

Northeast Metropolitan Regional Vocational High School

100 Hemlock Road, Wakefield, MA 01880
DRA PROJECT NO. 20202



• Structural

VOLUME 2 of 4

EARLY STRUCTURAL BID PACKAGE

Issue Date:February 24th, 2023

**NORTHEAST METROPOLITAN REGIONAL
VOCATIONAL H.S. BUILDING COMMITTEE**

Theodore Nickole, SBC Chair
Anthony Caggiano
Joseph Capraro
Brittany A. Carisella
Patricia Cronin
Deborah P. Davis
David DiBarri
Judith M. Dymont
Melissa Elam
Ward Hamilton
James J. Holland
Stephen Maio
Robert S. McCarthy
Larry Means
Robert O'Dwyer
Joseph Papagni
James Picone
Peter A. Rossetti Jr.
Carla Scuzzarella, Ed.D
Brant Snyder
Michael T. Wall

MASSACHUSETTS SCHOOL BUILDING AUTHORITY

40 Broad Street, Suite 500
Boston, MA 02109

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL SCHOOL DISTRICT

Deborah P Davis, School Committee Chair
David DiBarri, Superintendent-Director
Dr. Carla A. Scuzzarella, Deputy Director-Principal

DISTRICT COMMUNITIES

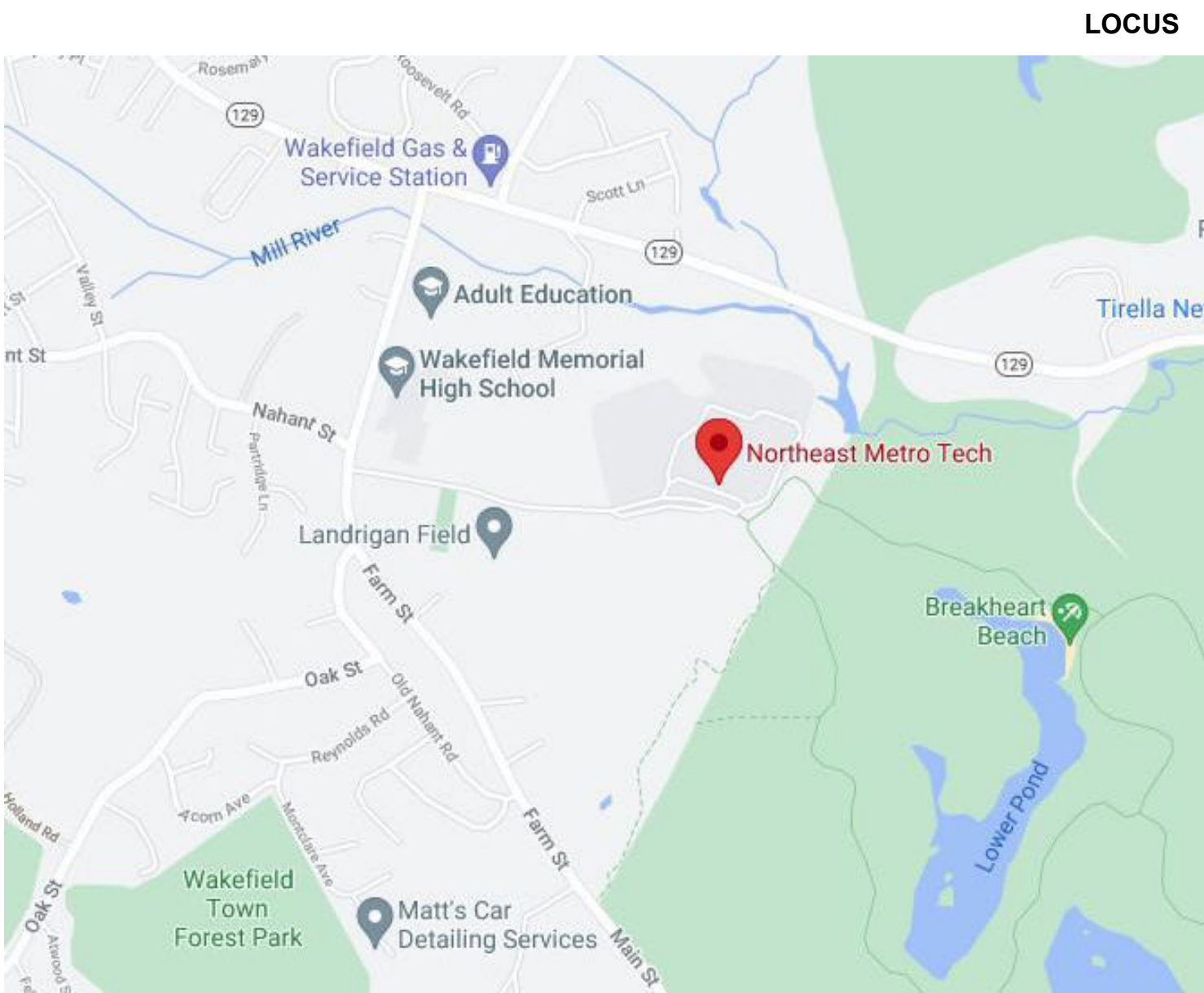
Chelsea, Malden, Melrose, North Reading, Reading, Revere, Saugus, Stoneham,
Wakefield, Winchester, Winthrop & Woburn

OWNERS PROJECT MANAGER

PMA Consultants
35 Braintree Hill Office Park, Suite 300
Braintree, MA 02184

CONSTRUCTION MANAGER AT RISK

Gilbane Building Company
10 Channel Center Street, Suite 100
Boston, MA 02210



ARCHITECT
Drumme Rosane Anderson
260 Charles Street, Studio 300
Waltham, MA 02453
t: 617.964.1700

LANDSCAPE ARCHITECT
Warner Larson
130 West Broadway
Boston, MA 02108
t: 617.464.1440

CIVIL ENGINEER
Nitsch Engineering
2 Center Plaza, Suite 430
Boston, MA 02108
t: 617.338.0063

STRUCTURAL ENGINEER
Engineers Design Group
350 Main Street, Floor 2
Malden, MA 02148
t: 781.396.9007

MEP-FP ENGINEER
Bala Consulting Engineers
52 Temple Place
Boston, MA 02111
t: 617.357.6060

EQUIPMENT CONSULTANT
Point Line
75 Lowell Street
Carlisle, MA 01741
t: 617.314.7501

TECHNOLOGY CONSULTANT
3Si, System Software Support, Inc.
168 Main Street
Northfield, MA 01360
t: 413.498.0069

FOOD SERVICE CONSULTANT
Crabtree McGrath Associates
161 West Main Street
Georgetown, MA 01833
t: 978.352.8500

DRA

VOLUME 1 OF 4
EARLY SITE PREPARTION
~ FOR REFERENCE ONLY~

CIVIL	
NUMBER	DRAWING NAME
EX-1	TOPOGRAPHIC SURVEY
EX-2	TOPOGRAPHIC SURVEY
EX-3	TOPOGRAPHIC SURVEY
EX-4	TOPOGRAPHIC SURVEY
EX-5	TOPOGRAPHIC SURVEY
EX-6	TOPOGRAPHIC SURVEY
EX-7	TOPOGRAPHIC SURVEY
EX-8	TOPOGRAPHIC SURVEY
EX-9	TOPOGRAPHIC SURVEY
EX-10	TOPOGRAPHIC SURVEY
EX-11	TOPOGRAPHIC SURVEY
EX-12	TOPOGRAPHIC SURVEY
EX-13	TOPOGRAPHIC SURVEY
EX-14	TOPOGRAPHIC SURVEY

C-000	CIVIL NOTES, LEGENDS, AND ABBREVIATIONS
C-100	KEY PLAN
C-200	UTILITY DEMOLITION PLAN I
C-201	UTILITY DEMOLITION PLAN II
C-202	UTILITY DEMOLITION PLAN III
C-203	UTILITY DEMOLITION PLAN IV
C-204	UTILITY DEMOLITION PLAN V
C-205	UTILITY DEMOLITION PLAN VI
C-300	SEDIMENTATION AND EROSION CONTROL PLAN I
C-301	SEDIMENTATION AND EROSION CONTROL PLAN II
C-302	SEDIMENTATION AND EROSION CONTROL PLAN III
C-303	SEDIMENTATION AND EROSION CONTROL PLAN IV
C-304	SEDIMENTATION AND EROSION CONTROL PLAN V
C-305	SEDIMENTATION AND EROSION CONTROL PLAN VI
C-400	DRAINAGE PLAN I
C-500	UTILITY SITE PLANS I
C-501	UTILITY SITE PLAN II
C-502	UTILITY SITE PLAN III
C-503	UTILITY SITE PLAN IV
C-504	UTILITY SITE PLAN V
C-505	UTILITY SITE PLAN VI
C-506	UTILITY X-SECTIONS
C-600	DRIVEWAY LAYOUT AND GRADING PLAN I
C-601	DRIVEWAY LAYOUT AND GRADING PLAN II
C-602	DRIVEWAY LAYOUT AND GRADING PLAN III
C-603	DRIVEWAY LAYOUT AND GRADING PLAN IV
C-604	DRIVEWAY PROFILE
C-605	DRIVEWAY CROSS-SECTIONS
C-700	CIVIL SITE DETAILS I
C-701	CIVIL SITE DETAILS II
C-702	CIVIL SITE DETAILS III
C-703	CIVIL SITE DETAILS IV
C-704	CIVIL SITE DETAILS V
C-705	CIVIL SITE DETAILS VI

LANDSCAPE	
NUMBER	DRAWING NAME
L000	OVERALL SITE PLAN
L101	DEMO AND SITE PREPARATION PLAN - 1
L102	DEMO AND SITE PREPARATION PLAN - 2
L103	DEMO AND SITE PREPARATION PLAN - 3
L104	DEMO AND SITE PREPARATION PLAN - 4
L105	DEMO AND SITE PREPARATION PLAN - 5
L201	LAYOUT PLAN - 1
L202	LAYOUT PLAN - 2
L203	LAYOUT PLAN - 3
L204	LAYOUT PLAN - 4
L205	LAYOUT PLAN - 5
L301	MATERIALS PLAN - 1
L302	MATERIALS PLAN - 2
L303	MATERIALS PLAN - 3
L304	MATERIALS PLAN - 4
L305	MATERIALS PLAN - 5
L401	GRADING PLAN - 1
L402	GRADING PLAN - 2
L403	GRADING PLAN - 3
L404	GRADING PLAN - 4
L405	GRADING PLAN - 5
L501	PLANTING PLAN - 1
L502	PLANTING PLAN - 2
L503	PLANTING PLAN - 3
L504	PLANTING PLAN - 4
L505	PLANTING PLAN - 5
L601	LANDSCAPE DETAILS - 1
L602	LANDSCAPE DETAILS - 2
L603	LANDSCAPE DETAILS - 3
L604	LANDSCAPE DETAILS - 4
L605	LANDSCAPE DETAILS - 5
L606	LANDSCAPE DETAILS - 6
L701	ADD ALTERNATES

VOLUME 2 OF 4
EARLY STRUCTURAL BID PACKAGE

STRUCTURAL	
NUMBER	DRAWING NAME
S0-0-1	GENERAL NOTES
S0-0-2	TYPICAL DETAILS
S0-0-3	TYPICAL DETAILS
S0-0-4	TYPICAL DETAILS
S0-0-5	TYPICAL DETAILS
S0-0-6	TYPICAL DETAILS
S0-0-7	TYPICAL DETAILS
S0-0-8	TYPICAL DETAILS
S0-0-9	TYPICAL DETAILS
S1-1-0C	LOWER LEVEL FOUNDATION PLAN - AREA C
S1-1-0D	LOWER LEVEL FOUNDATION PLAN - AREA D
S1-1-0MC	MEZZANINE FLOOR FRAMING PLAN - AREA C
S1-1-0MD	MEZZANINE FLOOR FRAMING PLAN - AREA D
S1-1-1A	FIRST FLOOR FOUNDATION PLAN - AREA A
S1-1-1B	FIRST FLOOR FOUNDATION PLAN - AREA B
S1-1-1C	FIRST FLOOR FOUNDATION PLAN - AREA C
S1-1-1D	FIRST FLOOR FOUNDATION PLAN - AREA D
S1-1-1MA	MEZZANINE FLOOR FRAMING - AREA A
S1-1-1MB	MEZZANINE FLOOR FRAMING - AREA B
S1-1-12A	SECOND FLOOR FRAMING PLAN - AREA A
S1-1-12B	SECOND FLOOR FRAMING PLAN - AREA B
S1-1-12C	SECOND FLOOR FRAMING PLAN - AREA C
S1-1-12D	SECOND FLOOR FRAMING PLAN - AREA D
S1-1-13A	THIRD FLOOR FRAMING PLAN - AREA A
S1-1-13B	THIRD FLOOR FRAMING PLAN - AREA B
S1-1-13C	THIRD FLOOR FRAMING PLAN - AREA C
S1-1-13D	THIRD FLOOR FRAMING PLAN - AREA D
S1-1-14A	FOURTH FLOOR FRAMING PLAN - AREA A
S1-1-14B	FOURTH FLOOR FRAMING PLAN - AREA B
S1-1-14C	FOURTH FLOOR FRAMING PLAN - AREA C
S1-1-14D	FOURTH FLOOR FRAMING PLAN - AREA D
S1-1-15A	ROOF FRAMING PLAN - AREA A
S1-1-15B	ROOF FRAMING PLAN - AREA B
S1-1-15C	ROOF FRAMING PLAN - AREA C
S1-1-15D	ROOF FRAMING PLAN - AREA D
S1-1-15MA	ROOF DUNNAGE FRAMING PARTS
S2-0-1	SECTIONS
S2-0-2	SECTIONS
S2-0-3	SECTIONS
S2-0-4	SECTIONS
S2-0-5	SECTIONS
S3-0-1	SECTIONS
S3-0-2	SECTIONS
S3-0-3	SECTIONS
S3-0-4	SECTIONS
S3-0-5	SECTIONS
S3-0-6	SECTIONS
S3-0-7	SECTIONS
S3-0-8	SECTIONS
S3-0-9	SECTIONS
S4-0-1	BRACE FRAME ELEVATIONS - AREA A
S4-0-2	BRACE FRAME ELEVATION - AREAS A + B
S4-0-3	BRACE FRAME ELEVATION - AREA B
S4-0-4	BRACED FRAME ELEVATION C + D
S4-0-5	SHEAR WALLS
S4-0-6	SHEAR WALLS
S4-0-7	SHEAR WALLS
S4-0-8	BRACED FRAME DETAILS
S4-0-9	BRACED FRAME DETAILS
S5-0-1	JOIST LOADING DIAGRAMS
S5-0-2	JOIST LOADING DIAGRAMS
S5-0-3	JOIST LOADING DIAGRAMS
SC-1-1	CONCESSION BUILDING PLANS
SC-2-1	CONCESSION BUILDING SECTIONS
SL-1-1	LOCKER BUILDING PLANS
SL-2-1	LOCKER ROOM BUILDING SECTIONS
SL-3-1	LOCKER ROOM BUILDING SHEAR WALLS
SM-1-1	MAINTENANCE BUILDING PLANS
SM-1-1	MAINTENANCE SITE BUILDING FOUNDATION PLANS

VOLUME 3 OF 4
~ FOR REFERENCE ONLY~

CODE ANALYSIS	
NUMBER	DRAWING NAME
CD-1-1	CODE ANALYSIS LOWER LEVEL
CD-1-2	CODE ANALYSIS FIRST FLOOR
CD-1-3	CODE ANALYSIS FIRST FLOOR MEZZ
CD-1-4	CODE ANALYSIS SECOND FLOOR
CD-1-5	CODE ANALYSIS THIRD FLOOR
CD-1-6	CODE ANALYSIS FOURTH FLOOR

ARCHITECTURAL	
NUMBER	DRAWING NAME
A1-0-0	PARTITION TYPES
A1-0-1	OVERALL LOWER LEVEL & FIRST FLOOR PLANS
A1-0-2	OVERALL LOWER LEVEL AND FIRST FLOOR MEZZ. PLANS
A1-0-3	OVERALL SECOND FLOOR PLAN
A1-0-4	OVERALL THIRD FLOOR PLAN
A1-0-5	OVERALL FOURTH FLOOR PLAN
A1-0-6	OVERALL ROOF PLAN
A1-0-8	LOWER & FIRST FLOOR NET AREA PLANS
A1-0-9	SECOND & THIRD FLOOR NET AREA PLANS
A1-0-10	FOURTH FLOOR & SATELLITE LOCKERS NET AREA PLANS
A1-0-11	LOWER LEVEL BUILDING LAYOUT & EDGE OF SLAB PLAN
A1-0-12	FIRST FLOOR BUILDING LAYOUT & EDGE OF SLAB PLAN
A1-0-13	SECOND & THIRD FLOOR EDGE OF SLAB PLANS
A1-0-14	FOURTH FLOOR EDGE OF SLAB PLAN
A1-1-0C	LOWER LEVEL FLOOR PLAN - AREA C
A1-1-0D	LOWER LEVEL FLOOR PLAN - AREA D
A1-1-0MC	LOWER LEVEL MEZZANINE PLAN - AREA C
A1-1-0MD	LOWER LEVEL MEZZANINE PLAN - AREA D
A1-1-1A	FIRST FLOOR PLAN - AREA A
A1-1-1B	FIRST FLOOR PLAN - AREA B
A1-1-1C	FIRST FLOOR PLAN - AREA C
A1-1-1D	FIRST FLOOR PLAN - AREA D
A1-1-1MA	FIRST FLOOR MEZZANINE PLAN - AREA A
A1-1-1MB	FIRST FLOOR MEZZANINE PLAN - AREA B
A1-1-12A	SECOND FLOOR PLAN - AREA A
A1-1-12B	SECOND FLOOR PLAN - AREA B
A1-1-12C	SECOND FLOOR PLAN - AREA C
A1-1-12D	SECOND FLOOR PLAN - AREA D
A1-1-13A	THIRD FLOOR PLAN - AREA A
A1-1-13B	THIRD FLOOR PLAN - AREA B
A1-1-13C	THIRD FLOOR PLAN - AREA C
A1-1-13D	THIRD FLOOR PLAN - AREA D
A1-1-14A	FOURTH FLOOR PLAN - AREA A
A1-1-14B	FOURTH FLOOR PLAN - AREA B
A1-1-14C	FOURTH FLOOR PLAN - AREA C
A1-1-14D	FOURTH FLOOR PLAN - AREA D
A1-2-1A	ROOF PLAN - AREA A
A1-2-1B	ROOF PLAN - AREA B
A1-2-1C	ROOF PLAN - AREA C
A1-2-1D	ROOF PLAN - AREA D
A2-0-1	OVERALL BUILDING ELEVATIONS
A2-1-1	BUILDING ELEVATIONS
A2-1-2	BUILDING ELEVATIONS

VOLUME 3 OF 4 (CONT.)
~ FOR REFERENCE ONLY~

ARCHITECTURAL	
NUMBER	DRAWING NAME
A2-1-3	BUILDING ELEVATIONS
A2-1-4	BUILDING ELEVATIONS
A2-1-5	BUILDING ELEVATIONS
A2-1-6	BUILDING ELEVATIONS
A2-1-7	BUILDING ELEVATIONS
A2-1-8	BUILDING ELEVATIONS
A2-2-1	INTERIOR ELEVATIONS
A2-2-2	INTERIOR ELEVATIONS
A2-2-3	INTERIOR ELEVATIONS
A2-2-4	INTERIOR ELEVATIONS
A2-2-5	INTERIOR ELEVATIONS
A2-2-6	INTERIOR ELEVATIONS
A2-2-7	INTERIOR ELEVATIONS
A2-2-8	INTERIOR ELEVATIONS
A2-2-9	INTERIOR ELEVATIONS
A2-2-10	INTERIOR ELEVATIONS
A2-2-11	INTERIOR ELEVATIONS
A2-2-12	INTERIOR ELEVATIONS
A2-2-13	INTERIOR ELEVATIONS
A2-2-14	INTERIOR ELEVATIONS
A2-2-15	INTERIOR ELEVATIONS
A2-2-16	INTERIOR ELEVATIONS
A3-1-1	BUILDING SECTIONS
A3-1-2	BUILDING SECTIONS
A3-1-3	BUILDING SECTIONS
A3-1-4	BUILDING SECTIONS
A3-1-5	BUILDING SECTIONS
A3-1-6	BUILDING SECTIONS
A3-2-1	WALL SECTIONS
A3-2-2	WALL SECTIONS
A3-2-3	WALL SECTIONS
A3-2-4	WALL SECTIONS
A3-2-5	WALL SECTIONS
A3-2-6	WALL SECTIONS
A3-2-7	WALL SECTIONS
A3-2-8	WALL SECTIONS
A3-2-9	WALL SECTIONS
A3-2-10	WALL SECTIONS
A3-2-11	WALL SECTIONS
A3-2-12	WALL SECTIONS
A3-2-13	WALL SECTIONS
A3-2-14	WALL SECTIONS
A3-2-15	WALL SECTIONS
A3-2-16	WALL SECTIONS
A3-2-17	WALL SECTIONS
A3-2-18	WALL SECTIONS
A3-2-19	WALL SECTIONS
A3-2-20	WALL SECTIONS
A3-2-21	WALL SECTIONS
A3-2-22	WALL SECTIONS
A3-2-23	WALL SECTIONS
A3-2-24	WALL SECTIONS
A3-3-1	VERTICAL DETAILS
A3-3-2	VERTICAL DETAILS
A4-1-1	TOILET AND LOCKER ROOM PLANS
A4-1-2	TOILET PLANS
A4-1-3	TOILET PLANS
A4-1-4	TOILET AND LOCKER ROOM ELEVATIONS
A4-1-5	TOILET AND LOCKER ROOM ELEVATIONS
A4-1-6	TOILET ELEVATIONS
A4-1-7	TOILET ELEVATIONS
A5-1-1	EXTERIOR PLAN DETAILS
A5-1-2	EXTERIOR PLAN DETAILS
A5-1-3	EXTERIOR PLAN DETAILS
A5-1-4	EXTERIOR PLAN DETAILS
A5-2-1	INTERIOR PLAN DETAILS
A5-2-2	INTERIOR PLAN DETAILS
A5-2-3	INTERIOR PLAN DETAILS
A5-3-1	ROOF DETAILS
A5-3-2	ROOF DETAILS
A5-3-3	ROOF DETAILS
A5-3-4	ROOF DETAILS
A6-2-1	DOOR SCHEDULE
A6-2-2	DOOR SCHEDULE
A6-2-3	DOOR SCHEDULE, FRAME & BORROWED LIGHT TYPES
A6-3-1	WINDOW, TRANSLUCENT WALL PANEL AND LOUVER TYPES
A6-3-2	CURTAIN WALL TYPES
A6-3-3	CURTAIN WALL TYPES
A6-3-4	CURTAIN WALL TYPES
A6-3-5	INTERIOR CURTAIN WALL TYPES
A6-3-6	STOREFRONT AND INTERIOR STOREFRONT TYPES
A6-3-7	INTERIOR STOREFRONT AND BORROWED LIGHT TYPES
A6-3-8	WINDOW & TRANSLUCENT WALL PANEL DETAILS
A6-3-9	CURTAIN WALL DETAILS
A6-3-10	CURTAIN WALL DETAILS
A7-1-1	STAIR PLANS
A7-1-2	STAIR SECTIONS
A7-1-3	STAIR PLANS & SECTIONS
A7-1-4	STAIR PLANS
A7-1-5	STAIR SECTIONS
A7-1-6	STAIR PLANS & SECTIONS
A7-1-7	STAIR PLANS & SECTIONS
A7-1-8	STAIR PLANS & SECTIONS
A7-1-9	ELEVATOR PLANS & SECTIONS
A7-1-10	STAIR DETAILS - ELEVATOR DETAILS, SPECIALTY DETAILS
A7-1-11	STAIR DETAILS
A7-1-12	LOADING RAMP PLAN, SECTION & DETAILS
A8-1-0C	LOWER LEVEL REFLECTED CEILING PLAN - AREA C
A8-1-0D	LOWER LEVEL REFLECTED CEILING PLAN - AREA D
A8-1-0MC	LOWER LEVEL MEZZANINE REFLECTED CEILING PLAN - AREA C
A8-1-0MD	LOWER LEVEL MEZZANINE REFLECTED CEILING PLAN - AREA D
A8-1-1A	FIRST FLOOR REFLECTED CEILING PLAN - AREA A
A8-1-1B	FIRST FLOOR REFLECTED CEILING PLAN - AREA B
A8-1-1C	FIRST FLOOR REFLECTED CEILING PLAN - AREA C
A8-1-1D	FIRST FLOOR REFLECTED CEILING PLAN - AREA D
A8-1-1MA	FIRST FLOOR MEZZANINE REFLECTED CEILING PLAN - AREA A
A8-1-1MB	FIRST FLOOR MEZZANINE REFLECTED CEILING PLAN - AREA B
A8-1-12A	SECOND FLOOR REFLECTED CEILING PLAN - AREA A
A8-1-12B	SECOND FLOOR REFLECTED CEILING PLAN - AREA B
A8-1-12C	SECOND FLOOR REFLECTED CEILING PLAN - AREA C
A8-1-12D	SECOND FLOOR REFLECTED CEILING PLAN - AREA D
A8-1-13A	THIRD FLOOR REFLECTED CEILING PLAN - AREA A
A8-1-13B	THIRD FLOOR REFLECTED CEILING PLAN - AREA B
A8-1-13C	THIRD FLOOR REFLECTED CEILING PLAN - AREA C
A8-1-13D	THIRD FLOOR REFLECTED CEILING PLAN - AREA D
A8-1-14A	FOURTH FLOOR REFLECTED CEILING PLAN - AREA A
A8-1-14B	FOURTH FLOOR REFLECTED CEILING PLAN - AREA B
A8-1-14C	FOURTH FLOOR REFLECTED CEILING PLAN - AREA C
A8-1-14D	FOURTH FLOOR REFLECTED CEILING PLAN - AREA D
A9-1-1	MISCELLANEOUS DETAILS
A9-1-2	MISCELLANEOUS DETAILS
AC-1-1	TOILET AND CONCESSION BUILDING PLANS & ELEVATIONS
AC-1-2	WALL SECTIONS, PLANS & SCHEDULES
AC-1-3	ENLARGED DETAILS
AL-1-1	LOCKER BUILDING PLANS
AL-1-2	LOCKER BUILDING ELEVATIONS & SECTIONS
AL-1-3	LOCKER BUILDING STAIR & ELEVATOR DRAWINGS
AL-1-4	TOILET AND LOCKER ROOM PLANS
AM-1-1	MAINTENANCE BUILDING DRAWINGS
AM-1-2	MAINTENANCE BUILDING TOILET ELEVATIONS

ARCHITECTURAL FINISHES	
NUMBER	DRAWING NAME
AF-1-1-0C	LOWER LEVEL FLOOR FINISHES PLAN- AREA C
AF-1-1-0D	LOWER LEVEL FLOOR FINISHES PLAN - AREA D
AF-1-1-1A	FIRST LEVEL FLOOR FINISHES PLAN - AREA A
AF-1-1-1B	FIRST LEVEL FLOOR FINISHES PLAN - AREA B
AF-1-1-1C	FIRST LEVEL FLOOR FINISHES PLAN - AREA C
AF-1-1-1D	FIRST LEVEL FLOOR FINISHES PLAN - AREA D
AF-1-1-2A	SECOND LEVEL FLOOR FINISHES PLAN - AREA A
AF-1-1-2B	SECOND LEVEL FLOOR FINISHES PLAN - AREA B
AF-1-1-2C	SECOND LEVEL FLOOR FINISHES PLAN - AREA C
AF-1-1-2D	SECOND LEVEL FLOOR FINISHES PLAN - AREA D
AF-1-1-3A	THIRD LEVEL FLOOR FINISHES PLAN - AREA A
AF-1-1-3B	THIRD LEVEL FLOOR FINISHES PLAN - AREA B
AF-1-1-3C	THIRD LEVEL FLOOR FINISHES PLAN - AREA C
AF-1-1-3D	THIRD LEVEL FLOOR FINISHES PLAN - AREA D
AF-1-1-4A	FOURTH LEVEL FLOOR FINISHES PLAN - AREA A
AF-1-1-4B	FOURTH LEVEL FLOOR FINISHES PLAN - AREA B
AF-1-1-4C	FOURTH LEVEL FLOOR FINISHES PLAN - AREA C
AF-1-1-4D	FOURTH LEVEL FLOOR FINISHES PLAN - AREA D
AF-1-2-0C	LOWER LEVEL WALL FINISHES PLAN - AREA C
AF-1-2-0D	LOWER LEVEL WALL FINISHES PLAN - AREA D
AF-1-2-1A	FIRST LEVEL WALL FINISHES PLAN - AREA A
AF-1-2-1B	FIRST LEVEL WALL FINISHES PLAN - AREA B
AF-1-2-1C	FIRST LEVEL WALL FINISHES PLAN - AREA C
AF-1-2-1D	FIRST LEVEL WALL FINISHES PLAN - AREA D
AF-1-2-2A	SECOND LEVEL WALL FINISHES PLAN - AREA A
AF-1-2-2B	SECOND LEVEL WALL FINISHES PLAN - AREA B
AF-1-2-2C	SECOND LEVEL WALL FINISHES PLAN - AREA C
AF-1-2-2D	SECOND LEVEL WALL FINISHES PLAN - AREA D
AF-1-2-3A	THIRD LEVEL WALL FINISHES PLAN - AREA A
AF-1-2-3B	THIRD LEVEL WALL FINISHES PLAN - AREA B
AF-1-2-3C	THIRD LEVEL WALL FINISHES PLAN - AREA C
AF-1-2-3D	THIRD LEVEL WALL FINISHES PLAN - AREA D
AF-1-2-4A	FOURTH LEVEL WALL FINISHES PLAN - AREA A
AF-1-2-4B	FOURTH LEVEL WALL FINISHES PLAN - AREA B
AF-1-2-4C	FOURTH LEVEL WALL FINISHES PLAN - AREA C
AF-1-2-4D	FOURTH LEVEL WALL FINISHES PLAN - AREA D
AF-1-3-1	TRANSITION DETAILS
AF-1-3-2	TRANSITION DETAILS
AF-1-4-1	BASE DETAILS
AF-1-4-2	BASE DETAILS
AF-1-4-3	BASE DETAILS
AF-1-5-1	DECORATIVE FABRIC METAL DETAILS
AF-1-6-1	PHENOLIC RESIN PANEL DETAILS
AF-1-7-1	INTERIOR WALL PANEL DETAILS
AF-1-8-1	CERAMIC TILES PATTERN

ARCHITECTURAL SIGNAGE	
NUMBER	DRAWING NAME
SL-1-1-1	CONCESSION BUILDING SIGNAGE PLAN
SL-1-1-2	MAINTENANCE BUILDING SIGNAGE PLAN
SL-1-1-3	LOCKER BUILDING FIRST FLOOR SIGNAGE PLAN
SL-1-1-4	LOCKER BUILDING SECOND FLOOR SIGNAGE PLAN
SL-1-1-5	LOWER LEVEL SIGNAGE PLAN
SL-1-1-6	FIRST FLOOR SIGNAGE PLAN
SL-1-1-7	SECOND FLOOR SIGNAGE PLAN
SL-1-1-8	THIRD FLOOR SIGNAGE PLAN
SL-1-1-9	FOURTH FLOOR SIGNAGE PLAN
SL-1-1-10	SITE SIGNAGE PLAN

EQUIPMENT	
NUMBER	DRAWING NAME
E00-00	NOTES, SCHEDULES, AND ABBREVIATIONS
E01-1-0C	FF&E/CASEWORK LOWER LEVEL AREA C
E01-1-0D	FF&E/CASEWORK LOWER LEVEL AREA D
E01-1-1A	FF&E/CASEWORK FIRST FLOOR AREA A
E01-1-1B	FF&E/CASEWORK FIRST FLOOR AREA B
E01-1-1C	FF&E/CASEWORK FIRST FLOOR AREA C
E01-1-1D	FF&E/CASEWORK FIRST FLOOR AREA D
E01-1-2A	FF&E/CASEWORK SECOND FLOOR AREA A
E01-1-2B	FF&E/CASEWORK SECOND FLOOR AREA B
E01-1-2C	FF&E/CASEWORK SECOND FLOOR AREA C
E01-1-2D	FF&E/CASEWORK SECOND FLOOR AREA D
E01-1-3A	FF&E/CASEWORK THIRD FLOOR AREA A
E01-1-3B	FF&E/CASEWORK THIRD FLOOR AREA B
E01-1-3C	FF&E/CASEWORK THIRD FLOOR AREA C
E01-1-3D	FF&E/CASEWORK THIRD FLOOR AREA D
E01-1-4A	FF&E/CASEWORK FOURTH FLOOR AREA A
E01-1-4B	FF&E/CASEWORK FOURTH FLOOR AREA B
E02-1	METAL FABRIC AND GLASS CASEWORK & EQUIPMENT
E02-2	AUTO COLLISION CASEWORK & EQUIPMENT
E02-3	AUTO TECHNOLOGY CASEWORK & EQUIPMENT
E02-4	HVAC TECH CASEWORK & EQUIPMENT
E02-5	CARPENTRY CASEWORK & EQUIPMENT
E02-6	PLUMBING / PIPEFITTING CASEWORK & EQUIPMENT
E02-7	ELECTRICAL TECHNOLOGY CASEWORK & EQUIPMENT
E02-8	DENTAL ASSISTING CASEWORK & EQUIPMENT
E02-9	ROBOTICS CASEWORK & EQUIPMENT
E02-10	DESIGN/VISUAL COM CASEWORK & EQUIPMENT
E02-11	DRAFTING / DESIGN CASEWORK & EQUIPMENT
E02-12	COSMETOLOGY CASEWORK & EQUIPMENT
E02-13	MEDICAL ASSIST CASEWORK & EQUIPMENT
E02-14	HEALTH ASSIST CASEWORK & EQUIPMENT
E02-15	BIOTECH CASEWORK & EQUIPMENT
E03-1	CASEWORK ELEVATIONS
E03-2	CASEWORK ELEVATIONS
E03-3	CASEWORK ELEVATIONS & DETAILS

THEATER EQUIPMENT	
NUMBER	DRAWING NAME
TR-1	THEATRE RIGGING PLAN
TR-2	THEATRE RIGGING SECTION
TR-3	HOUSE AND WINDOW TRAVELER CURTAIN RIGGING
TE-1	THEATRE ELECTRICS POWER + DATA RISERS

GENERAL NOTES

- G1. THE INTENT OF THE STRUCTURAL DRAWINGS IS TO SHOW THE MAIN STRUCTURAL FEATURES AND DESIGN FOR THE INTENDED PROJECT. ARCHITECTURAL DETAILS AND OTHER COMPONENTS THAT MAY BE NECESSARY TO CONSTRUCT THE PROJECT ARE SHOWN INCIDENTALLY ONLY AND NOT COMPLETELY. THEREFORE, ALL CONTRACT DRAWINGS AND SPECIFICATIONS MUST BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS DURING ALL PHASES OF CONSTRUCTION. DISCREPANCIES BETWEEN STRUCTURAL DRAWINGS AND ARCHITECTURAL DRAWINGS, IF NOT CLARIFIED IN THE ADDENDA AT THE REQUEST OF THE CONTRACTOR, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING CONSTRUCTION FOR CLARIFICATIONS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION IN HIS BID.
- G2. THE CONTRACTOR SHALL INFORM THE ARCHITECT OF ALL DISCREPANCIES BETWEEN DRAWINGS OF DIFFERENT TRADES PRIOR TO INITIATION OF ANY WORK.
- G3. THE DESIGN IS IN ACCORDANCE WITH THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE.
- G4. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES, PROPERTY, AND THE PUBLIC. THE CONTRACTOR SHALL SHIELD, BRACE, AND PROTECT THE EXISTING BUILDING AS REQUIRED FOR CONSTRUCTION OF NEW WORK.
- G5. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS AND DIMENSIONS OF ALL CHASES, SLOTS, INSERTS, CURBS, OPENINGS, SLEEVES, ANCHOR BOLTS, FLOOR PITCHES, ANGLE FRAMES, AND ALL OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS SHALL BE INCLUDED.
- G6. DETAILS SHOWN AS TYPICAL ARE APPLICABLE TO ALL SIMILAR CONDITIONS.
- G7. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE, AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL, IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
- G8. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS INCLUDING, BUT NOT LIMITED TO TEMPORARY SHORING AND BRACING OF NEW AND EXISTING CONSTRUCTION TO MAINTAIN STRUCTURAL STABILITY FOR ALL CONDITIONS OF STATIC, DYNAMIC, GRAVITY, AND WIND LOADS DURING DEMOLITION PROCEDURES, REPAIR PROCEDURES, AND NEW CONSTRUCTION PROCEDURES THROUGHOUT THE DURATION OF THE CONSTRUCTION CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF TEMPORARY SHORING INCLUDING ENGINEERING. A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS, THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION-RELATED SAFETY MEASURES.
- G9. ANY ILLUSTRATION OR DESCRIPTION OF CONSTRUCTION SEQUENCING, TEMPORARY SHORING SEQUENCE, OR TEMPORARY SHORING SYSTEM, AS SHOWN ANYWHERE IN THE CONTRACT DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) IS PROVIDED TO THE CONTRACTOR ONLY FOR ILLUSTRATION OF A POSSIBLE METHOD OR SEQUENCE OF ACCOMPLISHING THE WORK, TO DEMONSTRATE FEASIBILITY IN PRINCIPLE ONLY, UNLESS OTHERWISE NOTED. SUCH ILLUSTRATIONS OR DESCRIPTIONS OF CONSTRUCTION SEQUENCING OR TEMPORARY SHORING IN THE CONTRACT DOCUMENTS ARE DEMONSTRATED FOR CONSIDERATION ONLY BY THE CONTRACTOR AND ARE NOT ENDORSED BY THE ARCHITECT OR ENGINEER AND ARE NOT INTENDED TO DICTATE TO THE CONTRACTOR THE SELECTION, DETAILS AND EXECUTION OF ALL CONSTRUCTION MEANS, METHODS AND/OR SEQUENCING OF THE CONSTRUCTION WORK ARE SOLELY THE CHOICE AND RESPONSIBILITY OF THE CONTRACTOR. SUCH ILLUSTRATIONS OR DESCRIPTIONS OF CONSTRUCTION SEQUENCING OR TEMPORARY SHORING IN THE CONTRACT DOCUMENTS ARE SHOWN ONLY FOR THOSE ASPECTS OF THE WORK WHERE COMPLEXITY, UNUSUAL CONDITIONS, OR GLOBAL STABILITY AS RELATED TO THE PROJECT WARRANT NOTICE OF VERY SPECIAL ATTENTION REQUIRED BY THE CONTRACTOR. SUCH ILLUSTRATIONS OR DESCRIPTIONS OF CONSTRUCTION SEQUENCING OR TEMPORARY SHORING ARE NOT TO BE INTERPRETED IN ANY WAY AS LIMITING THE WORK REQUIRING SEQUENCING OR TEMPORARY SHORING TO ONLY THOSE ASPECTS ILLUSTRATED OR DESCRIBED. AS PART OF THE BASE CONTRACT WORK, THE CONTRACTOR SHALL IDENTIFY, PLAN, FOR, ENGINEER AND DETAIL, AND PROVIDE ALL CONSTRUCTION SEQUENCING AND TEMPORARY SHORING AS NECESSARY TO SAFELY AND SUCCESSFULLY EXECUTE ALL THE WORK ENCOMTERED FOR THIS PROJECT.

FOUNDATION NOTES

- F1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY LAHAF GEOTECHNICAL CONSULTANTS, INC. AUGUST 12, 2020. REFER TO BORING LOGS AND TEST PIT DATA IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- F2. FOOTINGS SHALL BEAR TYPICALLY ON STRUCTURAL FILL PLACED DIRECTLY OVER THE NATURAL SAND AND GRAVEL OR ON ROCK HAVING A MINIMUM BEARING CAPACITY OF 2 TONS PER SQUARE FOOT. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F3. ALL BACKFILL UNDER STRUCTURAL SLABS, MATS, AND FOOTINGS WILL BE ENGINEERED STRUCTURAL FILL COMPACTED IN SPECIFIED LIFTS TO 95 PERCENT OF MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED OR SPECIFIED. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F4. PROVIDE SHEETING, BRACING, AND UNDERPINNINGS AS REQUIRED TO PRESERVE ADJACENT STRUCTURES.
- F5. FOUNDATIONS AND SLABS SHALL NOT BE POURED IN WATER OR ON FROZEN GROUND.
- F6. VERIFY LOCATIONS AND REQUIREMENTS FOR INSERTS, SLEEVES, CONDUITS, EMBEDMENTS, AND PENETRATIONS WITH RESPECTIVE TRADES BEFORE PLACING CONCRETE.
- F7. BLASTING SHALL BE COMPLETED BEFORE ANY CONCRETE IS PLACED.
- F8. DOWELS FROM FOUNDATIONS INTO PIERS, PILE CAPS, COLUMNS, BUTTRESSES, OR WALLS SHALL BE THE SAME SIZE AND NUMBER AS REINFORCEMENT IN PIERS, COLUMNS, BUTTRESSES, OR WALLS ABOVE, EXCEPT AS OTHERWISE SHOWN.
- F9. CONTRACTOR SHALL PROVIDE CONTINUOUS DRAINAGE BY MECHANICAL METHODS TO CONTROL SURFACE AND UNDERGROUND WATER AS REQUIRED DURING CONSTRUCTION. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F10. CONTRACTOR SHALL ENSURE THAT GROUND WATER LEVELS UNDER ADJACENT STRUCTURES AND PROPERTIES ARE NOT ALTERED. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- F11. ALL FOUNDATIONS UNITS (PIERS AND FOOTINGS) SHALL BE CENTERED UNDER SUPPORT MEMBERS, UNLESS NOTED OTHERWISE ON PLANS.
- F12. COORDINATE UNDER FLOOR AND PERIMETER DRAIN REQUIREMENTS WITH ARCHITECTURAL, CIVIL, AND PLUMBING DRAWINGS.
- F13. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, SPECIFICATIONS, BORING LOGS, OR TEST PITS. THIS DATA IS INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION AND REPRESENT CONDITIONS ONLY OF THOSE SPECIFIED LOCATIONS AT THE PARTICULAR TIME THEY WERE MADE.
- F14. CONTRACTOR SHALL INFORM THE ARCHITECT AND RELOCATE ANY EXISTING UTILITY LINES AS REQUIRED THAT MAY INTERFERE WITH NEW FOUNDATIONS. CONTRACTOR SHALL REMOVE ANY EXISTING UTILITY LINES THAT ARE BEING ABANDONED IN THE VICINITY OF THE NEW FOUNDATION AND BACKFILL THE AREA WITH COMPACTED STRUCTURAL FILL.
- F15. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND OTHER SPECIFIC FOUNDATION CONSTRUCTION REQUIREMENTS.

REINFORCED CONCRETE NOTES

- R1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE* AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- R2. ALL CONCRETE SHALL BE CONTROLLED, MIXED, AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY, PROVIDED BY OWNER.
- R3. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM 5,000 PSI 28 DAY COMPRESSION STRENGTH AND CONTAIN AN AIR ENTRAINMENT ADMIXTURE.
- R4. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 POUNDS PER SQUARE INCH AT THE END OF 28 DAYS. CONCRETE SLABS ON GRADE AND SUPPORTED CONCRETE SLABS SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 POUNDS PER SQUARE INCH AT THE END OF 28 DAYS. CONCRETE SLABS ON STEEL DECK SHALL BE NORMAL WEIGHT CONCRETE AS INDICATED ON PLANS WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT THE END OF 28 DAYS.
- R5. CONCRETE QUALITY IN ACCORDANCE WITH THE REQUIREMENTS OF THESE DRAWINGS AND SPECIFICATIONS IS ESSENTIAL TO THE STRUCTURAL PERFORMANCE OF THIS BUILDING. CONCRETE THAT IS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WILL NOT BE ACCEPTED.
- R6. CONCRETE SHALL REACH THE 40 PERCENT OF ITS 28 DAY COMPRESSIVE STRENGTH (6i) BEFORE FORMS OR SHORES FOR WALLS MAY BE REMOVED, NO FORMS CAN BE REMOVED UNLESS CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO SUPPORT ITS OWN WEIGHT.
- R7. CONSTRUCTION JOINT LOCATIONS, OTHER THAN SHOWN ON THE DRAWINGS, ARE PERMITTED SUBJECT TO PRIOR APPROVAL OF THE ENGINEER. EXPANSION JOINT AND CONTROL JOINT LOCATIONS ARE MANDATORY AS SHOWN.
- R8. REINFORMING BARS SHALL CONFORM TO ASTM A615 WITH 60,000 POUNDS PER SQUARE INCH YIELD STRENGTH, AS INDICATED AND SHALL HAVE THE FOLLOWING CONCRETE COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- A. SURFACES PLACED IN CONTACT WITH THE GROUND - 3" B. FORMED SURFACE EXPOSED TO GROUND - 2" C. INSIDE FACE OF FORMED WALL - 1 1/2" D. WALL PER TIES - 1 1/2" E. SLAB REINFORCING - 3/4" TOP & BOTTOM
- R9. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, LAP TWO SQUARES AT ALL SPLICES AND THE AT 3 FOOT CENTERS.
- R10. ALL LAP REINFORCING TO DEVELOP FULL TENSION CAPACITY OF THE SMALLER BAR REINFORCEMENT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- R11. PROVIDE BAR SUPPORTS, SPACES, AND ACCESSORIES RECOMMENDED IN THE LATEST ADDITION OF THE ACI DETAILING MANUAL. PUBLICATION SHALL. ALL REINFORCEMENT DETAILING, LAP SPICES, AND EMBEDMENTS SHALL CONFORM TO THIS MANUAL. ALL ACCESSORIES, SUCH AS SLAB BOLSTERS AND BEAM AND SLAB CHAIRS IN CONTACT WITH EXPOSED SURFACES, SHALL BE ZINC COATED OR PLASTIC TYPE.
- R12. PIPES OR CONDUITS SHALL NOT BE PLACED IN SLABS ON GRADE OR ELEVATED SLABS.
- R13. CONCRETE WALLS SHALL BE CAST IN PANELS NOT EXCEEDING 60 FEET IN LENGTH.

