

- GENERAL NOTES:
1. IF ANY NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS, THE STRICTEST PROVISION SHALL GOVERN.

2. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. OSHA, DNR AND SAFETY CODE REQUIREMENTS ARE DETERMINED AND PROVIDED BY OTHERS. CLASSIC ENGINEERING, LLC IS NOT RESPONSIBLE FOR JOBSITE SAFETY.

3. DESIGN LOADINGS AND STRUCTURAL ANALYSIS IS BASED ON CODE PRESCRIBED LOADS FOR THE COMPLETED STRUCTURE. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS IF NECESSARY AND BRACING EXCAVATIONS TO PREVENT CAVE IN.

4. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION.

5. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED.

6. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITIONS. ANY UNCLEAR CONDITIONS SHALL BE VERIFIED WITH ENGINEER PRIOR TO CONSTRUCTION OF THAT AREA.

7. DRAWINGS ARE NOT TO BE SCALED. ANY UNCLEAR DIMENSIONS OR DIMENSIONAL DISCREPANCIES BETWEEN DISCIPLINES SHALL BE VERIFIED WITH ARCHITECT.

8. ADDITIONS OF OPENINGS, PENETRATIONS OR EMBEDMENTS IN THE FIELD SHALL BE VERIFIED WITH THE ARCHITECT/ENGINEER.

9. ALL EXISTING CONDITIONS AND RELATED DIMENSIONS INDICATED IN THE CONTRACT DOCUMENTS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION, ERECTION AND/OR CONSTRUCTION. ANY CONDITIONS THAT DIFFER FROM THAT INDICATED IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION, ERECTION AND/OR CONSTRUCTION.
- CONCRETE NOTES:
1. ALL CONCRETE SHALL ATTAIN THE FOLLOWING 28 DAY COMPRESSIVE STRENGTHS AS SHOWN IN THE CONCRETE MATERIAL SCHEDULE.

2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. LAP FABRIC 8" ON SIDES AND ENDS. MAINTAIN WIRE 1" TO 2" BELOW TOP SURFACE OF SLABS ON GRADE. PROVIDE CHAIRS, BOLSTERS OR OTHER APPROVED MEANS TO PROPERLY LOCATE REINFORCING.

3. ALL ANCHOR BOLTS SHALL MEET ASTM F1554, GRADE 36, UNO. PROVIDE A MINIMUM 3" COVER FOR ANCHOR BOLTS AND LOCATE HORIZONTAL REINFORCEMENT TO THE OUTSIDE FOR ANCHOR BOLT CONTAINMENT, UNO.

4. WHEN PLACING CONCRETE IN HOT WEATHER, REFER TO ACI308.1. WHEN PLACING CONCRETE IN COLD WEATHER, REFER TO ACI308.1. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

5. VERIFY AND COORDINATE ALL SLEEVES, OPENINGS, EMBEDDED ITEMS, ETC., AS NECESSARY, WITH THE APPLICABLE TRADE THAT MAY REQUIRE THEM.

6. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60. TIES AND STIRRUPS TO BE GRADE 60.

7. SAWN CONTROL JOINTS SHALL BE PLACED AS SOON AS CONCRETE IS ABLE TO BE SAWN WITHOUT PULLING OUT AGGREGATE FROM FLOOR. SLABS SHALL NOT BE LEFT OVERNIGHT, OR ANY REASONABLE AMOUNT OF TIME, WITHOUT SAWING JOINTS. WEATHER IS CRITICAL TO SCHEDULE OF SAWN JOINTS. IF LARGE AREAS OF SLAB ARE POURED AT ONE TIME, SEVERAL SAWS MAY BE REQUIRED TO PROVIDE JOINTS IN TIME TO PREVENT SHRINKAGE CRACKING. PROPER JOINTING OF SLAB IS CRITICAL TO ACI MANUAL OF CONCRETE PRACTICE FOR PROPER JOINTING TECHNIQUES.

8. DETAILING, MATERIALS AND INSTALLATION OF CONCRETE REINFORCING STEEL SHALL MEET REQUIREMENTS AS SET FORTH BY CRSI AND THE AMERICAN CONCRETE INSTITUTE AND THE APPLICABLE BUILDING CODE.

9. MATERIAL AND WORKMANSHIP FOR ALL CONCRETE AND REINFORCING SHALL BE IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE AND THE ACI BUILDING CODE REQUIREMENTS.

10. APPROPRIATE CURING MEASURES SHALL BE TAKEN FOR NEW CONCRETE. A MOIST CURE METHOD OR A CURING COMPOUND SHALL BE USED. COMMENCEMENT OF CURING OR APPLICATION OF A COMPOUND SHALL BE DONE IMMEDIATELY AFTER FINISHING OR REMOVING FORM-WORK. THE CURING COMPOUND SHALL BE COMPATIBLE WITH FLOOR COVERINGS OR MANUFACTURERS INSTRUCTIONS.

- STRUCTURAL STEEL NOTES:
1. STRUCTURAL STEEL SHALL CONFORM TO THE STEEL MATERIAL SCHEDULE.

2. DETAILS OUTLINE BASIC CONNECTION TYPES. BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS NOT DETAILED IN DRAWINGS SHALL BE SIZED BY STEEL DETAILER AS STANDARD AISC, TYPE 2, BEARING CONNECTIONS CAPABLE OF SUPPORTING REACTIONS AS INDICATED ON DRAWINGS. IF LOADS ARE NOT POSTED ON DRAWINGS DESIGN CONNECTIONS FOR 12 KIPS SHEAR MINIMUM.

3. STEEL SHALL BE DESIGNED, DETAILED, FABRICATED AND ERECTED ACCORDING TO ALL APPLICABLE SECTIONS OF THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION, ASD.

4. FOR BOLTED CONNECTIONS OF BEAMS AND COLUMNS USE A325 OR A490 BOLTS, SIZE AS REQUIRED.

5. PERFORM ALL WELDING WITH E70XX ELECTRODE, UNO, OR UNLESS REQUIRED FOR SPECIAL CONNECTIONS.

6. WELDING OF STRUCTURAL MEMBERS SHALL BE PERFORMED BY CERTIFIED WELDERS AND WELDING SHALL BE IN ACCORDANCE WITH STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.1)

7. INSPECTION OF STRUCTURAL STEEL CONNECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR. APPROVED BY THE ENGINEER AND RETAINED BY THE OWNER. INSPECTOR QUALIFICATION SHALL BE BASED ON COMPLIANCE WITH APPROPRIATE PROVISIONS OF THE AWS CODE D1.1. INSPECTION SHALL INCLUDE VISUAL INSPECTION OF ALL COMPLETED STRUCTURAL WELDED CONNECTIONS. THE INSPECTING AGENCY SHALL BE NOTIFIED BEFORE ANY WELDING WORK BEGINS AND SHALL BE RESPONSIBLE FOR VERIFICATION OF WELDERS CERTIFICATIONS, INSPECTION DURING WELDING UNTIL THE INSPECTOR IS SATISFIED THAT THE WELDING PROCESS IS BEING PERFORMED PER AWS REQUIREMENTS.

8. FIELD CUTTING, DRILLING OR OTHER MODIFICATIONS OF STRUCTURAL STEEL COMPONENTS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER. WHERE BEAM PENETRATIONS CANNOT BE AVOIDED OR WHERE CUTTING IS REQUIRED, CONTRACTOR SHALL SUBMIT TO THE ENGINEER, ALL PERTINENT INFORMATION INCLUDING PENETRATION SHAPE, SIZE, LOCATION AND METHOD OF CUTTING THE OPENING.

9. PAINTED SURFACES MAY REQUIRE FIELD PAINTING TO TOUCH UP ABRASIONS OF THE SHOP COAT OR OTHER DAMAGE TO THE PAINTED SURFACE. CONTRACTOR SHALL COORDINATE.

10. VERIFY AND COORDINATE SIZE AND LOCATION OF ALL OPENINGS IN FLOOR DECK WITH MECHANICAL CONTRACTOR(S). PROVIDE ANGLE FRAME FOR DECK SUPPORT AS REQUIRED. CONSULT ENGINEER FOR SIZE.

11. ALL STRUCTURAL STEEL SHALL RECEIVE A SHOP PRIME FINISH, EXCEPT THE FOLLOWING:

A. SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO DEPTH OF 2 INCHES.

B. SURFACES TO BE FIELD WELDED.

C. GALVANIZED SURFACES.

D. MEMBERS TO RECEIVE SPRAY-APPLIED FIREPROOFING.

POST INSTALLED ANCHORS-HILTI:

1. POST INSTALLED ANCHORS SHALL BE MANUFACTURED BY HILTI, INC. INTERNATIONAL CODE COUNCIL (ICC) APPROVED SUBSTITUTIONS (ALTERNATES) ARE ALLOWED AND MAY BE SUBMITTED FOR REVIEW AND APPROVAL.

2. THE FOLLOWING ANCHORS SHALL BE USED FOR THE VARIOUS APPLICATIONS LISTED UNLESS NOTED OTHERWISE. SEE THE DRAWINGS FOR SIZE, SPACING AND REQUIRED EMBEDMENT. PROVIDE STANDARD EMBEDMENT AT LOCATIONS NOT INDICATED.

3. ATTACHMENT TO CONCRETE:

-EXPANSION ANCHORS: HILTI KWIK BOLT TZ2.

-ADHESIVE ANCHORS: HILTI HAS RODS WITH HIT-HY 200 V3 INJECTION ADHESIVE.

-SCREW ANCHORS: HILTI KWIK HUS-EZ

-REINFORCING BAR: HILTI HIT-HY200 V3

4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AS WELL AS ANY NECESSARY INSTALLATION TOOLS REQUIRED FOR PLACEMENT OF ANCHORS. HOLE INSTALLATION CONDITIONS SHALL BE HAMMER DRILL DRY.

5. POST INSTALLED ANCHORS (EXPANSION AND ADHESIVE TYPES) USED IN SLIP (MOVEMENT) CONNECTIONS SHALL BE STUD TYPE UNLESS NOTED OTHERWISE. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S TORQUE REQUIREMENTS TO ALLOW PROPER SEATING OF THE ANCHOR. PRIOR TO BACKING OFF THE NUT TO FINGER-TIGHT.

- DESIGN CRITERIA:
- CODE: 2021 MICHIGAN BUILDING CODE

RISK CATEGORY: II

LIVE LOADS:

TYPICAL FLOOR= 100 PSF

FLOOR=

DECK + CONCRETE SELF WEIGHT= 63

CONCRETE OVERPOUR= 7

MEP ALLOWANCE= 5

MISC= 5

TOTAL= 80

EARTHQUAKE DESIGN DATA:

IMPORTANCE FACTOR, I 1.00

MAPPED SPECTRAL RESPONSE ACCELERATION, S_s= 0.087g

ACCELERATION, S₁= 0.047g

SITE CLASS= D

SPECTRAL RESPONSE COEFFICIENT, S_{ds}= 0.093

S_{d1}= 0.075

SEISMIC DESIGN CATEGORY= B

SEISMIC RESISTING SYSTEM= NOT MODIFIED

DESIGN BASE SHEAR, V= 0.031W

SEISMIC RESPONSE COEFFICIENT, C_s= 0.031

RESPONSE MODIFICATION FACTOR, R= 3

ANALYSIS PROCEDURE= EQUIVALENT LATERAL FORCE ANALYSIS

GEOTECHNICAL DATA:

ALLOWABLE BEARING CAPACITY= 2000 PSF (ASSUMED)

MINIMUM FROST PROTECTION DEPTH= 3'-6"

CONCRETE MASONRY UNIT NOTES:

1. CONCRETE MASONRY UNITS (CMU) SHALL COMPLY WITH ASTM C-90 GRADE N, TYPE I. STANDARD WEIGHT CONCRETE BLOCK SHALL BE USED, SIZES AS INDICATED ON PLANS.

