO NOT LAP, PROVIDE CS16X32" STRAP TO SPLICE PLATES. ALIGN WALL STUD WITH PLATE JOINTS.
5. PROVIDE DBL CANTILEVER FLOOR JOISTS BELOW (2) PLY (OR MORE) TRIMMERS/POSTS AND WHERE SHEAR WALL HOLDOWN STRAPS ARE INDICATED.
6. ATTACH (2) PLY HEADERS TOGETHER WITH (3) 16d AT 12" O.C. [(2) 16d OK FOR 2X6 HEADERS]. USE (3) 16d AT 12" O.C. EACH SIDE FOR (3) PLY HEADERS. USE (4) 16d AT (2) AND (3) PLY HEADERS WHEN HEADER HEIGHT IS GREATER THAN 11". ATTACH (4) PLY HEADERS TOGETHER WITH (2) 1/2" THROUGH BOLTS AT 16" O.C. OR (2) SDS 1/4" X 6" SCREWS AT 16" O.C. EACH SIDE OF HEADER U.N.O., SEE PLAN.
7. SEE BEARING WALL CONSTRUCTION TABLE FOR WALL FRAMING REQUIREMENTS.
8. NAIL STUDS OF INTERSECTING WALLS W/16d NAILS @ 6" O.C.
9. EDGE NAIL SHEATHING TO ALL DRAG MEMBERS.