REINFORCED CONCRETE NOTES (CONT)

- R14. DETAILING OF REINFORCEMENT SHALL BE ACCORDING TO THE LATEST EDITION OF ACI 318 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- R15. SET SECRETLY AND TIE ALL REINFORCEMENT BEFORE PLACING CONCRETE. SETTING DOWELS AND REINFORCEMENT INTO WET CONCRETE IS PROHIBITED.
- R16. ALL REINFORCING WILL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.
- R17. FOR CONCRETE FILL AND TOPPINGS, PLACE CONSTRUCTION AND EXPANSION JOINTS AT THE SAME LOCATION AS THE CONSTRUCTION AND EXPANSION JOINTS IN THE SUPPORTING CONCRETE.
- R18. BUILD ALL CONCRETE MAT FOUNDATIONS, BASE SLABS, WALLS, AND FLOORS TO MINIMIZE THE EFFECTS OF SHRINKAGE BY CASTING ALTERNATE SECTIONS. ADJACENT SECTIONS MAY BE CAST WHEN PREVIOUSLY PLACED SECTION HAS CURED FOR 48 HOURS AFTER ITS INITIAL SET. CURING REQUIREMENTS ARE SPECIFIED IN SECTION 03300, CAST-IN-PLACE CONCRETE OF THE SPECIFICATIONS.
- R19. EXPOSED EDGES OF CONCRETE ELEMENTS, SUCH AS PILASTERS, CURBS, AND EQUIPMENT PADS, WILL HAVE A 1/4 CHAMFER.
- R20. ALL KEYS SHALL BE 2"x4" (NOMINAL) UNLESS SHOWN OTHERWISE ON DRAWINGS.
- R21. NOT ALL OPENINGS THROUGH CONCRETE SLABS AND WALLS ARE SHOWN ON STRUCTURAL DRAWINGS. OPENINGS INDICATED, OR ANY ADDITIONAL OPENINGS OR INSERTS REQUIRED, SHALL BE VERIFIED WITH RESPECTIVE TRADES BEFORE POURING OF CONCRETE.
- R22. USE NON-SHRINK, NON-METALLIC GROUT WHERE INDICATED. SEE SECTION 03300, CAST-IN-PLACE CONCRETE OF THE SPECIFICATIONS FOR ALL THE REQUIREMENTS.
- R23. SEE ARCHITECTURAL DRAWINGS FOR FINISHES, DEPRESSIONS, REGLETS, NOTCHES, AND OTHER ARCHITECTURAL FEATURES.
- R24. PROVIDE SEALANT JOINTS FOR ALL EXPOSED TO VIEW CONSTRUCTION JOINTS, CONTROL JOINTS, AND SHEAR KEYS.
- R25. SET ANCHOR BOLTS AND EMBEDDED PLATES REQUIRED FOR CONNECTION OF WORK FURNISHED BY OTHER TRADES FOR INSTALLATION AS PART OF THEIR SCOPE OF WORK.
- R26. PROVIDE A MINIMUM OF 6 IN AT 12 EACH WAY, EACH FACE FOR ALL WALLS, FOOTINGS, PITS, OR PADS, UNLESS NOTED OTHERWISE.
- R27. PROVIDE CONCRETE PADS FOR MECHANICAL EQUIPMENT ACCORDING TO THE REQUIREMENTS OF THE MANUFACTURER AND IN ACCORDANCE WITH THE TYPICAL DETAILS ALWAYS PROVIDE A MINIMUM REINFORCEMENT FOR PADS, UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH MECHANICAL WORK.
- R28. PROVIDE CONDENSATE PITS AND OTHER DEPRESSIONS OR CURBS AS REQUIRED FOR COMPLETION OF THE MECHANICAL WORK.
- R29. NO CONCRETE SHALL BE PLACED BEFORE REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS HAVE BEEN OBTAINED FROM THE ARCHITECT / ENGINEER.
- R30. WHEN REINFORCEMENT IS PLACED IN TWO OR MORE LAYERS, BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE THOSE IN THE BOTTOM LAYER WITH A CLEAR DISTANCE BETWEEN THE LAYERS NOT LESS THAN ONE INCH.
- R31. FLOOR SLABS WILL BE AN INTEGRAL PART OF STRUCTURAL SLABS. SEPARATE CONCRETE FILL IS NOT PERMITTED. ALL OPENINGS THROUGH THE STRUCTURAL DRAWINGS, CONCRETE CAST ON SLOPED SURFACES, SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATIONS UNTIL THE INTENDED POUR IS COMPLETED.
- R32. ELEVATED SLABS ON DECK SHALL BE FINISHED LEVEL USING LASER MEASUREMENT AND SHALL MEET THE TOLERANCES FOR FLATNESS. SLAB THICKNESS INDICATED ON THE PLANS ARE A MINIMUM THICKNESSES. FOR QUANTITY OF CONCRETE, THE CONTRACTOR SHALL TAKE INTO ACCOUNT DEFLECTIONS OF SUPPORTING STRUCTURAL MEMBERS, FORMS AND DECK FOR AN AVERAGE ADDITIONAL 3/4" OF CONCRETE FOR THE ENTIRE AREA OF THE SLAB. USE A MAXIMUM OF THE DESIGN SLAB THICKNESS PLUS 1 INCH MAX.
- R33. FIBER REINFORCEMENT SHALL BE ASTM C 1116 - TYPE III, MACRO-SYNTHETIC FIBERS (HIGH-VOLUME SYNTHETICS USED FOR REDUCTION OF PLASTIC AND DRYING SHRINKAGE CRACKING). PROVIDE IN SLABS-ON-GRADE, ONLY WHERE SHOWN ON THE DRAWINGS. CONTRACTOR SHALL FOLLOW ALL MANUFACTURERS REQUIREMENTS AND PROVIDE A DOSAGE AS RECOMMENDED BY THE MANUFACTURER FOR CONDITIONS SHOWN ON THE DRAWINGS. E.G. SLAB THICKNESS, CONCRETE MIX STRENGTH, SPACING, AND LOCATION OF CONSTRUCTION JOINTS AND SAW-CUT CONTROL JOINTS, ETC.

REINFORCED CONCRETE MASONRY

- M1. ALL REINFORCED CONCRETE MASONRY SHALL CONFORM TO ACI 300-13 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 308-13 "SPECIFICATION FOR MASONRY STRUCTURES" FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE MASONRY AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- M2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE I, NORMAL WEIGHT AND HAVE AN AVERAGE MINIMUM COMPRESSIVE STRENGTH OF 2,000 POUNDS PER SQUARE INCH ON THE NET AREA.
- M3. MORTAR SHALL CONFORM TO ASTM C270, TYPE S, AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 1,800 POUNDS PER SQUARE INCH AT 28 DAYS.
- M4. GROUT SHALL CONFORM TO ASTM C478, FINE TYPE, AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 POUNDS PER SQUARE INCH.
- M5. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 TYPICAL, REINFORCING BARS BEING WELDED SHALL CONFORM TO A706, GRADE 60. DEFORMED HORIZONTAL TRUSS REINFORCING MATERIAL SHALL CONFORM TO ASTM A428 AND SHALL HAVE MINIMUM CROSS-SECTIONAL AREAS INDICATED ON PLANS OR IN SECTIONS.
- M6. PROVIDE HORIZONTAL AND VERTICAL REINFORCING AS NOTED ON THE DRAWINGS AND FILL ALL REINFORCED BLOCK CELLS WITH GROUT.
- M7. WALLS SHALL BE GROUTED USING LOW LIFT GROUT METHOD AND LIMITING THE GROUT LIFT HEIGHT TO 4'-0" AT LOCATION OF THE BOND BEAM.
- M8. REINFORCE CMU AT ALL ELEVATORS, STAIRS, AND MEANS OF EGRESS AND EXTERIOR WALLS WITH A MINIMUM #7 @ 48" ON CENTER VERTICALLY.
- M9. PROVIDE 48 DIAMETER LAPS FOR ALL REINFORCING UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL NOTES

- S1. ALL STEEL WORK SHALL CONFORM TO THE AISC 360-10 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- S2. THE STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
- A. ALL STRUCTURAL WIDE FLANGE SHAPES: ASTM A992 FY = 50ksi, HAVING A MINIMUM YIELD STRENGTH OF 50 KSI UNLESS OTHERWISE NOTED.
- B. BARS, PLATES, CHANNELS, AND CONNECTION ANGLES: ASTM A36, UNLESS NOTED OTHERWISE.
- C. STRUCTURAL TUBES: ASTM A500, GRADE C, FY = 50ksi.
- D. STRUCTURAL PIPES: ASTM A53, GRADE B OR ASTM A501.
- E. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554.
- S3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.
- S4. BOTTOM OF DECK ELEVATIONS REFER TO TOP ELEVATION OF SUPPORTING ELEMENT INCLUDING JOISTS, BEAMS, PLATES, TEES, ANGLES, ETC.
- S5. TOP-OF-STEEL ELEVATIONS INDICATED ON THE DRAWINGS REFER TO TOP OF TOP-BEAM FLANGE UNLESS NOTED OTHERWISE ON PLANS.
- S6. DESIGN AND DETAIL OF ALL CONNECTIONS SHALL BE ACCORDING TO AISC.
- S7. THE BEAM CONNECTION DESIGN SHOULD ACCOUNT FOR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM NEAR SUPPORTS CONCENTRATED LOADS WITHIN ONE THIRD THE SPAN OF THE BEAM CLOSER TO THE SUPPORT AND/OR VERTICAL COMPONENTS OF FORCE IN DIAGONAL BRACING MEMBERS FRAMING INTO THE MEMBERS.
- S8. ALL CONNECTIONS SHALL BE BOLTED WITH ASTM A325 HIGH-STRENGTH BOLTS OR WELDED IN ACCORDANCE TO AWS AND WITH THE AISC MANUAL REQUIREMENTS UNLESS NOTED OTHERWISE.
- S9. UNLESS OTHERWISE NOTED IN PLAN, DETAIL, FLOOR MEMBER CONNECTIONS FOR THE FOLLOWING FACTORED (LRFD) VERTICAL REACTIONS:
- | SHAPE | MINIMUM REACTIONS (KIPS) | MINIMUM NUMBER OF ROWS TO GIRDS | TO COLUMNS |
|--------|--------------------------|---------------------------------|------------|
| W12 | 30 | 38 | 3 |
| W14 | 38 | 45 | 3 |
| W16 | 45 | 57 | 4 |
| W18 | 54 | 69 | 4 |
| W21 | 69 | 83 | 5 |
| W24 | 86 | 108 | 5 |
| W27 | 105 | 129 | 6 |
| W30 | 128 | 150 | 7 |
| W33 | 150 | 180 | 8 |
| W36W40 | 180 | 220 | 9 |
- S10. SHOP CONNECTIONS MAY BE BOLTED OR WELDED, UNLESS THE CONNECTION METHOD IS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
- S11. THE CONTRACTOR SHALL SUPPLY ALL PLATES, CLIPS, SET ANGLES, CONNECTIONS, ETC. AS REQUIRED FOR COMPLETION OF THE STRUCTURE. EVEN IF SUCH ITEMS ARE NOT EXPLICITLY CALLED FOR ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
- S12. THE CONTRACTOR SHALL PROVIDE ALL EMBEDDED PLATES, SLEEVES, BOX-OUTS, CONDUITS, ETCETERAS, AS REQUIRED BY OTHER TRADES IN THE CONCRETE STRUCTURE.
- S13. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD NEW STRUCTURE UNDER LOADS DURING CONSTRUCTION LOADS. THE STEEL FRAME IN ACCORDANCE WITH SECTION 7.3.1 OF THE AISC CODE OF STANDARD PRACTICE. IT RELIES ON THE INTERACTION BETWEEN THE METAL ROOF DECK, THE CONCRETE COMPOSITE FLOOR, BRACED FRAMES, AND MASONRY SHEAR WALLS FOR STABILITY. THE CONTRACTOR IS TO PROVIDE TEMPORARY SUPPORTS UNTIL ALL ELEMENTS REQUIRED FOR STABILITY OF THE STEEL FRAME ARE COMPLETED.
- S14. PROVIDE ANCHOR BOLTS, SETTING PLATES, AND EMBEDDED PLATES TO BE SET BY OTHERS.
- S15. PROVIDE 1/4" THICK LEVELING PLATES FOR USE IN ALIGNING AND SETTING ANCHOR BOLTS AND BASE PLATES.
- S16. MOMENT CONNECTIONS BETWEEN BEAMS AND COLUMNS INDICATED ON THE DRAWINGS SHALL BE DESIGNED AND DETAILED FOR THE FULL MOMENT CAPACITY OF THE CONNECTING MEMBERS, UNLESS NOTED OTHERWISE.
- S17. ALL TUBE STEEL COLUMN CAP PLATES ARE TO BE 1/2" THICK MINIMUM EXCEPT MOMENT FRAMED COLUMNS ARE TO BE 3/4" THICK MINIMUM OR MATCH BEAM FLANGE, WHICH EVER IS GREATER, UNLESS OTHERWISE NOTED.
- S18. PROVIDE 1/4" THICK CLOSURE PLATES AT ALL OPEN ENDED TUBE STEEL MEMBERS.
- S19. STEEL FRAMING SHALL NOT BE CANTED UNLESS SPECIFICALLY NOTED AS "CANTED" ON THE STRUCTURAL DRAWINGS. WHERE THE DECK SLOPE AROUND THE BEARING SURFACE IS GREATER THAN 1:24, PROVIDE STEEL SHIMS FOR ADEQUATE BEARING OF STEEL DECK.

STEEL JOIST NOTES

- SJ1. ALL STEEL JOISTS SHALL CONFORM TO SJI K-10 "STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS K-SERIES", AND TO SJI L-10 "STANDARD SPECIFICATION FOR DEEP LONGSPAN STEEL JOISTS L-SERIES" OF THE STEEL JOIST INSTITUTE AND TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- SJ2. ALL WELDING WILL BE IN ACCORDANCE WITH THE AWS D1.1 STRUCTURAL WELDING CODE.
- SJ3. TOP AND BOTTOM CHORD OF ALL JOISTS SHALL BE OF DOUBLE ANGLES.
- SJ4. STARTING POINTS FOR ALL JOIST SPACING ARE BASED ON A JOIST OCCURRING AT COLUMN CENTER LINES UNLESS OTHERWISE NOTED ON PLANS.
- SJ5. ALL CONTINUOUS HORIZONTAL BRIDGING SHALL CONSIST OF TWO MEMBERS WITH ONE MEMBER AT TOP CHORD OF JOIST AND THE OTHER AT THE BOTTOM CHORD OF JOIST. ATTACH BY WELDING AT POINT OF CONTACT WITH EACH JOIST.
- SJ6. ALL BOLTED DIAGONAL BRIDGING SHALL CONSIST OF 2 MEMBERS BOLTED TO TOP CHORD OF JOIST AND BOTTOM CHORD OR FLANGE OF ADJACENT MEMBER AND BOLTED TOGETHER AT INTERSECTION.
- SJ7. DESIGN JOISTS AND PROVIDE UPLIFT BRIDGING FOR UPLIFT WIND LOADS AS PER SPECIFICATIONS. PROVIDE BRIDGING AT FIRST BOTTOM CHORDS FROM POINT AT BOTH ENDS OF JOIST.

STEEL DECK

- SD1. ALL STEEL DECK WORK SHALL CONFORM TO THE REQUIREMENTS OF
- | NC10 - 10 | STANDARD FOR NONCOMPOSITE STEEL FLOOR DECK. |
|-------------|--|
| RD10 - 10 | STANDARD FOR STEEL FLOOR DECK. |
| SD10 - 2011 | STANDARD FOR COMPOSITE STEEL FLOOR DECK SLABS. |
| SD1 - 2011 | STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK. |
- OF THE STEEL JOIST INSTITUTE AND THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.
- SD2. STEEL DECK UNITS SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A611, OR A653, WHERE GALVANIZED DECK IS INDICATED. SHEETS SHALL BE COATED WITH A ZINC COATING CONFORMING TO ASTM A653, G-60 COATING FOR FLOOR DECK AND FORM DECK AND G-90 COATING FOR ROOF DECK.
- SD3. STEEL DECKING SHALL BE FASTENED TO ALL SUPPORTING STEEL MEMBERS AS FOLLOWS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
- 3" DEEP DECK
- FIELD 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT EACH RIB, 8" ON CENTER. PERIMETER: 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 8" ON CENTER. OPENINGS: 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 8" ON CENTER. CORNERS: TWO EACH 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS. SIDE LAPS: NO. 10 TEK SCREWS AT 1'-0" ON CENTER AT SIDE LAPS BETWEEN SUPPORTS.
- 2" AND 3" DEEP DECK
- FIELD 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT EACH RIB, 12" ON CENTER. PERIMETER: 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 12" ON CENTER. OPENINGS: 3/4" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS AT 12" ON CENTER. CORNERS: ONE EACH 5/8" DIAMETER ROUND SPOT WELDS TO STEEL SUPPORTS.
- SPOT WELDS SHALL BE FULLY JOINED ALL AROUND TO THE DECK. AFTER WELDING, ALL ROOF DECK WELDS SHALL BE PAINTED WITH ZRC COALD GALVANIZING COMPOUND.
- SD4. STEEL DECK SIZES, GAGES, AND MINIMUM PROPERTIES SHALL BE AS INDICATED ON DRAWINGS OR IN SPECIFICATIONS.
- SD5. PROVIDE MINIMUM 16 GAGE SCORED ANGLE OR GREATER WHERE REQUIRED AT PERIMETER OF BUILDING AND ALL OPENINGS IN CONCRETE SLAB ON STEEL DECK, UNLESS OTHERWISE NOTED.
- SD6. HANGING FROM OR ATTACHING TO METAL DECK IS PROHIBITED. ALL DUCTS, PIPES, CONDUITS SHALL BE SUPPORTED FROM STEEL FRAMING OR SUPPLEMENTAL STEEL FRAMING PROVIDED BY THE CONTRACTOR OR SUBCONTRACTOR.

UNIT PRICES - PROVIDE UNIT PRICES AS PART OF THE BID FOR THE FOLLOWING:

- 1.) STRUCTURAL STEEL BEAMS, ANGLES, PLATES, COLUMNS, ETC. THE UNIT PRICE SHALL INCLUDE WEIGHT OF THE STEEL, COST OF DETAILING, FABRICATION, DELIVERY AND INSTALLATION. PROVIDE THE UNIT PRICE FOR THE FOLLOWING, USING UNIT MEASUREMENT AS NOTED.
- A. STRUCTURAL STEEL, UNIT WEIGHT UP TO 15 LB/LF.
- B. STRUCTURAL STEEL, UNIT WEIGHT 15 TO 30 LB/LF.
- C. STRUCTURAL STEEL, UNIT WEIGHT 30 TO 60 LB/LF.
- D. STRUCTURAL STEEL, UNIT WEIGHT MORE THAN 60 LB/LF.
- 2.) COST OF REINFORCEMENT OF BEAMS IN THE SHOP FOR PENETRATIONS FOR DUCTS AND OTHER UTILITIES PER DETAIL 5 ON DRAWING 50-0.4 MINIMUM OF 10 LOCATIONS. IN ADDITION, PROVIDE UNIT COST OF EACH ADDITIONAL REINFORCEMENT DETAIL AND CREDIT FOR UNIT COST OF EACH DETAIL THAT IS REDUCED FROM ALLOWANCE OF MINIMUM 10 UNITS.
- 3.) COST OF PROVIDING UNREINFORCED PENETRATIONS THROUGH STEEL BEAMS PER DETAIL 6 ON DRAWING 50-0.6 FOR DUCTS AND OTHER UTILITIES AT A MINIMUM OF 10 LOCATIONS. IN ADDITION, PROVIDE UNIT COST OF EACH ADDITIONAL PENETRATION AND CREDIT FOR UNIT COST OF EACH DETAIL THAT IS REDUCED FROM ALLOWANCE A MINIMUM OF 10 PENETRATIONS.
- 4.) FRAMES FOR OPENINGS THROUGH ROOF PER DETAIL 28 AND 3 ON DRAWING 50-0.8. IN ADDITION, PROVIDE A UNIT COST IF THESE FRAMES WERE TO BE INSTALLED AFTER ALL OF THE STRUCTURAL STEEL HAS BEEN ERECTED. IN THE BASE BID, ALLOW FOR THE COST OF THIS DETAIL FOR ALL OPENINGS SHOWN IN THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. PROVIDE A UNIT COST OR CREDIT FOR EACH DETAIL THAT IS REDUCED FROM THE OPENINGS SHOWN ON THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- 5.) FRAMES FOR OPENINGS THROUGH FLOOR AND ROOF PER DETAIL 1 ON DRAWING 50-0.8. IN ADDITION, PROVIDE A UNIT COST IF THESE FRAMES WERE TO BE INSTALLED AFTER ALL OF THE STRUCTURAL STEEL HAS BEEN ERECTED. IN THE BASE BID, ALLOW FOR THE COST OF THIS DETAIL FOR ALL OPENINGS SHOWN IN THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. PROVIDE A UNIT COST OR CREDIT FOR EACH DETAIL THAT IS REDUCED FROM THE OPENINGS SHOWN ON THE STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- 6.) COST OF ONE SQUARE FOOT OF VARIOUS TYPES OF DECK SPECIFIED FOR THE PROJECT. THE UNIT PRICE SHALL INCLUDE MATERIAL COST OF THE DECK AND ACCESSORIES, COST OF DETAILING, FABRICATION, DELIVERY AND INSTALLATION.

NOTE:
ALL STEEL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS BY 05 12 00 UNLESS SPECIFICALLY INDICATED TO BE BY 05 50 00 METAL FABRICATIONS.

DESIGN LOADS

- D1. ROOF SNOW LOADS
SNOW GROUND LOAD, Pg = 50 PSF
MINIMUM FLAT ROOF SNOW LOAD Pf = 30 PSF
FLAT ROOF SNOW LOAD PE = 39 PSF (PARTIALLY EXPOSED)
ALLOWANCE FOR DRIFTING PER MASSACHUSETTS STATE BUILDING CODE
- D2. FLOOR LIVE LOADS
MECHANICAL ROOMS 150 PSF MIN
PUBLIC GATHERING AREAS 100 PSF
STAIRS/LOBBY 100 PSF
STORAGE 125 PSF
TYPICAL CONCENTRATED LOAD 1,000 POUNDS
FUTURE PHOTOVOLTAIC PANELS 15 PSF
CLASSROOMS 40PSF + 15 PSF PARTITIONS
LIBRARY/READING ROOM 60PSF
CORRIDORS ABOVE FIRST FLOOR 80PSF
CONCENTRATED LOAD IN AUDITORIUM 3000 LBS
STAGE LOADING PLATFORM 400 PSF
TOILETS 60 PSF
ELEVATOR MACHINE ROOM 250 PSF
- D3. WIND LOADS
AS PER THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE.
BASIC WIND SPEED 137 M.P.H.
EXPOSURE C
WIND LOADS IN ACCORDANCE WITH ASCE7-10
- D4. SEISMIC LOADS
AS PER THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE
SEISMIC DESIGN CATEGORY B
SOIL PROFILE TYPE SITE CLASS C
MAPPED SPECTRAL RESPONSE ACCELERATIONS Sa = 0.232
S1 = 0.072
- BASIC SEISMIC FORCE RESISTING SYSTEMS
STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
- RESPONSE MODIFICATION FACTOR R = 3.0
DEFLECTION AMPLIFICATION FACTOR Cd = 3.0
ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE
- SEISMIC IMPORTANCE FACTOR, I = 1.25
- RISK CATEGORY 3
SPECTRAL RESPONSE COEFFICIENT SDs = 0.174
SD1 = 0.011
AREA A AND B (TOTAL COMBINED) CS = 0.073
SEISMIC RESPONSE COEFFICIENT CS = 0.073
DESIGN BASE SHEAR V = 320 KIPS
- AREA C AND D
SEISMIC RESPONSE COEFFICIENT CS = 0.073
DESIGN BASE SHEAR V = 170 KIPS

EXPOSED STEEL NOTES:

SPECIAL CARE USED IN THE HANDLING AND FABRICATING OF EXPOSED STEEL INDICATED ON THE DRAWINGS AND AS FOLLOWS:

- LOCATE FIELD JOINTS AT CONCEALED LOCATIONS IF POSSIBLE.
- FABRICATE WITH EXPOSED SURFACES SMOOTH, SQUARE AND FREE OF SURFACE BLEMISHES INCLUDING FITTING, RUST, SCALE AND ROUGHNESS.
- GRIND SHEARED, PUNCHED AND FLAME-CUT EDGES TO REMOVE BURRS AND PROVIDE SMOOTH SURFACES AND EDGES.
- FABRICATE STEEL WITH EXPOSED SURFACES FREE OF MILL MARKS, INCLUDING ROLLED TRADE NAMES AND STAMPED OR RAISED IDENTIFICATION.
- FABRICATE STEEL WITH EXPOSED SURFACES FREE OF SEAMS TO MAXIMUM EXTENT POSSIBLE.
- REMOVE BLEMISHES BY FILLING OR GRINDING OR BY WELDING AND GRINDING, BEFORE CLEANING, TREATING AND SHOP PRIMING.
- FABRICATE WITH PIECE MARKS FULLY HIDDEN IN THE COMPLETED STRUCTURE OR MADE WITH MEDIA THAT PERMITS FULL REMOVAL AFTER ERECTION.
- ALL EXPOSED TO VIEW STEEL, NOT INDICATED TO RECEIVE SPRAY APPLIED FIREPROOFING SHALL BE SHOP PRIMED. COORDINATE WITH INTUMESCENT AND SPRAY FIREPROOFING WHERE REQUIRED.

DRAWING

Drummeey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects Interior
Tel: 877.261.1100
www.dram.com

NORTHEAST
METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

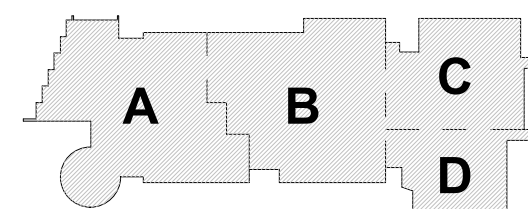
EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

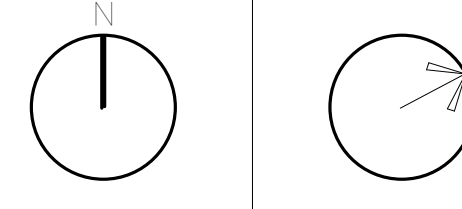
© COPYRIGHT 2021
DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE

FEBRUARY 24TH,
2023



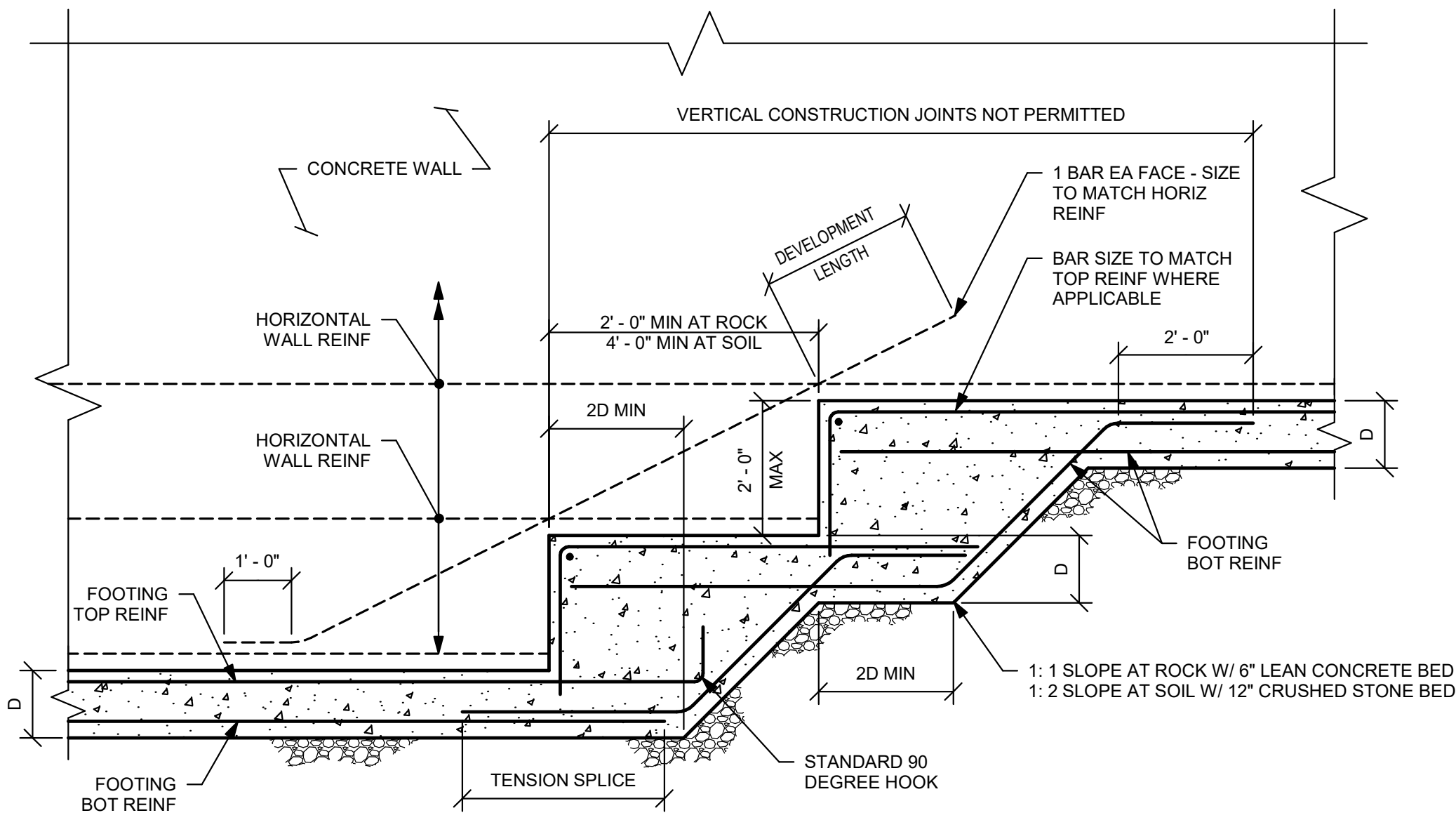
PROJECT NORTH
MAGNETIC NORTH



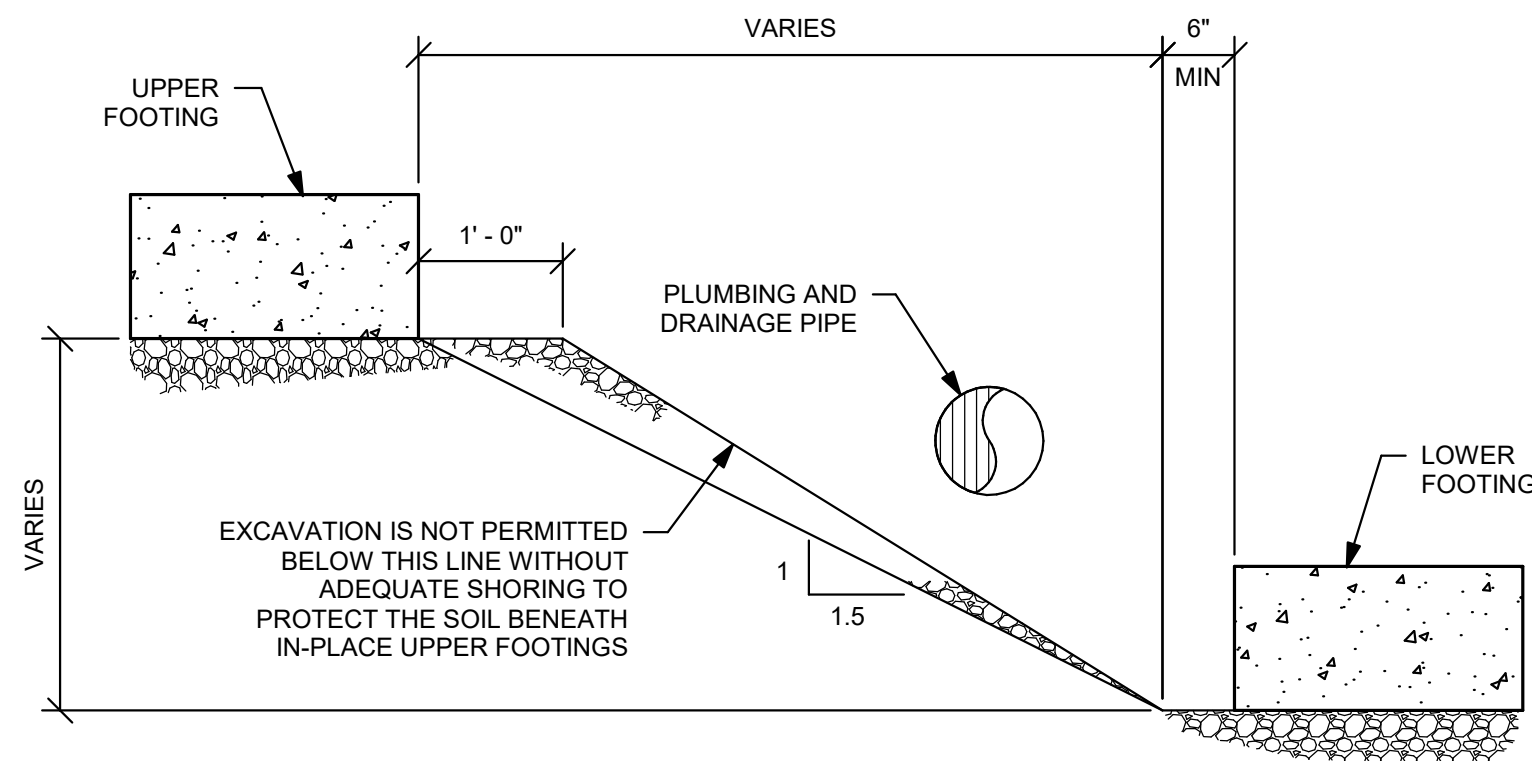
GENERAL
NOTES

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

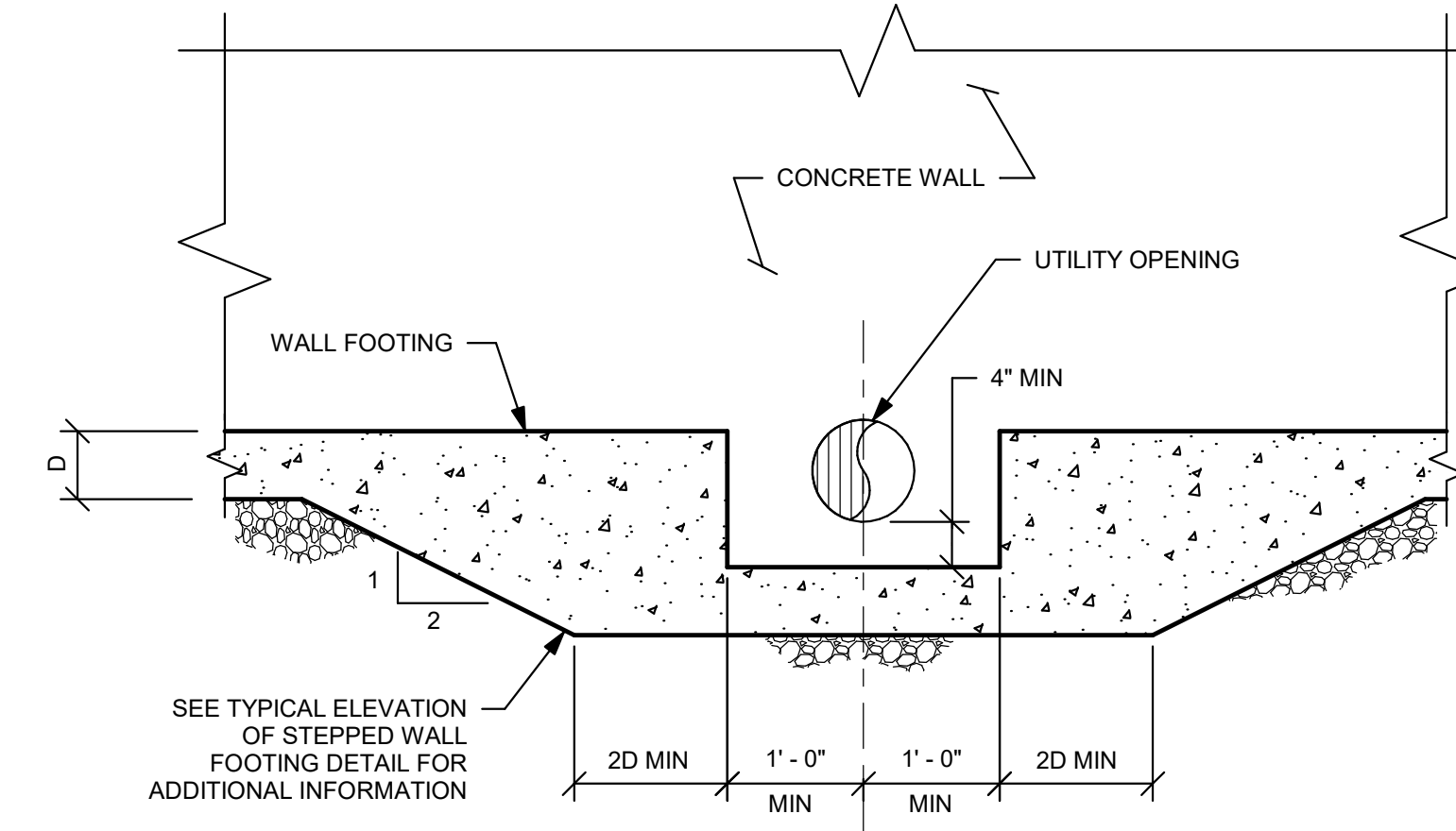
S0-0-1



TYPICAL ELEVATION OF STEPPED WALL FOOTING DETAIL

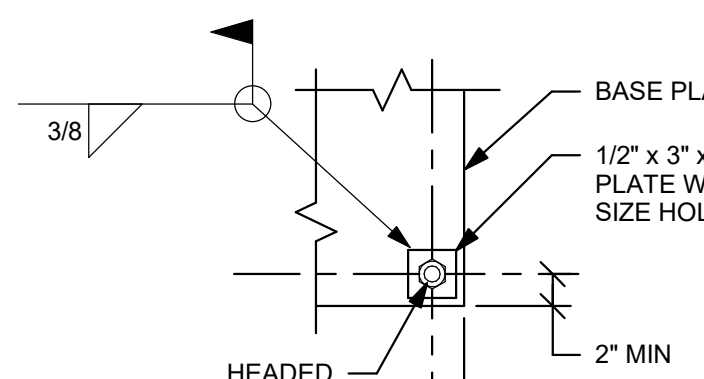


TYPICAL SLOPE BETWEEN FOOTINGS DETAIL

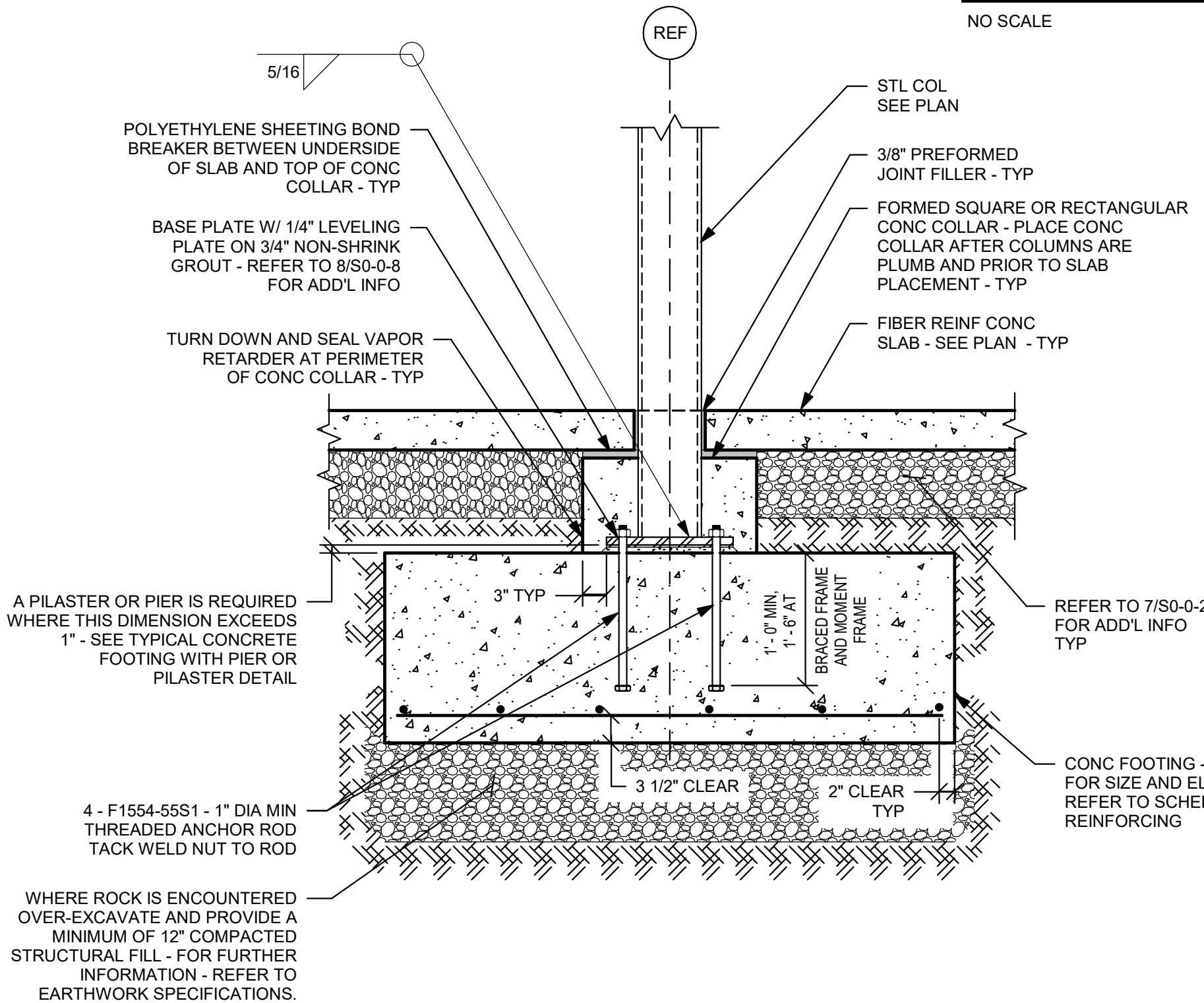


TYPICAL ELEVATION OF STEPPED WALL FOOTING AT UTILITY OPENING DETAIL

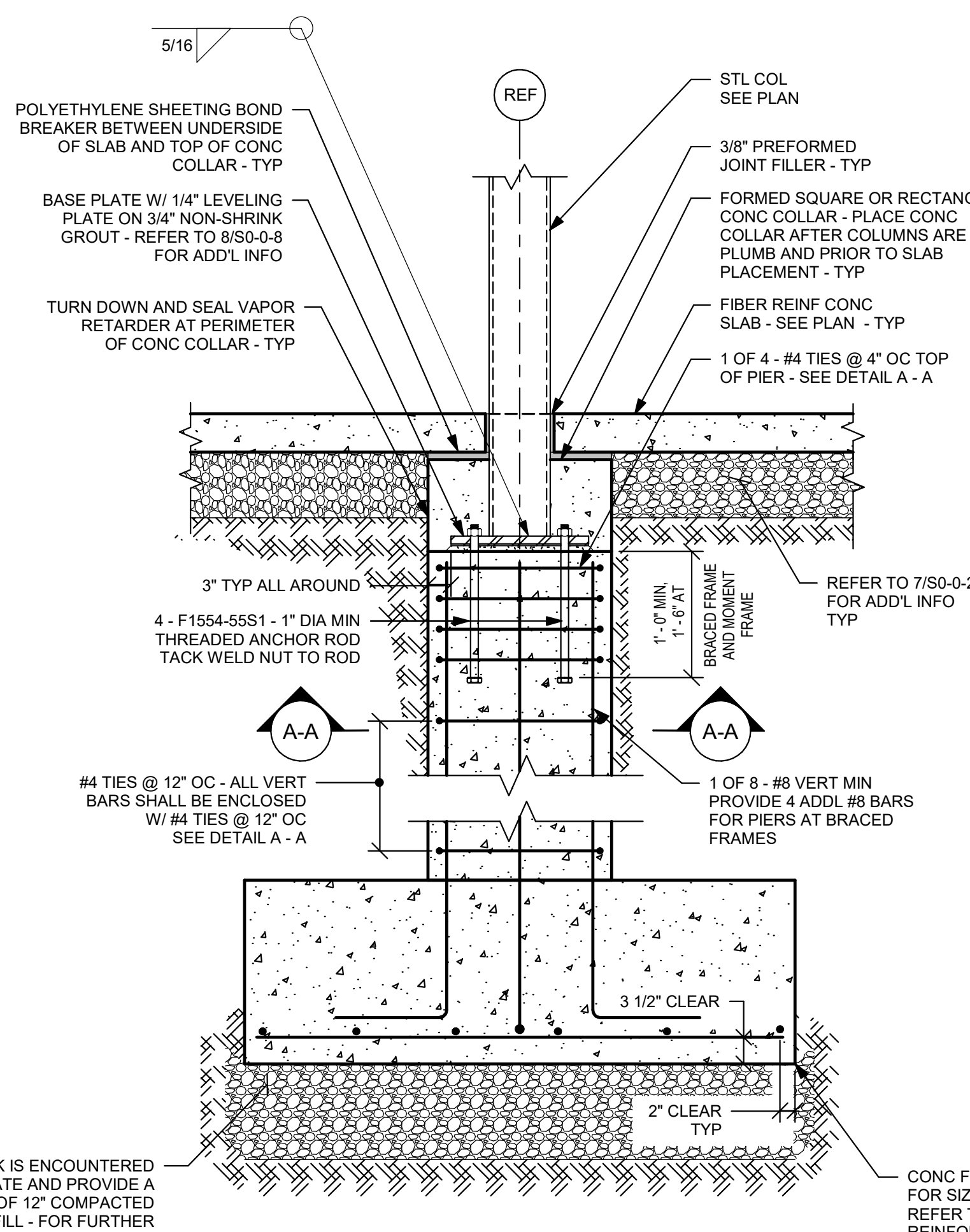
NOTE:
STEP FOOTING AS REQUIRED TO BE BELOW UTILITY OPENING.
COORDINATE WITH ALL CONTRACT DESIGN DISCIPLINES FOR
UTILITY OPENING SIZES, PLAN LOCATIONS AND ELEVATIONS.



