

GENERAL

- ALL WORKMANSHIP, MATERIAL, AND TESTING SHALL CONFORM TO THE REQUIREMENTS OF THE 2013 CALIFORNIA BUILDING CODE AS AMENDED BY CITY OF THOUSAND OAKS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS TO VERIFY CONDITIONS AT THE JOB SITE AND TO CROSS-CHECK DETAILS AND DIMENSIONS ON THE STRUCTURAL DRAWINGS WITH RELATED REQUIREMENTS ON THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND ALL OTHER PERTINENT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION.
- ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION.
- DETAILS MARKED TYPICAL SHALL APPLY IN ALL CASES, UNLESS SPECIFICALLY DETAILED OTHERWISE. WHERE NO DETAIL IS SHOWN, CONSTRUCTION SHALL BE AS SHOWN FOR OTHER SIMILAR WORK.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING BRACING, SHORING, AND LAYDOWN OF CONSTRUCTION MATERIALS, ETC. UNLESS SPECIFICALLY INDICATED OTHERWISE, THE DESIGN AND INSTALLATION OF TEMPORARY SHORING AND BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- UNLESS OTHERWISE STATED IN WRITING, SITE VISITS BY REPRESENTATIVES OF THE STRUCTURAL ENGINEER:
 - DO NOT INCLUDE INSPECTION OF PROTECTIVE OR TEMPORARY CONSTRUCTION.
 - ARE GENERAL IN NATURE AND ARE NOT CONTINUOUS OR DETAILED.
 - DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE.
 - SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
- DIMENSIONS SHALL GOVERN OVER SCALES SHOWN ON DRAWINGS.
- DESIGN LIVE LOADS:
 - FLOORS AND PLATFORMS 100PSF
 - STAIRS 100PSF

SEISMIC DESIGN DATA

- RISK CATEGORY = II
- IMPORTANCE FACTOR I = 1.0
- MAPPED ACCELERATION PARAMETERS:
 - S_s = 1.5
 - S₁ = 0.6
- SITE CLASS = D
- DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
 - S_{ds} = 1.0
 - S_{d1} = 0.6
- SEISMIC DESIGN CATEGORY = D

FOUNDATIONS

- ALL FOUNDATION AND SOIL WORK SHALL CONFORM TO THE 2013 CALIFORNIA BUILDING CODE.
- ALL FOUNDATION BEARING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE BUILDING INSPECTOR PRIOR TO PLACING CONCRETE.
- FOUNDATION DEPTHS INDICATED ON THESE DRAWINGS REPRESENT MINIMUM STRUCTURAL REQUIREMENTS. DEEPER FOUNDATIONS MAY BE REQUIRED BY THE BUILDING INSPECTOR.
- SOIL TYPE SILTY-SAND
- ALLOWABLE FOUNDATION SOIL BEARING = 1,500 PSF.
- LATERAL SOIL RESISTANCE = 100 PCF.
- ALLOWABLE COEFFICIENT OF FRICTION = 0.25.

CONCRETE

CONCRETE SHALL BE AS FOLLOWS:

LOCATION	COMPRESSIVE STRENGTH, F _c (PSI)	CEMENT TYPE	AGGREGATE TYPE	MAXIMUM SIZE AGGREGATE (IN.)	MAXIMUM SLUMP (IN.)	MAXIMUM WATER/CEMENT RATIO (W/C)
SLABS ON GRADE	3,000	II	HARDROCK	1"	4"	0.45
OTHER CONCRETE	3,000	II	HARDROCK	1"	4"	0.50
STAIR LANDING AND TREAD FILL	3,000	II	LIGHTWEIGHT	1/2"	4"	0.45
METAL DECK FILL	3,000	II	LIGHTWEIGHT	1/2"	4"	0.45

- ALL CONCRETE SHALL BE ROCK CONCRETE CONFORMING TO ASTM C-33, UNLESS NOTED LIGHTWEIGHT. LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C-890, AND SHALL HAVE A MAXIMUM DENSITY OF 110 PCF IN 28 DAYS. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C-150 AND SHALL BE TESTED.
- ALL REINFORCING BARS, DONELS, ANCHOR BOLTS AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING OF CONCRETE.
- NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL MOLDINGS, GROOVES, CLIPS, ORNAMENTS, GROUNDS AND OTHER INSERTS TO BE CAST IN CONCRETE.
- CONTINUOUS INSPECTION SHALL BE REQUIRED DURING PLACING OF CONCRETE SPECIFIED GREATER THAN 2000 PSI.
- LOCATION OF CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
- AN APPROVED TESTING AGENCY SHALL MAKE CYLINDER TESTS PER ASTM C-31 AND C-39 FOR CONCRETE WITH F_c GREATER THAN 2000 PSI. A MINIMUM OF 3 CYLINDERS PER DAY AND 3 CYLINDERS PER EACH 150 CUBIC YARDS PLACED IS REQUIRED. TEST 1 CYLINDER AT 7 DAYS AND 2 CYLINDERS AT 28 DAYS.
- AN APPROVED TESTING AGENCY SHALL PROVIDE A MIX DESIGN FOR ALL CONCRETE WITH F_c GREATER THAN 2000 PSI.
- FLY ASH IS NOT PERMITTED.

CONCRETE MIX DESIGNS

- MIX DESIGNS SHALL BE SUBMITTED TO THE ARCHITECT TWO WEEKS PRIOR TO ANY POUR FOR THE DESIGN.
- ALL MIX DESIGNS SHALL BE SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER.
- SEE SPECIFICATIONS AND GENERAL NOTES FOR MIX REQUIREMENTS.
- MIX DESIGNS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - PROJECT NAME
 - MIX DESIGN NUMBER
 - LOCATION WHERE EACH DESIGN IS TO BE USED
 - STRENGTH
 - MAXIMUM SLUMP
 - CEMENT TYPE
 - AGGREGATE GRADATION
 - MAXIMUM SIZE OF COARSE AGGREGATE
 - MATERIAL PROPORTIONS
 - ADMIXTURES
- SUBMIT MANUFACTURER'S INFORMATION FOR ALL ADMIXTURES.

GROUT PRODUCTS

- DRYPACK MIX SHALL BE ONE PART CEMENT AND 1 1/2 PARTS FINE AGGREGATE WITH A MINIMUM OF WATER.
- SKIRGROUT 212 NON-SHRINK CEMENTITIOUS GROUT SHALL BE USED WHERE "GROUT" IS SPECIFIED ON DRAWINGS.
- COMPLY WITH ALL PERTINENT RECOMMENDATIONS BY SIKA CORP. FOR THE USE OF SKIRGROUT 212.
- CONTINUOUS INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR ALL GROUTING PROCEDURES.

REINFORCING STEEL

- ALL REINFORCING STEEL BE PLACED AND SUPPORTED IN CONFORMANCE WITH THE MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION, LATEST EDITION, PUBLISHED BY C.R.S.I.
- ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60.
- ALL REINFORCING STEEL TO BE WELDED SHALL BE DEFORMED BARS CONFORMING TO ASTM A-708 GRADE 60.
- TIE WIRE SHALL BE 16 GAGE, FULLY ANNEALED, CONFORMING TO ASTM A-82.
- ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM CONCRETE COVERAGE, UNLESS NOTED OTHERWISE:
 - CONCRETE PLACED AGAINST EARTH = 3"
 - CONCRETE WITH FORMED SURFACES IN CONTACT WITH EARTH = 2"
 - CONCRETE EXPOSED TO WEATHER = 2"
 - SLABS AND WALLS NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH (#11 BARS AND SMALLER) = 1"
- CONTINUOUS REINFORCING STEEL IN CONCRETE MUST BE SPICED WITH A MINIMUM LAP ACCORDING TO THE TABLES BELOW, U.N.C. 1

TYPICAL CLASS B REBAR LAP SPLICES (INCHES)		
F _c = 3,000 PSI		
BAR SIZE	TOP BARS	OTHER BARS
#3	20"	22"
#4	37"	24"
#5	47"	36"
#6	56"	43"
#7	81"	63"
#8	93"	72"
#9	105"	81"
#10	116"	91"
#11	131"	101"

NOTES:
 1. TOP BARS ARE HORIZ. BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
 2. OTHER BARS ARE ALL EXCEPT TOP BARS.

- STAGGER REBAR SPLICES A MINIMUM OF TWICE THE LAP LENGTH FOR HORIZONTAL REINFORCING.
- DONELS SHALL BE PROVIDED AT ALL POUR JOINTS AND SHALL BE THE SAME SIZE AND SPACING AS REINFORCING DIRECTLY BEYOND POUR JOINTS.
- ANY WELDING OF REINFORCING STEEL REQUIRES E-90XX LOW HYDROGEN MOISTURE RESISTING ELECTRODES. CONTINUOUS INSPECTION BY A LICENSED DEPUTY INSPECTOR AND PRE-QUALIFICATION AS REQUIRED BY THE BUILDING DEPARTMENT.

STRUCTURAL STEEL

- STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED IN ACCORDANCE WITH THE 2010 EDITION A.I.S.C. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
- STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
 - WIDE FLANGES: A992
 - PLATES: A572, GRADE 50
 - STEEL TUBES: A500, GRADE B (F_y=46KSI)
 - STEEL PIPES: A53, GRADE B
 - CHANNELS AND ANGLES: A36
- A. TYP. BOLTS SHALL CONFORM TO ASTM A307 UNLESS NOTED OTHERWISE.
 B. ANCHOR BOLTS AND THREADED RODS AT STEEL BASE PLATES SHALL CONFORM TO ASTM F1554 GRADE 36
- SHOP DRAWINGS FOR STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE REVIEWED PRIOR TO FABRICATION.
- ALL WELDING SHALL CONFORM TO A.W.S. A5.1 AND A.W.S. D1.1 OF THE STRUCTURAL WELDING CODE.
- ALL WELDING SHALL BE DONE BY AWS CERTIFIED OPERATORS QUALIFIED BY AN INSPECTOR APPROVED BY THE CITY OF THOUSAND OAKS FOR THE TYPE OF OPERATION INVOLVED.
- E-TOXX ELECTRODES SHALL BE USED.
- SPECIAL INSPECTION IS REQUIRED FOR ALL SHOP AND FIELD WELDING BY A SPECIAL WELDING INSPECTOR APPROVED BY THE CITY OF THOUSAND OAKS.
- STRUCTURAL STEEL ADJACENT TO SOIL SHALL HAVE 4" MINIMUM CONCRETE COVERAGE.
- ALL COMPLETE PENETRATION GROOVE WELDS AND PARTIAL PENETRATION GROOVE WELDS THICKER THAN 1/4" SHALL BE TESTED BY ULTRASONIC TESTING.
- TYPE OF WELD (SHOP OR FIELD) SHALL BE DETERMINED BY CONTRACTOR.
- MINIMUM SIZE OF FILLET WELDS SHALL BE IN ACCORDANCE WITH AISC WHERE SMALLER WELDS ARE INDICATED OR WHERE NO SIZE IS INDICATED.

METAL DECKING

- ALL LIGHT GAGE STEEL DECKING, CLOSURES, FLASHING, ETC., SHALL CONFORM TO STEEL DECK INSTITUTE PUBLICATION, "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS", LATEST EDITION. DECK UNITS SHALL BE MADE FROM STEEL CONFORMING TO ASTM A653, MINIMUM YIELD STRENGTH 50,000 PSI, WITH GALVANIZED COATING CLASS 55. PAINTED DECKING WILL NOT BE ACCEPTABLE.
- DECK ERECTION CONTRACTOR SHALL CUT DECK TO SUIT DETAILS AT ALL FRAMED OPENINGS, COLUMNS, COLUMN CONNECTIONS, OR AS INDICATED ON THE DRAWINGS.
- THE OPENINGS SHOWN ON THE FRAMING PLANS INDICATE THE GENERAL ARRANGEMENT AND LOCATION ONLY. VERIFY CUTTING DIMENSIONS OF DECK WITH OTHER PERTINENT DRAWINGS AND CONTRACTORS.
- PIPE SLEEVES AND ALL OTHER REQUIRED OPENINGS SHALL BE FIELD CUT BY TRADE REQUIRING OPENING, ADEQUATE DECK SUPPORT, PIPE SLEEVES, FILLERS, CLOSURES, FLASHING, ETC., SHALL BE PROVIDED AND PROPERLY WELDED IN PLACE BY TRADE CUTTING OPENING.
- ALL WELDING SHALL BE DONE BY CAPABLE OPERATORS FOR THE TYPE OF WELDING INVOLVED.
- ALL WELDS AND ABRASIONS NOT RECEIVING CONCRETE FILL SHALL BE GIVEN A PROTECTIVE COAT OF GALVALLOY, DR1-GALV, GALVICOV OR APPROVED EQUAL.
- THE EFFECTIVE AREA OF 3/4" DIAMETER PUDDLE WELD SHALL NOT BE LESS THAN 1/2" DIAMETER.
- SHOP DRAWINGS FOR METAL DECKING AND RELATED CLOSURES, FLASHING, ETC. SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
- METAL DECK SHALL COMPLY WITH AIA/RMO ER-0217.

COLD-FORMED METAL FRAMING

- STEEL STUDS SHALL BE IN ACCORDANCE WITH THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) SPECIFICATIONS AND ICC ER-3064P, CONFORMING TO ASTM A653, SS GRADE 33 AND SS GRADE 50 CLASS 1 AND 660 GALVANIZED, HAVING THE MINIMUM VALUES IN ACCORDANCE WITH THE CHART BELOW.

SIZE	DESIGNATION	GAGE	AREA (IN ²)	k _x (IN ⁴)	S _x (IN ³)	MIN. YIELD
3 3/4"	362S162-33	20	0.262	0.551	0.304	33 KSI
4"	400S162-54	16	0.443	1.098	0.549	50 KSI
6"	600S162-54	16	0.556	2.860	0.953	50 KSI
10"	1000S200-87	12	1.474	19.936	3.867	50 KSI

- ALL TRACKS SHALL BE 16 GAGE AND HAVE 1 1/4" FLANGES.
- REFER TO ARCHITECTURAL DRAWINGS FOR STUDS AND DETAILS NOT SHOWN.
- SCREWS FOR COLD-FORMED METAL FRAMING SHALL BE GALVANIZED THREAD-FORMING OR THREAD-CUTTING PAN HEAD SCREWS WITH A SELF-DRILLING POINT. SCREWS SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- SCREW PENETRATION THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.

EXPANSION ANCHORS IN CONCRETE

- ALL EXPANSION ANCHORS SHALL BE CONCRETE STEEL KWIK BOLT TZ CONCRETE ANCHORS MANUFACTURED BY HILTI, INC. ANCHORS SHALL BE INSTALLED AT EMBEDMENT DEPTHS AND TESTED AS SHOWN IN THE CHART BELOW, UNLESS DETAILED OTHERWISE.

ANCHOR DIAMETER (IN)	DRILL BIT DIAMETER (IN)	EMBEDMENT (IN)	ICC TENSION VALUE (LB)		ICC SHEAR VALUE (LB)		INSTALLATION TORQUE (FT.-LB)	MINIMUM EDGE DISTANCE
			HARDROCK (LTM)	CONCRETE (LTM)	HARDROCK (LTM)	CONCRETE (LTM)		
3/8"	3/8"	3	866	(520)	1047	(832)	25	4.5"
1/2"	1/2"	4	1875	(1125)	2466	(1480)	40	6"
3/4"	3/4"	5	3488	(2093)	3529	(2311)	60	7.5"
1"	1"	6	4074	(2444)	5434	(3260)	110	9"

- THE TENSION AND SHEAR VALUES ARE FOR ANCHORS INSTALLED IN HARD ROCK OR LIGHT WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT THE TIME OF INSTALLATION.
- ALLOWABLE LOADS IN TABLE ARE BASED ON MINIMUM EDGE DISTANCE AS TABULATED ON ONE SIDE AND CRACKED CONCRETE PER ICC ESR-1917.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ICC ESR-1917.
- COMPLY WITH ALL MANUFACTURER'S RECOMMENDATIONS.
- CONTINUOUS INSPECTION IS REQUIRED FOR ANCHOR INSTALLATION.
- VALUES IN TABLE ARE BASED ON ALLOWABLE STRESS DESIGN.
- THICKNESS OF CONCRETE MUST BE AT LEAST 1.5 TIMES EMBEDMENT AS TABULATED.
- EMBEDMENT DEPTHS TABULATED AND SHOWN ON DRAWINGS SHALL BE EFFECTIVE EMBEDMENT DEPTHS PER ICC ESR-1917.

ADHESIVE ANCHORS IN CONCRETE

- ALL ADHESIVE ANCHORS SHALL CONSIST OF HIT-RE 500-SD ADHESIVE MANUFACTURED BY HILTI, INC. ANCHORS SHALL BE INSTALLED AT EMBEDMENT DEPTHS AND TESTED AS SHOWN IN THE CHARTS BELOW, UNLESS DETAILED OTHERWISE.

ASTM A193 GRADE B7 OR ASTM F568M CLASS 5.8 THREADED RODS IN NORMAL WEIGHT CONCRETE						
ROD DIAMETER (IN)	DRILL BIT DIAMETER (IN)	EMBEDMENT (IN)	ICC TENSION VALUE (LB)	ICC SHEAR VALUE (LB)	MINIMUM EDGE DISTANCE	
3/8"	7/8"	3	862	1387	5.5"	
1/2"	9/8"	4	1472	2466	7"	
5/8"	1 1/8"	5	2302	3852	8.5"	
3/4"	1 1/4"	6	3136	5434	10.5"	
7/8"	1 3/8"	7	3328	6847	12"	
1"	1 1/2"	8	4043	8366	13.5"	

GRADE 60 REINFORCING STEEL IN NORMAL WEIGHT CONCRETE						
REBAR SIZE	DRILL BIT DIAMETER (IN)	EMBEDMENT (IN)	ICC TENSION VALUE (LB)	ICC SHEAR VALUE (LB)	MINIMUM EDGE DISTANCE	
3	1/2"	3	666	1387	5.5"	
4	5/8"	4	1185	2466	7"	
5	3/4"	5	1851	3852	8.5"	
6	7/8"	6	2665	5434	10.5"	
7	1"	7	3070	6847	12"	
8	1 1/8"	8	3807	8366	13.5"	

- THE TENSION AND SHEAR VALUES IN CONCRETE TABLES ARE FOR ANCHORS INSTALLED IN HARD ROCK CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT THE TIME OF INSTALLATION.
- ALLOWABLE LOADS IN TABLE ARE BASED ON MINIMUM EDGE DISTANCE AS TABULATED ON ONE SIDE AND CRACKED CONCRETE AND TEMPERATURE RANGE A PER ICC ESR-3814.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ICC ESR-3814.
- COMPLY WITH ALL MANUFACTURER'S RECOMMENDATIONS.
- CONTINUOUS INSPECTION IS REQUIRED FOR ANCHOR INSTALLATION.
- VALUES IN TABLE ARE BASED ON ALLOWABLE STRESS DESIGN AND SHORT TERM EARTHQUAKE LOADING TABLE VALUES DO NOT APPLY FOR SUSTAINED LOADING.
- ADHESIVE ANCHOR LOCATIONS SHALL BE APPROVED BY THE EOR & DEPUTY INSPECTOR PRIOR TO INSTALLATION.
- THICKNESS OF CONCRETE MUST BE AT LEAST 1.5 TIMES EMBEDMENT AS TABULATED.

POWDER DRIVEN FASTENERS (SHOTPINS)

- HILTI LOW-VELOCITY POWER-DRIVEN FASTENERS (SHOTPINS) MAY BE USED TO ATTACH WOOD FRAMING TO CONCRETE AND STEEL BASE MATERIALS IN ACCORDANCE WITH ESR-1152.
- SHOTPINS SHALL NOT BE USED IN CONCRETE CURBS.
- THE ALLOWABLE LOADS SHALL BE 100 POUNDS OR 80% OF ICC APPROVAL VALUES, WHICHEVER IS LESS.
- QUALIFICATION FOR USE OF ALL POWER ACTUATED TOOLS MUST MEET ANSI A10.3 STANDARD AS REQUIRED BY THE MANUFACTURER AND ALL OSHA REQUIREMENTS.

PLYWOOD SHEAR WALLS AND FLOOR DIAPHRAGMS

- ALL PLYWOOD DESIGNATED ON THE STRUCTURAL DRAWINGS SHALL BE DOUGLAS FIR, CONFORMING TO THE LATEST NATIONAL BUREAU OF STANDARDS U.S. PRODUCT STANDARD PS-1. ALL PLYWOOD SHALL BE FIRE-RETARDANT, 5-LAYER, 5-PLY, GRADE STAMPED "STRUCTURAL" WITH EXTERIOR GLUE AND PANEL INDEX 32/16 FOR 1/2" PLYWOOD AND 48/24 FOR 3/4" PLYWOOD, UNLESS NOTED OTHERWISE. 3/4" PLYWOOD AT LOW RAISED PLATFORMS SHALL BE T&G.
- PLYWOOD PANELS LESS THAN 12" WIDE SHALL NOT BE USED.
- PLYWOOD PANELS SHALL BE PERMITTED TO BE APPLIED EITHER PARALLEL OR PERPENDICULAR TO FRAMING FOR SHEAR WALLS, AND SHALL BE PERPENDICULAR TO FRAMING FOR FLOOR DIAPHRAGMS.
- ALL SHEAR WALL PANEL EDGES SHALL BE BLOCKED WITH BLOCKING HAVING THE SAME GAGE AS STUDS.
- FLOOR DIAPHRAGM PANELS SHALL BE BLOCKED WITH 20 GAGE MIN. BLOCKING, EXCEPT NO BLOCKING IS REQUIRED AT T&G EDGES.
- SCREWS FOR FIRE-RETARDANT PLYWOOD SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS SCREWS SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, COPPER OR MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 645, CLASS 55 MINIMUM.

GYPSUM BOARD SHEAR WALLS

- GYPSUM BOARD SHALL COMPLY WITH ASTM C1396 / C1396M.
- GYPSUM PANELS SHALL BE PERMITTED TO BE APPLIED EITHER PARALLEL OR PERPENDICULAR TO FRAMING.
- GYPSUM BOARD PANELS LESS THAN 12" WIDE SHALL NOT BE USED.
- ALL PANEL EDGES SHALL BE FASTENED TO BLOCKING HAVING THE SAME GAGE AS STUDS.