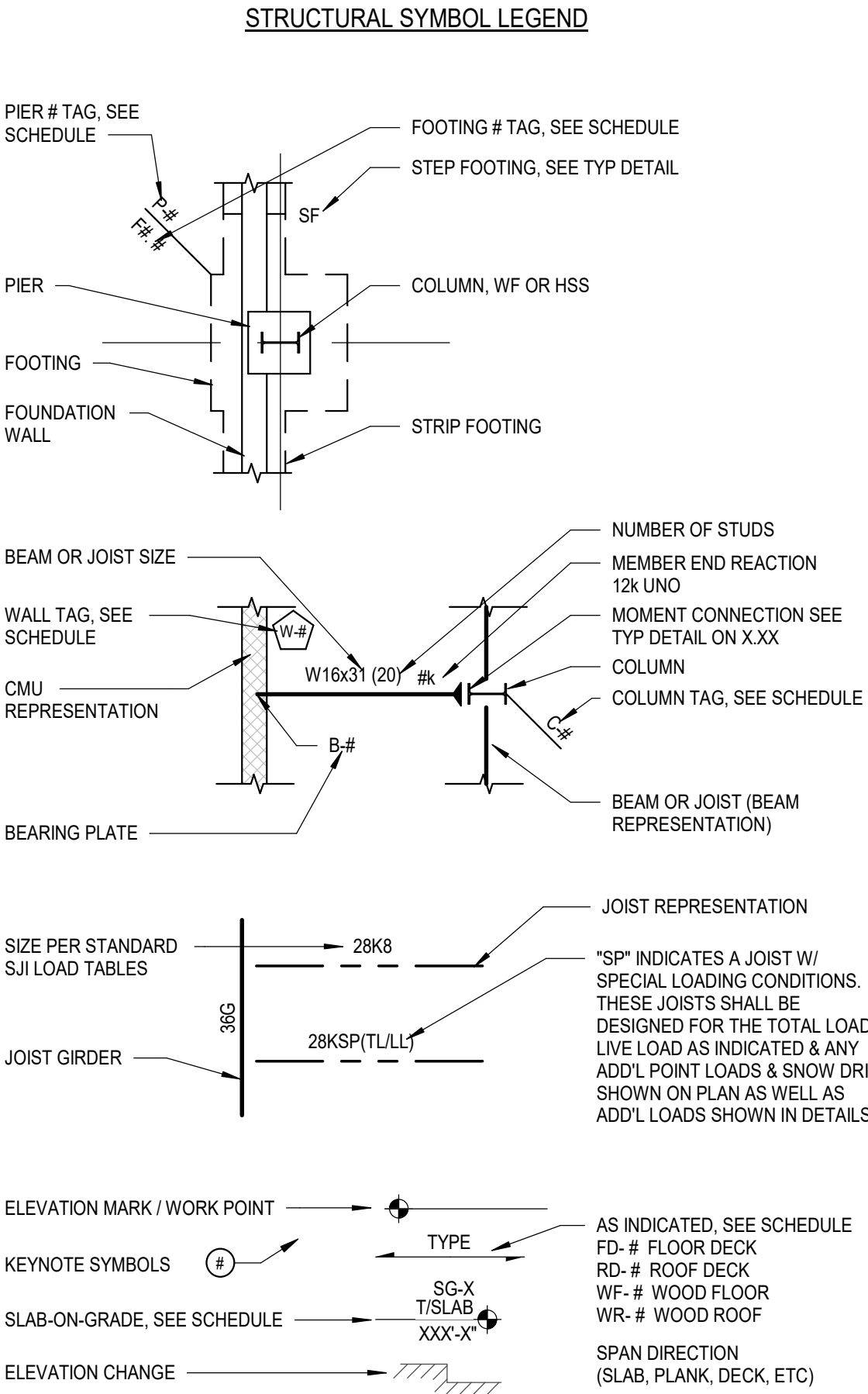
• 1" m SHALL BE 2000 PSI.
2. MORTAR SHALL BE TYPE 'N', EXCEPT BELOW GRADE, TYPE 'M' SHALL BE USED, UNO. MIX MORTAR FROM TYPE I PORTLAND CEMENT, TYPE II MAY BE USED FOR COLD WEATHER CONSTRUCTION), HYDRATED LIME (ASTM C-207) AND AGGREGATE (ASTM C-144).
3. NET AREA MINIMUM COMPRESSIVE STRENGTH OF CMU UNITS:

A. TYPE M OR S MORTAR: 2000 PSI

B. TYPE N MORTAR: 2650 PSI
4. GROUT FOR REINFORCED CORES AND BOND BEAMS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF F_c = 3000 PSI.
5. ALL CELLS BELOW GRADE AND ALL CELLS TO RECEIVE STEEL REINFORCING SHALL BE GROUTED SOLID. ADDITIONAL CELLS TO RECEIVE GROUT ARE SHOWN IN DETAILS.
6. CONCRETE GROUT USED TO FILL VOIDS SHALL CONSIST OF CEMENT, 3/8 INCH AGGREGATE AND FINE AGGREGATE AS CALLED OUT IN THE DIVISION 4 SPECIFICATIONS. MASONRY MORTAR SHALL NOT BE USED WHERE GROUT IS CALLED FOR. ALTERNATE MIX DESIGNS WILL BE CONSIDERED IF SUBMITTED TO THE ENGINEER FOR APPROVAL.
7. WHERE VERTICAL REINFORCING INTERSECTS HORIZONTAL REINFORCING, BOTH SHALL BE CONTINUOUS.
8. HORIZONTAL REINFORCING SHALL BE CONTINUOUS AT CORNERS WITH BEND OR SHALL HAVE CORNER BARS WITH EACH LEG EQUAL TO REQUIRED LAP LENGTH.
9. HOOKED VERTICAL DOWEL BARS SHALL BE PLACED INTO FOUNDATION AT ALL LOCATIONS WHERE VERTICAL REINFORCING IS SPECIFIED FOR WALLS OR COLUMNS. DOWELS SHALL BE SAME SIZE AS VERTICAL REINFORCING. DOWEL EMBEDMENTS AND HOOK LENGTHS SHALL BE PER THE CHART ON THIS SHEET. LENGTH OF DOWELS SHALL BE ADEQUATE TO ALLOW SPLICE WITH VERTICAL BARS AS INDICATED HEREIN. WHERE SPLICES ARE REQUIRED, SEE LAP SCHEDULE.
10. HORIZONTAL BOND BEAMS WITH (2) #4 CONTINUOUS SHALL BE PROVIDED AT TOP OF WALL, TOP OF WALL OPENINGS, AND AS CALLED FOR IN PLANS AND NOTES. ADDITIONAL BOND BEAMS ABOVE AND BELOW WALL OPENINGS SHALL EXTEND 2'-0" MINIMUM BEYOND THE FACE OF OPENING UNO.
11. GROUT AND REINFORCE WITH (1) #4 ALL VERTICAL CORNER CELLS, ALL VERTICAL END CELLS AND (1) CELL EACH SIDE OF EACH SIDE OF ALL OPENINGS UNO SPECIFICALLY.
12. MASONRY WALLS SHALL HAVE HORIZONTAL JOINTS REINFORCED WITH 9 GA TRUSS TYPE JOINT REINFORCEMENT EQUAL TO 'DUROWALL' AT 16" ON CENTER.
13. VERTICAL CONTROL JOINTS SHALL BE LOCATED AT ONE SIDE OF ALL OPENINGS AND AT WALL INTERSECTIONS AND SHALL BE SPACED AT 1.5 TIMES THE HEIGHT OF THE WALL OR 24'-0", WHICHEVER IS LESS. REFER TO TYPICAL CMU CONTROL JOINT DETAIL.
14. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
15. PROVIDE SOLID MASONRY OR FILL CORE OF BLOCKS WITH GROUT MINIMUM OF THREE (3) COURSES UNDER ALL BEAM AND LINTEL BEARING POINTS. GROUT CORES FULL HEIGHT WHERE REINFORCING IS REQUIRED AT THE BEARING POINTS UNLESS NOTED OTHERWISE.
16. REINFORCED MASONRY CORES SHALL BE FILLED WITH GROUT IN LIFTS OF 48" MAXIMUM UNLESS CLEAN-OUT HOLES ARE PROVIDED FOR HIGH-LIFT GROUTING. GROUT SHALL BE PUDDLED OR VIBRATED IN PLACE.
17. MASONRY REINFORCING MUST BE CONTINUOUS, MAINTAIN MINIMUM LAP WHERE SPLICES OCCUR. SUPPORT REINFORCING VERTICALLY AT A DISTANCE NOT EXCEEDING 192 BAR DIAMETERS AND MAINTAIN 1/4" MINIMUM CLEARANCE BETWEEN THE STEEL AND MASONRY.

STEEL FLOOR DECK NOTES:

1. FLOOR DECK SHALL HAVE THE MINIMUM DESIGN PROPERTIES AND ATTACHMENTS AS SHOWN IN THE FLOOR DECK SCHEDULE ON THE DESIGN CRITERIA SHEET.
2. FLOOR DECK SHALL BE ASTM A663/A (HOT DIP GALVANIZED). PROVIDE MINIMUM YIELD STRENGTHS AS SPECIFIED IN THE FLOOR DECK SCHEDULE AND IN COMPLIANCE WITH THE STEEL DECK INSTITUTE DESIGN MANUAL.
3. STEEL FLOOR DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED IN THE FLOOR DECK SCHEDULE.
4. ALL ENDLAPS SHALL BE A MINIMUM OF 2" AND SHALL OCCUR OVER SUPPORTS.
5. PROVIDE STEEL ANGLE FRAME AT DECK OPENINGS AND PENETRATIONS. SEE TYPICAL ANGLE FRAME AT SLAB WITH METAL DECK OPENING DETAIL.
6. 6" NOMINAL DIAMETER AND SMALLER PIPES MAY PENETRATE THE DECK WITHOUT AN ANGLE FRAME. SUPPORT FOR WEIGHT OF THE PIPE MUST BE PROVIDED BY UNISTRUT OR OTHER APPROVED FRAMING AS THE DECK IS NOT DESIGNED TO SUPPORT THE WEIGHT OF THE PIPE.