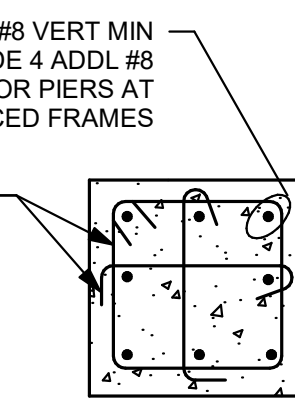
WASHER PLATE DETAIL



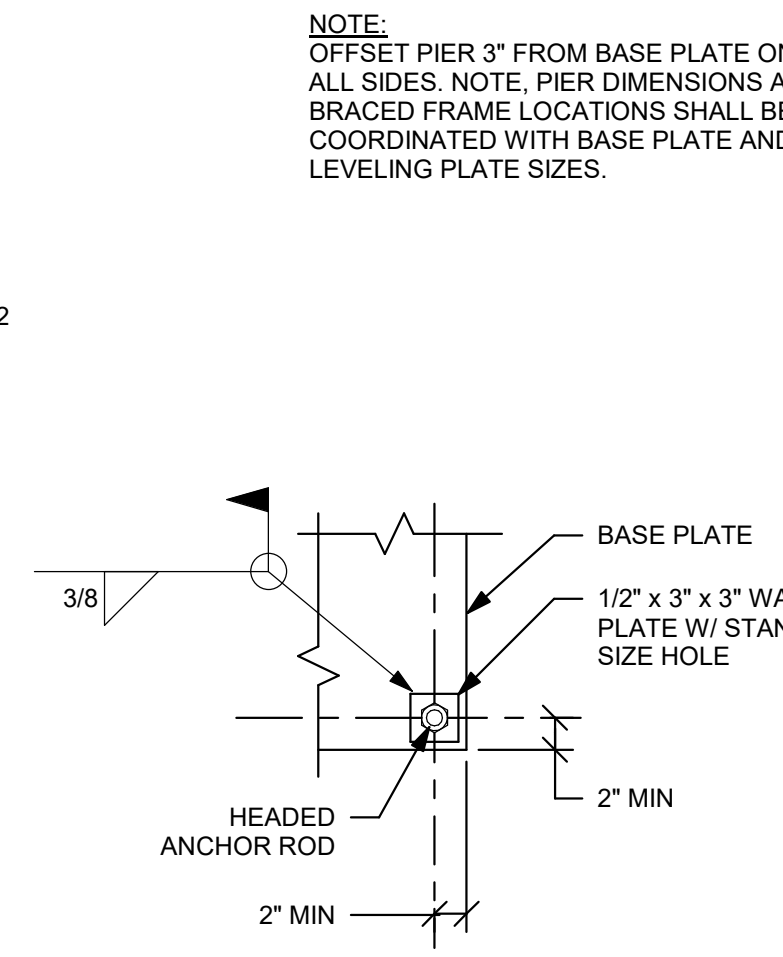
TYPICAL CONCRETE FOOTING WITHOUT PIER OR PILASTER DETAIL



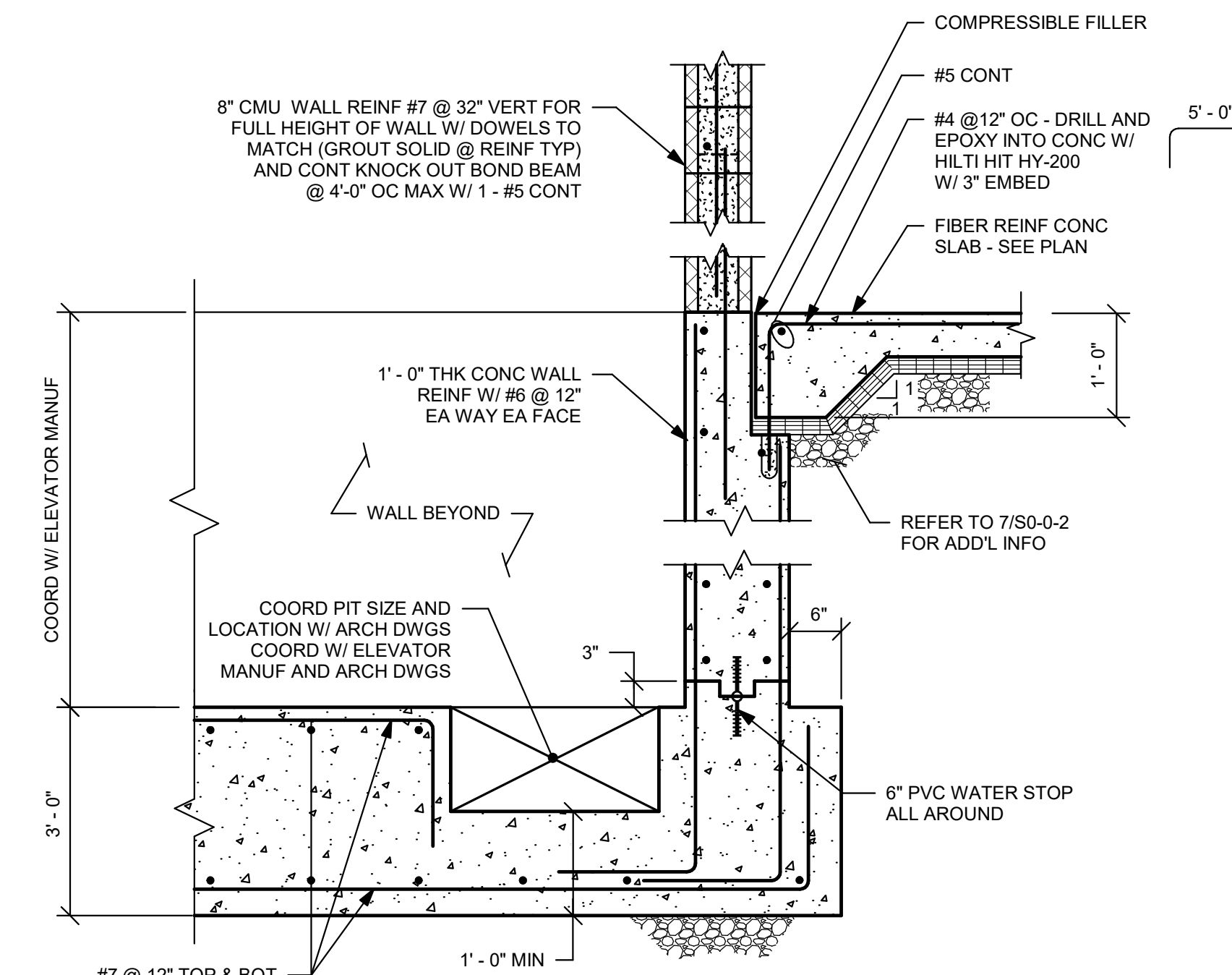
TYPICAL CONCRETE FOOTING WITH PIER OR PILASTER DETAIL



TYPICAL PIER DETAIL A-A

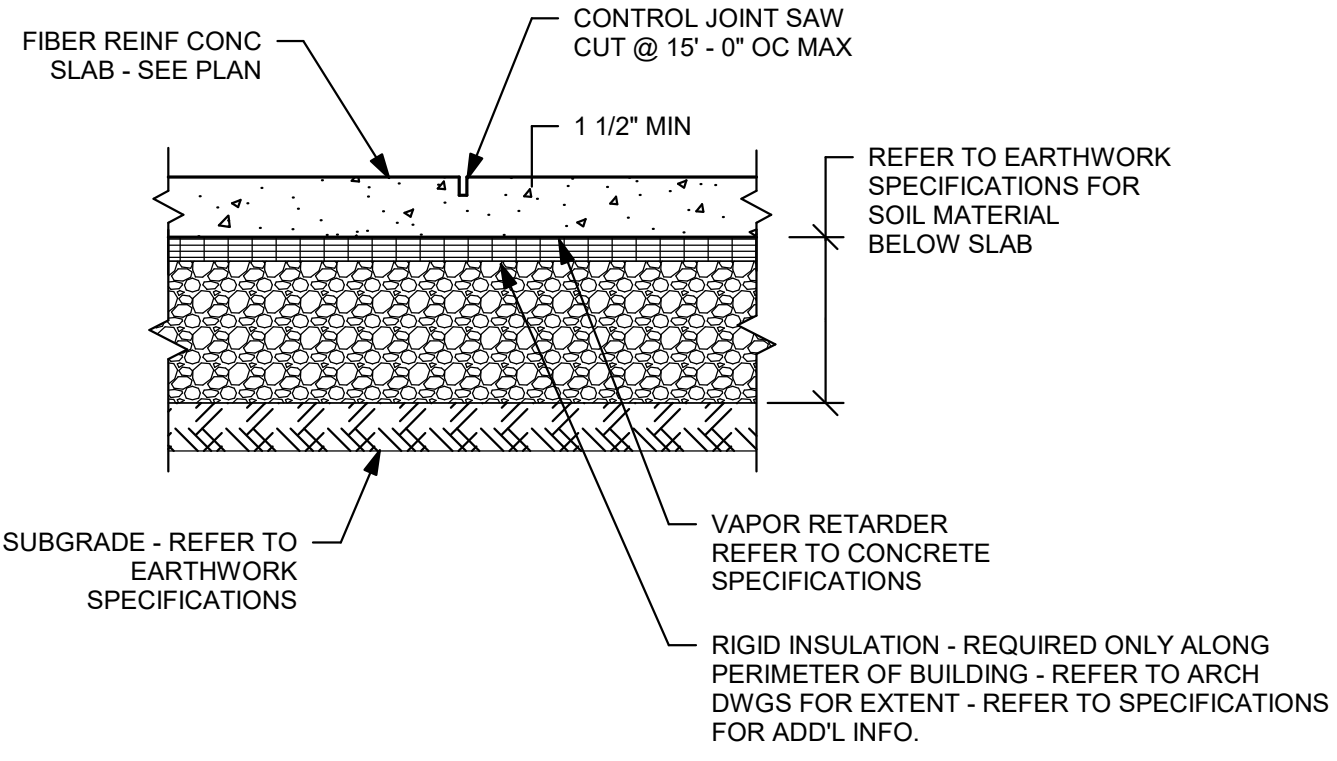


WASHER PLATE DETAIL



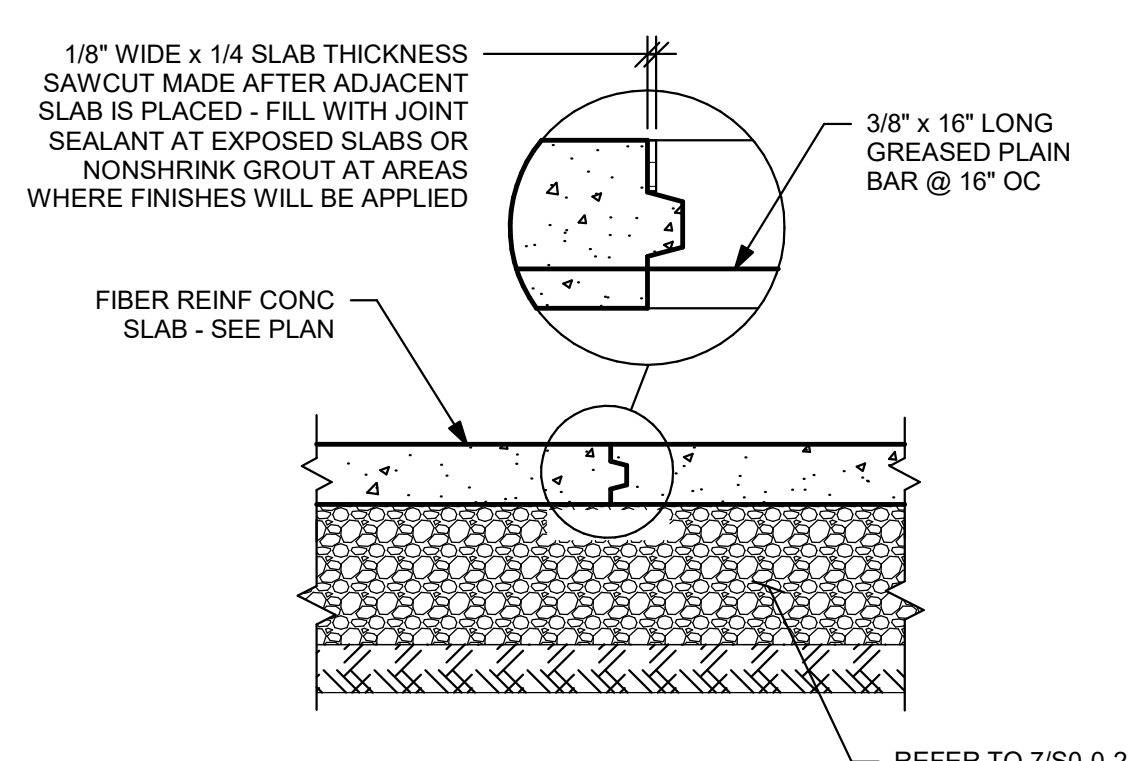
ELEVATOR PIT DETAIL

NOTES:
1) COORDINATE ELEVATOR PIT DIMENSIONS
WITH ELEVATOR MANUFACTURER AND
ARCHITECTURAL DRAWINGS.
2) SEE ARCH DWGS FOR SILL ANGLE AND
COORD WITH ELEV MANUFACTURER.



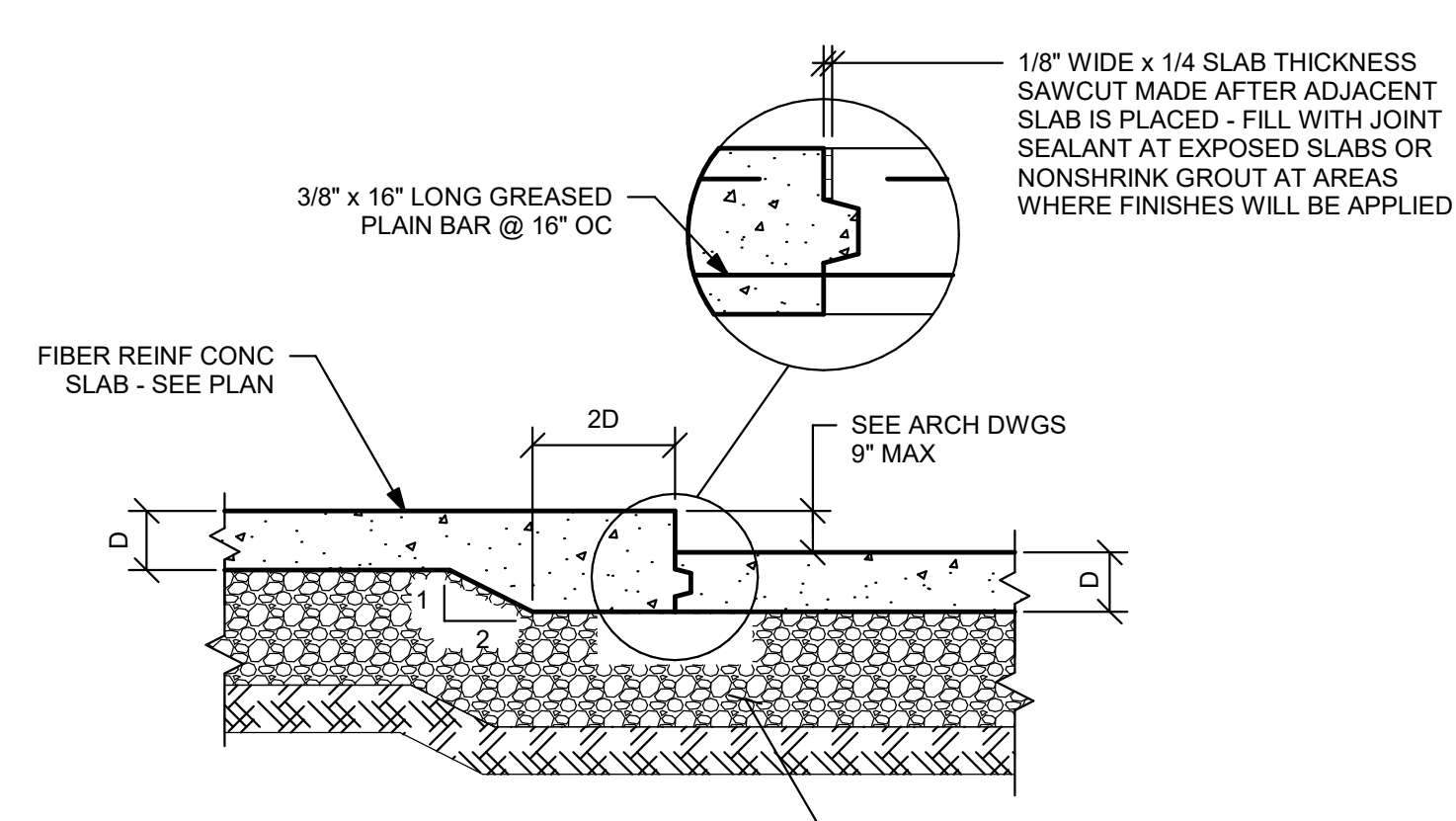
TYPICAL SLAB ON GRADE AND CONTROL JOINT DETAIL

NOTES:
1) SUBMIT A PLAN SHOWING PROPOSED LOCATIONS OF ALL THE CONTROL JOINTS
AND CONSTRUCTION JOINTS FOR REVIEW BY THE ENGINEER PRIOR TO
PLACEMENT OF CONCRETE FOR THE SLAB. CONTROL JOINTS SHALL TERMINATE
AT SLAB EDGE OR CONSTRUCTION JOINT.
2) PROVIDE SUPPORT FOR WWR AT 3' - 0" ON CENTER MAXIMUM, EACH WAY.



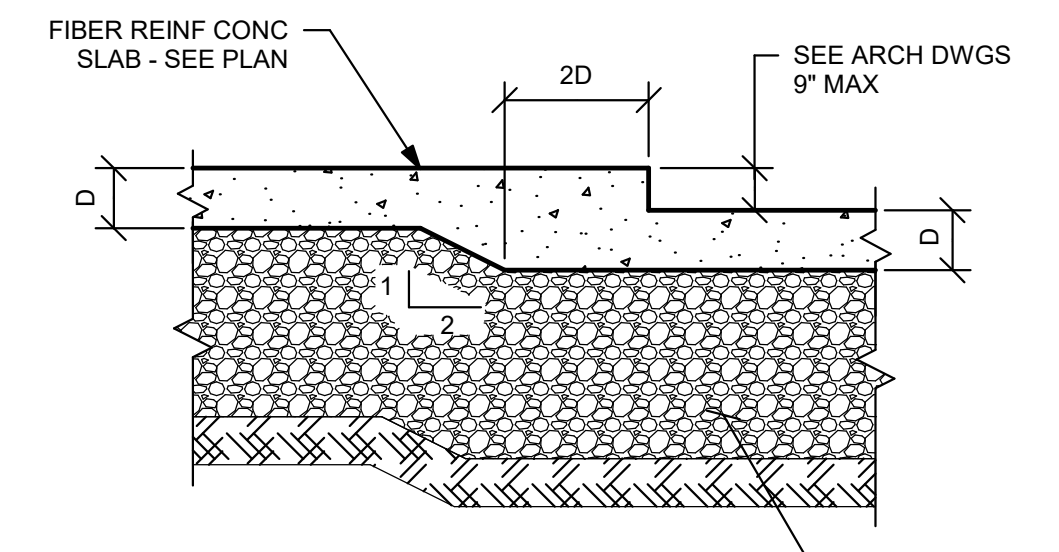
TYPICAL SLAB ON GRADE CONSTRUCTION JOINT DETAIL

NOTE:
SUBMIT A PLAN SHOWING PROPOSED LOCATIONS OF ALL THE CONTROL JOINTS
AND CONSTRUCTION JOINTS FOR REVIEW BY THE ENGINEER PRIOR TO PLACEMENT
OF CONCRETE FOR THE SLAB.

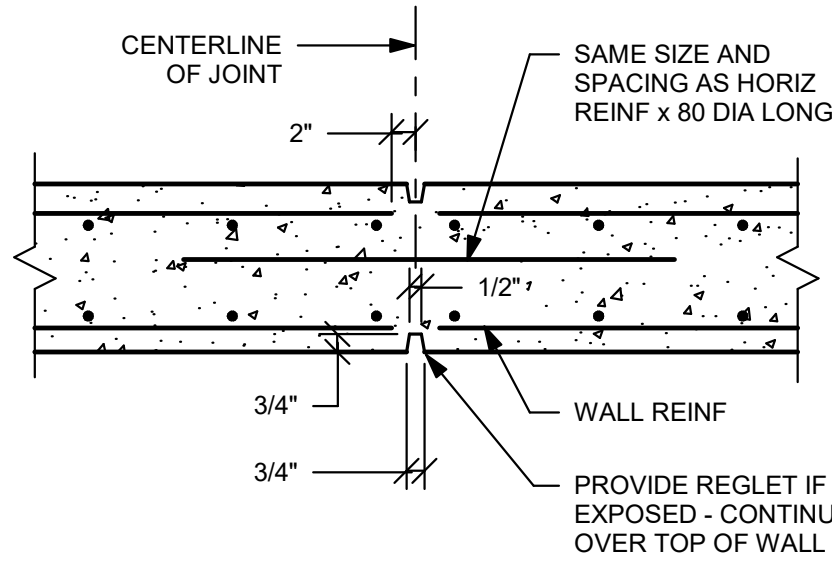


TYPICAL DEPRESSED SLAB ON GRADE CONSTRUCTION JOINT DETAIL

NOTE:
SUBMIT A PLAN SHOWING PROPOSED LOCATIONS OF ALL THE CONTROL JOINTS
AND CONSTRUCTION JOINTS FOR REVIEW BY THE ENGINEER PRIOR TO PLACEMENT
OF CONCRETE FOR THE SLAB.



TYPICAL DEPRESSED SLAB ON GRADE DETAIL

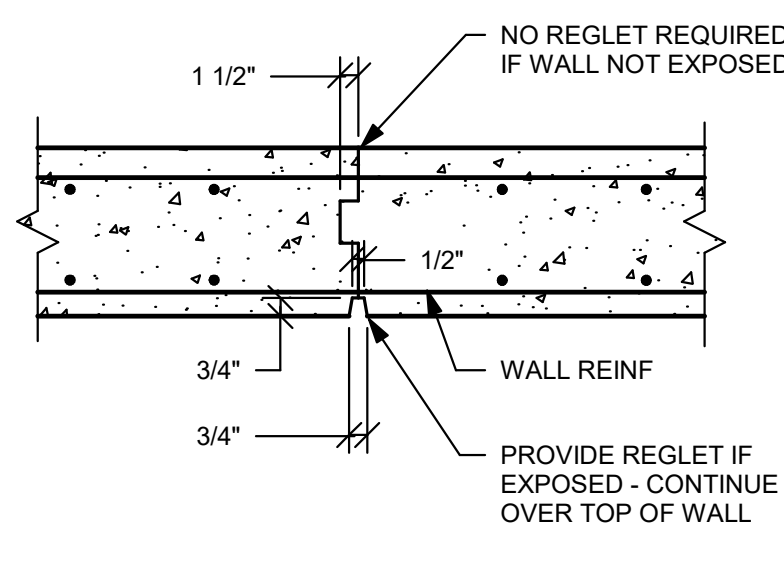


TYPICAL CONCRETE WALL CONTROL JOINT DETAIL

- NOTES:
- 1) SPACE AT 30" - 0" CENTER TO CENTER MAX.
 - 2) A CONSTRUCTION JOINT MAY BE SUBSTITUTED FOR A CONTROL JOINT, SEE CONSTRUCTION JOINT DETAIL.

1

NO SCALE

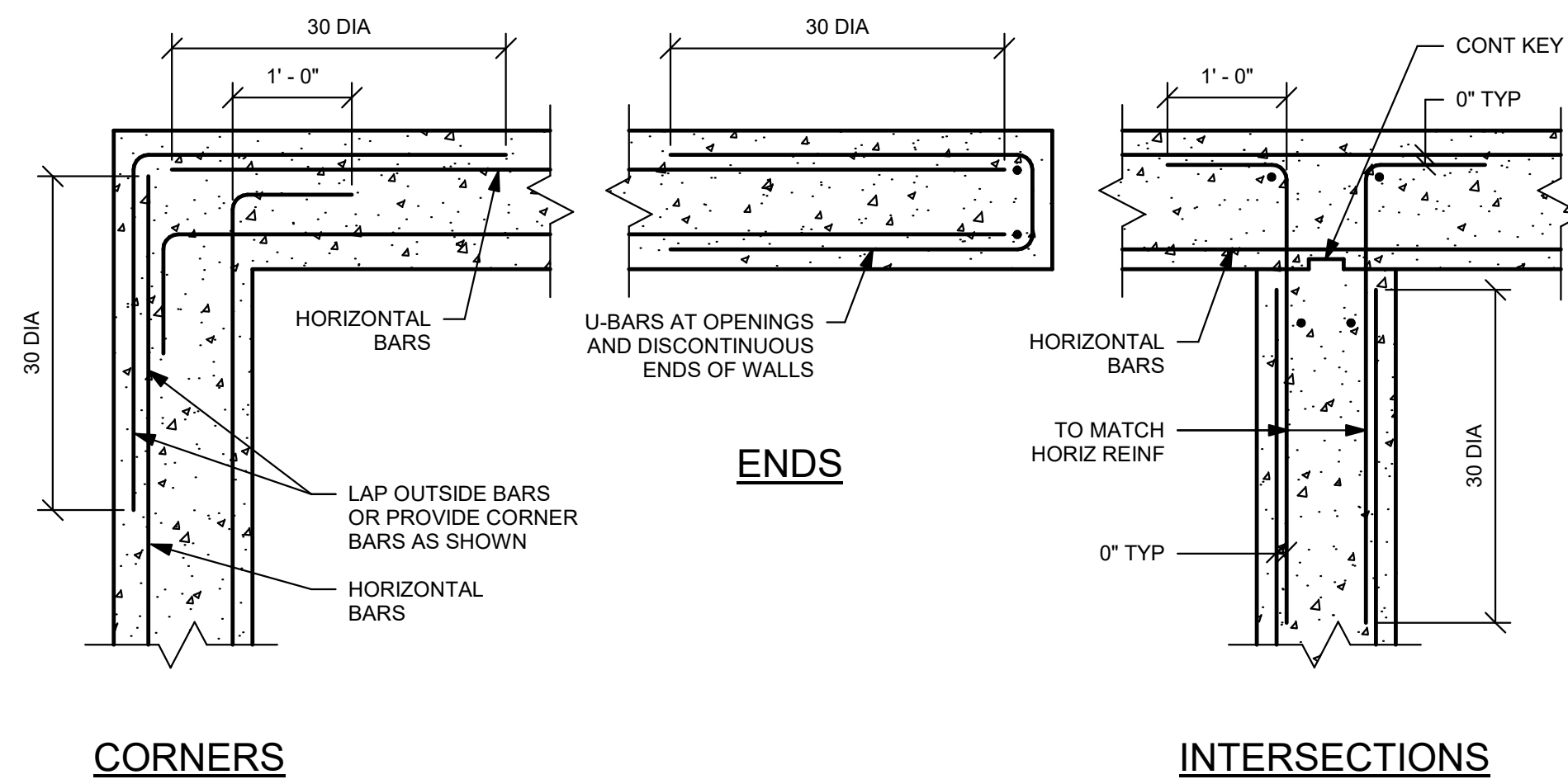


TYPICAL CONCRETE WALL CONSTRUCTION JOINT DETAIL

- NOTE:
- SPACE AT 60" - 0" CENTER TO CENTER MAX.

2

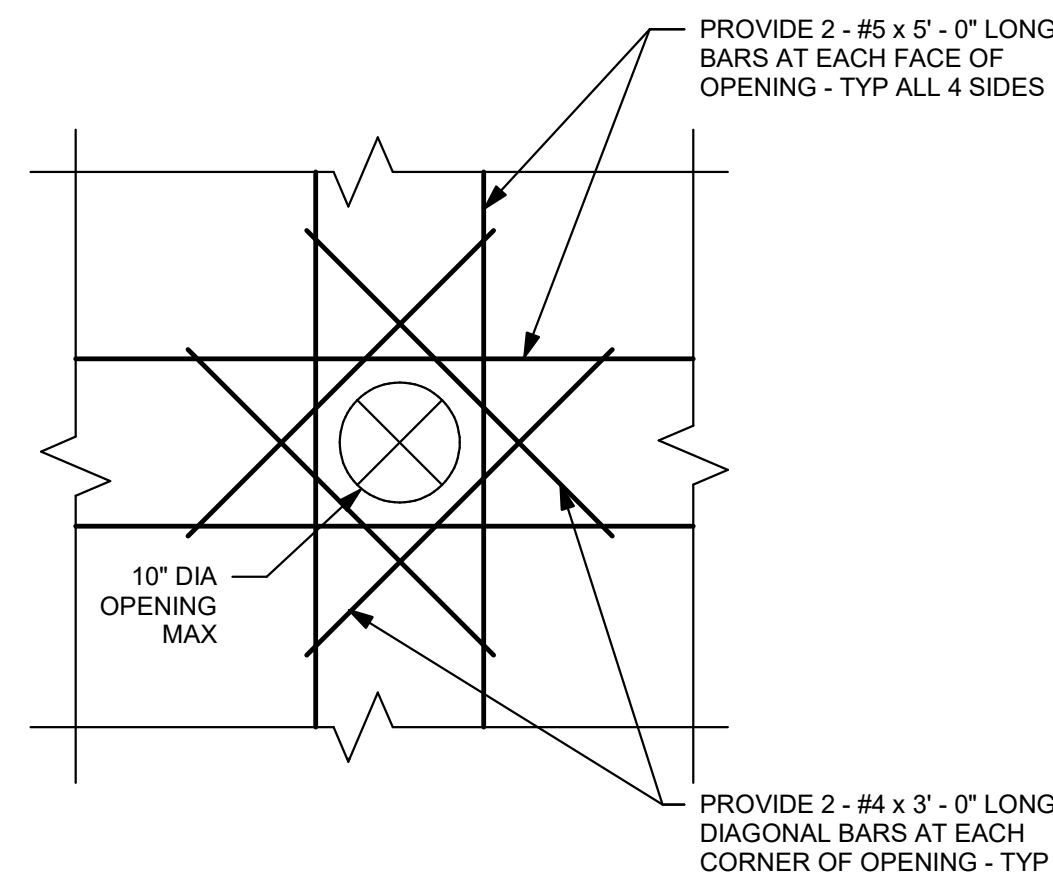
NO SCALE



TYPICAL PLAN OF HORIZONTAL REINFORCING OF CONCRETE WALLS DETAIL

3

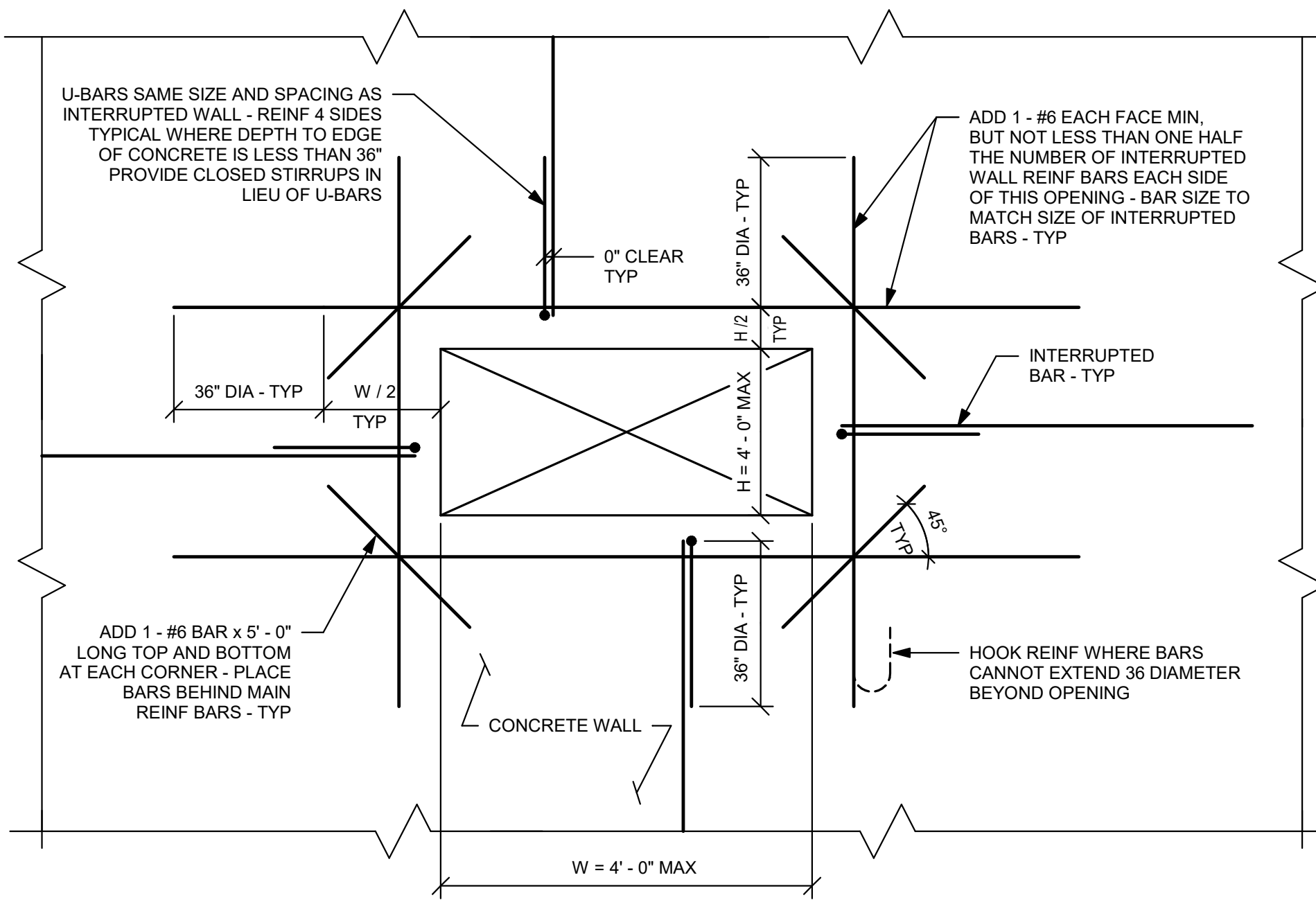
NO SCALE



- NOTE:
- THE SLEEVE SHALL NOT INTERRUPT OR CUT THROUGH THE VERTICAL REINFORCING STEEL AND SHALL NOT BE PLACED IN COLUMN PILES OR PLASTERS.

4

NO SCALE



TYPICAL REINFORCEMENT AT OPENINGS IN REINFORCED CONCRETE WALLS DETAIL

- NOTES:
- 1) FOR QUANTITY, LOCATION, AND SIZES REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS.
 - 2) TREAT EACH CONDUIT AS A SEPARATE OPENING.
 - 3) PROVIDE A MINIMUM OF 12" CLEAR CONCRETE BETWEEN TOP OF PENETRATION AND TOP OF WALL.

5

NO SCALE

BAR SIZE	d PER SPACING AND COVER CASE			
	CASE 1	CASE 2	CASE 1	CASE 2
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	19	15	28	22
#4	25	19	37	29
#5	31	24	47	36
#6	37	29	56	43
#7	44	37	67	51
#8	51	44	81	61
#9	58	51	97	71
#10	65	58	114	81
#11	72	65	131	91
#12	79	72	148	101
#13	86	79	165	111
#14	93	86	182	121
#15	100	93	199	131
#16	107	100	216	141
#17	114	107	233	151
#18	121	114	250	161

TENSION DEVELOPMENT LENGTHS, ℓ_d (INCHES)
FOR GRADE 60 UNCOATED BARS
 $f_c = 4500$ psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

BAR SIZE	LAP CLASS	LAP LENGTH PER SPACING AND COVER CASE			
		CASE 1	CASE 2	CASE 1	CASE 2
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	B	24	19	36	28
#4	B	32	25	48	37
#5	B	40	31	60	47
#6	B	48	37	72	56
#7	B	56	44	84	65
#8	B	64	51	96	74
#9	B	72	58	108	83
#10	B	80	65	120	92
#11	B	88	72	132	101
#12	B	96	79	144	110
#13	B	104	86	156	119
#14	B	112	93	168	128
#15	B	120	100	180	137
#16	B	128	107	192	146
#17	B	136	114	204	155
#18	B	144	121	216	164

TENSION LAP SPLICING LENGTHS, ℓ_d (INCHES)
FOR GRADE 60 UNCOATED BARS
 $f_c = 4500$ psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

BAR SIZE	d PER SPACING AND COVER CASE			
	CASE 1	CASE 2	CASE 1	CASE 2
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	17	13	25	19
#4	22	17	33	26
#5	28	22	42	32
#6	33	26	50	38
#7	40	33	60	46
#8	46	40	70	54
#9	52	46	80	62
#10	58	52	90	70
#11	64	58	100	78
#12	70	64	110	86
#13	76	70	120	94
#14	82	76	130	102
#15	88	82	140	110
#16	94	88	150	118
#17	100	94	160	126
#18	106	100	170	134

TENSION DEVELOPMENT LENGTHS, ℓ_d (INCHES)
FOR GRADE 60 UNCOATED BARS
 $f_c = 4500$ psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

BAR SIZE	LAP CLASS	LAP LENGTH PER SPACING AND COVER CASE			
		CASE 1	CASE 2	CASE 1	CASE 2
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	B	22	17	33	25
#4	B	29	22	43	33
#5	B	36	28	54	42
#6	B	43	33	65	50
#7	B	50	40	76	59
#8	B	57	47	87	68
#9	B	64	54	98	77
#10	B	71	61	109	86
#11	B	78	68	120	95
#12	B	85	75	131	104
#13	B	92	82	142	113
#14	B	99	89	153	122
#15	B	106	96	164	131
#16	B	113	103	175	140
#17	B	120	110	186	149
#18	B	127	117	197	158

TENSION LAP SPLICING LENGTHS, ℓ_d (INCHES)
FOR GRADE 60 UNCOATED BARS
 $f_c = 4500$ psi; NORMAL-WEIGHT CONCRETE
BASED ON ACI 12.2.2

5,000 PSI NORMAL-WEIGHT CONCRETE

- NOTES:
- 1) TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST IN THE MEMBER BELOW THE REINFORCEMENT. WALL REINFORCEMENT IS CLASSIFIED AS OTHER BARS.
 - 2) FOR LIGHTWEIGHT AGGREGATE CONCRETE MULTIPLY THE VALUES ABOVE BY 1.3.

ABBREVIATIONS:

d_b DENOTES NOMINAL BAR DIAMETER
> DENOTES GREATER THAN
≥ DENOTES EQUAL TO OR GREATER THAN
≠ DENOTES NOT
≤ DENOTES EQUAL TO OR LESS THAN

CASE 1 BEAMS AND COLUMNS: CONCRETE COVER ≥ d_b , C-C, BAR SPACING ≥ 2 d_b , AND WITH STIRRUPS OR TIES THROUGHOUT ℓ_d NOT LESS THAN THE CODE MINIMUM. OTHER MEMBERS: CONCRETE COVER ≥ d_b AND C-C, BAR SPACING ≥ 3 d_b .

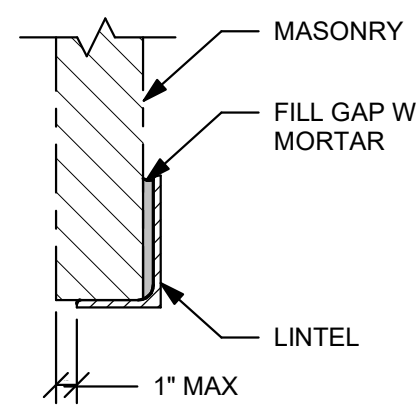
CASE 2 BEAMS AND COLUMNS: CONCRETE COVER < d_b AND C-C, BAR SPACING < 2 d_b . OTHER MEMBERS: CONCRETE COVER < d_b OR C-C, BAR SPACING < 3 d_b .

4,500 PSI NORMAL-WEIGHT CONCRETE

MINIMUM SPLICE AND EMBEDMENT LENGTH SCHEDULE

(UNLESS SHOWN OTHERWISE ON DRAWINGS)

- NOTES:
- 1) PROVIDE LINTELS OVER ALL MASONRY OPENINGS UNLESS OTHERWISE NOTED OR DETAILED.
 - 2) PROVIDE ONE ANGLE FOR EACH 4" OF WALL THICKNESS. FOR 6" WALLS PROVIDE TEE, DOUBLE ANGLE OR BUILT-UP SECTION WITH PROPERTIES EQUAL TO OR GREATER THAN 1-1/2" TIMES ANGLE PROPERTIES FOR 4" WALL.
 - 3) PROVIDE 8" OF BEARING EACH END OF ALL LINTELS.
 - 4) SPAN LENGTH = CENTERLINE TO CENTERLINE OF BEARING.
 - 5) ALL EXTERIOR LINTELS SHALL BE GALVANIZED. PROVIDE 1/4" THICK CLOSURE PLATE OVER AIR SPACE AT OPENINGS UNLESS NOTED OR DETAILED OTHERWISE ON ARCHITECTURAL DRAWINGS.
 - 6) FOR CURVED LINTELS USE CHORD LENGTH IN CONJUNCTION WITH SCHEDULE ABOVE. PROVIDE HORIZONTAL ANGLES AT EACH END OF LINTEL FOR 8" OF BEARING. HORIZONTAL ANGLES SHALL MATCH LINTEL SIZE AND SHALL BE WELDED TO CURVED ANGLE WITH FULL PENETRATION WELD.
 - 7) LOOSE LINTELS SHALL BE FURNISHED BY METAL FABRICATORS (SPECIFICATION 055000) AND INSTALLED BY UNIT MASONRY ASSEMBLIES (SPECIFICATION 042000).
 - 8) LOOSE LINTELS ARE REQUIRED FOR ALL OPENINGS INCLUDING DOORS, WINDOWS, MECHANICAL DUCTS, PIPES, ETC.
 - 9) ALL THE LINTELS NOT ATTACHED TO STRUCTURAL STEEL ARE IN THE SCOPE OF THE METAL FABRICATION CONTRACTOR (SPECIFICATION 055000). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. ALL THE LINTELS WELDED TO STRUCTURAL STEEL ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE STRUCTURAL STEEL FABRICATOR.

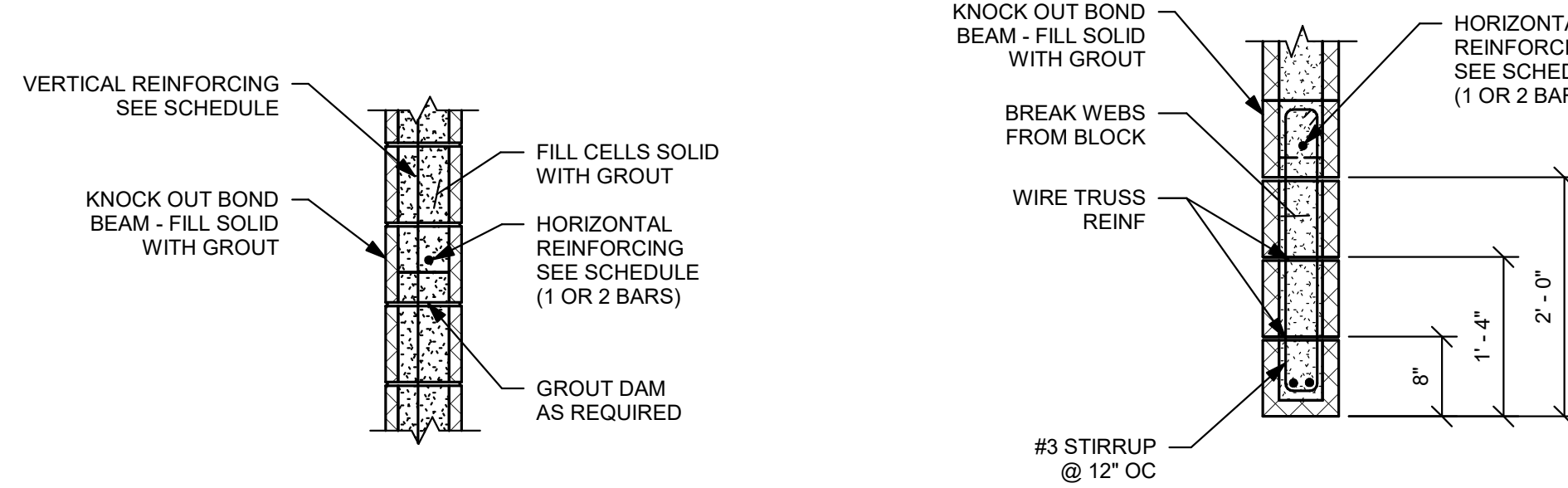
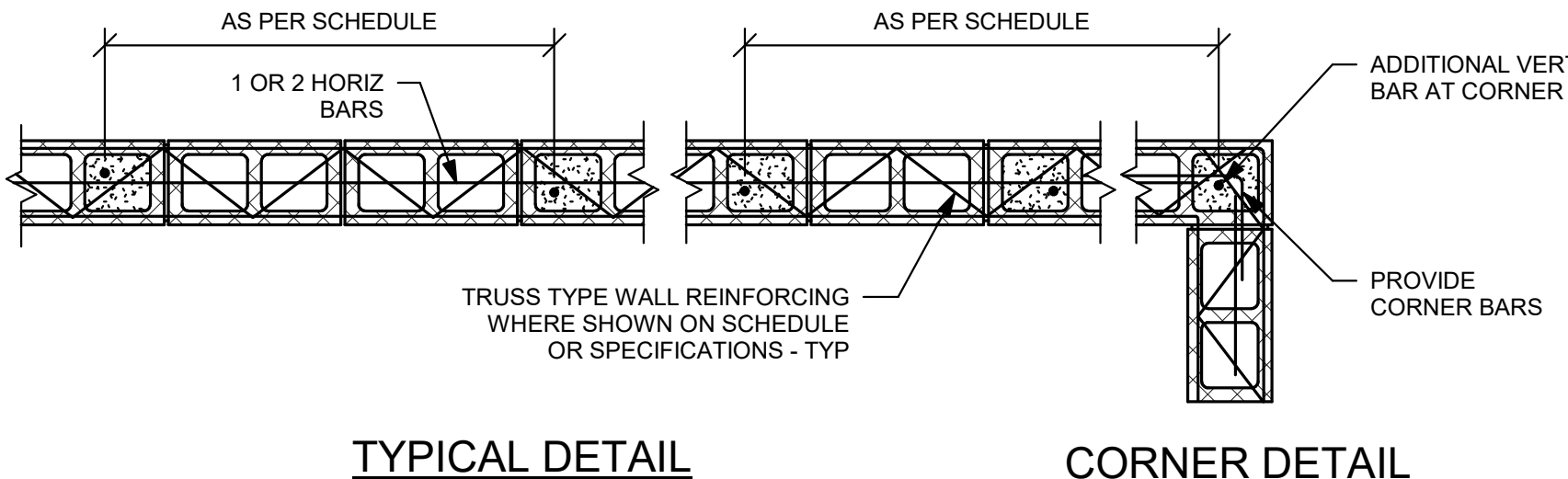
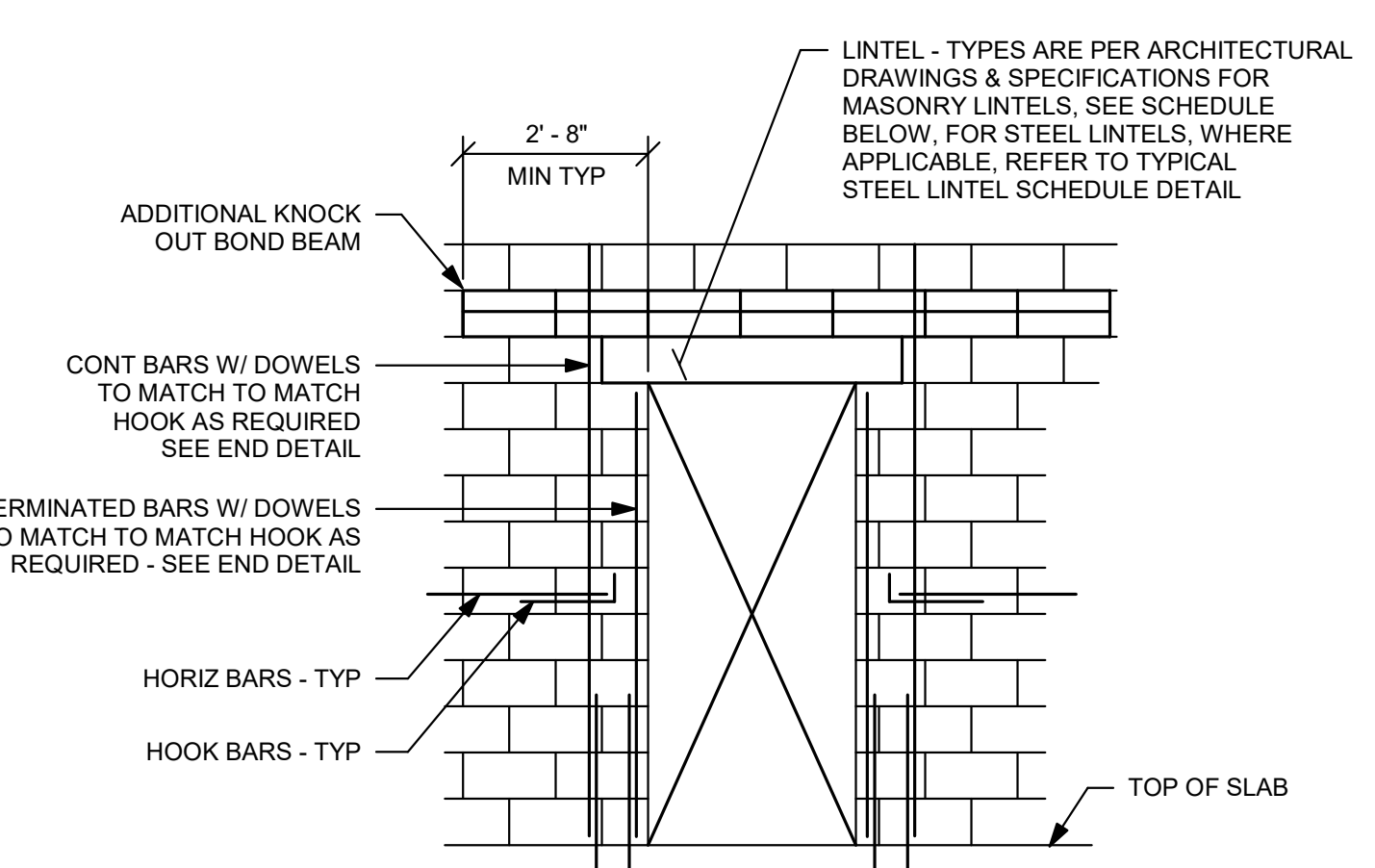


TYPICAL SECTION SINGLE WYTHE MASONRY

LINTEL SCHEDULE	
MASONRY OPENING	LINTEL SIZE
UP TO 4' - 0"	L 4" x 3-1/2" x 5/16" (4" LEG VERTICAL)
4' - 7" TO 6' - 0"	L 5" x 3-1/2" x 5/16" (5" LEG VERTICAL)
6' - 1" TO 8' - 0"	L 6" x 3-1/2" x 3/8" (6" LEG VERTICAL)
8' - 1" TO 10' - 0"	L 7" x 4" x 3/8" (7" LEG VERTICAL)

TYPICAL STEEL LINTEL SCHEDULE

NO SCALE



BOND BEAM DETAIL

- NOTES:
- 1) SEE SCHEDULE FOR SPACING.
 - 2) PROVIDE REINFORCED BOND BEAM WITHIN 16" OF TOP OF WALL.
 - 3) PROVIDE REINFORCED BOND BEAM AT TOP AND BOTTOM OF ALL OPENINGS.

MASONRY LINTEL DETAIL AND SCHEDULE

NOTE:

NO CONSTRUCTION JOINTS OR CONTROL JOINTS ARE PERMITTED WITHIN 3' - 0" OF EDGE OF OPENING.

