



1040 Lincoln Avenue, Suite 200  
Pasadena, California 91103  
T: 626.432.5000  
F: 626.432.5010  
www.pbws.com

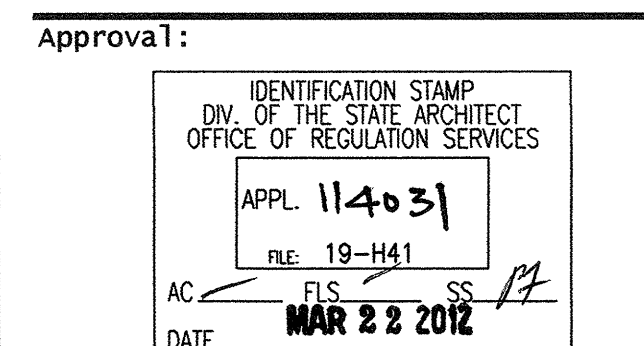
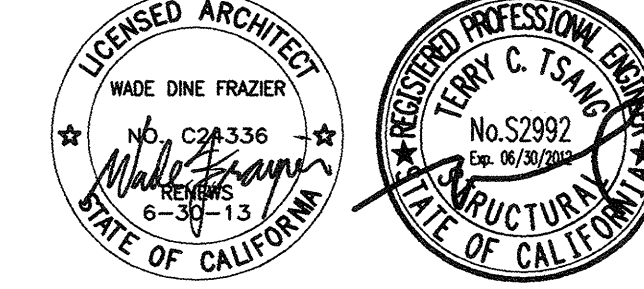
Consultant:  
T M A D  
TAYLOR & GAINES  
STRUCTURAL  
MECHANICAL  
ELECTRICAL  
CIVIL

Project Title:

**Palos Verdes HS**  
CLASSROOM BUILDING 3  
600 Cloyd Road  
Palos Verdes Estates  
California 90274

KEY PLAN

BID SET	04.24.12
DSA Submittal	06.08.11
50% CD	05.31.11
DESIGN DEVELOPMENT	03.17.11
Mark Date	Description
Issues/Revisions	



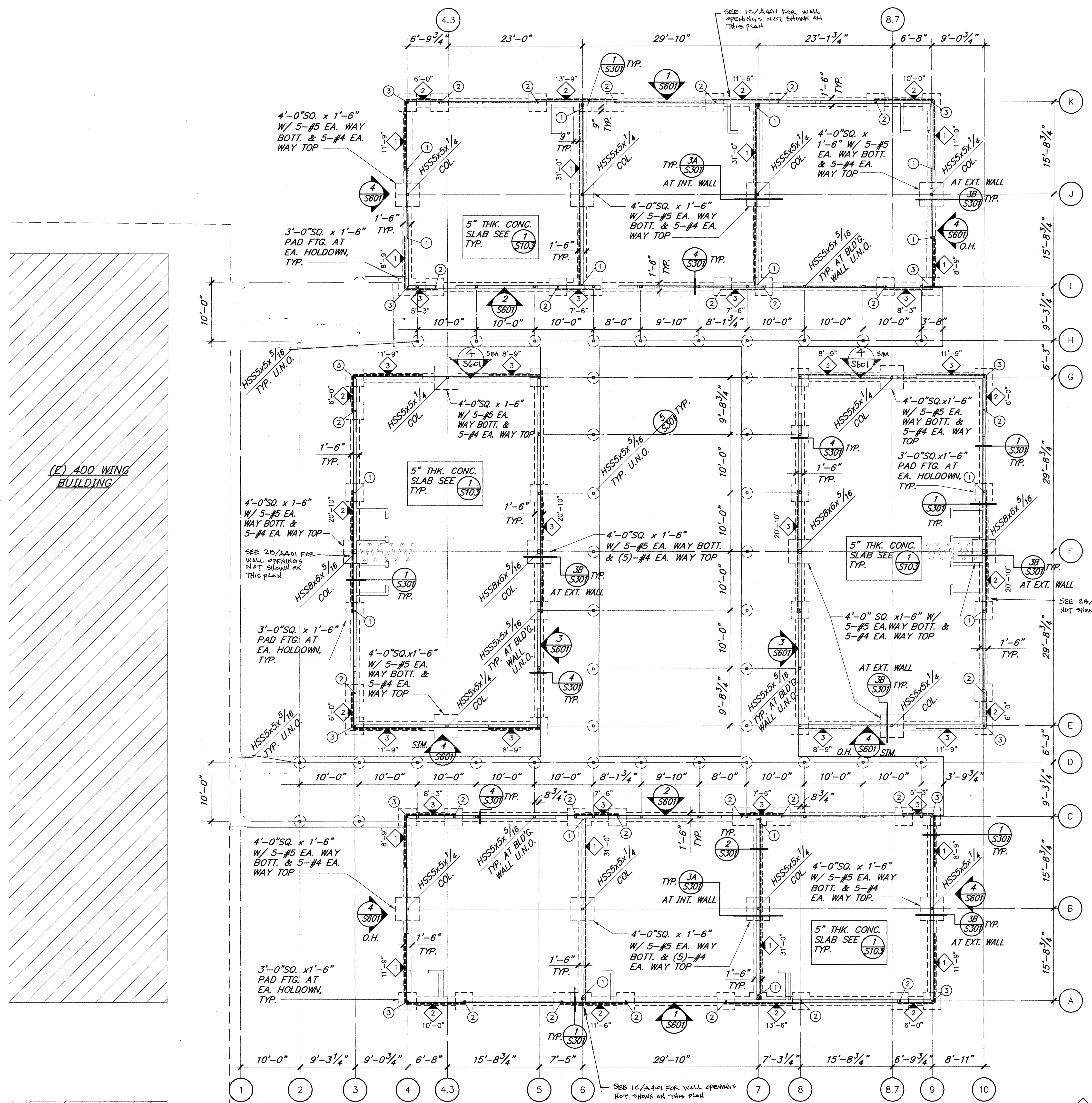
Project No: 10021.00  
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Drawn By: DG  
Checked By: TL

Sheet Title:

Sheet Number:

**FOUNDATION NOTES:**

- INDICATED LOCATION OF SIMPSON HOLD-DOWNS AT ENDS OF SHEAR WALL. SEE DETAILS (1) S307
- INDICATES THOSE 2x6 @ 16" O.C. U.N.O. STUD WALLS THAT REQUIRES PLYWD. SHEATHING FOR STRUCTURAL REASONS. THE PLYWOOD NAILING SHALL BE AS INDICATED ON DET. 2/S105 AND SHALL BE CONTINUED FOR THE FULL LENGTH OF THE WALL INCLUDING ABOVE ALL DOORS AND AROUND ALL OPENINGS.
- CONC. CURB NOT SHOWN FOR CLARITY, SEE (1) AND ARCH'L.
- SEE (6) S304 FOR FOOTING & PAD PREPARATION
- (5) INDICATES DIMENSION OF FLOOR DEPRESSION FROM REFERENCE FINISH FLOOR ELEVATION. SEE DETAIL (1) S103

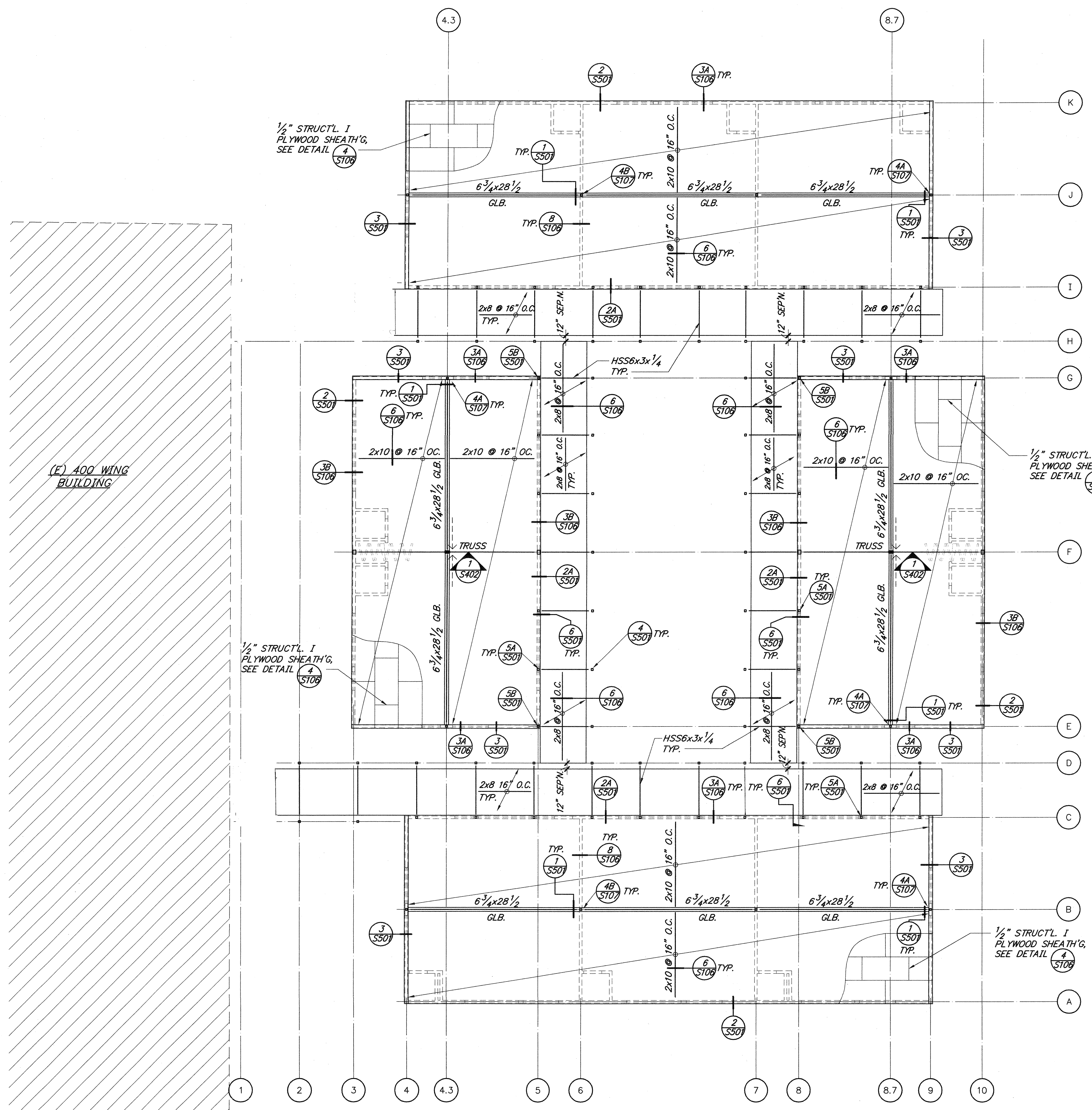


FOUNDATION PLAN

1/8" 1

**S201**

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- ROOF NOTES:**
1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
  2. ROOF SHEATHING FOR DETAIL SEE 4/S106
  3. ALL SHEAR WALLS, FLOOR SHEATHING AND SHEAR TRANSFER WALLS SHALL BE COMMON WIRE NAILS. SINKER AND BOX NAILS ARE NOT PERMITTED.
  4. CONTRACTOR TO NOTIFY AND OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER WHEN PLUMBING LINES OR MECHANICAL DUCTS INTERRUPT DOUBLE TOP PLATES.
  5. HOLES AND NOTCHES IN FRAMING MEMBERS ARE ONLY PERMITTED PER CBC 2010 AND DETAIL 1/S107 ANY OVERSIZED HOLE OR NOTCH IN A MEMBER WILL RESULT IN REPLACING THAT MEMBER AT CONTRACTOR'S EXPENSE.
  6. FOR DETAIL OF SHEAR WALL CORNERS AND INTERSECTIONS SEE 3/S105
  7. TOP PLATE SPLICE ALONG ALL SHEAR WALLS SHALL BE PER DETAIL 3/S106 MINIMUM, U.N.O.
  8. ALL PERIMETER AND BEARING STUD WALLS SHALL BE PER. TYP.
  9. FOR HEADER SIZE SEE DETAIL 1/S106 U.N.O.
  10. FOR STUD SIZE SEE DETAIL 1/S106 U.N.O.
  11. LENGTH OF THE SHEAR WALLS SHOWN ON PLANS ARE TO FACE TO FACE OF TRIMMER.
  12. GLB DENOTES GLULAM BEAM.
  13. ROOF OPENING FOR HATCH & EQUIPMENT NOT SHOWN FOR CLARITY, SEE MEP, & ARCH'L. SEE DET. 5/S107
  14. PROVIDE SIMPSON LST149 AT ALL THE BUILDING CORNERS.
  15. PROVIDE 2x4 BLK'G. WHERE REQ'D. FOR CEMENT PLASTER CEILING TYP. AT PATIO.
  16. ——— INDICATES BENT BM. SEE DET. 1/S407

(E) 400 WING BUILDING

1040 Lincoln Avenue, Suite 200  
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F: 626.432.5010  
www.pbws.com

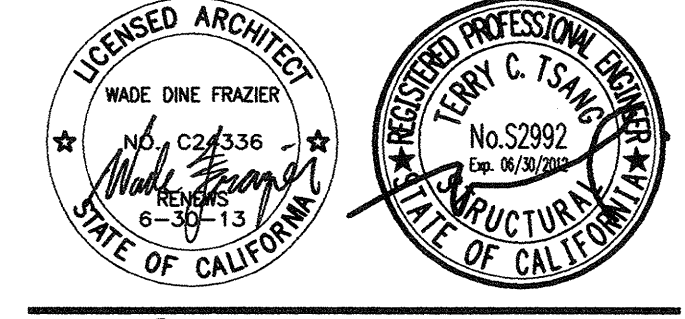
consultant:  
T M A D  
TAYLOR & GAINES  
STRUCTURAL  
MECHANICAL  
ELECTRICAL  
CIVIL  
800 North Ferral Lane, Suite 100  
Ontario, California 91764  
Phone: 909.477.8615 Fax: 909.477.8619  
www.tmadtg.com Project No. 0011.043.00

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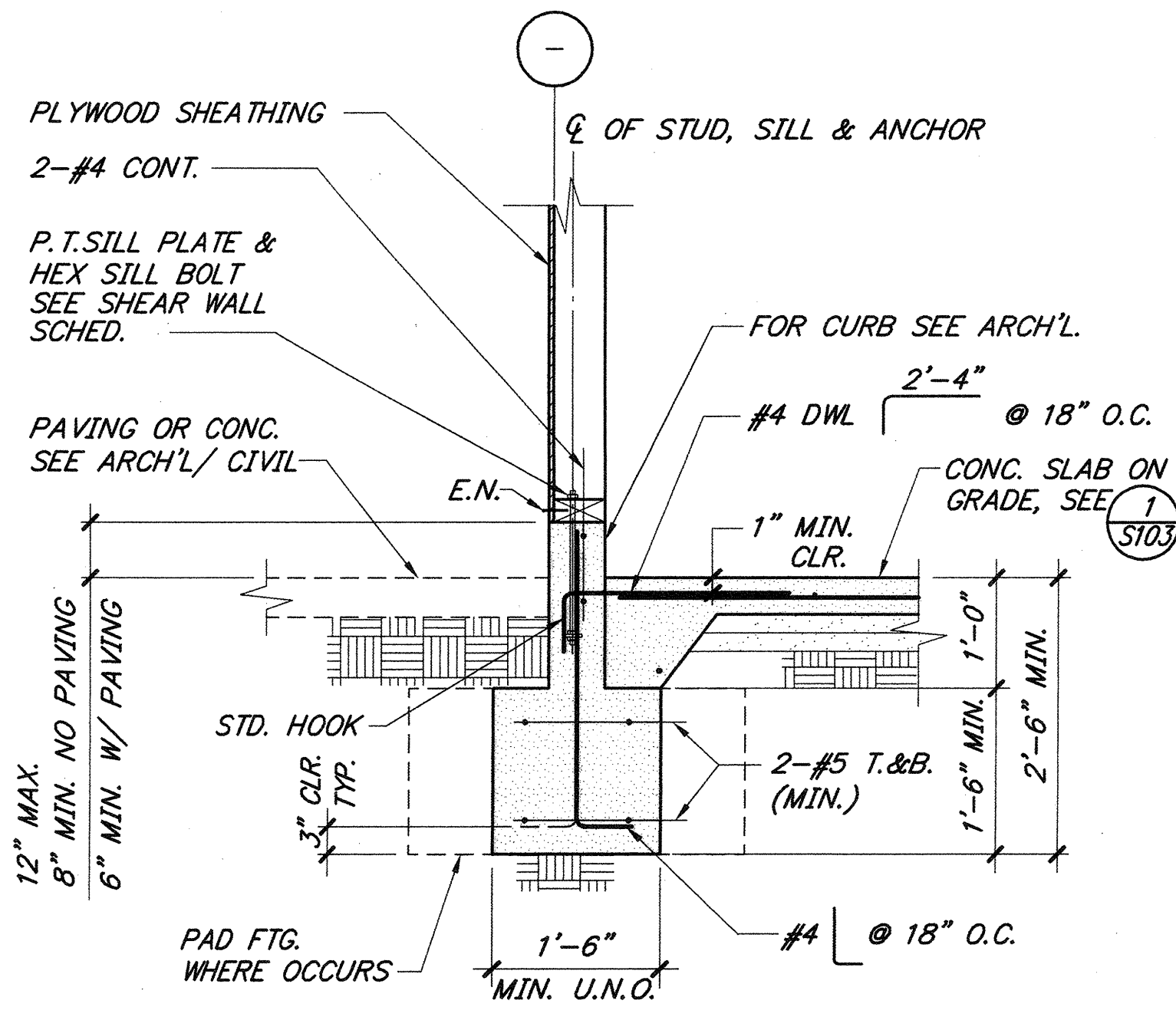
ROOF FRAMING PLAN

Sheet Number: **S202**

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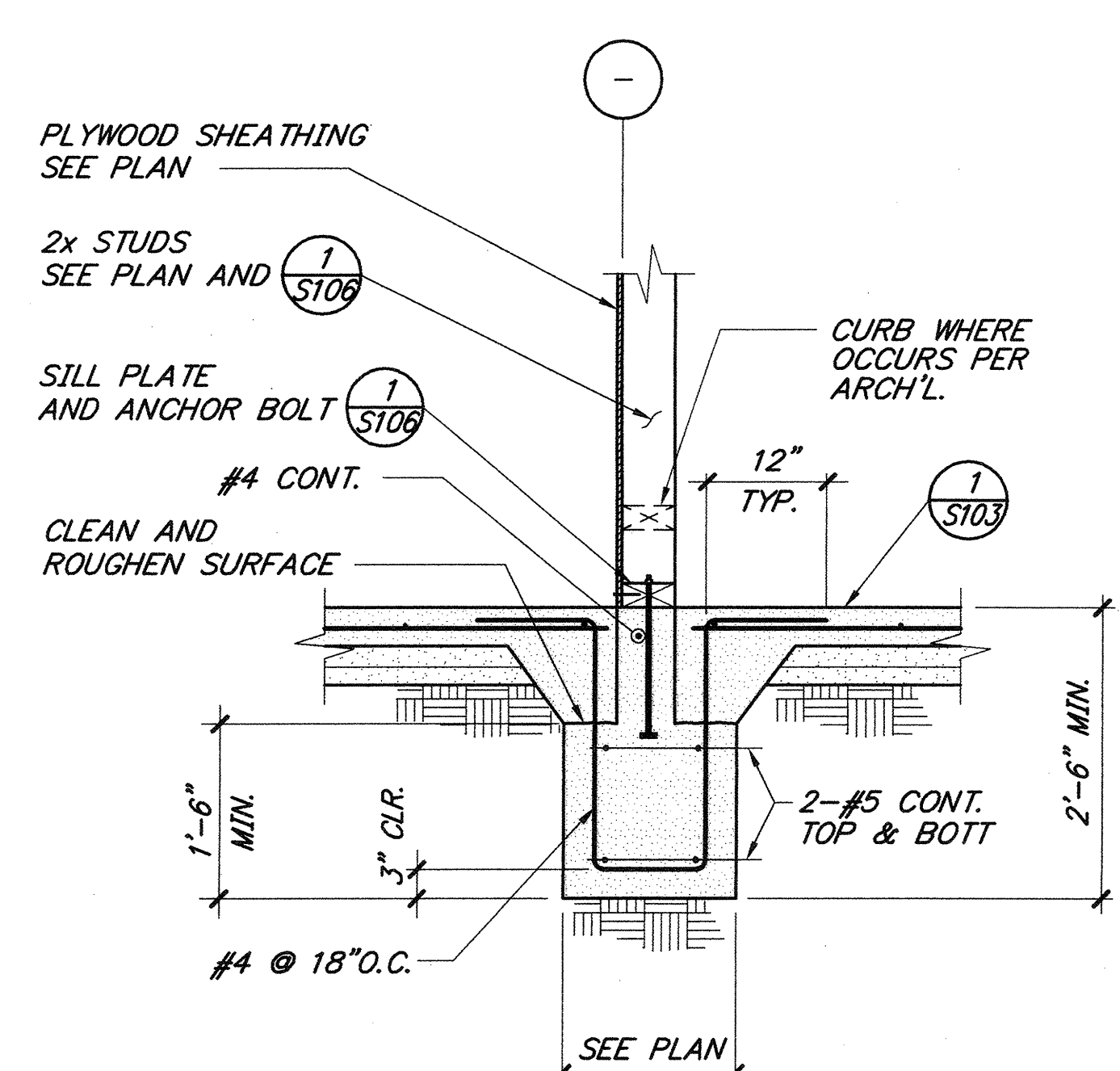
ROOF FRAMING PLAN