SPECIAL INSPECTIONS

- SPECIAL INSPECTION IS REQUIRED FOR VARIOUS MATERIALS ON THIS PROJECT. REFER TO THE MATERIAL SECTIONS IN THESE GENERAL NOTES FOR SPECIFIC TESTS AND INSPECTIONS REQUIRED FOR EACH MATERIAL.
- CONTRACTORS RESPONSIBLE FOR THE CONSTRUCTION OF A KIND OR SEISMIC FORCE RESISTING SYSTEM OR COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTION SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE CITY INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SECTION 17091.1.

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PERTAINING TO ISSUES OF CONFIDENTIALITY AND COPYRIGHT, REQUEST FOR THE RELEASE OR REPRODUCTION OF THESE DRAWINGS MUST BE APPROVED BY ERIC NIELSEN ARCHITECT

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PROJECT NUMBER:
 2016-0090

DRAWN BY: GG

APPROVED BY: LS

ISSUE DATE:
 12/01/2016

REVISIONS	#	DATE	DESCRIPTION

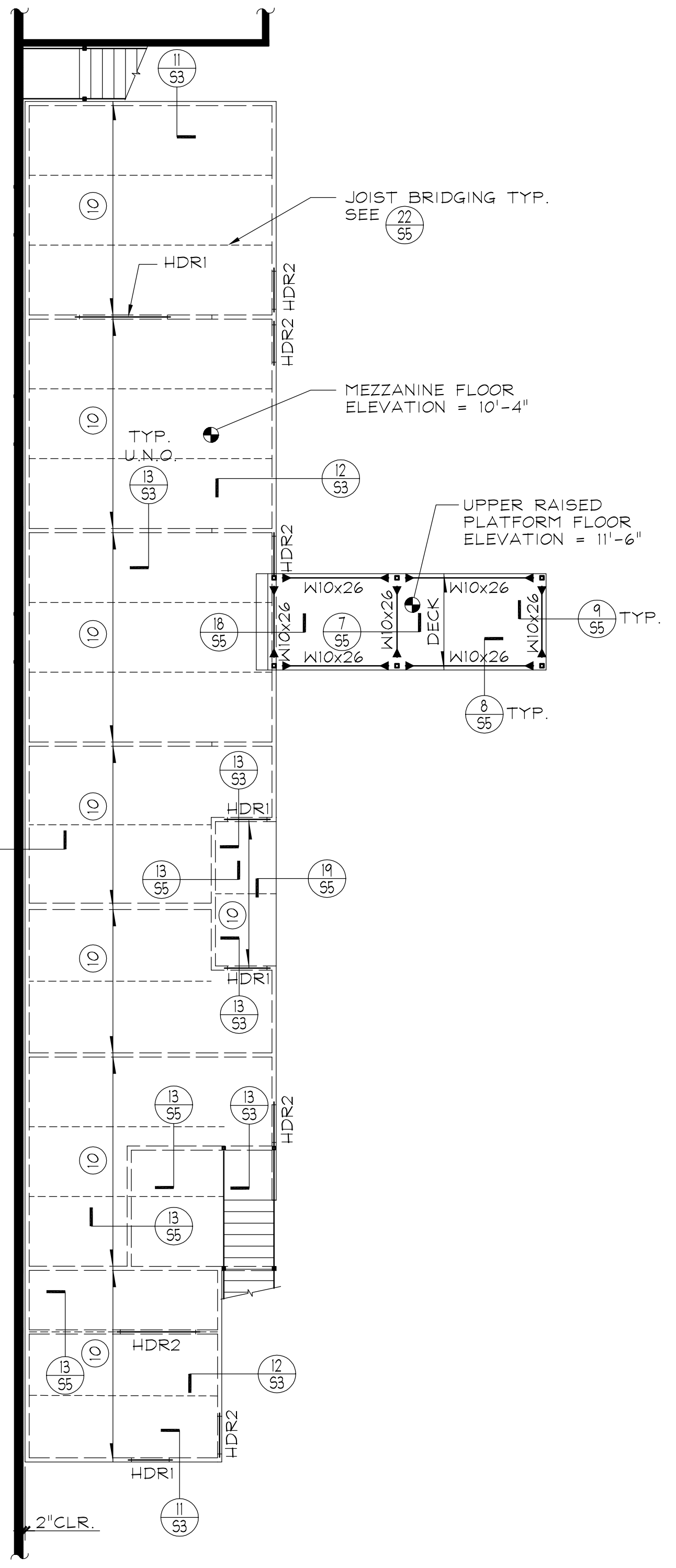
CATHO
 30" X 42" SHEET

GENERAL NOTES

S1

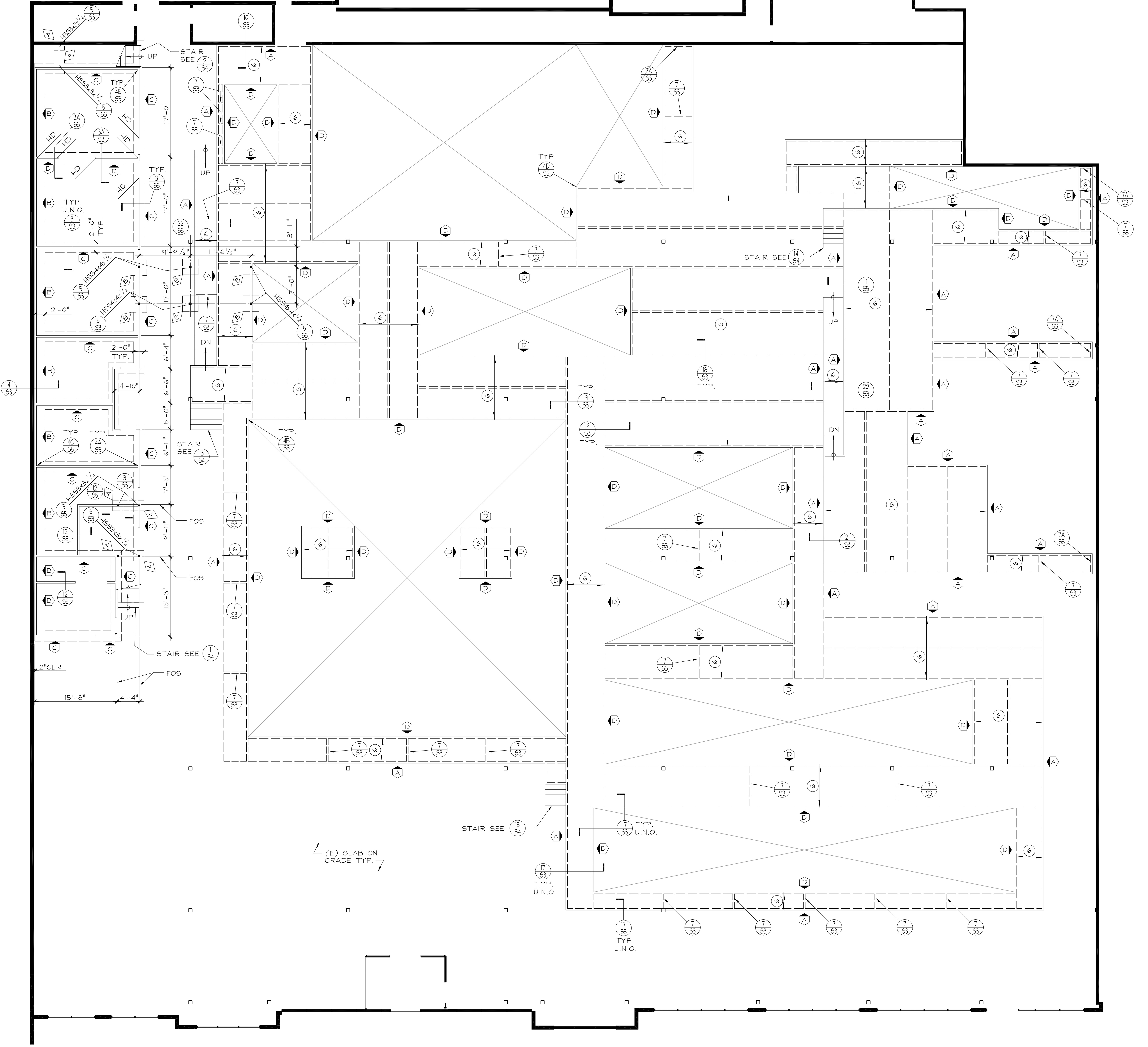
GENERAL NOTES

DRAWING NAME: 161561.DWG



MEZZANINE FRAMING PLAN

- NOTES:
- LOW RAISED PLATFORMS HAVE NOT BEEN DESIGNED FOR EQUIPMENT LOADS. EQUIPMENT SUPPLIERS FOR TRAMPOLINES, ETC. SHALL PROVIDE THE NECESSARY SUPPORT AND ANCHORAGE FOR THEIR EQUIPMENT.
 - INDICATES COLUMN FOOTING TYPE, SEE (5/55).
 - INDICATES SHEARWALL TYPE, SEE (5/55).
 - ALL STEEL WALL STUDS AT MEZZANINE SHALL BE 4" STEEL STUDS, EXCEPT USE 6" STEEL STUDS FOR FULL LENGTH OF WALL AT PLUMBING WALLS.
 - ALL STEEL WALL STUDS AT LOW RAISED PLATFORMS SHALL BE 3 1/4" STEEL STUDS, AND SHALL BE LOCATED DIRECTLY BELOW JOISTS WHERE JOISTS ARE SPLICED BACK TO BACK OVER WALL, PROVIDE A WALL STUD DIRECTLY BELOW EACH JOIST.
 - INDICATES 10" STEEL STUD JOISTS @ 16" o.c.
 - INDICATES 6" STEEL STUD JOISTS @ 16" o.c.
 - (E) INDICATES EXISTING CONSTRUCTION.
 - MEZZANINE DECK SHALL BE 1 7/8" LT. WT. CONCRETE FILL WITH 6x6-W1.4xW1.4 W.N.F. OVER 3/4"x26 GAGE SHALLOW VERCOR GALVANIZED STEEL DECKING BY VERCOR (2" TOTAL DECKING AND FILL), 36" WIDE, 2 SPANS CONTINUOUS (MIN.), 1MIN=0.013 IN/FT., 5MIN=0.042 IN/FT., FOR ATTACHMENT SEE (6/55).
 - LOW RAISED PLATFORM FLOORS SHALL CONSIST OF 3/4" T&G FIRE RETARDANT PLYWOOD SHEATHING. FASTEN PLYWOOD WITH #10 SCREWS @ 6" o.c. EDGES AND 10" o.c. FIELD. PLYWOOD SCREWS SHALL BE FLATHEAD COUNTERSUNK SELF-TAPPING SCREWS WITH MINIMUM HEAD DIAMETER OF 0.333 INCH. SCREWS USED TO ATTACH WOOD STRUCTURAL PANEL SHEATHING SHALL BE IN ACCORDANCE WITH ASTM C153. SCREWS FOR FIRE-RETARDANT PLYWOOD SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS SCREWS SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, COPPER OR MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55 MINIMUM.
 - UPPER RAISED PLATFORM DECK SHALL BE 2" LT. WT. CONCRETE FILL WITH 6x6-W1.4xW1.4 W.N.F. OVER 1 1/2"x18 GAGE TYPE B FORMLOK BY VERCOR, 36" WIDE, 1MIN=0.302, 5MIN=0.322, FOR ATTACHMENT SEE (6/55).
 - INDICATES MOMENT CONNECTION, SEE (20/55).
 - HDR INDICATES HEADER, SEE (34/55) AND (26/55) TYP. U.N.O.
 - HD INDICATES HOLDOWN, SEE (23/55) TYP.
 - DIMENSIONS SHOWN ON PLAN ARE TO FACE OF STUD (FOS) OR COLUMN.