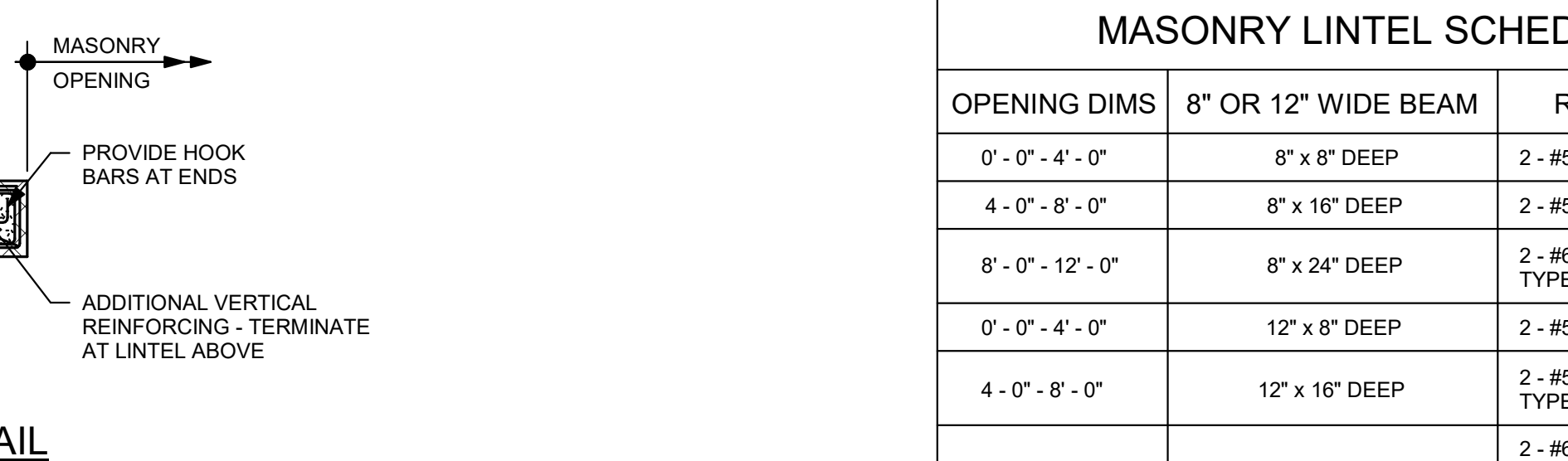
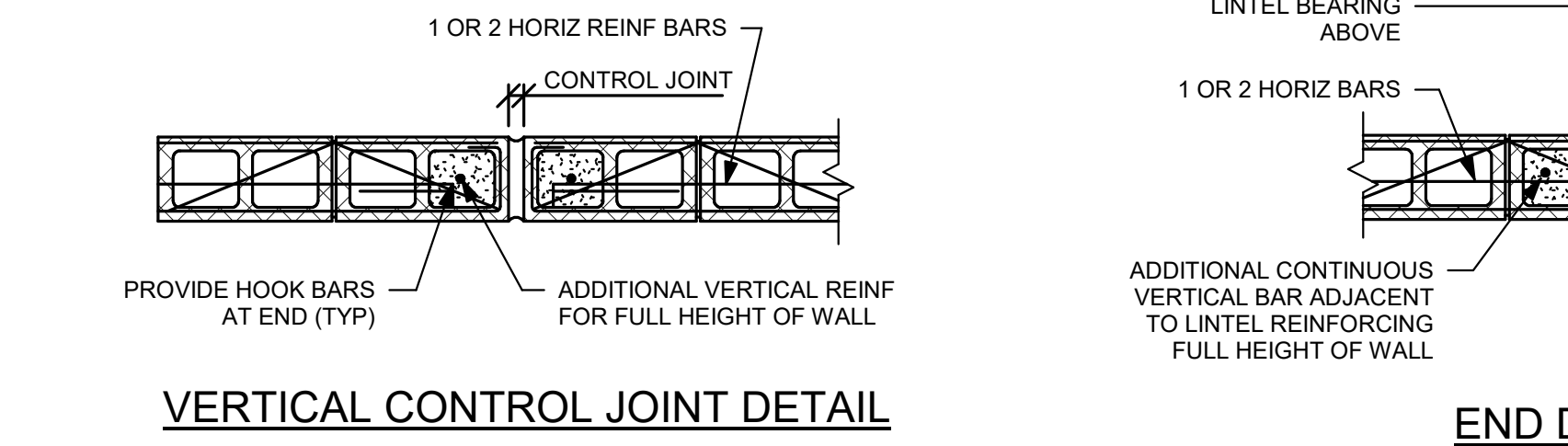
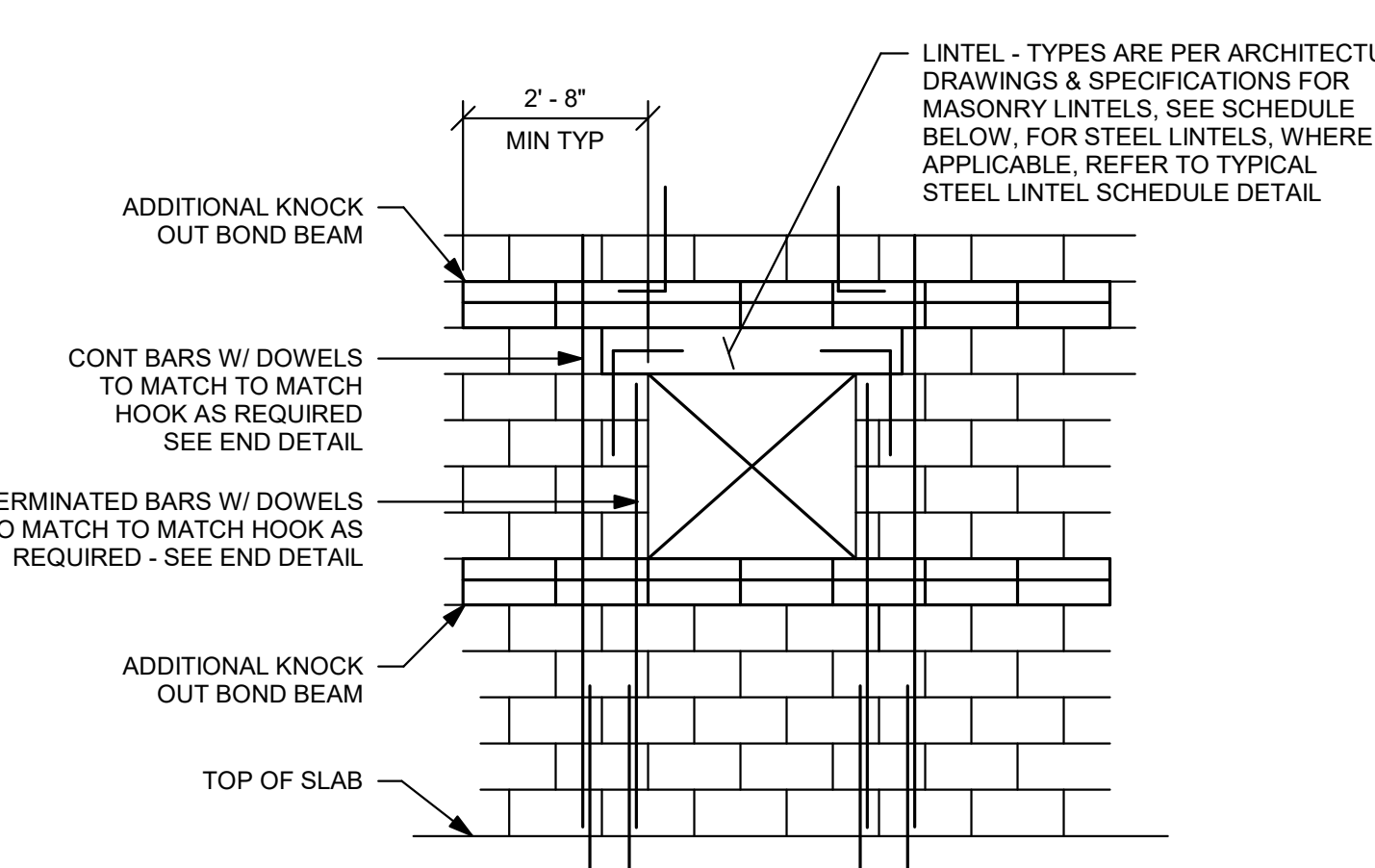
MASONRY LINTEL SCHEDULE		
OPENING DIMS	8" OR 12" WIDE BEAM	REINFORCEMENT
0' - 0" - 4' - 0"	8" x 8" DEEP	2 - #5 CONT
4' - 0" - 8' - 0"	8" x 8" DEEP	2 - #5 CONT
8' - 0" - 12' - 0"	8" x 24" DEEP	2 - #5 CONT AND WIRE TRUSS TYPE - REINF AT JOINTS
0' - 0" - 4' - 0"	12" x 8" DEEP	2 - #5 CONT
4' - 0" - 8' - 0"	12" x 16" DEEP	2 - #5 CONT AND WIRE TRUSS TYPE - REINF AT JOINTS
8' - 0" - 12' - 0"	12" x 24" DEEP	2 - #5 TOP & BOT CONT AND WIRE TRUSS TYPE REINF AT JOINTS

MINIMUM CONCRETE MASONRY WALL REINFORCING SCHEDULE			
WALL LOCATION	WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
SHEAR WALLS AND LOADING BEARING SHEAR WALLS SHOWN ON PLAN	8"	#3 @ 48"	1 - #5 IN BOND BEAM AT 48" ON CENTER
CLASS 'A' WALLS	8"	#6 @ 48"	1 - #5 IN BOND BEAM AT 48" ON CENTER
ALL EXTERIOR WALLS, STAIR WALLS, AND ELEVATOR SHAFT WALLS	8"	#7 @ 48"	1 - #5 IN BOND BEAM AT 48" ON CENTER
CLASS 'B' WALLS	12"	#8 @ 48"	2 - #5 IN BOND BEAM AT 48" ON CENTER
ALL INTERIOR CMU WALLS GREATER THAN 16' - 0" IN HEIGHT	ALL SIZES	#4 @ 48"	1 - #4 IN BOND BEAM AT 48" ON CENTER
CLASS 'C' WALLS	ALL SIZES	#4 @ 48"	1 - #4 IN BOND BEAM AT 48" ON CENTER
ALL INTERIOR CMU WALLS 16' - 0" IN HEIGHT OR LESS	ALL SIZES	#4 @ 48"	1 - #4 IN BOND BEAM AT 48" ON CENTER

- NOTES:
- 1) REFER TO PLANS, SECTIONS, AND SPECIFICATIONS FOR REINFORCING REQUIREMENTS MORE STRINGENT THAN IN THE SCHEDULE.
 - 2) PROVIDE REINFORCED BOND BEAM WITHIN 16" OF TOP OF WALL.
 - 3) ALL VERTICAL REINFORCING TO BE IN SOLIDLY GROUTED CELLS. AND PROVIDE 48 DIAMETER LAP AT ALL BAR SPLICES TYPICAL.
 - 4) PROVIDE 9 GA HORIZONTAL JOINT REINFORCING AT 16" OC FOR ALL WALLS.

NOTE:

ALL REINFORCING WITHIN THE MASONRY WALL SHALL BE FURNISHED BY THE MASONRY SUB CONTRACTOR (SPECIFICATION 04200). EXCEPT BOWLS EMBEDDED IN CONCRETE FOUNDATION ARE THE RESPONSIBILITY TO THE GENERAL CONTRACTOR AND THE CONCRETE SUB-CONTRACTOR



END DETAIL

- NOTES:
- 1) PROVIDE 1 - CONTINUOUS BAR AT MASONRY OPENING 4' - 0" OR LESS IN WIDTH AT STRUTTED ENDS.
 - 2) PROVIDE 2 - CONTINUOUS BARS AT MASONRY OPENING 4' - 0" TO 8' - 0" IN WIDTH.

TYPICAL REINFORCING AT CMU WALLS WITH OPENINGS ELEVATION

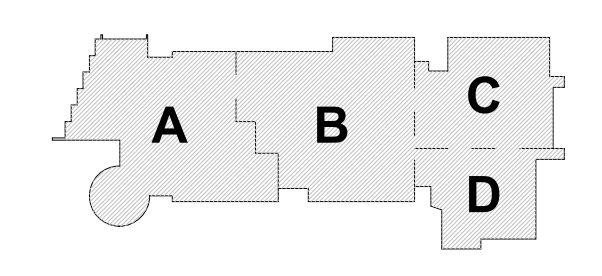
NO SCALE

8

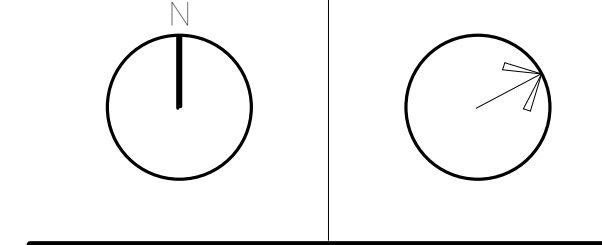
NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

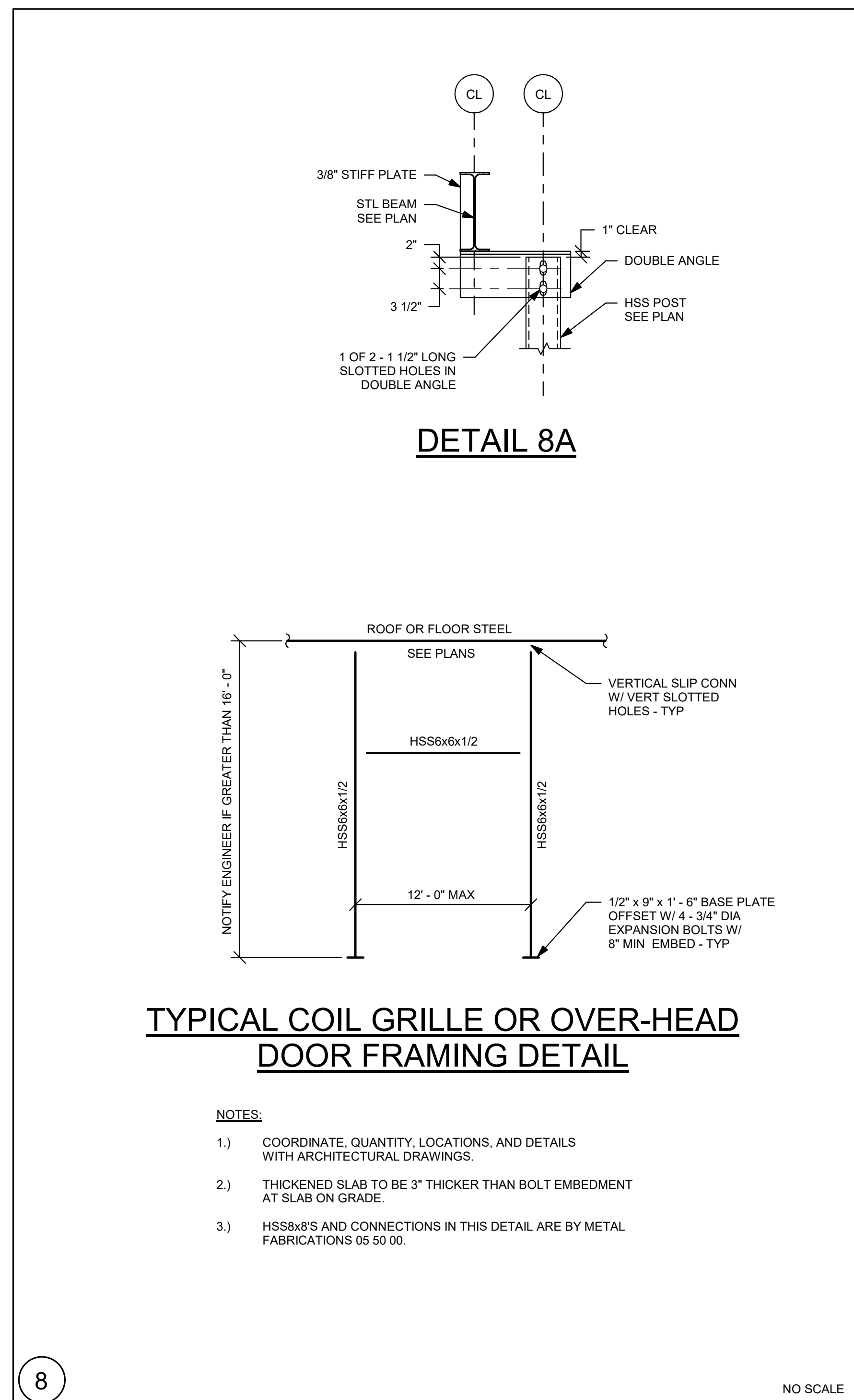
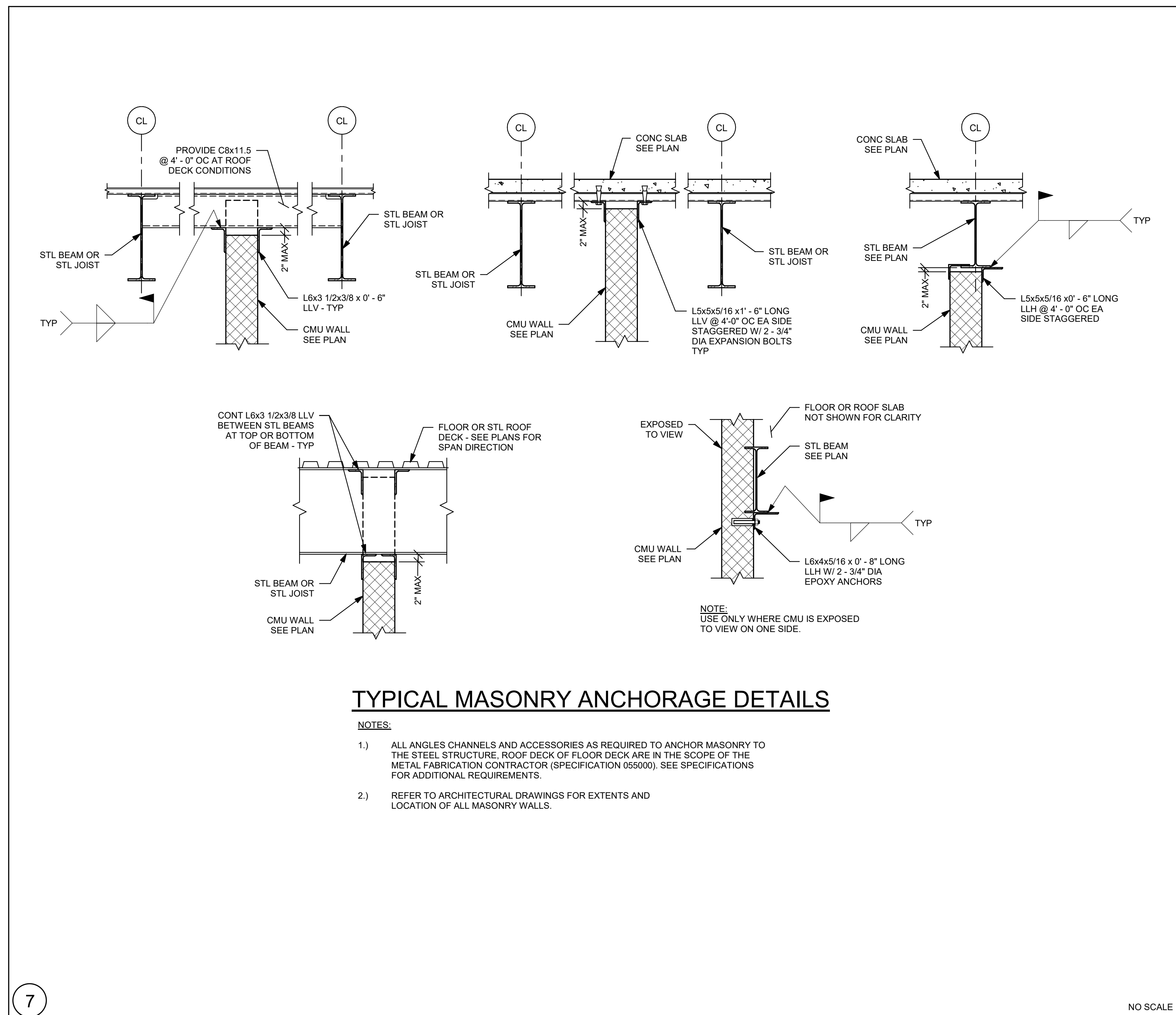
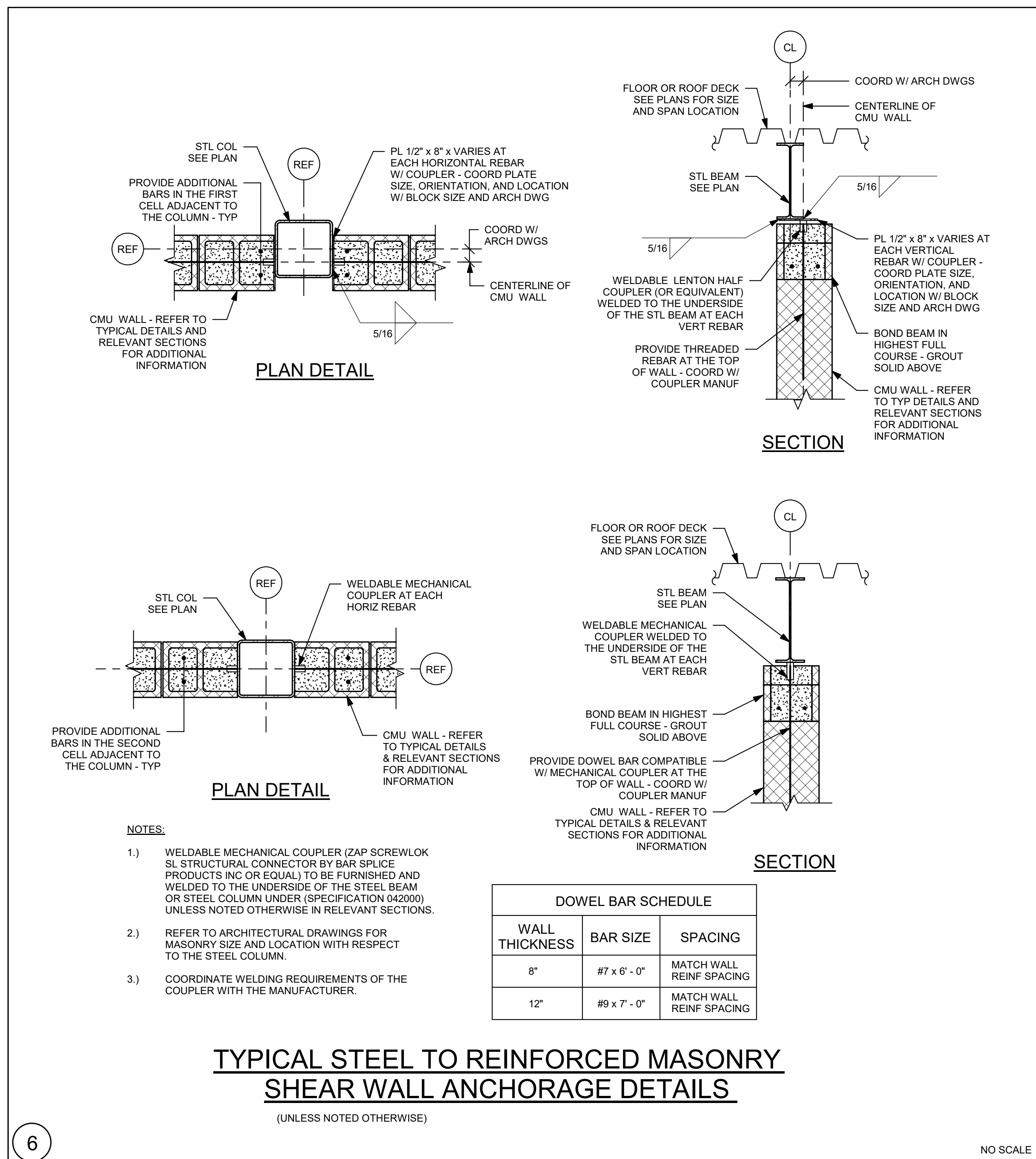
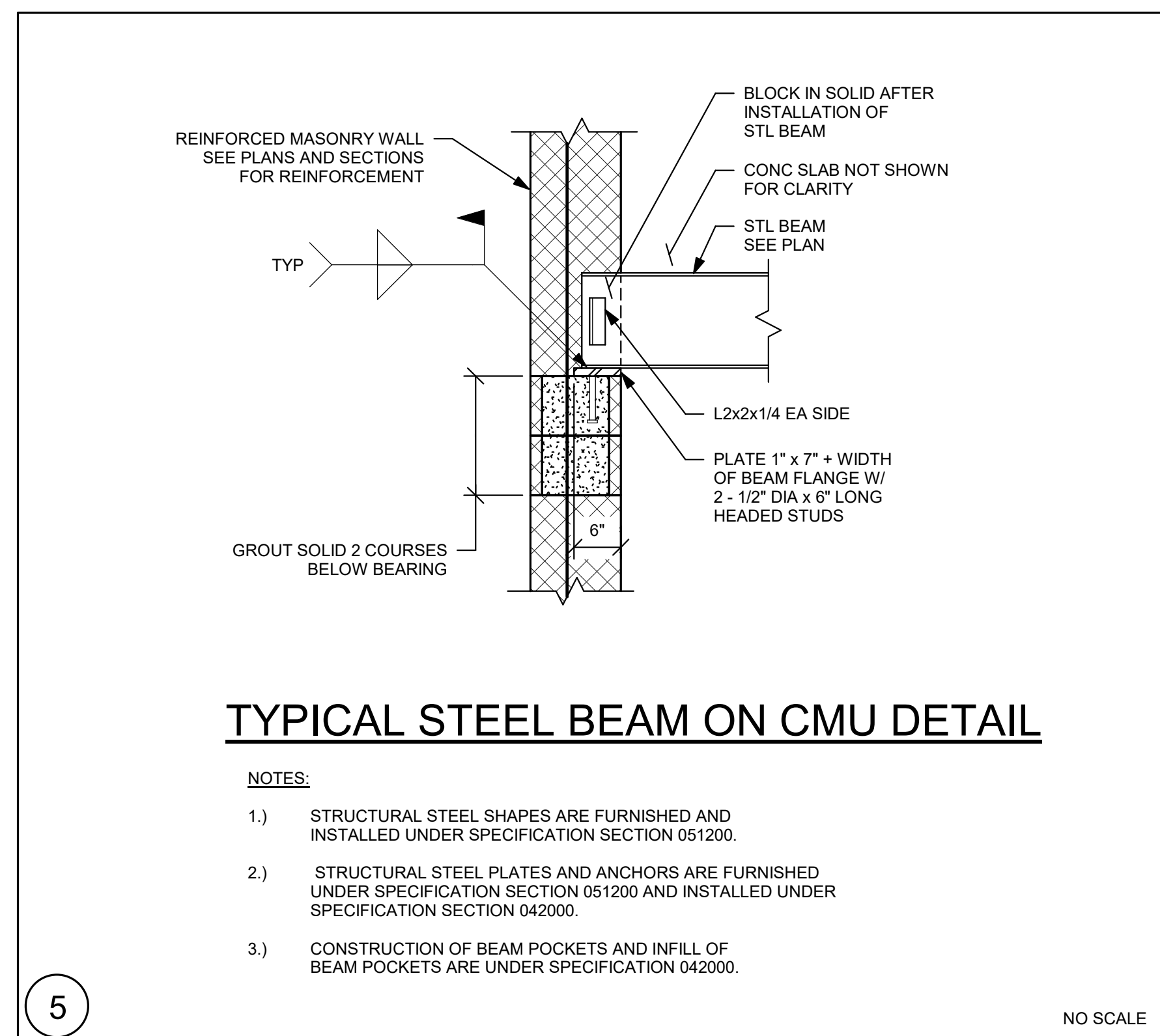
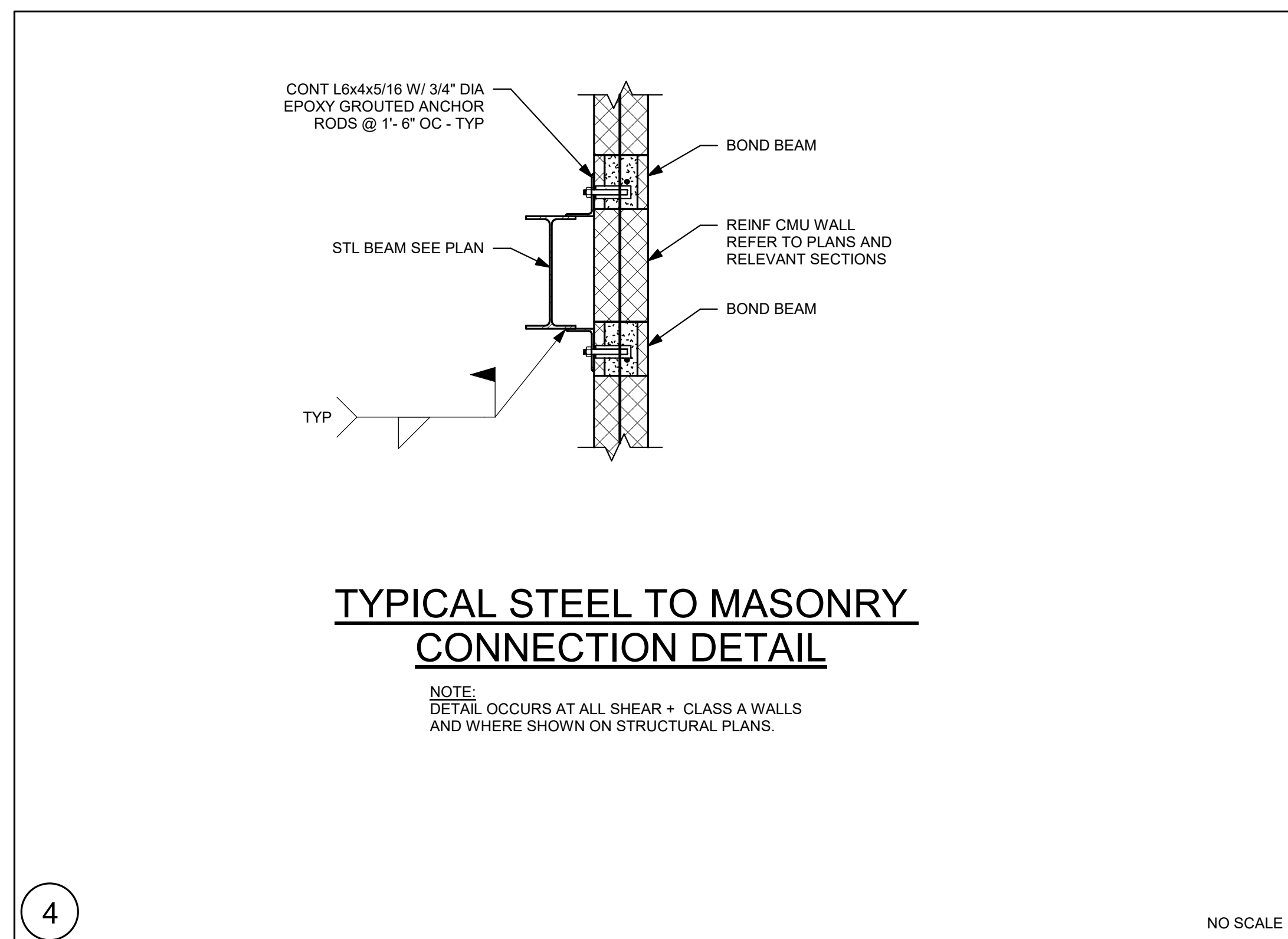
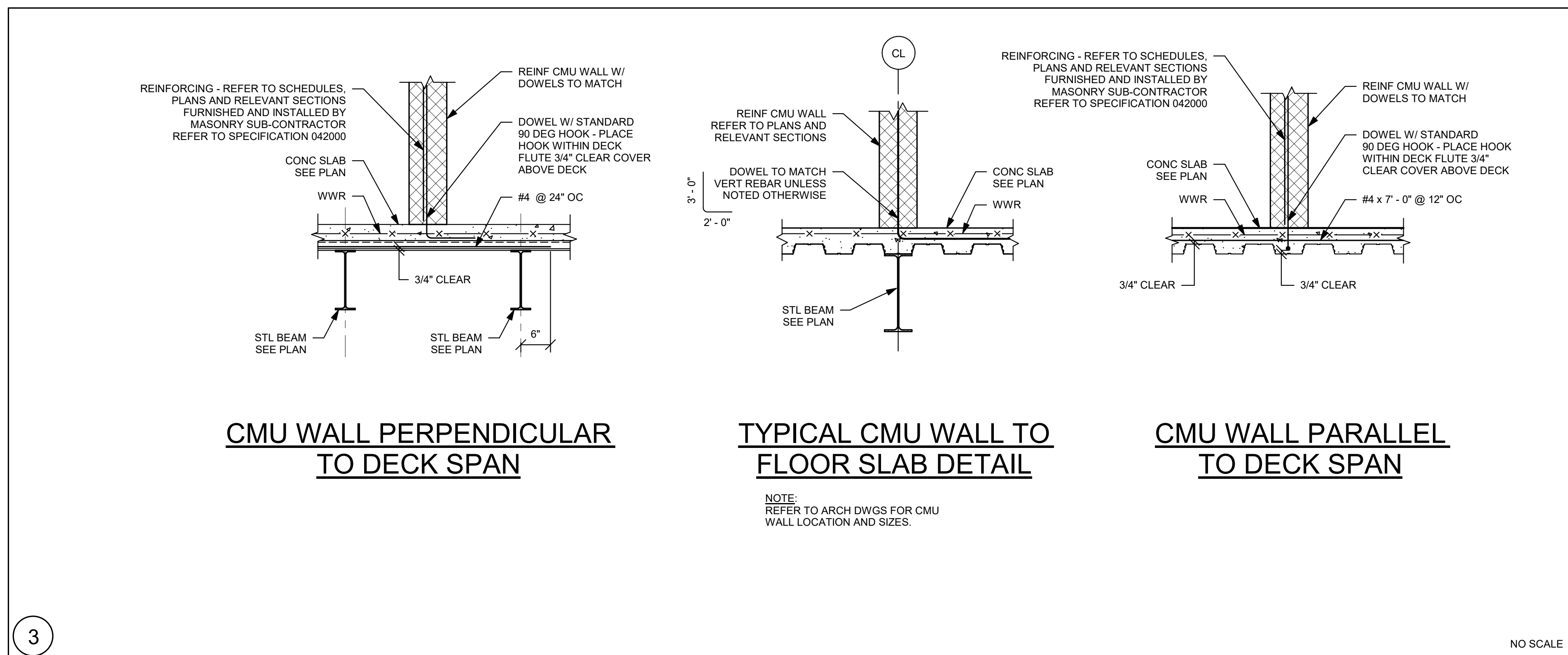
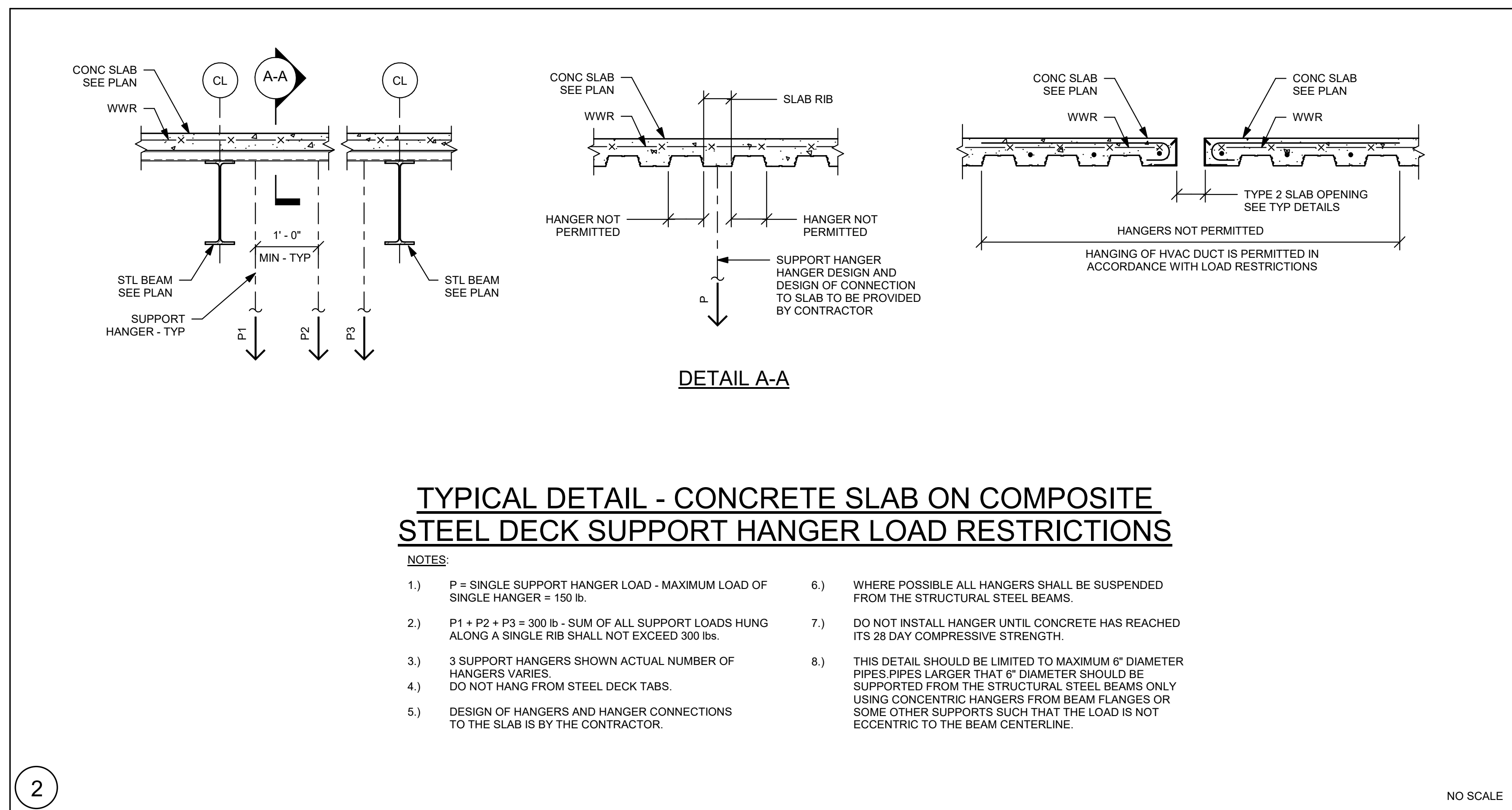
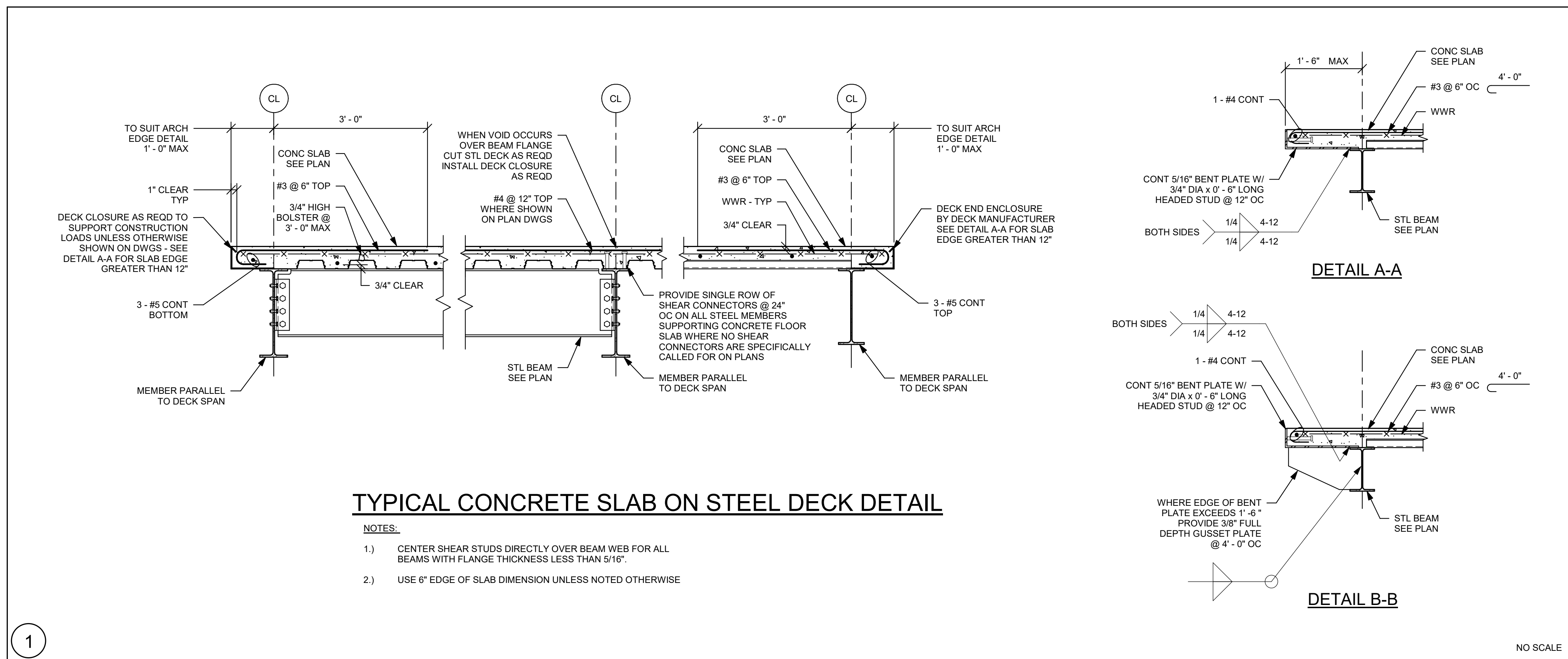
EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



PROJECT NORTH
MAGNETIC NORTH



TYPICAL DETAILS



DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects Interior
Tel: 877.621.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