10. WHEN CHIMNEY IS SUPPORTED BY ROOF/FLOOR FRAMING, TRUSS/JOIST MFR TO DESIGN TRUSSES/JOISTS TO SUPPORT CHIMNEY WEIGHT INCLUDING VENEER WHERE OCCURS. CHIMNEYS CANTILEVERING MORE THAN 4' ABOVE ROOF SHALL BE FRAMED WITH 2X6 @12" O.C., USE LSL 2X6 @ 12" O.C. FOR CHIMNEYS EXTENDING MORE THAN 8' ABOVE THE ROOF. CHIMNEYS EXTENDING MORE THAN 10' ABOVE THE ROOF SHALL BE LATERALLY BRACED (WITHIN 4' OF CHIMNEY TOP) TO THE ROOF FRAMING WITH CABLES OR RODS ANCHORED TO RESIST SEISMIC AND WIND LOADS. CHIMNEYS THAT EXTEND MORE THAN 6' ABOVE THE ROOF AND ARE SUPPORTED BY ROOF FRAMING (FRAMING DOES NOT EXTEND CONTINUOUS THROUGH ROOF) SHALL HAVE A MSTC48B3 ANCHOR AT EACH CORNER (HOOKED UNDER ROOF JOIST OR TRUSS TOP CHORD).