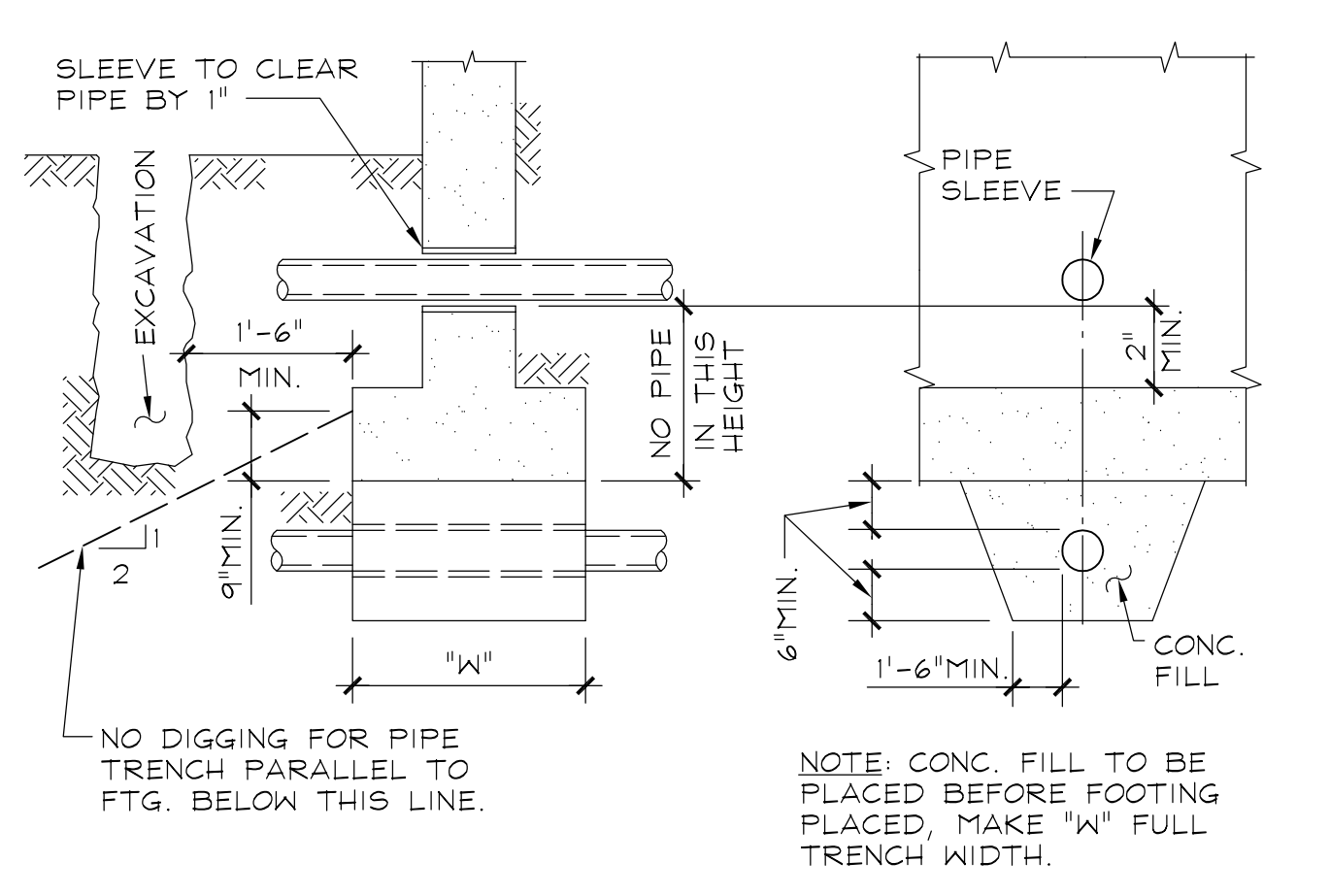


FOUNDATION PLAN

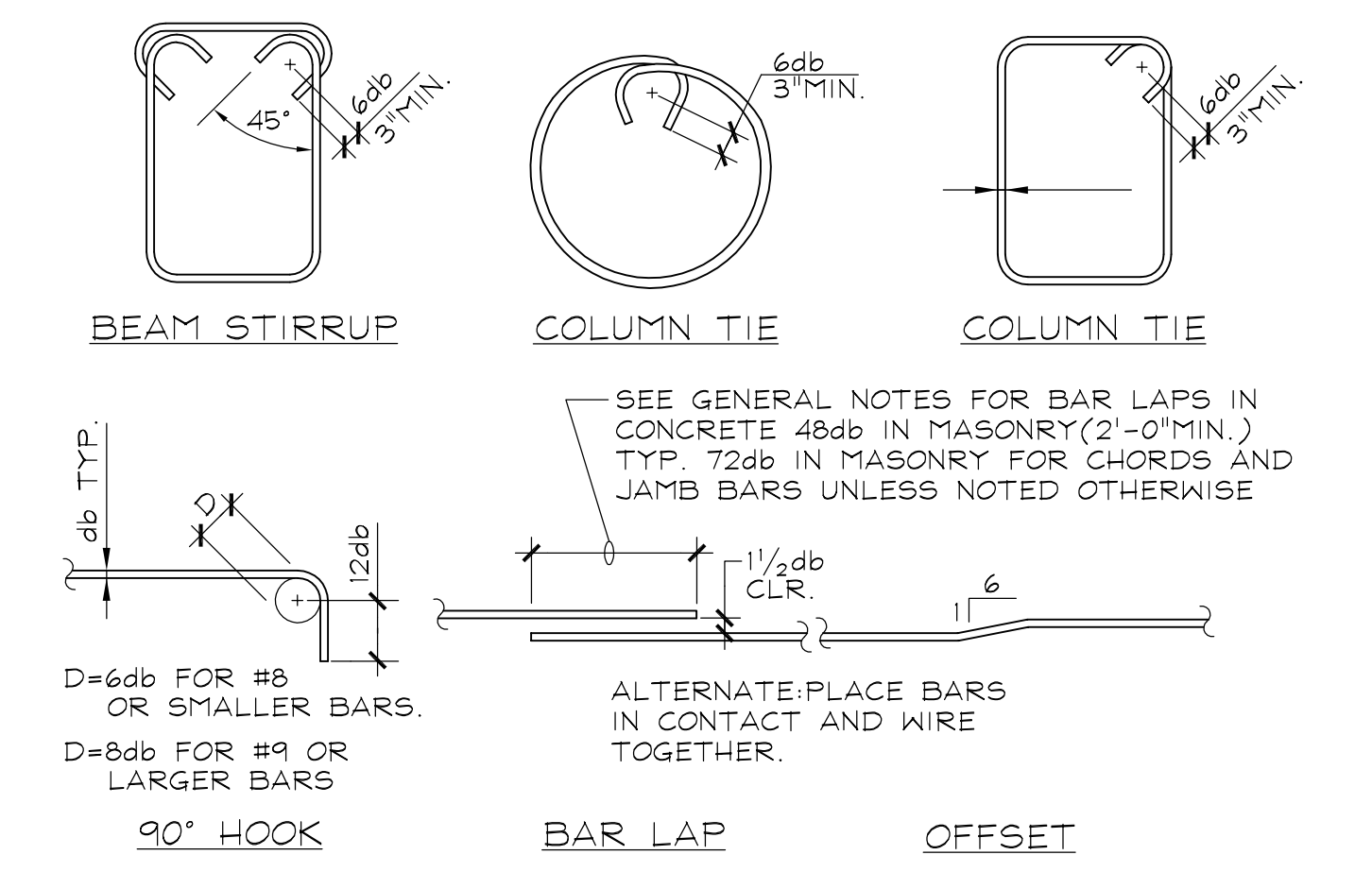
1/8" = 1'-0" 1

REVISIONS	DATE	DESCRIPTION

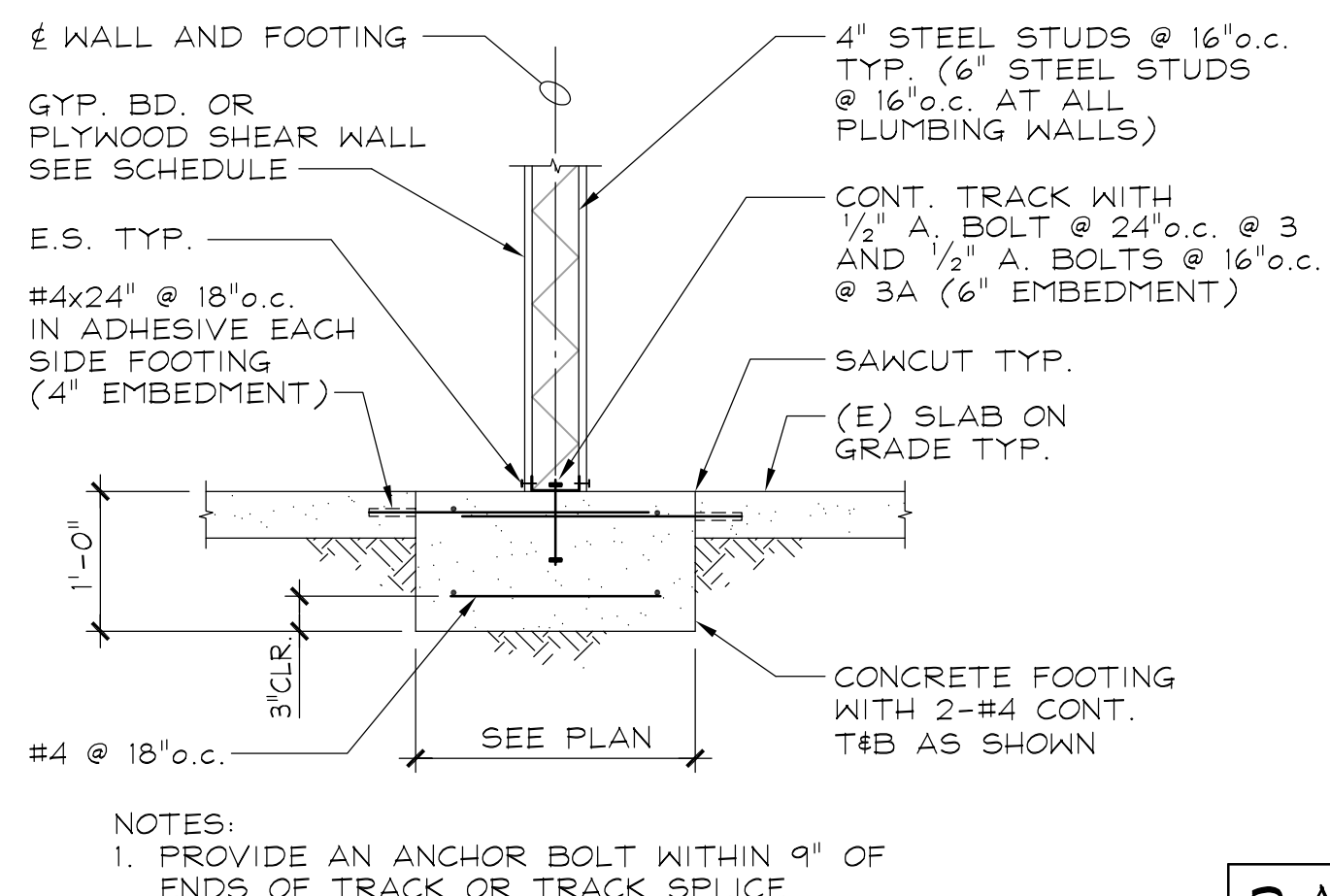
DRAWING NAME: 1615692.DWG



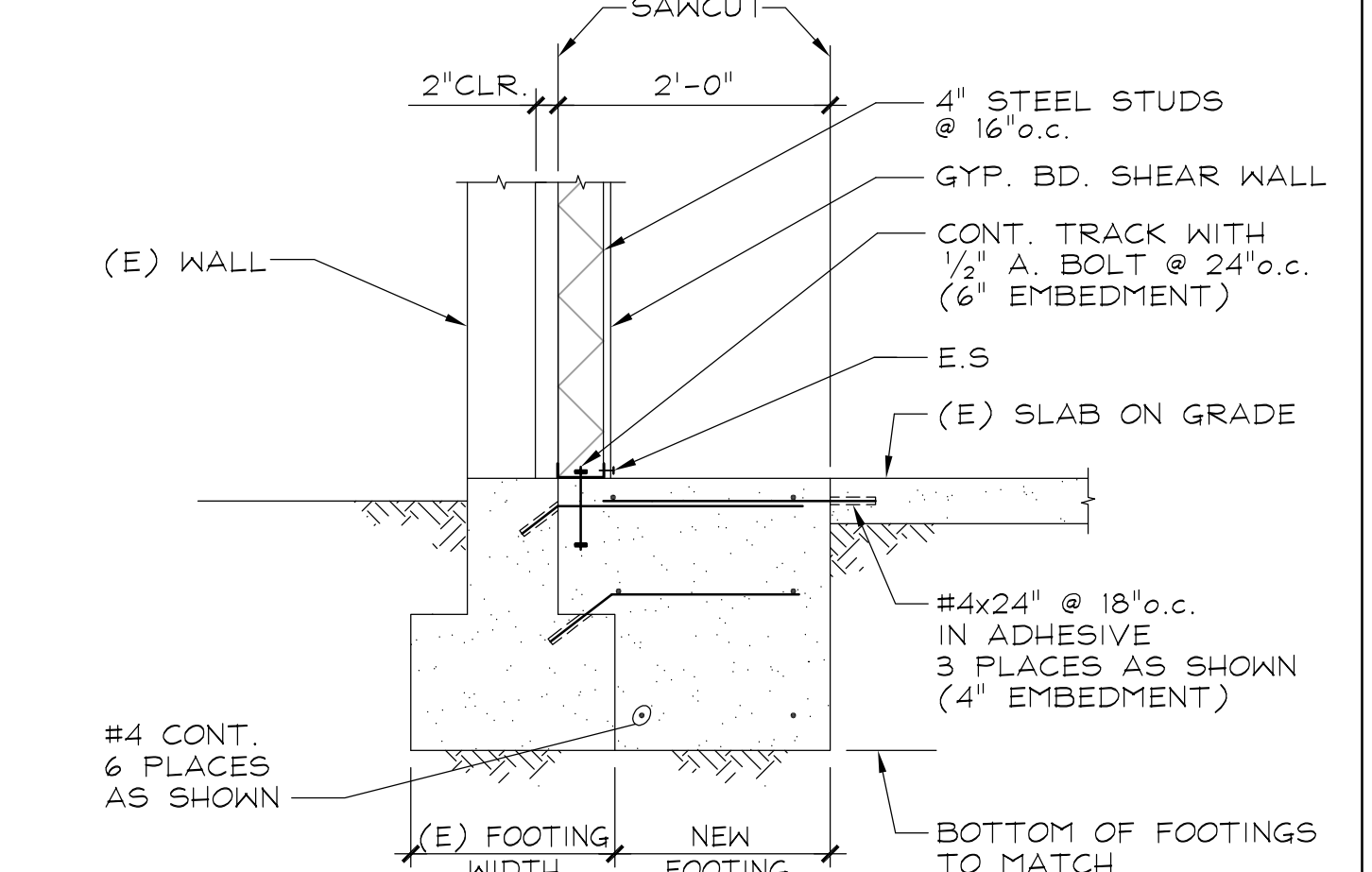
TYP. PIPE SLEEVE DETAIL 1



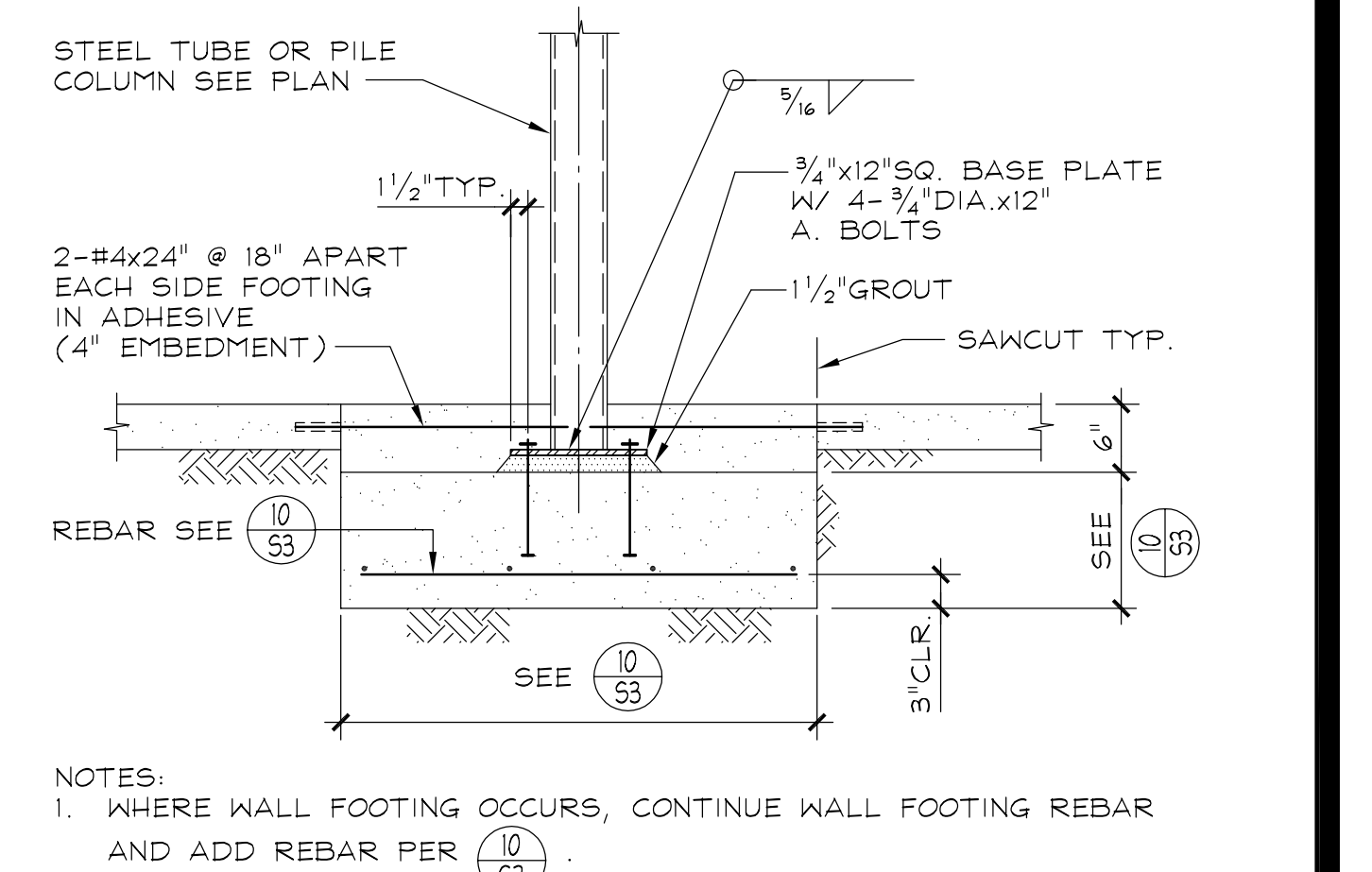
TYP. REBAR DETAIL 2



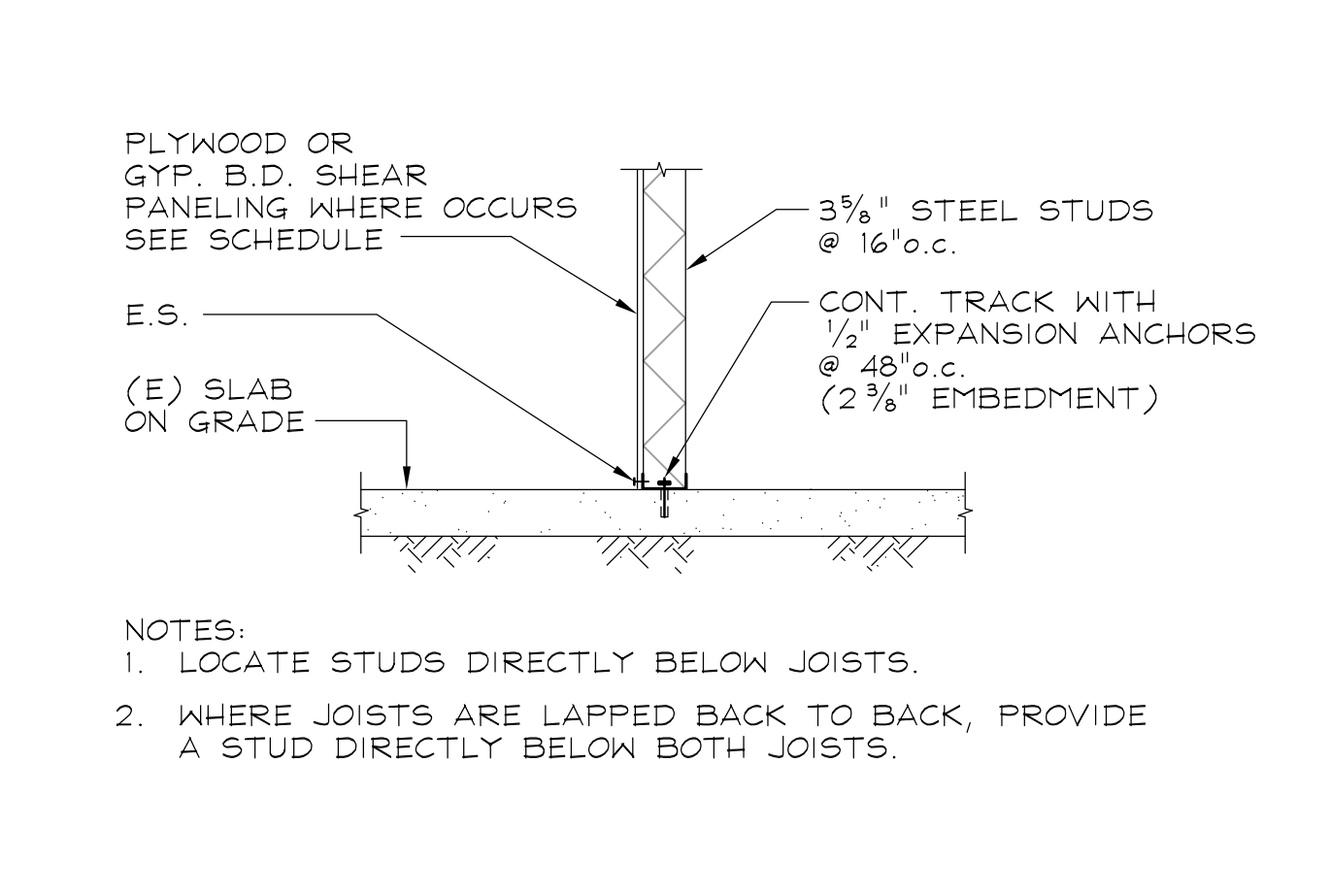
SECTION 3A



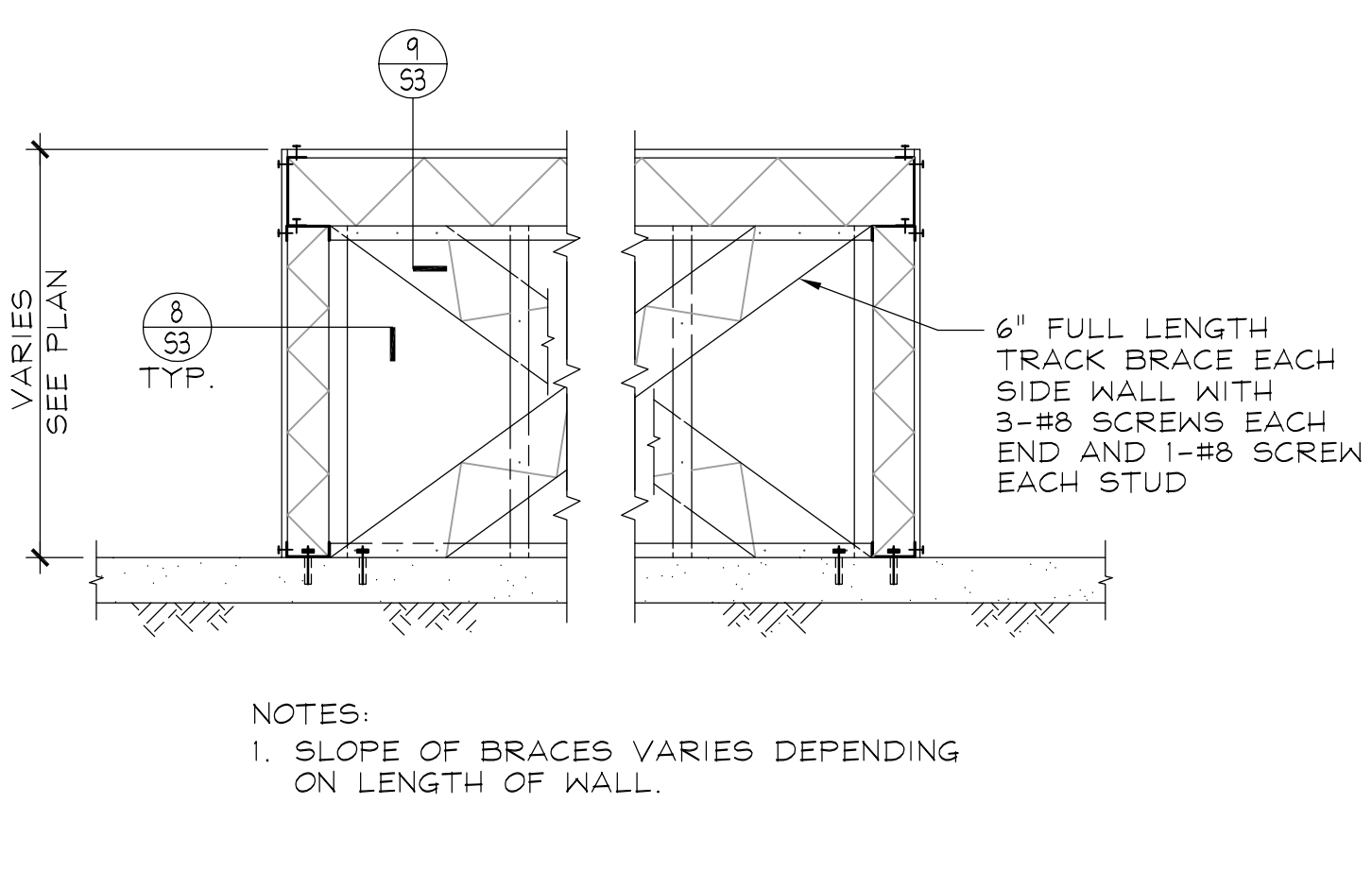
TYP. DETAIL 4



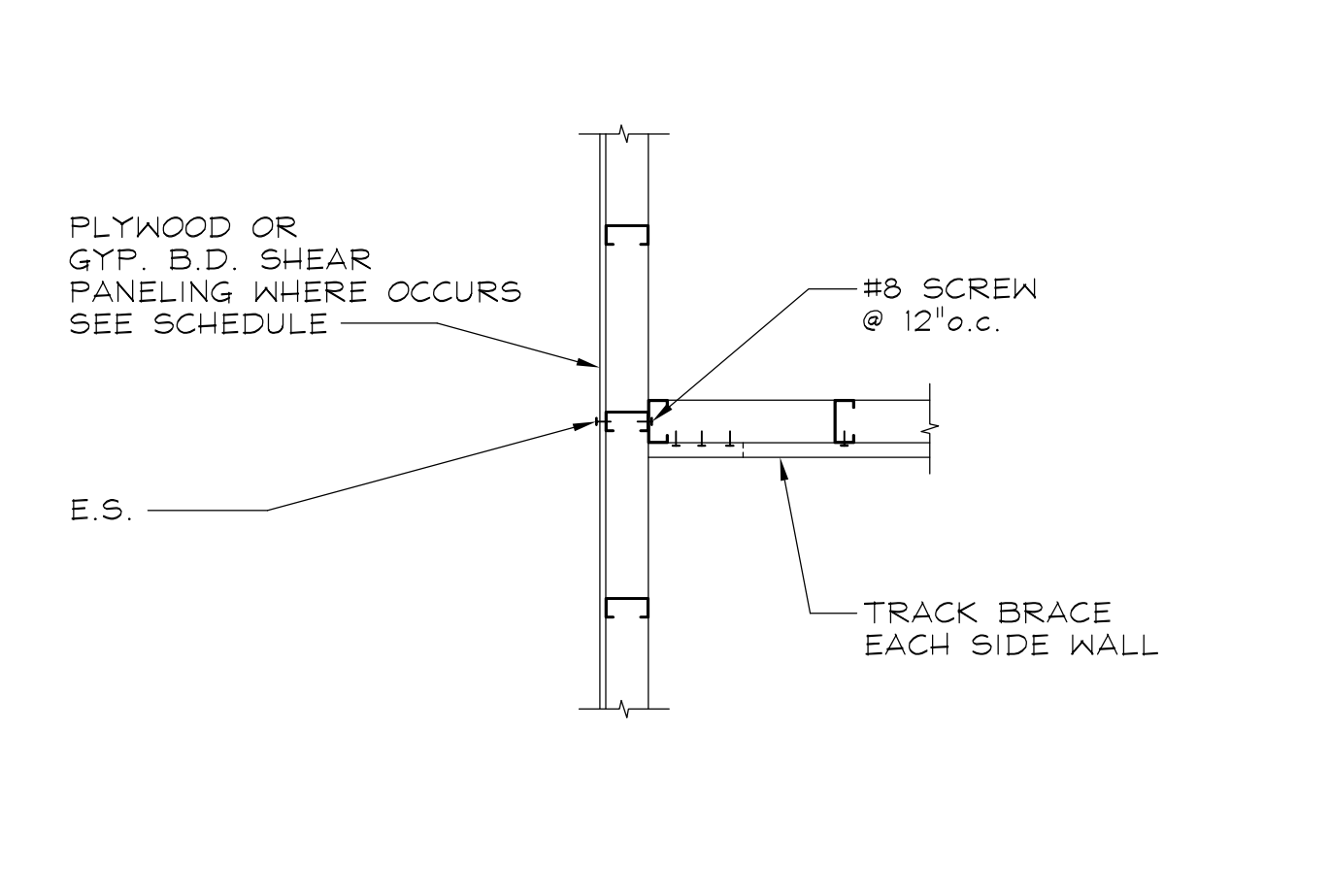
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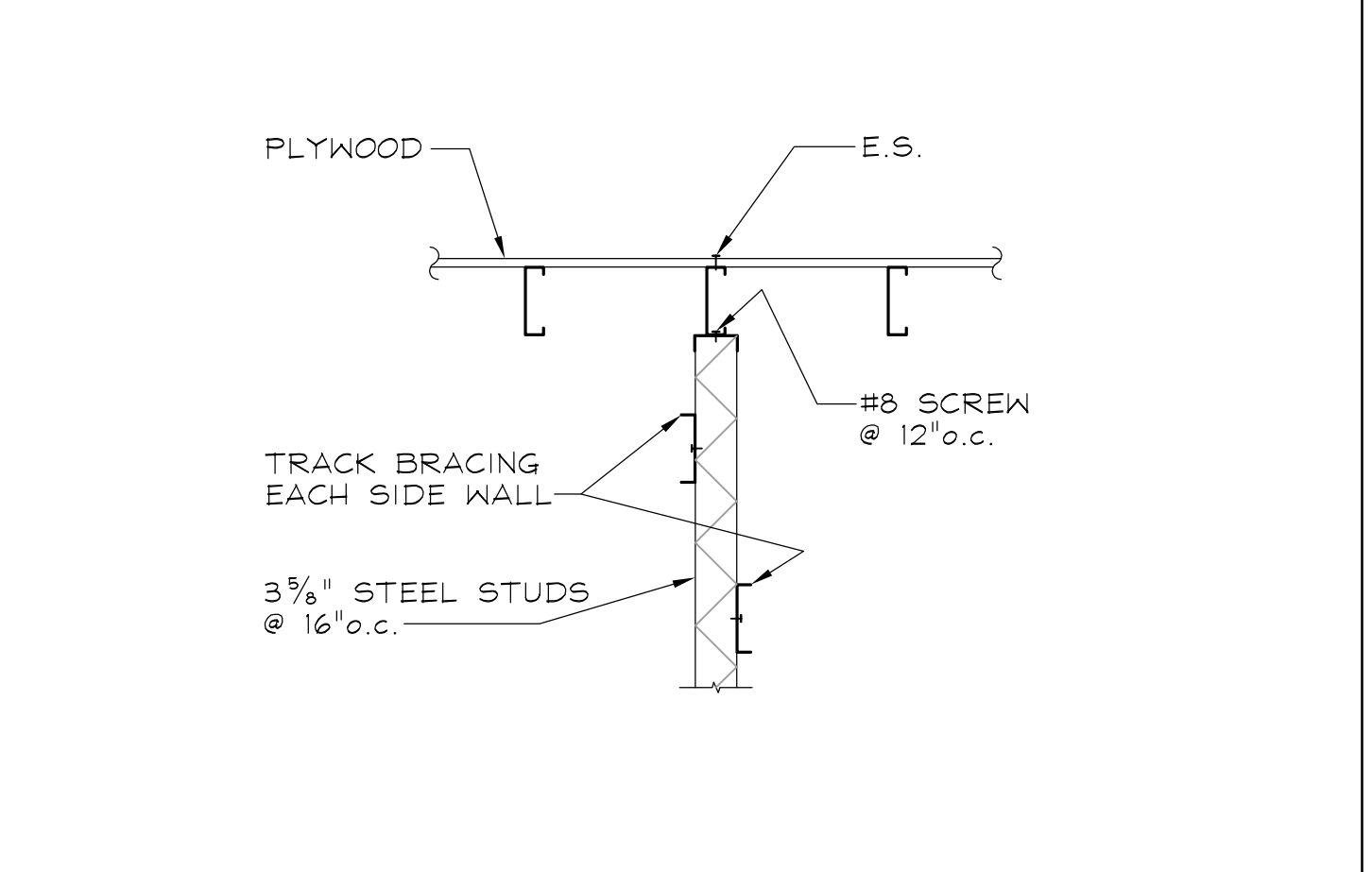
SECTION 6