EARLY STRUCTURAL BID PACKAGE

FEBRUARY 24TH, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

TYPICAL DETAILS

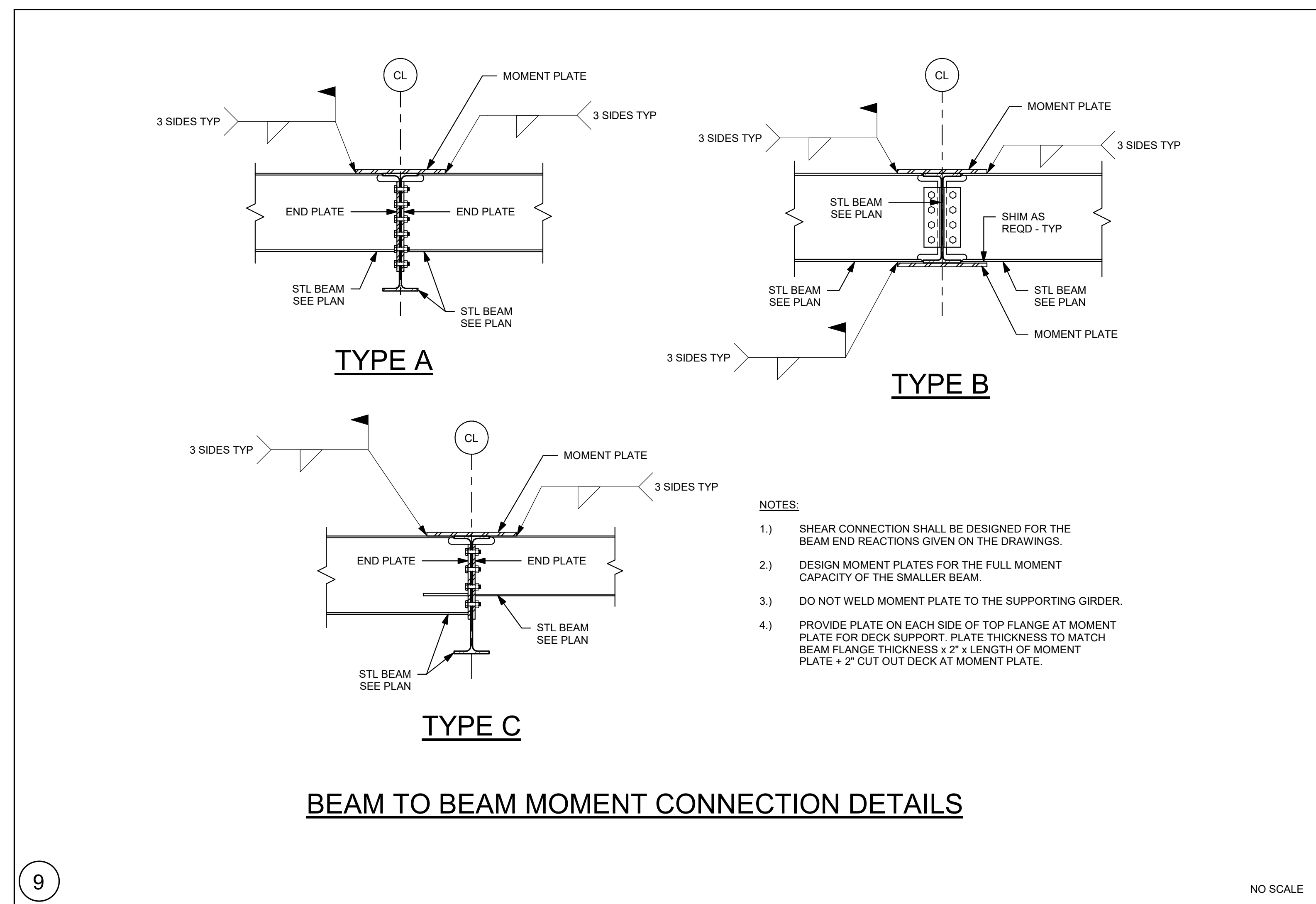
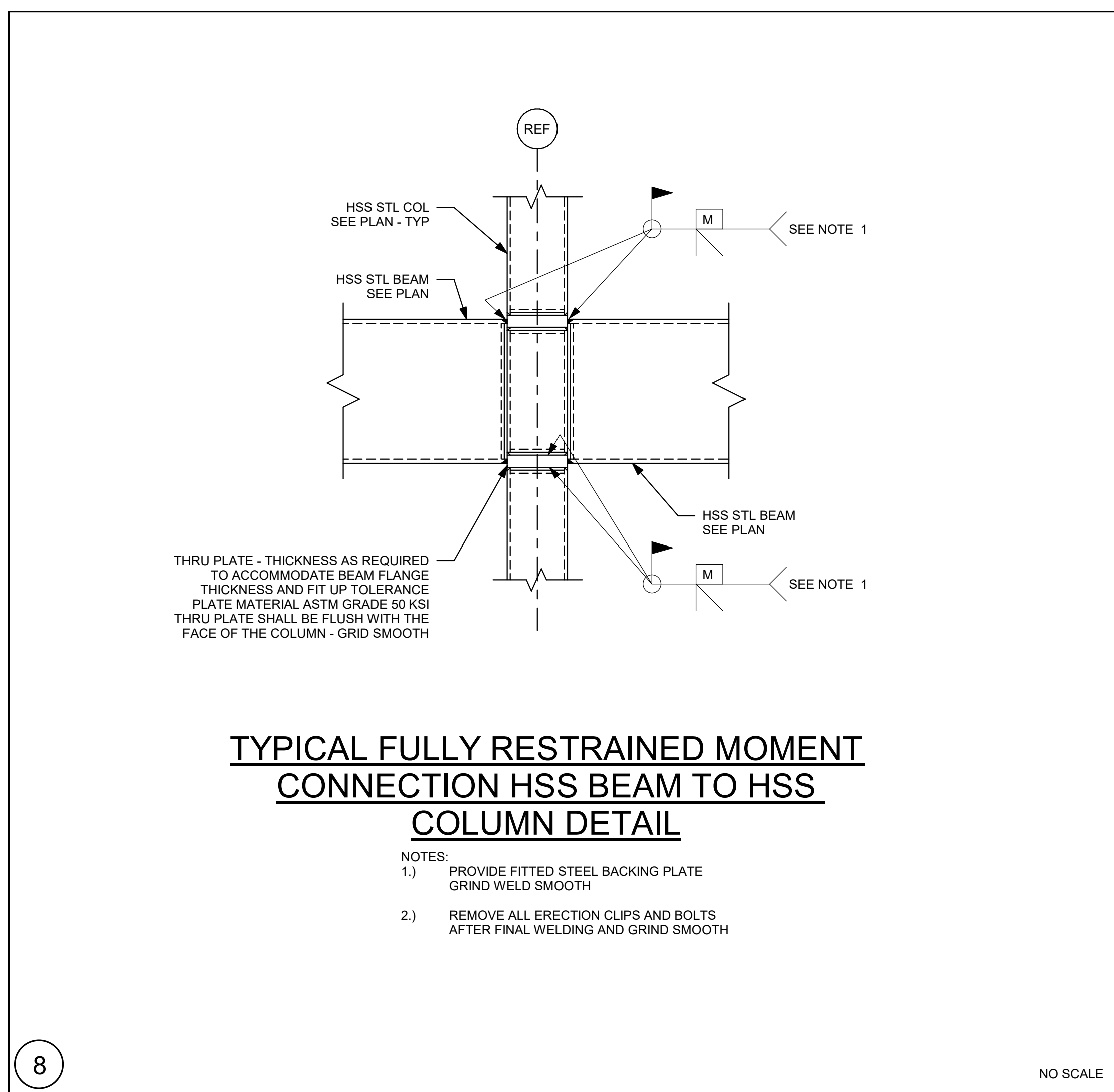
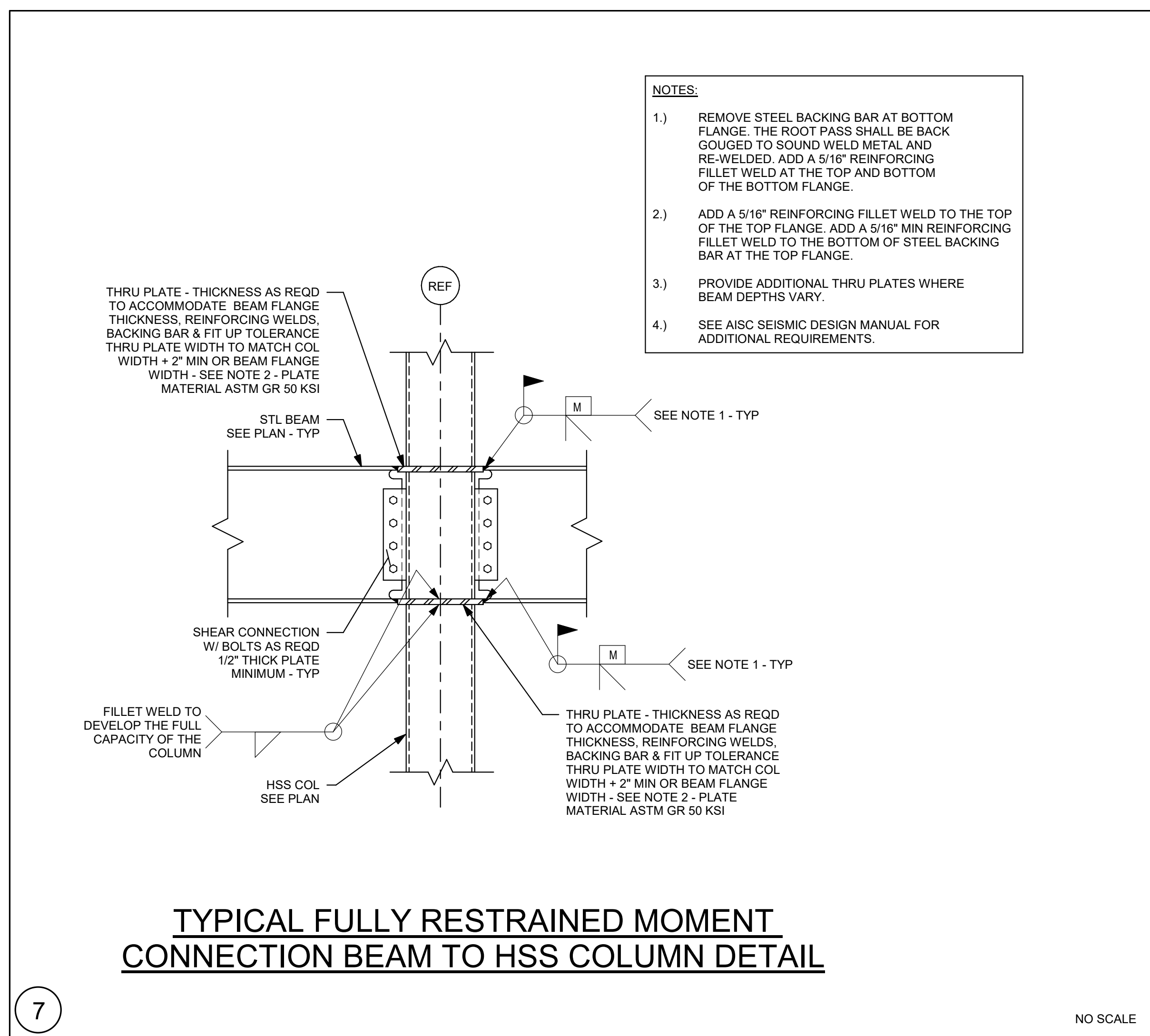
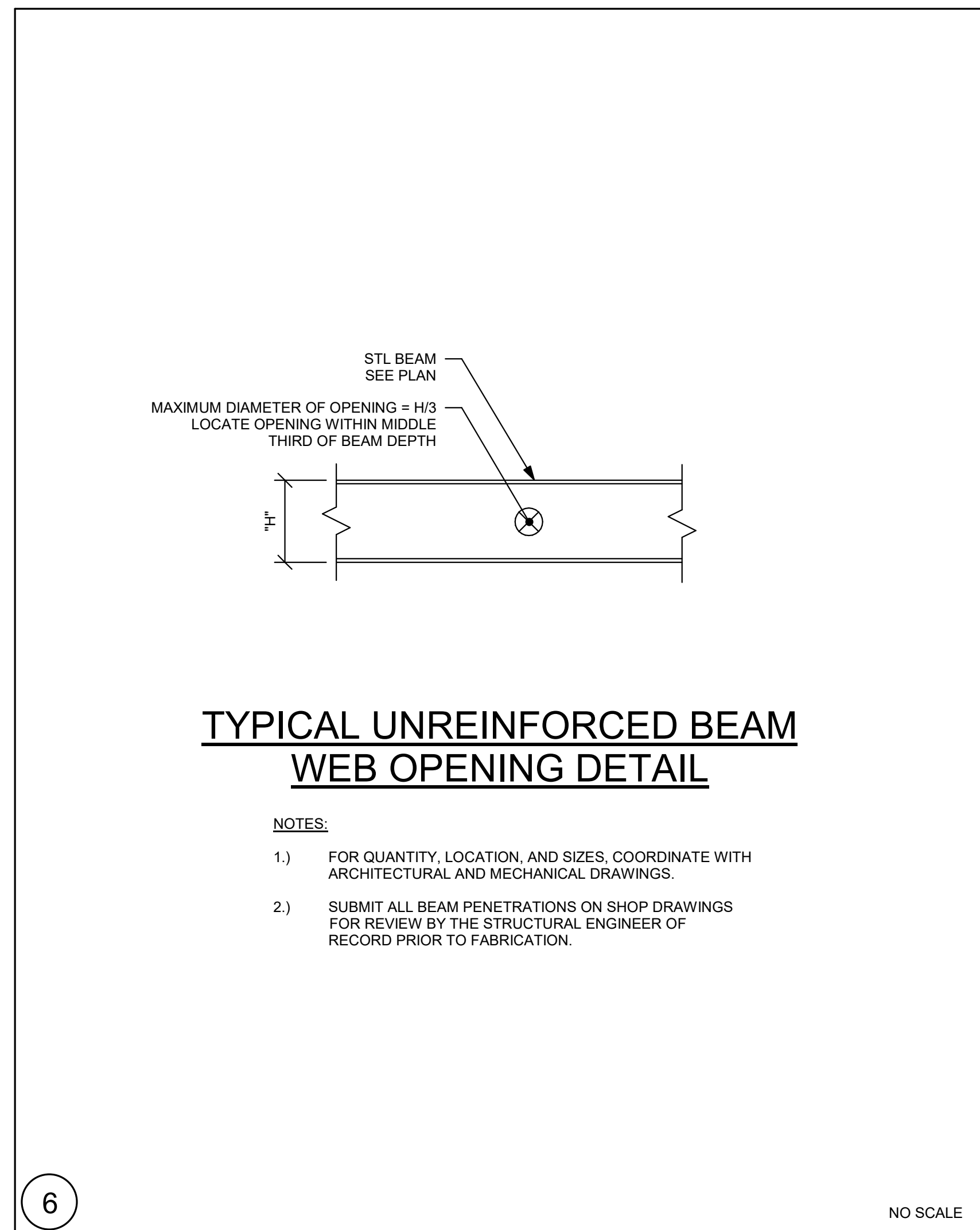
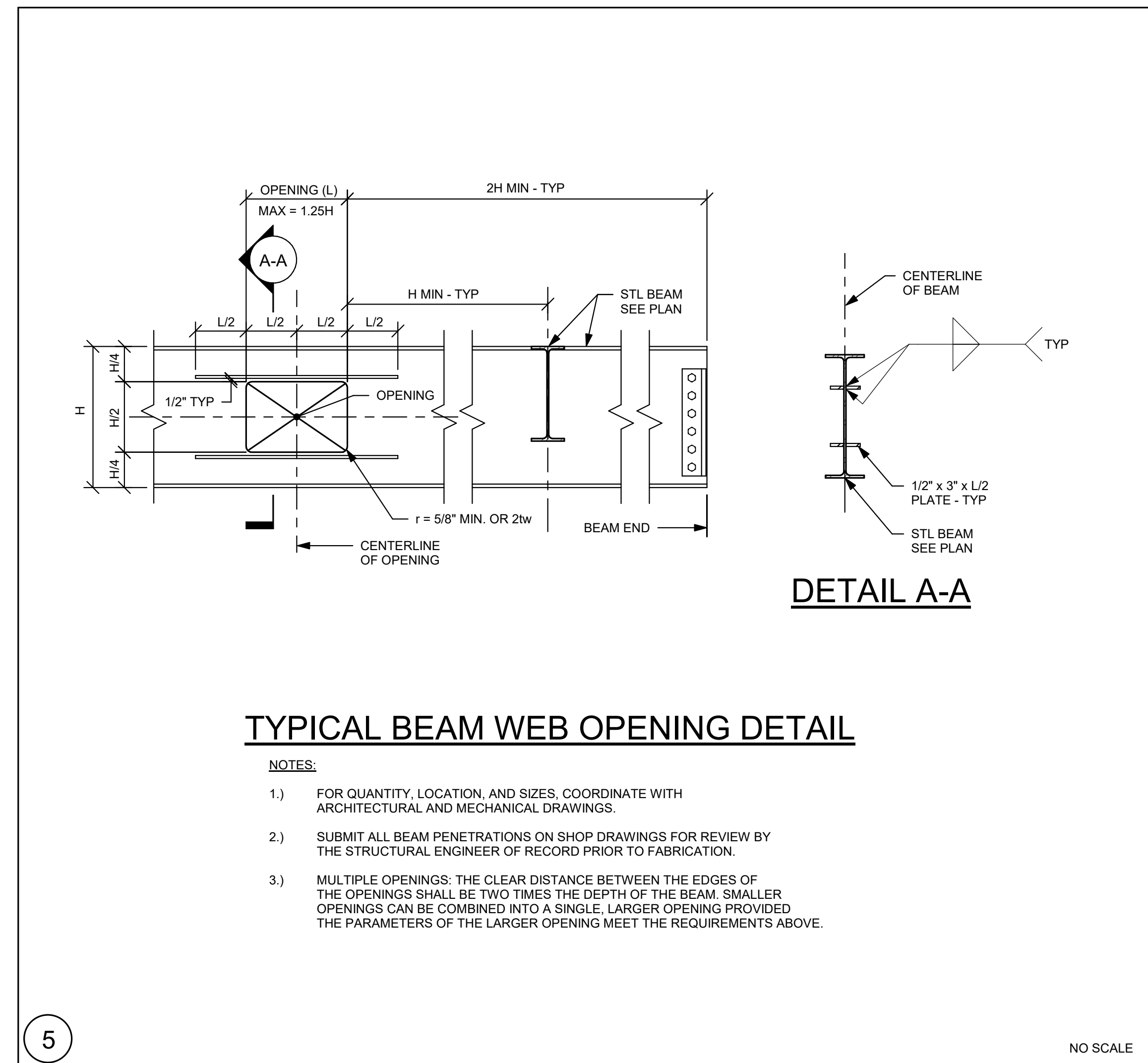
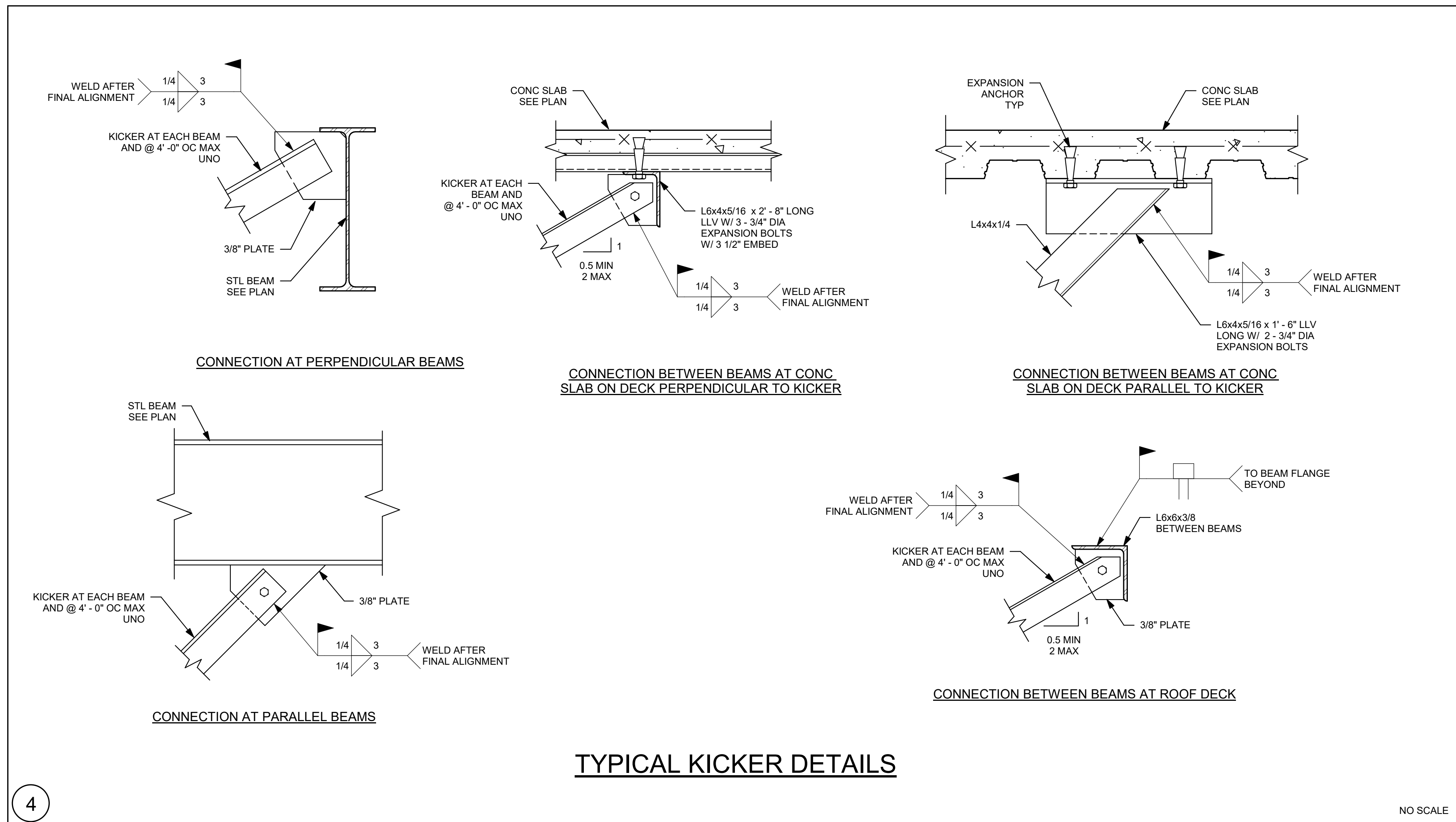
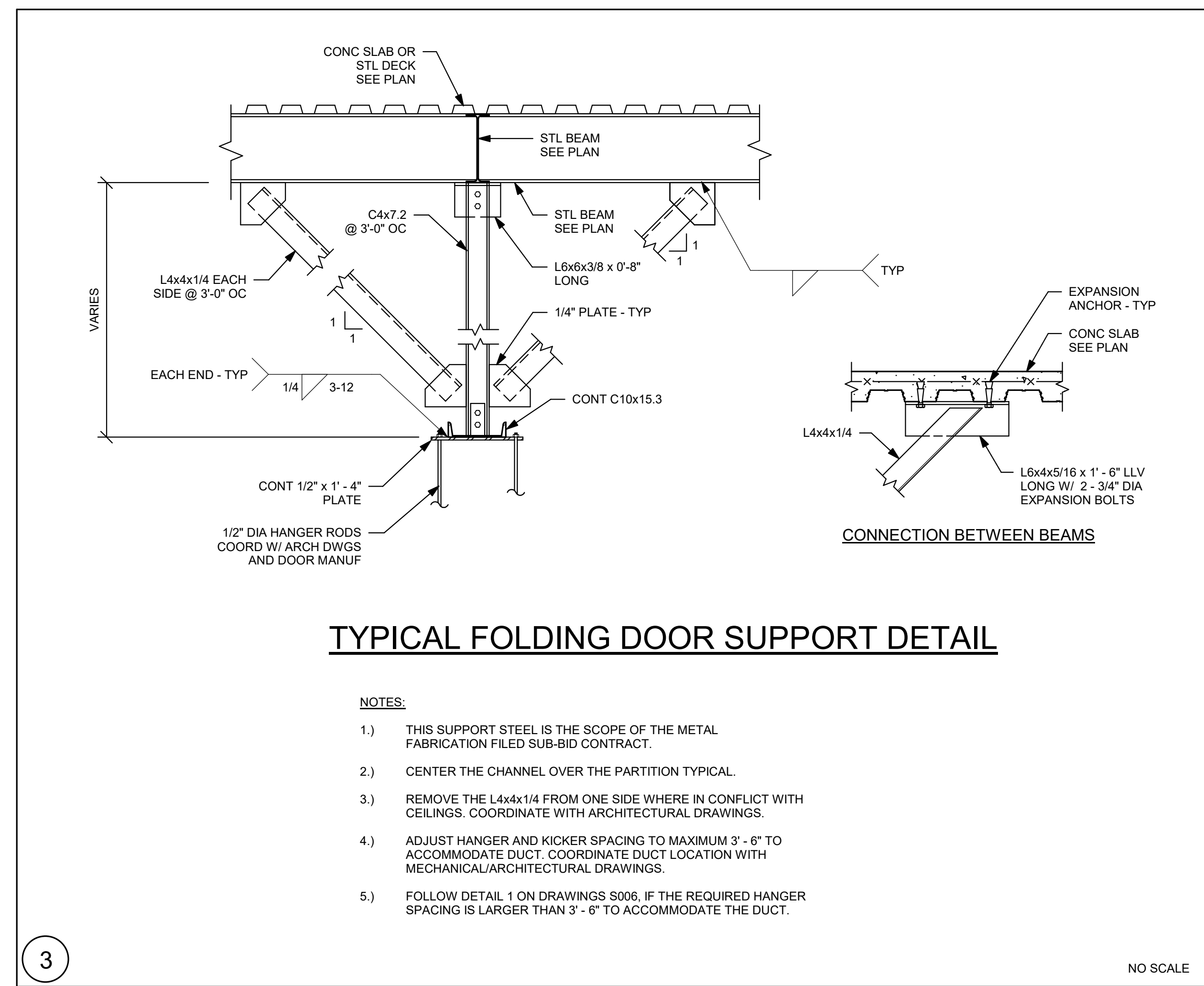
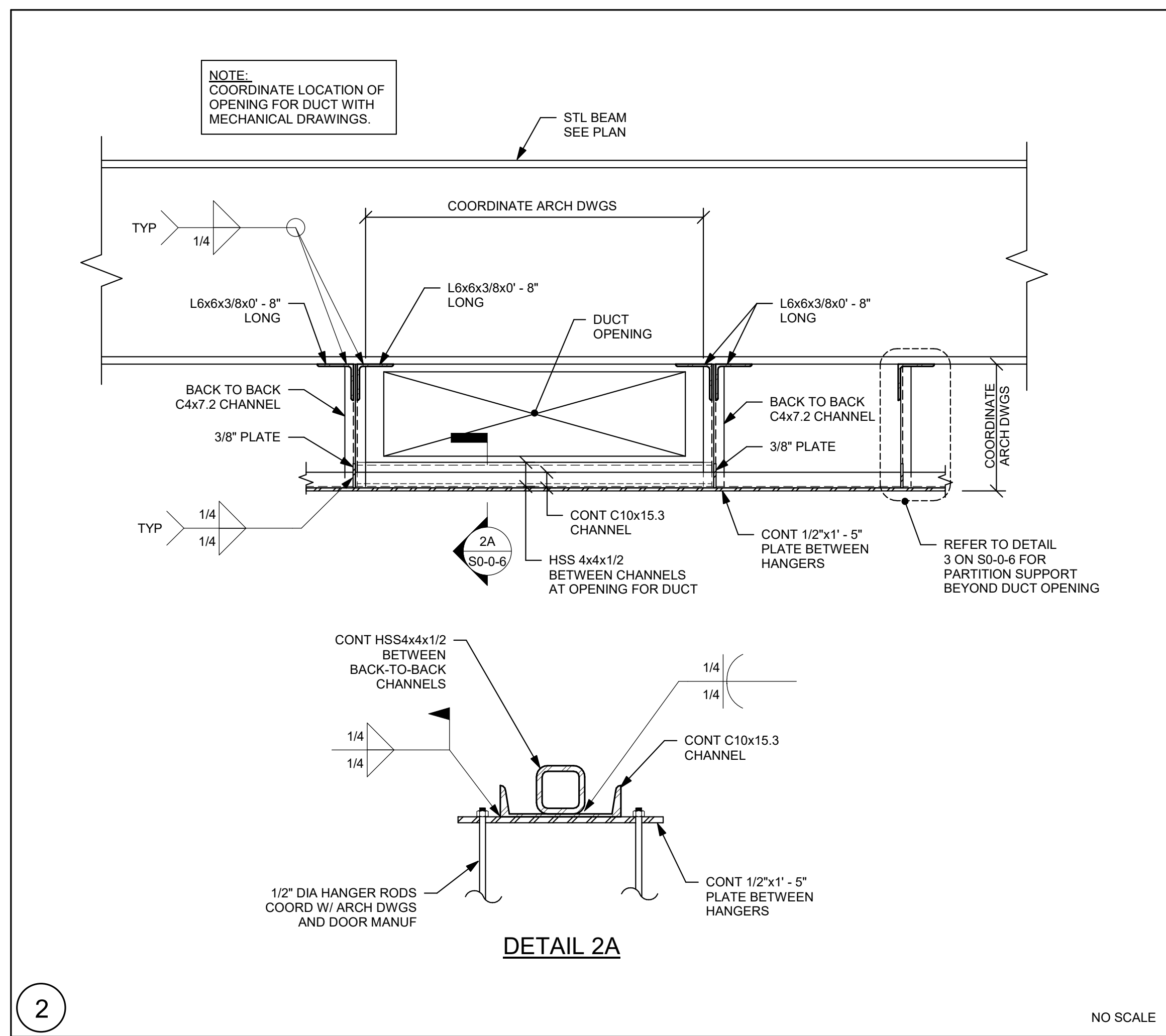
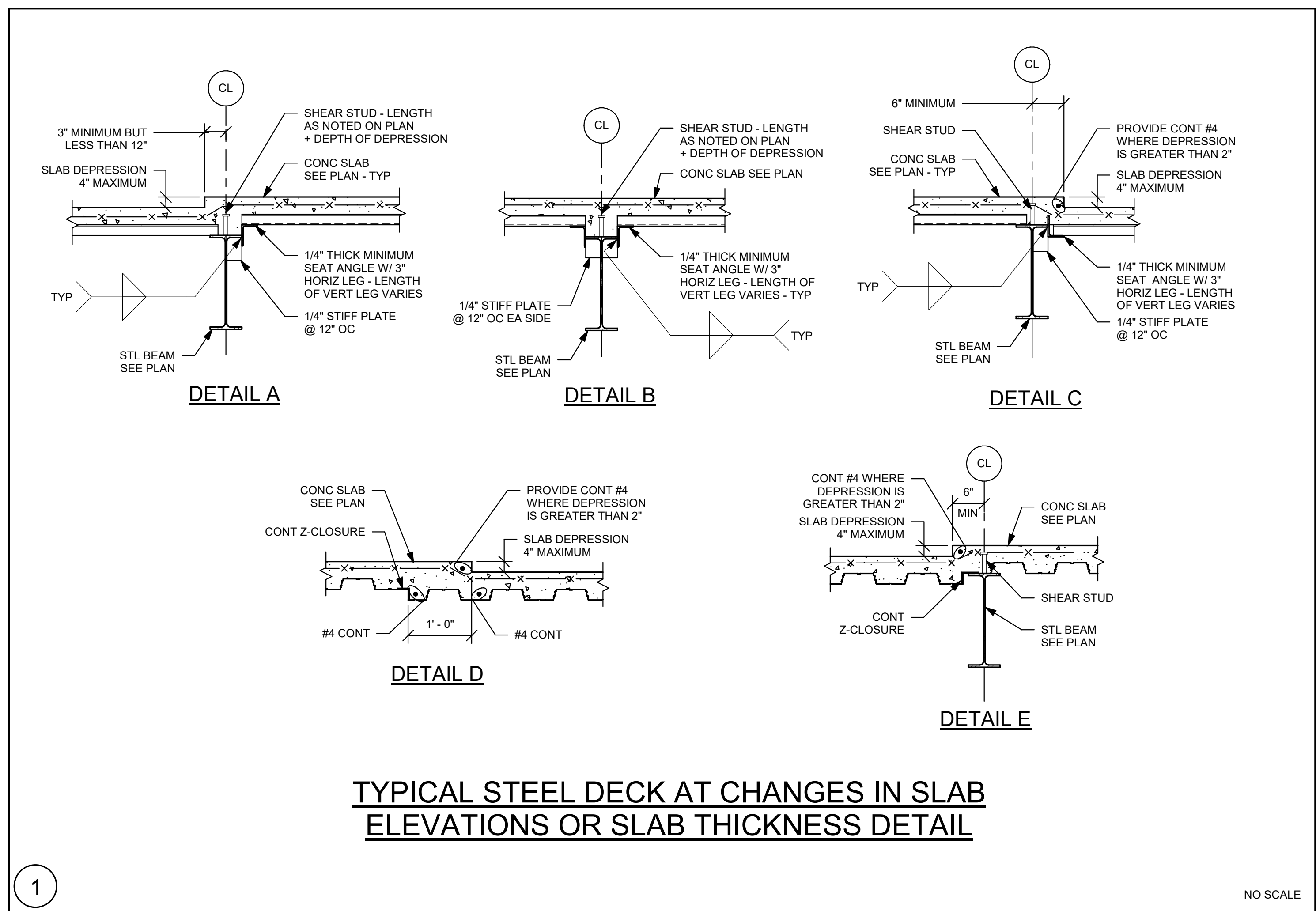
Scale: 3/4" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH, 2023

S0-0-5



DRA

Drummeys Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior
Tel: 817.261.1100
www.draa.com

NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

EARLY STRUCTURAL BID PACKAGE

FEBRUARY 24TH, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

TYPICAL DETAILS

Scale: As indicated

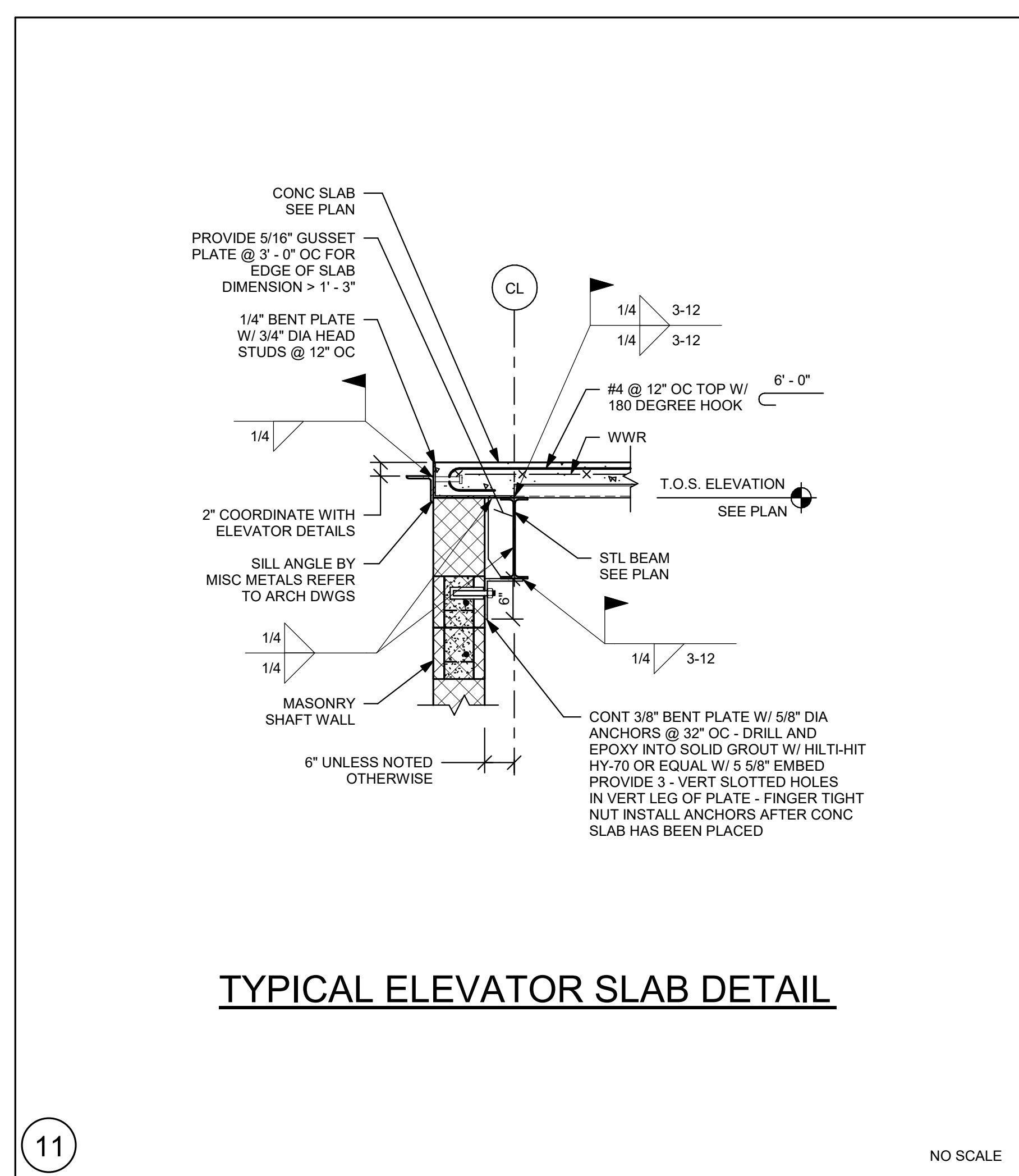
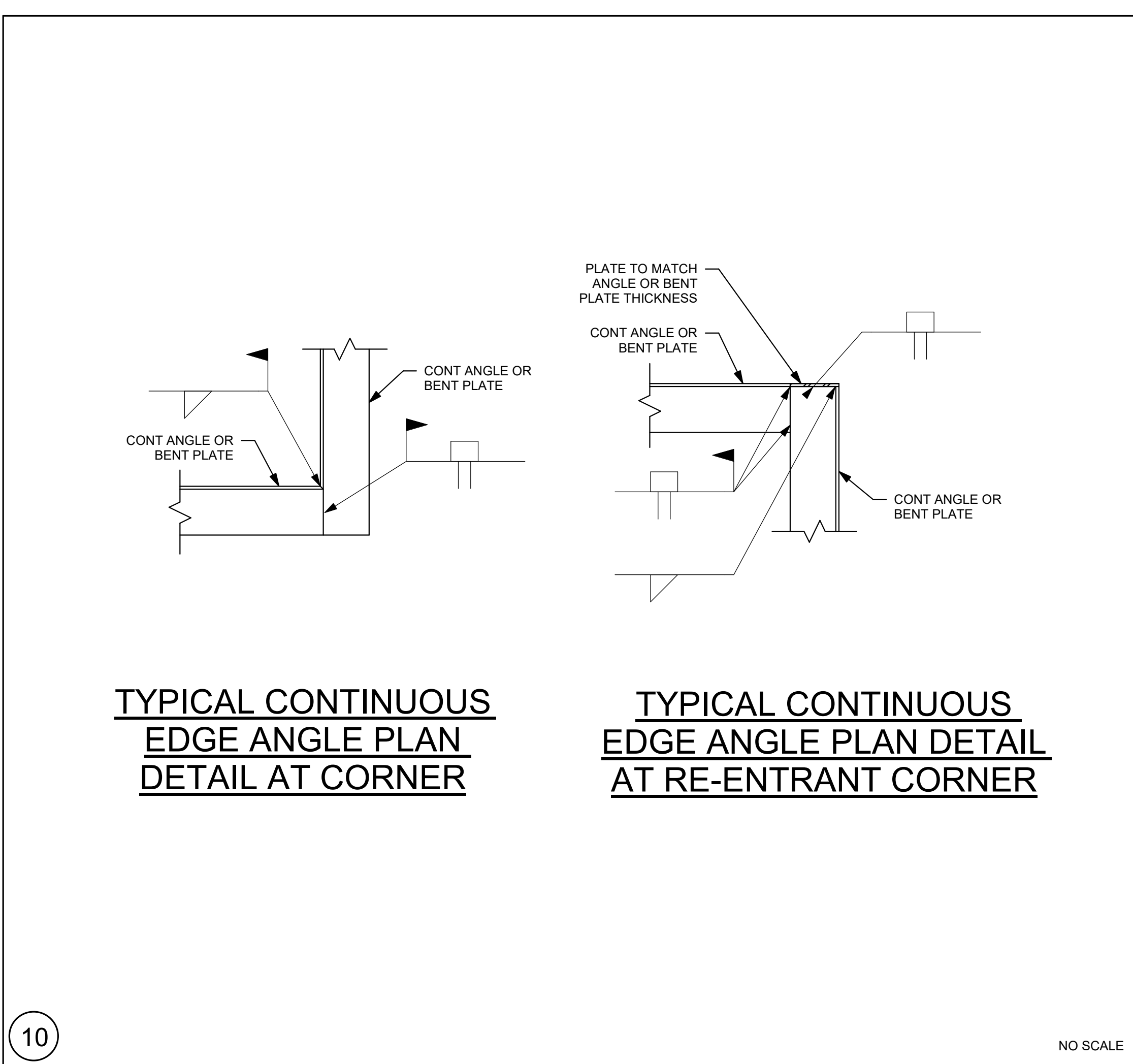
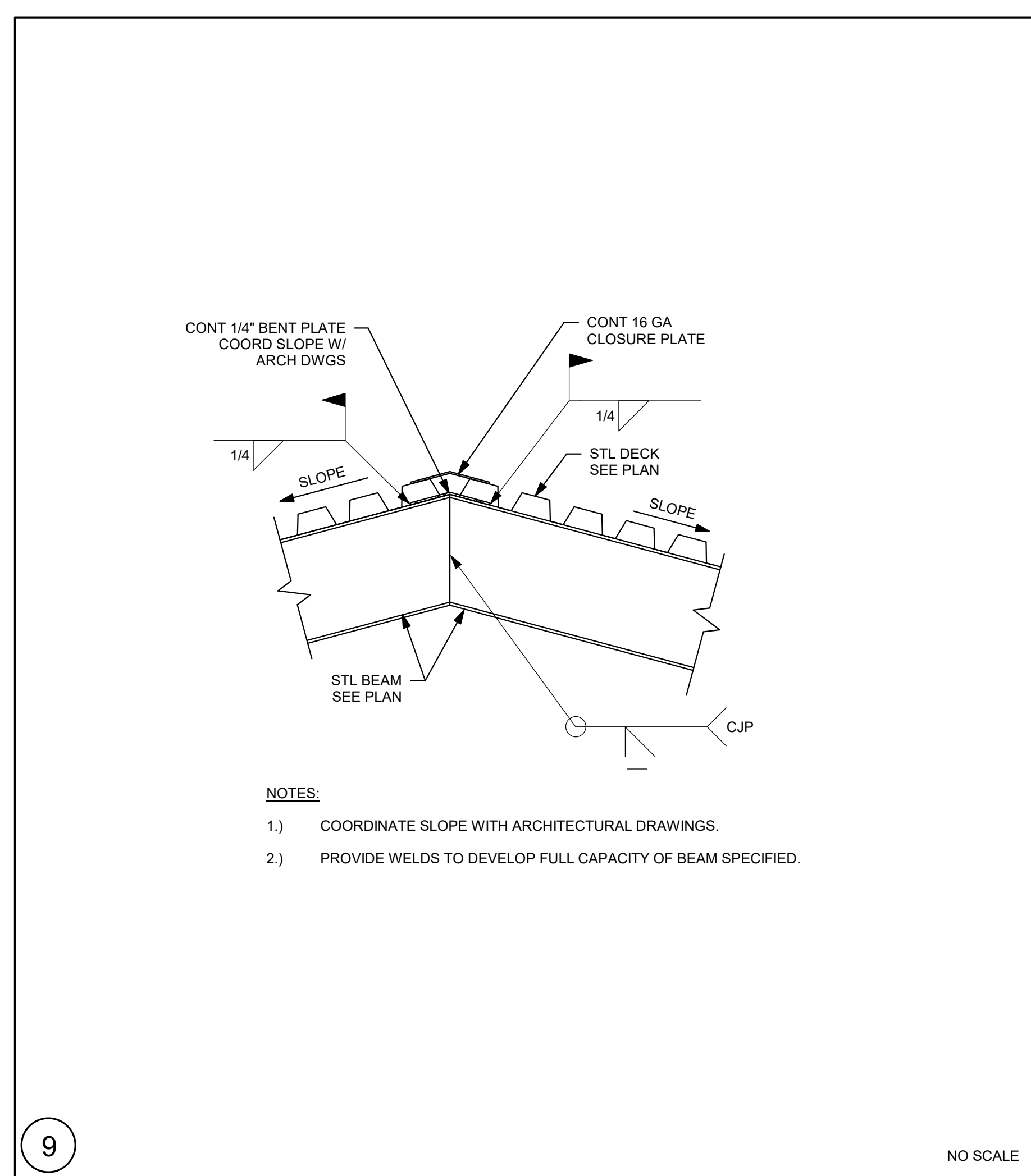
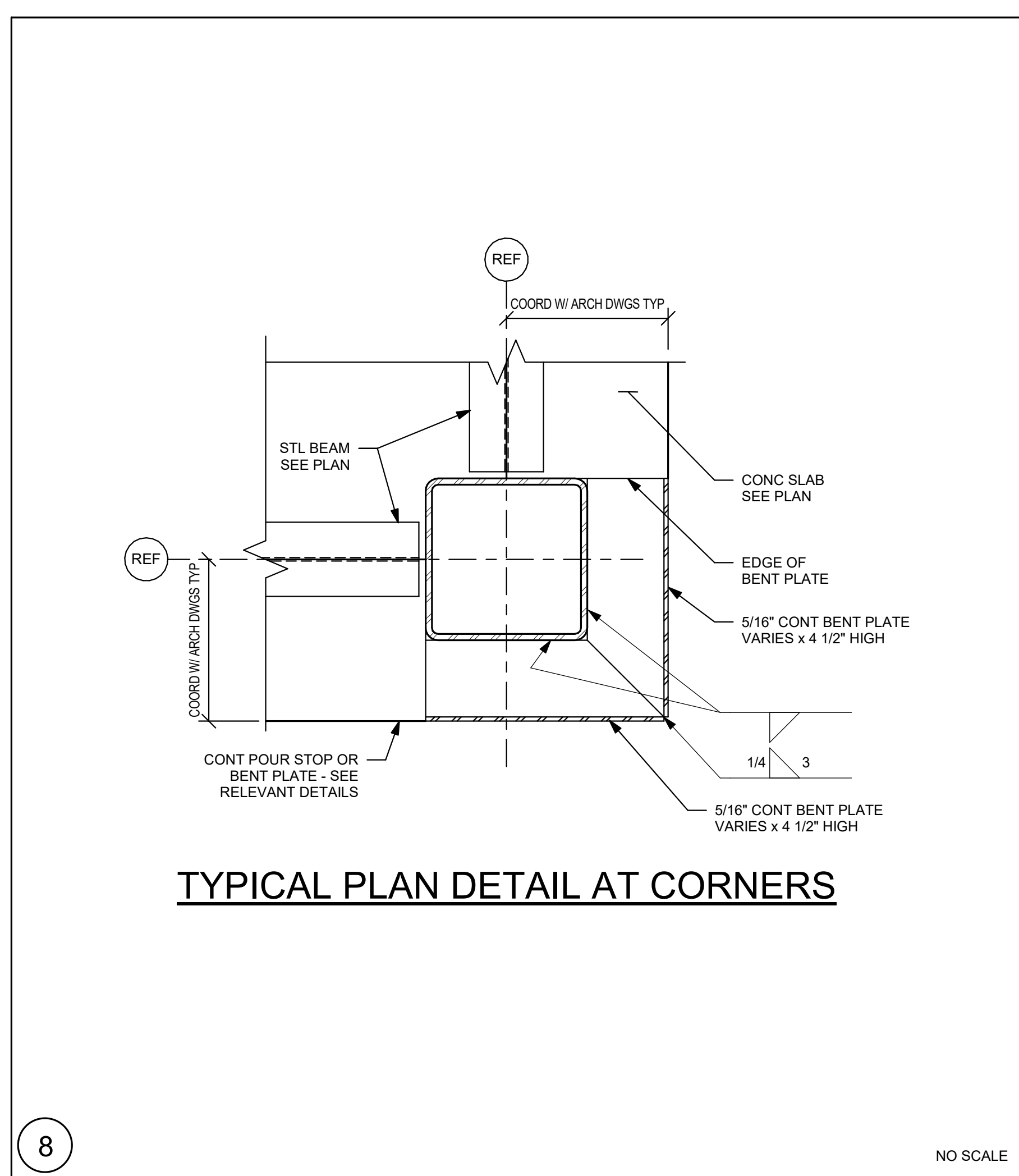
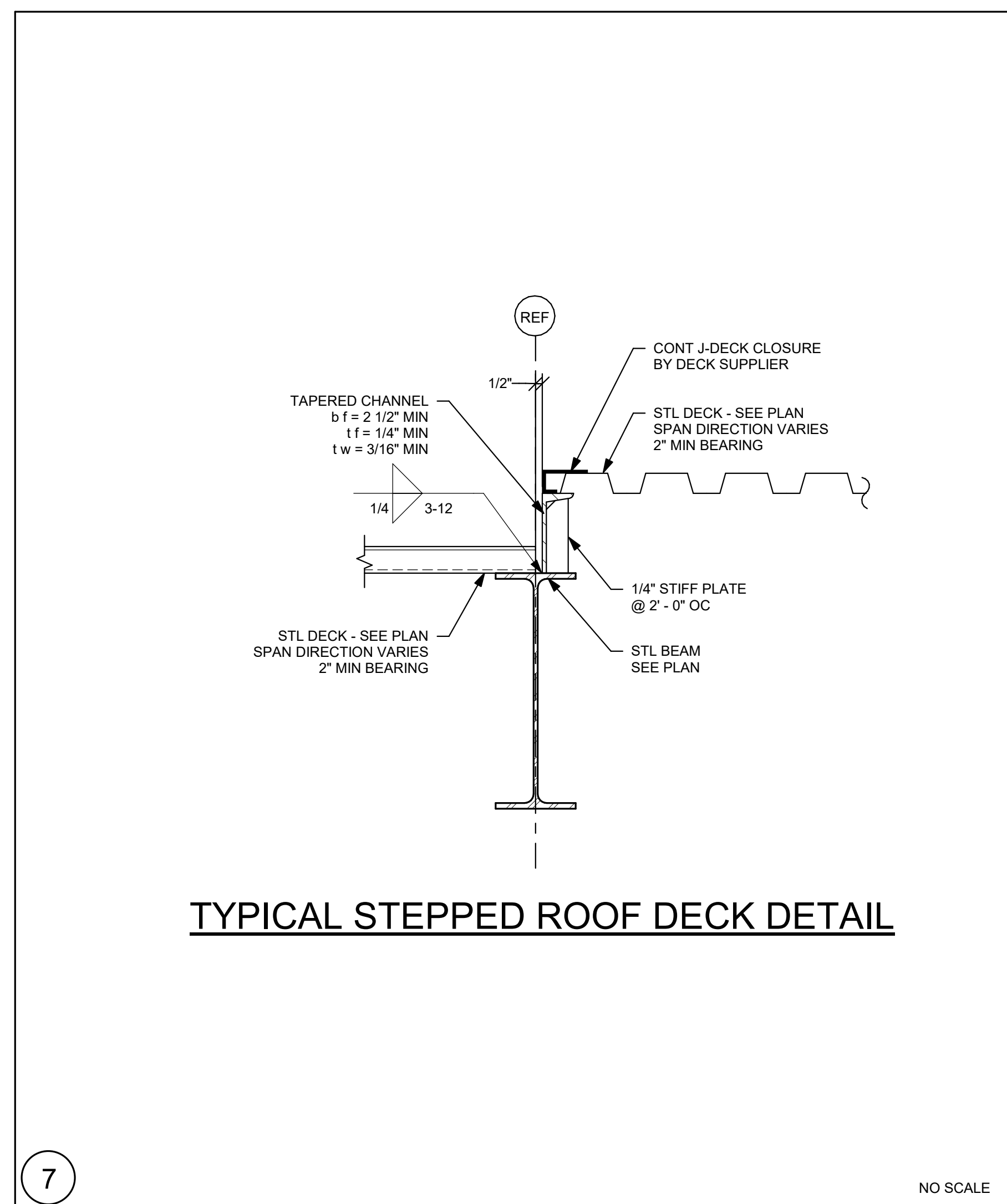
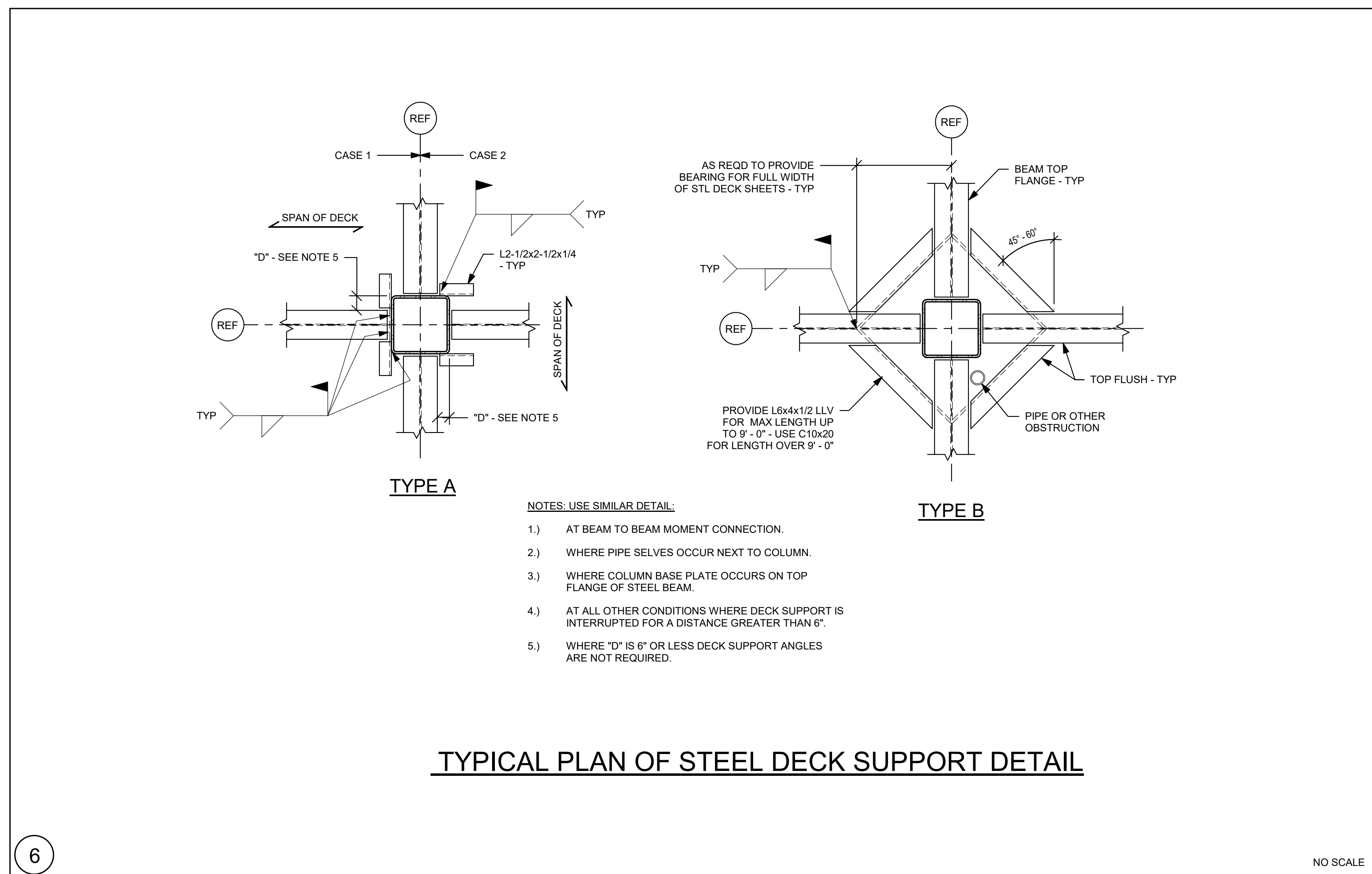
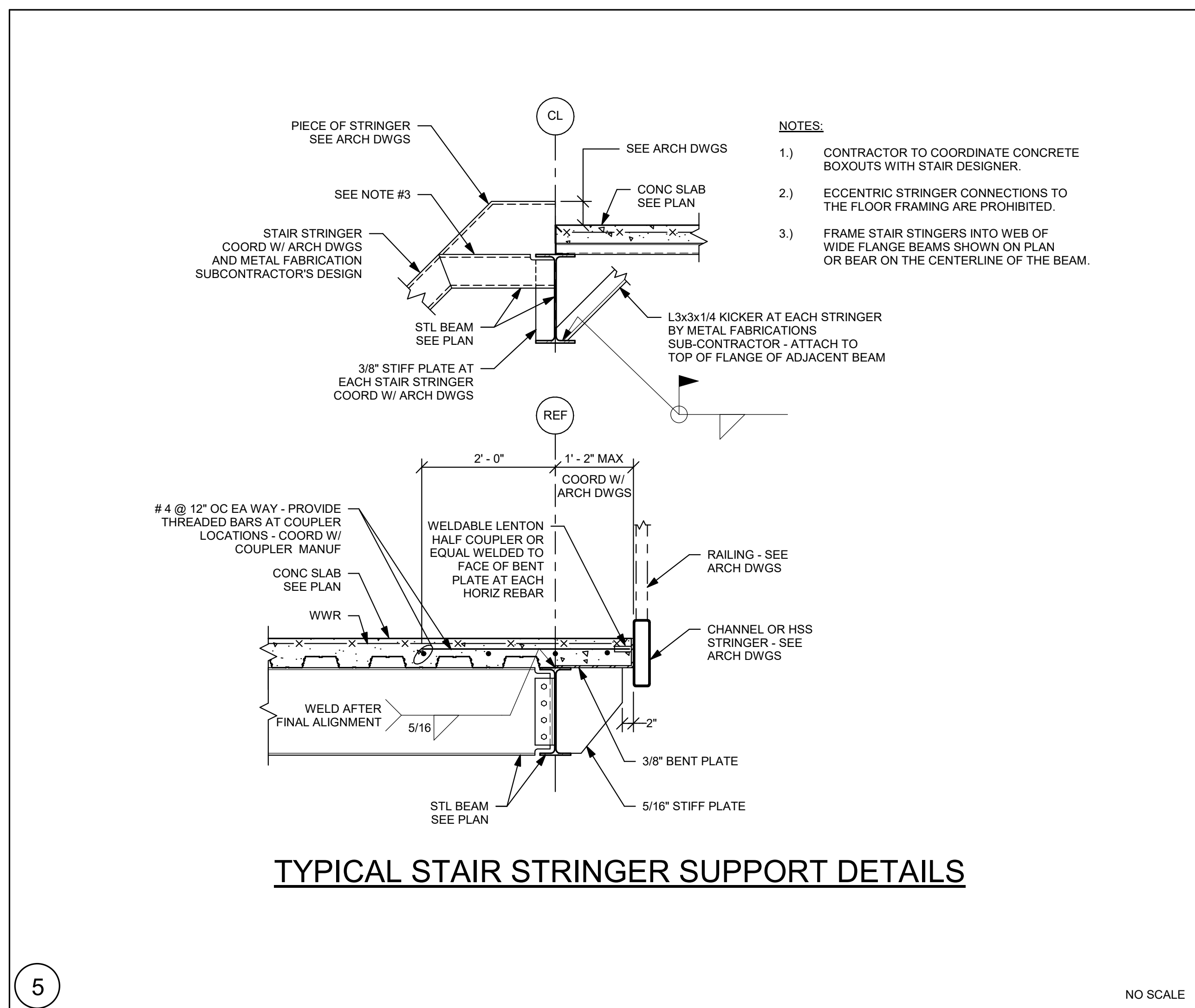
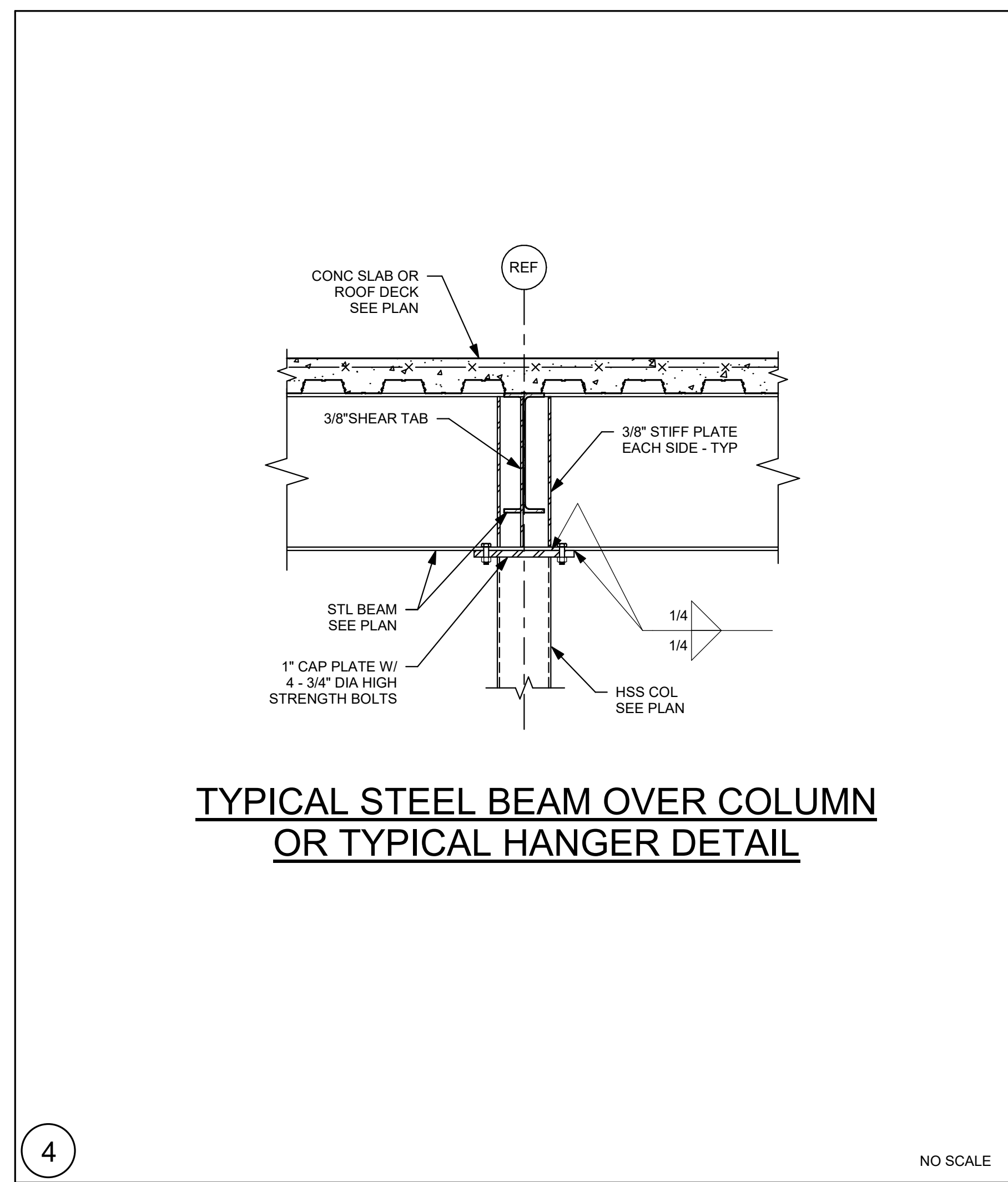
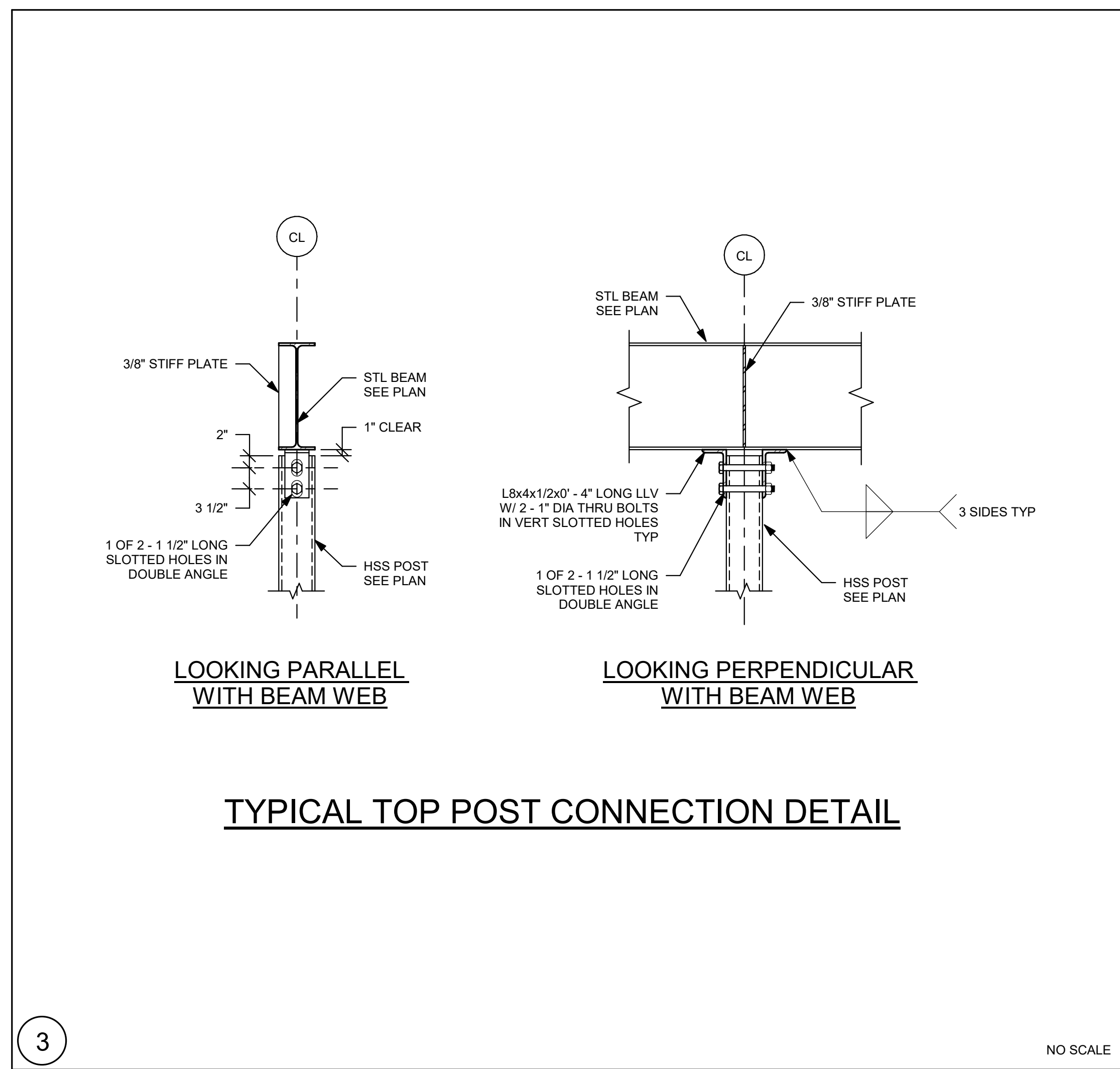
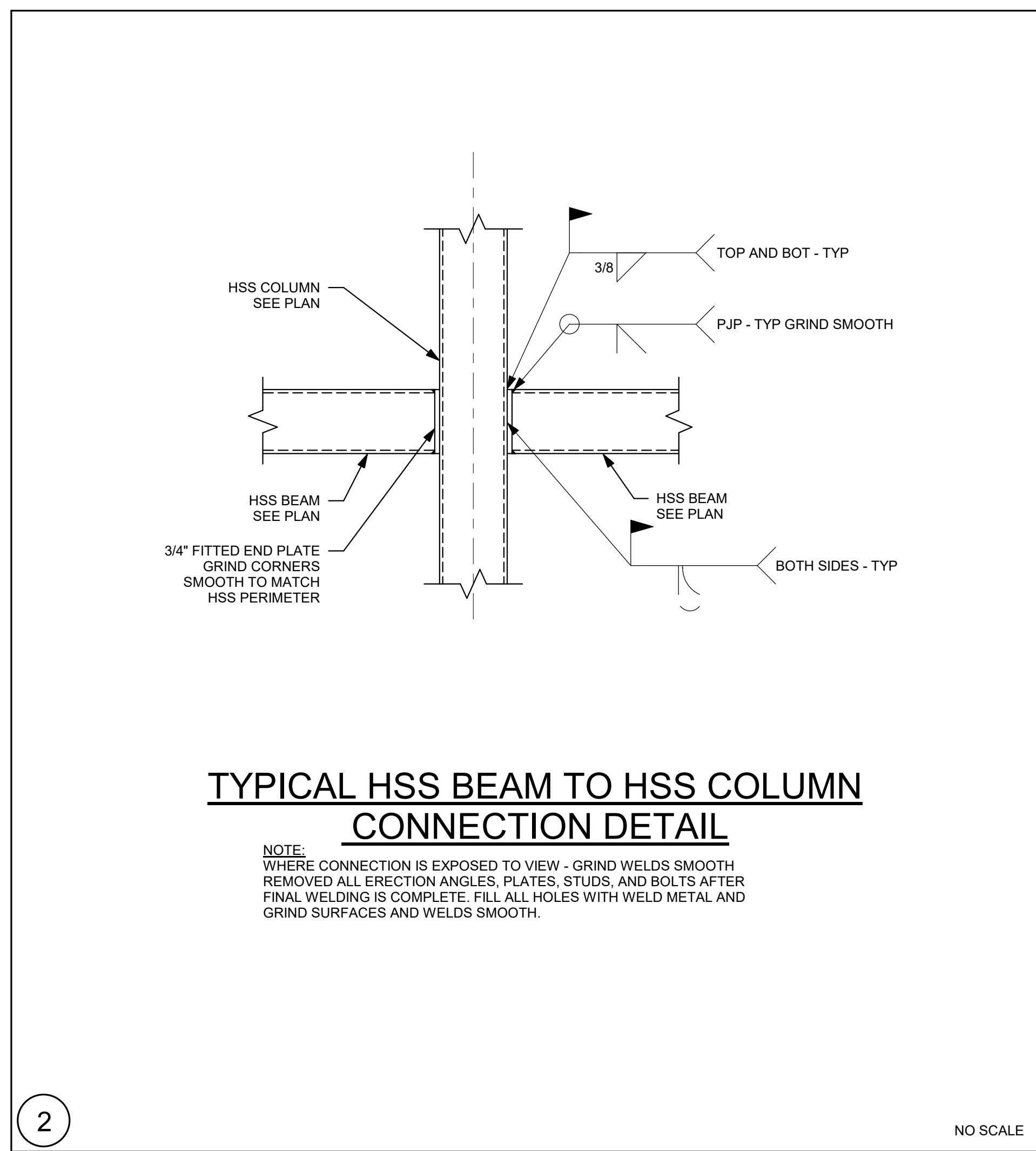
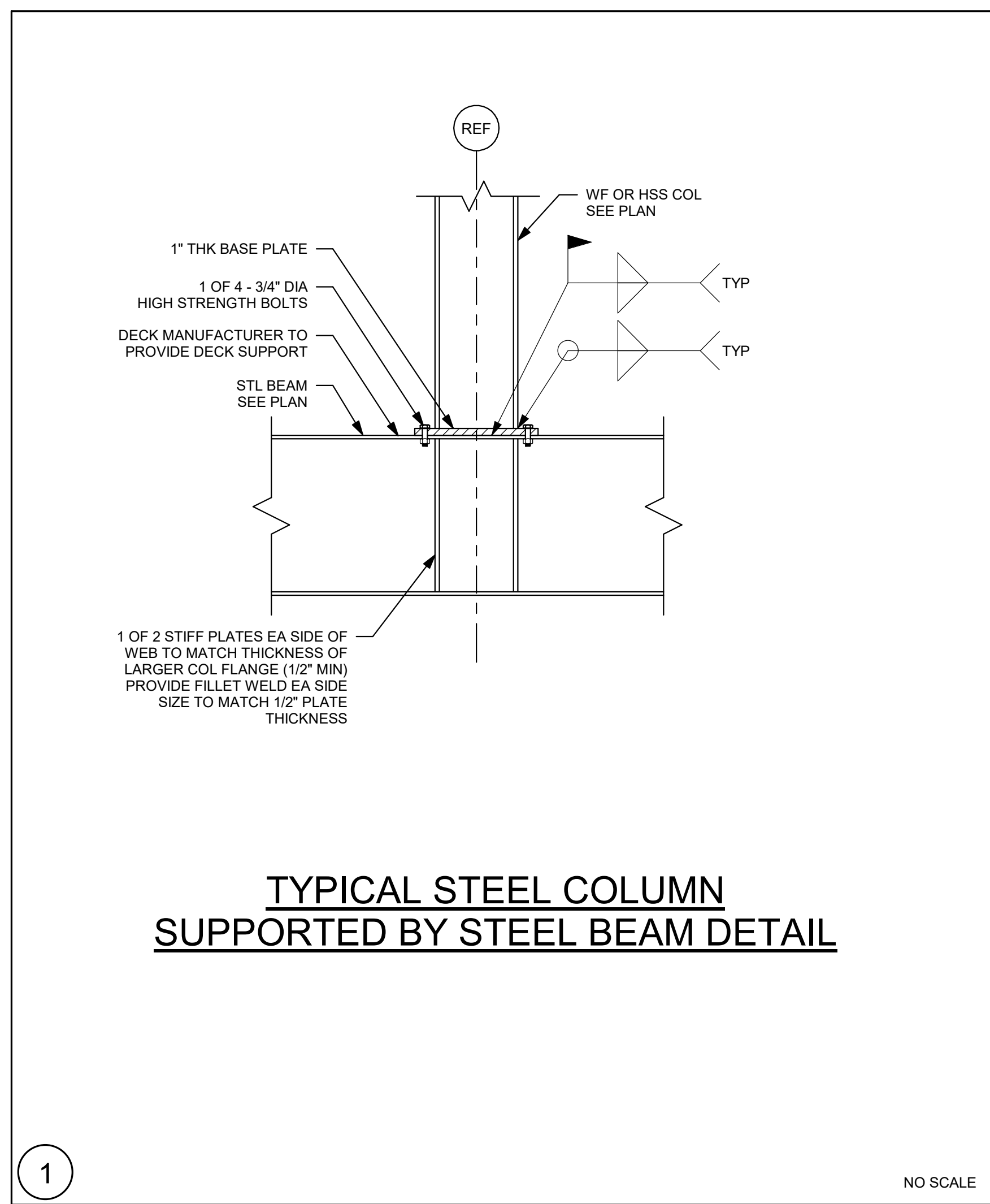
Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH, 2023