1/8" 1



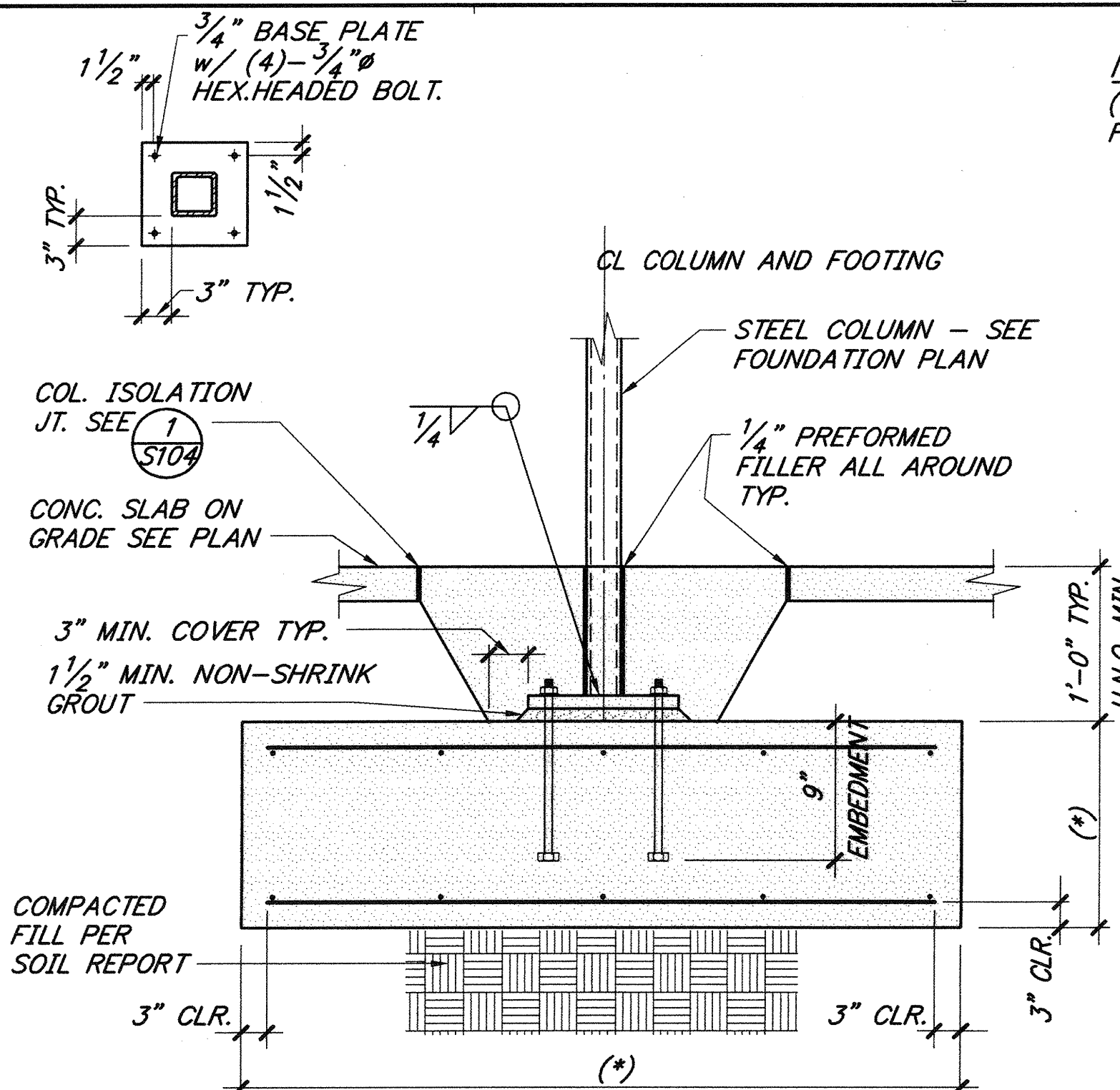
TYPICAL PERIMETER FOOTING

NONE 1



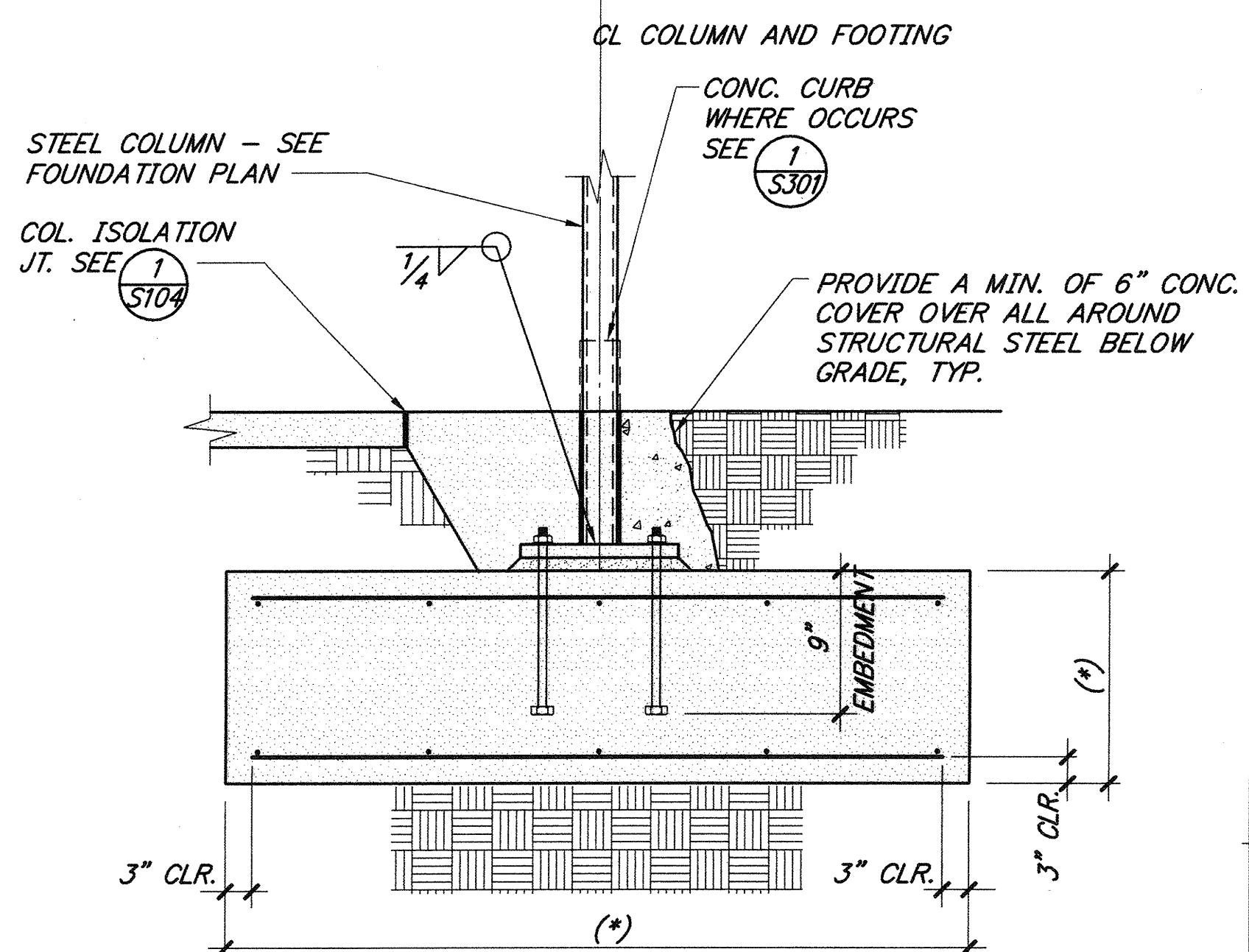
TYP. INTERIOR FOUNDATION DETAIL

NONE 2



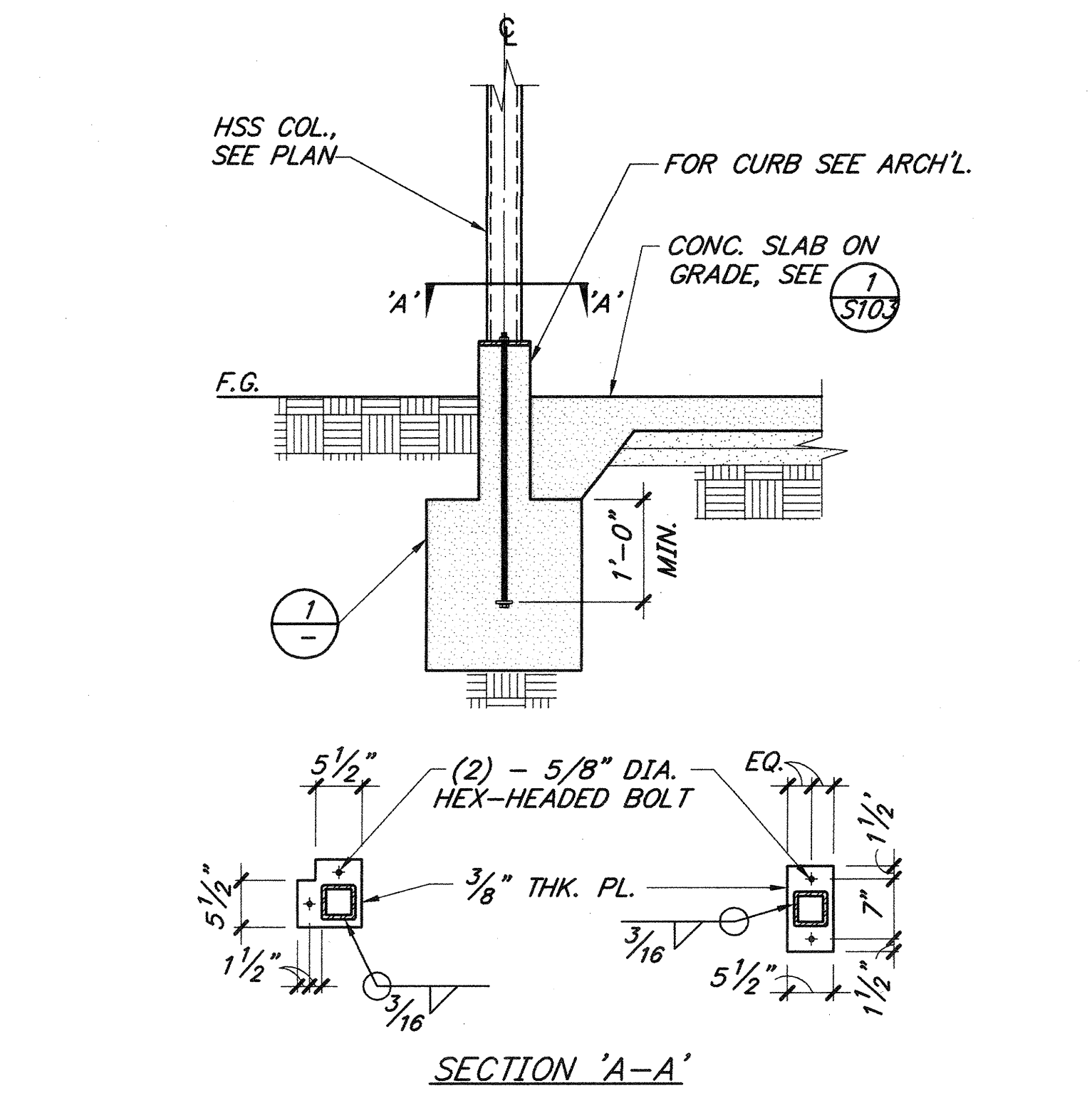
A - INTERIOR COLUMN PAD FTG.

NOTE:  
(\*) SEE FOUNDATION PLAN FOR SIZE, THICKNESS AND REINFORCING



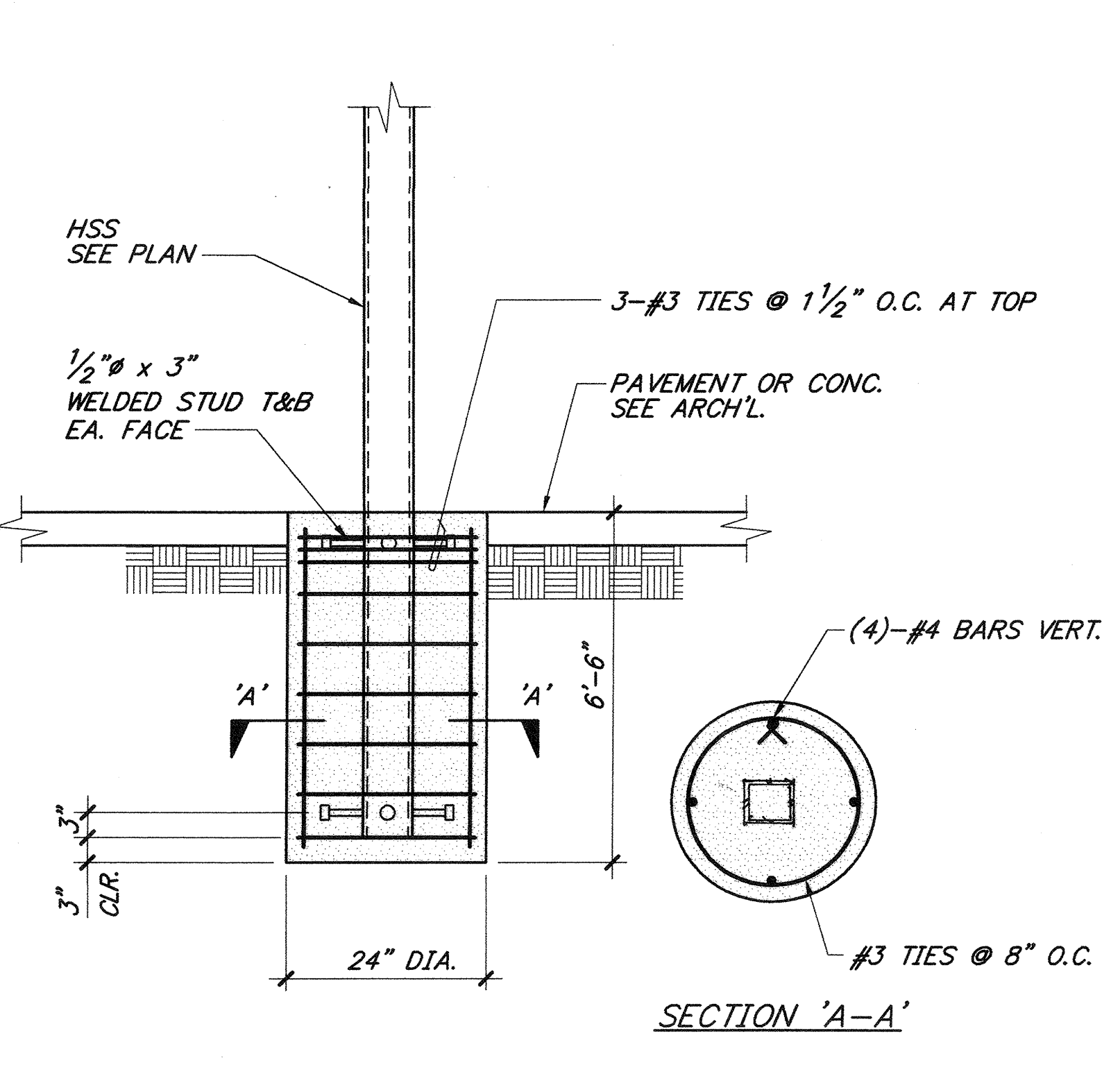
B - EXTERIOR COLUMN PAD FTG.

NOTE:  
FOR MORE INFO, SEE DETAIL "A"



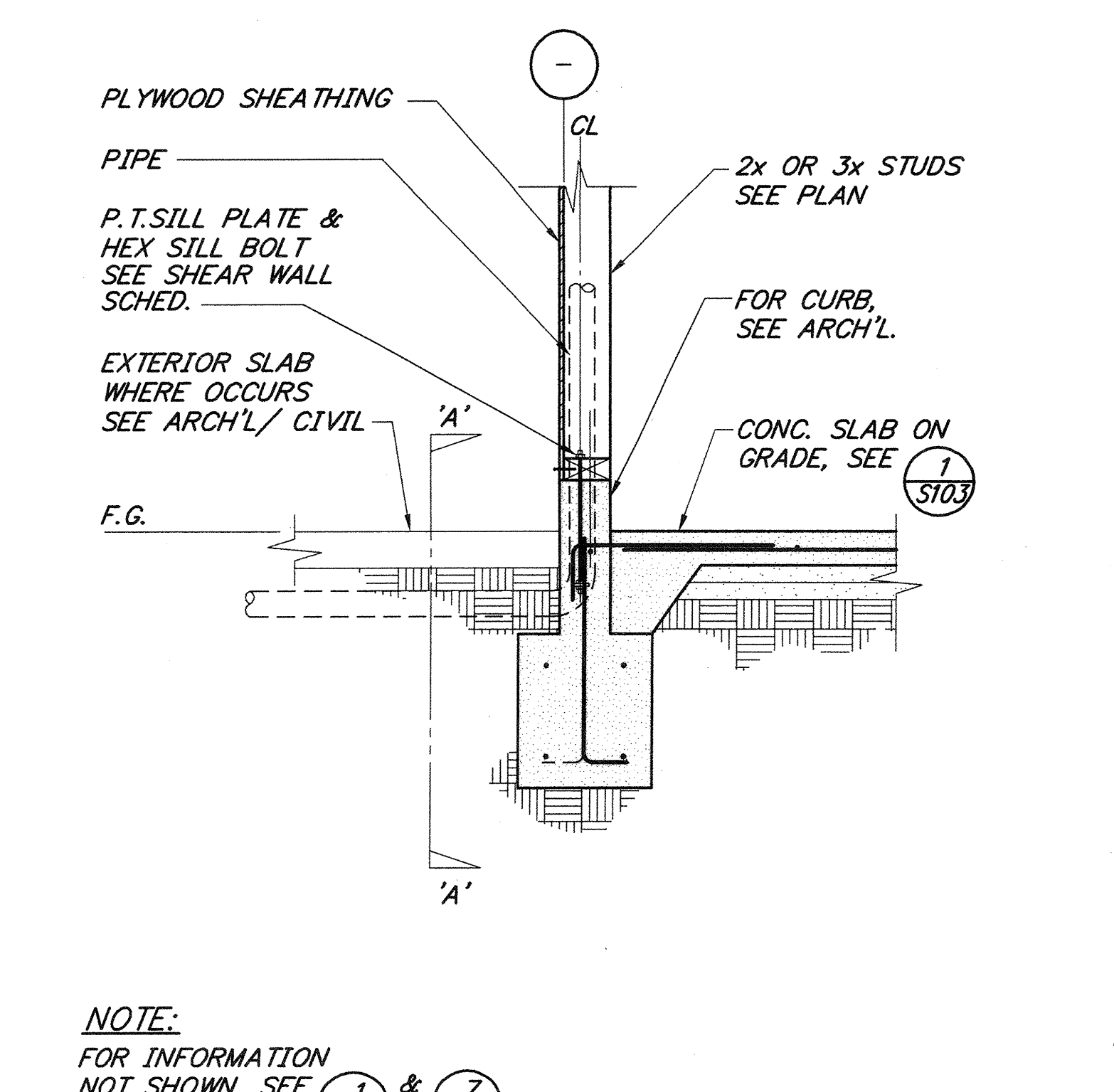
COLUMN BASE PLATE CONNECTION

NONE 4



POLE FOOTING

- 5



TYPICAL PIPE CHASE AT FOUNDATION DETAIL

NONE 7

NOTE:  
LOCATION OF PIPE NOT INDICATED ON FOUNDATION PLAN, FOR CLARITY, SEE PLUMBING & ARCH'L. DWG.



NOT USED

- 8



NOT USED

- 9



NOT USED

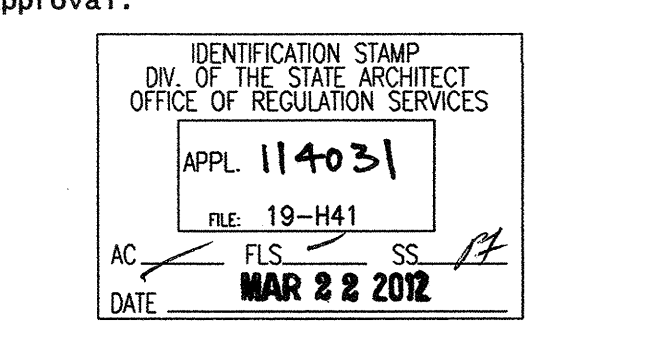
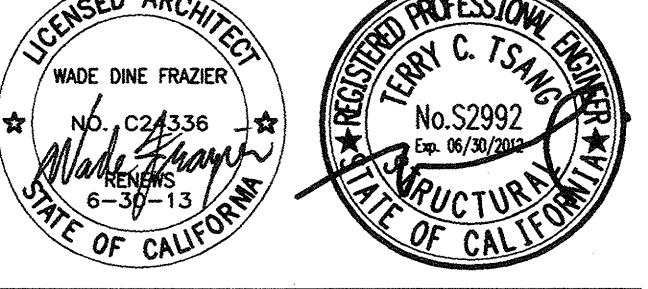
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NOT USED

- 11

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1040 Lincoln Avenue, Suite 200  
Pasadena, California 91103  
T: 626.432.5000  
F: 626.432.5010  
www.pbwsi.com