11. ATTACH STEEL BEAMS TO WOOD POSTS PER BEAM POCKET IN WOOD WALL DETAIL.
12. ALL HARDWARE SHOWN ON PLANS TO BE AS SPECIFIED OR EQUIVALENT

#### PREFABRICATED ENGINEERED TRUSSES

TRUSS LAYOUT AND CALCULATIONS TO BE SUBMITTED TO YORK ENGINEERING FOR REVIEW PRIOR TO CONSTRUCTION.

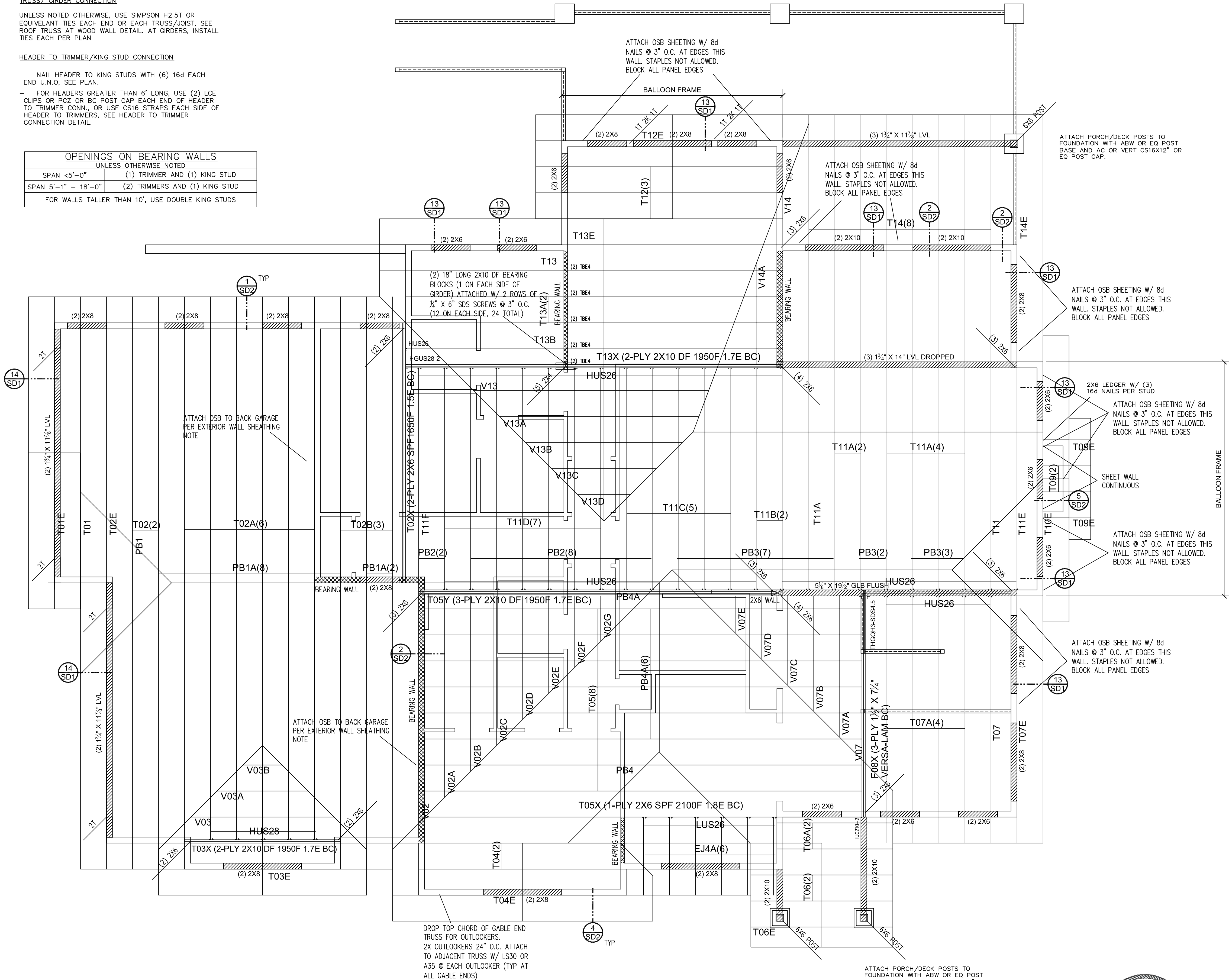
#### TRUSS/ GIRDER CONNECTION

UNLESS NOTED OTHERWISE, USE SIMPSON H2.5T OR EQUIVELANT