BRACED WALL ELEVATION 7



SECTION 8

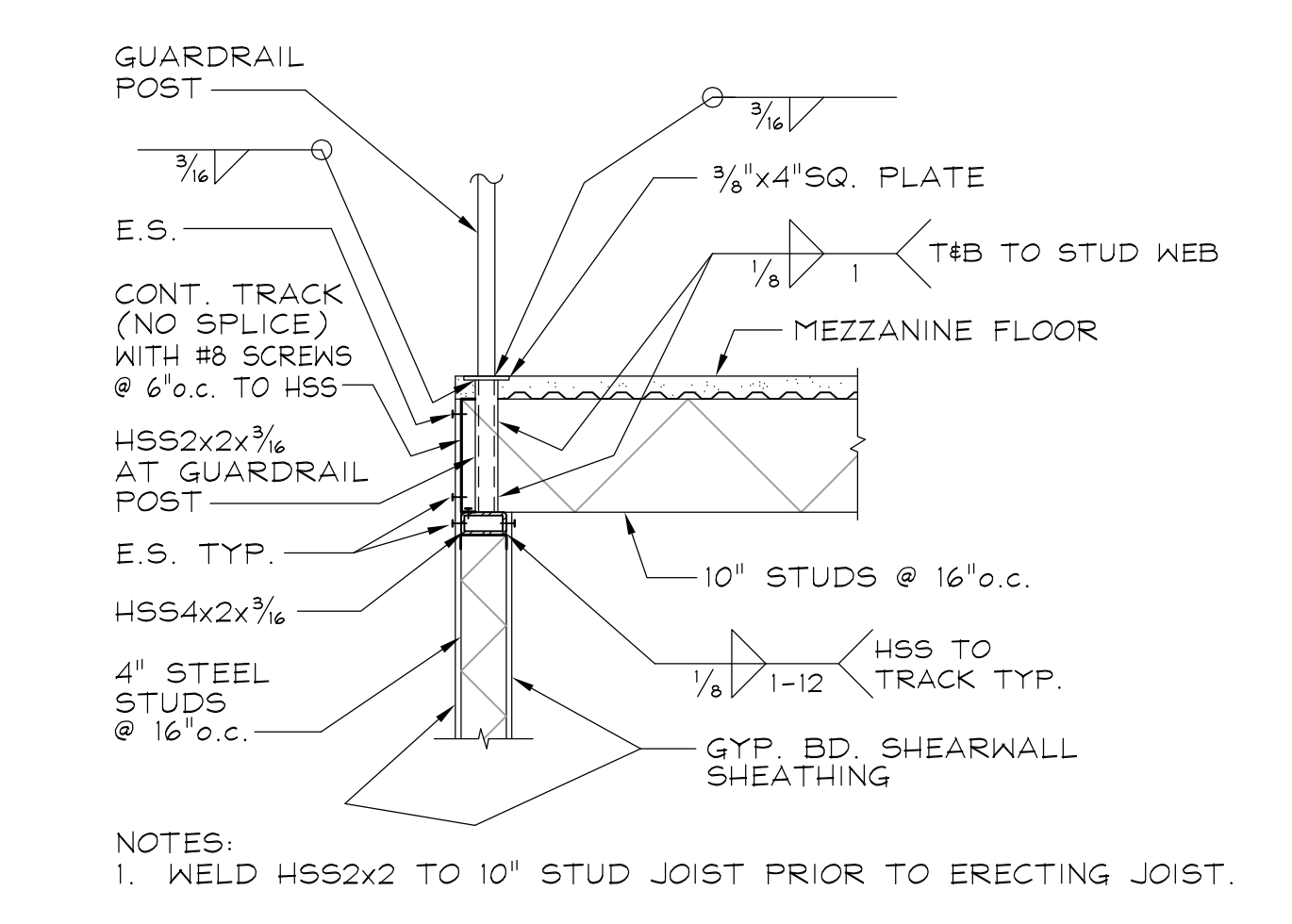


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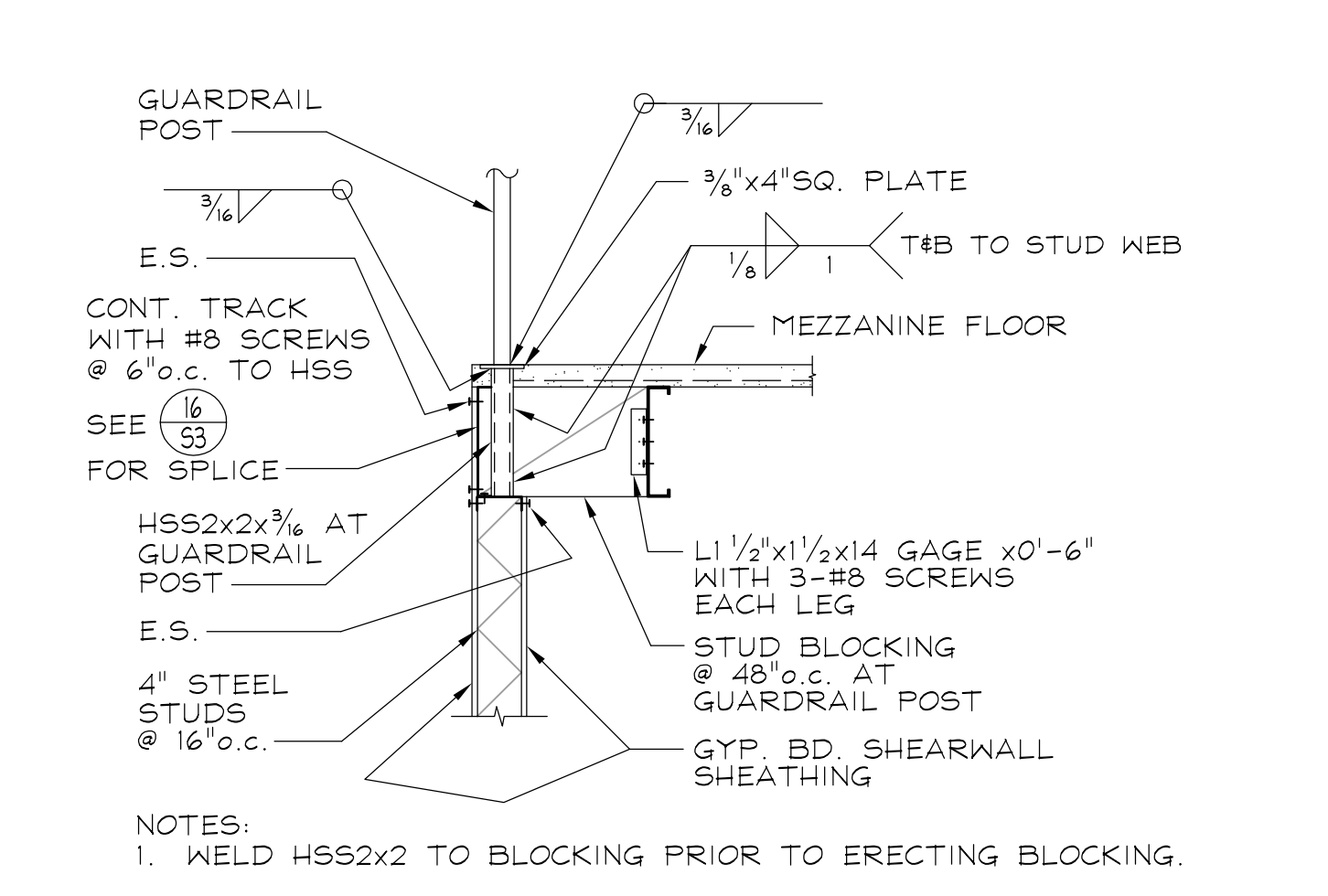
FOOTING SCHEDULE

TYPE	FOOTING SIZE	BOTT. BARS
A	2'-0" SQ. x 12"	3-#4 E.W.
B	3'-0" SQ. x 12"	4-#4 E.W.

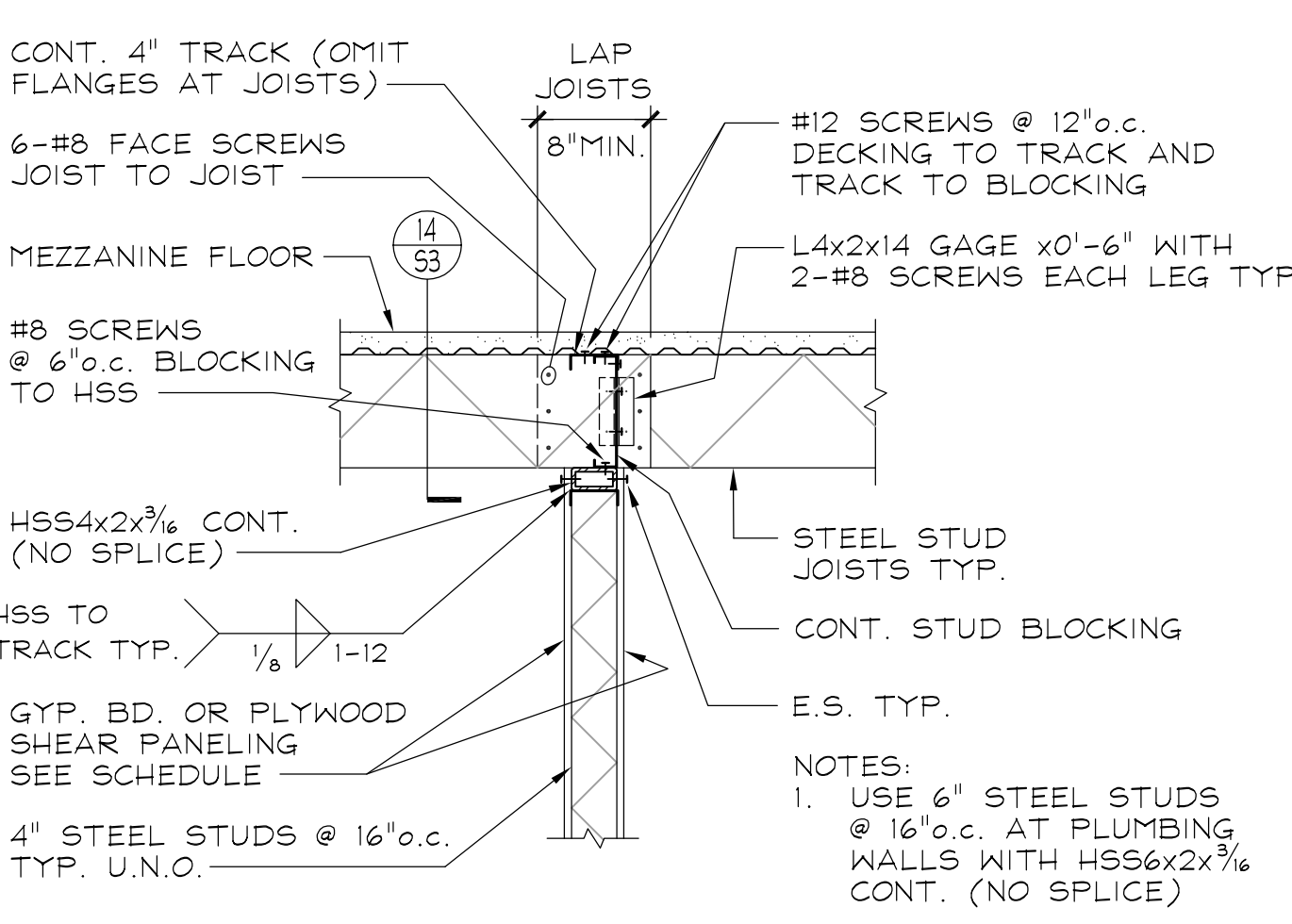
SCHEDULE 10



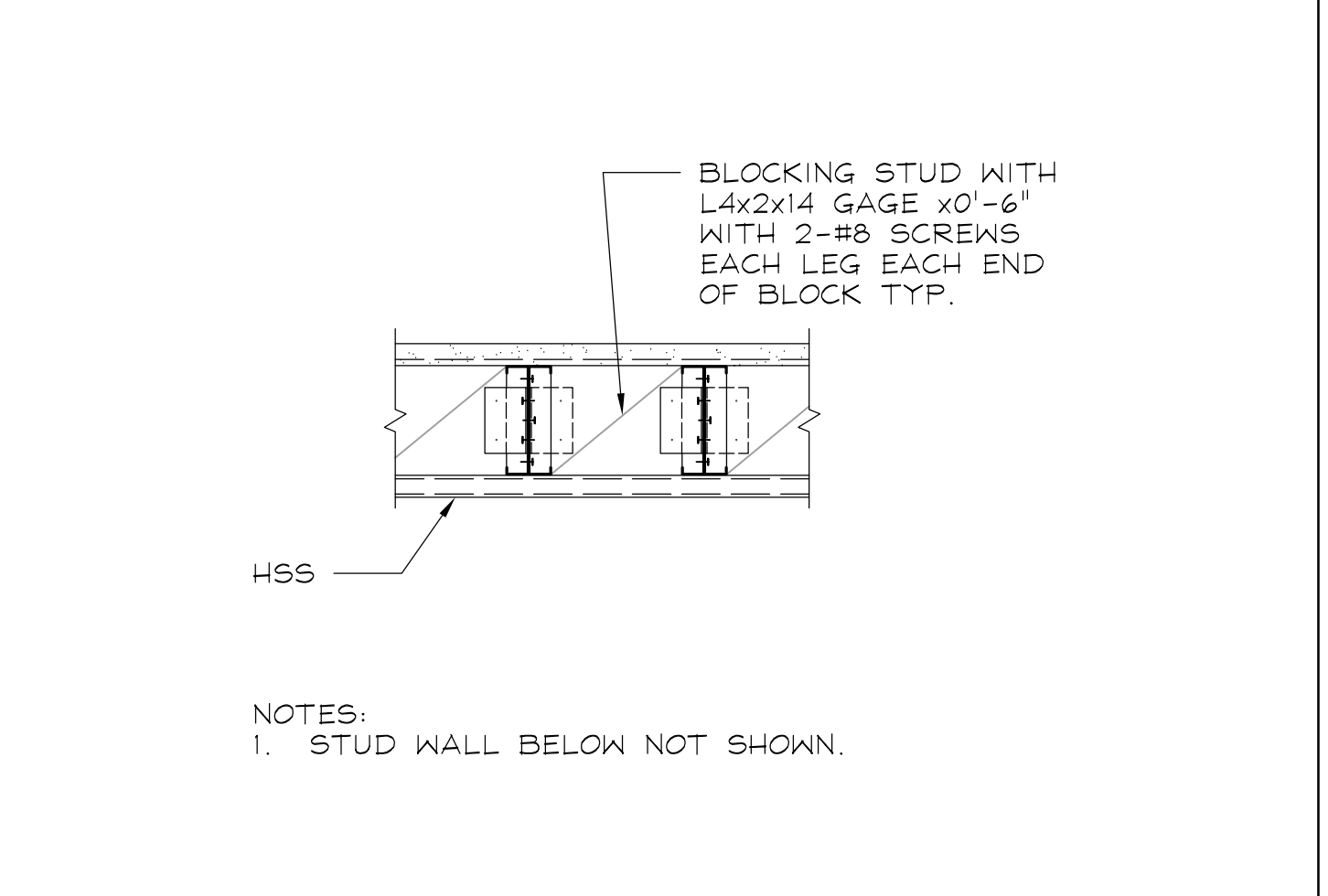
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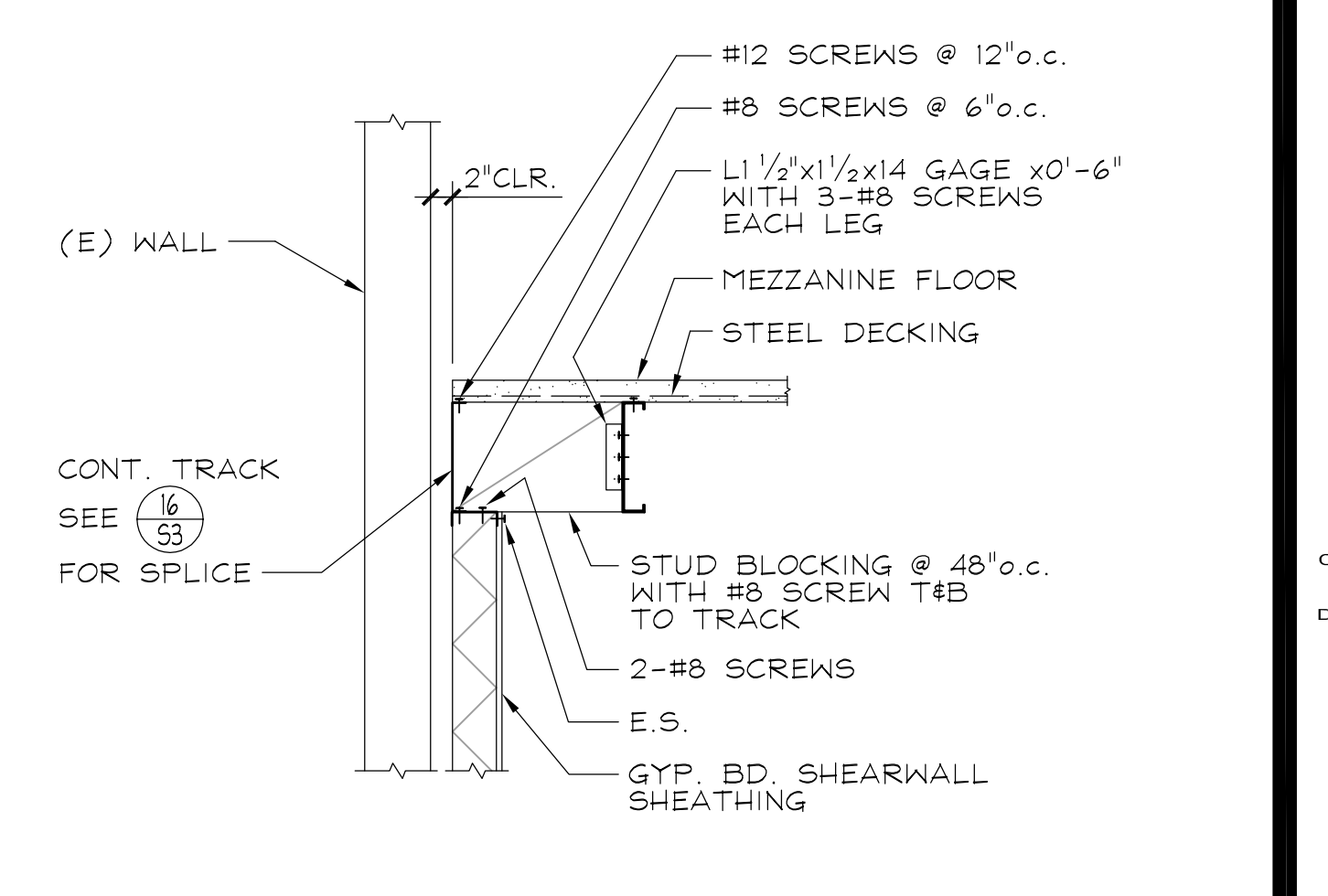
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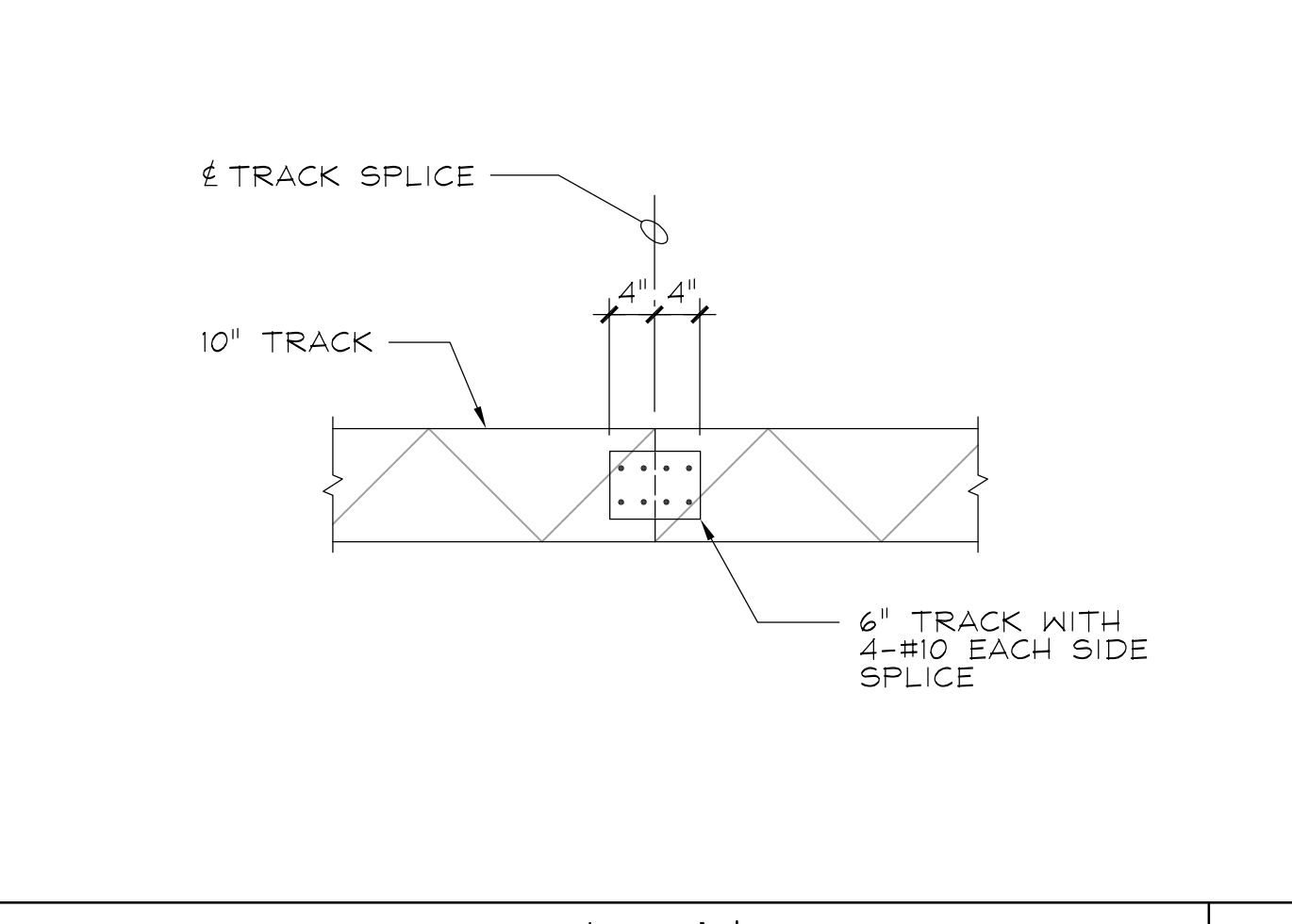
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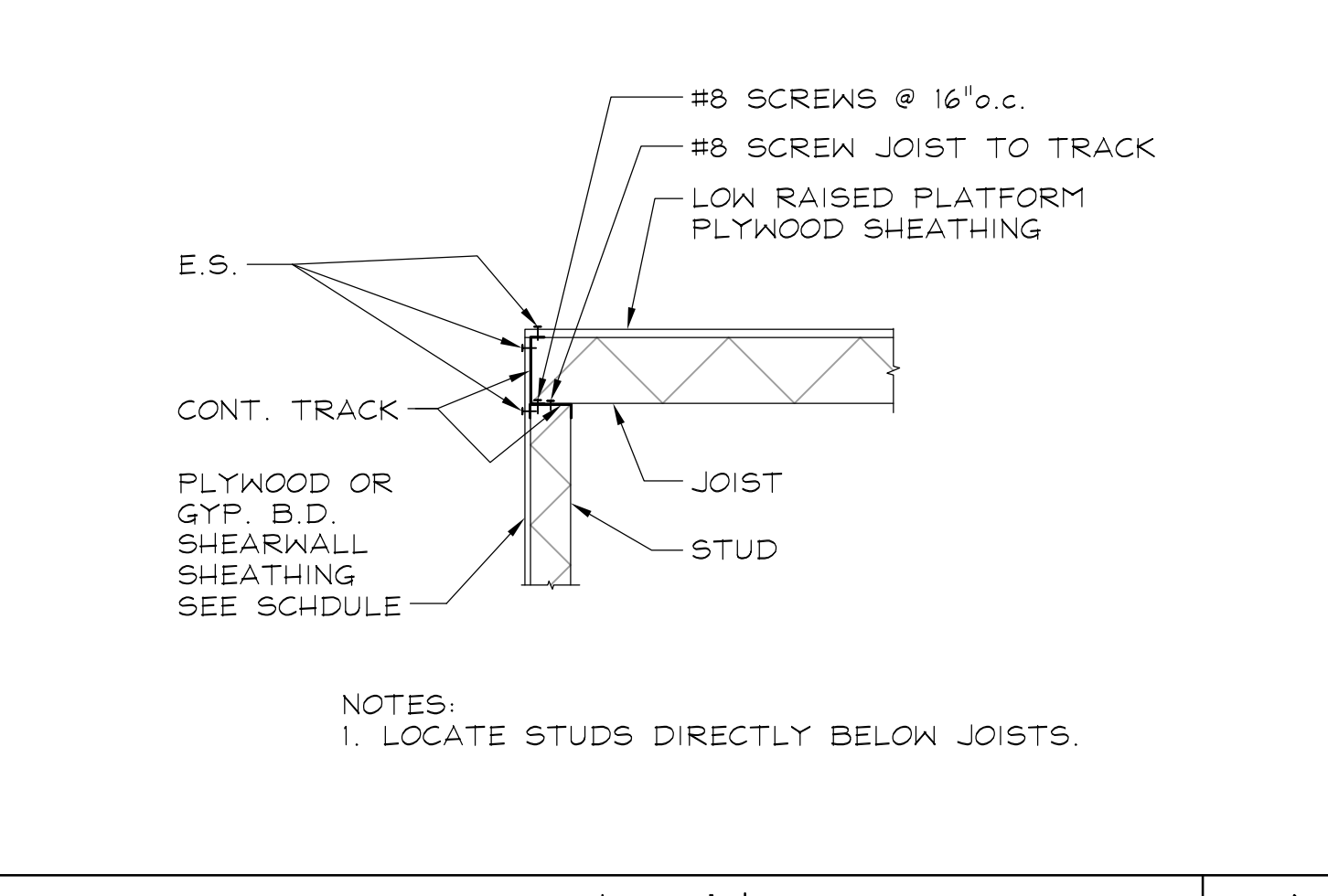
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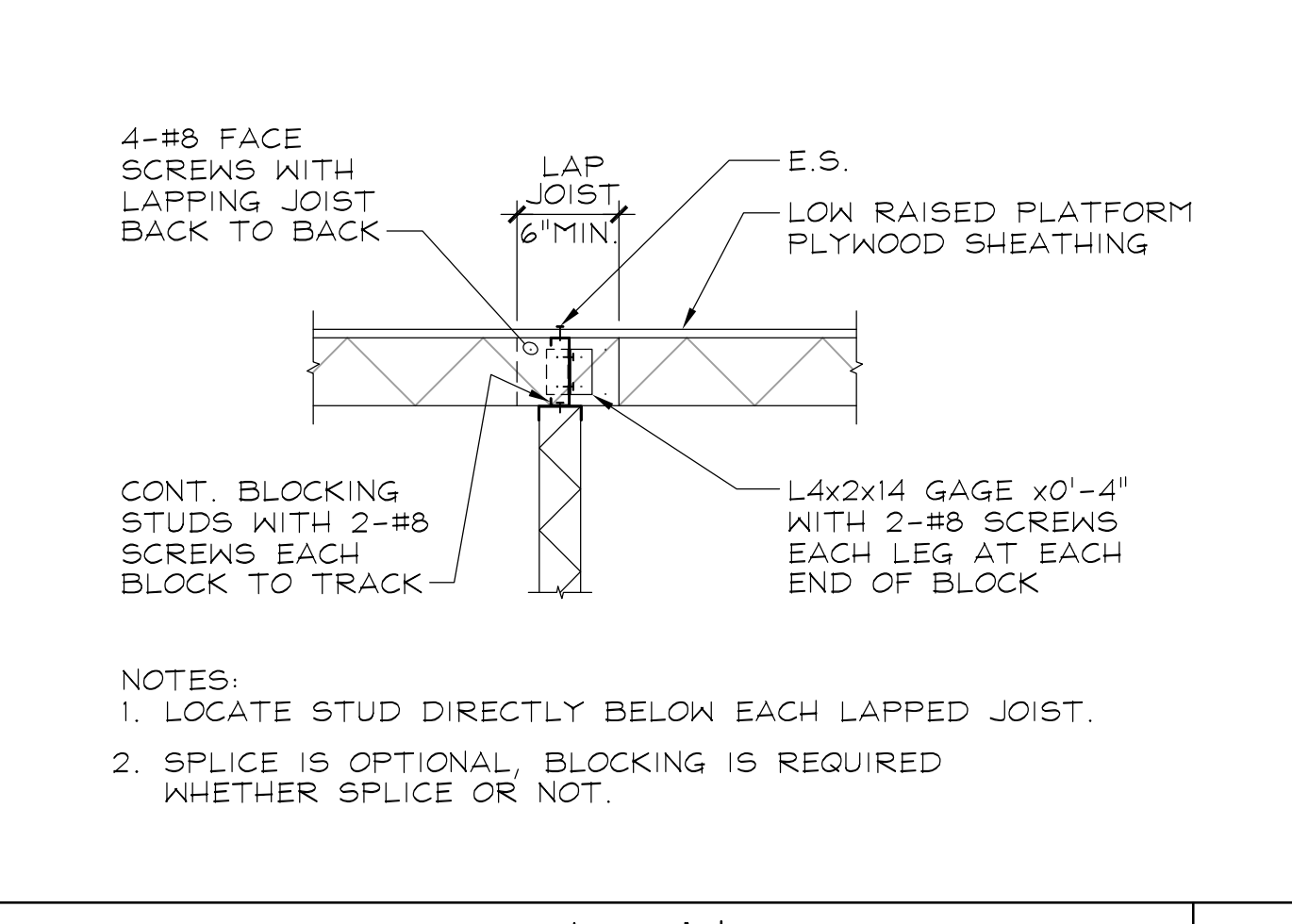
SECTION 15