Consultant:  
T M A D  
TAYLOR & GAINES  
STRUCTURAL  
MECHANICAL  
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800 North Ferrari Lane, Suite 100  
Ontario, California 91764  
Phone: 908.477.6915 Fax: 908.477.6919  
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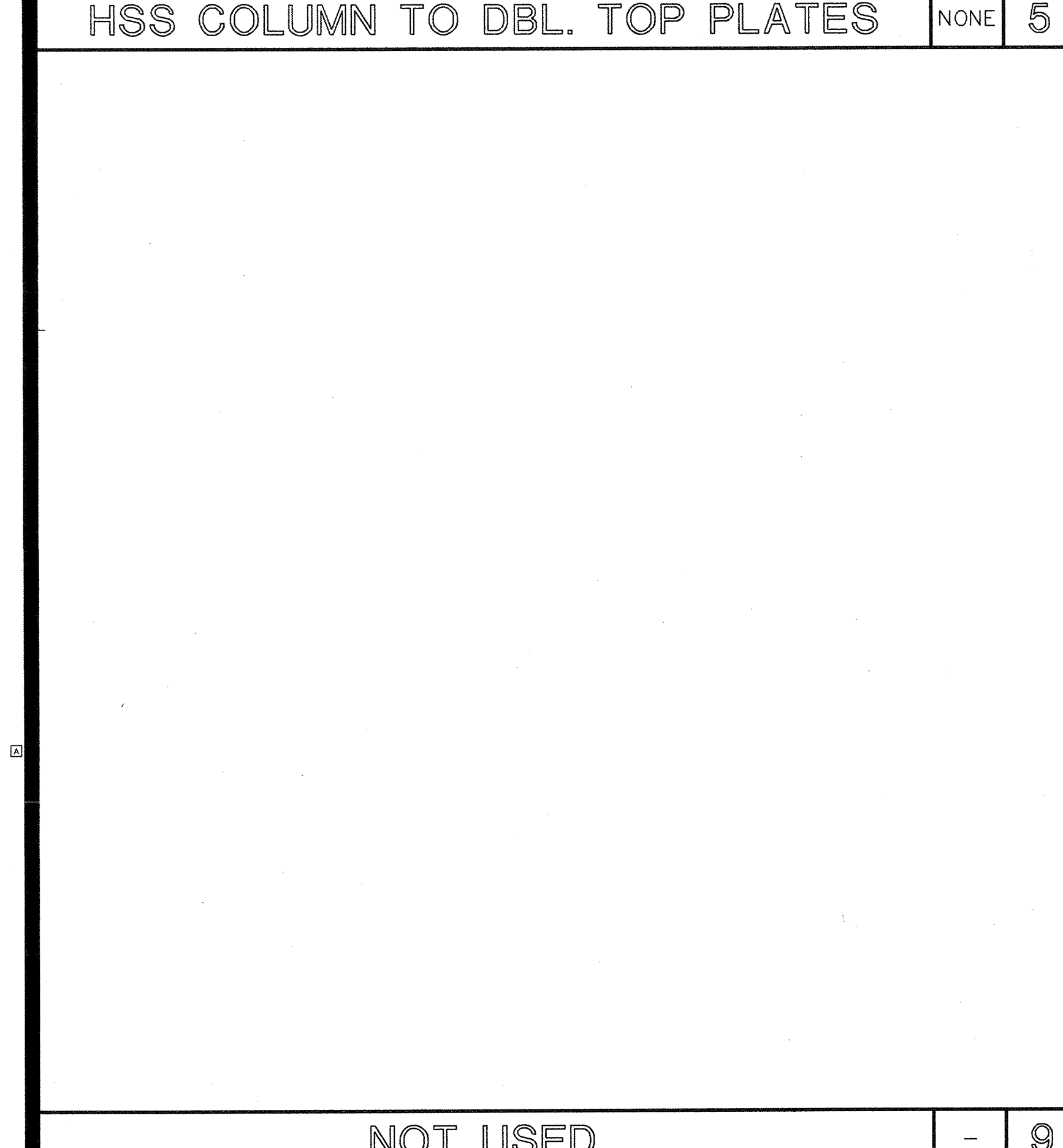
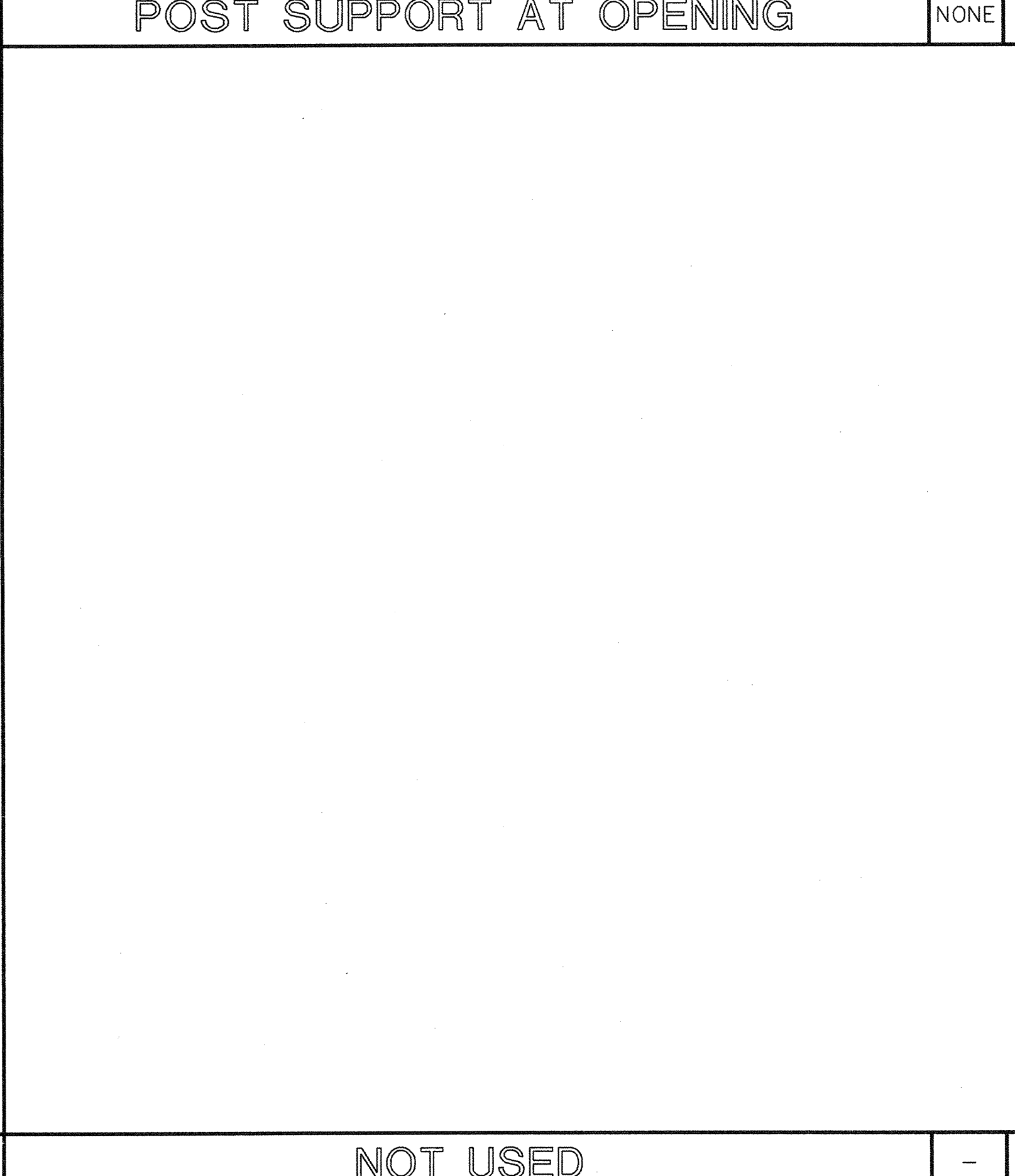
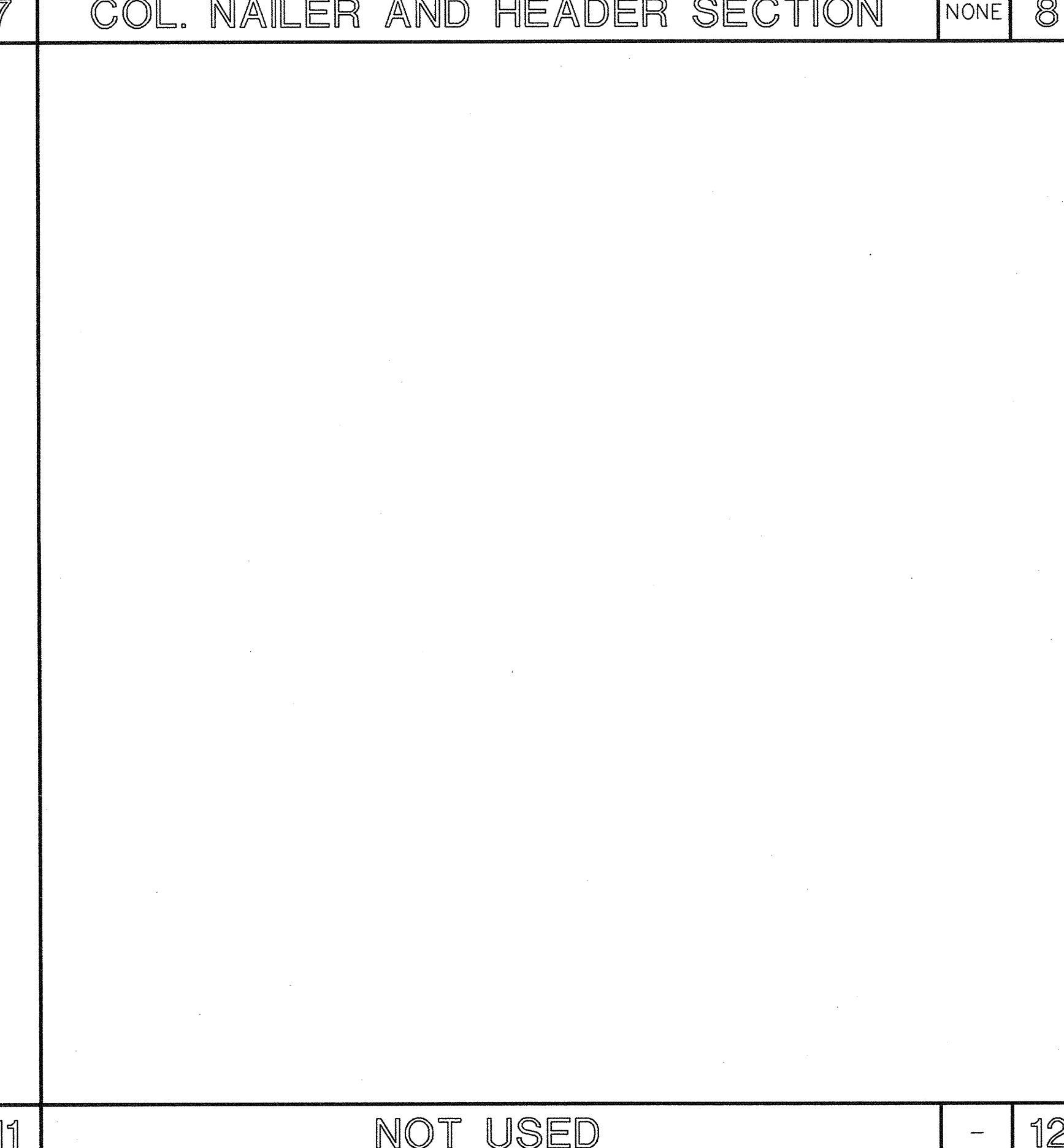
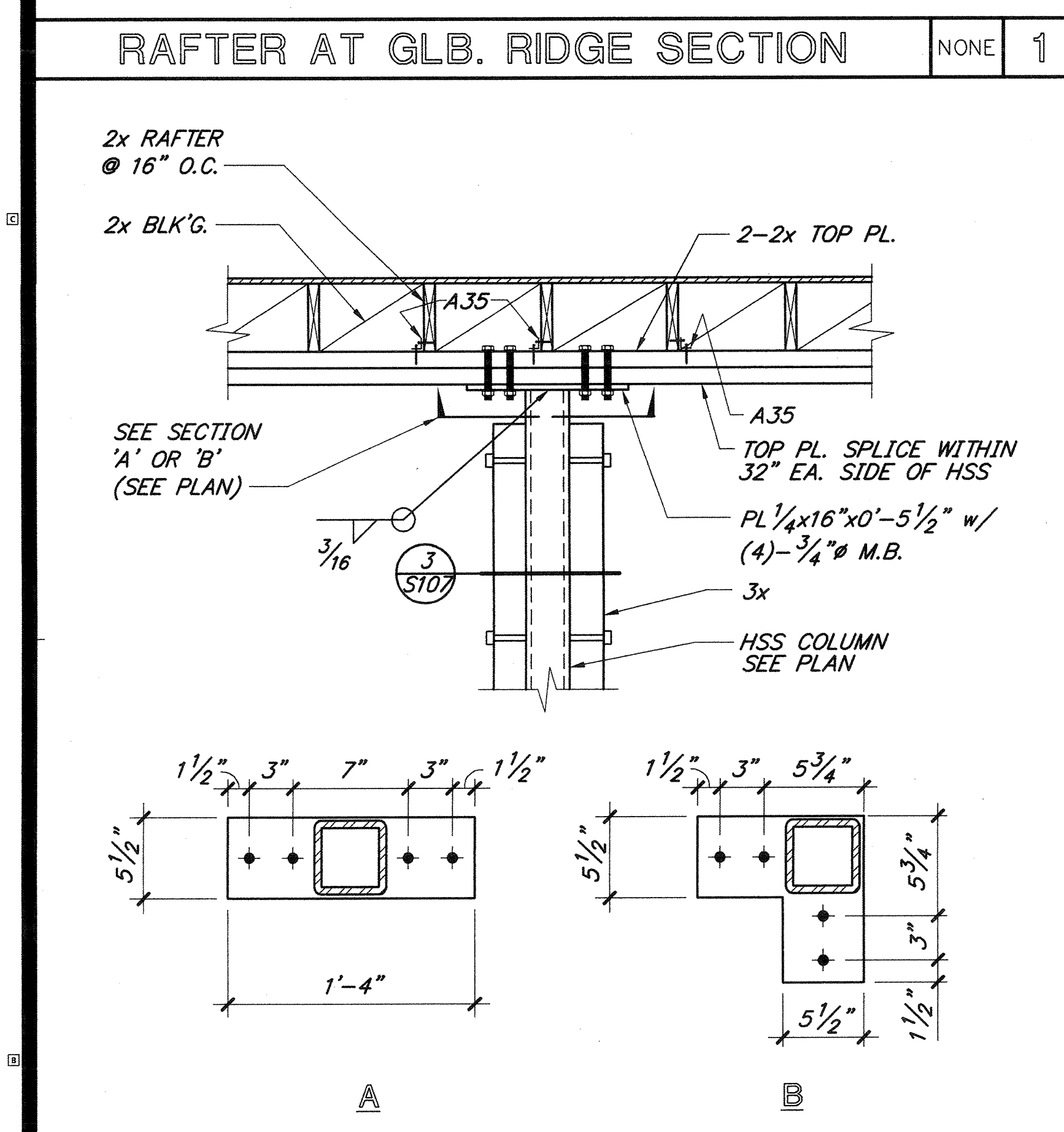
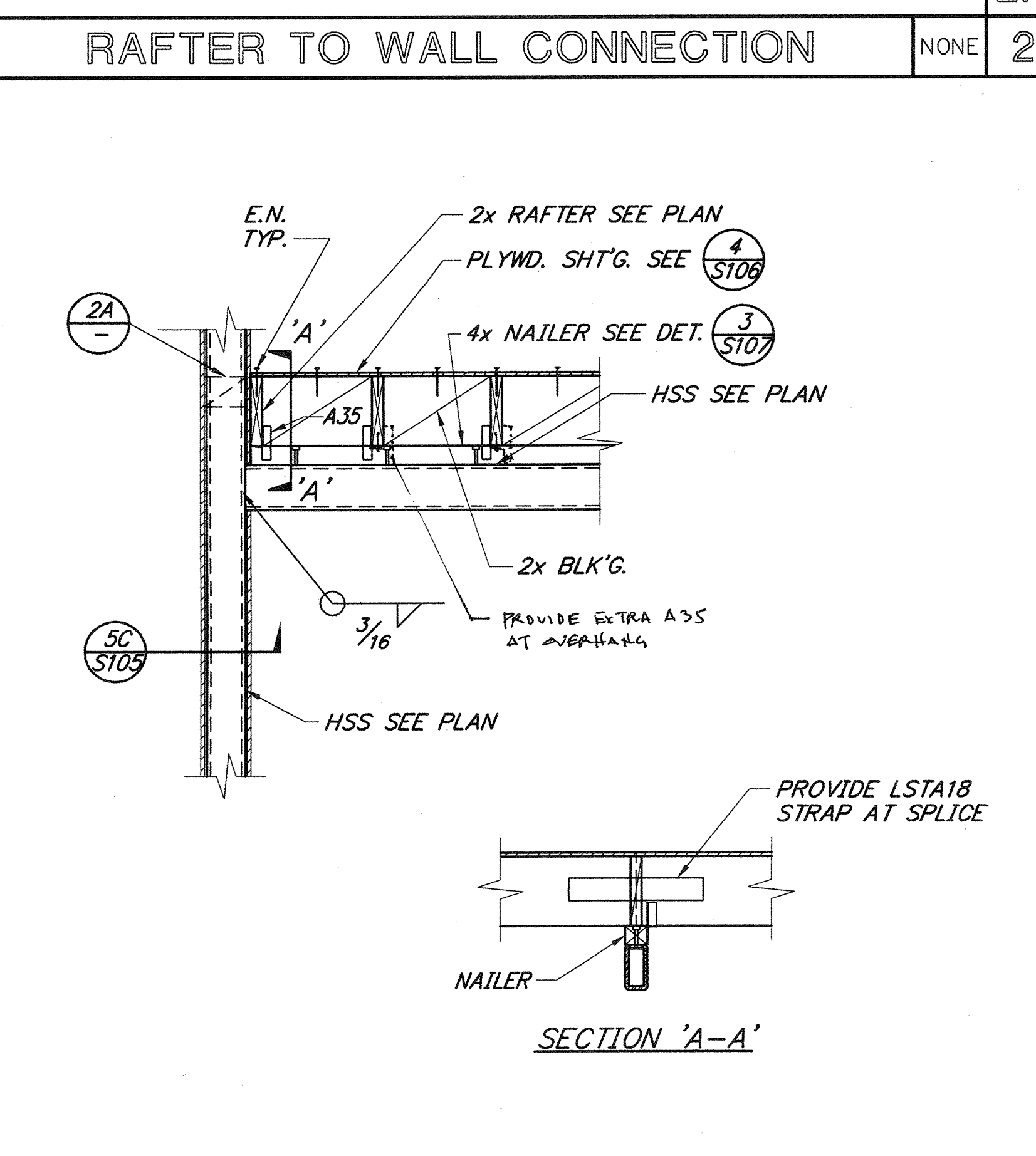
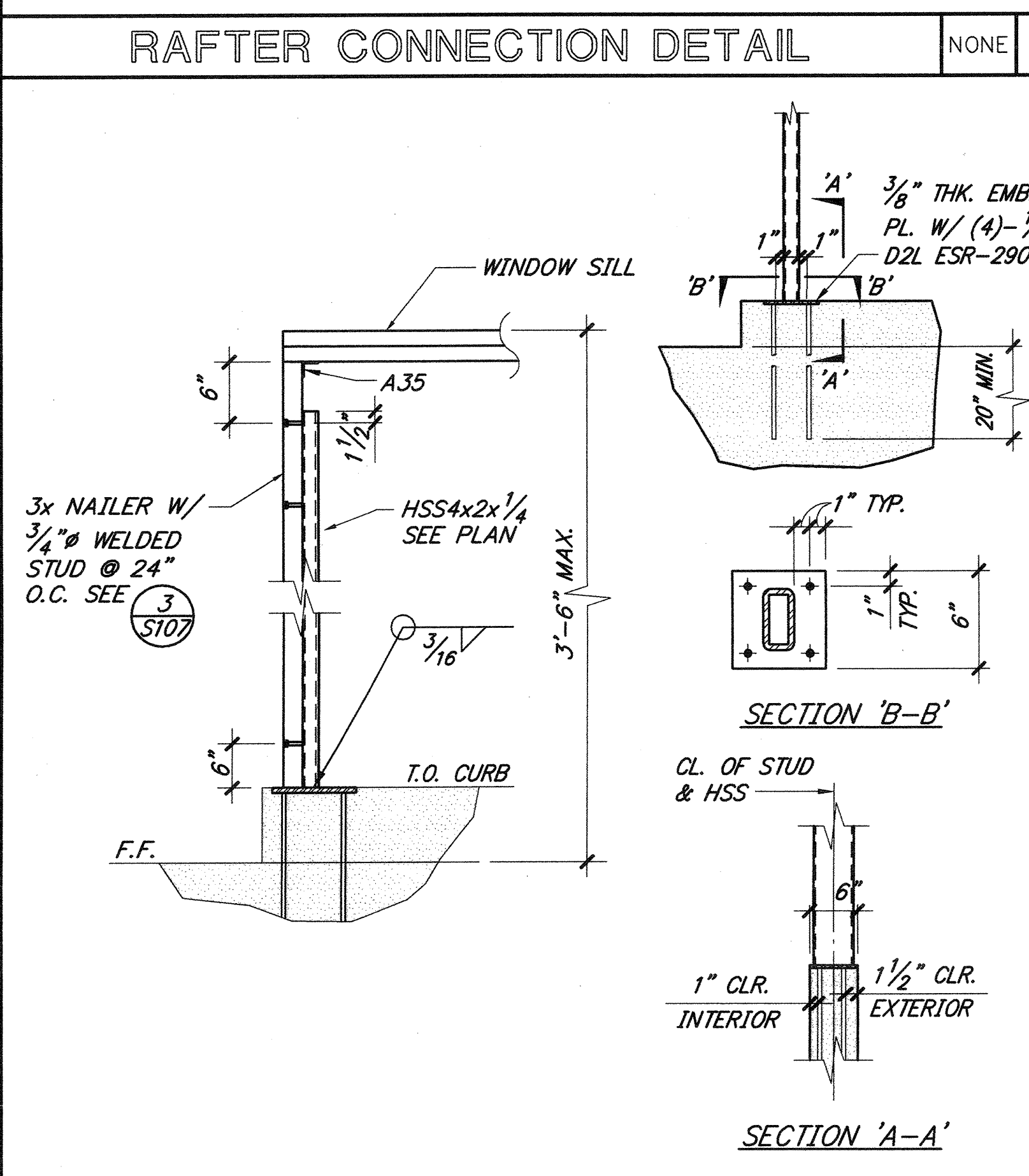
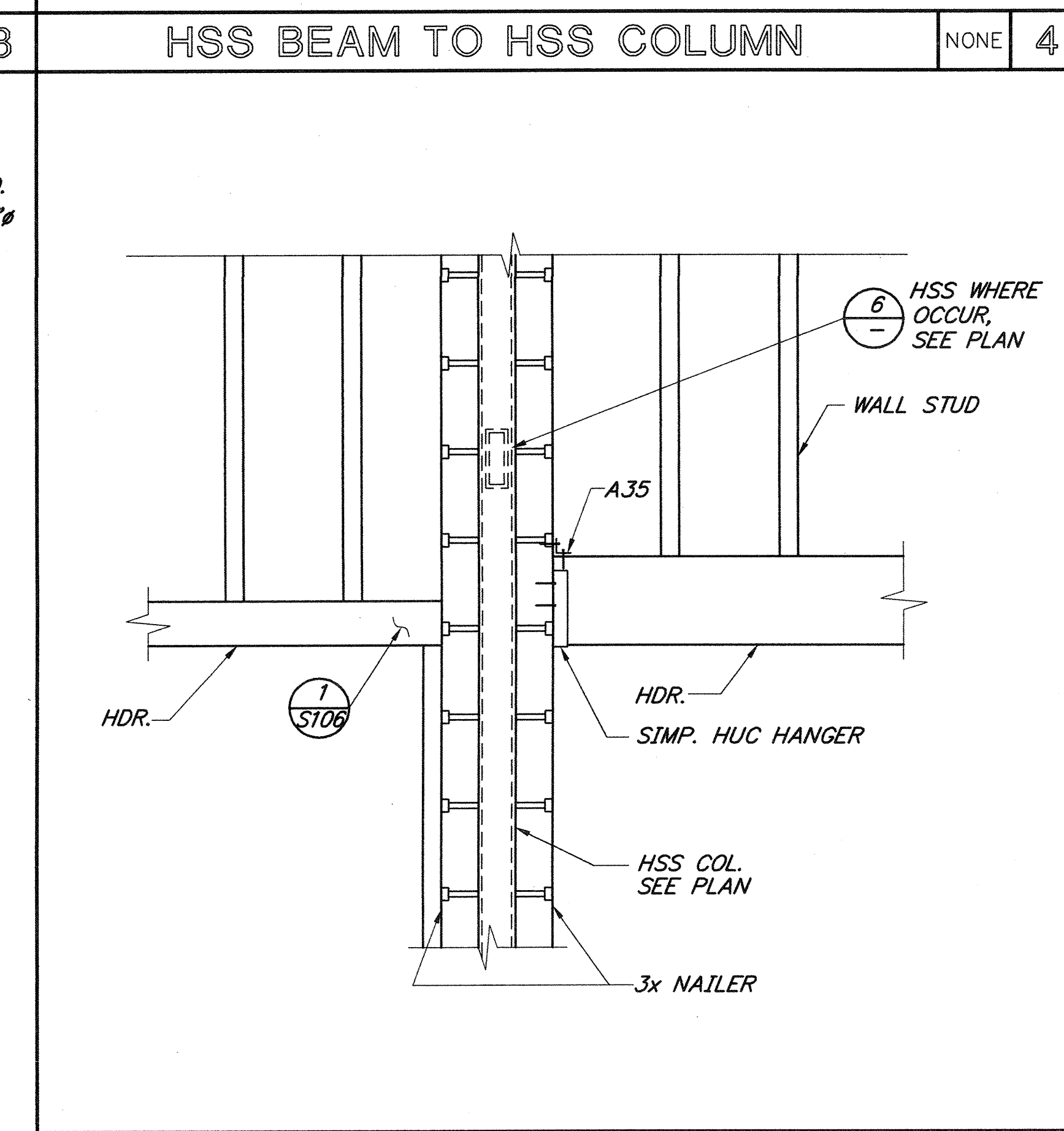
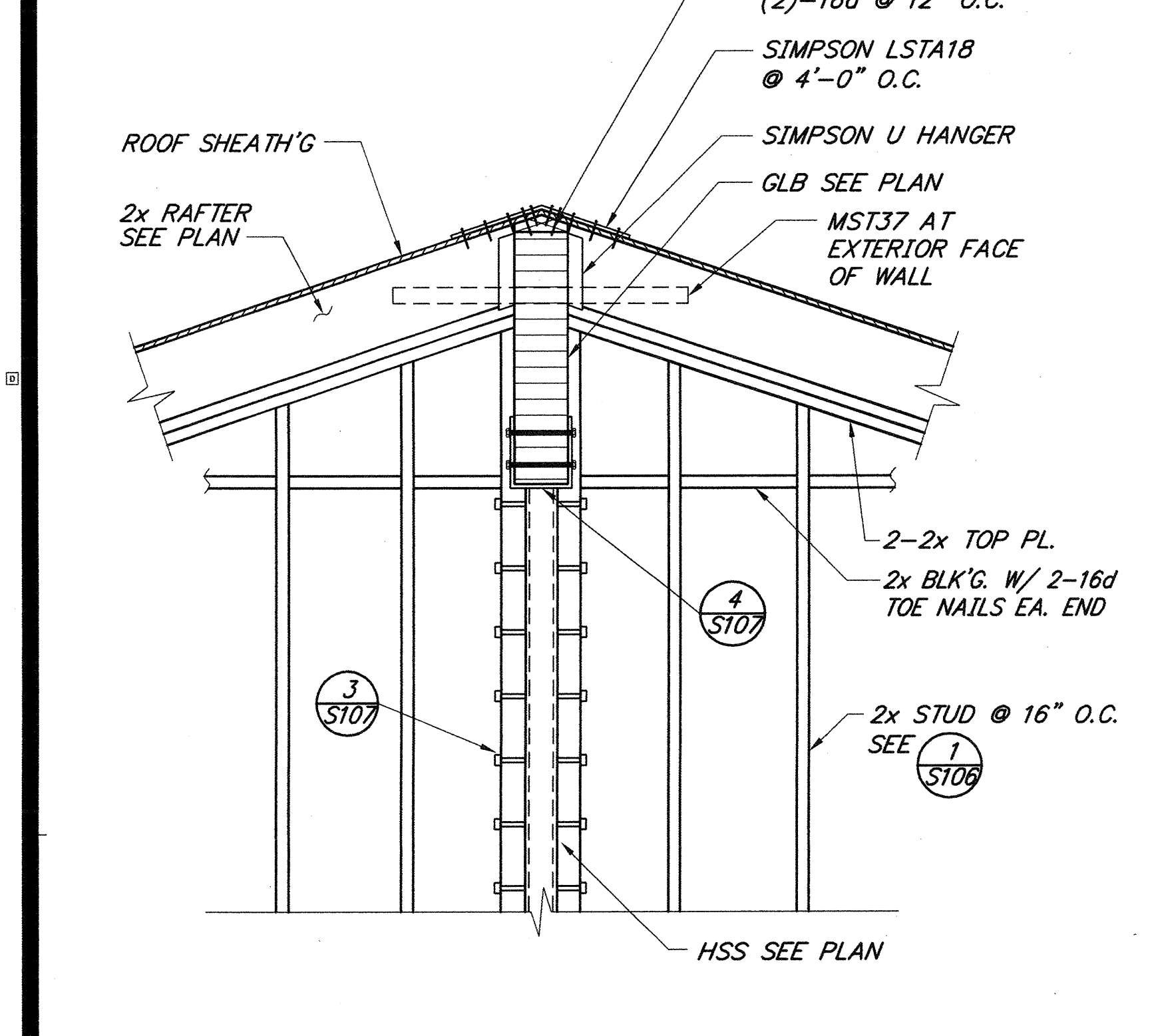
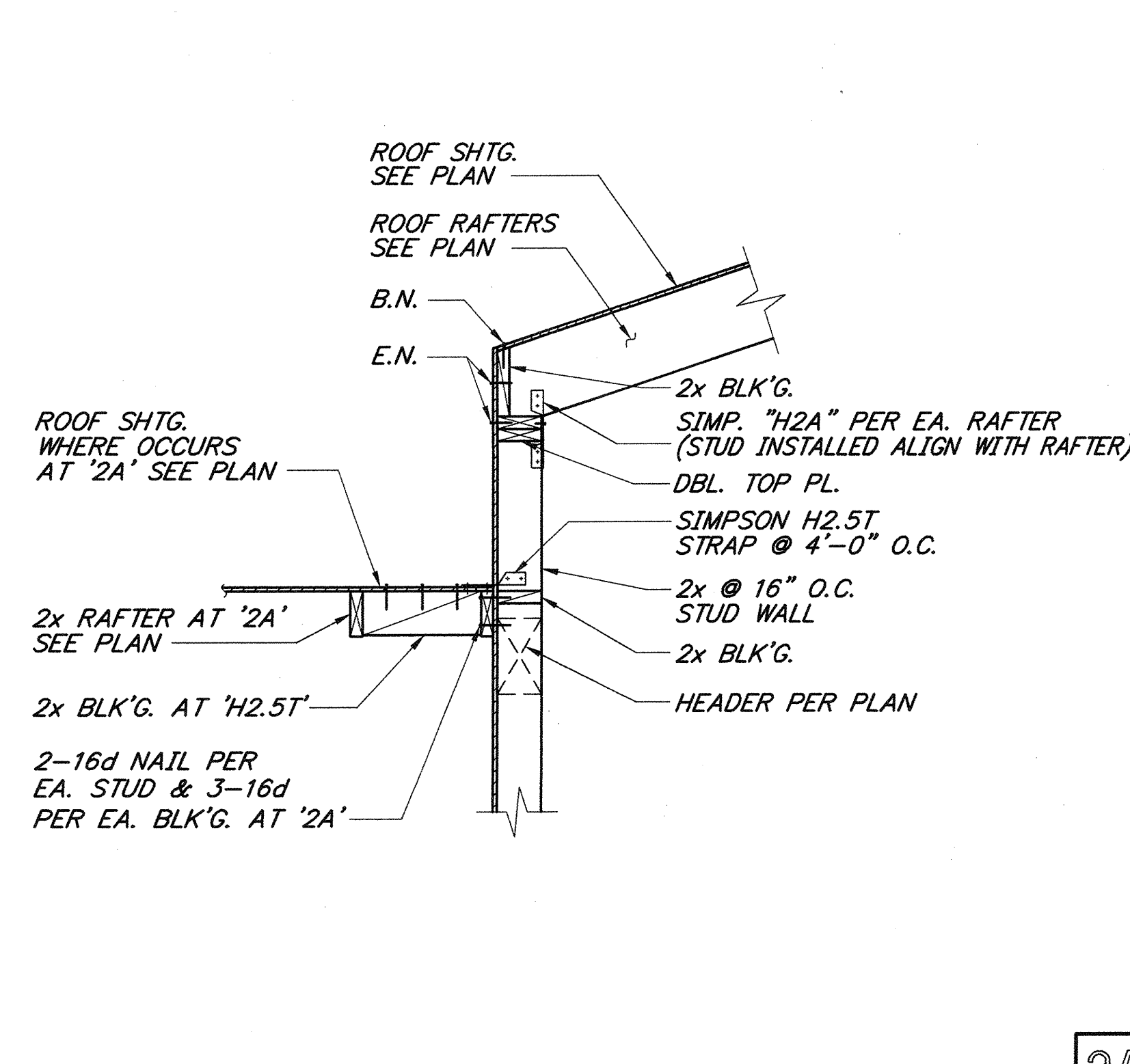
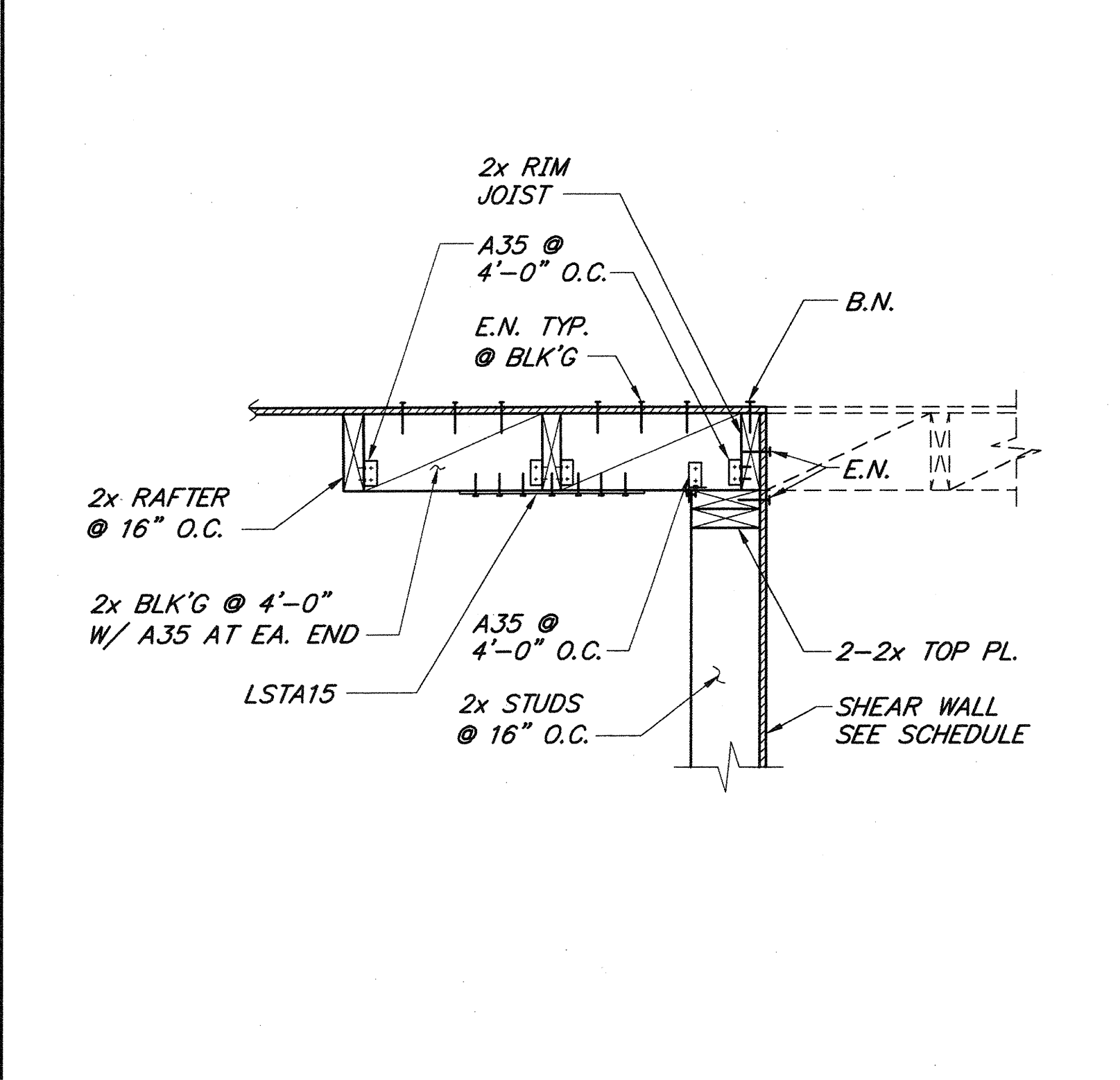
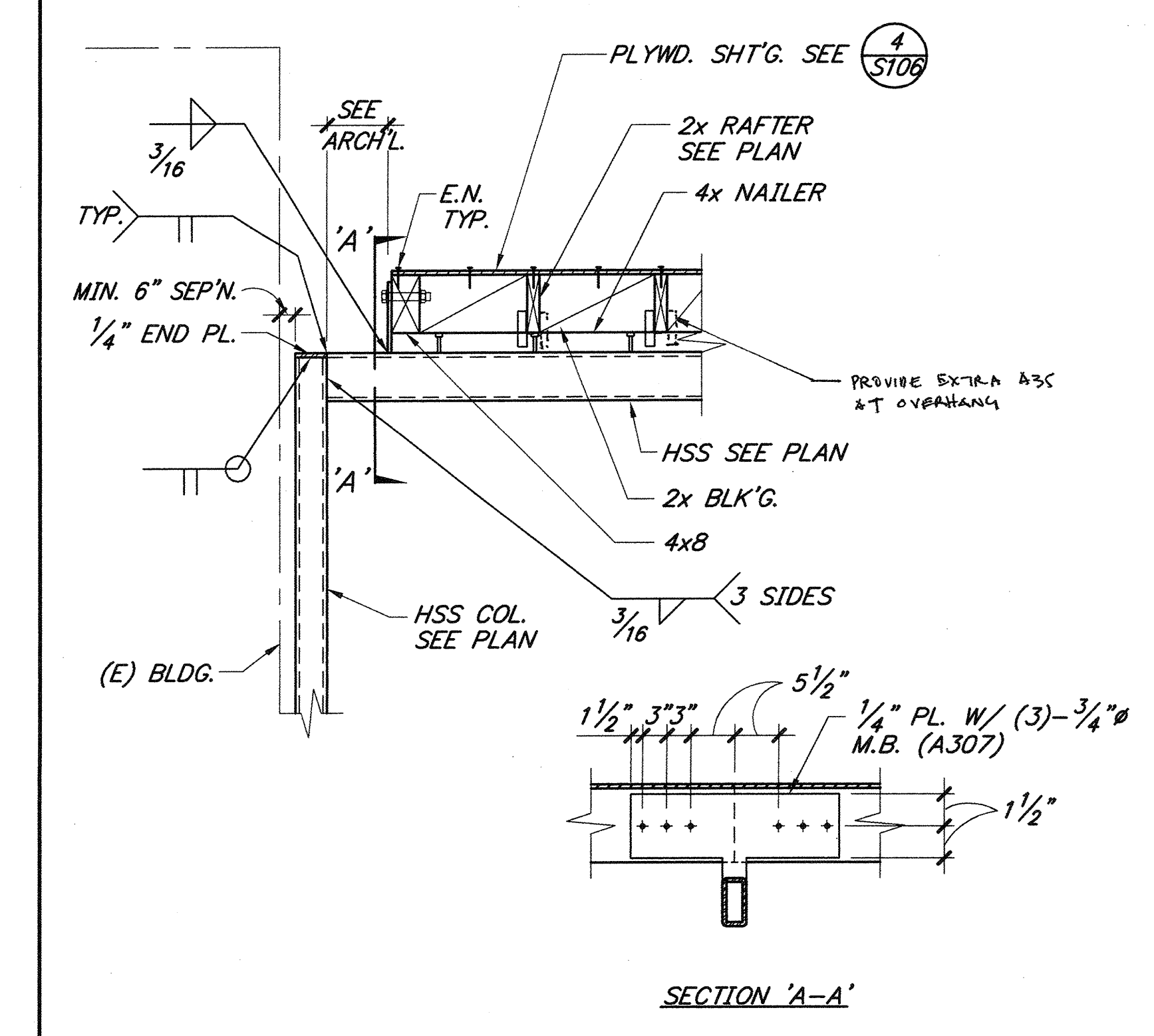
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Sheet Title:  
WOOD DETAILS  
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**S501**