S0-0-6

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.



DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Planning Architecture Interior
Tel: 877.261.1100
www.draa.com

260 Charles Street
Studio 300
Waltham, MA 02453

NORTHEAST
METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021
DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

TYPICAL
DETAILS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S0-0-7



-



NOTE:
NO REINFORCING IS REQUIRED WHERE "L" IS LESS THAN 6" IN DIRECTION PERPENDICULAR TO DECK



- DRA**
- Drumme y Rosane Anderson, Inc.**
- | | |
|--|--|
| 225 Oakland Road
Studio 205
South Windsor, CT
06074 | 260 Charles Street
Studio 300
Waltham, MA
02453 |
|--|--|
- Planning Architecture Interior**
- Tel: 877.967.1700
www.draiv.com

**NORTHEAST
METRO TECH**

100 Hemlock Rd,
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM



TYPICAL ROOF HATCH, VENT, OR
SMOKE HATCH OPENING DETAIL



- NOTES:
- 1.) PROVIDE 2" MIN DECK BEARING.
 - 2.) ECCENTRIC CONNECTIONS TO STEEL FRAMING IS PROHIBITED. FRAME ROOF LADDER INTO TOP THIRD OF THE WEB OF THE STEEL BEAM. PROVIDE ADDITIONAL PIECE OF LADDER TO EXTEND ABOVE THE ROOF LEVEL AS REQUIRED BY ARCHITECTURAL DRAWINGS.



- | NOTES: | |
|--------|---|
| 1. | 7" CONCRETE SLAB WITH 3" DEEP X 16 GAGE, GALVANIZED COMPOSITE METAL DECK. |
| 2. | TOP OF SLAB ELEVATION VARIES WITH SLOPE OF DECK. MAINTAIN UNIFORM 6" SLAB THICKNESS |
| 3. | REFER TO PLANS FOR SLAB LOCATIONS. |
| 4. | REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR MECHANICAL UNIT TO STRUCTURE CONNECTION AND ADDITIONAL DETAILS. |
| 5. | COORDINATE SLAB OPENINGS WITH MECHANICAL DRAWINGS AND TYPICAL DETAILS. |
| 6. | PROVIDE 3/4" DIA X 5' LONG HEAVY SHEAR STUDS AT 2' O'C MIN UNLESS NOTED OTHERWISE. STUDS ARE NOT REQUIRED ON OPEN WEB STEEL JOISTS. |
| 7. | HOOK BARS AT RTU OPENINGS AND PROVIDE ADDITIONAL BARS AROUND OPENINGS PER TYPICAL DETAILS. PROVIDE GREATER THAN 2' O' REQUIRE STEEL BEAMS PER TYPE 2 ON DRAWING 1.04 DRAWING. |



TYPICAL MECH EQUIPMENT SUPPORT DETAIL

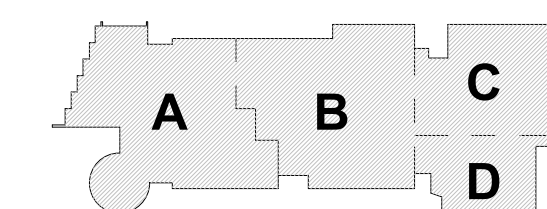
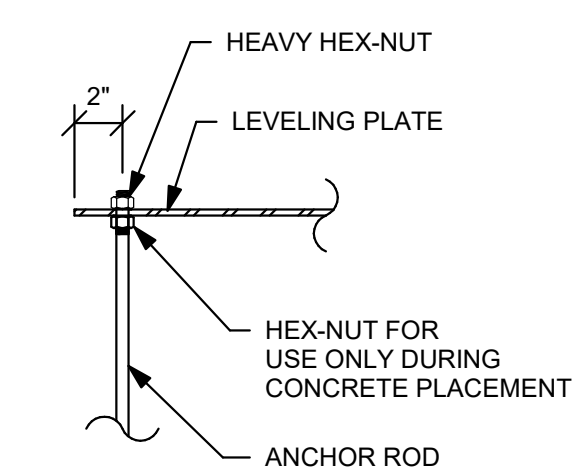
NOTE:
DETAIL APPLIES ONLY TO MECHANICAL EQUIPMENT THAT IS NOT SUPPORTED ON CONCRETE SLABS. REFER TO PLANS FOR SLAB LOCATIONS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR QUANTITY, SIZE, AND LOCATIONS OF ALL MECHANICAL EQUIPMENT.



NOTE:
SIMILAR AT RECTANGULAR BASE
PLATES AT BRACE FRAMES.

ANCHOR DETAIL

NOTE:
SIMILAR AT RECTANGULAR BASE
PLATES AT BRACE FRAMES.



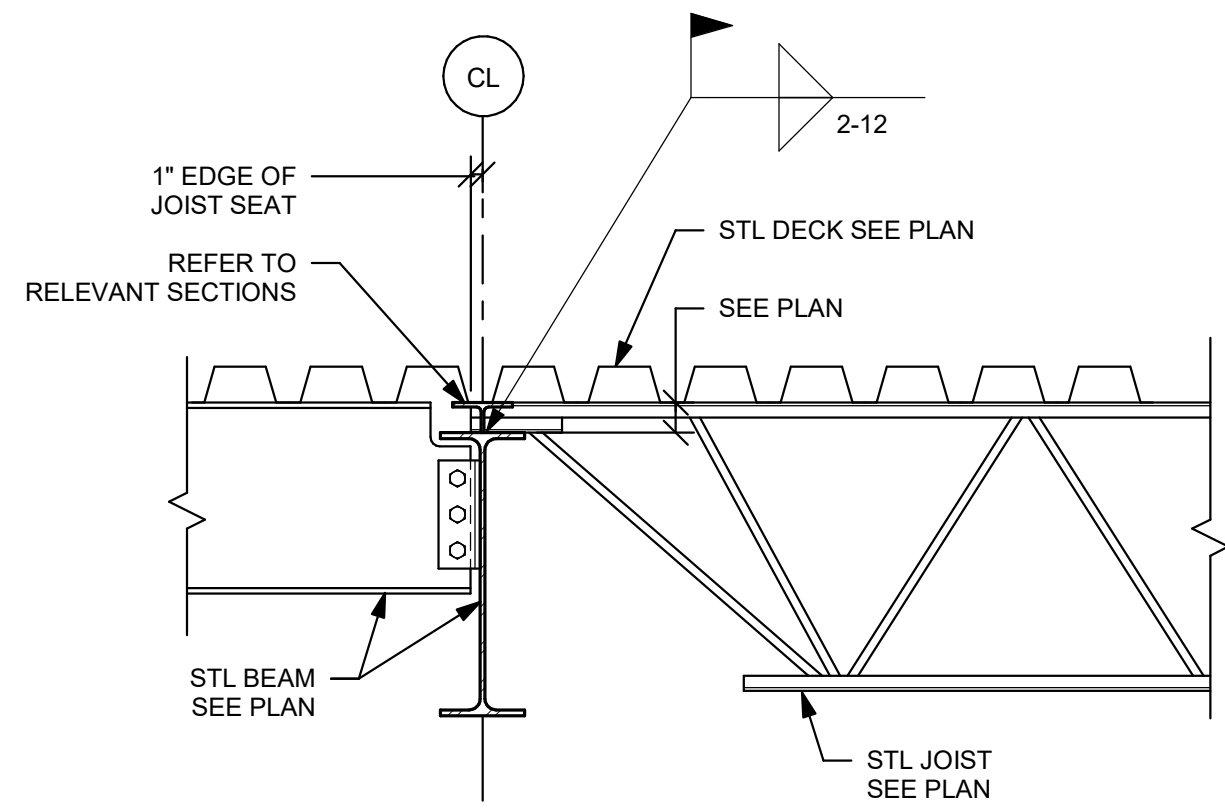
KEY PLAN

PROJECT NORTH	MAGNETIC NORTH
---------------	----------------

TYPICAL DETAILS

Scale: As indicated
Job No.: 20202
Drawn By: EDC
Date: FEBRUARY 24
2023

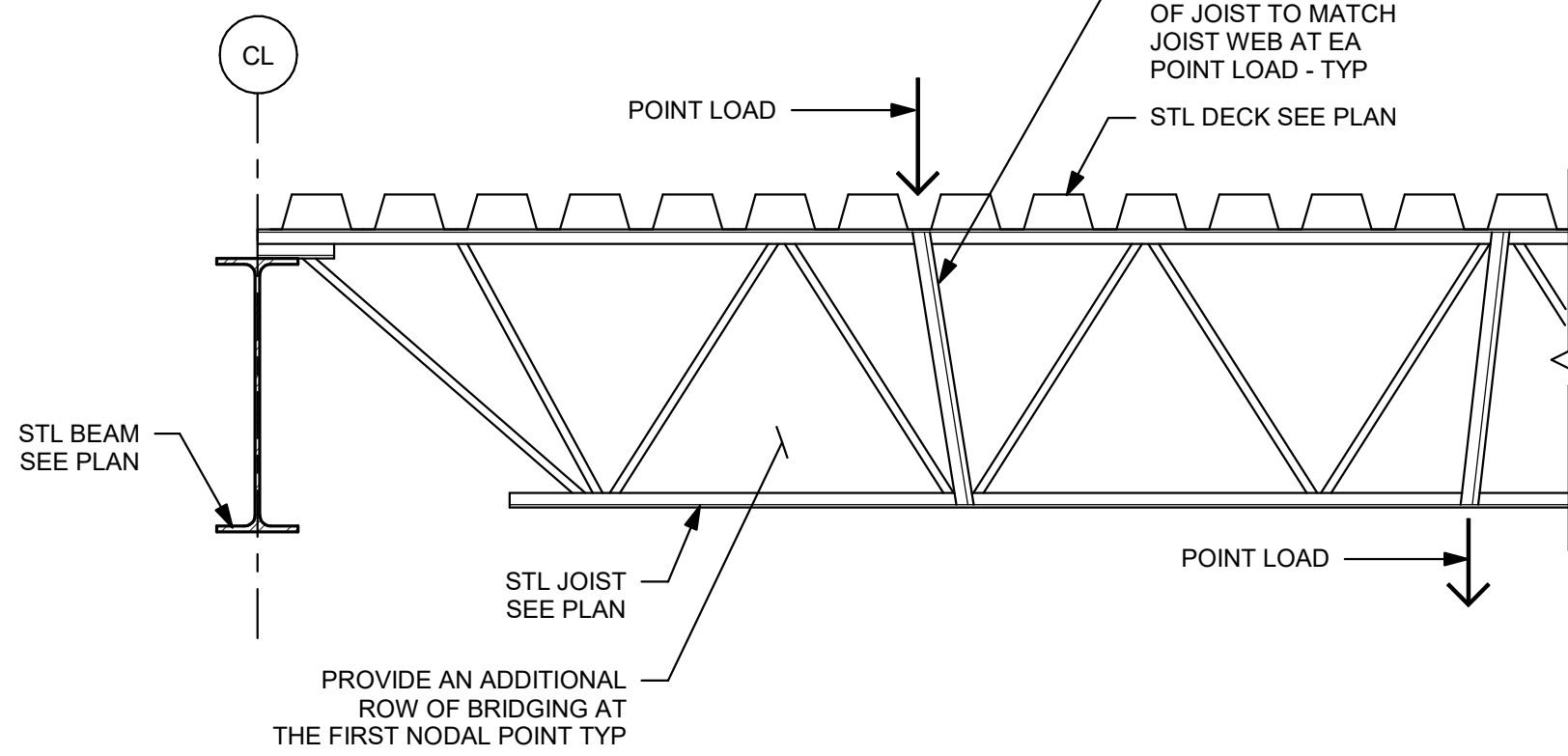
S0-0-8



**TYPICAL BEAM / JOIST
SUPPORT DETAIL AT ROOF**

1

NO SCALE

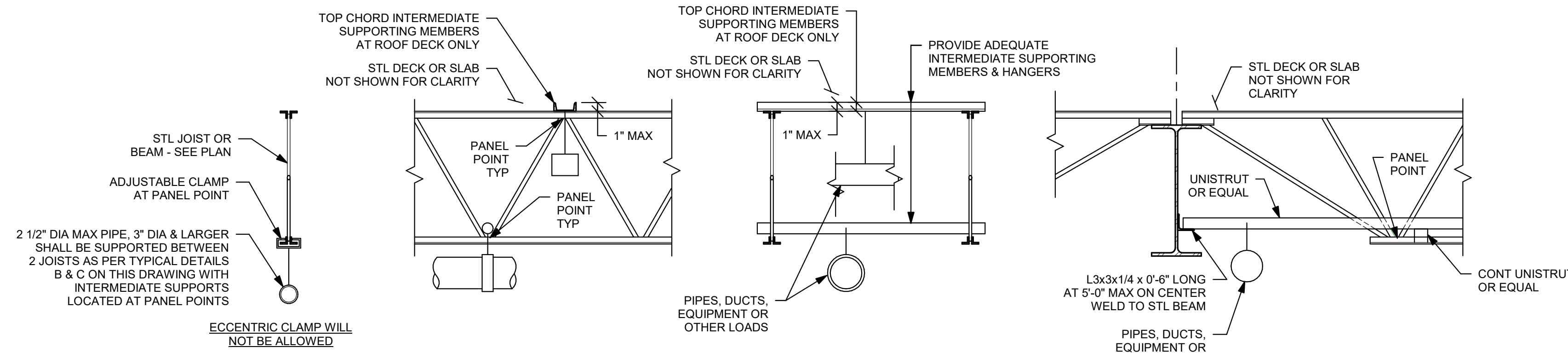


**TYPICAL JOIST BOTTOM AND TOP
CHORD REINFORCING DETAIL**

NOTE:
PROVIDE AT ALL CONDITIONS WHERE JOIST IS LOADED AT LOCATIONS OTHER THAN A PANEL POINT. COORDINATE WITH TRADES FOR EXACT LOCATIONS.

2

NO SCALE



DETAIL A

DETAIL B

DETAIL C

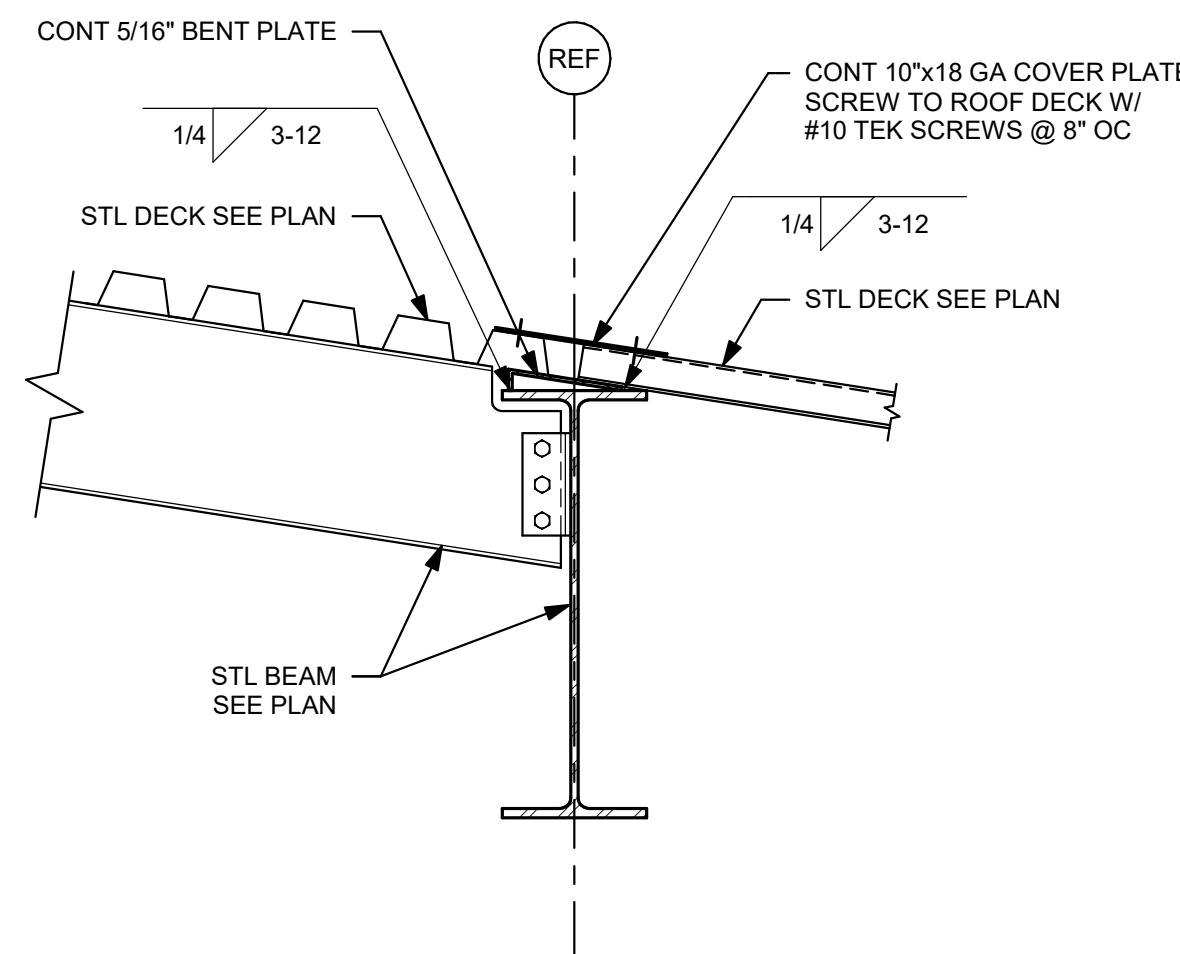
DETAIL D

TYPICAL JOIST LOADING METHOD DETAIL

NOTES:

- 1.) WHERE POSSIBLE ALL HANGERS SHALL BE SUSPENDED FROM WIDE FLANGE BEAMS.
- 2.) PIPES, DUCTS, FIXTURES, ETC. SHALL NOT BE HUNG FROM NEW OR EXISTING STEEL DECK OR EXISTING CONCRETE SLAB OR BRIDGING ANGLES.
- 3.) THE SUM OF ALL BUILDING TRADES HANGER LOADS SHALL NOT EXCEED 250 LBS. PER JOIST. WHEN THIS MAXIMUM IS EXCEEDED A DETAIL OF PROPOSED METHOD OF HANGING SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- 4.) HANGERS AND SUPPORTING MEMBERS SHALL BE LOCATED AT PANEL POINTS.
- 5.) PIPING WITH A 4" DIAMETER AND LARGER RUNNING PERPENDICULAR TO JOISTS SHALL BE SUPPORTED FROM EVERY JOIST.
- 6.) CONTRACTOR SHALL COORDINATE WITH ALL TRADES CONCERNED.
- 7.) USE THESE TYPICAL DETAILS WHERE APPLICABLE, UNLESS OTHERWISE SHOWN. FIELD MEASURE FOR SIZE OF EXISTING STRUCTURAL FRAMING.
- 8.) ALL ADDED UNISTRUTS, ANGLES, AND HANGERS TO BE SUPPLIED AND INSTALLED BY F.I.E.P. SUB-CONTRACTORS. REFER TO RELEVANT SPECIFICATIONS.
- 9.) REFER TO TYPICAL DETAIL 4 ON DRAWING S0-07 FOR ADDITIONAL REINFORCING WHEN HANGERS OR INTERMEDIATE SUPPORTING MEMBERS CAN NOT BE LOCATED AT PANEL POINT. ADDITIONAL REINFORCING SHALL BE SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR.

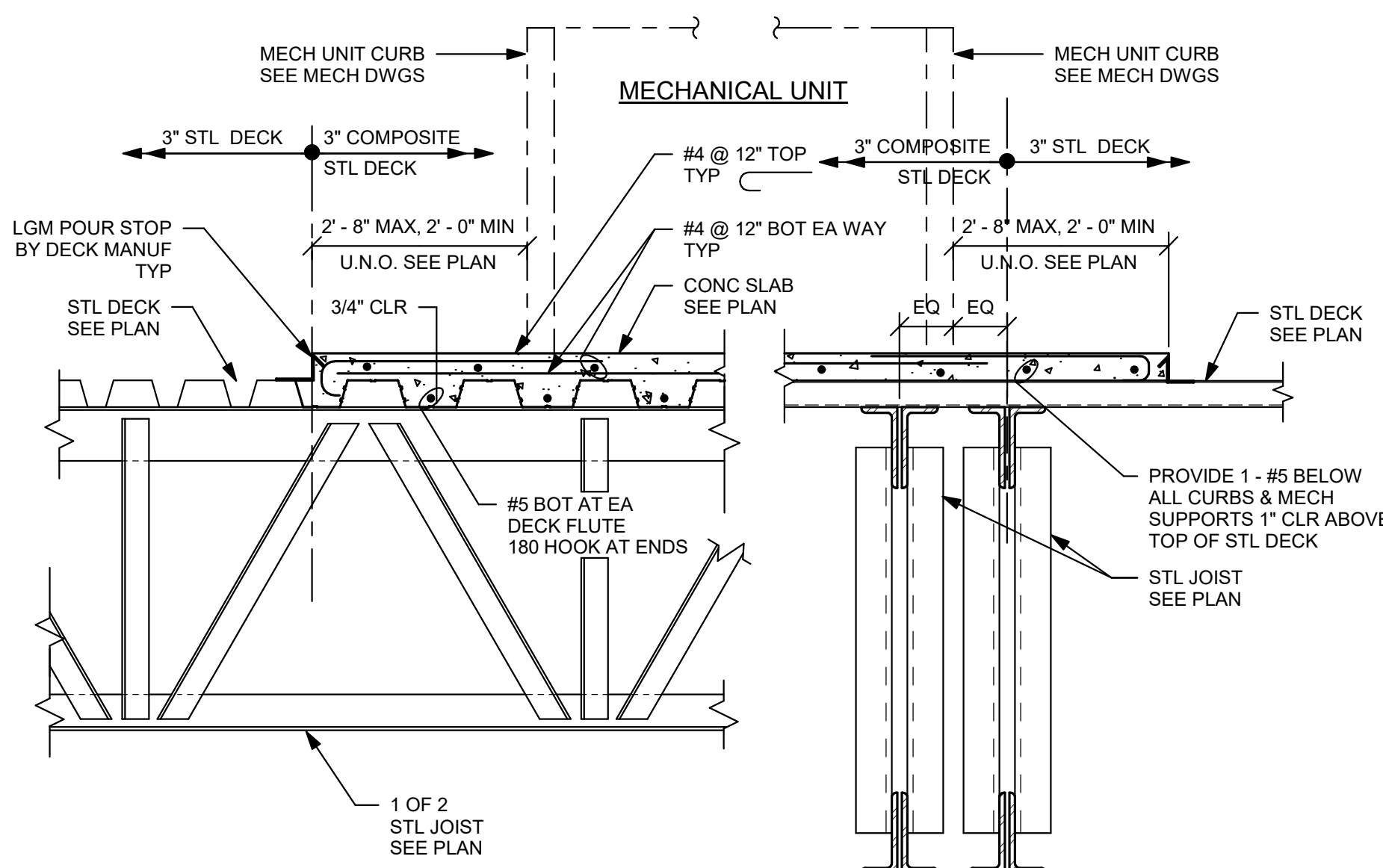
NO SCALE



**TYPICAL SLOPED DECK SUPPORT
AT STEEL BEAM DETAIL**

4

NO SCALE

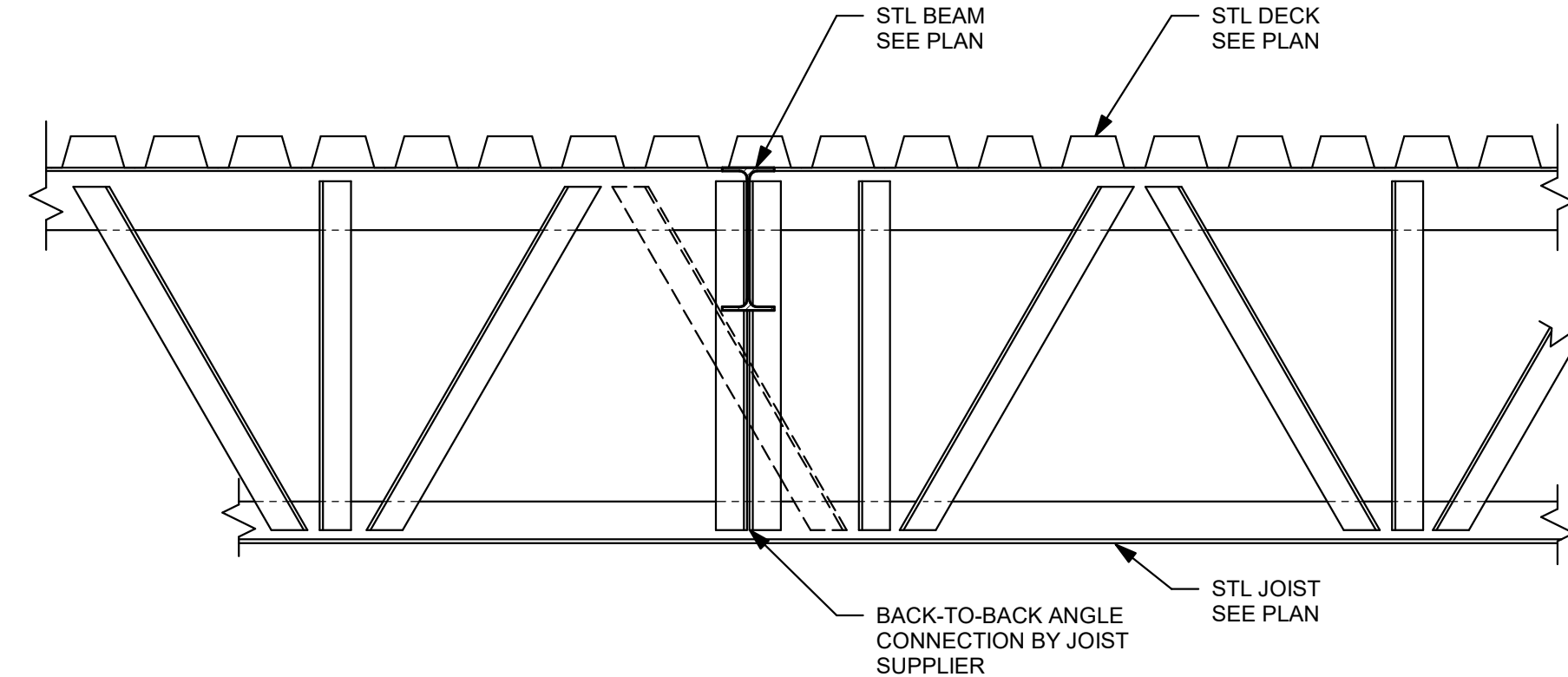


TYPICAL MECHANICAL UNIT ROOF SLAB

NOTES:

- 1.) 6" CONCRETE SLAB WITH 3" DEEP x 16 GAGE, GALVANIZED COMPOSITE METAL DECK.
- 2.) TOP OF SLAB ELEVATION VARIES WITH SLOPE OF DECK. MAINTAIN UNIFORM 6" SLAB THICKNESS.
- 3.) REFER TO PLANS FOR SLAB LOCATIONS.
- 4.) REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR MECHANICAL UNIT TO STRUCTURE CONNECTION AND ADDITIONAL DETAILS.
- 5.) COORDINATE SLAB OPENINGS WITH MECHANICAL DRAWINGS AND TYPICAL DETAILS.
- 6.) HOOK BARS AT RTU OPENINGS AND PROVIDE ADDITIONAL BARS AROUND OPENINGS PER TYPICAL DETAILS. OPENINGS GREATER THAN 2' - 0" REQUIRE STEEL BEAMS PER TYPE 2 ON DETAIL 1 ON DRAWING S0-0-8.

NO SCALE



**TYPICAL STEEL BEAM - TO - OPEN WEB
JOIST CONNECTION DETAIL**

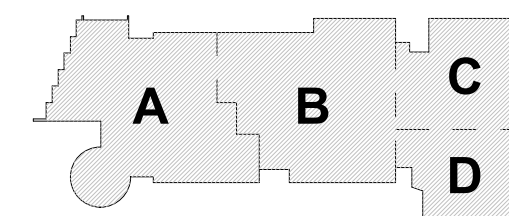
NOTES:

- 1.) COORDINATE DESIGN OF CONNECTION WITH STEEL BEAM REACTION TABLE ON S0-0-1.
- 2.) PROVIDE ADDITIONAL JOIST REINFORCEMENT FOR STEEL BEAMS NOT ALIGNED WITH PANEL POINTS AS REQUIRED. SEE DETAIL 2 ON S0-0-9 FOR ADDITIONAL INFORMATION.
- 3.) PROVIDE ADDITIONAL BRIDGING BETWEEN JOISTS AS REQUIRED.
- 4.) DO NOT SLOPE STEEL BEAM IF STEEL JOIST IS SLOPED. PROVIDE CONTINUOUS STEEL BENT PLATE ALONG STEEL BEAM AS REQUIRED FOR ADEQUATE DECK SUPPORT PER DETAIL 4 ON S0-0-9.

NO SCALE

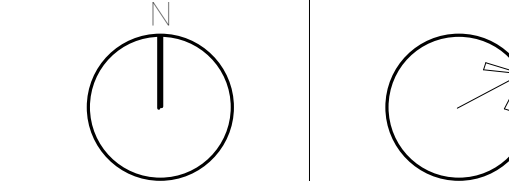
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**TYPICAL
DETAILS**

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S0-0-9

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects Interior
Tel: 877.221.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FOUNDATION NOTES:

- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE FIRST FLOOR LEVEL, EQUAL TO 163.50' ON THE SITE GRADING PLANS.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- F3 ETC., INDICATES A FOOTING TYPE. FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (X'-X") COMPUTED FROM A DATUM ELEVATION OF 100'-0" ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTORS FIELD LAYOUT.
- ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0.2.
- C1 ETC., INDICATES A COLUMN TYPE. FOR SIZE OF COLUMNS AND BASE PLATES SEE SCHEDULE ON THIS DRAWING.
- BOTTOM OF BASE PLATE ELEVATION TO BE 1'-11" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 1'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS "X" REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- INDICATES A DEPRESSIONED SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON DRAWING S0-0.2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 5 ON DRAWING S0-0.8 AND RELEVANT SECTIONS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.5, S4-0.6, S4-0.7, S4-0.8, AND S4-0.9 FOR ADDITIONAL INFORMATION.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS AND DETAIL 7 ON DRAWING S4-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.2.
- INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
- CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0.2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTINUOUS.

COLUMN SCHEDULE *		
MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1" x 16" x 1'-4"
C2	HSS8x8x1/2	1" x 16" x 1'-4"
C3	HSS12x12x3/8	1" x 20" x 1'-8"
C4	HSS12x12x1/2	1" x 20" x 1'-8"
C5	HSS12x12x5/8	1" x 20" x 1'-8"
C6	HSS12.75x500	1" x 20" x 1'-8"
C7	HSS20x12x1/2	1 1/2" x 20" x 2'-4"
C8	HSS8x8x3/8	1" x 16" x 1'-0"
C9	HSS16x500	1 1/2" x 24" x 2'-0"
C10	HSS12x6x1/2	1 1/2" x 20" x 1'-2"
C11	HSS10x500	1" x 16" x 1'-6"
C12	HSS8x8x3/8	1" x 14" x 1'-2"
C13	HSS6x6x3/8	1" x 12" x 1'-2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.

* PROVIDE 4 - 1" DIA F1554-5581 ANCHOR RODS TYPICALLY. REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACINGS.