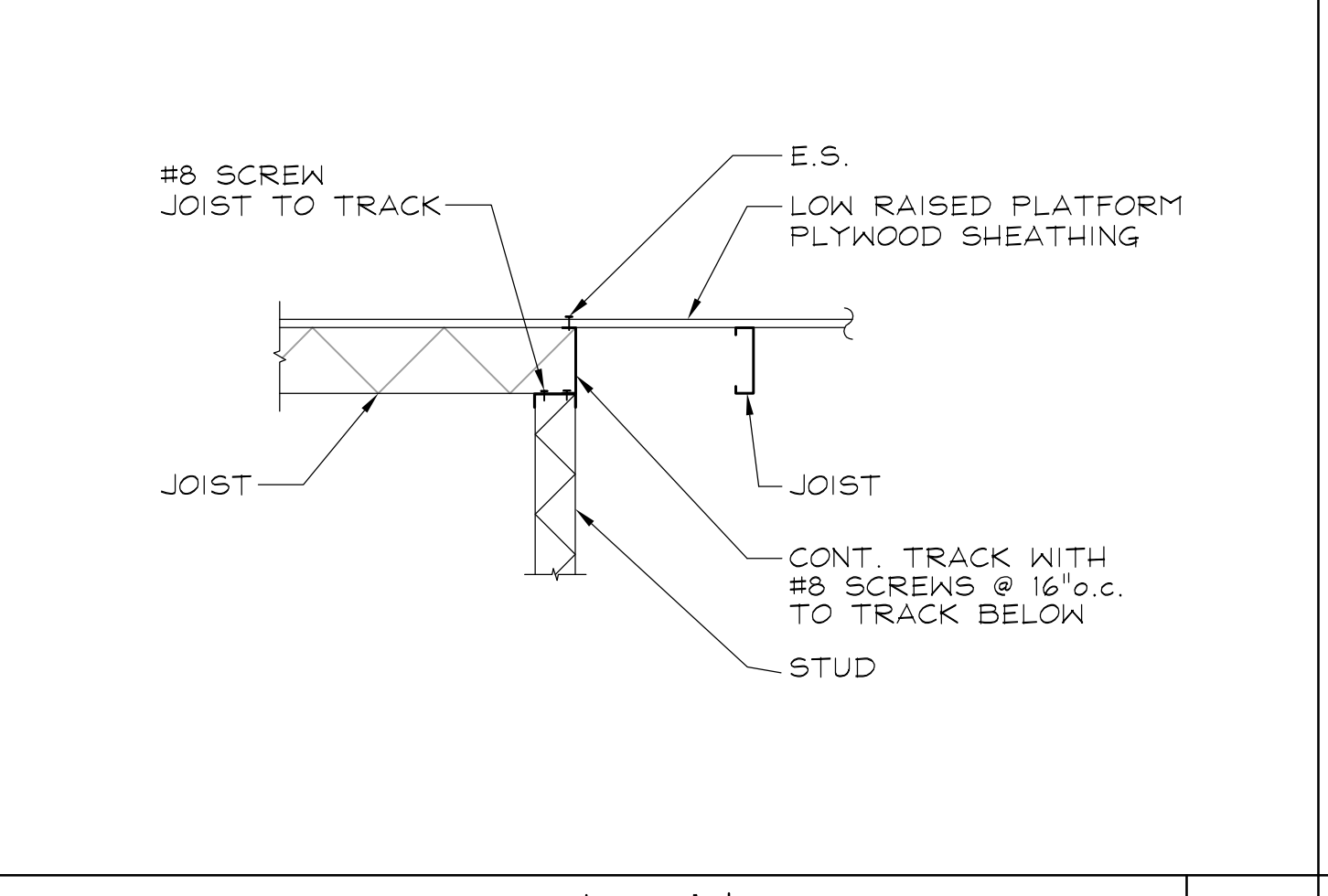
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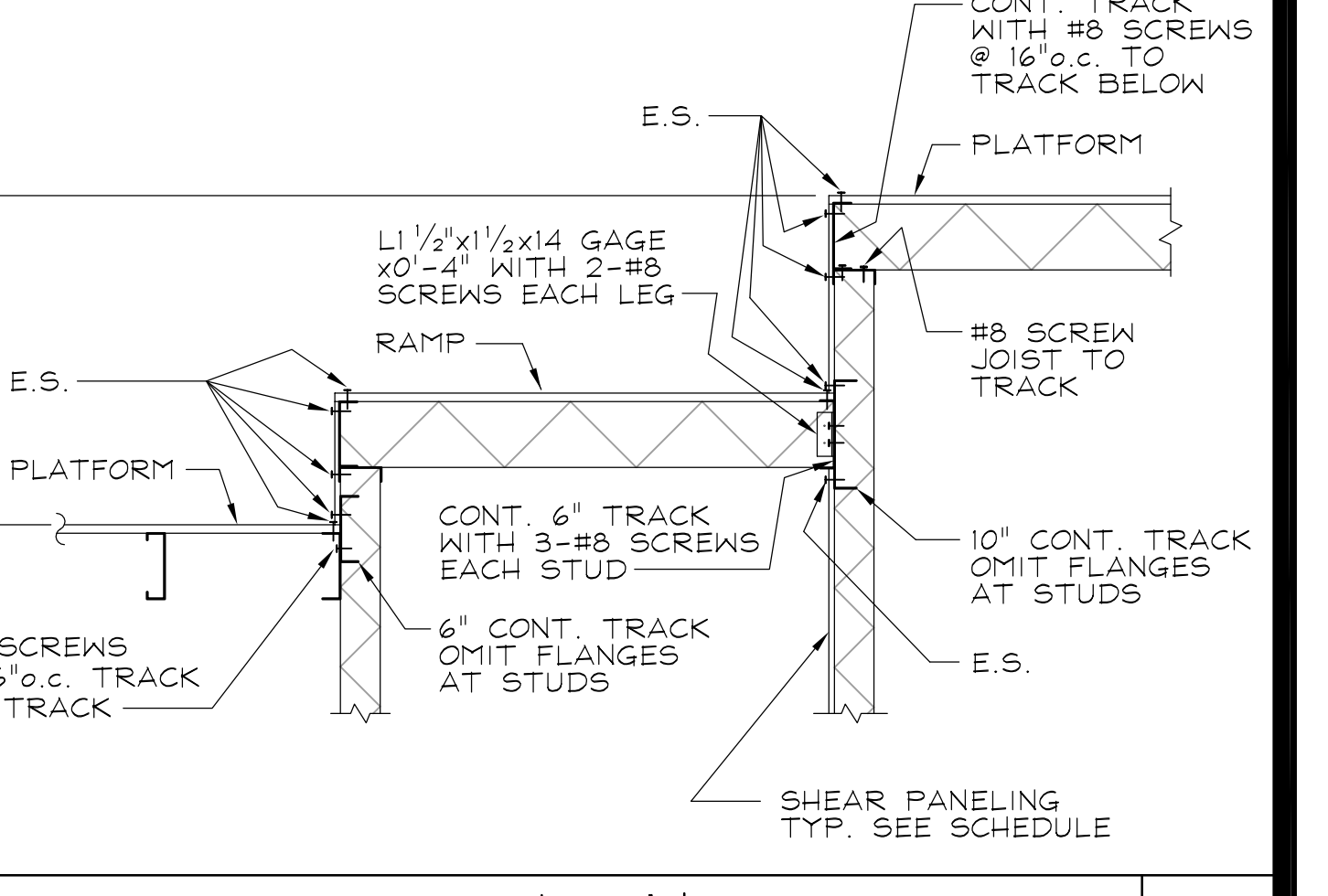
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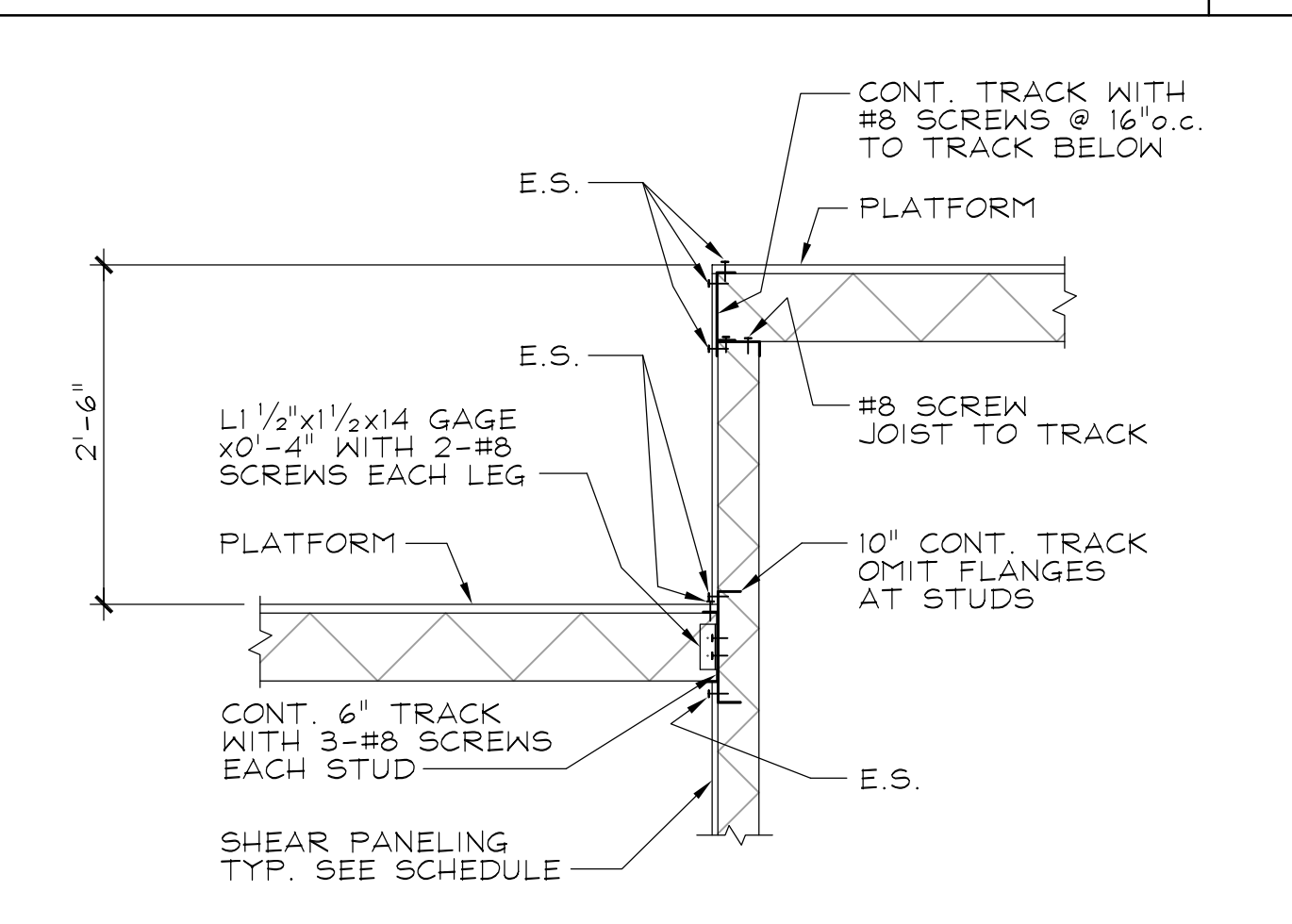
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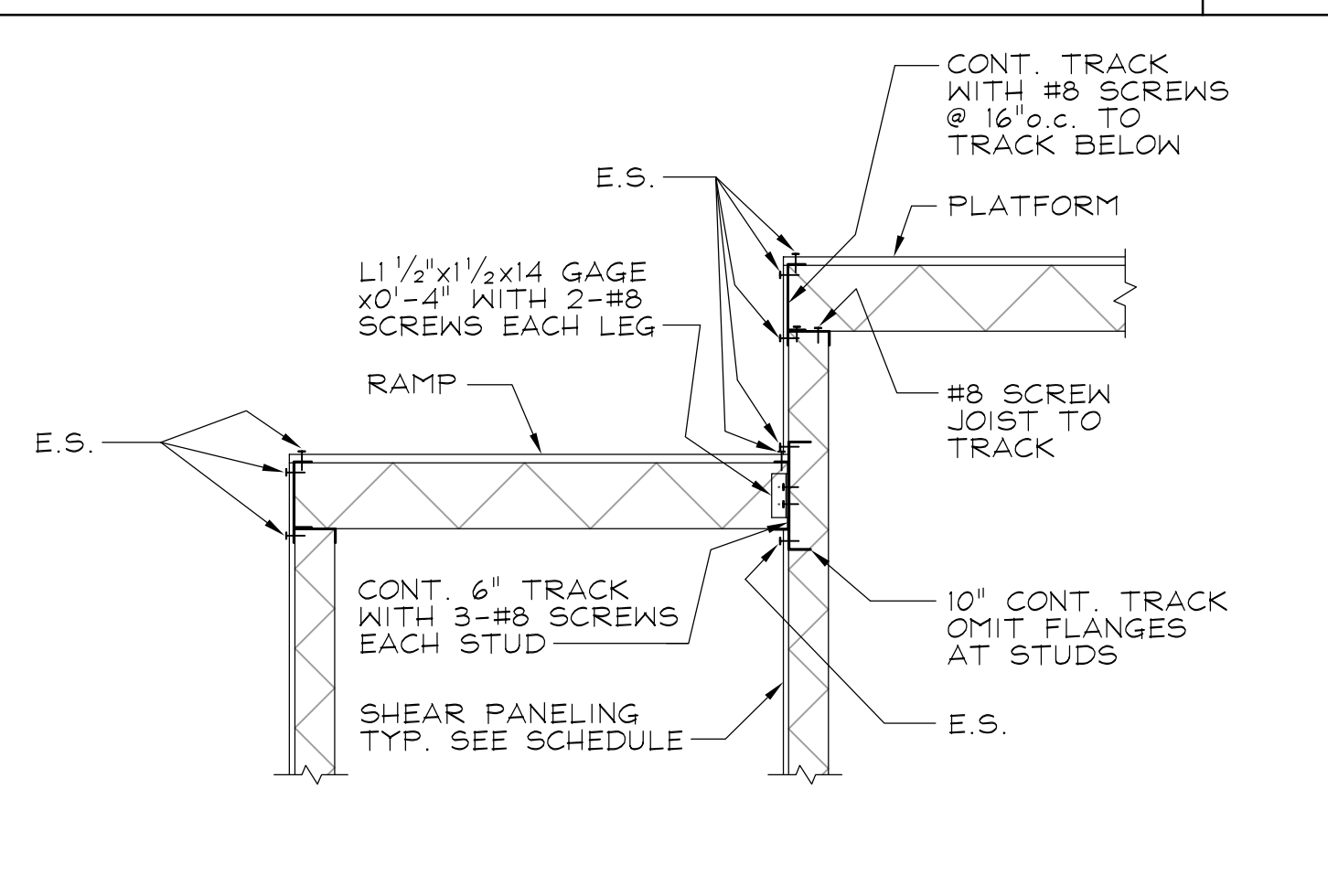
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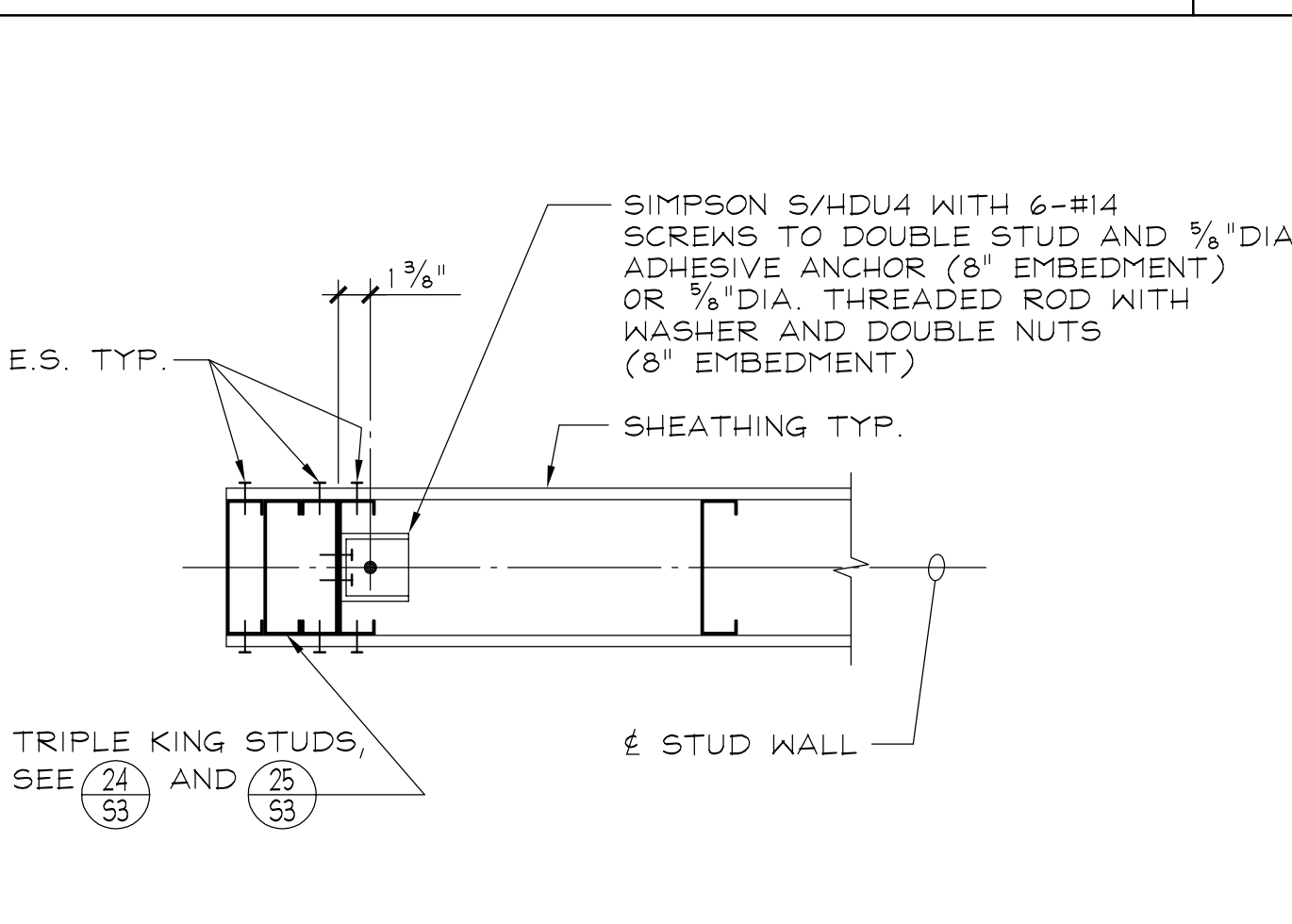
SECTION 20