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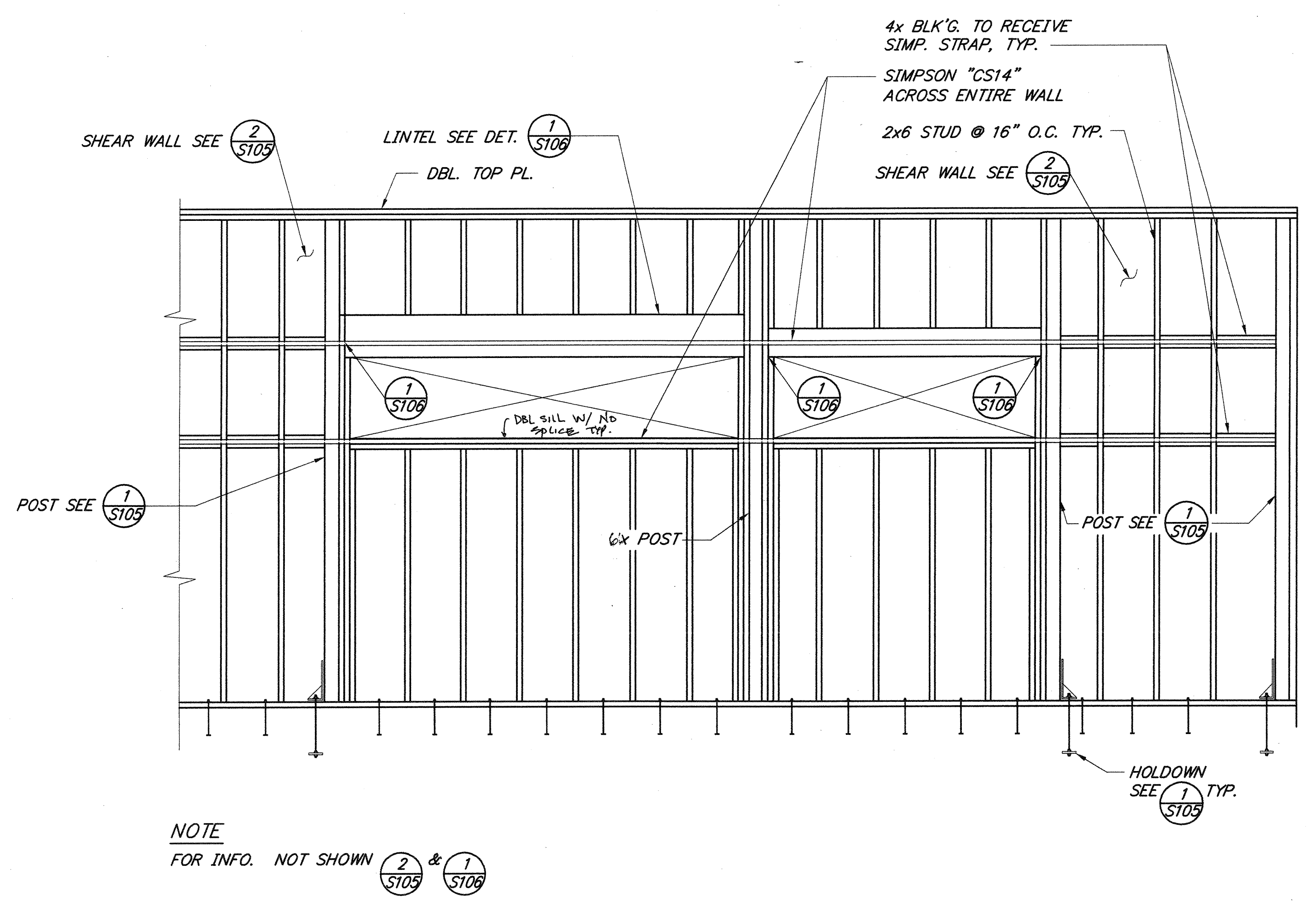
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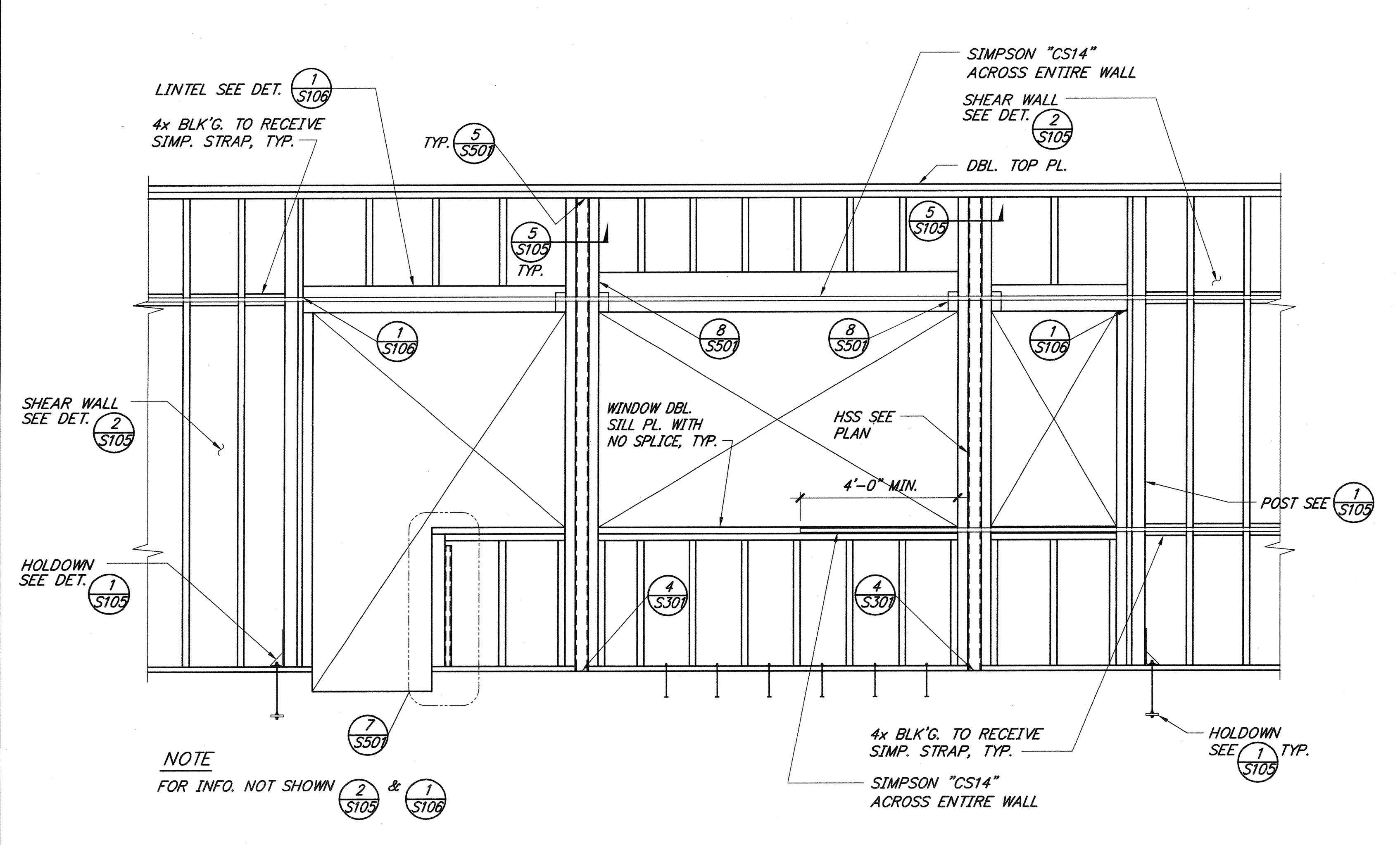
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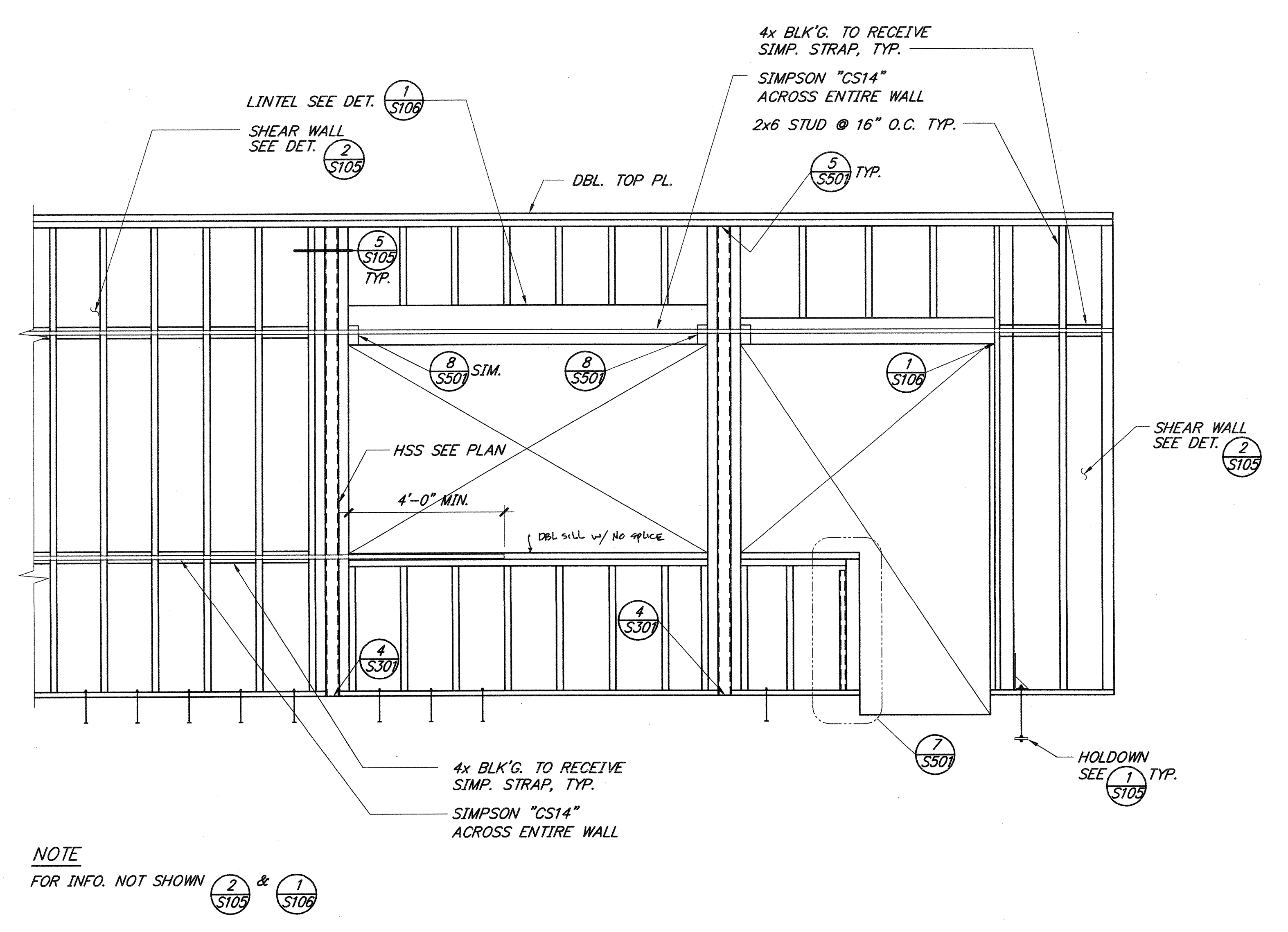
WALL FRAMING ELEVATION 1/2" 1