DEFERRED SUBMITTALS:

1. PORTIONS OF THE DESIGN HAVE BEEN DEFERRED AND WILL BE DESIGNED BY PRODUCT MANUFACTURERS QUALIFIED LICENSED ENGINEERS. THE STRUCTURAL ENGINEER OF RECORD WILL ONLY REVIEW SUBMITTALS OF THESE SYSTEMS FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS INDICATED AND IS NOT RESPONSIBLE FOR DEFERRED SUBMITTAL DESIGN. DEFERRED SUBMITTALS INCLUDE:

A. CONCRETE MIX DESIGN

B. STRUCTURAL STEEL CONNECTIONS

C. METAL DECK

STEEL FLOOR DECK SCHEDULE

FLOOR DECK DESIGNATION	DECK TYPE	GAGE	MIN YIELD F _y	COMPOSITE SHEAR STUDS	CONCRETE				MIN DECK SECTION PROPERTIES (PER FLOOR WIDTH)				DECK FASTENERS		MIN SPAN COND	REMARKS
					THICKNESS ABOVE DECK	TOTAL SLAB THICKNESS	MAX WET UNIT WEIGHT (PCF)	REINFORCEMENT	I _b (in ⁴ /ft)	S _x (in ³ /ft)	I _y (in ⁴ /ft)	S _y (in ³ /ft)	WELD PATTERN	#SIDELAP FASTENERS		
FD-1	1.5 VL	20	50ksi	-	4 1/2"	6"	150	6x6 W2.9xW2.9WWR	0.182	0.218	0.216	0.226	3/64	4 PER SPAN	1-SPAN	GALVANIZED

NOTES:

1. FLOOR DECK SHALL BE WELDED TO SUPPORTS WITH 5/8"Ø PUDDLE WELDS IN THE BOTTOM OF THE FLUTES USING THE WELD PATTERN INDICATED AT LOCATIONS WHERE SHEAR STUDS DO NOT OCCUR..
2. FLOOR DECK SIDELAPS SHALL BE FASTENED USING #10 TEK SCREWS WITH THE MINIMUM NUMBER OF FASTENERS PER SPAN AS INDICATED.
3. FLOOR DECK SHALL BE ATTACHED TO ALL PERIMETER EDGE ANGLES, EAVE STRUTS, OR MEMBERS AROUND OPENINGS AND PENETRATIONS WITH 5/8"Ø PUDDLE WELDS IN THE BOTTOM OF THE FLUTES AT 12" OC UNLESS NOTED OTHERWISE.
4. CONCRETE SLAB SHALL BE CONSTRUCTED TO THE UNIFORM TOTAL SLAB THICKNESS SPECIFIED, EVEN IF BEAMS OR DECK STRUCTURE DEFLECTS DURING CONCRETE POUR. MAXIMUM LOCAL THICKNESS OVERAGE NOT TO EXCEED 1/2".
5. PROVIDE 1 1/2" COVER FROM TOP OF SLAB TO WELDED WIRE REINFORCEMENT. SET WWR ON CHAIRS (OR OTHER SUITABLE SUPPORT ACCESSORY). DO NOT LIFT INTO PLACE DURING CONCRETE POUR.
6. ANY FINISHING OR OTHER CONSTRUCTION EQUIPMENT MAY NOT EXCEED THE DESIGN UNIFORM LIVE LOAD OF THE FLOOR SYSTEM SHOWN IN THE DESIGN CRITERIA.

STEEL MATERIAL SCHEDULE

SECTION	MINIMUM YIELD STRENGTH F _y (ksi)	SPECIFICATION
W, WT, C, MC, L	50	ASTM A572, ASTM A992
PL, ROD, BAR	36	ASTM A36
ANCHOR ROD	36	ASTM F1554, GRADE 36
HSS - SQUARE/RECT	50	ASTM A500, GRADE C
HIGH STR BOLTS	120	ASTM F3125, GR A325

CONCRETE COVER SCHEDULE

LOCATION	CLEAR COVER
SLABS, JOISTS, WALLS NOT EXPOSED TO EARTH OR WEATHER	3/4"
CONCRETE PLACED AGAINST EARTH	3"

NOTES:

1. MINIMUM COVER APPLIES TO OUTER-MOST LAYER OF REINFORCING BARS.
2. SPECIFIC DIMENSION FOR BAR PLACEMENT SHOWN ON DETAILS SHALL SUPERCEDE VALUES IN THIS SCHEDULE.
3. PROVIDE BAR SUPPORT ACCESSORIES TO PROPERLY MAINTAIN COVER FOR REINFORCING BAR AND WWR.

CONCRETE MATERIAL SCHEDULE

STRUCTURAL ELEMENT	ACI EXPOSURE CLASS	MAX W/C RATIO	f _c (PSI)	AIR ENTRAIN	REMARKS
INTERIOR CONCRETE & SLAB ON METAL DECK	F0	0.5	4000	NO	-

NOTES:

1. FINAL MIX DESIGN BY THE CONCRETE SUPPLIER FOLLOWING THIS TABLE AS A MINIMUM
2. SEE REINFORCED CONCRETE GENERAL NOTES FOR ADDITIONAL INFORMATION
3. SEE ACI 318 FOR AIR ENTRAINMENT RECOMMENDATIONS BASED ON EXPOSURE TYPE AND MAX AGGREGATE SIZE.

SCHEDULE OF SPECIAL INSPECTIONS

FABRICATION & IMPLEMENTATION PROCEDURES - STRUCTURAL STEEL

VERIFICATION & INSPECTION	MBC 1705.2.1	REQ'D	EXTENT*	COMMENTS
1. AISC Certification		YES	S	ASCE 360 Chapter N, N2
-OR-				
2. Fabricator shall hire an approved testing agency to monitor and test the structural elements as they are fabricated in the shop. That agency shall submit a written report of the results of the testing and monitoring of the fabrication process and confirm the fabricated structure and work performed in the shop meets the code requirements and the requirements indicated on the approved construction documents.		YES	S	ASCE 360 Chapter N, N2

STEEL CONSTRUCTION

VERIFICATION & INSPECTION	MBC Section 1704.3, 1708.4	REQ'D	EXTENT*	
1. Material verification of high-strength bolts, nuts and washers.				
A.) Identification markings to conform to ASTM standards specified in the approved construction documents.	YES	S	Applicable ASTM material specifications AISC 360 Sect A3.3	
B.) Manufacturer's certificate of compliance required.	YES	S		
2. Inspection of high-strength bolting.				
A.) Bearing-type connections.	YES	P	AISC 360 Sect. M2.5, MBC Sect. 1704.3.3	
3. Material verification of structural steel (MBC Sect 1708.4)				
A.) Identification markings to conform to ASTM standards specified in the approved construction documents.	YES	S	AISC 360 Sect. M5.5	
B.) Manufacturer's certified mill test reports.	YES	S		
4. Material verification of weld filler materials.				
A.) Identification markings to conform to AWS specifications in the approved construction documents.	YES	S	AISC 360 Sect. A3.5, AWS A5	
B.) Manufacturer's certificate of compliance required.	YES	S		
5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	YES	S	AWS D1.1	
6. Inspection of welding (MBC 1704.3.1)				
A.) Complete and partial penetration groove welds.	YES	S	AWS D1.1	
B.) Multi-pass fillet welds.	YES	S	AWS D1.1	
C.) Single-pass fillet welds < 5/16".	YES	P	AWS D1.1	
D.) Roof deck welds.	YES	P	AWS D1.1	
7. Inspection of steel frame joint locations for compliance (MBC Sect 1704.3.2) with approved construction documents.				
A.) Details such as bracing and stiffening.	YES	P		
B.) Member locations.	YES	P		
C.) Application of joint details at each connection.	YES	P		

* C=Continuous, P=Periodic, S=Submittal or N=None

Classic Engineering, LLC



08/13/2026

JON BRYANT
MACY'S RIVERTOWN CROSSINGS FLOOR INFILL
3700 RIVERTOWN CROSSINGS MALL DRIVE, GRANDVILLE, MI

ISSUED FOR:

08/12/26: CONSTRUCTION

PROJECT NUMBER:

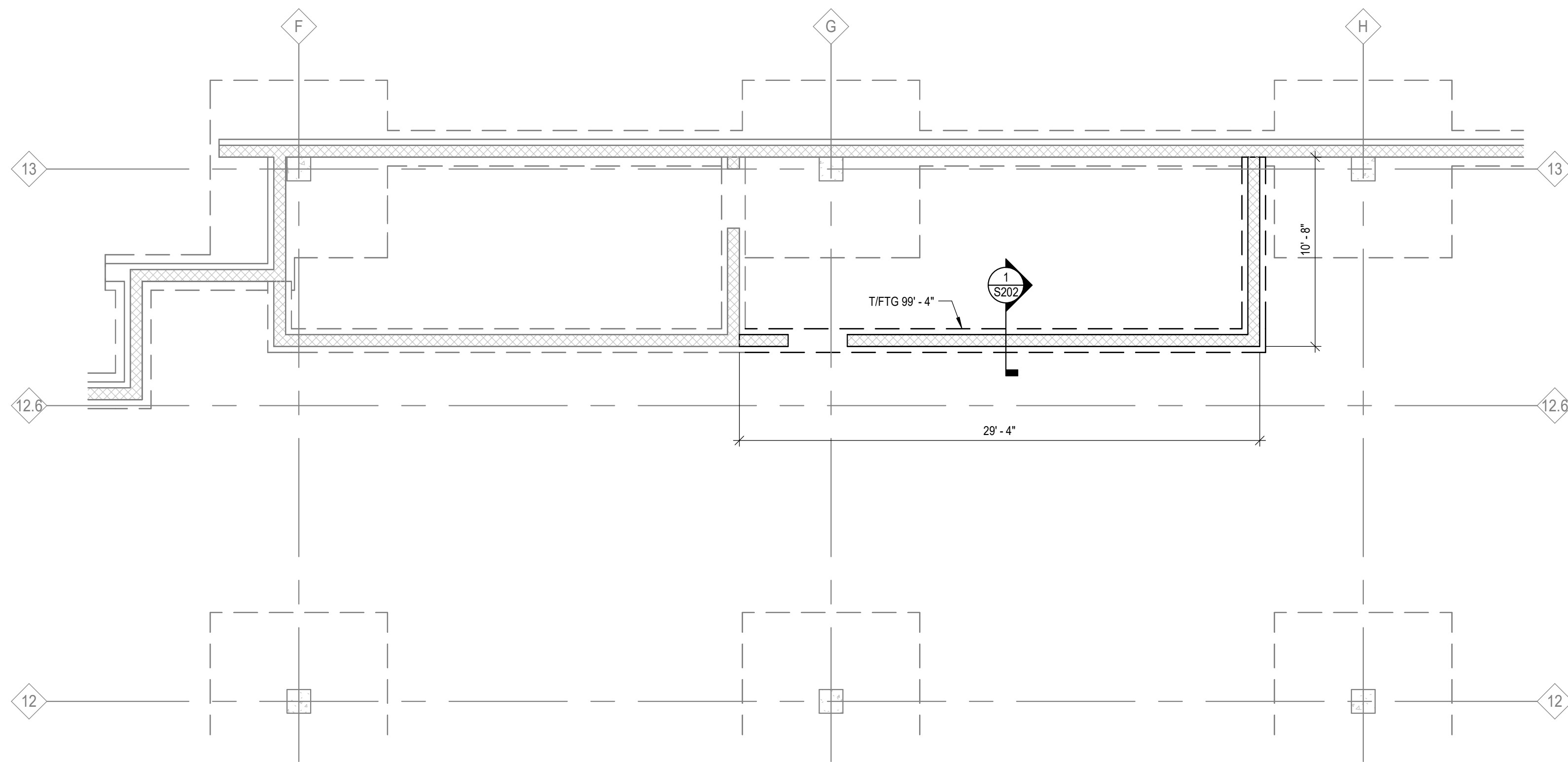
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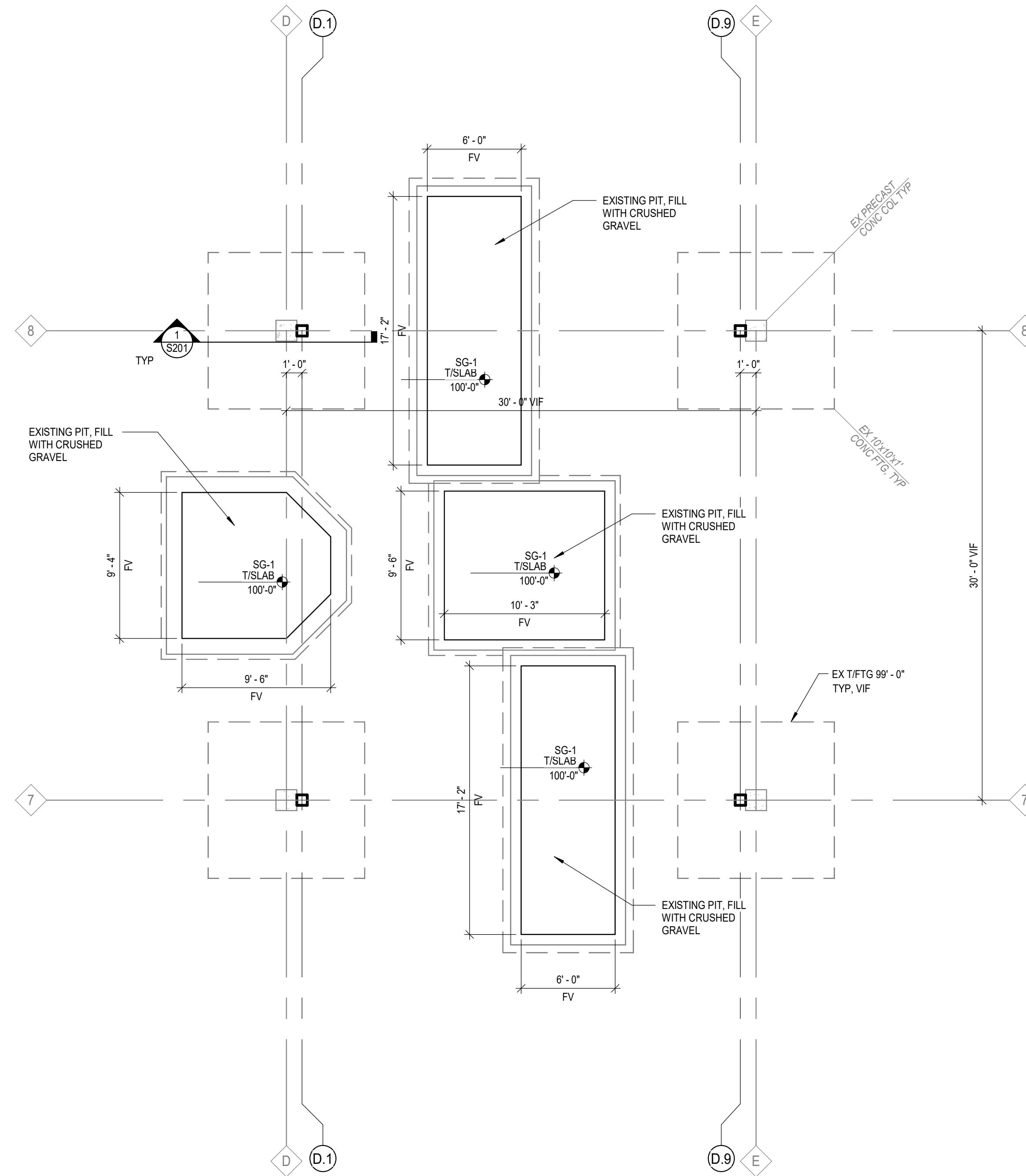
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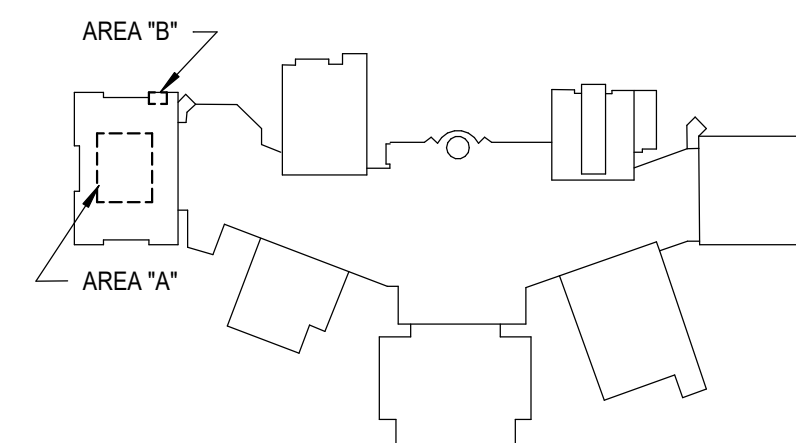
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FOUNDATION PLAN AREA "B"
3/16" = 1'-0"



FOUNDATION PLAN AREA "A"
3/16" = 1'-0"



KEYPLAN
NOT TO SCALE

Classic Engineering, LLC
100 Cesar E Chavez Ave SW
Grand Rapids, Michigan 49503
(616) 742-2810
www.classicengineering.com



NATHANIEL MARK LUNDELL
ENGINEER
No. 6201807344
08/13/2026

JON BRYANT
MACY'S RIVERTOWN CROSSINGS FLOOR INFILL
3700 RIVERTOWN CROSSINGS MALL DRIVE, GRANDVILLE, MI

ISSUED FOR:
08/12/26: CONSTRUCTION

PROJECT NUMBER:
2026272

DATE:
08/12/2026

DRAWING NUMBER:
S100



1. PROVIDE STIFFENER PLATE AT BEAM BEARING. SEE TYPICAL STIFFENER PLATE DETAIL.

Classic Engineering, LLC
100 Cesar E Chavez Ave SW
Grand Rapids, Michigan 49503
(616) 742-2810
www.classicengineering.com



JON BRYANT
MACY'S RIVERTOWN CROSSINGS FLOOR INFILL
3700 RIVERTOWN CROSSINGS MALL DRIVE, GRANDVILLE, MI

ISSUED FOR:

12/26: CONSTRUCTION

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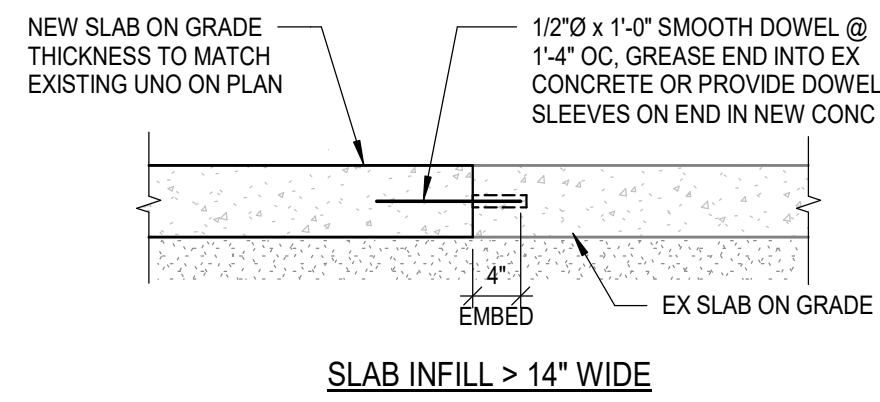
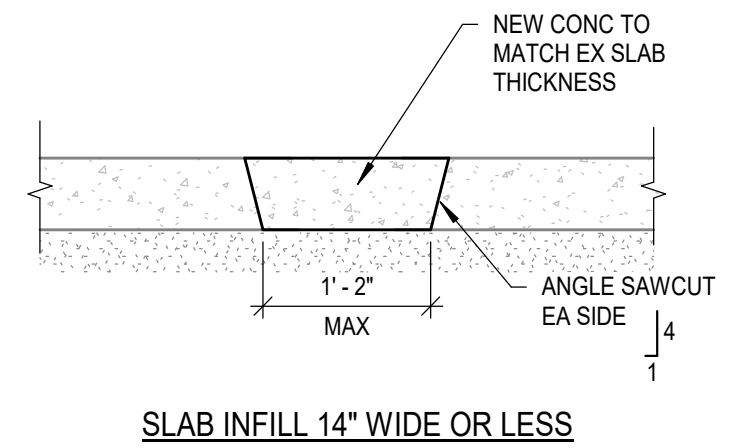
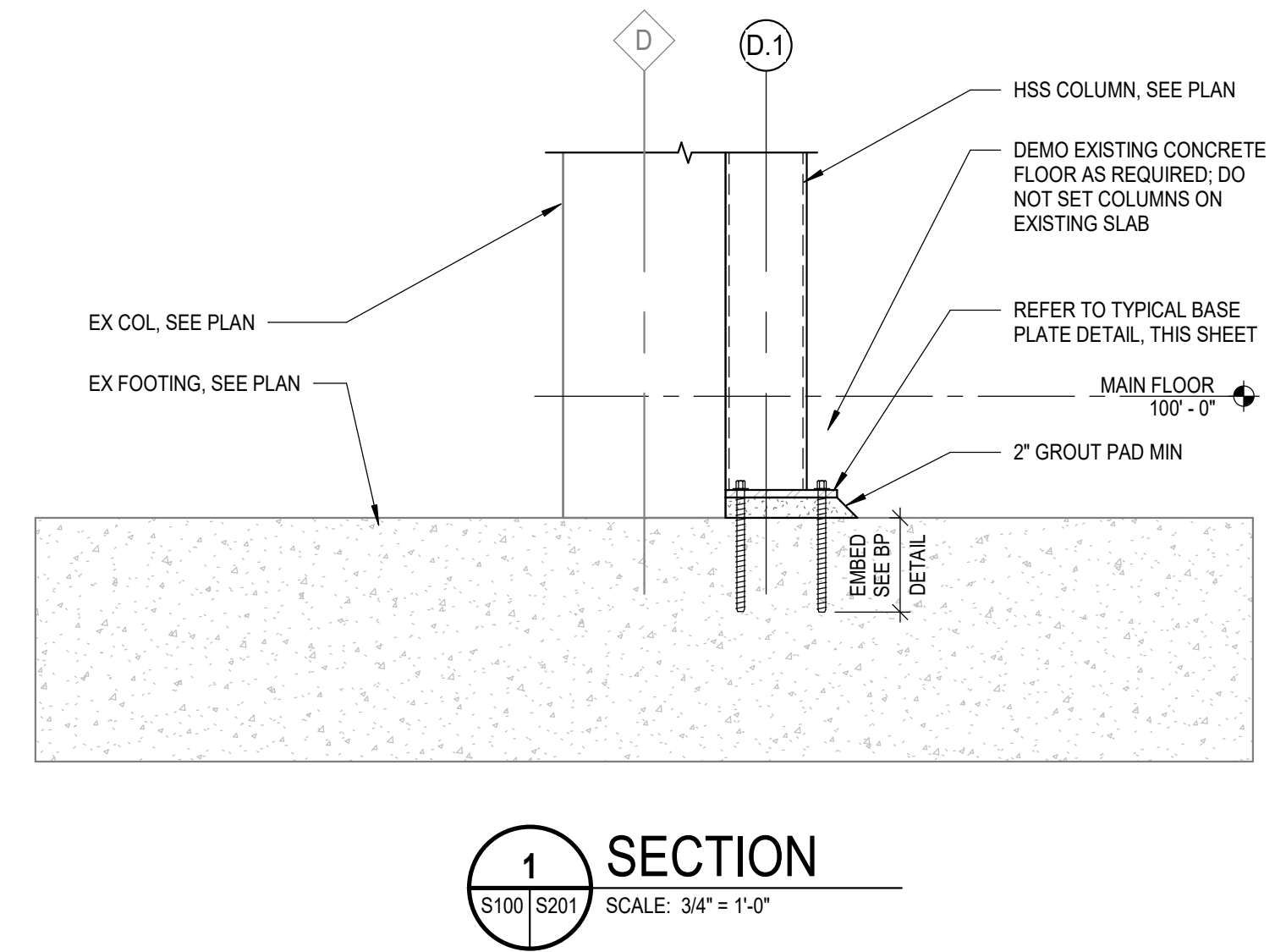
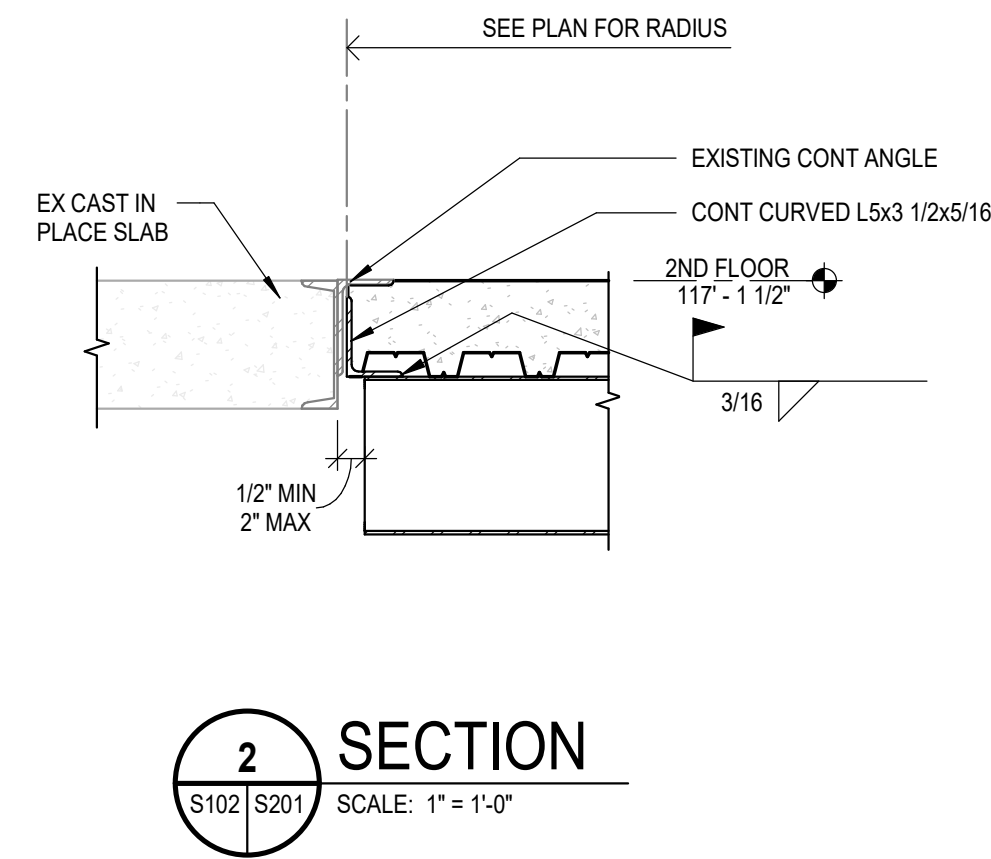
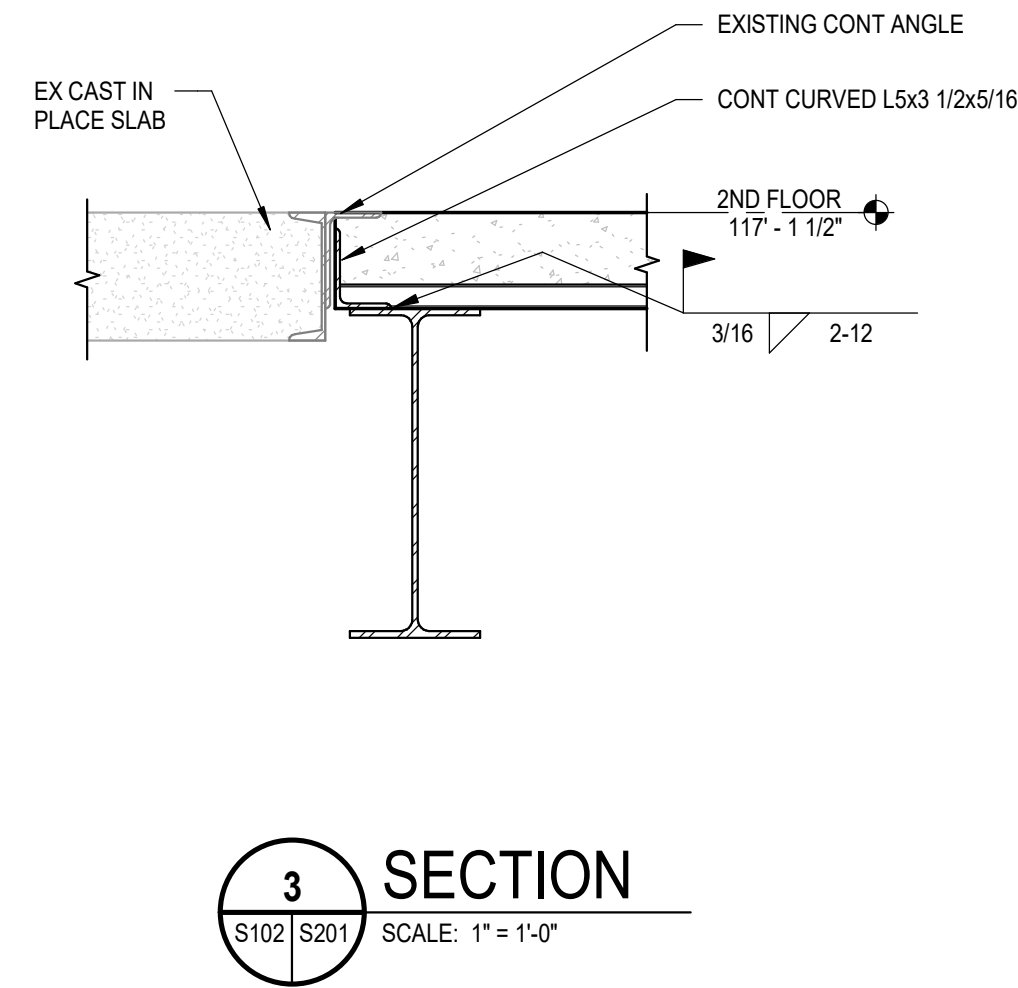