TIES EACH END OR EACH TRUSS/JOIST. SEE ROOF TRUSS AT WOOD WALL DETAIL. AT GIRDERS, INSTALL TIES EACH PER PLAN

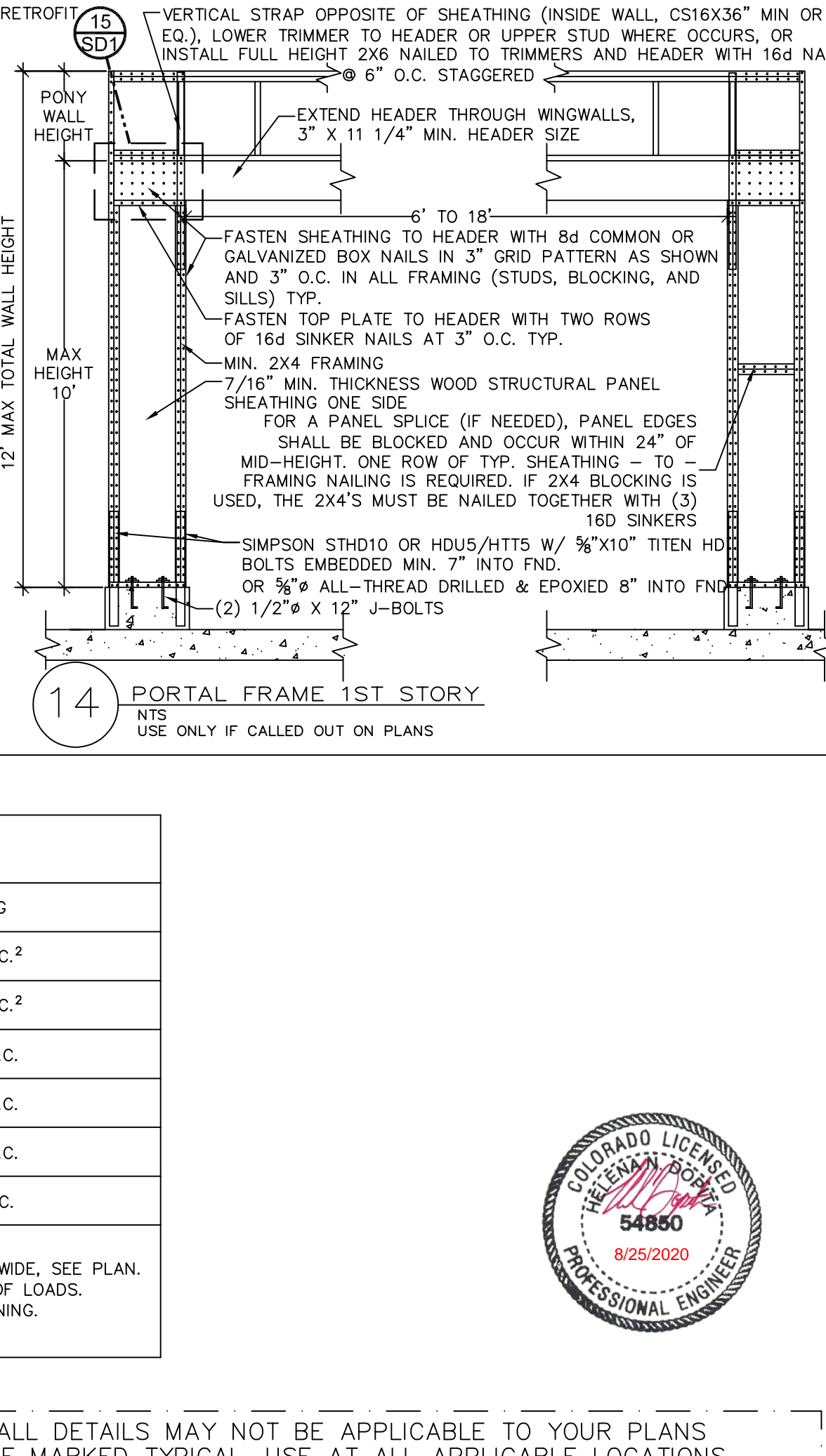
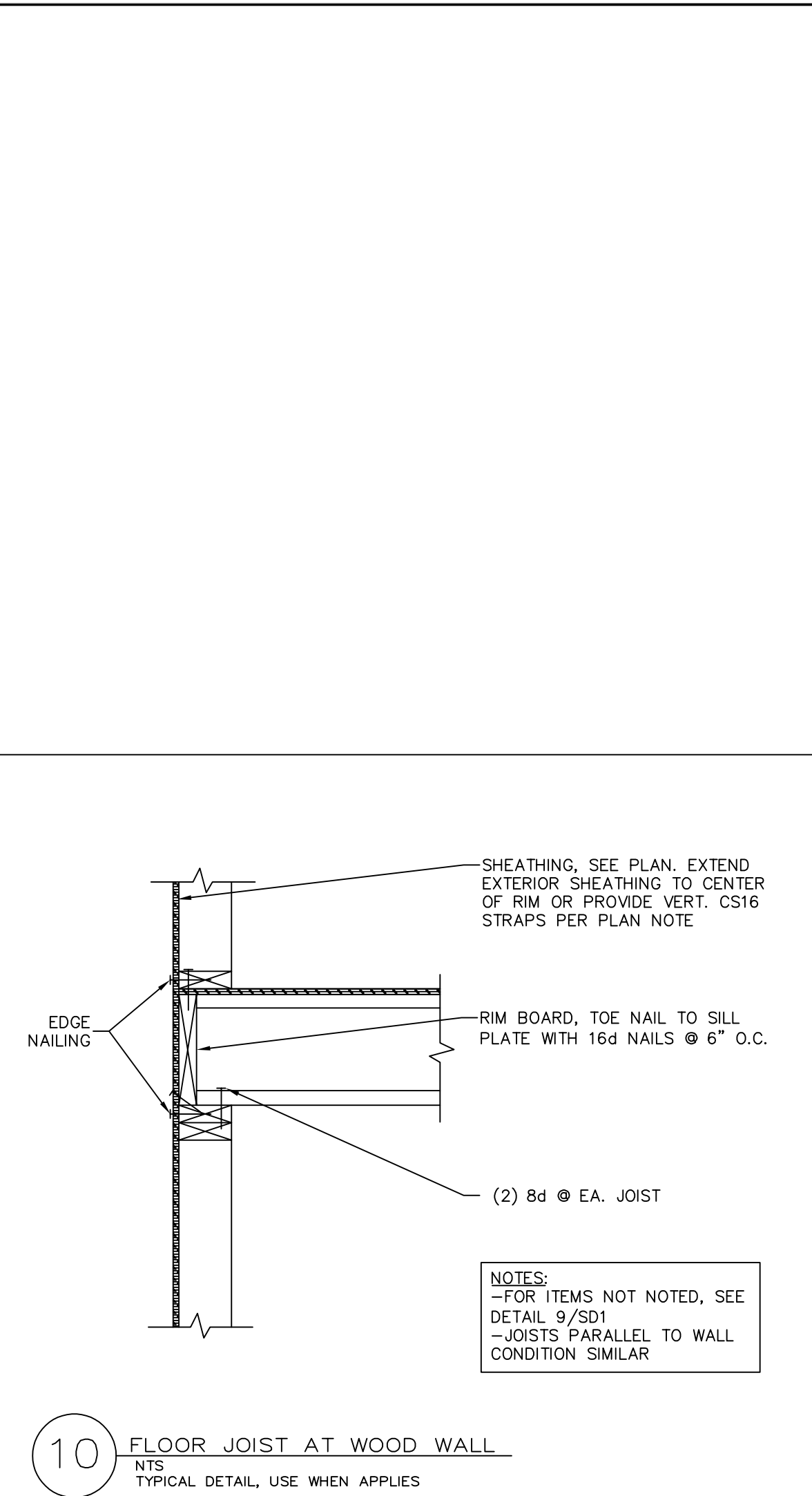
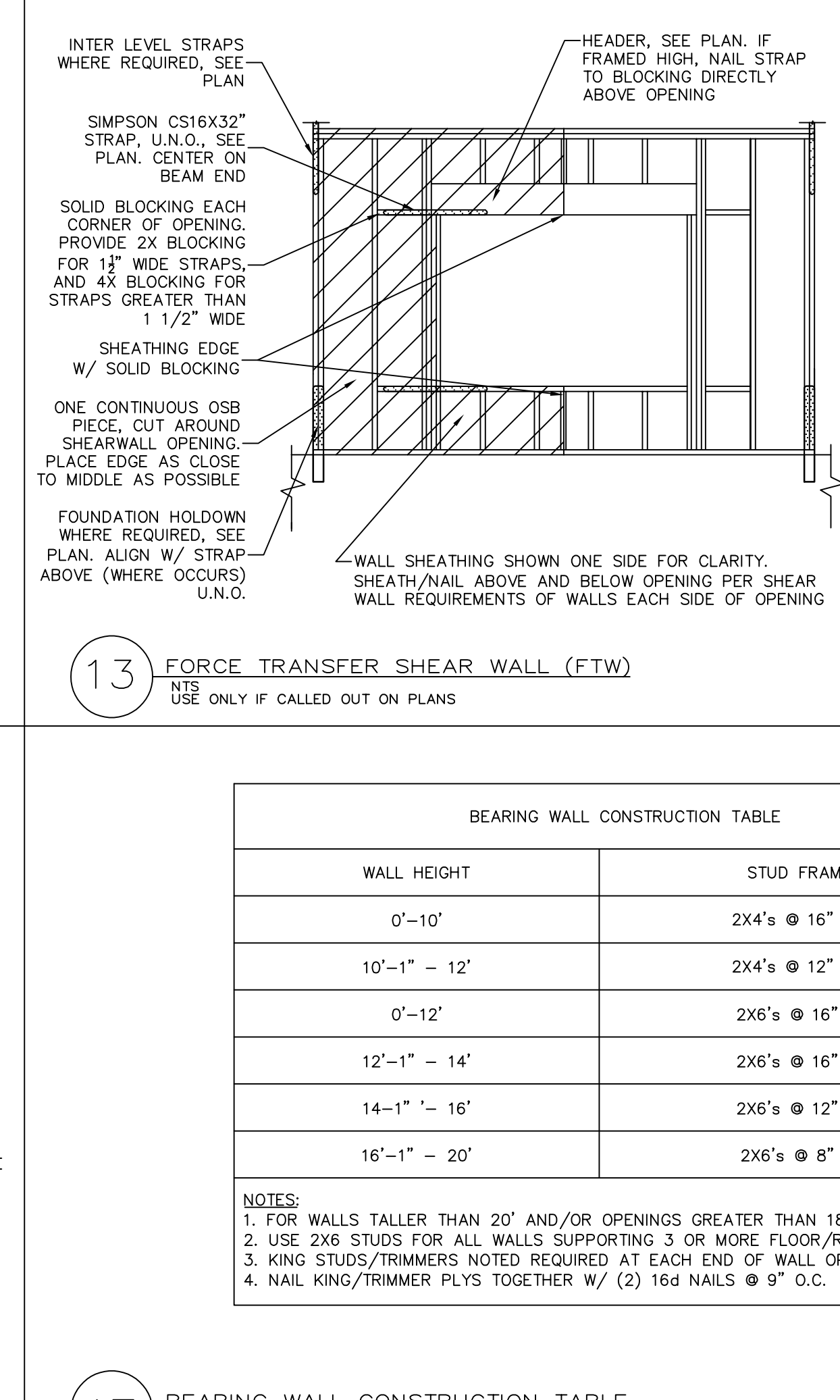
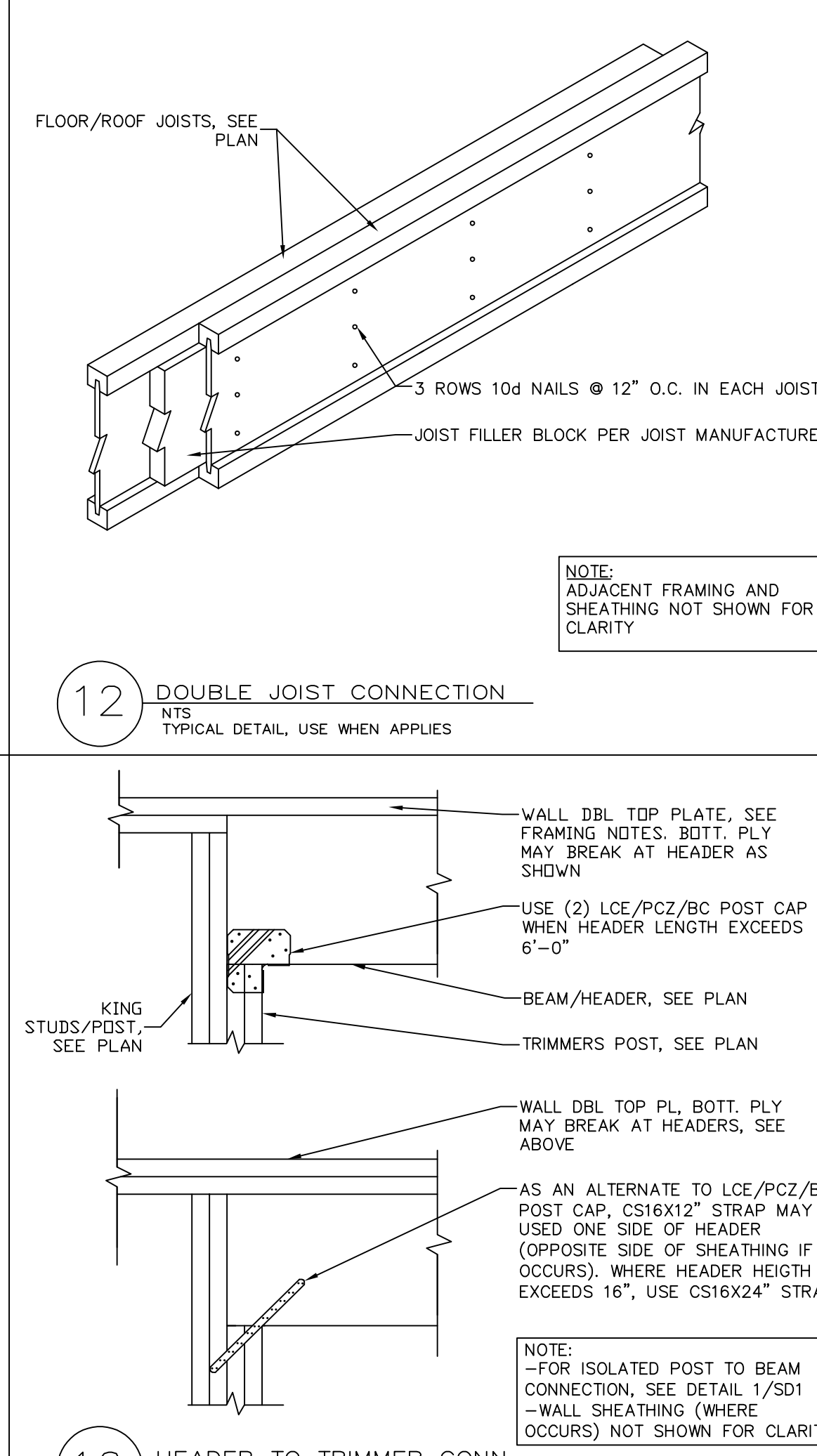
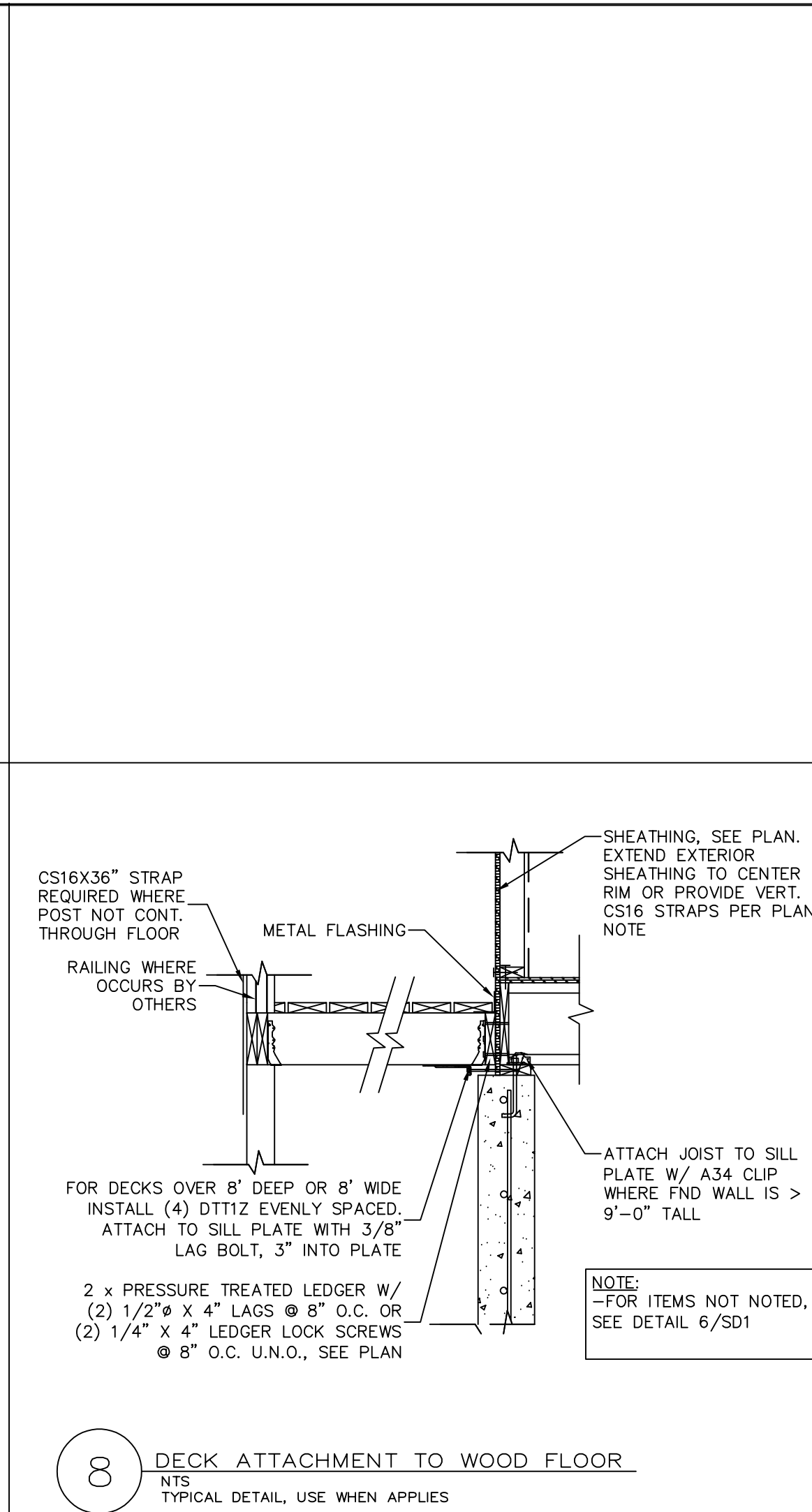
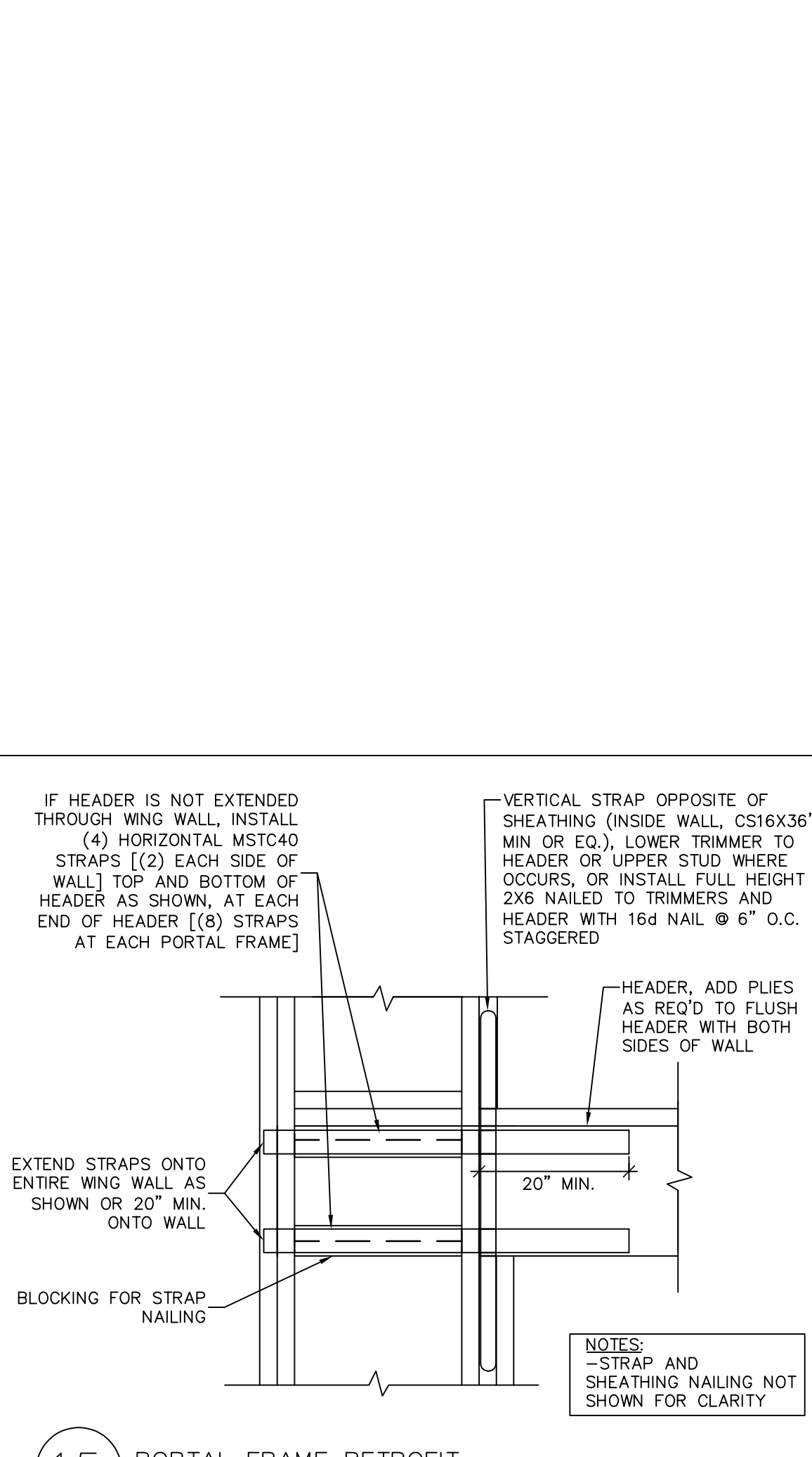
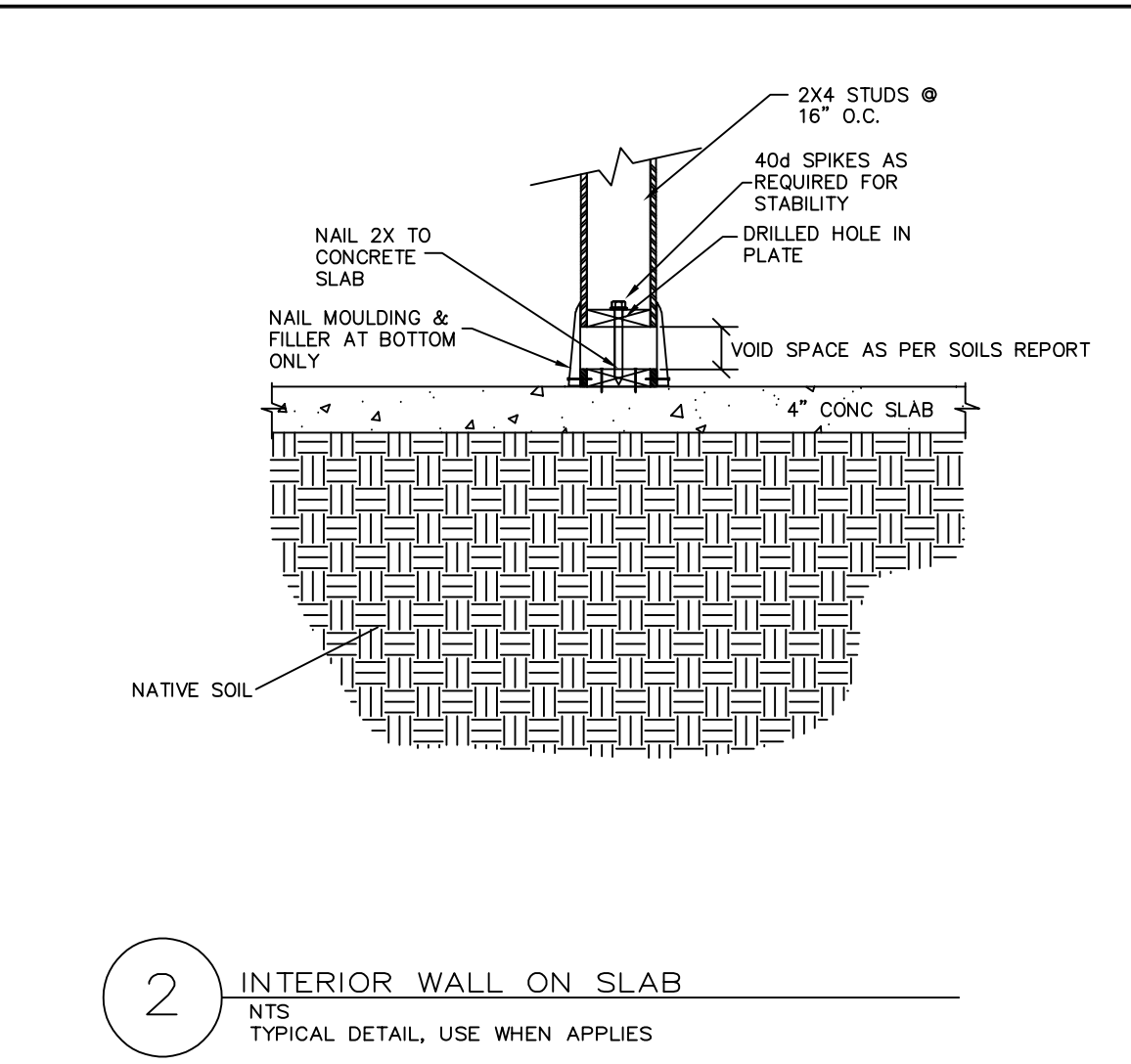