1/2" 1



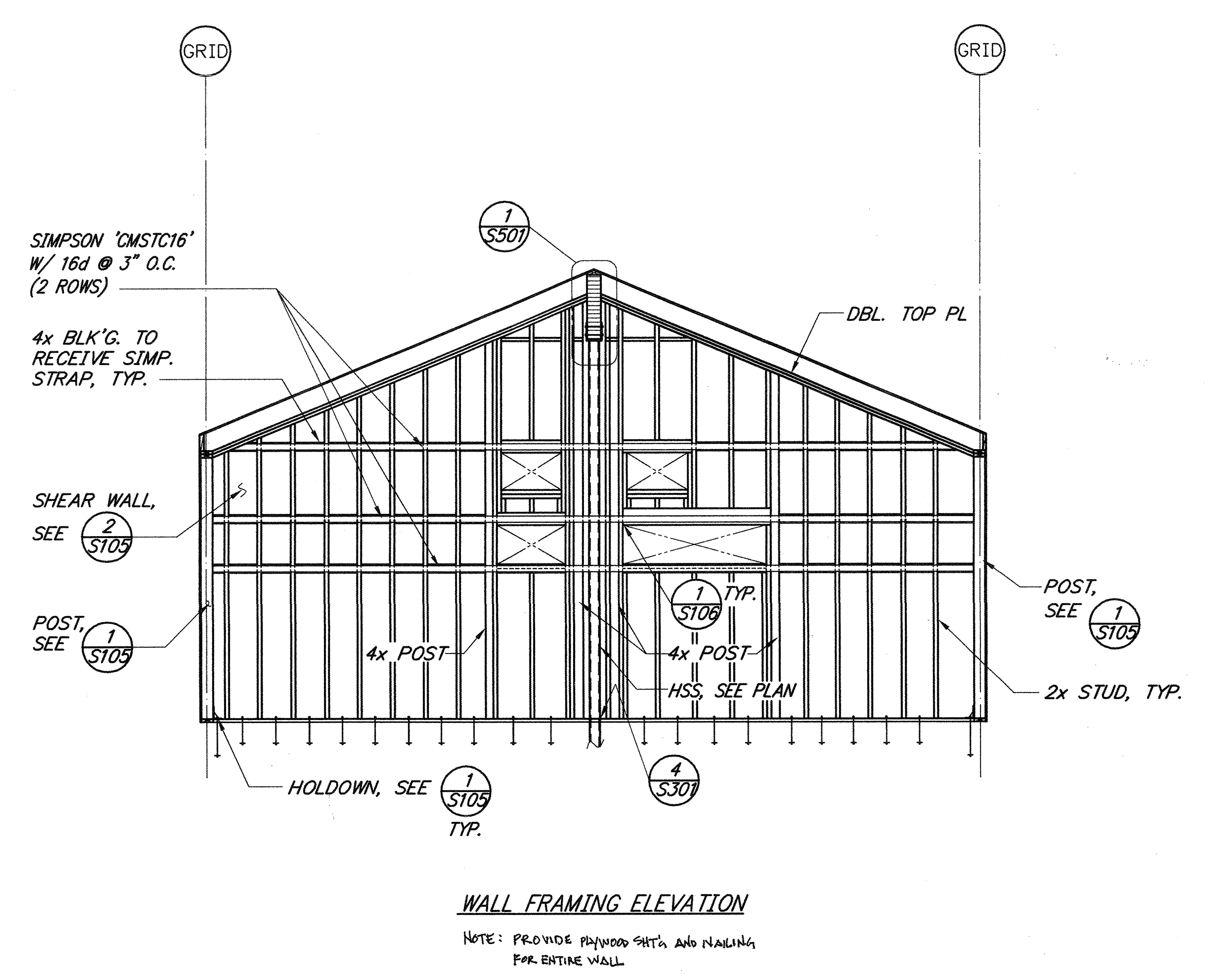
WALL FRAMING ELEVATION 1/2" 2

1/2" 2



WALL FRAMING ELEVATION 1/2" 3

1/2" 3

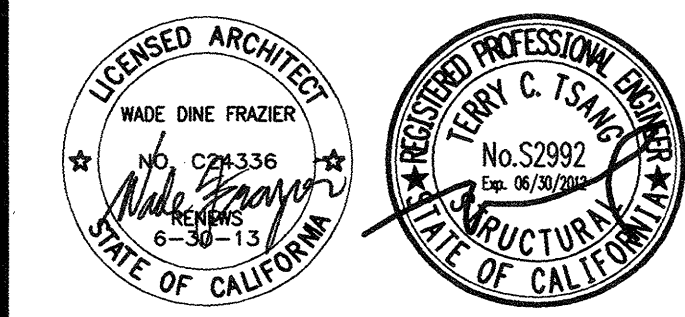


WALL FRAMING SECTION 1/4" 4

1/4" 4

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APPL 114031  
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Sheet Title:  
WALL FRAMING SECTIONS

Sheet Number:  
**S601**

**SCHOOL EQUIPMENT ANCHORAGE NOTES**

**EQUIPMENT ANCHORAGE NOTE:**

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2010 CBC, SECTIONS 1615A.1.12 THROUGH 1615A.1.22 AND ASCE 7-05 CHAPTER 6 AND 13.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

**PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:**

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2010 CBC, SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

**GENERAL NOTES**

1. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES AND ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF OTHER TRADES.
2. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED.
3. THIS CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK AND EQUIPMENT. HE SHALL COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER TRADES AND ALL JOB CONDITIONS.
4. THE INSTALLATION OF VALVES, THERMOMETERS, GAUGES, CLEANOUTS, DAMPERS, DUCT ACCESS DOORS OR OTHER INDICATING EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
5. ALL LINE VOLTAGE WIRING, EQUIPMENT AND LINE VOLTAGE CONDUIT SHOWN DASHED SHALL BE BY THE ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING AND LOW VOLTAGE CONDUIT SHALL BE BY THE HVAC CONTRACTOR. VERIFY ELECTRICAL CHARACTERISTICS PRIOR TO BID AND MATERIAL PURCHASE.
6. FINAL LOCATIONS OF THERMOSTAT OR SENSORS TO BE VERIFIED WITH THE ELECTRICAL AND MECHANICAL ENGINEER AT JOB SITE.
7. ALL THERMOSTATS OR SENSORS ON EXTERIOR WALLS TO BE MOUNTED ON THERMAL ISOLATION BASE.
8. ROOM THERMOSTATS OR SENSORS SHALL BE MOUNTED AT 4'-0" ABOVE FINISHED FLOOR. SEE DETAIL, THIS SHEET, FOR THERMOSTATS LOCATED ABOVE CABINETS, JUNCTION BOX AND CONDUIT SHALL BE SEALED AIR-TIGHT.
9. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL ENGINEER AND DSA FIELD ENGINEER.
10. ALL MISCELLANEOUS DUCTS, PIPES, ETC. SHALL BE BRACED IN ACCORDANCE WITH SMACNA DETAILS.
11. ALL SIZES FOR DUCTWORK AND AIR DISTRIBUTION ARE NET INSIDE DIMENSIONS.
12. PROVIDE AND INSTALL TURNING VANES IN RIGHT ANGLE ELBOWS AND DEFLECTORS IN RECTANGLE BRANCHES.
13. PROVIDE AND INSTALL ALL NECESSARY ACCESS DOORS AND CEILING ACCESS PANELS FOR DAMPERS AND CONTROLS.
14. PROVIDE COMBINATION FIRE/SMOKE DAMPERS IN DUCTS PENETRATING FIRE RATED PARTITIONS.
15. FOR EXACT LOCATIONS OF DIFFUSERS AND REGISTERS, SEE ARCHITECTURAL DRAWINGS.
16. INSTALL ALL FRESH AIR INTAKES AS TO BE 10'-0" FROM ANY AND ALL SANITARY VENTS OR EXHAUST FAN DISCHARGE. WHEN NECESSARY, EXTEND VENTS OR PROVIDE ADDITIONAL FRESH AIR INTAKE DUCTWORK AS DIRECTED BY THE ENGINEER.
17. THE SIZES, WEIGHTS AND CAPACITIES OF ALL EQUIPMENT SCHEDULED ON THE PLAN HAVE BEEN CAREFULLY COMPUTED. SHOULD EQUAL ITEMS BY DIFFERENT MANUFACTURERS (SEE SPECIFICATIONS) BE SUBMITTED FOR APPROVAL, ALL SUCH SUBMITTALS SHALL INCLUDE 1/4" SCALE SHOP DRAWINGS SHOWING METHOD OF INSTALLATION, PROVIDE LOAD RATINGS AND SEISMIC CALCULATIONS AS APPROVED BY A REGISTERED STRUCTURAL ENGINEER WITH EACH SUBMITTAL.

18. REQUIRED ROUTINE MAINTENANCE ACTION SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL, WHICH MAY BE LIMITED TO IDENTIFYING BY TITLE AND/OR PUBLICATION NUMBER THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT. ONE COPY OF THIS INFORMATION SHALL BE FURNISHED BY THE CONTRACTOR TO THE OWNER.
19. THE CONTRACTOR SHALL PROVIDE THE BUILDING OWNER, MANAGER, AND ORIGINAL OCCUPANTS A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AND RECIRCULATED AIR THAT THE VENTILATION SYSTEMS ARE DESIGNED TO PROVIDE TO EACH AREA.
20. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE PLANS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
21. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, SAW CUTTING, PATCHING AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS SHALL BE SEALED TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING PENETRATED.
22. CUTTING, BORING, SAW CUTTING OR DRILLING THROUGH THE STRUCTURAL ELEMENTS IS NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEW AND APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER AND THE DSA FIELD ENGINEER IF THE DETAILS DO NOT SHOW OR CONFORM TO THE APPROVED DRAWINGS.
23. PENETRATIONS OF PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENING SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A U.L. TESTED AND APPROVED ASSEMBLY APPROVED BY THE STATE FIRE MARSHALL.
24. BEFORE BIDDING THE PROJECT THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE CLEARANCES AVAILABLE TO BRING THE SPECIFIED EQUIPMENT AND MATERIAL TO THE SITE.
25. MANUAL VOLUME DAMPERS USED FOR HARD CEILING SHALL BE POTTORFF MODEL RCS-213 (REMOTE CONTROL DAMPER SYSTEM). CONTRACTOR SHALL VERIFY CEILING TYPE TO DETERMINE APPROPRIATE DAMPER TYPE.

**LEGEND**

SYMBOL	ABBREV.	DESCRIPTION
	(L)	SQUARE OR RECTANGULAR DUCT
	(L)	DUCT WITH ACOUSTIC LINER (IN ADDITION TO WHERE SPECIFIED)
		ROUND DUCT
		FLEXIBLE ROUND DUCT
		DUCT SLOPE DIRECTION
		DUCT UP OR DOWN
		DUCT TRANSITION
	(* FIG. 2-2)	RADIUS ELBOW (* FIG. 2-2)
	(* FIG. 2-2)	RECTANGULAR/SQUARE DUCT THROAT ELBOW WITH VANES (* FIG. 2-2)
	(* FIG. 2-8)	SQUARE 45 DEGREE ENTRY BRANCH CONNECTION (* FIG. 2-8)
	(* FIG. 3-5)	ROUND DUCT WYE FITTING (* FIG. 3-5)
	(* FIG. 2-7)	RECTANGULAR DUCT PARALLEL FLOW BRANCH (* FIG. 2-7)
		THROAT SIZE ON RECTANGULAR DUCT SPLIT
		DUCT TAKE-OFF FROM BOTTOM
		DUCT TAKE-OFF FROM TOP
	MVD	VOLUME DAMPER
	FD	FIRE DAMPER
	FD-SM	MOTORIZED DAMPER
	FD-SM	FIRE DAMPER & SMOKE DAMPER
		BAROMETRIC DAMPER
	CR	CEILING REGISTER (RETURN OR OUTSIDE AIR)
	CD	CEILING DIFFUSER (SUPPLY)
	CR	CEILING REGISTER (EXHAUST AIR)
		SUPPLY AIR DUCT SECTION UP OR DOWN
		RETURN OR OUTSIDE AIR DUCT SECTION UP OR DOWN
		EXHAUST AIR DUCT SECTION UP OR DOWN
		SUPPLY AIR DUCT UP THRU FLOOR OR ROOF
		RETURN OR OUTSIDE AIR DUCT UP THRU FLOOR OR ROOF
		EXHAUST AIR DUCT UP THRU FLOOR OR ROOF
	LVR.	DOOR LOUVER AND SQUARE FOOT AREA
		UNDERCUT DOOR 3/4"
	GALV.	GALVANIZED
	G. I.	GALVANIZED IRON
	S.P.	STATIC PRESSURE
	DIA.	ROUND(DIAMETER)
	CFM	CUBIC FEET OF AIR PER MINUTE
	DTR	DOWN THRU ROOF
	EXH.	EXHAUST
	OSA	OUTSIDE AIR
	R. OR RET.	RETURN
	S. OR SUPP.	SUPPLY
	TEMP.	TEMPERATURE
	TYP	TYPICAL
	UTR	UP THRU ROOF
		EQUIPMENT NUMBER
	T'STAT.	THERMOSTAT WITH UNIT NUMBER @ 48" MAX. A.F.F.
	BDD	BACKDRAFT DAMPER
	(L)	LINED DUCT

**DRAWING LIST**

DWG. NO.	DESCRIPTION
M0.0	GENERAL NOTES, LEGEND AND DRAWING LIST
M0.1	TITLE 24
M2.0	FLOOR PLAN
M4.0	DETAILS

**EQUIPMENT SCHEDULES**

**FURNACE SCHEDULE**

ITEM NO.	MANUFACTURER AND MODEL NO.	QUANTITY	ROOM SERVED	INPUT MBTU/HR.	OUTPUT MBTU/HR.	EXTERNAL S.P.	AFUE	C.F.M.	MOTOR H.P.	ELECTRICAL DATA			MOCIP	APPROX. OPERATING WT.-LBS.	ANCHORAGE DETAIL	OUTSIDE AIR (CFM)	REMARKS
										V-#-HZ	MCA						
F1	CARRIER 58CVX070-12	10	CLASSROOMS IN SCOPE OF WORK	66.0	54.0	.75	80.0	1180	1/2	115-1-60	9.0	15	130	(1) M4.0	450	COMPLETE WITH 7-DAY ELEC. PROGRAMMABLE T-STAT.	

**CEILING DIFFUSER SCHEDULE (SUPPLY AIR)**

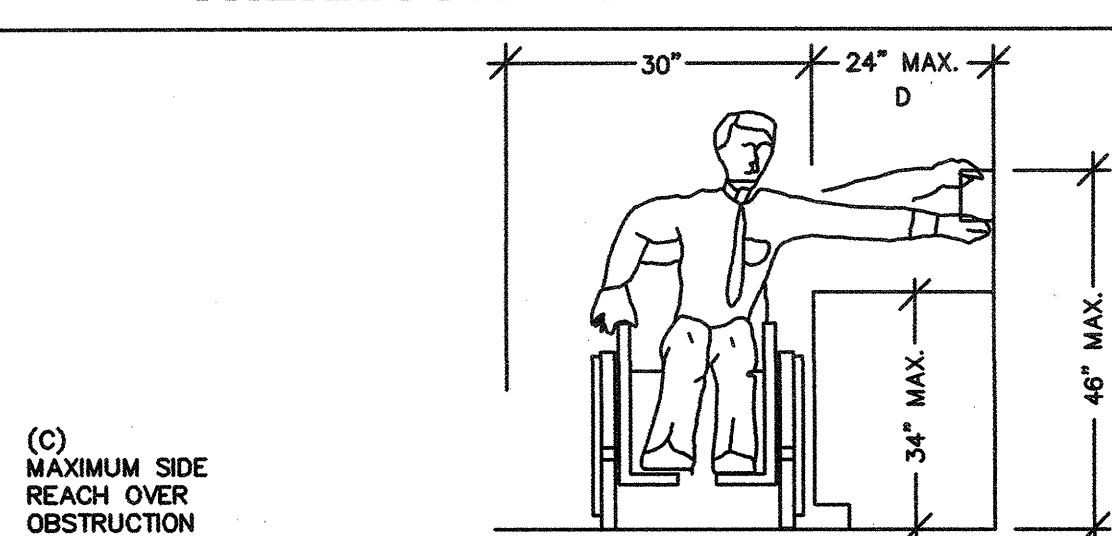
ITEM NO.	CEILING TYPE	MANUFACTURER AND MODEL NO.	FACE TYPE	REMARKS
CD	T-BAR OR GYP. BOARD	METAL AIRE 9000	MODULAR CORE	24x24 FILLER PANEL FOR LAY IN T-BAR. FIELD VERIFY PROPER DISCHARGE CONFIGURATION (2-WAY, 3-WAY OR 4-WAY).

**CEILING REGISTER SCHEDULE (RETURN/EXHAUST AIR)**

ITEM NO.	CEILING TYPE	MANUFACTURER AND MODEL NO.	FACE TYPE	REMARKS
CR	T-BAR OR GYP. BOARD	METAL AIRE RH	FIXED LOUVER	NONE

\* REFERS TO "SMACNA" HVAC DUCT CONSTRUCTION STANDARDS

**THERMOSTAT OVER OBSTRUCTION**



(C) MAXIMUM SIDE REACH OVER OBSTRUCTION

THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

SIDE REACH

FIGURE 11B-50

CORRESPONDING REACH HEIGHTS FOR GIVEN DEPTHS:

- WHEN D = 10" OR LESS, H = 54" MAX.
- WHEN D = 11" H = 53.5" MAX.
- WHEN D = 12" H = 53.0" MAX.
- WHEN D = 13" H = 52.5" MAX.
- WHEN D = 14" H = 51.5" MAX.
- WHEN D = 15" H = 51.0" MAX.
- WHEN D = 16" H = 50.5" MAX.
- WHEN D = 17" H = 50.0" MAX.
- WHEN D = 18" H = 49.5" MAX.
- WHEN D = 19" H = 49.0" MAX.
- WHEN D = 20" H = 48.5" MAX.
- WHEN D = 21" H = 47.5" MAX.
- WHEN D = 22" H = 47.0" MAX.
- WHEN D = 23" H = 46.5" MAX.
- WHEN D = 24" H = 46.0" MAX.

THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

SIDE REACH

FIGURE 11B-50

**APPLICABLE CODES AND STANDARDS**

- APPLICABLE CODES AS OF JANUARY 1, 2011
- 2010 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2010 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2009 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
- 2010 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2008 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
- 2010 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4 (2009 UNIFORM MECHANICAL CODE (UMC) W/CALIFORNIA AMENDMENTS)
- 2010 CALIFORNIA PLUMBING CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5 (2009 UNIFORM PLUMBING CODE (UPC) W/CALIFORNIA AMENDMENTS)
- 2010 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2010 CALIFORNIA FIRE CODE (FC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2009 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)

**PBWS ARCHITECTS**

1040 Lincoln Avenue, Suite 200  
Pasadena, California 91103

T: 626.432.5000  
F: 626.432.5010  
www.pbws.com

Consultant:

**TTG**

- STRUCTURAL
- MECHANICAL
- ELECTRICAL
- CIVIL

TMAD TAYLOR & GAINES  
901 Via Piedmont, Suite 400  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
www.ttgc.com Project No. 0011.006.00

Project Title:

**Palos Verdes HS**

CLASSROOM BUILDING 3

600 Cloyd Road  
Palos Verdes Estates  
California 90274

KEY PLAN

BID SET	DATE
04.24.12	
DSA SUBMITTAL	07.22.11
50% CD	05.31.11

Mark	Date	Description
Issues/Revisions		

Approval:

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
OFFICE OF REGULATION SERVICES  
APPL. 03-114031  
RE 19-1441  
MAR 2 2012

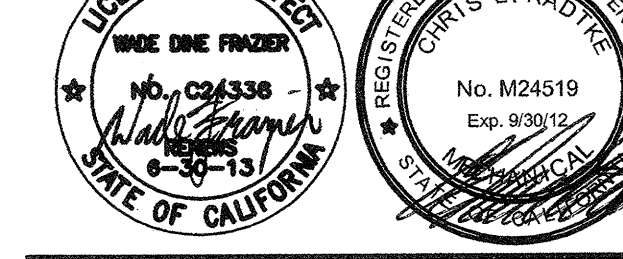
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CAD Dwg. File:	AD
Drawn By:	SN
Checked By:	SN

Sheet Title:

GENERAL NOTES,  
LEGEND AND DRAWING  
LIST

Sheet Number:

**M0.0**



PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERFC-1C Palos Verdes HS Classroom Bldg. 3 ANNUAL ENERGY USE SUMMARY (ASHRAE) 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERFC-1C Palos Verdes HS Classroom Bldg. 3 ANNUAL ENERGY USE SUMMARY (ASHRAE) 6/30/2011

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERFC-1C Palos Verdes HS Classroom Bldg. 3 ANNUAL ENERGY USE SUMMARY (ASHRAE) 6/30/2011

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERFC-1C Palos Verdes HS Classroom Bldg. 3 ANNUAL ENERGY USE SUMMARY (ASHRAE) 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 4 of 3) MECH-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 3) ENV-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

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CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL MECH-MM Palos Verdes HS Classroom Bldg. 3 6/30/2011

ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL ENV-MM Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 4) MECH-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C Palos Verdes HS Classroom Bldg. 3 6/30/2011

**KEY NOTES**

- 1 WALL LOUVER COMPLETE WITH FULL SIZE PLENUM.
- 2 WALL LOUVER COMPLETE WITH FULL SIZE PLENUM. PROVIDE A SHEET METAL DIVIDER IN PLENUM FOR EACH DUCT. RUN OSA AND RELIEF DUCT ABOVE MECHANICAL CLOSET.
- 3 HIGH AND LOW COMBUSTION AIR LOUVERS ARE TO BE WITHIN 12" OF THE FINISHED FLOOR AND 12" WITHIN BOTTOM OF CEILING IN MECHANICAL CLOSETS. SEE ARCHITECTURAL ELEVATIONS.

**PBWS**  
ARCHITECTS

1040 Lincoln Avenue, Suite 200  
Pasadena, California 91103  
T: 626.432.5000  
F: 626.432.5010  
www.pbws.com

Consultant:  
**TTG** + STRUCTURAL  
+ MECHANICAL  
+ ELECTRICAL  
+ CIVIL  
THAD TAYLOR & GAINES  
901 Via Piemonte, Suite 400  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
www.ttgcorp.com Project No. 0011.006.00

Project Title:

**Palos Verdes HS**  
CLASSROOM BUILDING 3  
600 Cloyden Road  
Palos Verdes Estates  
California 90274

KEY PLAN

BID SET	04.24.12
DSA SUBMITTAL	07.22.11
50% CD	05.31.11
DESIGN DEVELOPMENT	03.17.11

Mark Date Description  
Issues/Revisions

REGISTERED ARCHITECT  
NO. 22493  
STATE OF CALIFORNIA

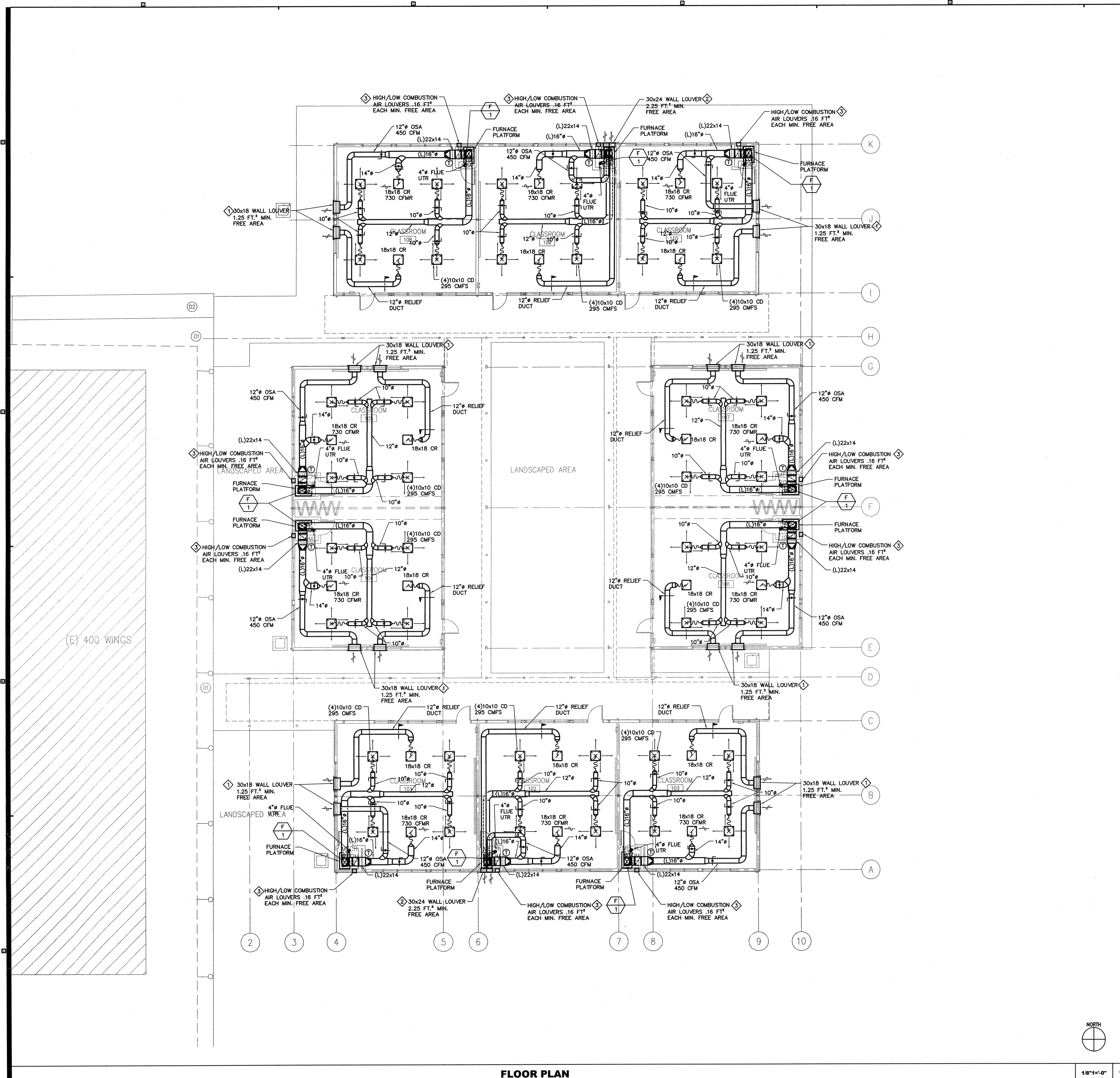
PROFESSIONAL ENGINEER  
No. M24519  
Exp. 9/30/12  
STATE OF CALIFORNIA

Approval:

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
OFFICE OF REGULATION SERVICES  
APPL. 03-114031  
ISS. 19-441  
DATE MAR 2-2-2012

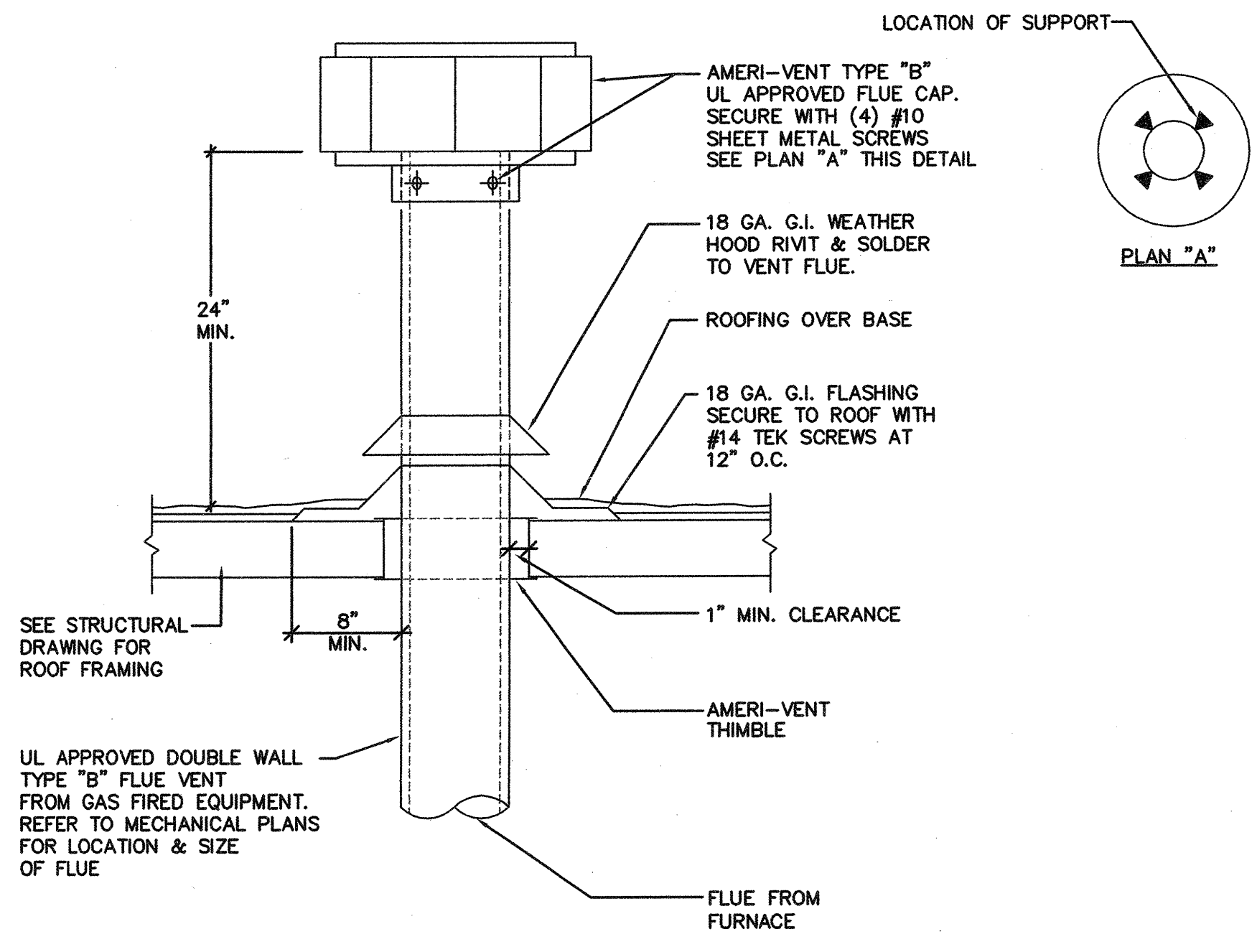
Project No: 10021.00  
CAD Dwg. File: AS  
Checked By: RP  
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Sheet Title:

FLOOR PLAN  
Sheet Number:  
**M2.0**



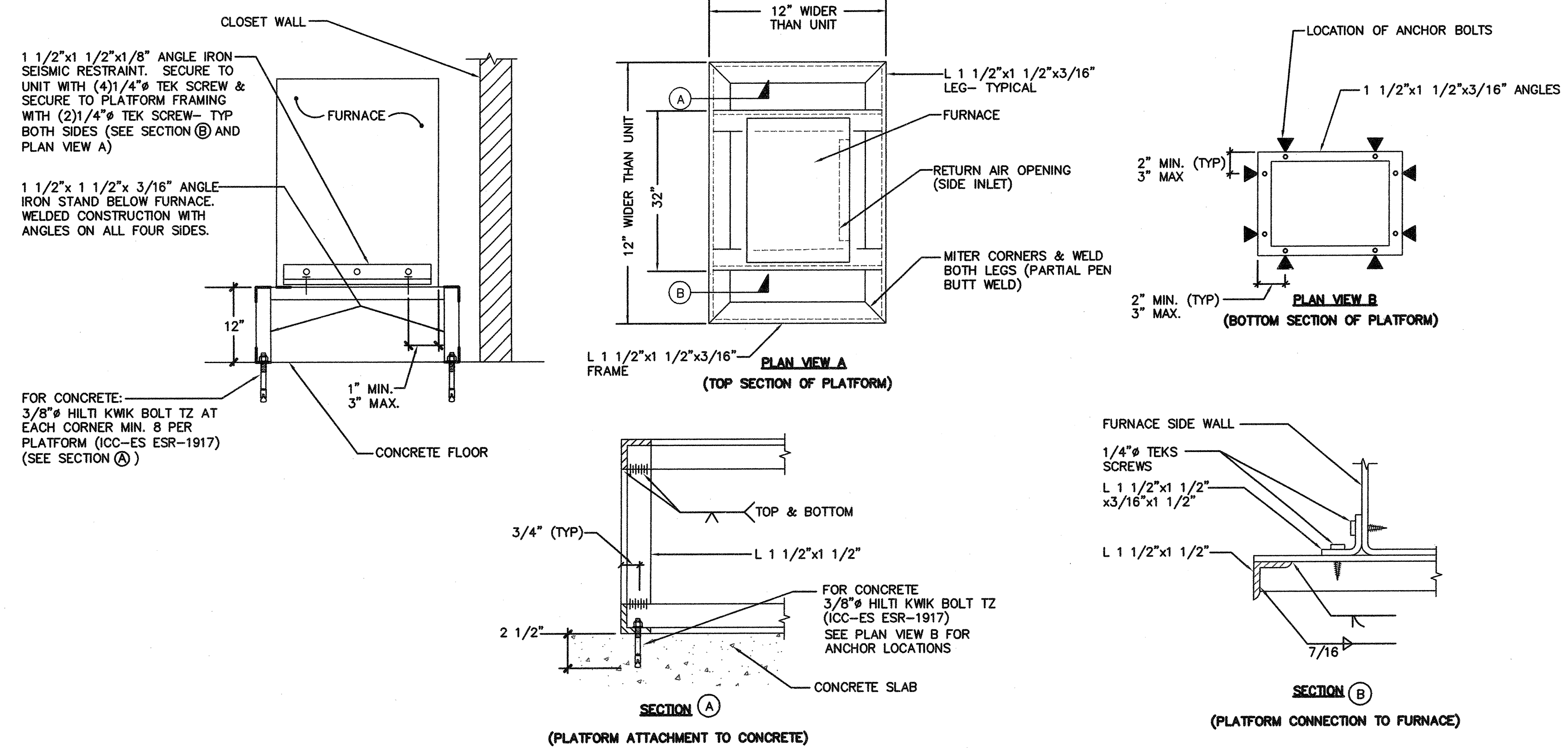
**FLOOR PLAN**

1/8"=1'-0" 1



FURNACE FLUE THRU ROOF DETAIL

NTS 6



FURNACE PLATFORM DETAIL

NTS 1

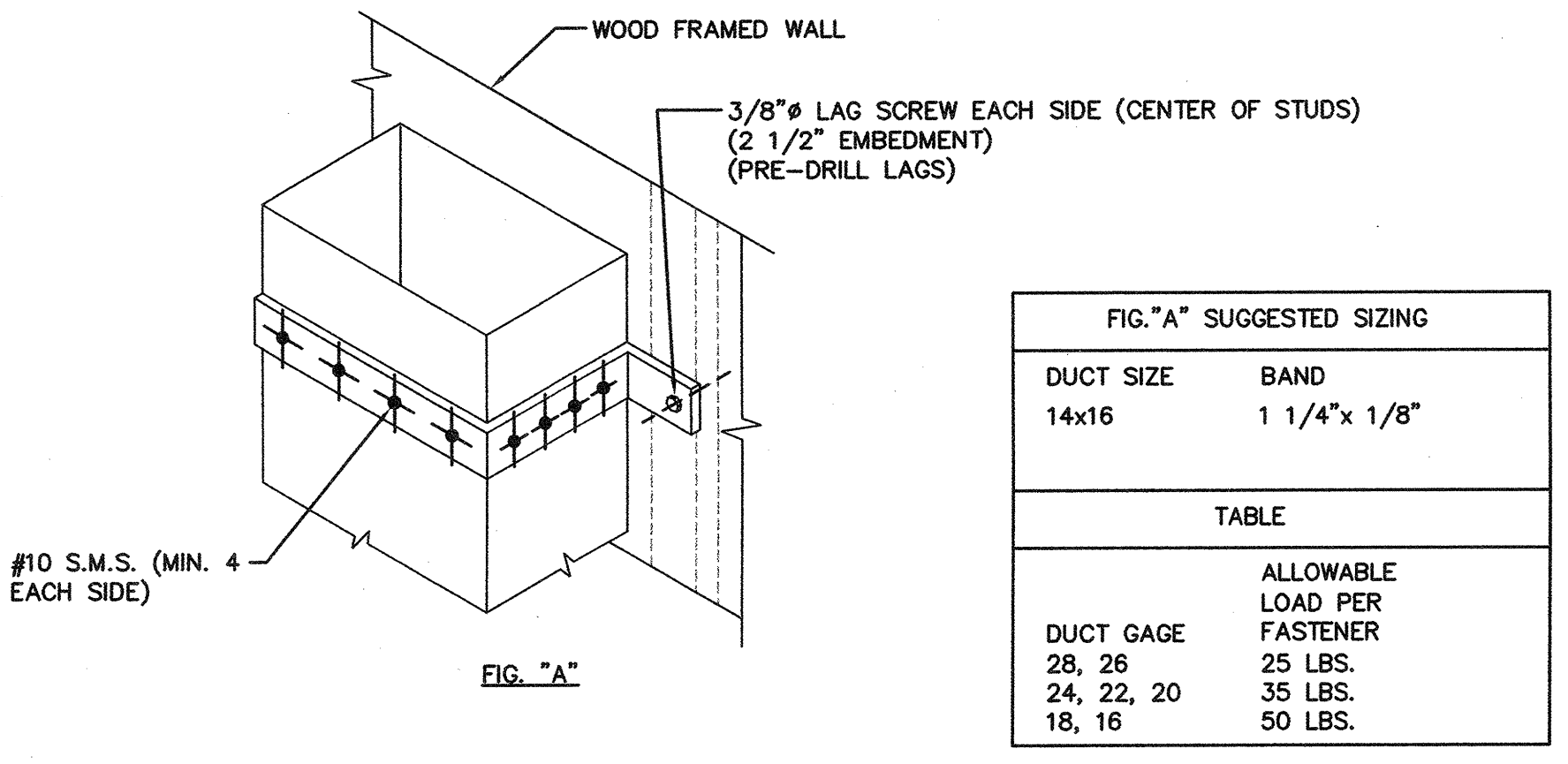


FIG. "A" SUGGESTED SIZING

DUCT SIZE	BAND
14x16	1 1/4" x 1/8"

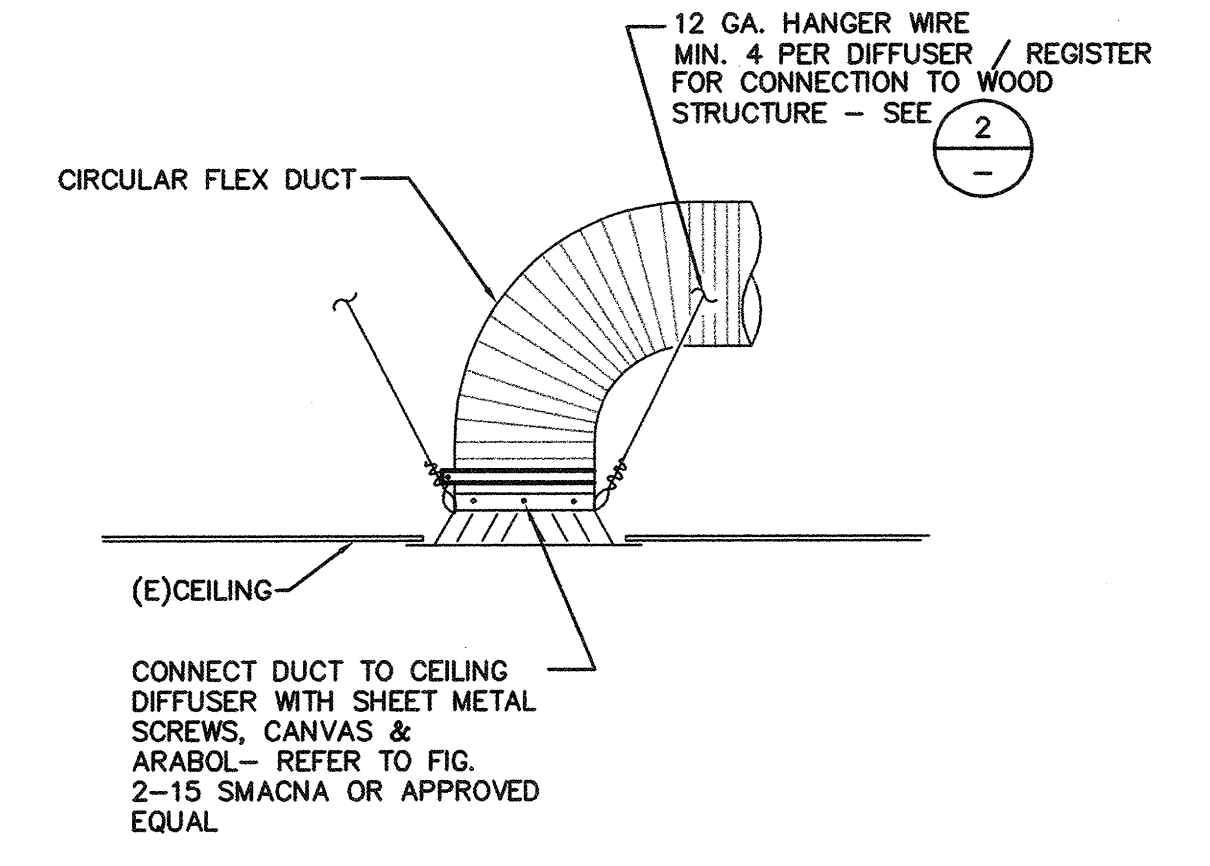
  

TABLE	
DUCT GAGE	ALLOWABLE LOAD PER FASTENER
28, 26	25 LBS.
24, 22, 20	35 LBS.
18, 16	50 LBS.