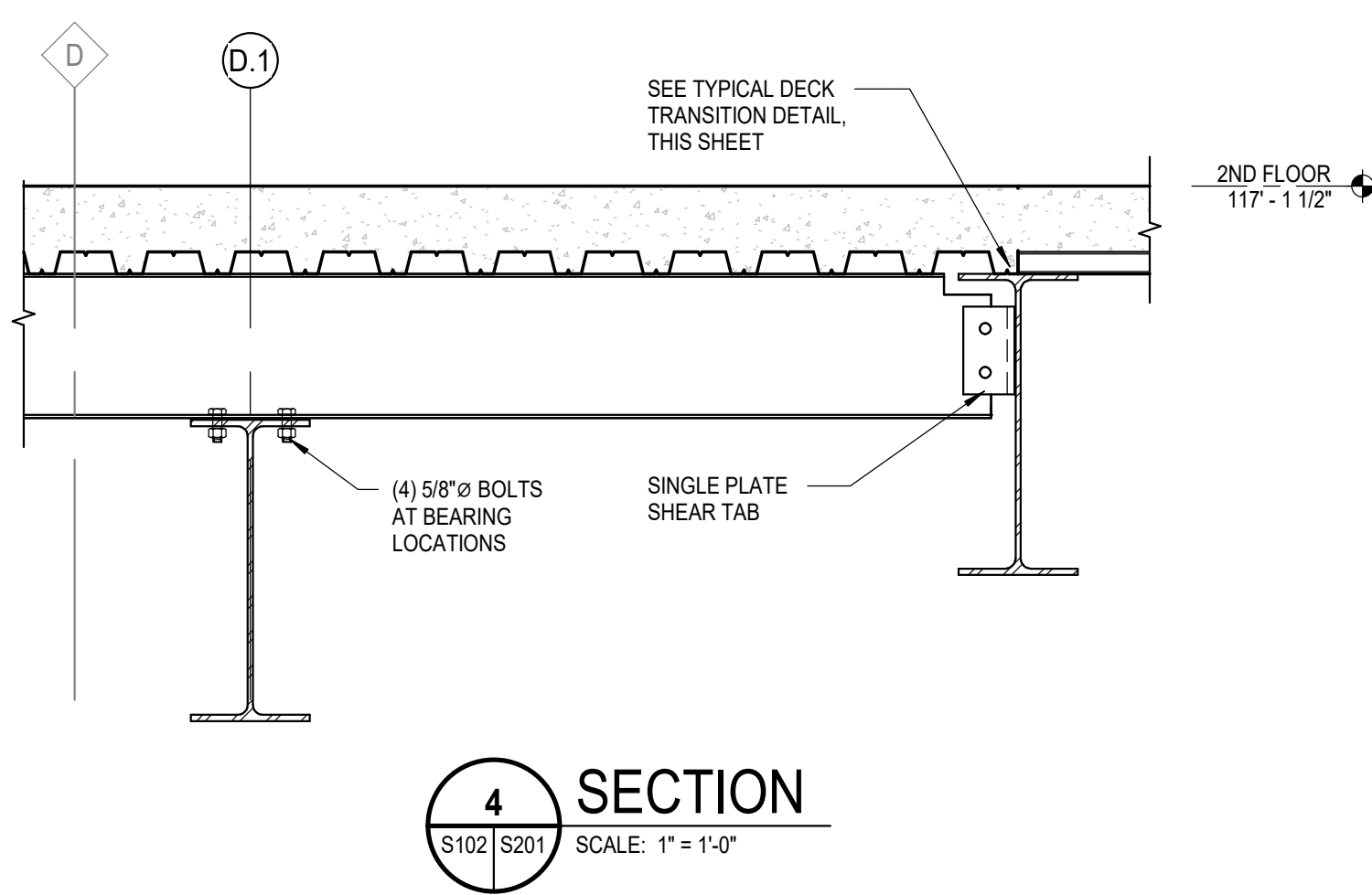
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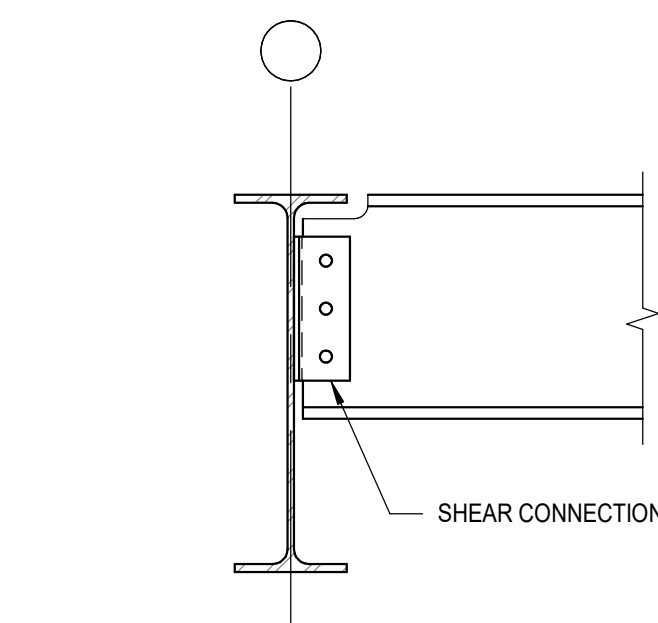
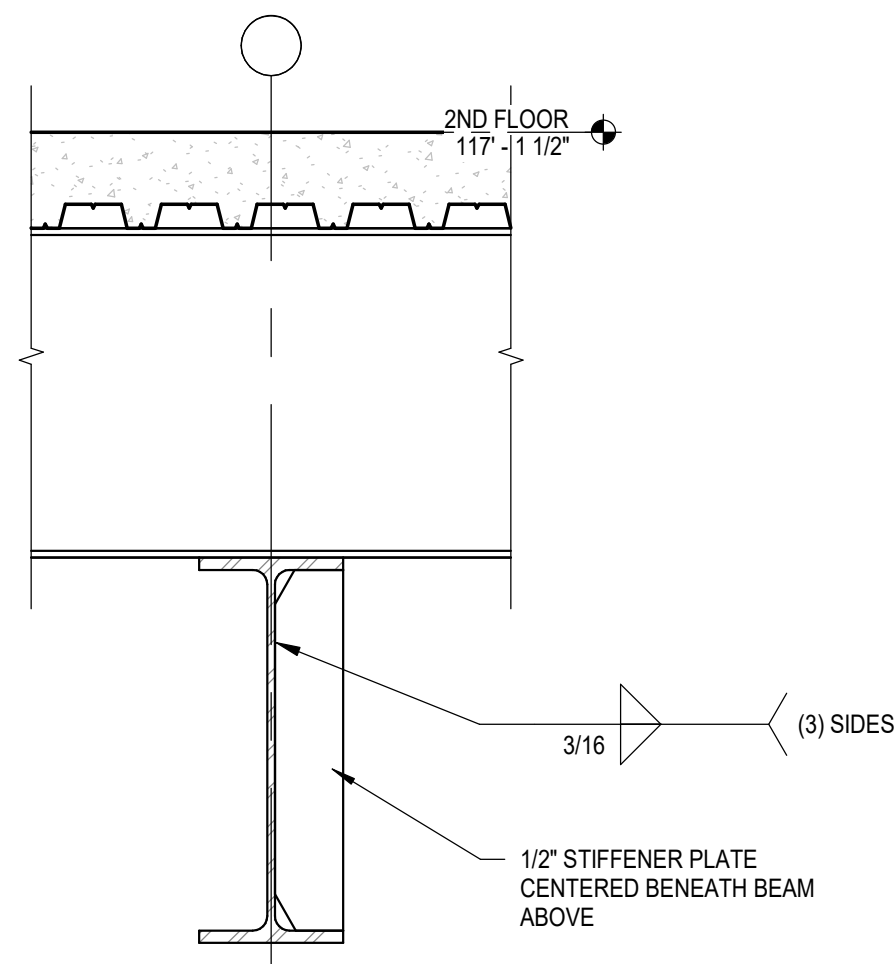
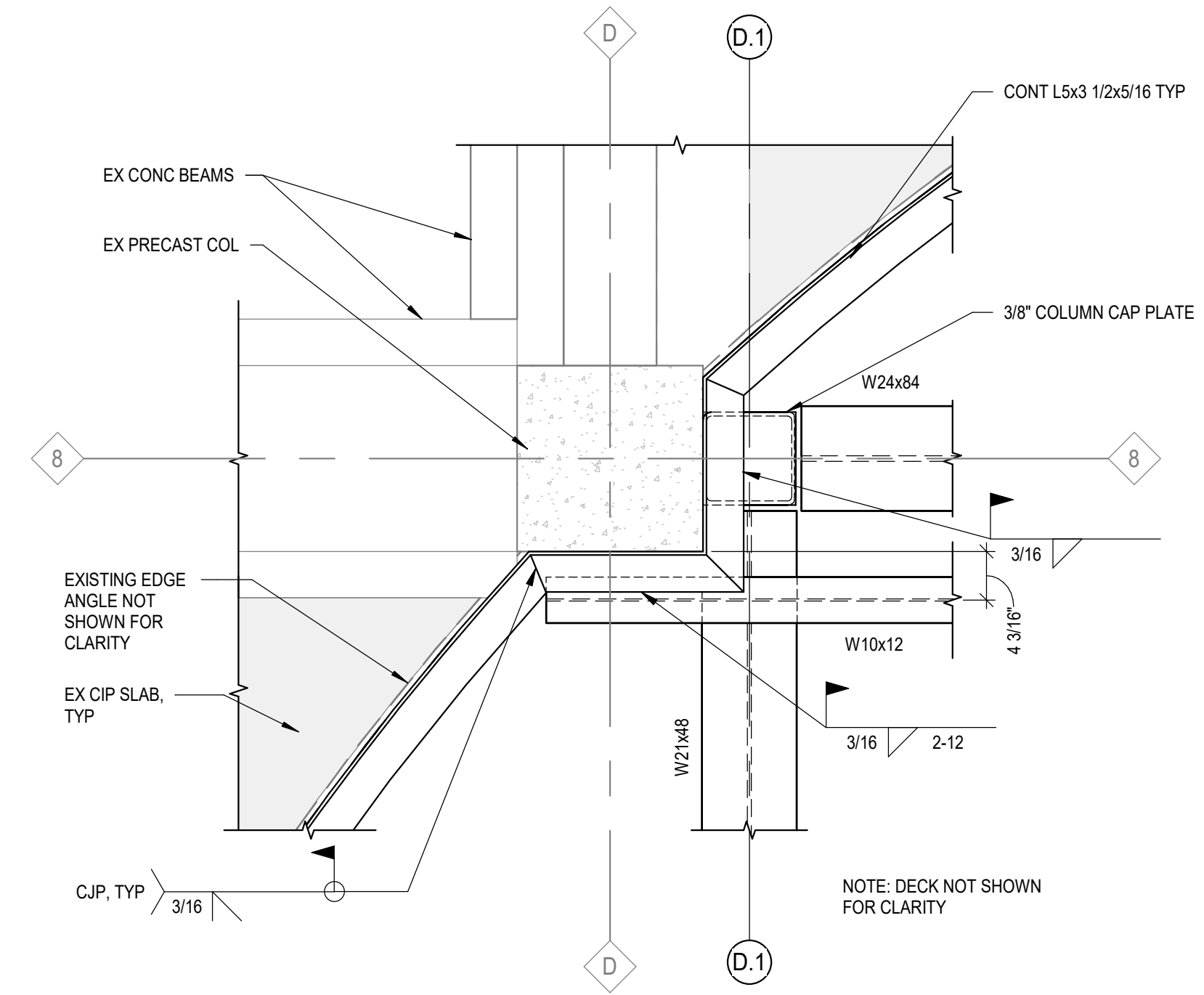
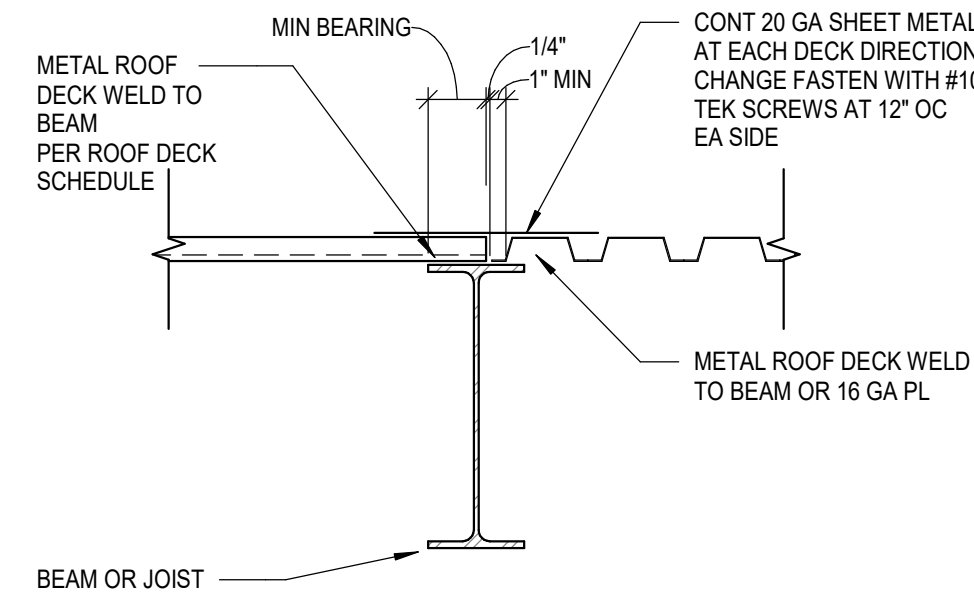
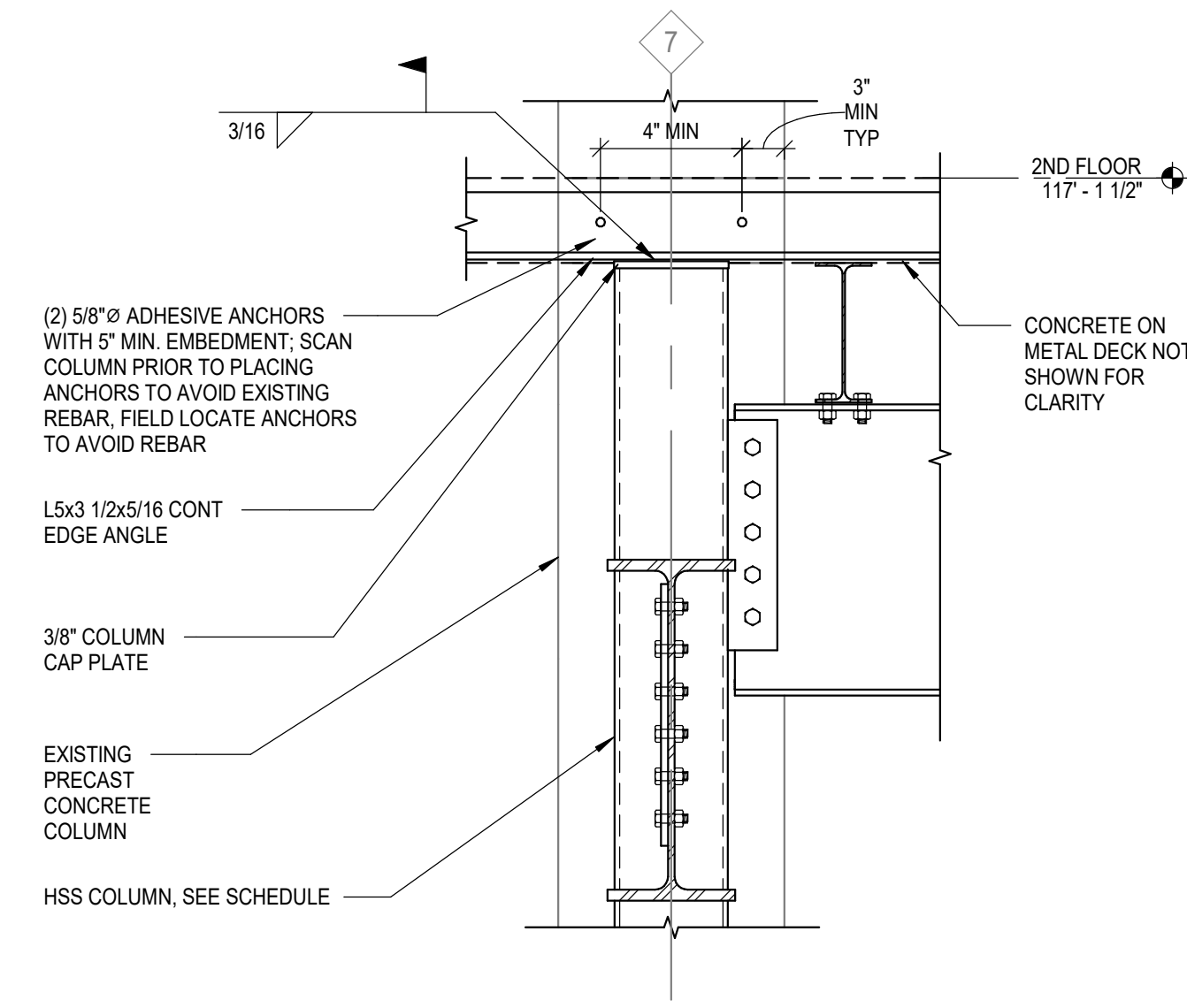
6/12/2026