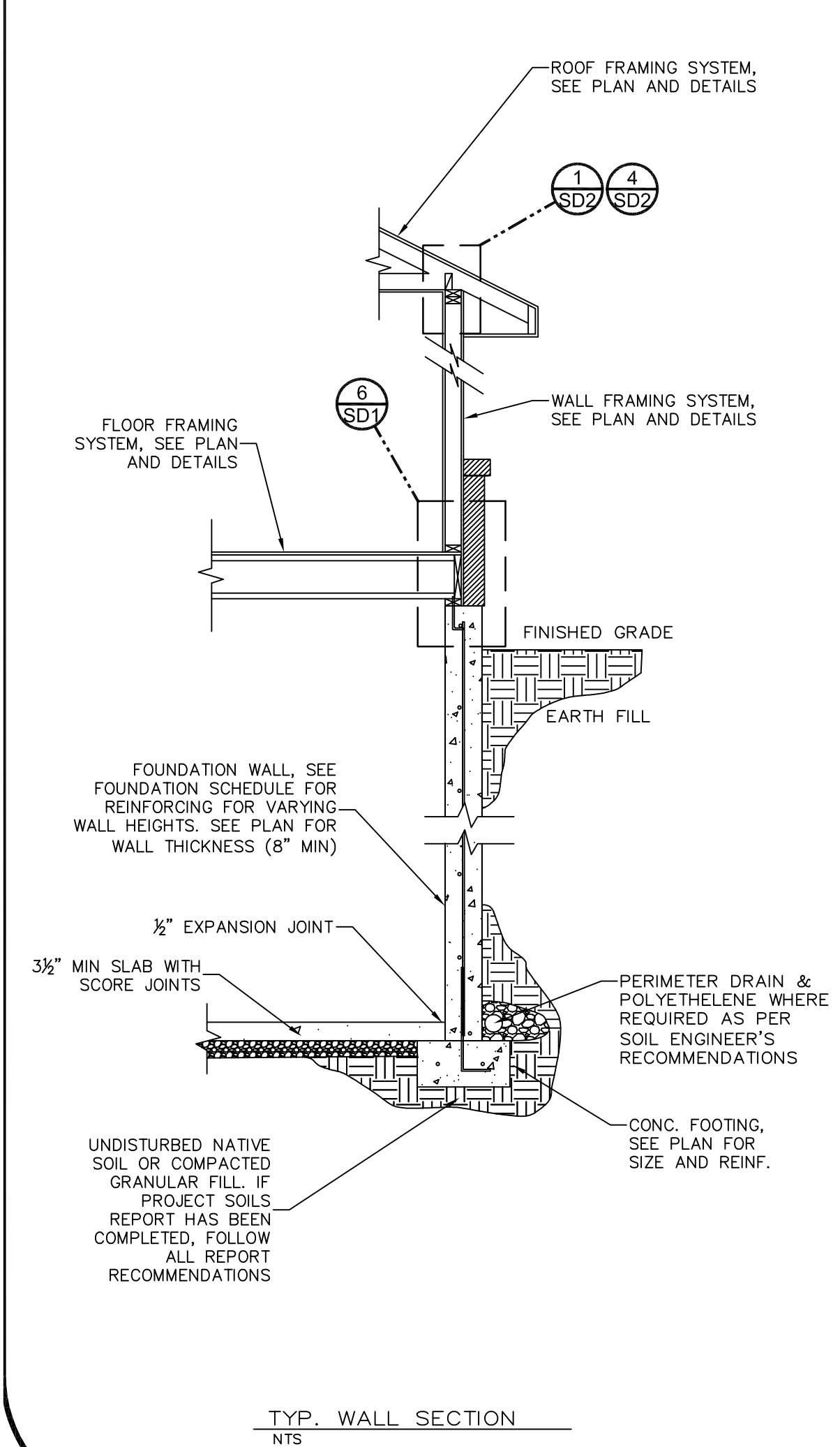
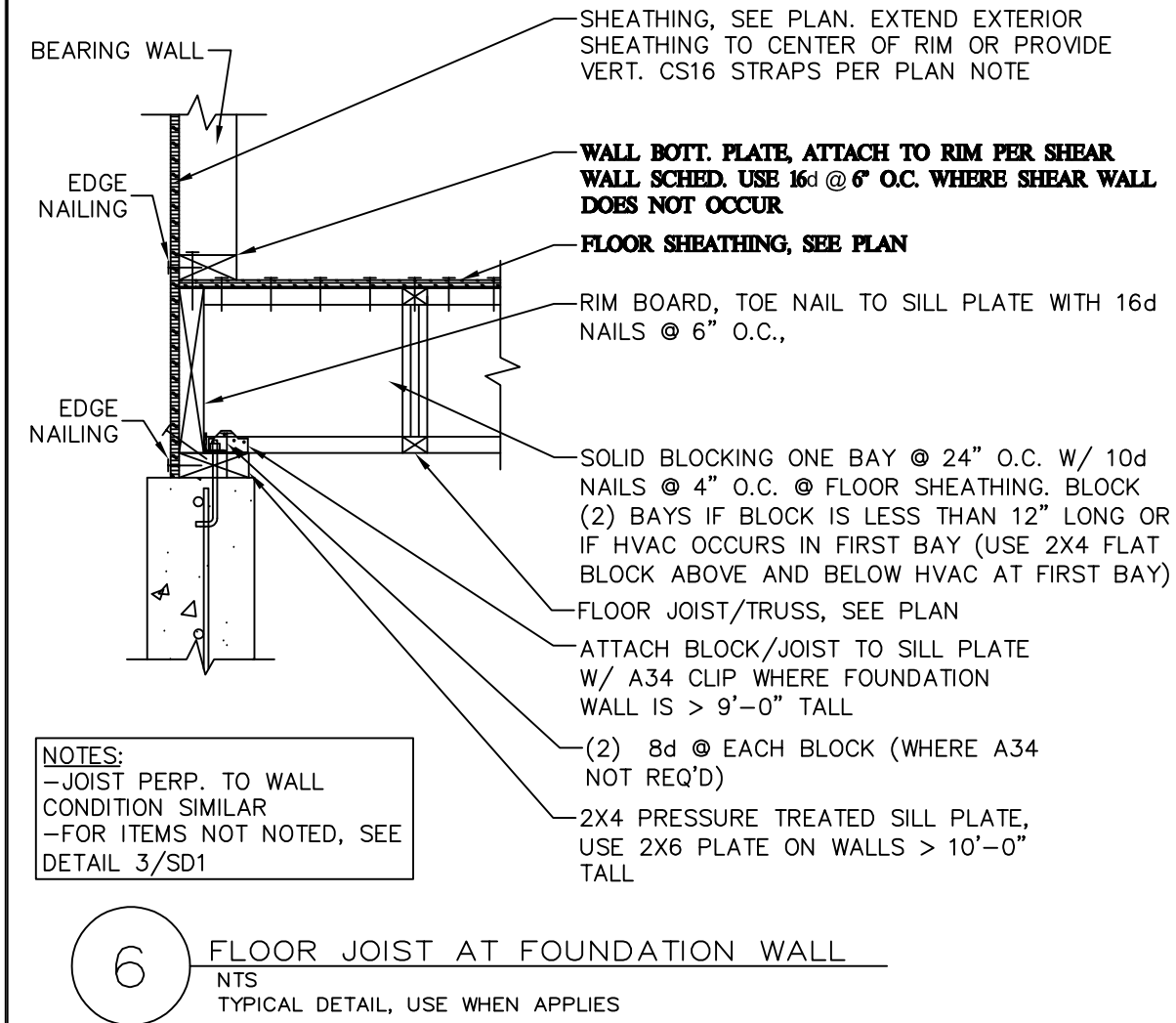
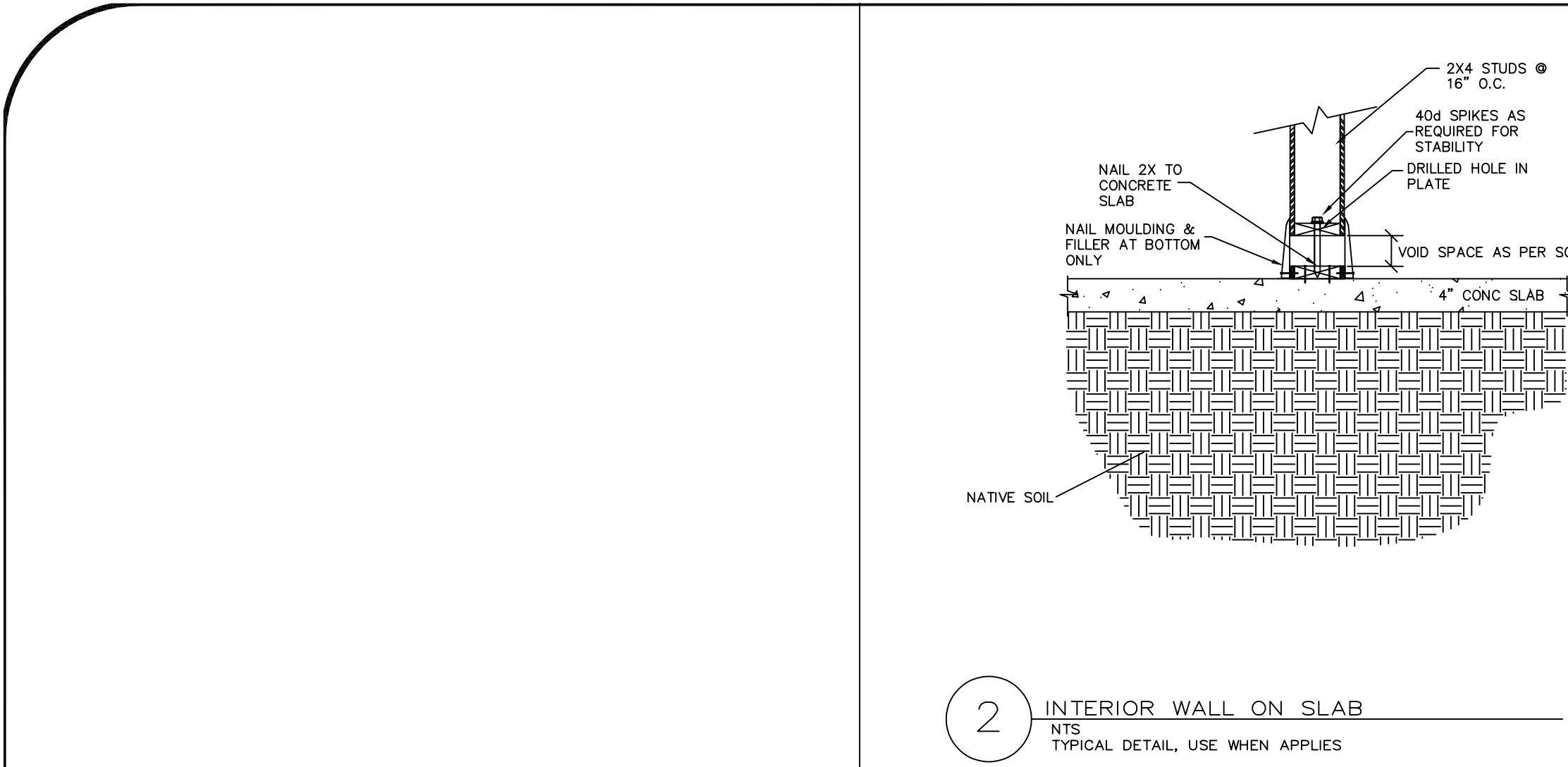
#### HEADER TO TRIMMER/KING STUD CONNECTION

- NAIL HEADER TO KING STUDS WITH (6) 16d EACH END U.N.O. SEE PLAN.
- FOR HEADERS GREATER THAN 6' LONG, USE (2) LCE CLIPS OR PC2 OR BC POST CAP EACH END OF HEADER TO TRIMMER CONN., OR USE CS16 