- NOTE: (REFERENCE SMACNA DUCT CONST. STDS. FIG. 4-7)
- BRACKETS ARE SIZED FOR 12' OF DUCT MAX.
  - LOCATE DUCTS AGAINST WALL OR MAX. OF 2" AWAY FROM WALL
  - EACH WALL ANCHOR SHALL SATISFY THE FOLLOWING CRITERIA UNLESS OTHER ANALYSIS IS MADE:
    - A. TENSILE LOAD = 3/8" x DUCT WEIGHT, SAFETY FACTOR OF (4)

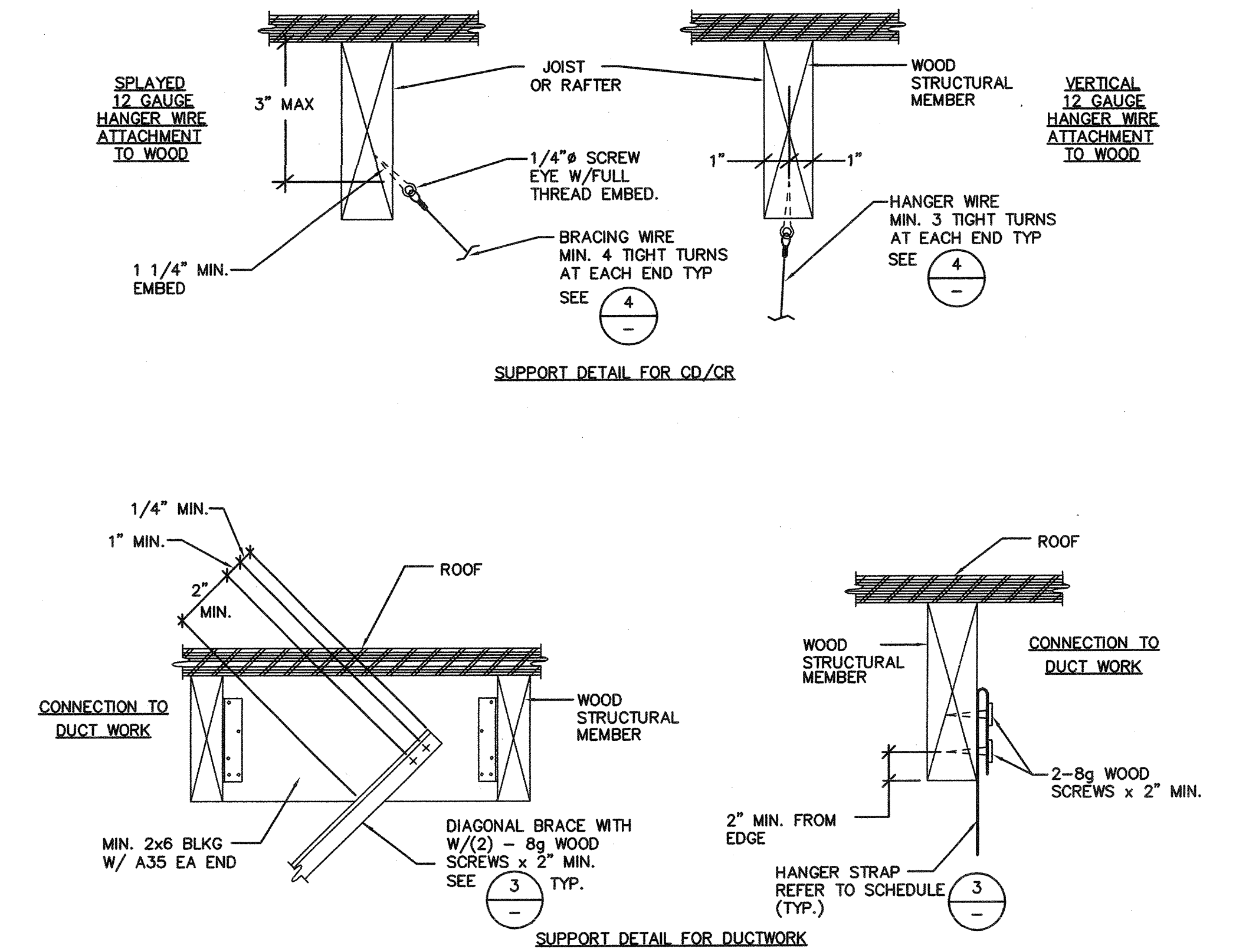
DUCT CONNECTION TO WALL

NTS 7



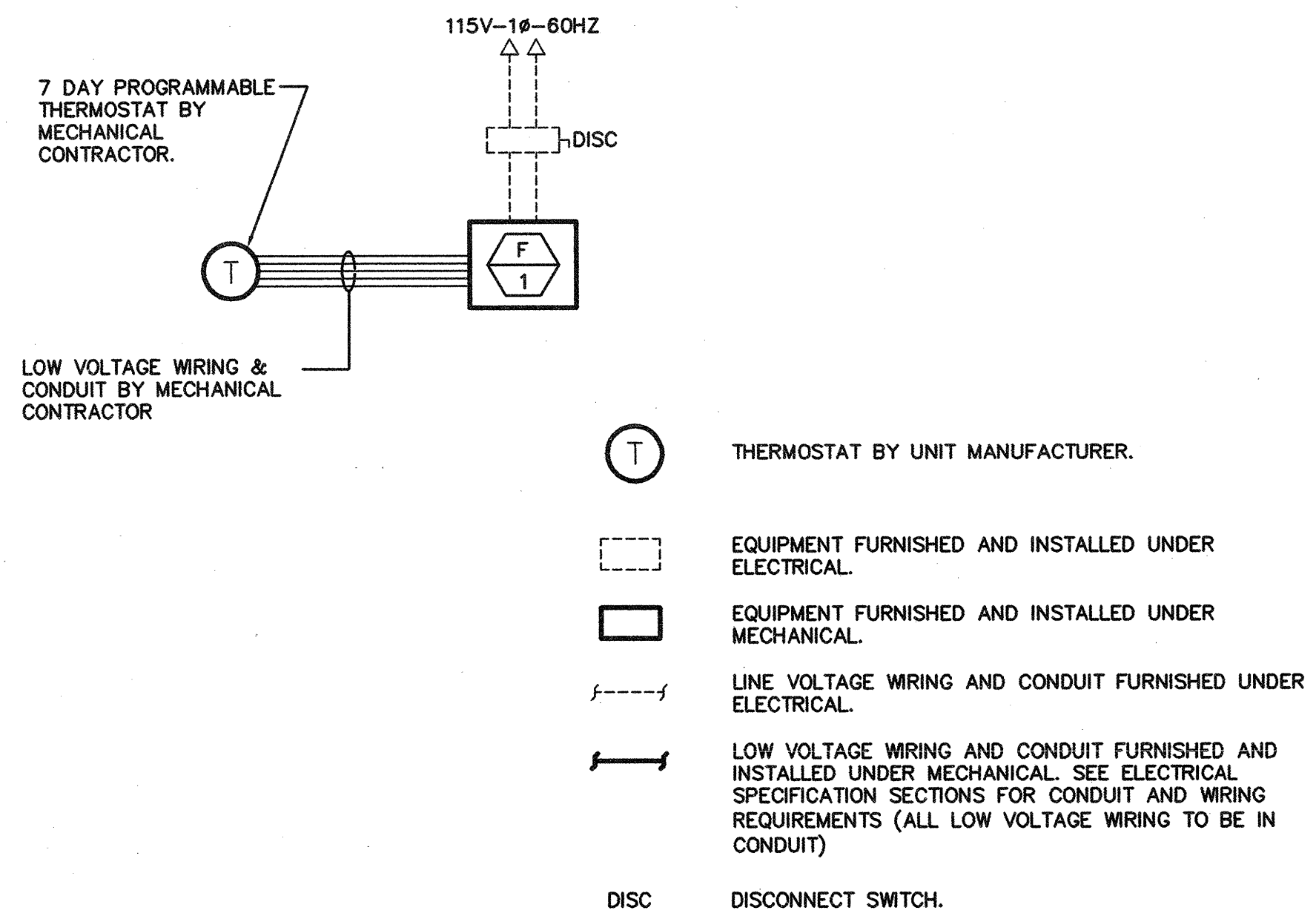
CD/CR MOUNTING DETAIL

NTS 4



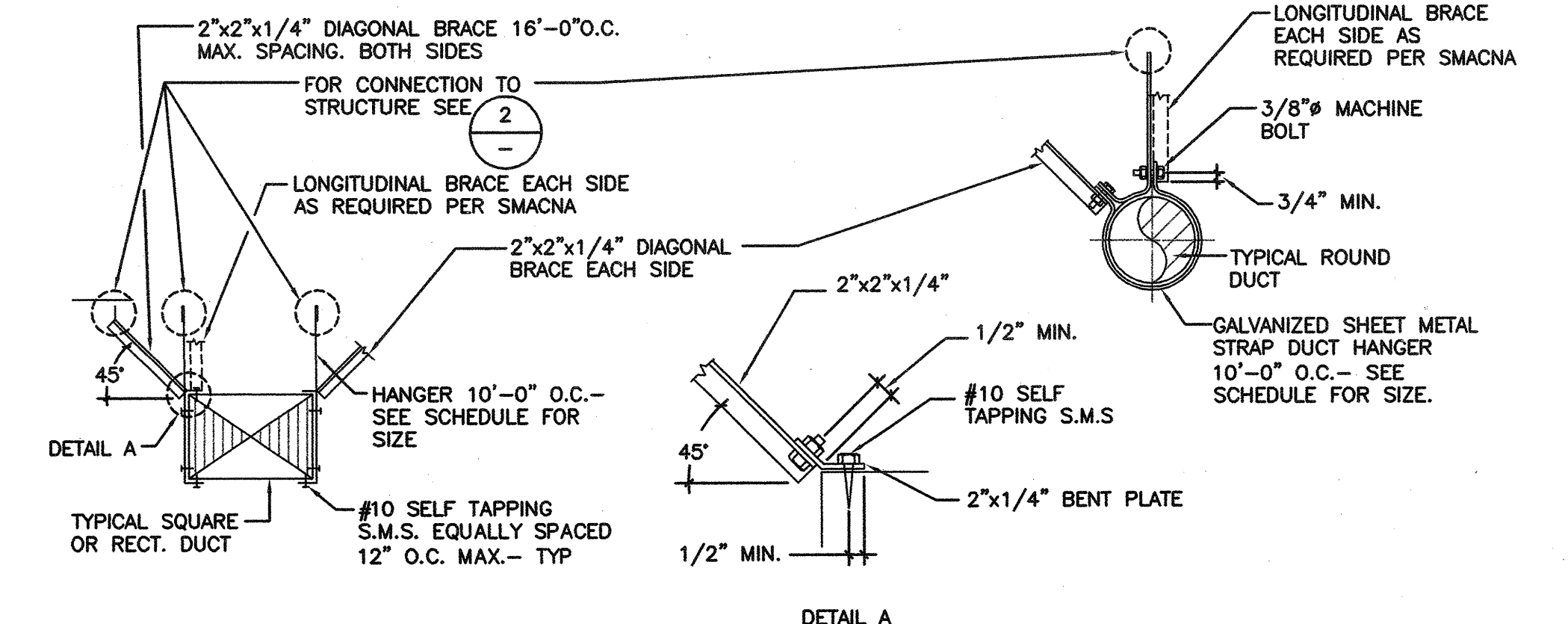
CONNECTION TO STRUCTURE

NTS 2



CONTROL WIRING DIAGRAMS/LEGEND

NTS 5



RECTANGULAR DUCT			ROUND DUCT		
MAX. OF DUCT PERIMETER/IN.	STRAP	MAX. LOAD EACH HANGER/LBS.	DIAMETER /INCHES	STRAP	MAX. LOAD EACH HANGER/LBS.
P/2 = 72	1" X 20 GA.	20	UP TO 20"	1" X 20 GA.	20
P/2 = 96	1" X 18 GA.	30	21" TO 36"	1" X 18 GA.	30

- NOTE:
- NO BRACING REQUIRED IF DUCT IS SUSPENDED 12 INCHES OR LESS IN LENGTH.
  - FOR TRANSVERSE AND LONGITUDINAL BRACING FOLLOW "SMACNA" GUIDELINES FOR SEISMIC HAZARD LEVEL "A".

DUCT SUPPORT DETAIL

NTS 3

**GENERAL NOTES**

- ALL WORK AND MATERIAL SHALL COMPLY WITH THE LATEST; CALIFORNIA BUILDING CODE, CALIFORNIA PLUMBING CODE, 2010 CALIFORNIA ADMINISTRATIVE CODE TITLE 24, CALIFORNIA STATE FIRE MARSHAL APPLICABLE CODES, AMENDMENTS AND REQUIREMENTS. ALL APPROVED ASTM, ACl, AND AITC DESIGNATIONS SHALL BE AMENDED TO MOST RECENT DATE.
- PROVIDE ALL SYSTEM COMPONENTS AND APPURTENANCES FOR A FULLY OPERATIONAL, CODE COMPLIANT INSTALLATION.
- ALL WORK AND MATERIALS INDICATED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
- PRIOR TO BIDDING, CONTRACTORS SHALL BECOME FAMILIAR WITH ALL PROJECT DOCUMENTS AND SURVEY THE SITE TO BECOME AWARE OF ALL EXISTING CONDITIONS AND SHALL NOTIFY THE OWNER IN WRITING ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN WITHIN THE DRAWINGS. NO EXTRA COMPENSATION SHALL BE AWARDED FOR THE CONTRACTOR'S FAILURE TO ALLOW FOR ANY EXISTING CONDITIONS THAT AFFECT HIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSIDERED EVIDENCE OF THE FACT THAT THE CONTRACTOR IS FULLY AWARE OF THESE CONDITIONS AND IS ABLE TO COMPLETE ALL WORK REQUIRED.
- THE CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL AND STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL CONFIRM ALL NECESSARY DIMENSIONS, SYSTEM COMPONENT SPACE REQUIREMENTS, AND POINTS OF CONNECTIONS TO ALL EXISTING SYSTEM COMPONENTS, FIXTURES, AND EQUIPMENT.
- THESE DRAWINGS AND LAYOUTS ARE DIAGRAMMATIC TO SHOW DESIGN INTENT AND INDICATE THE FINISHED REQUIREMENTS FOR THE PLUMBING SYSTEMS. IF NECESSARY, THE CONTRACTOR SHALL MAKE ANY MINOR ADJUSTMENTS TO THE SYSTEM OR ITS APPURTENANCES TO AVOID ANY CONFLICTS WITH BUILDING STRUCTURE OR THE WORK OF OTHER TRADES. IF DUE TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, OR STRUCTURAL INTERFERENCE, THE RETENTION OF EXISTING FACILITIES, OR FOR OTHER REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK IN A MANNER DIFFERENT FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO IMPLEMENTATION.
- CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHETHER SHOWN WITHIN THE DRAWINGS OR NOT AND SHALL PROTECT THEM FROM ANY DAMAGE. CONTRACTOR SHALL PAY FOR ALL REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY THE WORK.
- THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO ENSURE THAT THE PLUMBING AND FIRE PROTECTION SYSTEMS ARE FULLY COORDINATED WITH ALL OTHER TRADES. VERIFY ALL EXISTING UTILITIES, LOCATION, SIZE, DEPTH, PRESSURE AND AVAILABILITY PRIOR TO STARTING WORK.
- COORDINATE WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY PLUMBING EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION FOR AVAILABLE VOLTAGES PRIOR TO PURCHASING SAID EQUIPMENT.
- KEEP ALL PIPING CLEAR OF ALL LOAD BEARING FOOTINGS.
- UNDERGROUND STEEL PIPING, BOLTS, FLANGES, JOINTS AND COUPLINGS SHALL BE GIVEN HIGH QUALITY PROTECTIVE COATING SUCH AS 40 ML EXTRUDED POLYETHYLENE, 20 MIL PLASTIC TAPE OVER PRIMER PER AWWA STANDARD C209 OR HOT APPLIED COAL TAR ENAMEL OR TAPE PER AWWA C203.
- WHERE METALLIC PIPING PENETRATES CONCRETE STRUCTURE, SUCH AS FLOOR OR WALL, RUBBER SEALS, OR OTHER DIELECTRIC MATERIAL SHALL BE USED TO PREVENT PIPE CONTACT WITH CONCRETE AND REINFORCING STEEL.
- PENETRATION OF RATED ASSEMBLIES SHALL BE FIRE STOPPED USING AN APPROVED MATERIAL BY UL AND SHALL HAVE AN F OR T RATING AS DETERMINED BY TESTS CONDUCTED IN ACCORDANCE WITH UBC.
- THE CONTRACTOR SHALL COORDINATE ALL SHUT DOWN OF THE PLUMBING AND FIRE PROTECTION SYSTEMS WITH THE GENERAL CONTRACTOR AND/OR THE BUILDING ENGINEER AT A MINIMUM OF TWO WEEKS IN ADVANCE.
- WHERE THERE IS A DISCREPANCY BETWEEN THE DRAWINGS AND THE PROJECT SPECIFICATIONS OR BUILDING STANDARDS, THE ARCHITECTS SHALL BE NOTIFIED OF THIS DISCREPANCY PRIOR TO PROCEEDING WITH THE WORK.
- IF ANY EQUIPMENT OR MATERIAL FOR WHICH THE CONTRACTOR IN PLANNING ON UTILIZING IS DIFFERENT FROM THAT SPECIFIED SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL. THE SUBMITTAL SHALL INDICATE THAT THE SUBMITTED IS A SUBSTITUTION AND THE CREDIT DUE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF ALL OTHER CHANGES RESULTING FROM THE SUBSTITUTION INCLUDING CHANGES IN THE WORK OF OTHER TRADES NECESSARY TO ACCOMMODATE THE REQUESTED SUBSTITUTION.
- THE CONTRACTOR SHALL PROVIDE A COORDINATED SET OF SHOP DRAWINGS AND PRODUCT DATA ACCORDING TO THE SPECIFICATIONS FOR REVIEW AND APPROVAL PRIOR TO THE STARTING OF WORK AND THE PROCUREMENT OF ANY MATERIALS.

**GENERAL NOTES (CONTINUATION)**

- THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE RECORD SET OF DRAWINGS. THESE PRINTS SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE USED ONLY AS A RECORD SET. UPON COMPLETION OF THE WORK, AUTOCAD COPIES OF THE CONTRACT DRAWINGS SHALL OBTAINED FROM THE ARCHITECT, AND ALL CHANGES AS NOTED ON THE RECORD SET TO INCLUDE RFI'S SHALL BE INCORPORATED THEREON. THIS DOCUMENT WILL SERVE AS THE "AS-BUILT" RECORD SET. USE AUTOCAD VERSION 2008 OR LATER.
- ALL SYMBOLS SHOWN ON THE SYMBOL LIST ARE NOT NECESSARILY USED ON THIS PROJECT.
- ALL PLANS APPROVED BY GOVERNING AGENCIES SHALL BE KEPT IN A SECURE PLACE AND SHALL NOT BE USED BY WORKMEN. THE CONTRACTOR SHALL PROVIDE ALL SUBCONTRACTORS' CONSTRUCTION SETS REFLECTING SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS, ON PREMISES AT ALL TIMES, UNDER CARE OF THE JOB SUPERINTENDENT.
- THE CONTRACTOR OR SUBCONTRACTORS SHALL NOT TAKE SCALE MEASUREMENTS FROM THE DRAWINGS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. DETAIL DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- ALL PLUMBING AND ELECTRICAL WORK SHALL BE ANCHORED AND SUPPORTED PER SMACNA GUIDELINES. PLUMBING PIPES SHALL BE SUPPORTED AND BRACED PER 2010 UNIFORM PLUMBING CODE, SECTION 316. ELECTRICAL WORK SHALL BE SUPPORTED AND BRACED PER C.E.C.
- ALL PLUMBING AND ELECTRICAL SHALL BE SEISMICALLY BRACED ACCORDANCE WITH GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPE SYSTEMS PUBLISHED BY SMACNA FOR SEISMIC LEVEL "A". CONNECTIONS, HANGERS, BRACED MEMBERS, AND ANCHORAGE SHALL MEET SMACNA REQUIREMENTS FOR SEISMIC LEVEL "A".
- CONTRACTOR SHALL PROVIDE AND INSTALL ANY NECESSARY BLOCKING, BACKING, FURRING, AND FRAMING FOR ELECTRICAL, PLUMBING, EQUIPMENT, FIXTURES, AND OTHER MISCELLANEOUS ITEMS REQUIRING SAME.
- CONTRACTORS IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. CONTRACTOR SHALL MAINTAIN STRUCTURAL INTEGRITY OF ALL WORK UNTIL ALL WORK IS COMPLETE.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL REPLACEMENT OR REMEDY OF ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP WHICH APPEARS WITHIN ONE YEAR AFTER THE ACCEPTANCE OF THE WORK UNDER THIS CONTRACT, EXCEPT AS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING FINISHES THAT ARE AFFECTED BY THE WORK.
- PAINT ALL EXPOSED PIPING TO MATCH BACKGROUND OR AS DIRECTED BY THE ARCHITECT.

**BRACING NOTES**

**PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE.**

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2010 CBC, SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

**PLUMBING NOTES**

- THE CONTRACTOR SHALL PROVIDE A COMPLETE PLUMBING SYSTEM FOR THOSE AREAS INDICATED ON THE DRAWINGS, INCLUDING BUT NOT LIMITED TO, FIXTURE ROUGH-INS AND ALL UTILITY PIPING.
- RUN ALL PLUMBING PIPING AS HIGH AS POSSIBLE TO STRUCTURE AND COORDINATE ROUTING WITH OTHER TRADES.
- ALL PIPE BRANCH CONNECTIONS SHALL OFFSET. NO "BULL HEAD" CONNECTIONS WILL BE ALLOWED.
- THE CONTRACTOR SHALL PROVIDE CHROME PLATED ANGLE STOPS ON ALL ISOLATION VALVES ON ALL EQUIPMENT.
- SECURE ALL ESCUTCHEONS TIGHT TO WALL, OR SPUD.
- GAS COOKS, COUPLINGS, & FLEXIBLE CONNECTIONS SHALL BE INSTALLED AT EACH GAS CONNECTION LOCATION & SHALL BE ACCESSIBLE FOR SERVICE.
- ALL SHUT-OFF VALVES SHALL BE ACCESSIBLE.
- CONTRACTOR SHALL DETERMINE THE LOCATION OF THE EXISTING UTILITIES, EXISTING LOADS, AND IF APPROPRIATE THE INVERT OF THE SANITARY LINES. THE CONTRACTOR SHALL ENSURE THAT THE EXISTING UTILITY MAINS HAVE ADEQUATE CAPACITY FOR THE FIXTURES WHICH ARE BEING CONNECTED TO IT. THE CONTRACTOR SHALL INSURE THAT THERE IS SUFFICIENT FALL FROM THE NEW FIXTURE LOCATION TO THE SANITARY MAIN. SHOULD IT BE NECESSARY TO REROUTE LINES DUE TO CONDITIONS FOUND IN THE FIELD OR IF THE INDICATED POINT OF CONNECTION CANNOT BE MADE TO THE LINES AS FOUND, THE CONTRACTOR SHALL BEFORE CONTINUING, NOTIFY THE ARCHITECT BEFORE INSTALLING ANY WORK WHICH MAY BE AFFECTED.
- CONTRACTOR TO BED ALL PIPING WITHIN THE BUILDING IN SAND AND FILL TO 6 INCHES ABOVE TOP OF PIPE, COMPACT TO 95%. BACKFILL TRENCH WITH NATIVE SOIL AND COMPACT TO 95%. AND INSTALL A VAPOR BARRIER BELOW THE CONCRETE SLAB. THE VAPOR BARRIER SHALL BE APPROPRIATELY SEALED TO THE EXISTING VAPOR BARRIER.
- CONTRACTOR TO BED ALL PIPING OUTSIDE THE BUILDING IN A BEDDING AND COVERAGE MATERIAL HAVING A SAND EQUIVALENT OF GREATER THAN 30 SAND, FILL TO 6 INCHES ABOVE TOP OF PIPE, COMPACT TO 95%. PLACE A MARKER TAPE ON TOP OF THE 6-INCH FILL MATERIAL, AND BACKFILL TRENCH WITH NATIVE SOIL AND COMPACT TO 95%.