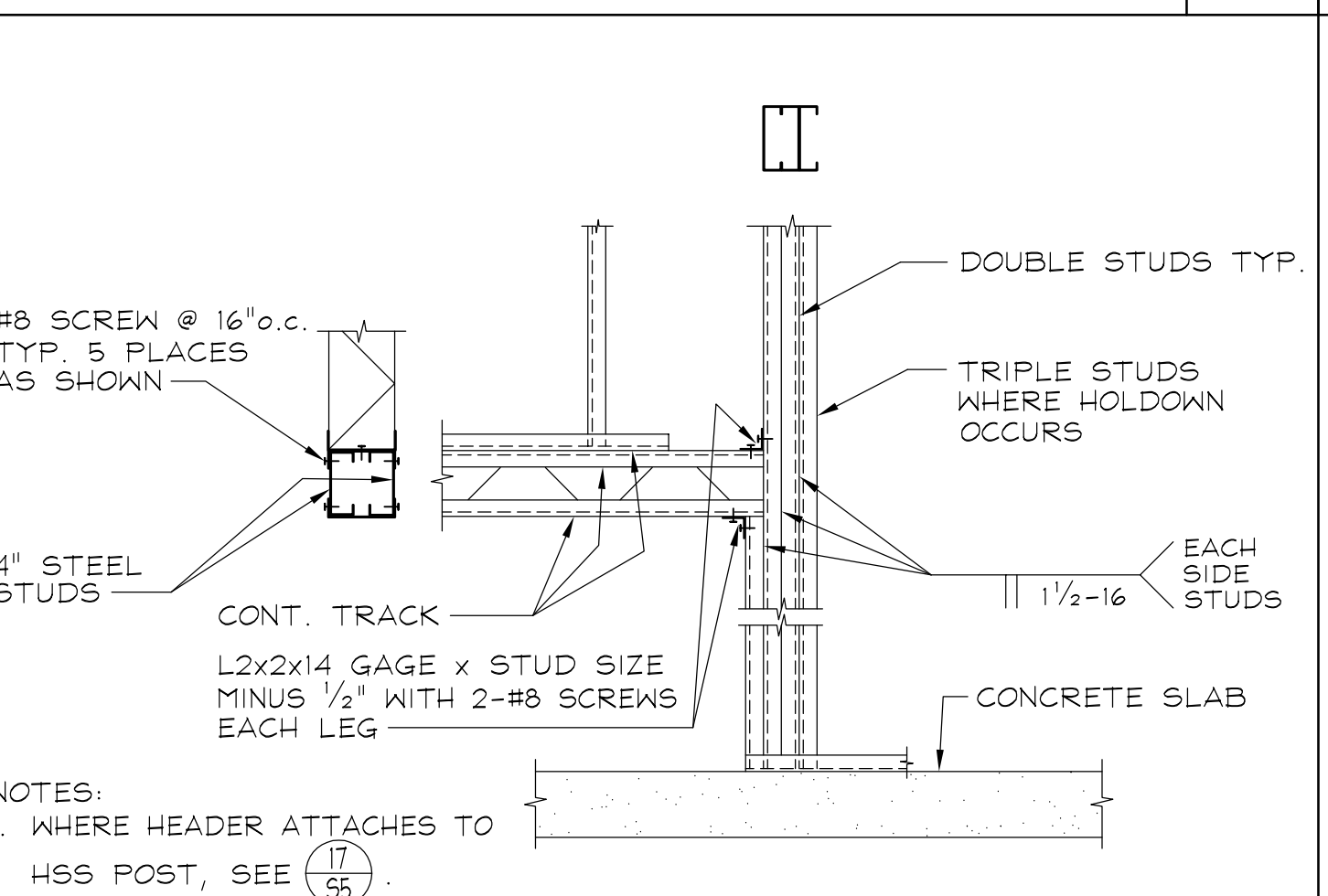
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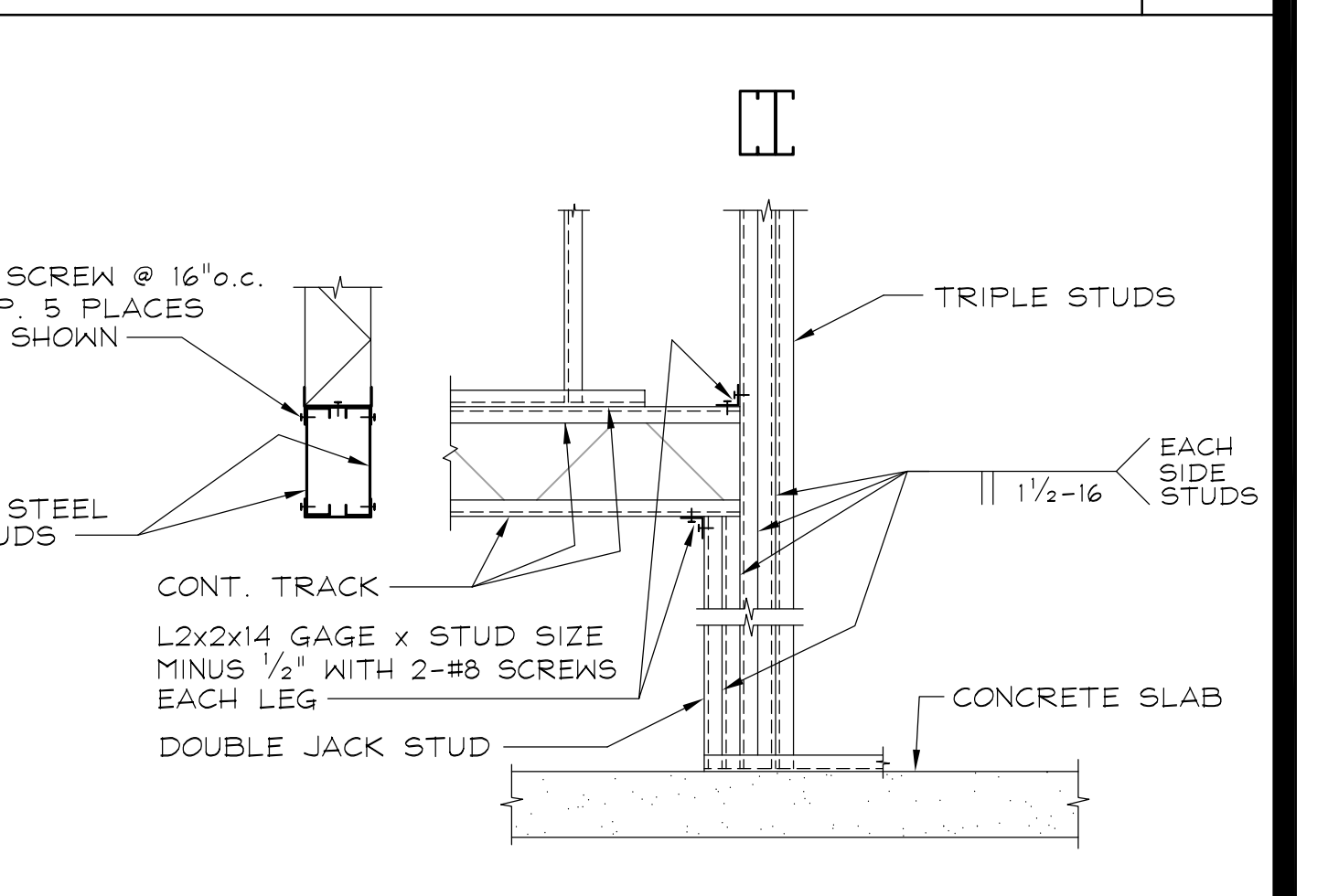
SECTION 22



PLAN DETAIL 23



HDR2 DETAIL 24



HDR1 DETAIL 25

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ARCHITECT
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GROSSMAN & SPEER
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STRUCTURAL ENGINEERS
#16156

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PROJECT NUMBER:
2016-0090
DRAWN BY: GG-GS
APPROVED BY: LS
ISSUE DATE: 12/01/2016

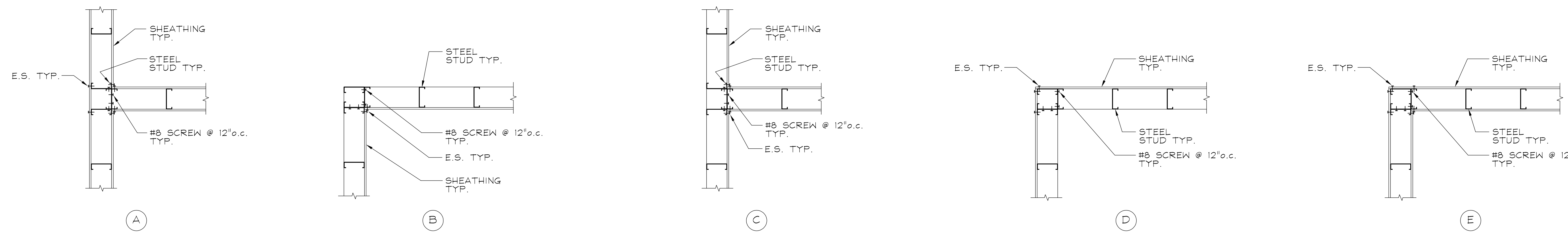
REVISIONS

#	DATE	DESCRIPTION

CATHO
30" X 42" SHEET
SHEET CONTENTS:

DETAILS AND SECTIONS
S3

DRAWING NAME: 1615356.DWG



SHEAR PANEL SCHEDULE			
PANEL TYPE	TYPE OF SHEATHING	EDGE SCREW	FIELD SCREW
A	3/8" GYP. BOARD ONE SIDE	#8 @ 8" o.c.	#8 @ 12" o.c.
B	3/8" GYP. BOARD ONE SIDE	#8 @ 4" o.c.	#8 @ 4" o.c.
C	3/8" GYP. BOARD TWO SIDES	#8 @ 4" o.c.	#8 @ 4" o.c.
D	1/2" PLYWOOD ONE SIDE	#10 @ 6" o.c.	#10 @ 12" o.c.

- SCREWS SHALL HAVE A 3/4" MINIMUM EDGE DISTANCE. SCREWS SHALL BE SCREWED THAT THE SCREW HEADS ARE FLUSH WITH THE FACE OF SHEATHING. ALL SHEATHING EDGES SHALL BE ATTACHED TO FRAMING MEMBERS OR BLOCKING.
- PLYWOOD SCREWS SHALL BE FLATHEAD COUNTERSUNK SELF-TAPPING SCREWS WITH A MINIMUM HEAD DIAMETER OF 0.333 INCH. SCREWS USED TO ATTACH WOOD STRUCTURAL PANEL SHEATHING SHALL BE IN ACCORDANCE WITH ASTM C135.
- SCREWS FOR FIRE-RETARDANT PLYWOOD SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS SCREWS SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, COPPER OR MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 645, CLASS 55 MINIMUM.
- GYP. BOARD SCREWS SHALL BE IN ACCORDANCE WITH ASTM C954 OR ASTM C1002 AS APPLICABLE.
- BLOCKING SAME GAGE AS STUDS SHALL BE PROVIDED AT PANEL EDGES.

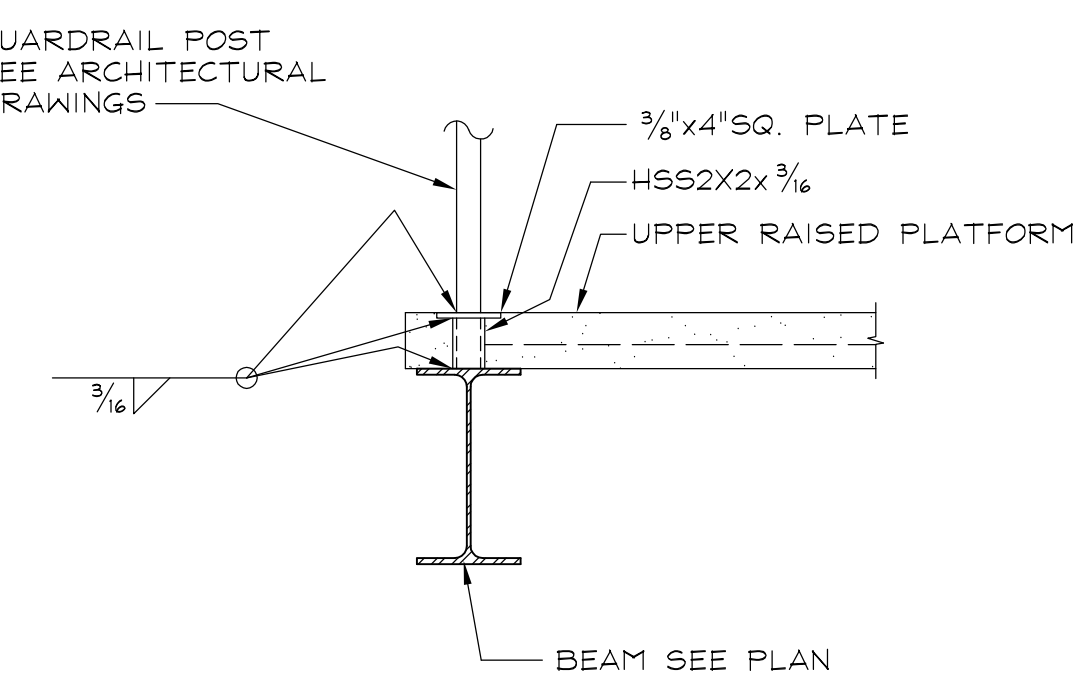
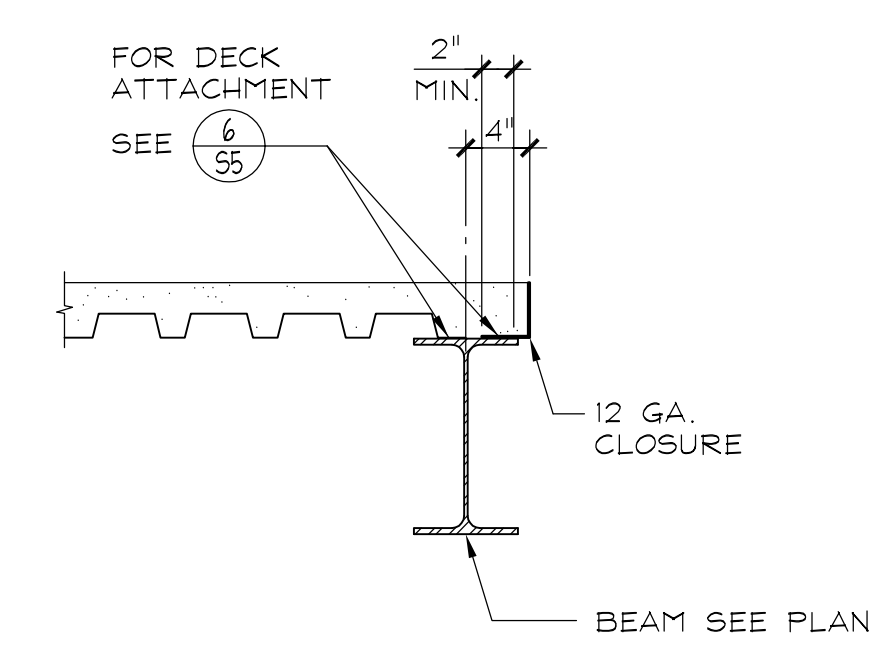
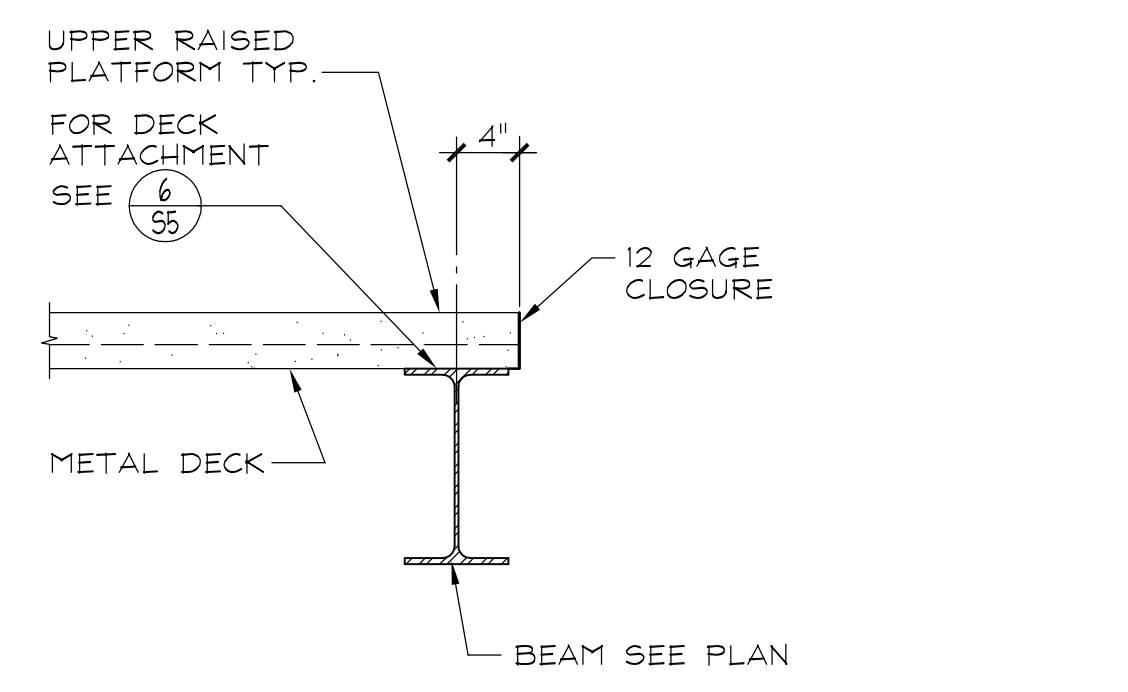
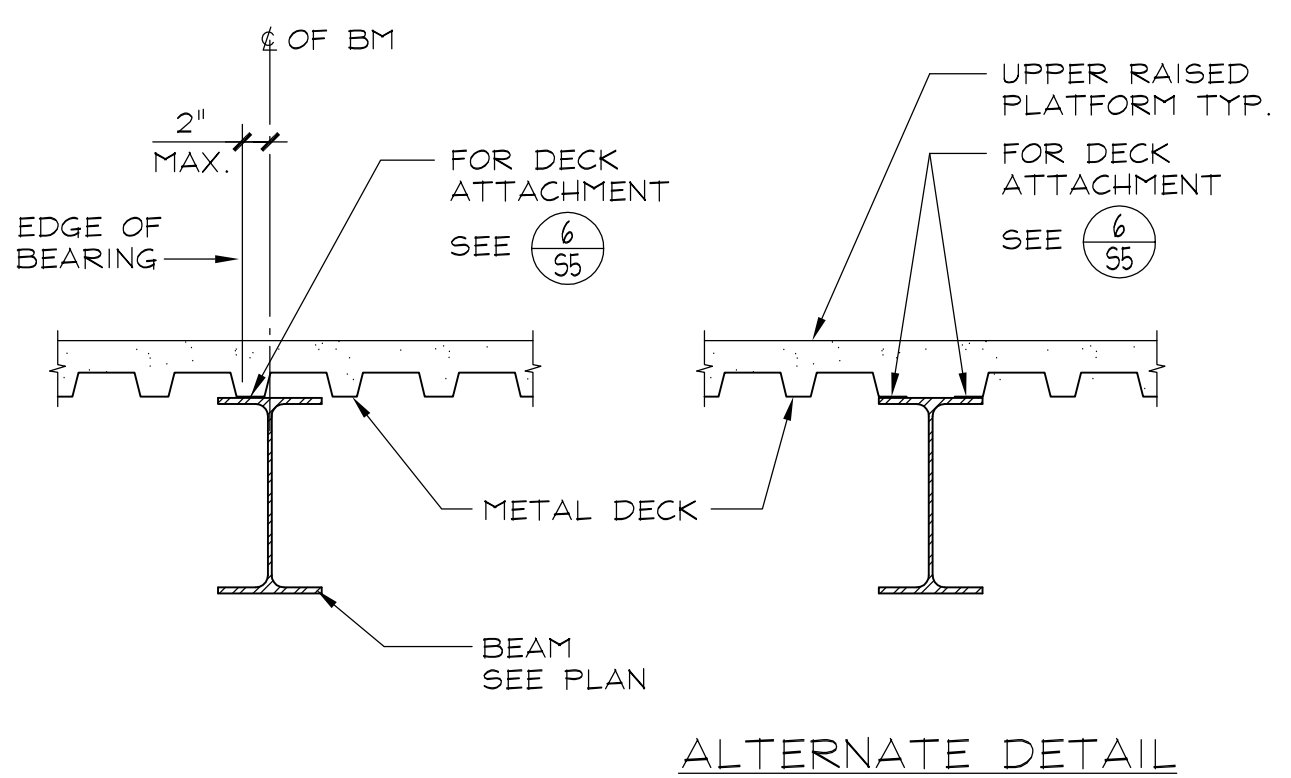
TYP. DETAILS