STRAPS EACH SIDE OF HEADER TO TRIMMERS. SEE HEADER TO TRIMMER CONNECTION DETAIL.

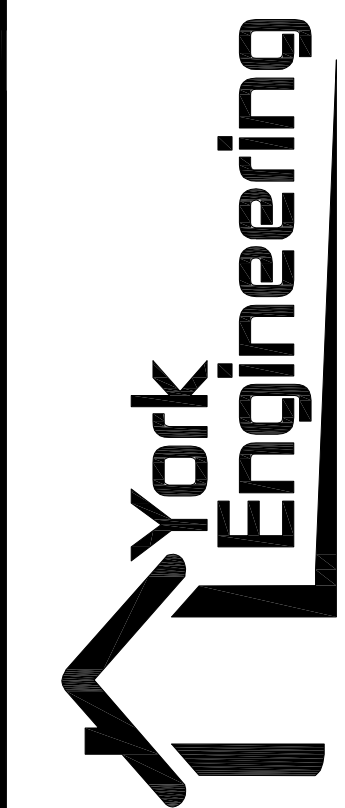
OPENINGS ON BEARING WALLS	
UNLESS OTHERWISE NOTED	
SPAN <5'-0"	(1) TRIMMER AND (1) KING STUD
SPAN 5'-1" - 18'-0"	(2) TRIMMERS AND (1) KING STUD
FOR WALLS TALLER THAN 10', USE DOUBLE KING STUDS	







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