**DRAWING LIST**

Sheet Number	Sheet Title
P0.0	GENERAL NOTES, LEGEND, TABLES & DRAWING LIST
P1.0	SITE PLAN
P2.0	FLOOR PLAN
P3.0	DETAILS

**LEGEND**

SYMBOL	ABBREV.	DESCRIPTION
	G	FUEL GAS -8"W.C.
	MPG	MEDIUM PRESSURE GAS
	E	EXISTING
	GC	GAS COOK
		VALVE/COOK IN RISE/DROP
	GPR	GAS PRESSURE REGULATOR
	POD	POINT OF DISCONNECTION
	POC	POINT OF CONNECTION
		PLUMBING FIXTURE IDENTIFICATION / ENLARGEMENT REFERENCE
		PLUMBING EQUIPMENT IDENTIFICATION
		PLUMBING KEY NOTE IDENTIFICATION
	&	AND
	@	AT
	CFH	CUBIC FEET PER HOUR
	EXIST	EXISTING
	TYP	TYPICAL
	SGV	SEISMIC GAS VALVE

**PBWS ARCHITECTS**

1040 Lincoln Avenue, Suite 200  
Pasadena, California 91103

T: 626.432.5000  
F: 626.432.5010  
www.pbws.com

Consultant:  
**TTG**  
TMAD TAYLOR & GAINES  
901 Via Piemonte, Suite 400  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
www.ttcorp.com Project No. 0011.006.00

Project Title:

**Palos Verdes HS**

CLASSROOM BUILDING 3

600 Cloyden Road  
Palos Verdes Estates  
California 90274

**SIZE TABLES**

**GAS PRESSURE REGULATOR SCHEDULE**

ITEM	DESCRIPTION	LOCATION	MANUFACTURER		CAPACITY (5 PSI TO 8" WC)			ACTUAL LOAD (CFH)	
			MAKE	MODEL	SIZE	SPRING COLOR	ORIFICE FULLY OPEN		
GPR 1	SEISMIC GAS VALVE	TWO CLASS PORTABLE	AMERICAN METER CO.	1813C	3/4"	PURPLE	1/4"	338	132
GPR 2	SEISMIC GAS VALVE	THREE CLASS PORTABLE	AMERICAN METER CO.	1813C	3/4"	PURPLE	1/4"	338	198

**SEISMIC GAS VALVE SCHEDULE**

ITEM	DESCRIPTION	LOCATION	MANUFACTURER		SIZE	ACTUAL LOAD (CFH)
			MAKE	MODEL		
SGV 1	SEISMIC GAS VALVE	TWO CLASS PORTABLE	PACIFIC SEISMIC	VT311 (60)	1"	132
SGV 2	SEISMIC GAS VALVE	THREE CLASS PORTABLE	PACIFIC SEISMIC	VT312 (60)	1 1/4"	198

**SITE MPG P.E. PIPE SIZE TABLE**

BASED ON NATURAL GAS HAVING A SPECIFIC GRAVITY OF 0.60, PRESSURE SETTING OF 5 PSI, PRESSURE DROP OF 3.5 PSI. SIZE BASED FORMULAS FOUND IN NFPA 54 1400 FEET LENGTH

PIPE SIZE	CFH
1/2"	270
3/4"	537
1"	970
1 1/4"	1681
1 1/2"	2539
2"	4563
2 1/2"	12634
3"	24430
4"	67430

(ML) MEASURED LENGTH=930'  
(TDL) TOTAL DEVELOPED LENGTH : (930)(1.5 FITTINGS)=(1395')

**BLDG. 8" W.C. METALLIC PIPE SIZE TABLE**

BASED ON NATURAL GAS HAVING A SPECIFIC GRAVITY OF 0.60, PRESSURE SETTING LESS THAN 2 PSI, PRESSURE DROP OF .5"W.C. SIZE BASED TABLE 12-8 IN THE 2010 CPC REFER TO LENGTHS LISTED BELOW

BUILDING (TDL)	NORTH		SOUTH		WEST	
	(ML)	(TDL)	(ML)	(TDL)	(ML)	(TDL)
120	80	82.5	80	82.5	NOT USED	
PIPE SIZE	CFH					
1/2"	44	52	44	52	NOT USED	
3/4"	92	110	92	110	NOT USED	
1"	173	207	173	207	NOT USED	
1-1/4"	355	424	355	424	NOT USED	
1-1/2"	532	635	532	635	NOT USED	
2"	1020	1220	1020	1220	NOT USED	
2-1/2"	1630	1950	1630	1950	NOT USED	
3"	2890	3450	2890	3450	NOT USED	
4"	5890	7030	5890	7030	NOT USED	

(ML) MEASURED LENGTH  
(TDL) TOTAL DEVELOPED LENGTH

**EQUIPMENT GAS LOADS NORTH. BLDG.**

EQUIPMENT	QTY	INDIVIDUAL CAPACITY (CFH)	SUBTOTAL (CFH)	REQUIRED PRESSURE
MECHANICAL UNIT	3	66	198	8"W.C.
TOTAL			198 CFH	

**EQUIPMENT GAS LOADS EAST BLDG.**

EQUIPMENT	QTY	INDIVIDUAL CAPACITY (CFH)	SUBTOTAL (CFH)	REQUIRED PRESSURE
MECHANICAL UNIT	2	66	132	8"W.C.
TOTAL			132 CFH	

**EQUIPMENT GAS LOADS SOUTH BLDG.**

EQUIPMENT	QTY	INDIVIDUAL CAPACITY (CFH)	SUBTOTAL (CFH)	REQUIRED PRESSURE
MECHANICAL UNIT	3	66	198	8"W.C.
TOTAL			198 CFH	

**EQUIPMENT GAS LOADS WEST BLDG.**

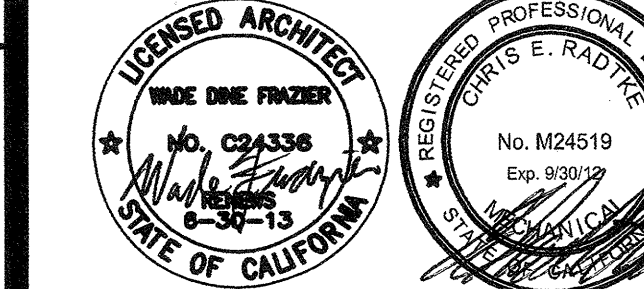
EQUIPMENT	QTY	INDIVIDUAL CAPACITY (CFH)	SUBTOTAL (CFH)	REQUIRED PRESSURE
MECHANICAL UNIT	2	66	132	8"W.C.
TOTAL			132 CFH	

**APPLICABLE CODES AND STANDARDS**

- THE INSTALLATION SHALL COMPLY WITH REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION AND INCLUDING THE FOLLOWING.
- 2010 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2010 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR. BASED ON THE 2009 INTERNATIONAL BUILDING CODE (IBC)
- 2010 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR. BASED ON THE 2008 NATIONAL ELECTRICAL CODE (NEC)
- 2010 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR. BASED ON THE 2009 UNIFORM MECHANICAL CODE (UMC)
- 2010 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CCR. BASED ON THE UNIFORM PLUMBING CODE (UPC)
- 2008 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2010 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR. BASED ON THE 2009 INTERNATIONAL FIRE CODE (IFC) RFC PD ORDINANCE 46
- 2010 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

KEY PLAN

BID DATE	04.24.12
DSA SUBMITTAL	07.22.11
50% CD	05.31.11
DESIGN DEVELOPMENT	03.17.11
Mark Date	Description
Issues/Revisions	



Approval:

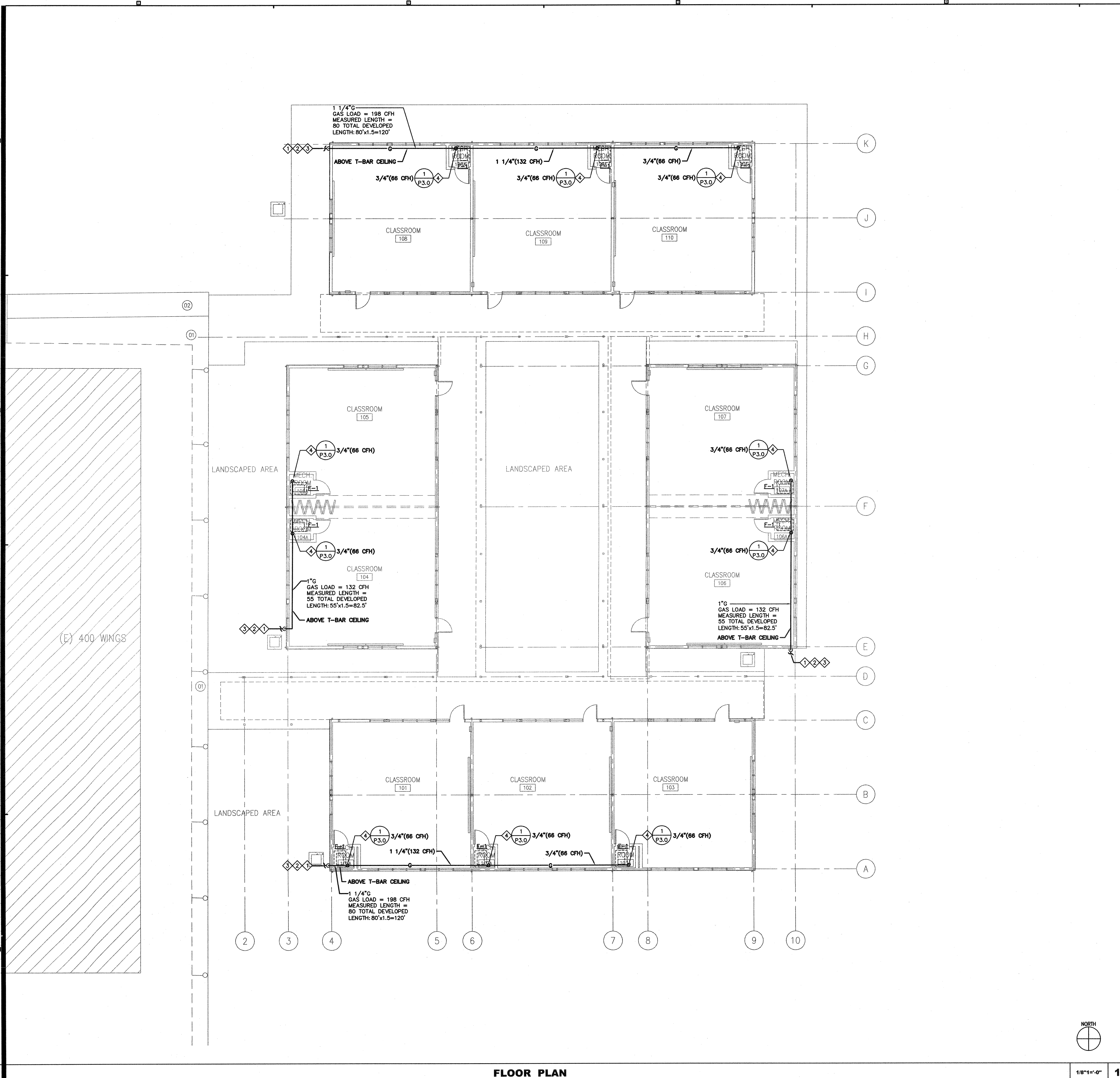
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DIV. OF THE STATE ARCHITECT  
OFFICE OF REGULATION SERVICES  
APPL 03-114031  
FILE 19-H41  
MAR 22 2012

Project No: 10021.00  
CAD Dwg. File:  
Drawn By: AD  
Checked By: SJ  
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Sheet Title:  
**GENERAL NOTES, LEGEND, TABLES & DRAWING LIST**

Sheet Number:  
**P0.0**





- KEY NOTES**
- 1. MINIMUM DEPTH OF COVER SHALL BE 3'-0". PATCH AND REPAIR ALL SURFACES TO MATCH EXISTING.
  - 2. CONTRACTOR TO CONTACT DIGALERT PRIOR TO THE START OF EXCAVATION.
  - 3. NEATLY SAWCUT OR TRENCH SURFACES FOR THE INSTALLATION OF THE NEW GAS LINES. PATCH AND REPAIR ALL SURFACES TO MATCH EXISTING.
  - 4. CONNECT GAS TO NEW HVAC UNIT PER DETAIL AS NOTED.

**PBWSI**  
ARCHITECTS

1040 Lincoln Avenue, Suite 200  
Pasadena, California 91103

T: 626.432.5000  
F: 626.432.5010  
www.pbws.com

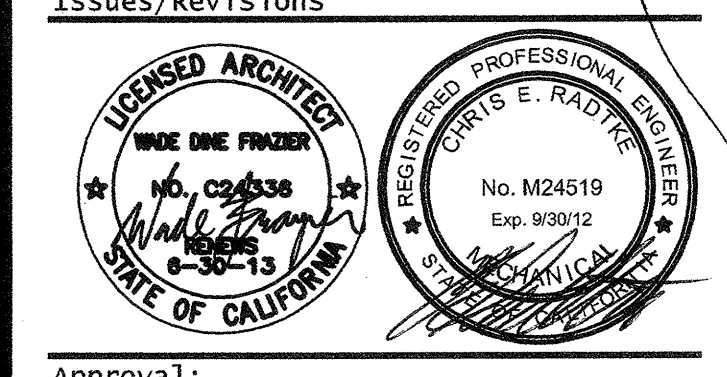
Consultant:  
**TTG**  
TMAD TAYLOR & GAINES  
901 Via Placentia, Suite 400  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
www.ttgcorp.com Project No. 0011.006.00

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CLASSROOM BUILDING 3  
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California 90274

KEY PLAN

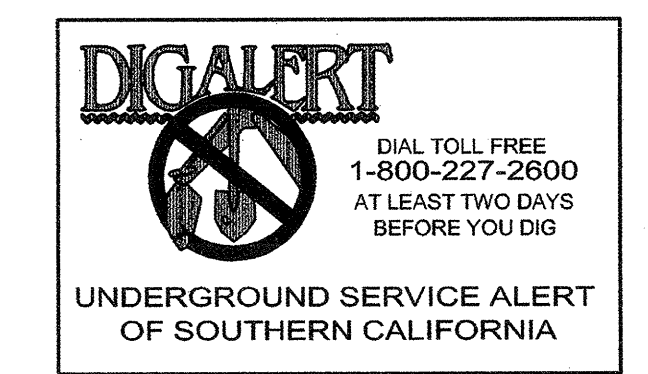
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Mark	Date	Description
Issues/Revisions		



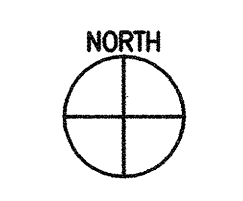
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DATE MAR 2 2012

Project No: 10021.00  
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Sheet Title:



NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS AN INQUIRY (I.D. NUMBER FROM "UNDER-GROUND SERVICE ALERT" (1-800-227-2600) AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.



**FLOOR PLAN**

1/8"=1'-0" 1

FLOOR PLAN  
Sheet Number:  
**P2.0**

BID SET	04.24.12
DSA SUBMITTAL	07.22.11
50% CD	05.31.11
DESIGN DEVELOPMENT	03.17.11

Mark	Date	Description



Approval:

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APPL 03-114031  
RE 19-H41  
DATE **MAR 2 2 2012**

Project No: 10021.00  
CAD Dwg. File: AS  
Drawn By: RP  
Checked By: RP

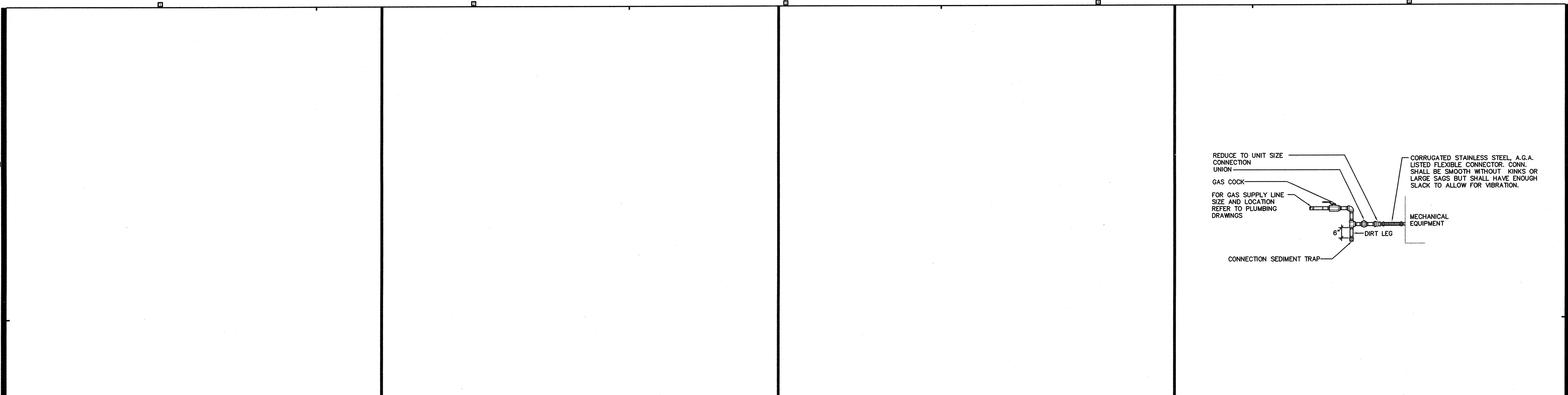
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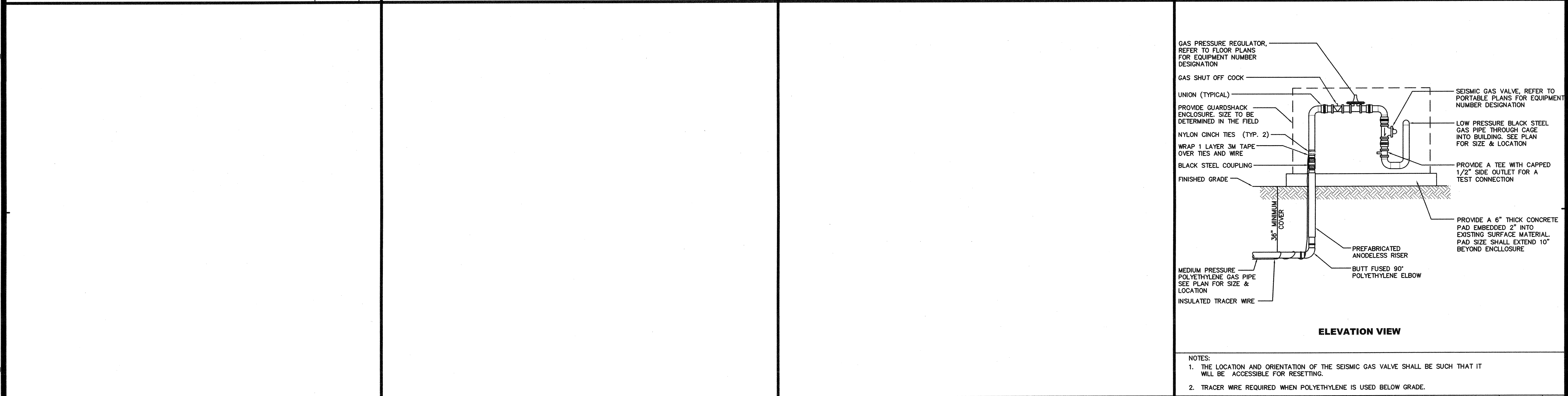
DETAILS

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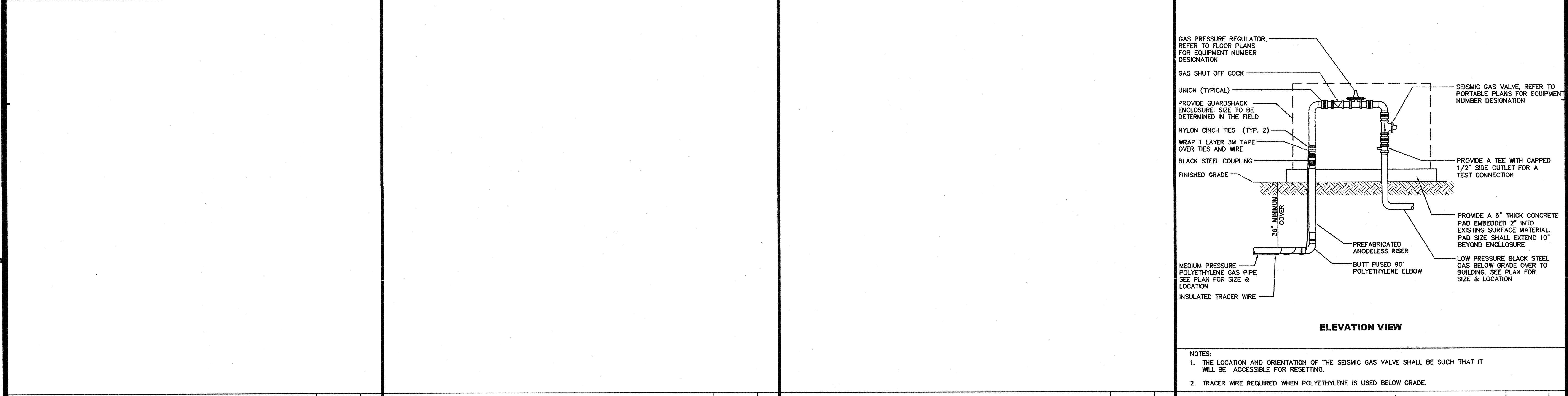
**P3.0**



NOT USED    NTS    10    NOT USED    NTS    7    NOT USED    NTS    4    **HVAC UNIT GAS CONNECTION**    NTS    1



NOT USED    NTS    11    NOT USED    NTS    8    NOT USED    NTS    5    **GAS PRESSURE REGULATOR STATION**    NTS    2



NOT USED    NTS    12    NOT USED    NTS    9    NOT USED    NTS    6    **GAS PRESSURE REGULATOR STATION**    NTS    3