4

SCHEDULE

5

DECK ATTACHMENT SCHEDULE			
LOCATION	MEZZANINE	UPPER RAISED PLATFORM	REMARKS
PERIMETER FRAMING PARALLEL TO DECK	#12 SCREW @ 12" o.c.	SHOTPINS @ 12" o.c.	
PERIMETER FRAMING PERPENDICULAR TO DECK	#12 SCREW @ 12" o.c.	SHOTPINS @ 12" o.c.	
LONGITUDINAL BEAMS	#12 SCREW @ 12" o.c.	SHOTPINS @ 12" o.c.	
TRANSVERSE SUPPORT BEAMS	#12 SCREW @ 12" o.c.	SHOTPINS @ 12" o.c.	
SEAM ATTACHMENT	#10 SCREW @ 12" o.c.	VSC2 @ 12" o.c. U.N.O.	



- NOTES:
- SEE NOTES 8 AND 10 ON (10/55) FOR DECKING TYPE AND IAPMO ER-0217.
 - SCREWS SHALL BE SELF DRILLING, SELF TAPPING SCREWS COMPLYING WITH ASTM C135.
 - SHOTPINS SHALL BE HILTI X-ENP19 OR PNEUTEK K66.
 - VSC2 INDICATES VERCO SIDELAP CONNECTION 2. SEE SECTION 3.8 IN IAPMO ER 0217.

- NOTES:
- FOR GUARDRAIL POST CONNECTION SEE (10/55).

- NOTES:
- FOR GUARDRAIL POST CONNECTION SEE (10/55).

TYP. DECK DETAIL

6

TYP. DETAIL

7

TYP. DETAIL

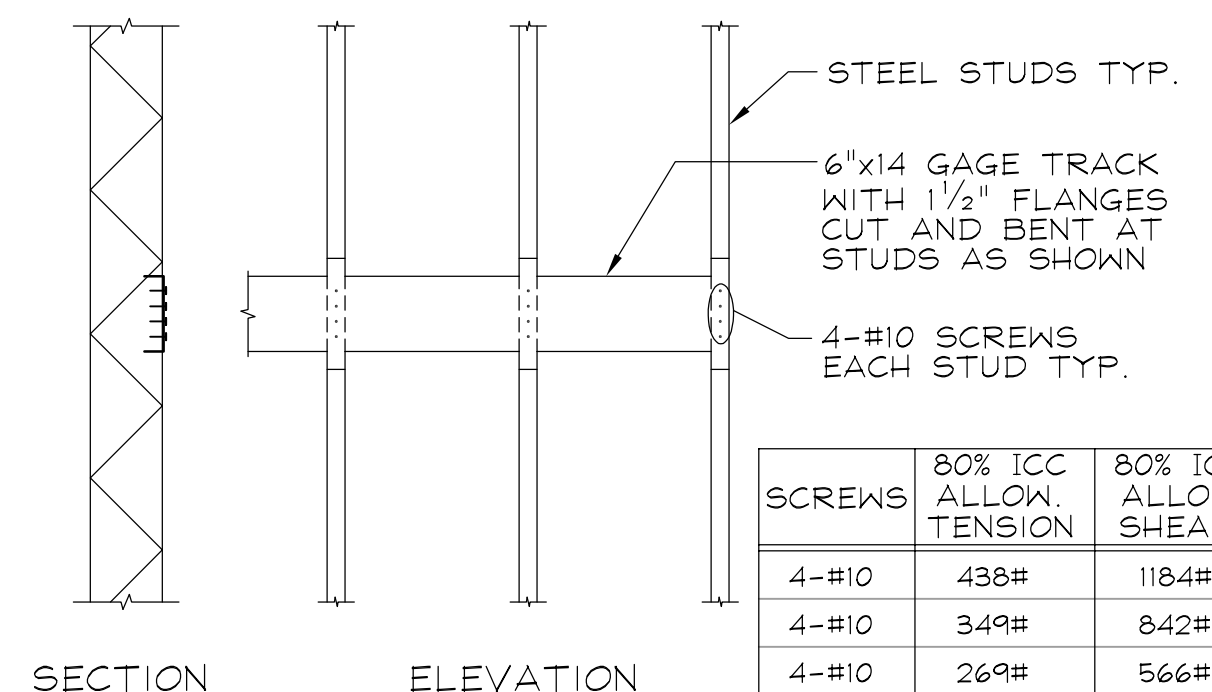
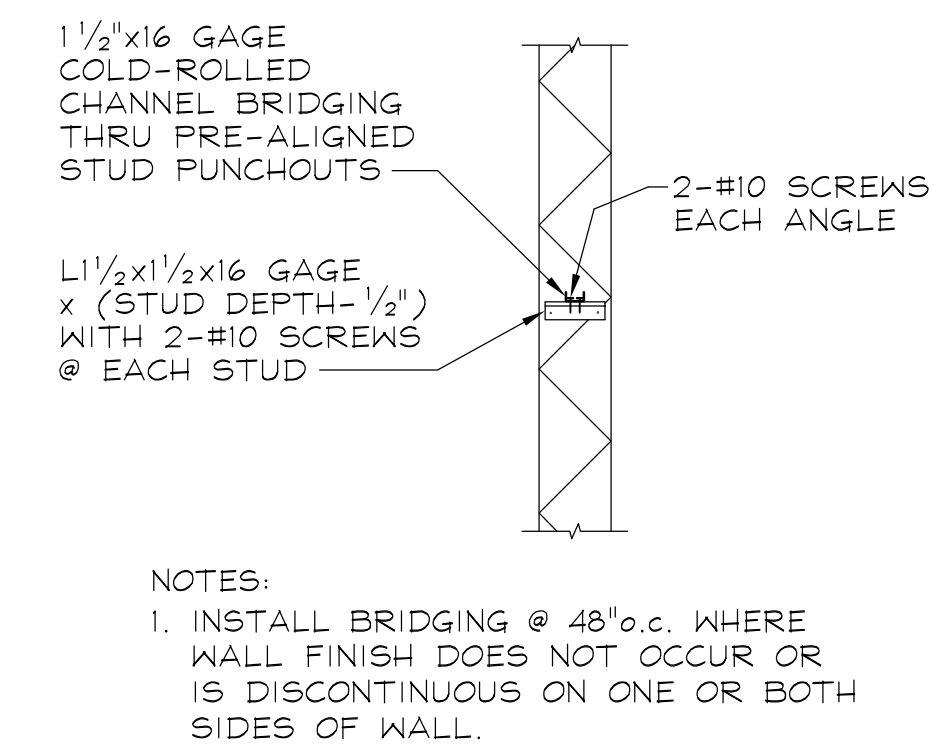
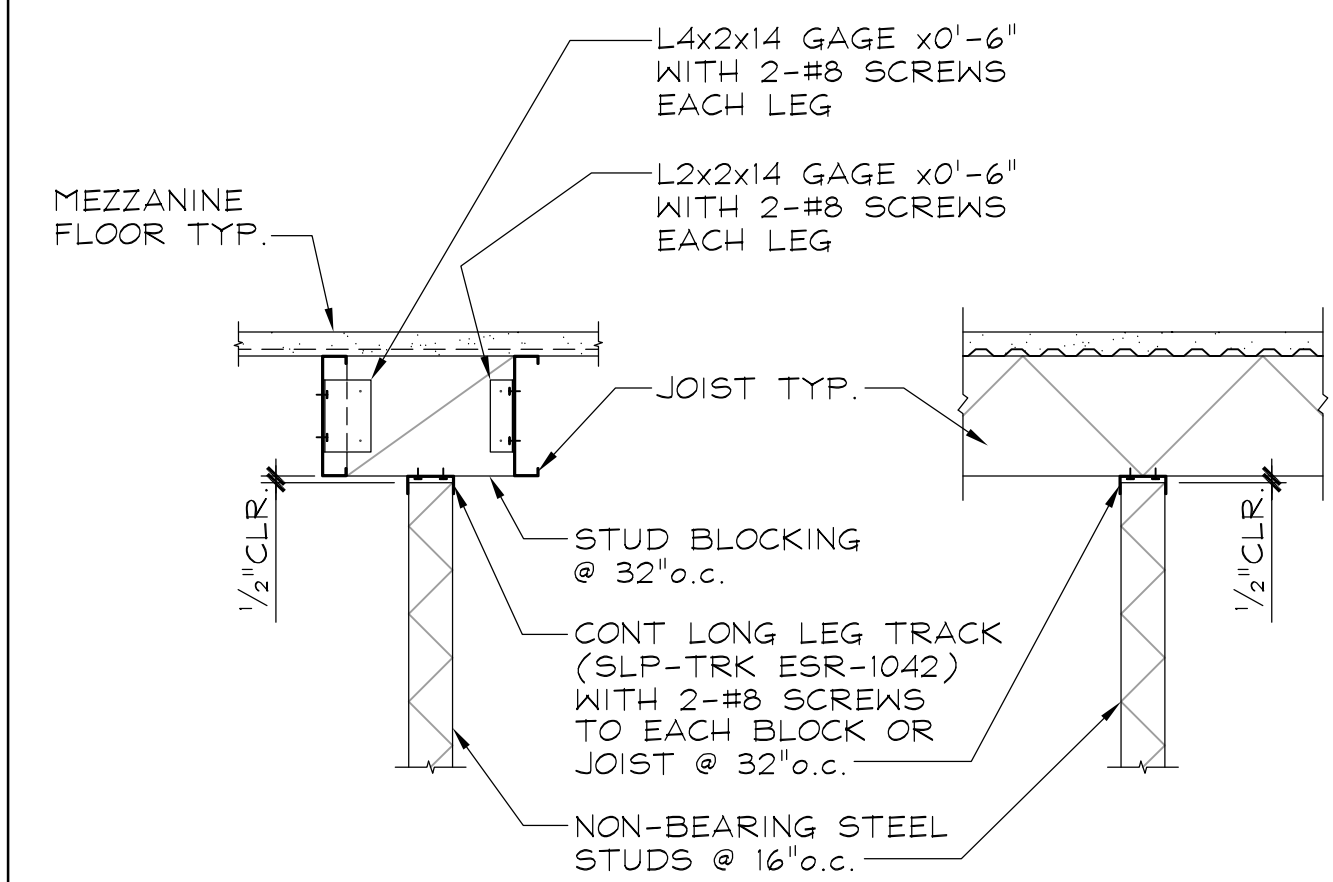
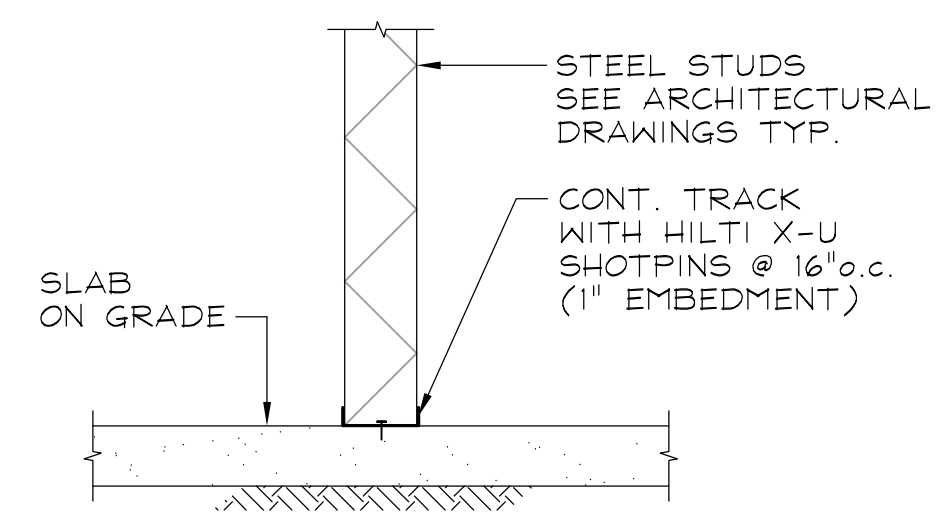
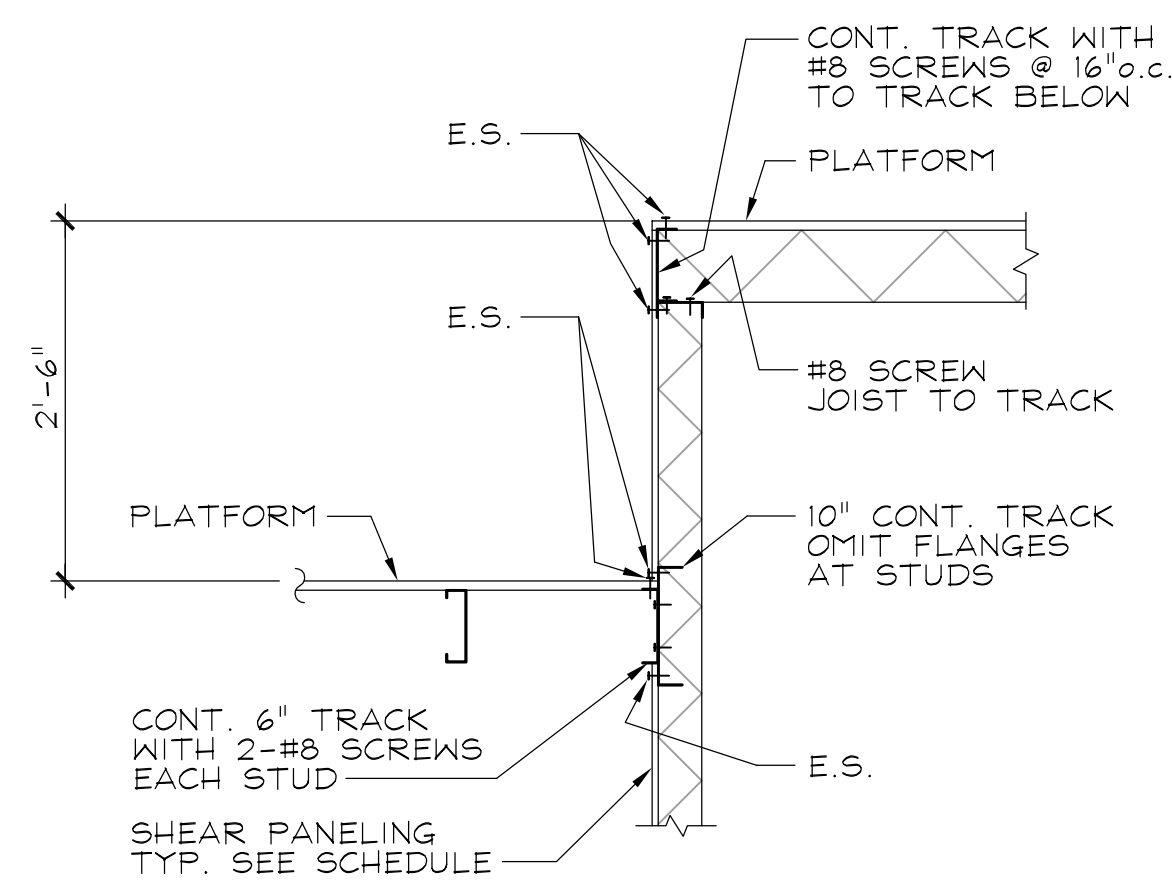
8

TYP. DETAIL

9

DETAIL

10



SCREWS	80% ICC ALLOW. TENSION	80% ICC ALLOW. SHEAR	STEEL STUD THK.
4-#10	438#	1184#	16 GA.
4-#10	348#	842#	18 GA.
4-#10	264#	566#	20 GA.

- NOTES:
- INSTALL BRIDGING @ 48" o.c. WHERE WALL FINISH DOES NOT OCCUR OR IS DISCONTINUOUS ON ONE OR BOTH SIDES OF WALL.

- NOTES:
- TYPICAL BACKING FOR ANY ARCHITECTURAL ITEM ATTACHED TO WALL.