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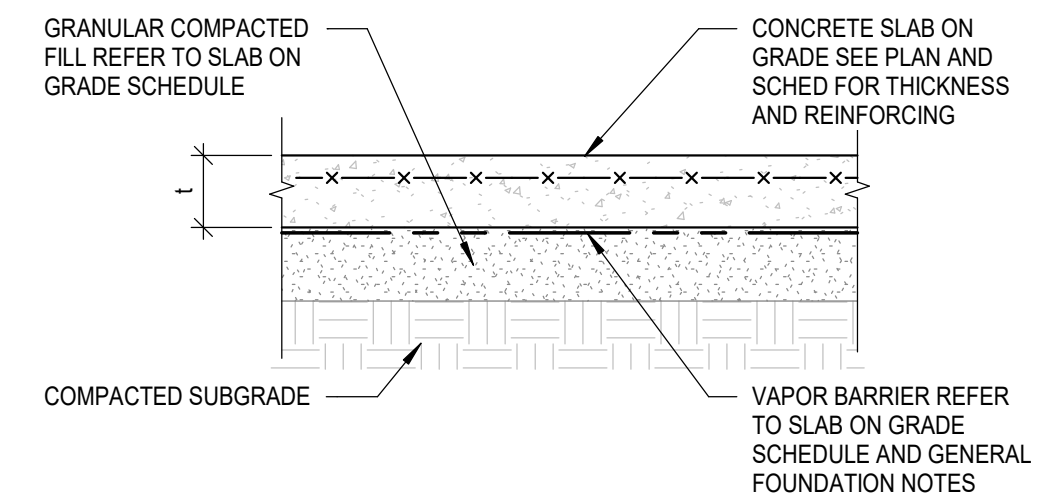
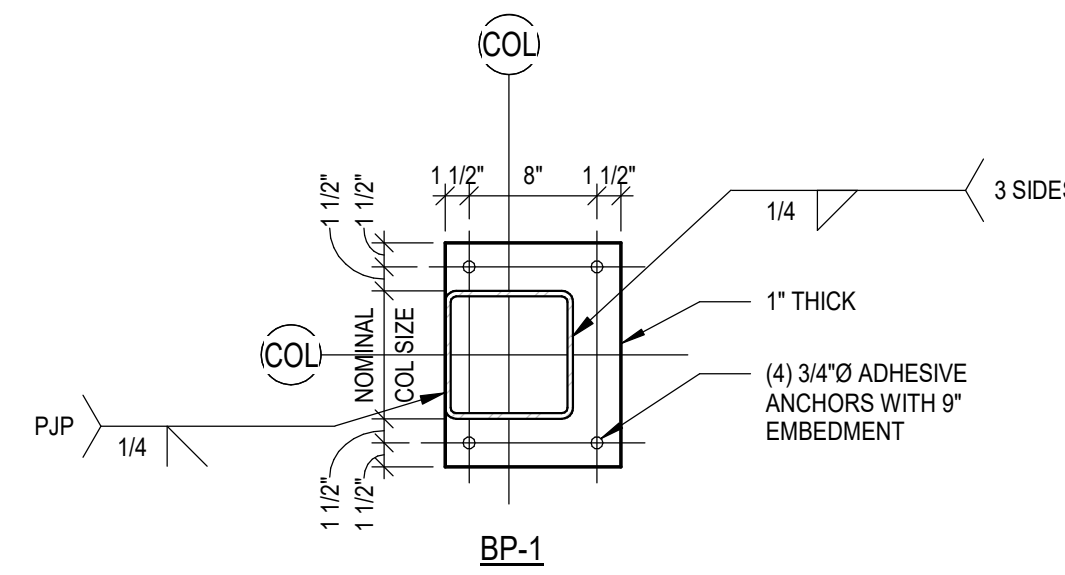
S102



8 TYP EXISTING SLAB INFILL
S201
SCALE: NTS



NOTES:
1. DESIGN CONNECTION AS STANDARD AISC SIMPLE CONNECTION. AT CONTRACTOR'S OPTION, CONNECTION MAY BE DESIGNED AS STANDARD SHEAR PLATE CONNECTION, SINGLE ANGLE, DOUBLE ANGLE OR SEATED CONNECTION.
2. DEVELOP 100% OF THE MINIMUM VERTICAL SHEAR CAPACITY AS INDICATED ON FRAMING PLANS, OR PER GENERAL STEEL NOTES WHICHEVER IS GREATER.
3. DESIGN CONNECTION FOR 12k MIN UNO.



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NATHANIEL MARK LUNDELL
ENGINEER
No. S201087344
08/13/2026

JON BRYANT
MACY'S RIVERTOWN CROSSINGS FLOOR INFILL
3700 RIVERTOWN CROSSINGS MALL DRIVE, GRANDVILLE, MI

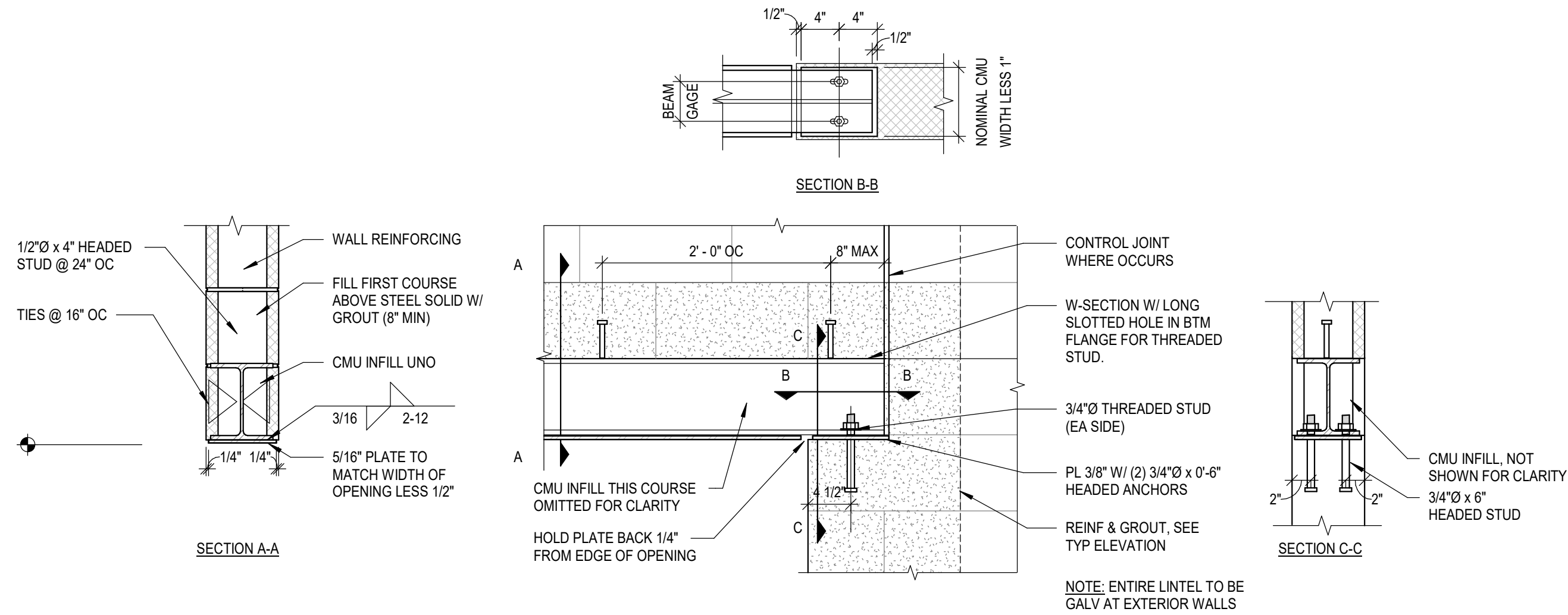
ISSUED FOR:
08/12/26: CONSTRUCTION

PROJECT NUMBER:
2026272

DATE:
08/12/2026

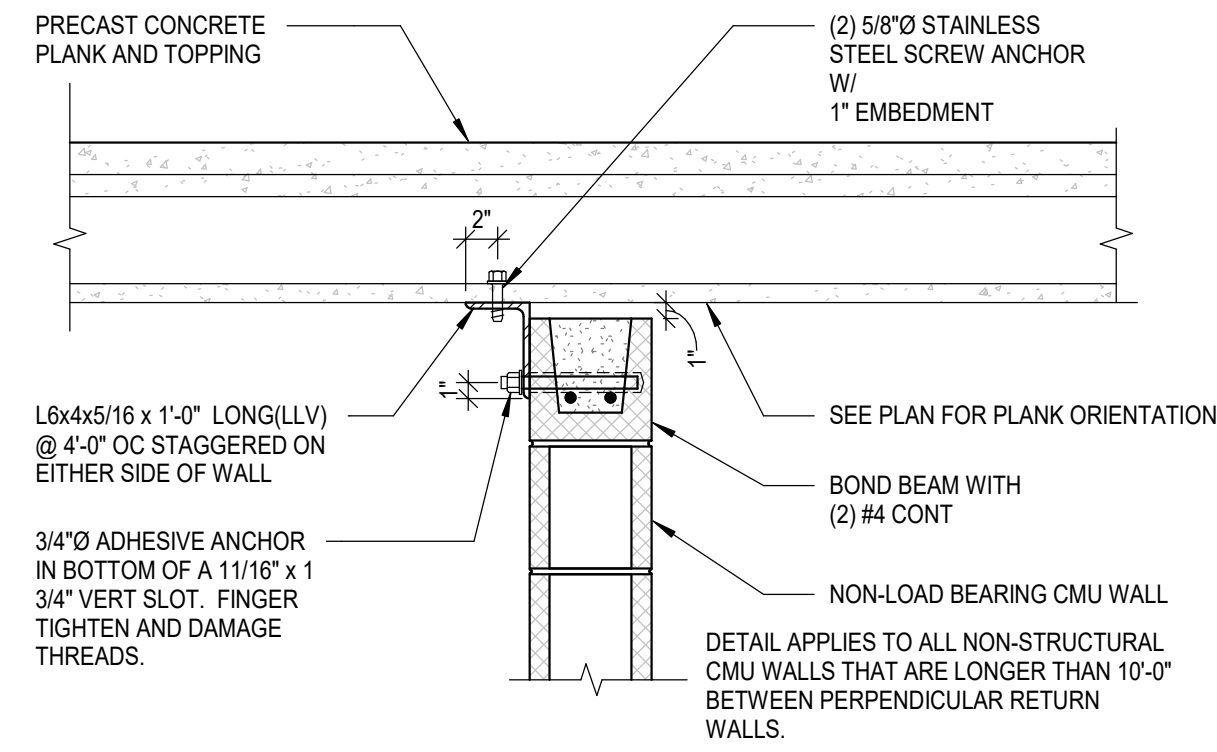
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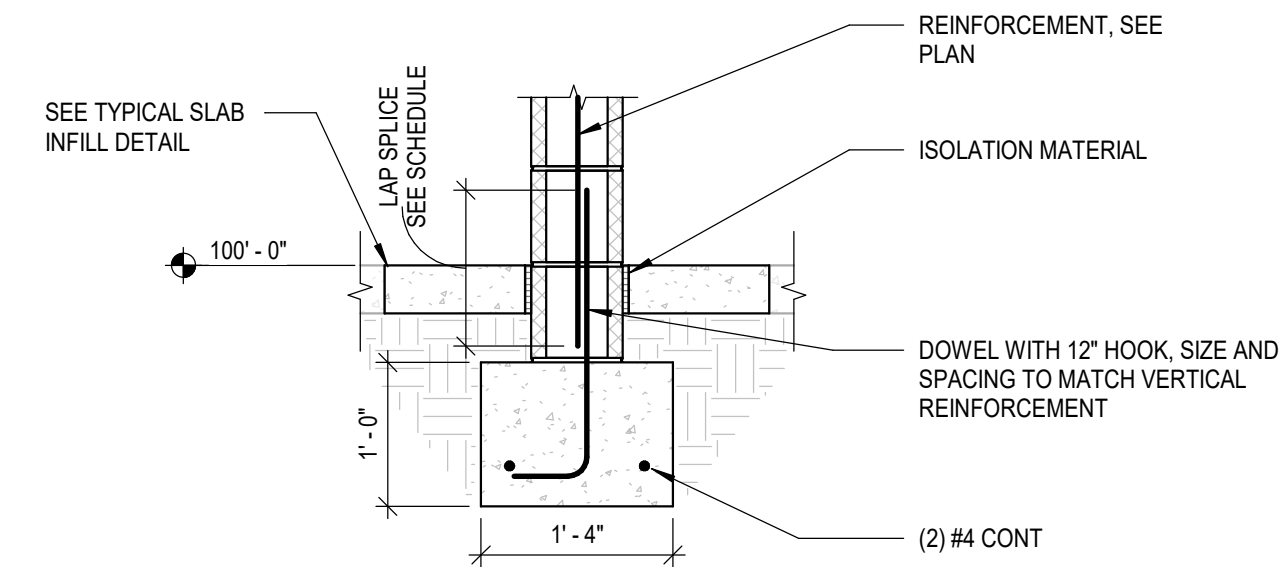
3 TYP WIDE FLANGE LINTEL SUPPORT

S202 SCALE: 1" = 1'-0"



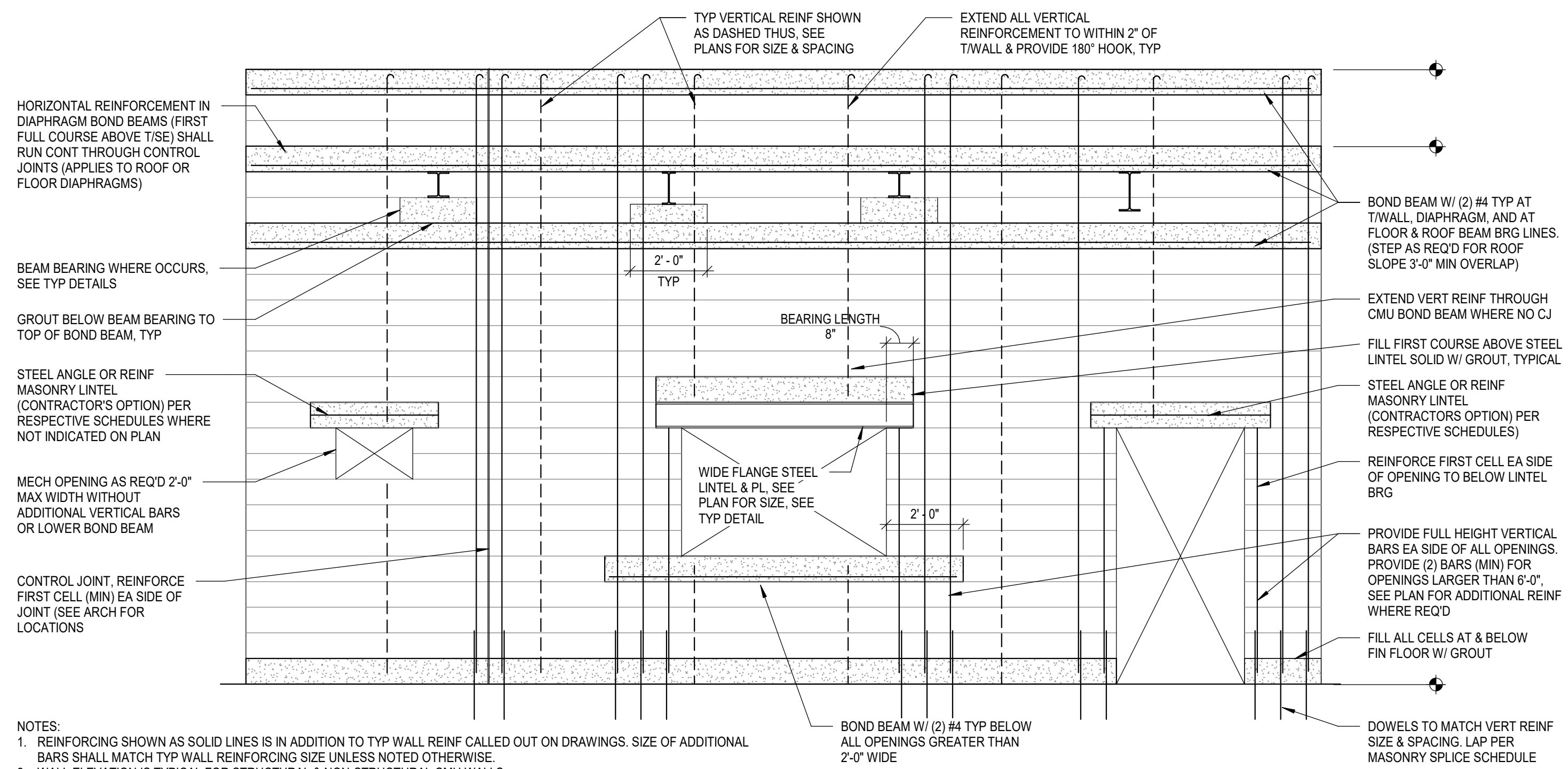
2 NON-LOAD BEARING CMU TO PRECAST

S102 S202 SCALE: 1" = 1'-0"



1 SECTION

S100 S202 SCALE: 3/4" = 1'-0"



- NOTES:
1. REINFORCING SHOWN AS SOLID LINES IS IN ADDITION TO TYP WALL REINF CALLED OUT ON DRAWINGS. SIZE OF ADDITIONAL BARS SHALL MATCH TYP WALL REINFORCING SIZE UNLESS NOTED OTHERWISE.
 2. WALL ELEVATION IS TYPICAL FOR STRUCTURAL & NON-STRUCTURAL CMU WALLS.
 3. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-STRUCTURAL CMU WALLS.
 4. PROVIDE "LADDER" TYPE HORIZONTAL MASONRY REINFORCEMENT AT 16" OC IN CMU AND BRICK VENEER. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
 5. SEE LAP SPLICE SCHEDULE FOR LAP LENGTHS.

4 TYP CMU WALL ELEVATION

S202 SCALE: 3/8" = 1'-0"

MASONRY LAP SPLICE SCHEDULE (f'm=2000PSI)			
LOC.	CENTER		EDGE
SIZE	8" CMU	12" CMU	ALL CMU
#3	18"	18"	18"
#4	24"	24"	24"
#5	30"	30"	30"
#6	38"	36"	57"
#7	-	42"	80"
#8	-	50"	-

5 MASONRY LAP SPLICE SCHEDULE

S202 SCALE: 12" = 1'-0"