SECTION

11

TYP. DETAIL

12

TYP. DETAIL

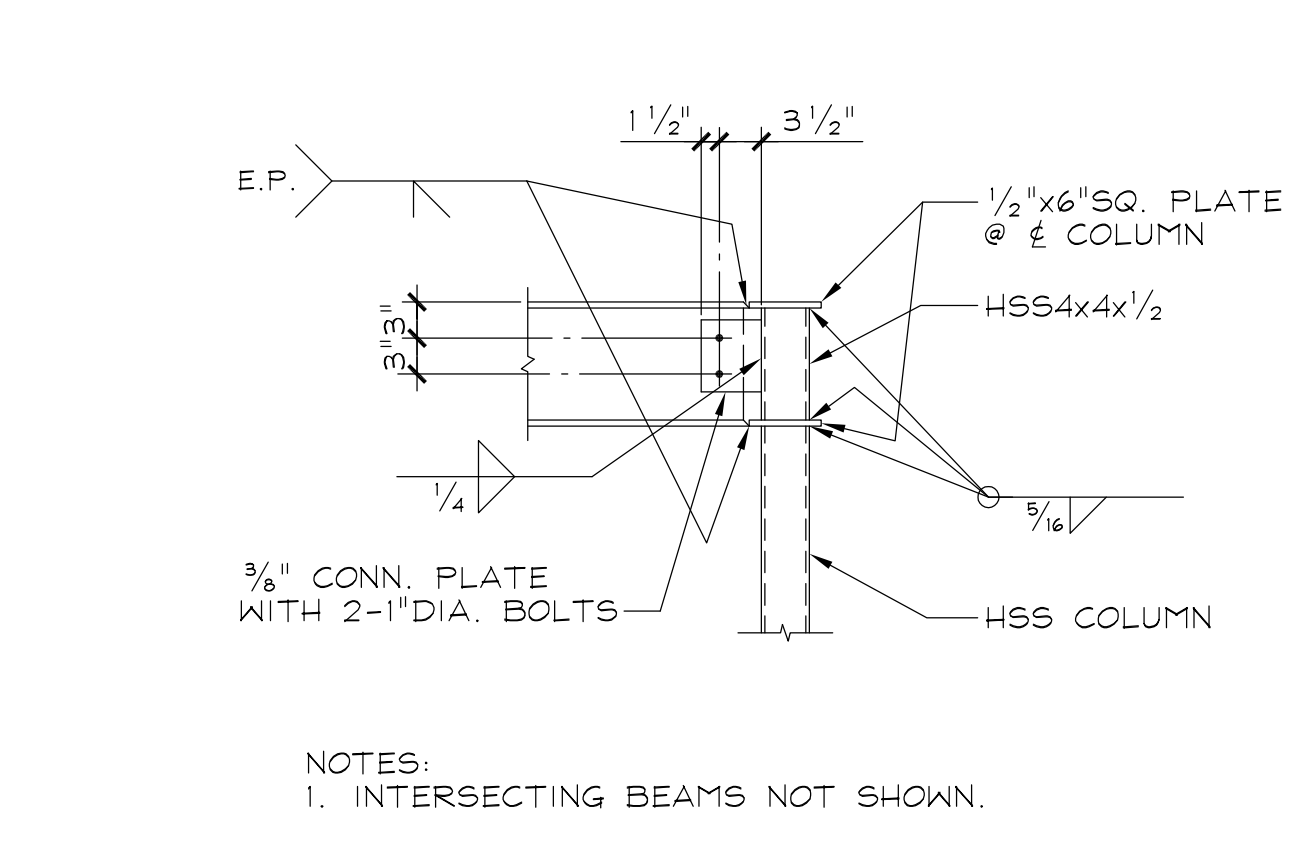
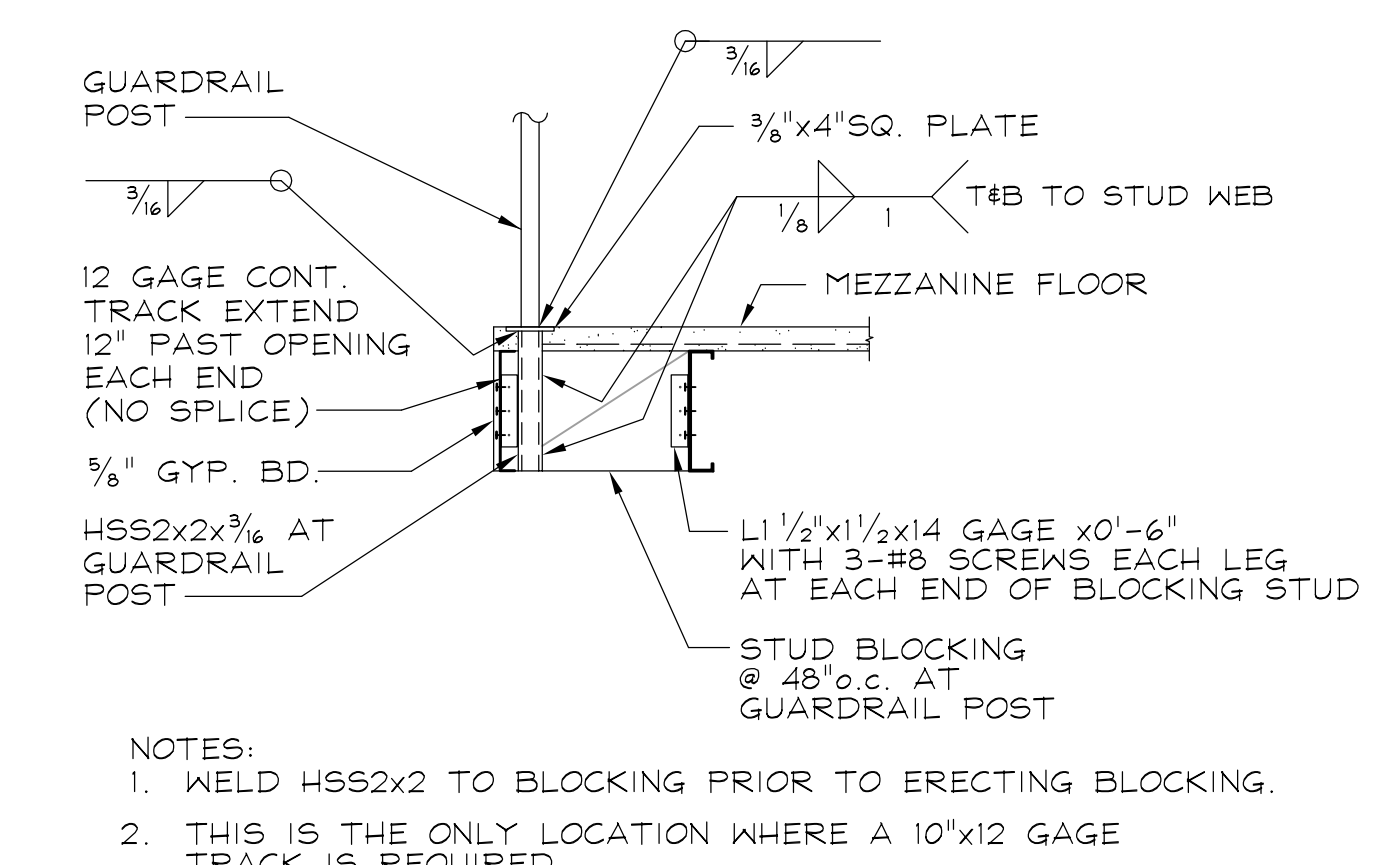
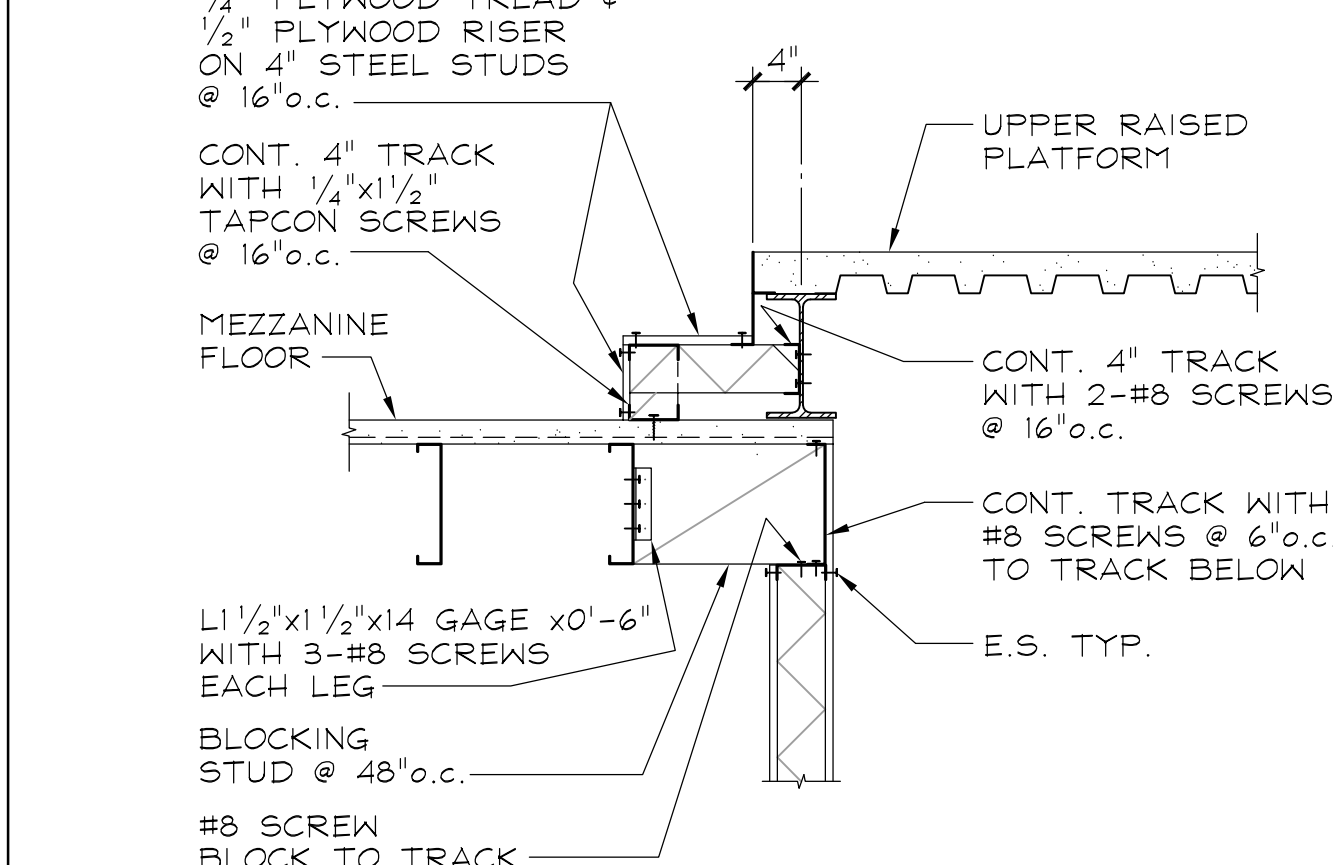
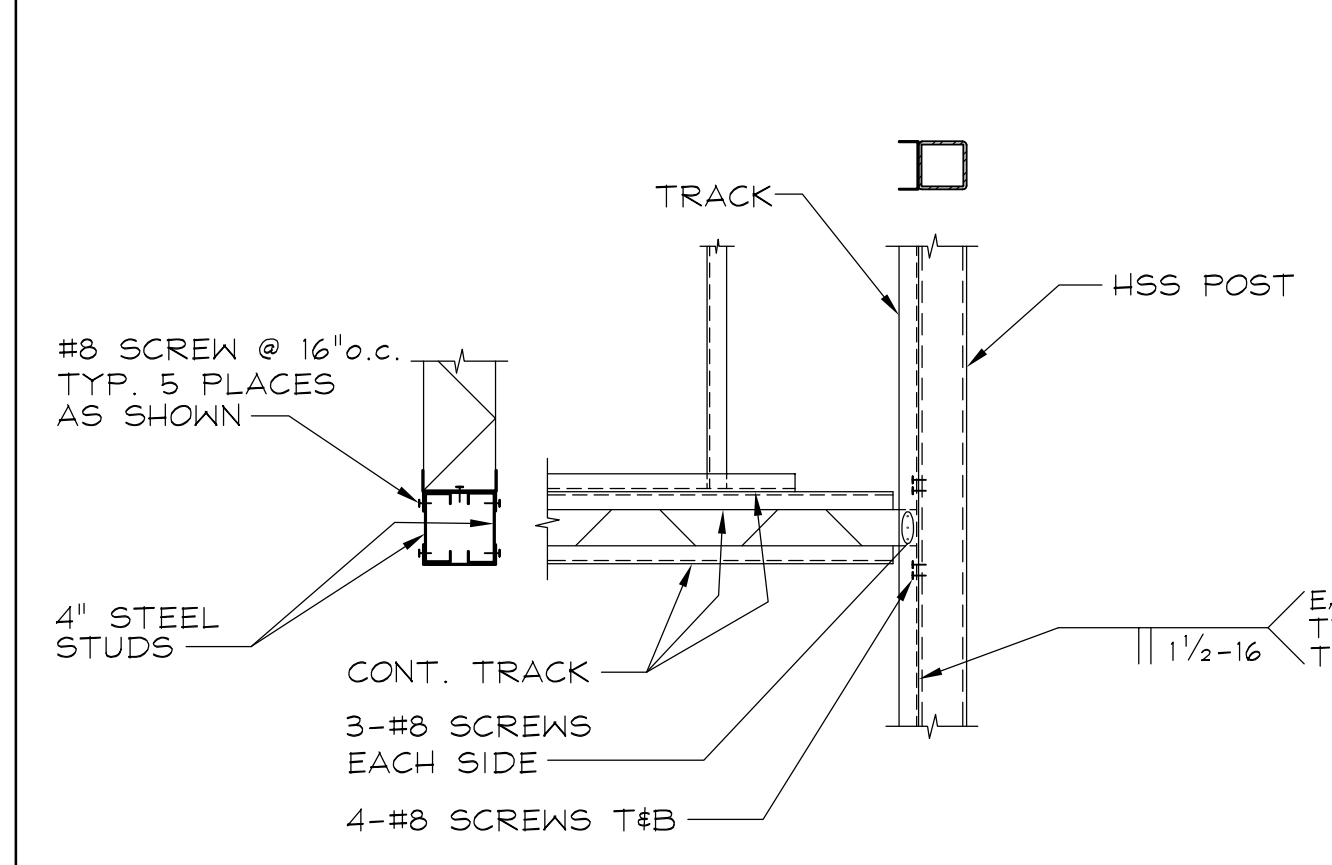
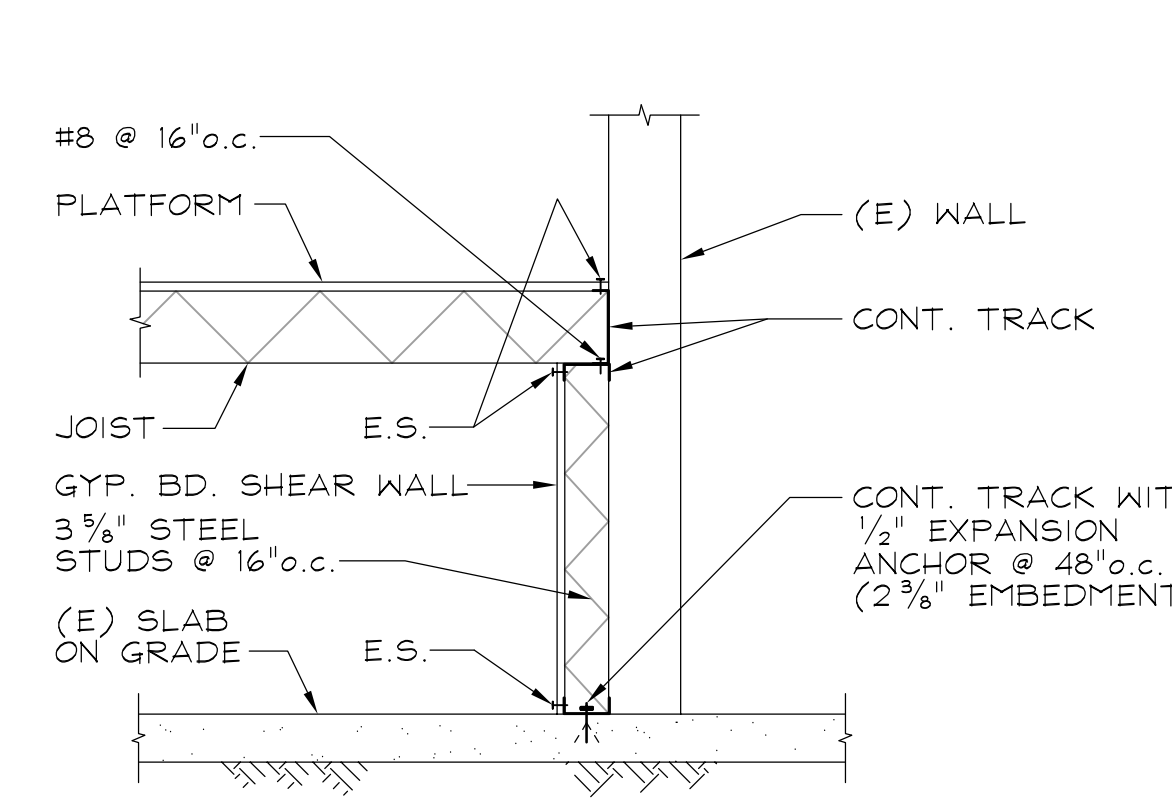
13

TYP. DETAIL

14

TYP. DETAIL

15



- NOTES:
- WELD HSS2x2 TO BLOCKING PRIOR TO ERECTING BLOCKING.
 - THIS IS THE ONLY LOCATION WHERE A 10"x12" GAGE TRACK IS REQUIRED.

- NOTES:
- INTERSECTING BEAMS NOT SHOWN.

SECTION

16

SECTION

17

SECTION

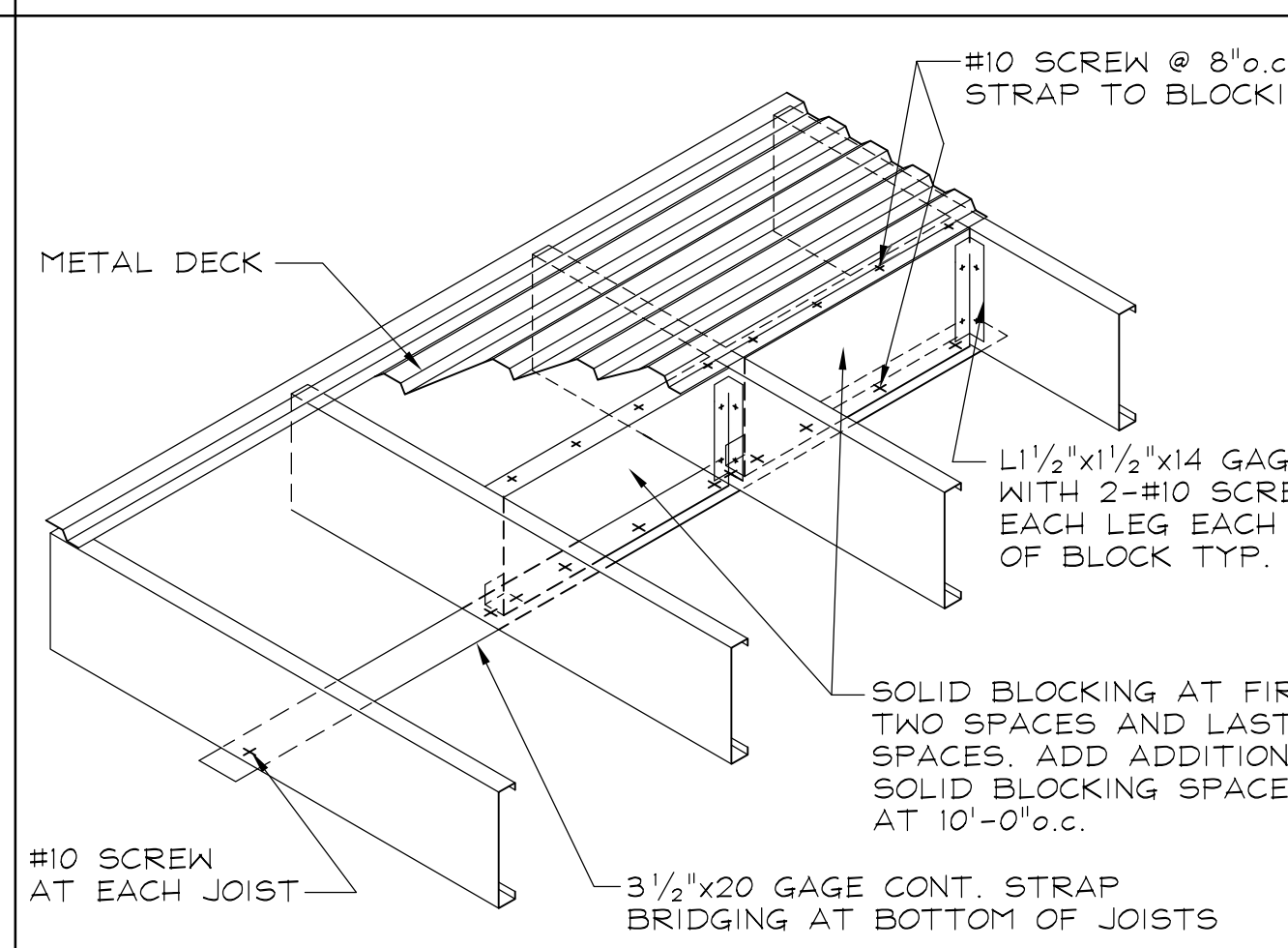
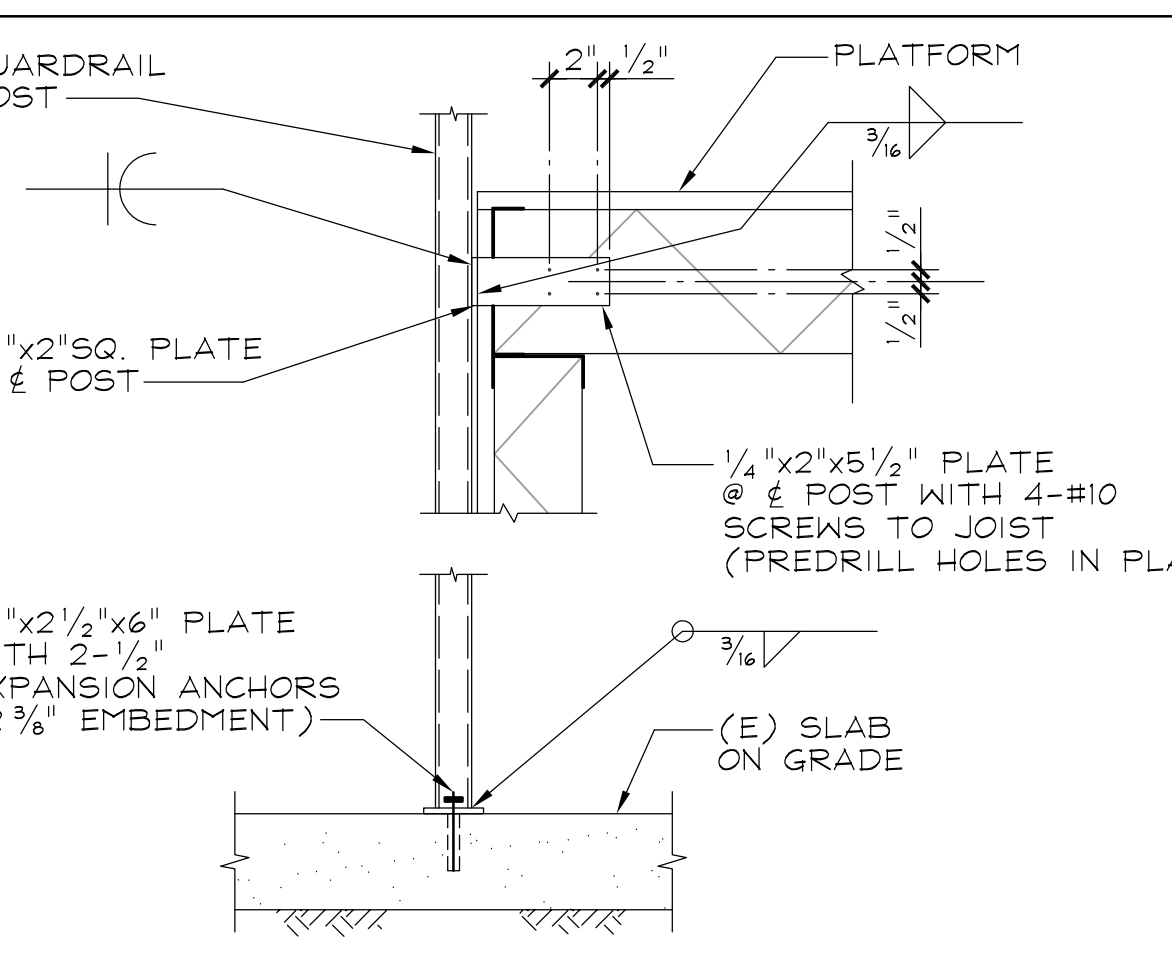
18

SECTION

19

DETAIL

20



TYP. GUARDRAIL CONN. @ LOW PLATFORM

21

TYP. JOIST BRIDGING

22

23

24

25

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T M G THE MCLAIN GROUP

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DRAWN BY: GG-GS
APPROVED BY: LS
ISSUE DATE: 12/01/2016

REVISIONS
DATE DESCRIPTION

CATHO
30" X 42" SHEET
SHEET CONTENTS:
DETAILS AND SECTIONS

S5

DRAWING NAME: 161665.DWG