FOOTING SCHEDULE F SERIES

MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6 - #5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7 - #5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-0"	8 - #5 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-0"	9 - #5 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10 - #5 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11 - #5 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-0"	12 - #5 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-0"	13 - #10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14 - #10 BOT EA WAY
FA	SEE PLAN x 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

FOOTING SCHEDULE G SERIES

MARK	SIZE	REINFORCEMENT
G4	4'-0" x 4'-0" x 2'-0"	5 - #5 BOT EA WAY
G5	5'-0" x 5'-0" x 2'-0"	6 - #5 BOT EA WAY
G6	6'-0" x 6'-0" x 2'-0"	7 - #5 BOT EA WAY
G7	7'-0" x 7'-0" x 2'-0"	8 - #5 BOT EA WAY
G8	8'-0" x 8'-0" x 2'-0"	9 - #5 BOT EA WAY
G9	9'-0" x 9'-0" x 2'-0"	10 - #7 BOT EA WAY
G10	10'-0" x 10'-0" x 2'-0"	11 - #7 BOT EA WAY
G11	11'-0" x 11'-0" x 2'-0"	12 - #8 BOT EA WAY
G12	12'-0" x 12'-0" x 3'-0"	13 - #8 BOT EA WAY
G13	13'-0" x 13'-0" x 3'-0"	14 - #9 BOT EA WAY
G14	14'-0" x 14'-0" x 3'-0"	15 - #9 BOT EA WAY
G15	15'-0" x 15'-0" x 3'-0"	16 - #9 BOT EA WAY
GA	SEE PLAN x 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

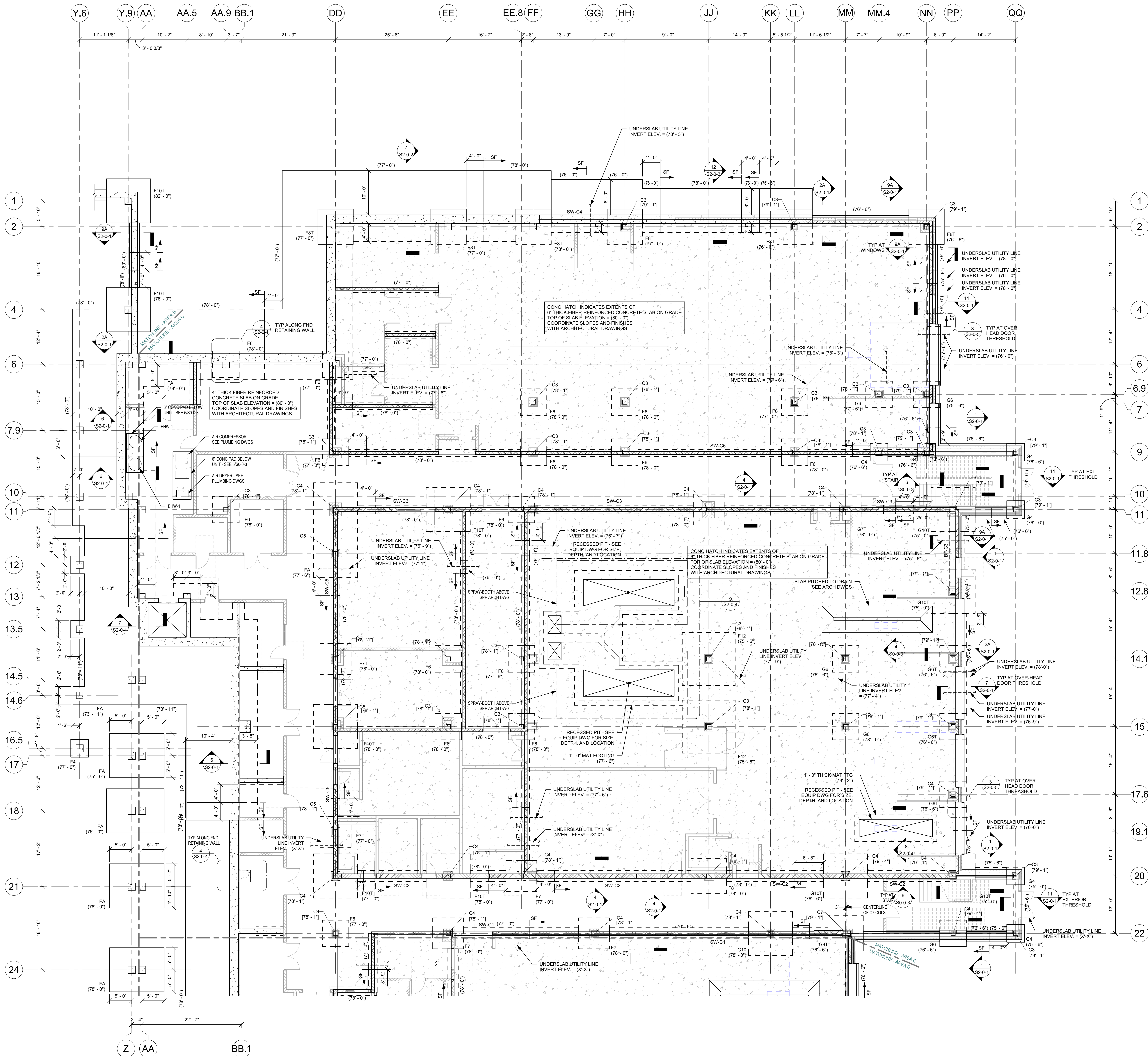
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

BRACE FRAME KEY

0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	WF	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL

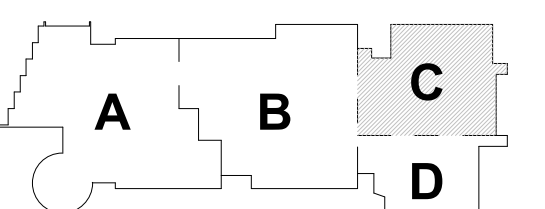
FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED. AS A ROUND HSS COLUMN, EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- BRACED FRAME SHOWN ALONG COLUMN GRID AA BETWEEN GRIDS 6 AND 11, SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING. ALL OTHER EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.



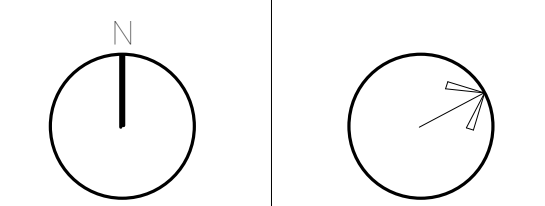
© COPYRIGHT 2021 DRUMMEYS ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



PROJECT NORTH

MAGNETIC NORTH



LOWER LEVEL FOUNDATION PLAN - AREA C

Scale: 1/8" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH, 2023

S1-1-0C

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FOUNDATION NOTES

- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE FIRST FLOOR LEVEL, EQUAL TO (163.50') ON THE SITE GRADING PLANS.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- FL ETC., INDICATES A FOOTING TYPE, FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (4'-1") COMPUTED FROM A DATUM ELEVATION OF 100'-0" ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTORS FIELD LAYOUT.
- ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- SF → INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0.2.
- C1 ETC., INDICATES A COLUMN TYPE, FOR SIZE OF COLUMNS AND BASE PLATES SEE SCHEDULE ON THIS DRAWING.
- BOTTOM OF BASE PLATE ELEVATION TO BE 1'-11" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (X'-X") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON DRAWING S0-0.2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0.8 AND RELEVANT SECTIONS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.5, S4-0.6, S4-0.7, S4-0.8, AND S4-0.9 FOR ADDITIONAL INFORMATION.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 5 ON DRAWING S0-0.5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL. FOR NON-STRUCTURAL WALLS, REFER TO RELEVANT SECTIONS FOR CONNECTIONS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.2.
- INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALLS. COORDINATE THE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
- CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0.2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTINUOUS.

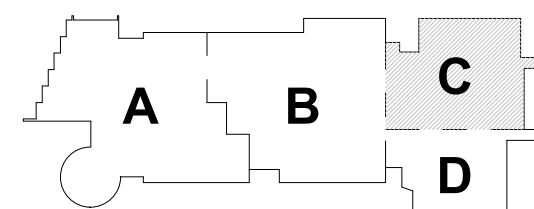
COLUMN SCHEDULE *		
MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1' x 16' x 1' - 4"
C2	HSS8x8x1/2	1' x 16' x 1' - 4"
C3	HSS12x12x3/8	1' x 20' x 1' - 8"
C4	HSS12x12x1/2	1' x 20' x 1' - 8"
C5	HSS12x12x5/8	1' x 20' x 1' - 8"
C6	HSS12.75x6.500	1' x 20' x 1' - 8"
C7	HSS20x12x1/2	1 1/2' x 20' x 2' - 4"
C8	HSS8x4x3/8	1' x 16' x 1' - 0"
C9	HSS16x6.500	1 1/2' x 24' x 2' - 0"
C10	HSS12x6x1/2	1 1/2' x 20' x 1' - 2"
C11	HSS10x6.500	1' x 18' x 1' - 6"
C12	HSS6x4x3/8	1' x 14' x 1' - 2"
C13	HSS6x4x3/8	1' x 12' x 1' - 2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.

* PROVIDE 4" - 1" DIA F1554-5551 ANCHOR RODS TYPICALLY REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

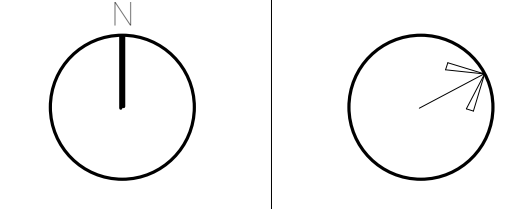
FOOTING SCHEDULE F SERIES		
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6 - #5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7 - #5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-0"	8 - #6 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-0"	9 - #6 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10 - #8 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11 - #9 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-6"	12 - #9 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-6"	13 - #10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14 - #10 BOT EA WAY
FA	SEE PLAN x 2' - 0"	#8 @ 12" OC TOP AND BOT EA WAY
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING		

FOOTING SCHEDULE G SERIES		
MARK	SIZE	REINFORCEMENT
G4	4'-0" x 4'-0" x 2'-0"	5 - #5 BOT EA WAY
G5	5'-0" x 5'-0" x 2'-0"	6 - #5 BOT EA WAY
G6	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY
G7	7'-0" x 7'-0" x 2'-0"	8 - #6 BOT EA WAY
G8	8'-0" x 8'-0" x 2'-0"	9 - #6 BOT EA WAY
G9	9'-0" x 9'-0" x 2'-6"	10 - #7 BOT EA WAY
G10	10'-0" x 10'-0" x 2'-6"	11 - #7 BOT EA WAY
G11	11'-0" x 11'-0" x 2'-6"	12 - #8 BOT EA WAY
G12	12'-0" x 12'-0" x 3'-0"	13 - #8 BOT EA WAY
G13	13'-0" x 13'-0" x 3'-0"	14 - #9 BOT EA WAY
G14	14'-0" x 14'-0" x 3'-0"	15 - #9 BOT EA WAY
G15	15'-0" x 15'-0" x 3'-0"	16 - #9 BOT EA WAY
GA	SEE PLAN x 2' - 0"	#8 @ 12" OC TOP AND BOT EA WAY
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING		



KEY PLAN

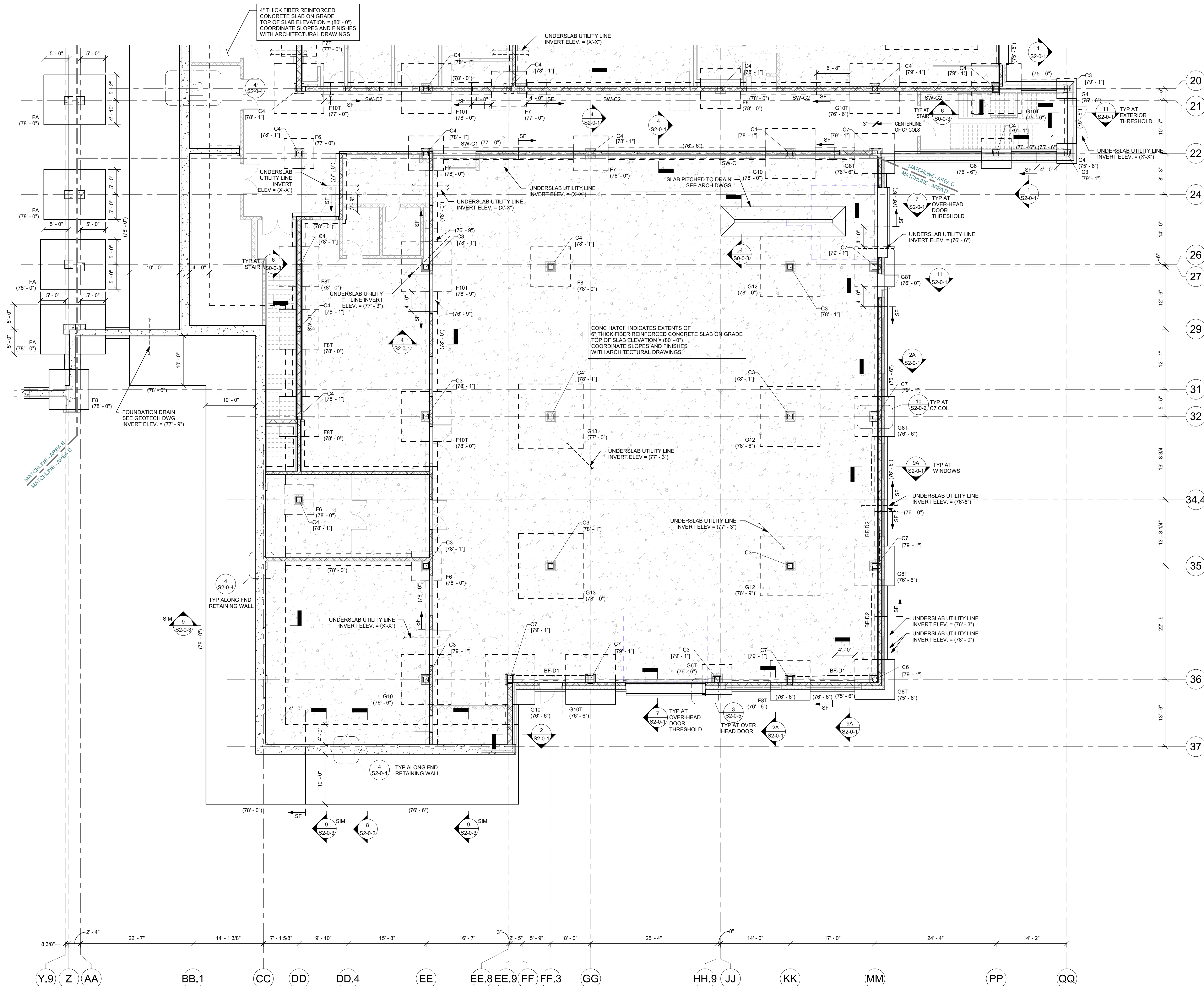
PROJECT NORTH MAGNETIC NORTH



LOWER LEVEL FOUNDATION PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-0D



- ### FIREPROOFING NOTES:
- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY		
0" TYP	WF	BF-X
0" TYP	BF-X	WF
0" TYP	WF	BF-X
0" TYP	BF-X	WF
INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL		
INDICATES A BRACE FRAME ABOVE LEVEL		
INDICATES A BRACE FRAME BELOW LEVEL		

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453
Tel: 877.221.1100
www.dra.com

NORTHEAST
METRO TECH

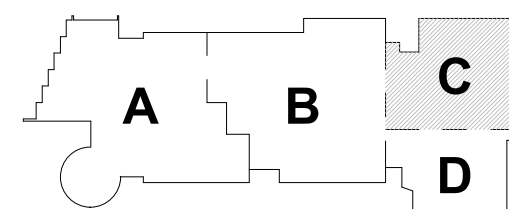
100 Hemlock Rd,
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

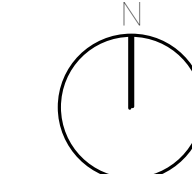
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

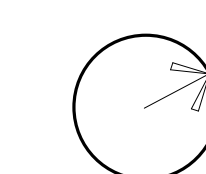


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



MEZZANINE
FLOOR FRAMING
PLAN - AREA C

Scale: 1/8" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH,
2023

S1-1-0MC

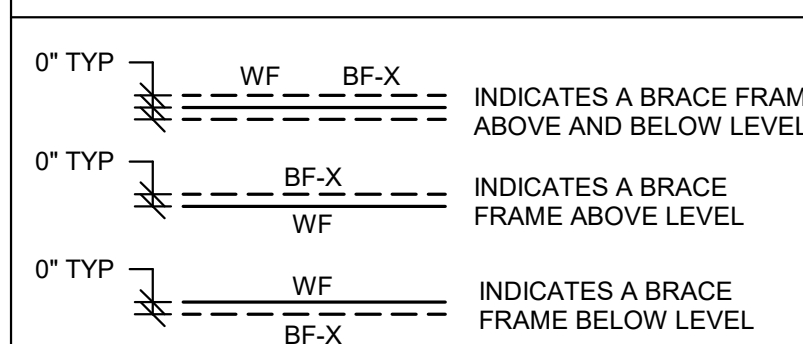
FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADSTUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- <X'> INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2.1xW2.1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 18/20 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2.1xW2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2.1xW2.1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 2' LONG HEADSTUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-4. FOR DECKING SUPPORT, REFER TO DETAIL 5 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-3 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XXXXX INDICATES OPENING IN WEB OF STEEL BEAM FOR MICH ELECT PLUMB/ FIRE PROTECT/ ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- BRACED FRAME SHOWN ALONG COLUMN GRID AA BETWEEN GRIDS 6 AND 11, SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING. ALL OTHER EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY



FRAMING ELEVATION NOTES:

- TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (8'-6") AT THE MEZZANINE FLOOR LEVELS, IN THE AREAS BOUNDED BY GRIDS (DD) - (EE) AND (J) - (K), AND GRIDS (DD) - (FF) AND (15) - (20).
- FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (8'-6"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FIT-ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC... INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 1, 2 AND 3 ON DRAWING S0-0-5.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X' > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2.1W2.1 WWR.
- 1'-12" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2.1W2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2.1W2.1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8 FOR DECKING SUPPORT. REFER TO DETAIL 8 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT, DETAIL 6 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 0/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX'xXX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-5 FOR ADDITIONAL INFORMATION.

FRAMING ELEVATION NOTES:

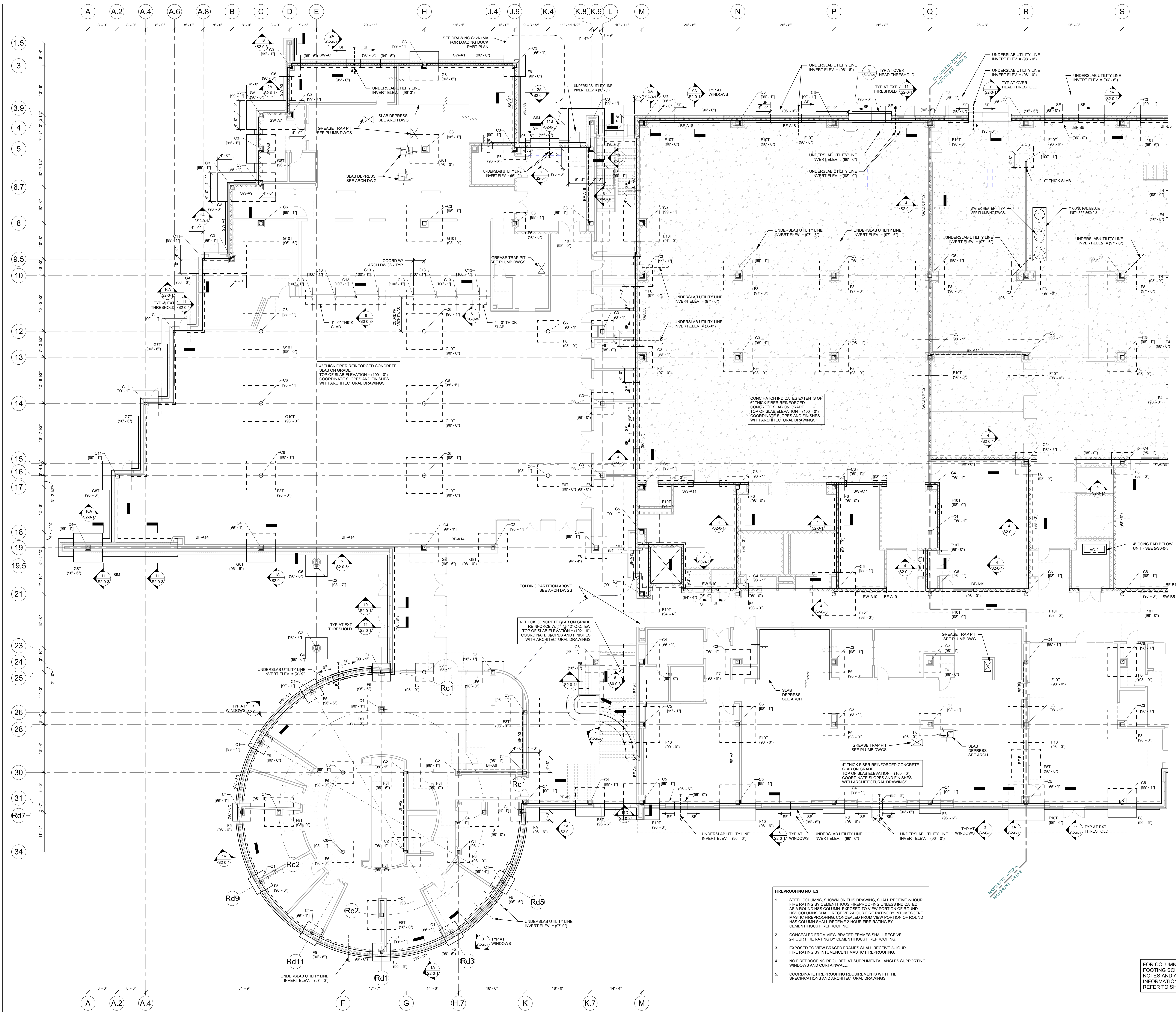
- TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (89' - 6") AT THE MEZZANINE FLOOR LEVELS. IN THE AREA BOUNDED BY GRID (CC) - (EE) AND (22) - (36).
- FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (88' - 6"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY

- | | | | |
|--------|------|------|--|
| 0' TYP | WF | BF-X | INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL. |
| 0' TYP | BF-X | WF | INDICATES A BRACE FRAME ABOVE LEVEL. |
| 0' TYP | WF | BF-X | INDICATES A BRACE FRAME BELOW LEVEL. |



DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Planning Architecture Interior
Tel: 877.221.1100
www.dra.com

260 Charles Street
Studio 300
Waltham, MA 02453

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021
DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

A

B

C

D

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

FIRST FLOOR
FOUNDATION
PLAN - AREA A

FOR COLUMN SCHEDULE,
FOOTING SCHEDULE, PLAN
NOTES AND ADDITIONAL
INFORMATION NOT SHOWN,
REFER TO SHEET S1-1-B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S1-1-1A

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning Architectural Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

- FOUNDATION NOTES:**
- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE FIRST FLOOR LEVEL, EQUAL TO (163.50) ON THE SITE GRADING PLANS.
 - FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
 - F3 ETC., INDICATES A FOOTING TYPE, FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
 - TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (X'-Y) COMPUTED FROM A DATUM ELEVATION OF 100'-0" ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTORS FIELD LAYOUT.
 - ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
 - ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
 - SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0.2.
 - C1 ETC., INDICATES A COLUMN TYPE, FOR SIZE OF COLUMNS AND BASE PLATES SEE SCHEDULE ON THIS DRAWING.
 - BOTTOM OF BASE PLATE ELEVATION TO BE 1'-11" MINIMUM BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (XX'-XX") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
 - FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
 - INDICATES A DEPRESSIONED SLAB ON GRADE. REFER TO DETAILS 9 AND 10 ON DRAWING S0-0.2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
 - FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0.8 AND RELEVANT SECTIONS.
 - BF-1 ETC., INDICATES A BRACED BAY, REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.3, S4-0.4, S4-0.7, S4-0.8, AND S4-0.9 FOR ADDITIONAL INFORMATION.
 - INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT, DETAIL 6 ON DRAWING S0-0.3 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
 - FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
 - INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.2.
 - INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE PIER. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
 - CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0.2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTINUOUS.

COLUMN SCHEDULE *

MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1' x 16' x 1'-4"
C2	HSS8x8x1/2	1' x 16' x 1'-4"
C3	HSS12x12x3/8	1' x 20' x 1'-8"
C4	HSS12x12x1/2	1' x 20' x 1'-8"
C5	HSS12x12x5/8	1' x 20' x 1'-8"
C6	HSS12.75x12.75	1' x 20' x 1'-8"
C7	HSS20x12x1/2	1 1/2' x 20' x 2'-4"
C8	HSS8x4x3/8	1' x 16' x 1'-0"
C9	HSS16x10.500	1 1/2' x 24' x 2'-0"
C10	HSS12x6x1/2	1 1/2' x 20' x 1'-2"
C11	HSS10x10.500	1' x 16' x 1'-6"
C12	HSS8x6x3/8	1' x 14' x 1'-2"
C13	HSS8x4x3/8	1' x 12' x 1'-2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.

* PROVIDE 4 - 1" DIA F1554-55S1 ANCHOR RODS TYPICALLY. REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

FOOTING SCHEDULE F SERIES

MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 2'-0"	6 - #5 BOT EA WAY
F5	5'-0" x 5'-0" x 2'-0"	7 - #5 BOT EA WAY
F6	6'-0" x 6'-0" x 2'-0"	8 - #6 BOT EA WAY
F7	7'-0" x 7'-0" x 2'-0"	9 - #6 BOT EA WAY
F8	8'-0" x 8'-0" x 3'-0"	10 - #8 BOT EA WAY
F9	9'-0" x 9'-0" x 3'-0"	11 - #9 BOT EA WAY
F10	10'-0" x 10'-0" x 3'-0"	12 - #9 BOT EA WAY
F11	11'-0" x 11'-0" x 3'-0"	13 - #10 BOT EA WAY
F12	12'-0" x 12'-0" x 4'-0"	14 - #10 BOT EA WAY
FA	SEE PLAN x 2'-0"	#8 @ 12"OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

FOOTING SCHEDULE Q SERIES

MARK	SIZE	REINFORCEMENT
G4	4'-0" x 4'-0" x 2'-0"	5 - #5 BOT EA WAY
G5	5'-0" x 5'-0" x 2'-0"	6 - #5 BOT EA WAY
G6	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY
G7	7'-0" x 7'-0" x 2'-0"	8 - #6 BOT EA WAY
G8	8'-0" x 8'-0" x 2'-0"	9 - #6 BOT EA WAY
G9	9'-0" x 9'-0" x 2'-0"	10 - #7 BOT EA WAY
G10	10'-0" x 10'-0" x 2'-0"	11 - #7 BOT EA WAY
G11	11'-0" x 11'-0" x 2'-0"	12 - #8 BOT EA WAY
G12	12'-0" x 12'-0" x 3'-0"	13 - #9 BOT EA WAY
G13	13'-0" x 13'-0" x 3'-0"	14 - #9 BOT EA WAY
G14	14'-0" x 14'-0" x 3'-0"	15 - #9 BOT EA WAY
G15	15'-0" x 15'-0" x 3'-0"	16 - #9 BOT EA WAY
GA	SEE PLAN x 2'-0"	#8 @ 12"OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

BRACE FRAME KEY

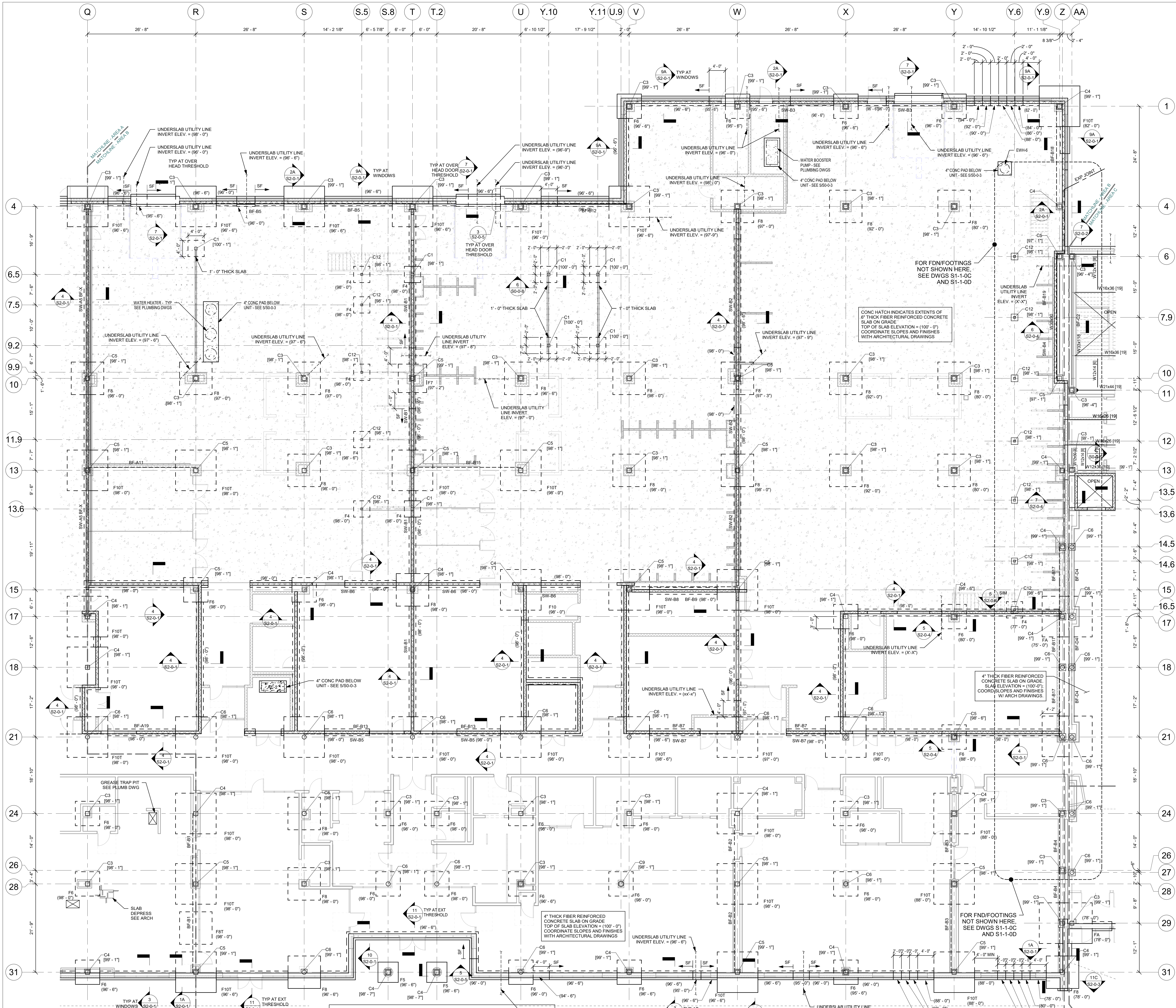
0" TYP
WF
BF-X
INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL

0" TYP
WF
BF-X
INDICATES A BRACE FRAME ABOVE LEVEL

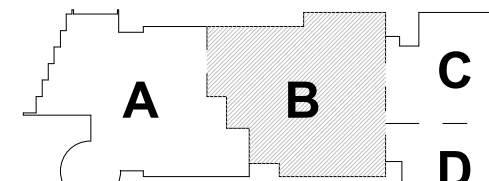
0" TYP
WF
BF-X
INDICATES A BRACE FRAME BELOW LEVEL

FIREPROOFING NOTES:

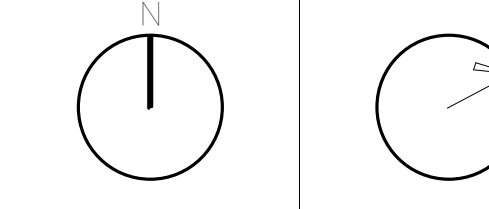
- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- NO FIREPROOFING REQUIRED AT COLUMNS AT GRIDS Y-10-6.5, Y-11-6.5, Y-10-9.2, AND Y-11-9.2 OR AT THE HSS TUBES FRAMING INTO THEM.
- STEEL COLUMNS SUPPORTING THE PLYWOOD MEZZANINES ALONG COLUMN GRIDS S.5 AND T.1 AND GRIDS Y.6 SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL ANGLES SUPPORTING WINDOWS AND CURTAINWALL.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.



EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



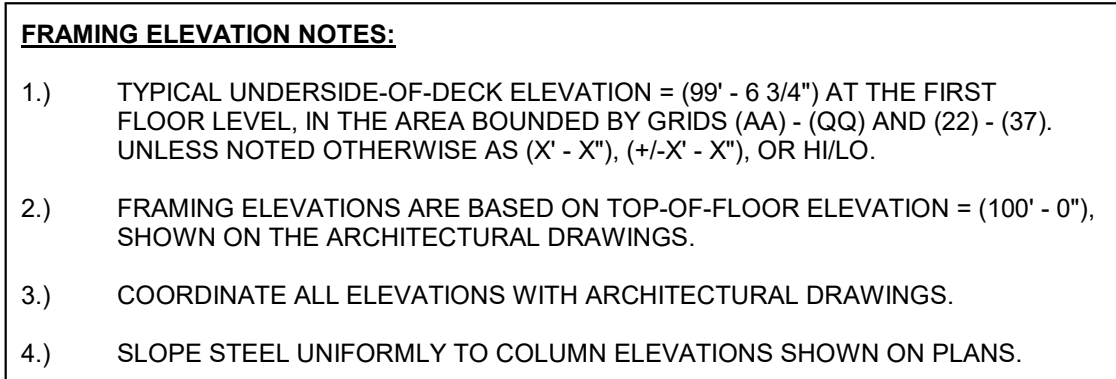
PROJECT NORTH
MAGNETIC NORTH



FIRST FLOOR FOUNDATION PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-1B



- * BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0-8 AND S4-0-9 FOR ADDITIONAL INFORMATION.
- * PROVIDE 4 - 1" DIA F1554-55S1 ANCHOR RODS TYPICALLY. REFER TO DETAILS ON DRAWING S4-0-8 AND S4-0-9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN JOINTS TO BE CONSIDERED TO THE JOINTS OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. BUILT-UP COLUMNS ALONG JOINTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
4. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
5. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
6. AT STAIRS 4, 6, AND 7 ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
7. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT THE VOCATIONAL OVERHEAD DOOR.
8. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT STOREFRONT, CURTAINWALL, AND FIBERGLASS PANEL HEADS.
9. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- | NAMING NOTES | |
|--------------|--|
| 1) | FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS 300-1, 300-2, 300-3, 300-4, 300-5, 300-6, 300-7 AND 300-8. |
| 2) | FOR ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS OF EACH STEEL UNIFORMITY, TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN BY THE ARCHITECTURAL DRAWINGS. |
| 3) | BF1- CT1, INDICATES A BRACE BY REFER TO BRACE FRAME ELEVATIONS. DETAIL 9 ON DRAWING 300-1, 300-2, 300-3, 300-4, 300-5, 300-6, 300-7 AND 300-8 FOR ADDITIONAL INFORMATION. |
| 4) | [XX] INDICATES THE NUMBER OF 3/4" DIAMETER X 4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS BETWEEN, ALONG THE BEAM UNLESS NOTED OTHERWISE. |
| 5) | INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE BEAM. REFER TO TYPICAL DETAILS 7.8 AND 9 ON DRAWING 300-6. |
| 6) | ● INDICATES A 5/16" FLAT WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK TEE PLATE TIE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING 300-7. |
| 7) | < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER. |
| 8) | < 1/4" > INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 2" THICK, 20 GAUGE REINFORCED CONCRETE TOPPING. TOTAL THICKNESS = 5 1/2" REINFORCE WITH 6#6 - W2 XW21 WWR. REFER TO TYPICAL DETAIL 1 ON DRAWING 300-7. |
| 9) | 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAUGE TYPE B, GALVANIZED STEEL ROOF DECK. |
| 10) | 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAUGE TYPE NCAS, GALVANIZED CELLULAR ACQUSTIC STEEL ROOF DECK. |
| 11) | 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 2" THICK, 20 GAUGE REINFORCED CONCRETE TOPPING. TOTAL THICKNESS = 4" REINFORCE WITH 6#6 - W2 XW21 WWR. REFER TO TYPICAL DETAIL 1 ON DRAWING 300-7. |
| 12) | FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING 300-8. |
| 13) | HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 2" THICK, 20 GAUGE REINFORCED CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6#6 - W2 XW21 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING 300-7 FOR ADDITIONAL INFORMATION. |
| 14) | ⊗ INDICATES A ROOF DRAIN REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING 300-8 AND DETAIL 1 ON DRAWING 300-8. FOR DECKING SUPPORT REFER TO DETAIL 4 ON DRAWING 300-8. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS. |
| 15) | CT INDICATES A COLUMN TERMINATES AT THIS LEVEL. |
| 16) | WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING 300-6. |
| 17) | INDICATES A CMI WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING 300-4 FOR REINFORCEMENT. DETAIL 8 ON DRAWING 300-4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 9 ON DRAWING 300-4 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO DETAIL 9 ON DRAWING 300-4 FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE. |



Engineers Design Group Inc.
Structural Engineers
19 Main Street, Suite 401
Salem, MA 02148
(617)396-9007
EDG@EDGINC.COM

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architectural Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.1, S4-0.2, S4-0.3, S4-0.4, S4-0.5, S4-0.6, S4-0.7 AND S4-0.8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0.6.
- INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0.7.
- < X' > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2 1xW2.1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE 1 GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2 1xW2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0.8.
- 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4" REINFORCE WITH 6x6 - W2 1xW2.1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0.07 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0.4 AND DETAIL 1 ON DRAWING S0-0.4 FOR DECKING SUPPORT. REFER TO DETAIL 6 ON DRAWING S0-0.7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0.7.
- OR OR INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0.6.
- 9'16" INDICATES SPAN DIRECTION OF 9'16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX'xXX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0.4 FOR ADDITIONAL INFORMATION.

COLUMN SCHEDULE *		
MARK	SIZE	BASE PLATE SIZE
C1	HSS8x8x3/8	1" x 16" x 1" - 4"
C2	HSS8x8x1/2	1" x 16" x 1" - 4"
C3	HSS12x12x3/8	1" x 20" x 1" - 8"
C4	HSS12x12x1/2	1" x 20" x 1" - 8"
C5	HSS12x12x5/8	1" x 20" x 1" - 8"
C6	HSS12.75x500	1" x 20" x 1" - 8"
C7	HSS20x12x1/2	1 1/2" x 20" x 2" - 4"
C8	HSS8x4x3/8	1" x 16" x 1" - 0"
C9	HSS18x60.500	1 1/2" x 24" x 2" - 0"
C10	HSS12x6x1/2	1 1/2" x 20" x 1" - 2"
C11	HSS10x500	1" x 18" x 1" - 6"
C12	HSS6x6x3/8	1" x 14" x 1" - 2"
C13	HSS6x4x3/8	1" x 12" x 1" - 2"

* BASE PLATE LENGTH AND WIDTH SPECIFIED IN SCHEDULE IS THE MINIMUM SIZE FOR A COLUMN THAT IS PART OF A BRACED FRAME. SEE FOUNDATION NOTE ABOVE AND REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL INFORMATION.
* PROVIDE 4 - 1" DIA F155A-5551 ANCHOR RODS TYPICALLY REFER TO DETAILS ON DRAWING S4-0.8 AND S4-0.9 FOR ADDITIONAL ANCHOR RODS FOR COLUMN RECEIVING BRACING.

FOOTING SCHEDULE F SERIES		
MARK	SIZE	REINFORCEMENT
F4	4' - 0" x 4' - 0" x 2' - 0"	6 - #5 BOT EA WAY
F5	5' - 0" x 5' - 0" x 2' - 0"	7 - #5 BOT EA WAY
F6	6' - 0" x 6' - 0" x 2' - 6"	8 - #5 BOT EA WAY
F7	7' - 0" x 7' - 0" x 2' - 6"	9 - #5 BOT EA WAY
F8	8' - 0" x 8' - 0" x 3' - 0"	10 - #5 BOT EA WAY
F9	9' - 0" x 9' - 0" x 3' - 0"	11 - #9 BOT EA WAY
F10	10' - 0" x 10' - 0" x 3' - 6"	12 - #9 BOT EA WAY
F11	11' - 0" x 11' - 0" x 3' - 6"	13 - #10 BOT EA WAY
F12	12' - 0" x 12' - 0" x 4' - 0"	14 - #10 BOT EA WAY
FA	SEE PLAN x 2' - 0"	#8 @ 12" OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

BRACE FRAME KEY

0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	WF	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL

FIREPROOFING NOTES:

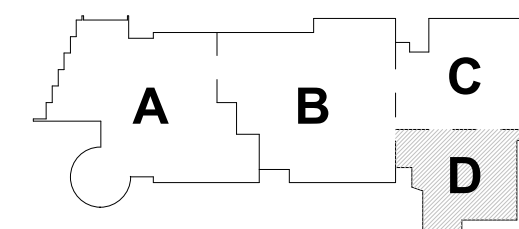
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID B6.1. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. BUILT-UP COLUMNS ALONG GRID B6.1 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 3, 5, AND 6, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT THE VOCATIONAL OVERHEAD DOORS.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES LOCATED AT STOREFRONT, CURTAINWALL, AND FIBERGLASS PANEL HEADS.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (89' - 6 3/4") AT THE FIRST FLOOR LEVEL. IN THE AREA BOUNDED BY GRIDS (BB) - (MM) AND (22) - (37), UNLESS NOTED OTHERWISE AS (< X' - X' >), (< X' - X' >), OR H/LO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (100' - 0"). SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

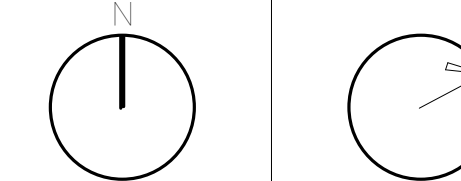
© COPYRIGHT 2021 DRUMSEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

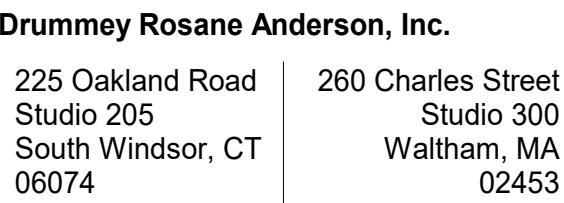
PROJECT NORTH MAGNETIC NORTH



FIRST FLOOR FOUNDATION PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-1D



Planning Architecture Interior
Design
Tel: 617.964.1700
www.draaws.com

**NORTHEAST
METRO TECH**

100 Hemlock Rd,
Wakefield, MA 01880



FRAMING ELEVATION NOTES:

- 1.) TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = (10'-6") AT THE MEZZANINE FLOOR LEVEL. IN THE AREA BOUNDED BY GRIDS (M) - (Q) AND (17) - (21).
- 2.) FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = (10'-6"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 3.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

FOR GENERAL NOTES AND SYMBOLS, DETAILS SEE DRAWINGS
 00-01, 50-0-2, 50-0-3, 50-0-4, 50-0-5, 50-0-6, 50-0-7 AND 50-0-8

2) REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. MATCH ALL STEEL UNIFORM TO LOW POINTS ON THE COLUMNS AND BEAM BENTS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.

3) B1 & ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS 50-0-1, 50-0-2, 50-0-3, 50-0-4, 50-0-5, 50-0-6, 50-0-7 AND 50-0-8 FOR ADDITIONAL INFORMATION.

4) [X]X INDICATES THE NUMBER OF 3/4" DIAMETER X 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EQUALLY ALONG THE BEAM, UNLESS NOTED OTHERWISE.

5) INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER REFER TO TYPICAL DETAIL 5.7 OR 6 ON DRAWING 50-0-7.

6) INDICATES A 5/16" FLEET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO BE WELDED ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING 50-0-7.

7) < X'> INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.

8) 5" x 14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GA. GALVANIZED COMPOSITE STEEL DECK WITH X 1 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#5 - W2 14W12 1 WWR.

9) INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GA. GALVANIZED STEEL ROOF DECK.

10) NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GA. TYPE 304, GALVANIZED COMPOSITE STEEL ROOF DECK.

11) INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GA. GALVANIZED COMPOSITE STEEL DECK WITH X 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#5 - W2 14W12 1 WWR.

12) LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GA. GALVANIZED COMPOSITE STEEL DECK WITH X 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#5 - W2 14W12 1 WWR.

13) FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL, DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 5.7 AND 5.8 ON DRAWING 50-0-7.

14) HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GA. GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6#5 - W2 14W12 1 WWR. REFER TO TYPICAL DETAIL 5.8 ON DRAWING 50-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 5' LONG HEADED STUDS.

15) INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAIL 1 AND 2 ON DRAWING 50-0-7 FOR CONNECTIONS TO STEEL BEAMS. FOR DESIGN SUPPORT, REFER TO DETAIL 6, ON DRAWING 50-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.

16) CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.

17) INDICATES A BEND IN THE STEEL. BEAM, DETAIL TO 8 ON DRAWING 50-0-7.

18) OR OR INDICATES A CURV WELD. REFER TO TYPICAL DETAIL 8 ON DRAWING 50-0-7 FOR REINFORCEMENT. DETAIL 6 ON DRAWING 50-0-8 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS. DETAIL 5 ON DRAWING 50-0-8 FOR CONNECTION OF STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL. FOR NON-STRUCTURAL WALLS, REFER TO RELEVANT DETAILS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.

19) 8" x 2" POCK PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.

20) 10" x 2" POCK PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.

21) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.

22) INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.

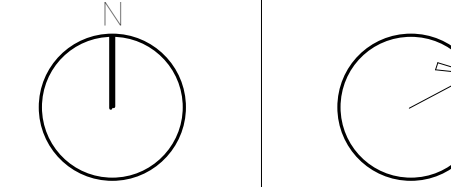
23) INDICATES A SLAB DEPRESSION. REFER TO TYPICAL DETAIL 4 ON DRAWING 50-0-7.

24) INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GA. GALVANIZED STEEL ROOF DECK.

25) INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECTR/PLUMB/FIRE PROTECT ETC COORDINATE WITH APPLICABLE REQUIREMENTS FOR OPENING SIZE AND SPECIAL DETAIL. REFER TO TYPICAL DETAIL 4 ON DRAWING 50-0-7.

1. STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2. EXPOSED TO VIEW BRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
3. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

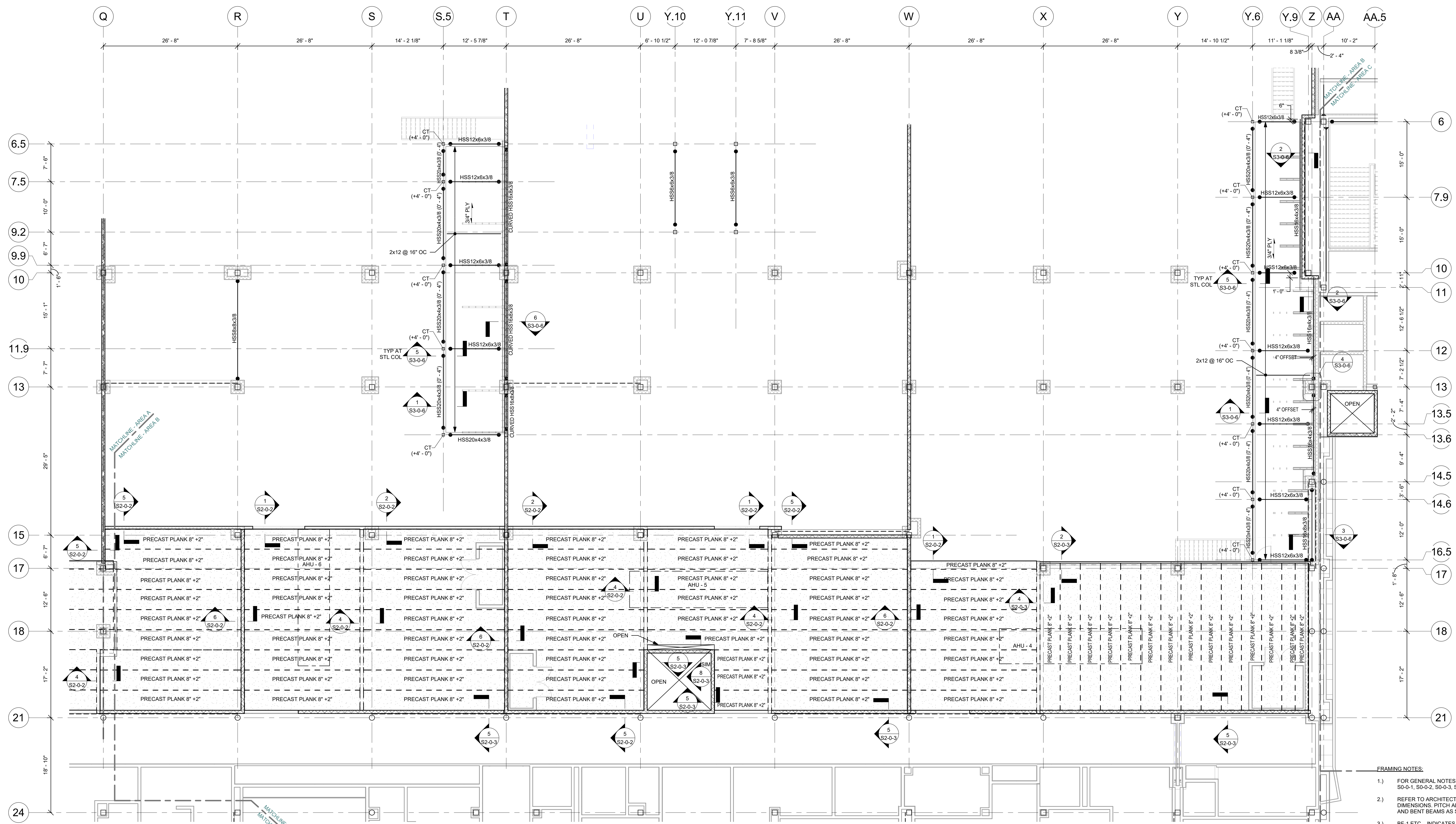
KEY PLAN	
PROJECT NORTH	MAGNETIC NORTH



**MEZZANINE
FLOOR FRAMING
- AREA A**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: ED
Date: FEBRUARY 24,
2023

S1-1-1MA



FRAMING NOTES:

- | | |
|-----|---|
| 1) | FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8. |
| 2) | REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. MATCH ALL STEEL DRAWINGS TO LOW POINTS OF THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS. |
| 3) | BE-1 ET-1. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.1, S4-0.2, S4-0.3, S4-0.4, S4-0.5, S4-0.6, S4-0.7 AND S4-0.8 FOR ADDITIONAL INFORMATION. |
| 4) | DOQ INDICATES THE NUMBER OF 3/4" DIAMETER X 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM. UNLESS NOTED OTHERWISE. |
| 5) | INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7.5 AND 8.0 FOR DRAWING. |
| 6) | INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) INDICATES BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2.0 FOR DRAWING. |
| 7) | <X> INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER. |
| 8) | 5'-14" COMPOSITE STEEL DECK OF 2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5'-14" REINFORCE WITH 6#s @ 12" W2X12 WWR. |
| 9) | 1'-12" INDICATES STEEL DECK OF 1" DEEP, 20 GAUGE TYPE B. GALVANIZED STEEL ROOF DECK. |
| 10) | NCAS INDICATES STEEL DECK OF 3" DEEP, 1820 GAUGE TYPE NCAS. GALVANIZED CELLULAR CORED STEEL ROOF DECK. |
| 11) | 4'-1" INDICATES STEEL DECK OF 1" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4" REINFORCE WITH 6#s @ 12" W2X12 WWR. |
| 12) | FOR EACH NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND DRILLING AND BOLTING FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0.8. |
| 13) | 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6#s @ 12" W2X12 WWR. REFER TO TYPICAL DETAIL 5.0 ON DRAWING S0-0.7 FOR ADDITIONAL INFORMATION. |
| 14) | INDICATES A ROOF RAMP. REFER TO TYPICAL STRUCTURAL DETAILS 1.0 AND 2.0 ON DRAWINGS S0-0.8 AND DETAIL 1.0 ON DRAWING S0-0.9 FOR DECKING SLOPE. REFER TO DETAIL 6.0 ON DRAWING S0-0.7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR FINISHES, FINISHES AND LOCATIONS. |
| 15) | CT INDICATES A COLUMN TERMINATES AT THIS LEVEL. |
| 16) | WE INDICATES A BEAM IN THE BEAM. REFER TO TYPICAL DETAIL 6.0 ON DRAWING S0-0.7. |

- | | | |
|-----|--|--|
| 18) | | PLANK INDICATES SPAN OF 8' WITH DOUBLE PRESTRESSED. PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2\"/> |
| 19) | | PLANK INDICATES SPAN OF 10' WITH DOUBLE PRESTRESSED. PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2\"/> |
| 20) | | PLANK INDICATES SPAN OF 12' WITH DOUBLE PRESTRESSED. PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2\"/> |
| 21) | | PLANK INDICATES SPAN OF 14' WITH DOUBLE PRESTRESSED. PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2\"/> |
| 22) | | INDICATES A SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM. |
| 23) | | INDICATES SPAN DIRECTION OF 9/16\"/> |
| 24) | | INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH ELEC/PLUMB/FIRE PROTECT ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. |

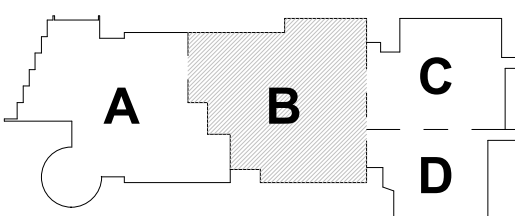
FRAMING ELEVATION NOTES:

- 1) TYPICAL TOP-OF-CONCRETE TOPPING ELEVATION = $(109' - 8")$ (E) AT THE MEZZANINE FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (Q) - (Z) AND (15) - (21).
- 2) TYPICAL TOP-OF-STEEL ELEVATION = $(108' - 8")$ (E) AT THE MEZZANINE FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (S) - (T) AND (6) - (13), UNLESS NOTED OTHERWISE AS (X^{+}) , $(-X)$, OR HILO.
- 3) TYPICAL TOP-OF-STEEL ELEVATION = $(108' - 8")$ (E) AT THE MEZZANINE FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (V) - (Z) AND (6) - (16), UNLESS NOTED OTHERWISE AS (X^{+}) , $(-X)$, OR HILO.
- 4) FRAMING ELEVATIONS ARE BASED ON TYPICAL BOTTOM-OF-PLANK ELEVATION = SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 5) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

FIREPROOFING NOTES:

1. STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS NOTED AS A ROUND HSS COLUMN EXPOSED TO VERTICAL PORTION OF ROUND HSS COLUMN. SHALL RECEIVE 2-HOUR FIRE RATING BY INCREMENTAL MASTIC FIREPROOFING CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2. STEEL COLUMNS, HSS BEAMS, AND ANGLES SUPPORTING THE PLYWOOD MEZZANINES BETWEEN COLUMN GRIDS 5 & 2 AND GRIDS 1 & 2 SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
3. EXPOSED TO VIEW TRACED FRAMES SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
4. NO FIREPROOFING REQUIRED AT COLUMNS AT GRIDS Y-10&5, Y-11&5, Y-10&2, AND Y-11&2 OR AT THE HSS FRAMES THEREON.
5. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH
2023



KEY PLAN	
PROJECT NORTH	MAGNETIC N

**MEZZANINE
FLOOR
FRAMING- AREA
B**

Scale: 1/8" = 1'-0"

Job No : 20202

Figure 2

Date: FEBRUARY 1964

S1-1-1MB

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior
Tel: 877.271.1100
www.dra.com

NORTHEAST METRO TECH

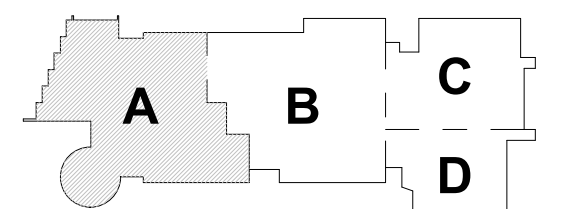
100 Hemlock Rd.
Wakefield, MA 01880



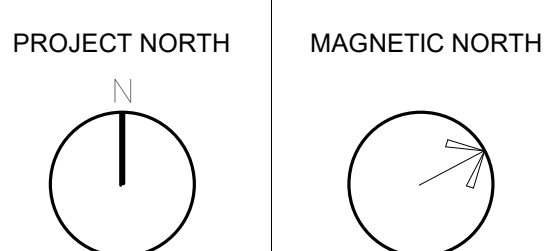
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

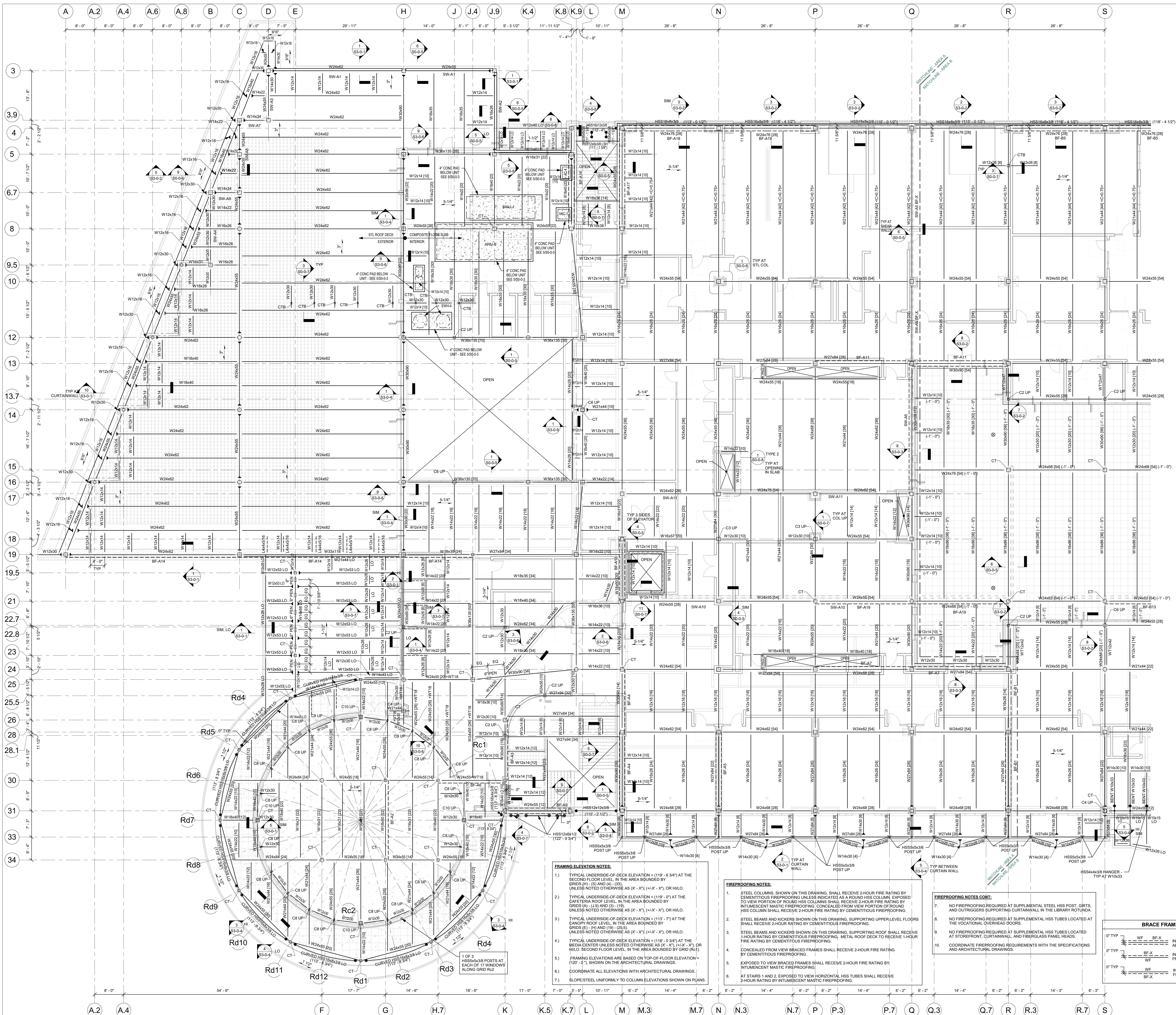


SECOND FLOOR FRAMING PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202

Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S1-1-2A



DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning Architects Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0.1, S0-0.2, S0-0.3, S0-0.4, S0-0.5, S0-0.6, S0-0.7 AND S0-0.8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0.1, S4-0.2, S4-0.3, S4-0.4, S4-0.5, S4-0.6, S4-0.7 AND S4-0.8 FOR ADDITIONAL INFORMATION.
- [X] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0.6.
- INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0.7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5'-14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#6 - W2, 1W2, 1 WWR.
- 1'-12" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#6 - W2, 1W2, 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0.8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6#6 - W2, 1W2, 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0.7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0.8 AND DETAIL 1 ON DRAWING S0-0.8 FOR DECKING SUPPORT. REFER TO DETAIL 6 ON DRAWING S0-0.7 REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0.7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0.4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0.4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0.5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0.5.
- INDICATES SPAN DIRECTION OF 8 1/2" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0.6 FOR ADDITIONAL INFORMATION.

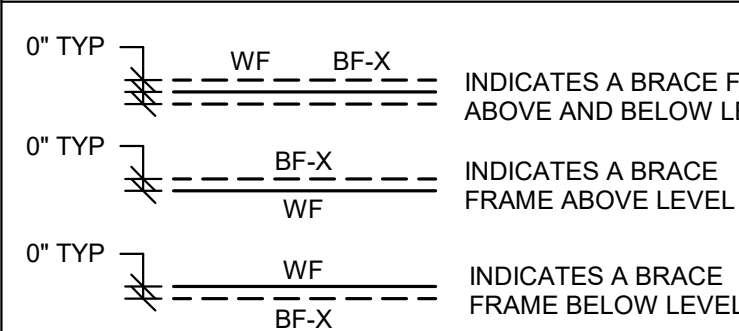
FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (11'9" - 6 3/4") AT THE SECOND FLOOR LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (GG) AND (11) - (22) UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HI/LO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (11'9" - 6 3/4") AT THE LOW ROOF LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (GG) AND (2) - (11) UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HI/LO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (11'9" - 4") AT THE CANOPY ROOF LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (DD) AND (4) - (6).
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (120' - 0") SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

FIREPROOFING NOTES:

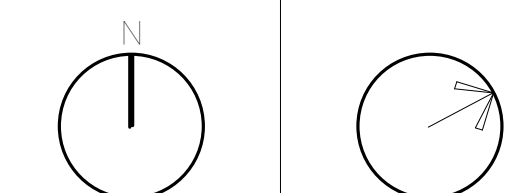
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID BB.1. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. BUILT-UP COLUMNS ALONG GRID BB.1 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 4 AND 7, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
- NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING CURTAINWALL CW23.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY



KEY PLAN

PROJECT NORTH



SECOND FLOOR
FRAMING PLAN -
AREA C

Scale: 1/8" = 1'-0"
Job No.: 2020
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-2C

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning Architects Interior
Tel: 877.221.1100
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 8 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND. (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 3 1/4". REINFORCE WITH 6x6 - W2.1xW2.1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAUGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 18/20 GAUGE TYPE NCAS, GALVANIZED CELLULAR ACUSTIC STEEL ROOF DECK.
- 4" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2.1xW2.1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-6.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6x6 - W2.1xW2.1 WWR. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8 FOR DECKING SUPPORT. REFER TO DETAIL 6 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WE INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAILS 1 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WE INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAUGE GALVANIZED STEEL ROOF DECK.
- XX'XXX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.

FRAMING ELEVATION NOTES:

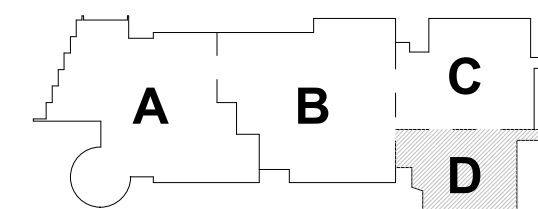
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (11'9" - 6 3/4") AT THE SECOND FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (AA-1), (DD) AND (22) - (34-4). UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION IS DERESSED BELOW (11'9" - 6 3/4") AT THE GYM FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (DD) - (MM) AND (22) - (37). ELEVATION IS TO BE DETERMINED BASED ON THICKNESS OF GYM FLOORING SYSTEM UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (120' - 0"). SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN OR BUILT-UP COLUMN ALONG COLUMN GRID BB-1. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. BUILT-UP COLUMNS ALONG GRID BB-1 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 3, 5, AND 6 ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

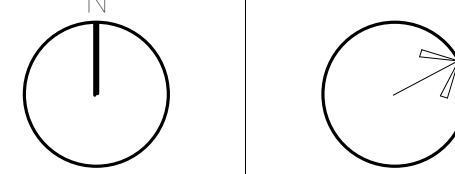
BRACE FRAME KEY

0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	WF	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL



KEY PLAN

PROJECT NORTH MAGNETIC NORTH

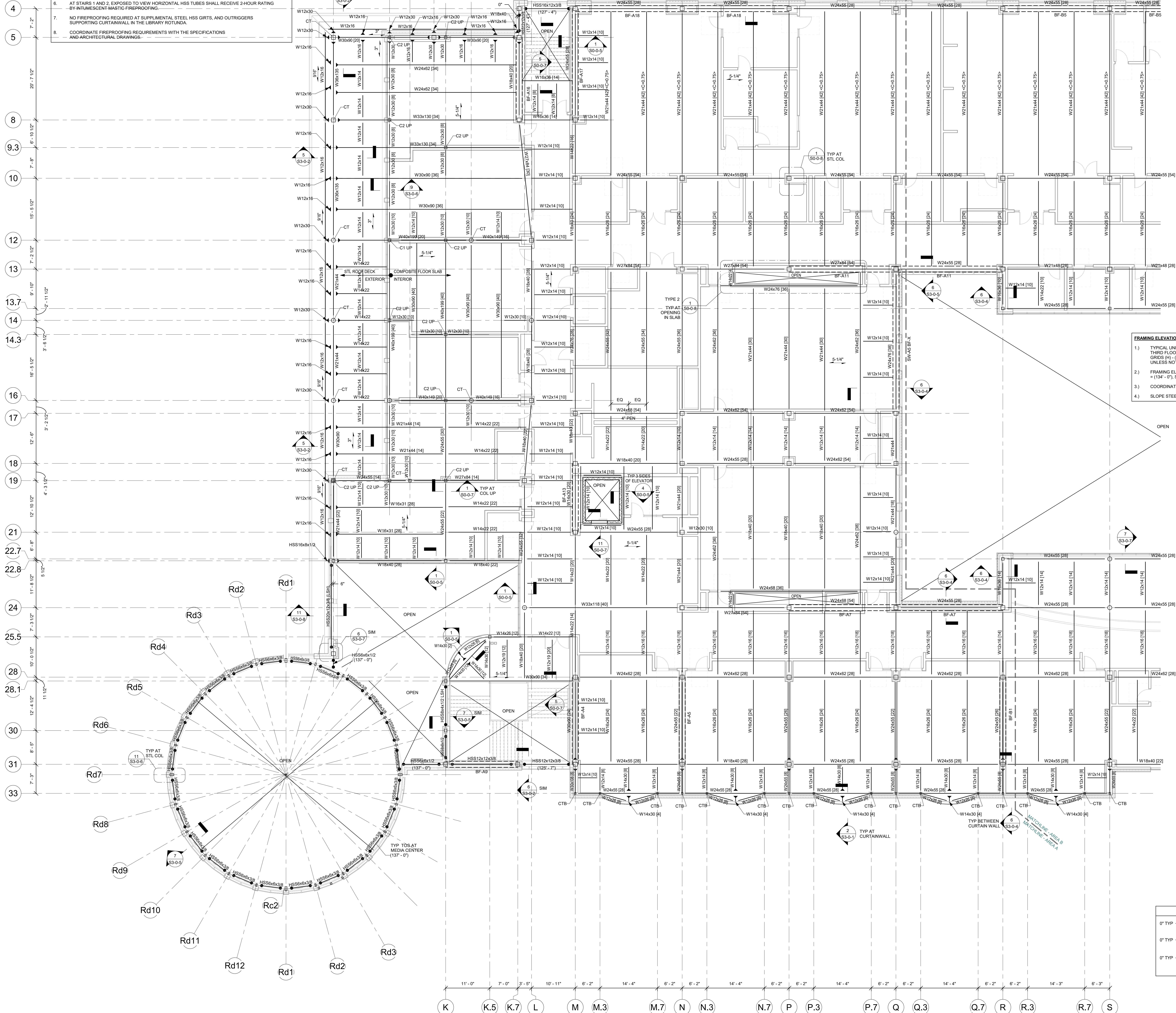


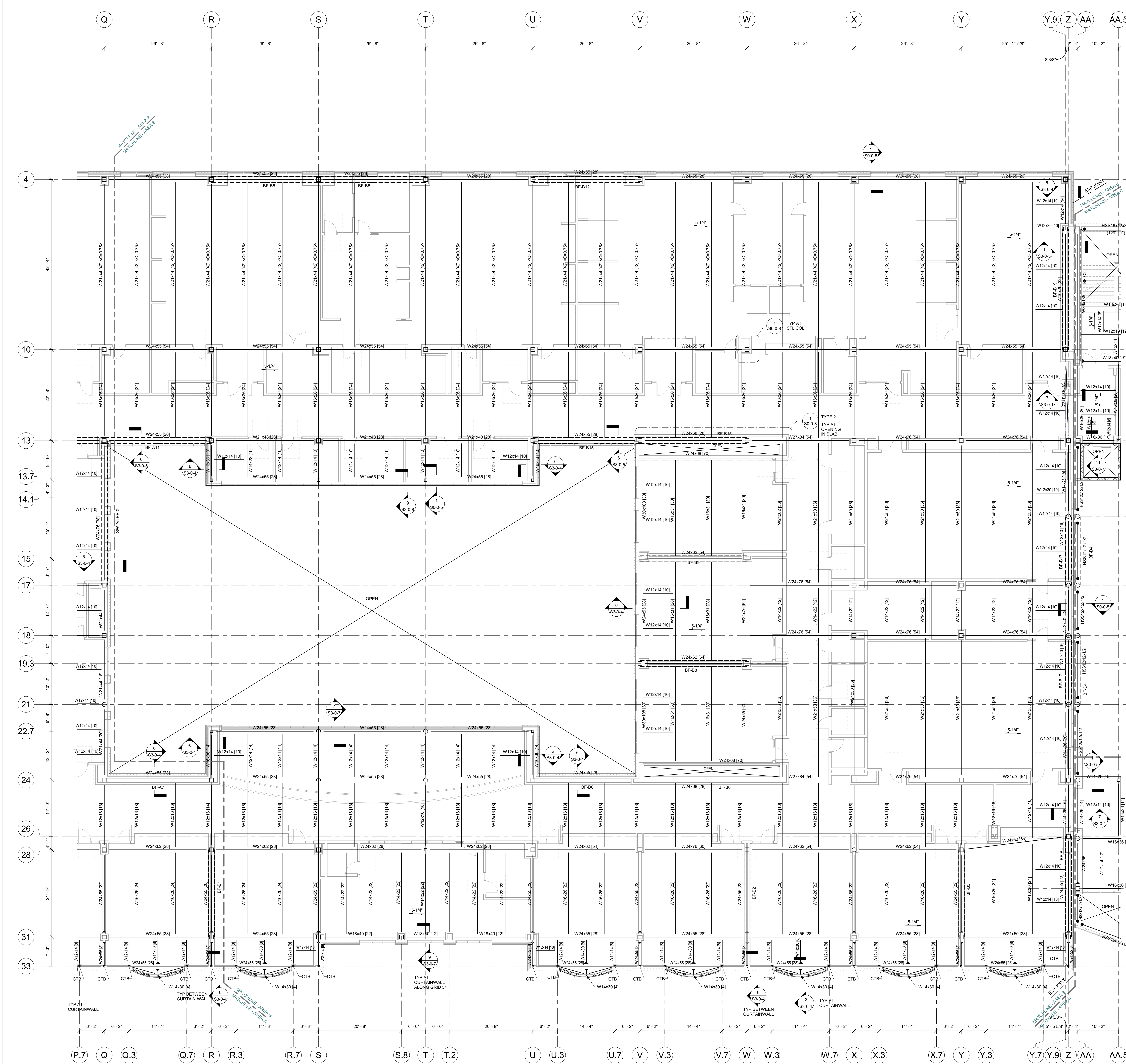
SECOND FLOOR
FRAMING PLAN -
AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-2D

- FIREPROOFING NOTES:**
1. STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
 3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 4. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 5. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 6. AT STAIRS 1 AND 2, EXPOSED TO VIEW HORIZONTAL HSS TUBES SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
 7. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL STEEL HSS GIRTS, AND OUTRIGGERS SUPPORTING CURTAINWALL IN THE LIBRARY ROTUNDA.
 8. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.





FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (13' - 6 3/4") AT THE THIRD FLOOR LEVEL IN THE AREA BOUNDED BY GRIDS (Q) - (Z) AND (4) - (3).
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (134' - 0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY

0" TYP. WF BF-X INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL

0" TYP. BF-X WF INDICATES A BRACE FRAME ABOVE LEVEL

0" TYP. WF BF-X INDICATES A BRACE FRAME BELOW LEVEL

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects Interior
Tel: 877.221.1100
www.draa.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEYS ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

THIRD FLOOR
FRAMING PLAN -
AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S1-1-3B



Drummay Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects Interior
Tel: 877.221.1100
www.dra.com

NORTHEAST METRO TECH

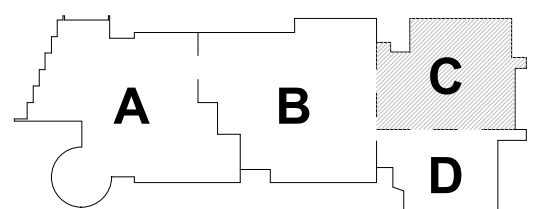
100 Hemlock Rd.
Wakefield, MA 01880



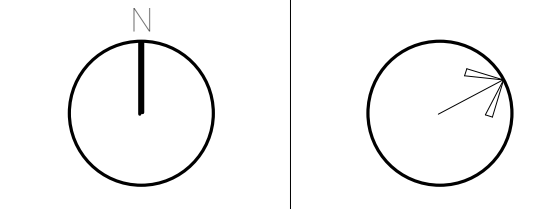
Engineers Design Group Inc.
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMAY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



PROJECT NORTH
MAGNETIC NORTH



THIRD FLOOR FRAMING PLAN - AREA C

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-3C

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [X] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 1, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE WELD ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#6 - W2 1xW2.1 WVR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAGE TYPE NCAS, GALVANIZED CELLULAR ACUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#6 - W2 1xW2.1 WVR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6#6 - W2 1xW2.1 WVR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-6 FOR DECKING SUPPORT. REFER TO DETAIL 6 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" + 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XXXX INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 8 ON S0-0-6 FOR ADDITIONAL INFORMATION.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (137' - 6 3/4") AT THE THIRD FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (AA.9) AND (6) - (13). UNLESS NOTED OTHERWISE AS (X' - X'), (X' - X' - X'), OR HI/LO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (135' - 0 3/4") AT THE THIRD FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (DD) - (DD) AND (20) - (22). UNLESS NOTED OTHERWISE AS (X' - X'), (X' - X' - X'), OR HI/LO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (136' - 4") ALONG THE PERIMETER OF THE MULTI-PURPOSE ROOM ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (DD) - (PP) AND (11) - (20). UNLESS NOTED OTHERWISE AS (X' - X'), (X' - X' - X'), OR HI/LO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (134' - 0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- IN MULTIPURPOSE JOISTS BETWEEN GRIDS DD AND MM (INCLUDING MM) SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. REMAINING JOIST TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 4 AND 7, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY

- | | | | |
|--------|------|------|--|
| 0" TYP | WF | BF-X | INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL. |
| 0" TYP | BF-X | WF | INDICATES A BRACE FRAME ABOVE LEVEL. |
| 0" TYP | WF | BF-X | INDICATES A BRACE FRAME BELOW LEVEL. |

NORTHEAST METRO TECH

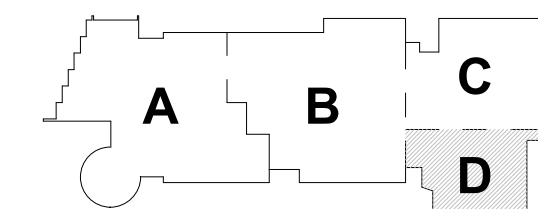
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

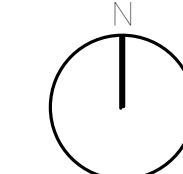
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

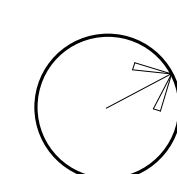


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



THIRD FLOOR FRAMING PLAN - AREA D

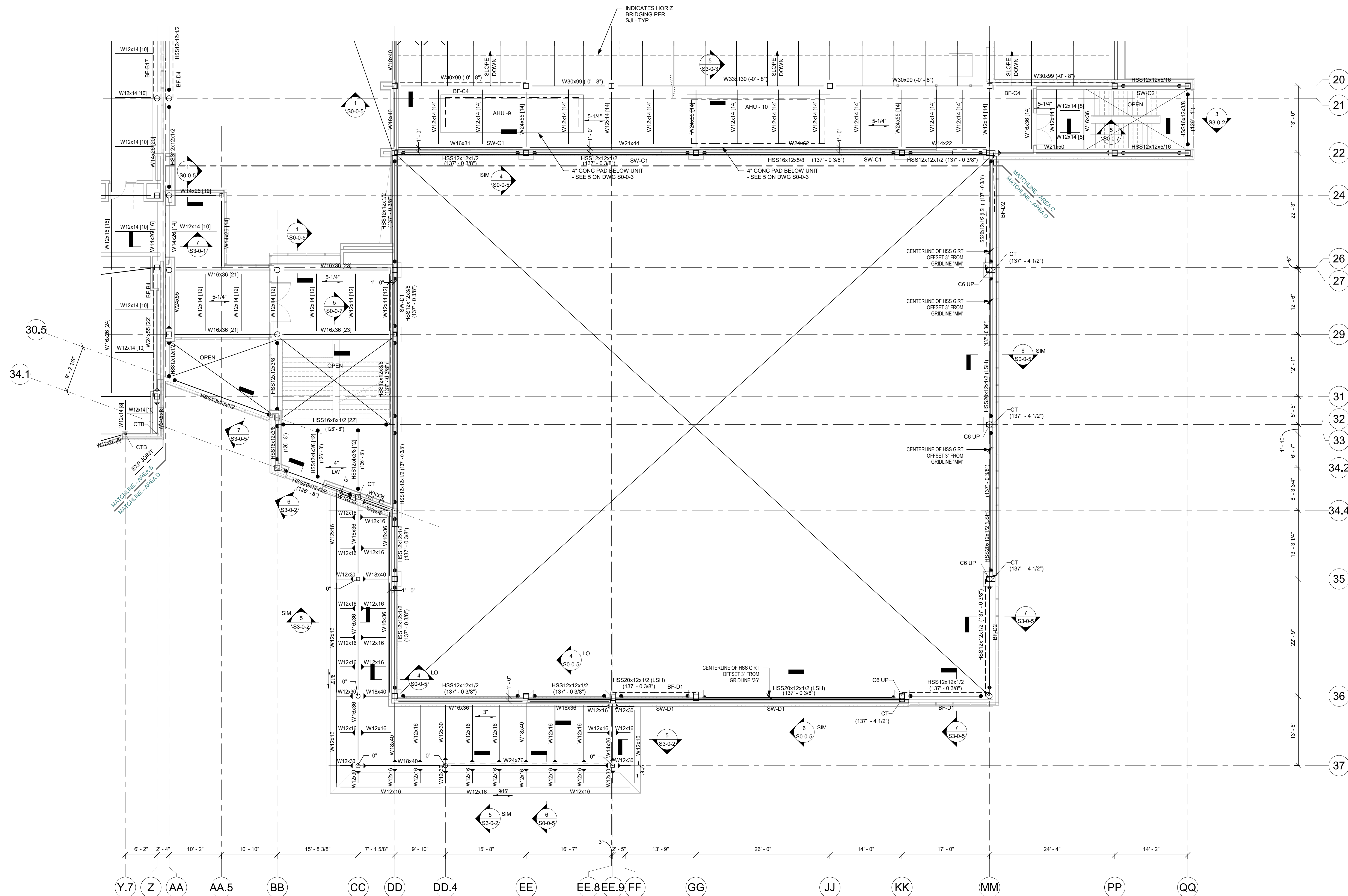
Scale: 1/8" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH,
2023

S1-1-3D



FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 3 AND 6, ALL EXPOSED TO VIEW BEAMS AND HSS TUBES SUPPORTING STAIR LANDINGS AND STRINGERS SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL HSS TUBES SUPPORTING ONLY CURTAINWALL.
- EXPOSED TO VIEW HORIZONTAL HSS TUBES IN GYMNASIUM AND SUPPORTING CURTAINWALL CW2 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (133' - 6 3/4") AT THE THIRD FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (DD) AND (24) - (34.4), UNLESS NOTED OTHERWISE AS (X' - X"), (X'-X' - X'), OR HILO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (129' - 0") AT THE LOW ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (CC) - (FF) AND (34.4) - (37), UNLESS NOTED OTHERWISE AS (X' - X"), (X'-X' - X'), OR HILO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (134' - 0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY

- | | | |
|--------|--|---|
| 0" TYP | | INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL |
| 0" TYP | | INDICATES A BRACE FRAME ABOVE LEVEL |
| 0" TYP | | INDICATES A BRACE FRAME BELOW LEVEL |

Drummeys Rosane Anderson, Inc.	
225 Oakland Road Studio 205 South Windsor, CT 06074	260 Charles Street Studio 300 Waltham, MA 02453

NORTHEAST METRO TECH



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

KEY PLAN

PROJECT NORTH	MAGNETIC NORTH
---------------	----------------

Scale: 1/8" = 1'-0"

Job No. 30302

JOD NO.: 20202

Drawn By: E

S1-1-4A

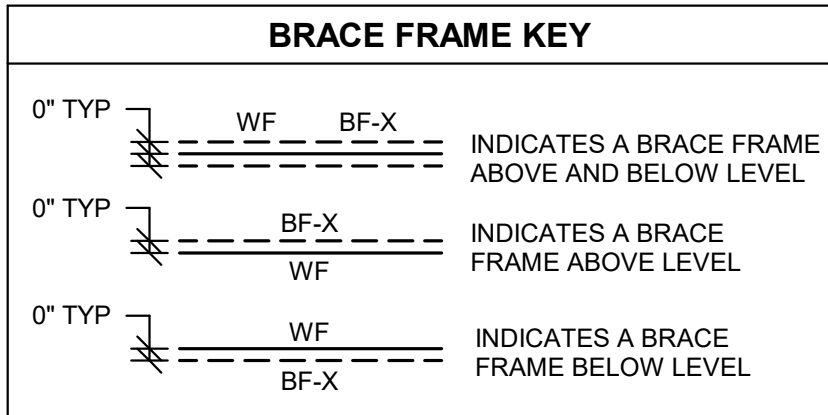
PREPROFING NOTES:

1. STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS ROUND HSS COLUMNS EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
3. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
4. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING .
5. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING .
6. AT STAIRS 1 AND 2 : EXPOSED TO VIEW HORIZONTAL HSS TUBES SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING .
7. NO FIREPROOFING REQUIRED AT SUPPLEMENTAL STEEL HSS GIRTS, AND OUTRIGGERS SUPPORTING CURTAINWALL IN THE LIBRARY ROTUNDA.
8. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING ELEVATION NOTES:

- 1.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = $(147' - 6 \frac{3}{4}")$ AT THE FOURTH FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (H) - (S) AND (4) - (33).
UNLESS NOTED OTHERWISE AS $(X' - X'')$, $(+/-X' - X'')$, OR HI/LO.
- 2.) TYPICAL UNDERSIDE-OF-DECK ELEVATION = $(147' - 6 \frac{3}{4}")$ AT THE MEDIA CENTER ROOF LEVEL, IN THE AREA BOUNDED BY GRID (Rc2).
- 3.) FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = $(145' - 0'')$, SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 4.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- 5.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY		
0° TYP		INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0° TYP		INDICATES A BRACE FRAME ABOVE LEVEL
0° TYP		INDICATES A BRACE FRAME BELOW LEVEL



Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects interior
Tel: 877.267.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 2 AND 7, ALL EXPOSED TO VIEW STRUCTURE SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FIT ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [X] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 9/16" FLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 7" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#6 - W2 1W/2 1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 18/20 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#6 - W2 1W/2 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6#6 - W2 1W/2 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-8. FOR DECKING SUPPORT, REFER TO DETAIL 6 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WE INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 6 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 6 ON DRAWING S0-0-4 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WE INDICATES A SPLICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPLICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9/16" GALVANIZED STEEL ROOF DECK INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-6 FOR ADDITIONAL INFORMATION.

FRAMING ELEVATION NOTES:

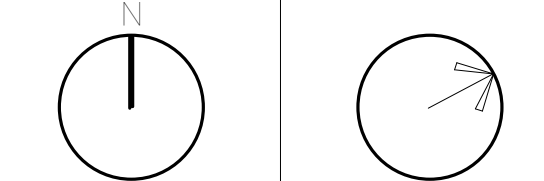
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (147'-6 3/4") AT THE FOURTH FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (AA.9) AND (8) - (13) UNLESS NOTED OTHERWISE AS (X' - X'), (+/-X' - X'), OR HILO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (152'-4") AT THE CLEAR-STORY ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (QQ) AND (10) - (22) UNLESS NOTED OTHERWISE AS (X' - X'), (+/-X' - X'), OR HILO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (148'-0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY

- 0" TYP. --- WF --- BF-X --- INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
- 0" TYP. --- BF-X --- INDICATES A BRACE FRAME ABOVE LEVEL
- 0" TYP. --- WF --- BF-X --- INDICATES A BRACE FRAME BELOW LEVEL

KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FOURTH FLOOR FRAMING PLAN - AREA C

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-4C

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architects interior
Tel: 877.221.1100
www.dra.com

NORTHEAST
METRO TECH

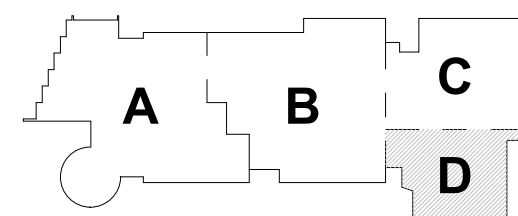
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

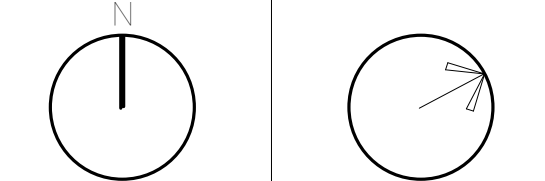
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FOURTH FLOOR
FRAMING PLAN -
AREA D

Scale: 1/8" = 1'-0"

Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH,
2023

S1-1-4D

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- IN GYMNASIUM, JOISTS ALONG GRIDS EE, GG, AND KK SHALL RECEIVE 1-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING UPPER LEVEL FLOORS SHALL RECEIVE 2-HOUR RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES AND HORIZONTAL HSS GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- AT STAIRS 3 AND 8, ALL EXPOSED TO VIEW STRUCTURE SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW HORIZONTAL HSS TUBES IN GYMNASIUM AND SUPPORTING CURTAINWALL, CW2 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.



FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (147' - 6 3/4") AT THE FOURTH FLOOR LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (DD) AND (24) - (34.4), UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (152' - 4") ALONG THE PERIMETER OF THE GYM ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (DD) - (MM) AND (2) - (8), UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- FRAMING ELEVATIONS ARE BASED ON TOP-OF-FLOOR ELEVATION = (148' - 0"), SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

BRACE FRAME KEY

- 0" TYP
WF
BF-X
INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
- 0" TYP
WF
BF-X
INDICATES A BRACE FRAME ABOVE LEVEL
- 0" TYP
WF
BF-X
INDICATES A BRACE FRAME BELOW LEVEL

DRA

Drumsey Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning Architects Interior
Tel: 877.221.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FIREPROOFING NOTES:

- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-1, S0-2, S0-3, S0-4, S0-5, S0-6, S0-7 AND S0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER X 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS. PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-7.
- + X" INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-14" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6x6 - W2 1xW2 1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" NCAS INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" LW INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6x6 - W2 1xW2 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6x6 - W2 1xW2 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA X 6" LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-8 AND DETAIL 1 ON DRAWING S0-4. FOR DECKING SUPPORT, REFER TO DETAIL 6 ON DRAWING S0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-4 FOR REINFORCEMENT. DETAIL 8 ON DRAWING S0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 160 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2-HOUR FIRE RATING.
- PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 160 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2-HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-6.
- 9/16" INDICATES SPAN DIRECTION OF 9/16" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX-XX INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC. COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-6 FOR ADDITIONAL INFORMATION.

FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (162' - 0") AT THE ROOF LEVEL IN THE AREA BOUNDED BY GRIDS (K) - (S) AND (4) - (33). UNLESS NOTED OTHERWISE AS (X' - X'), (+X' - X'), OR HILO.
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (163' - 4") AT THE ELEVATOR ROOF - AREA A.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

ELEVATOR ROOF FRAMING PART PLAN - AREA A

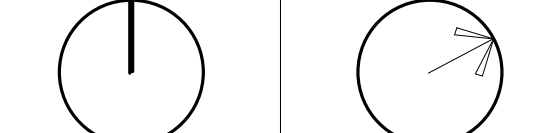
UD ELEV = 163' - 4"

BRACE FRAME KEY		
0" TYP	WF	BF-X
0" TYP	BF-X	WF
0" TYP	WF	BF-X
0" TYP	BF-X	WF
0" TYP	WF	BF-X
0" TYP	BF-X	WF

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH



ROOF FRAMING PLAN - AREA A

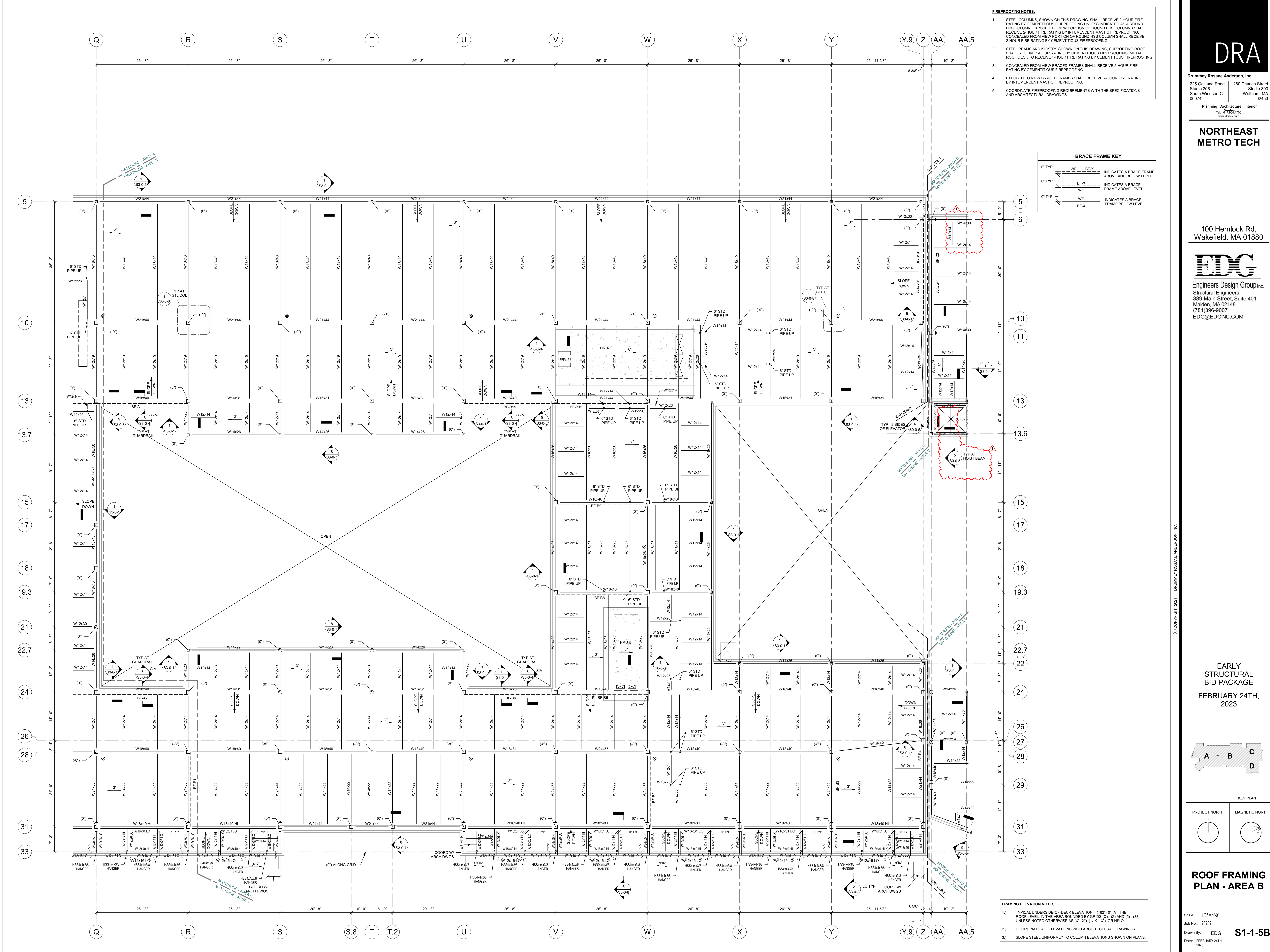
Scale: 1/8" = 1'-0"

Job No.: 2020

Drawn By: EDG

Date: FEBRUARY 24TH, 2023

S1-1-5A



- FIREPROOFING NOTES:**
- STEEL COLUMNS, SHOWN ON THIS DRAWING, SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME KEY

0" TYP	WF	BF-X	INDICATES A BRACE FRAME ABOVE AND BELOW LEVEL
0" TYP	BF-X	WF	INDICATES A BRACE FRAME ABOVE LEVEL
0" TYP	WF	BF-X	INDICATES A BRACE FRAME BELOW LEVEL

- FRAMING ELEVATION NOTES:**
- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (162'-0") AT THE ROOF LEVEL IN THE AREA BOUNDED BY GRIDS (0) - (2) AND (5) - (33), UNLESS NOTED OTHERWISE AS (X'-X"), (X'-X'-X"), OR H/LD.
 - COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
 - SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior
Tel: 877.221.1100
www.dra.com

**NORTHEAST
METRO TECH**

100 Hemlock Rd,
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021
DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

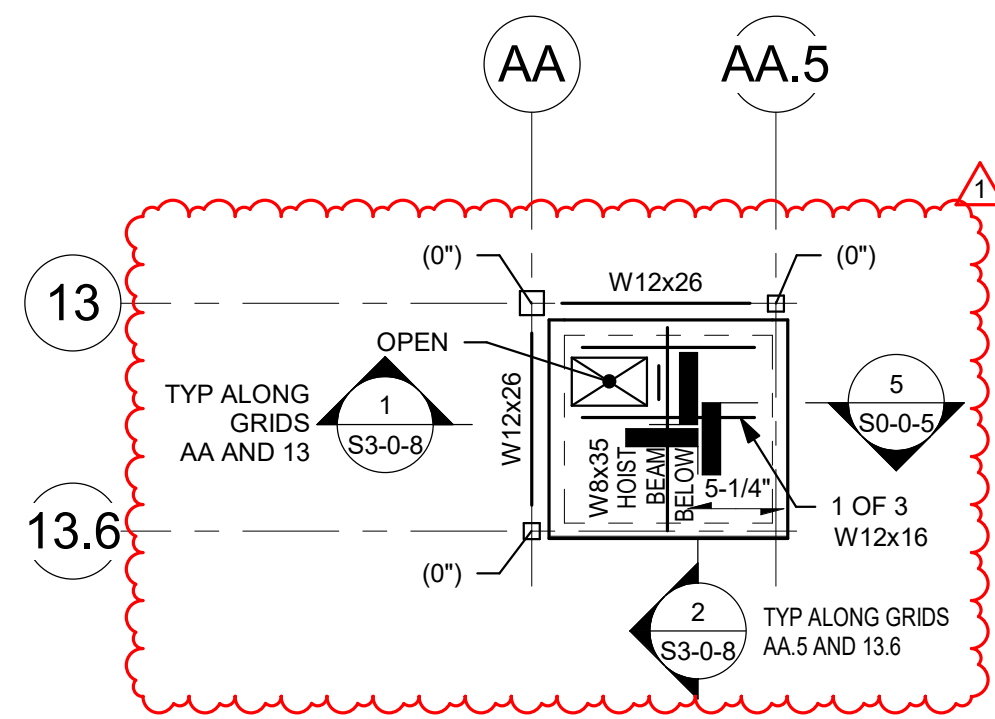
KEY PLAN

PROJECT NORTH
MAGNETIC NORTH

**ROOF FRAMING
PLAN - AREA B**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S1-1-5B

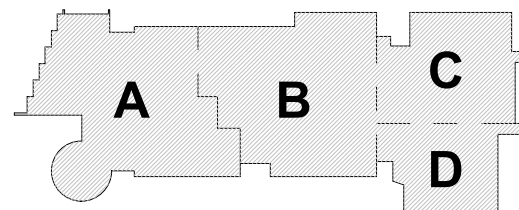


ELEVATOR ROOF FRAMING
PART PLAN - AREA C
U/D ELEV = 163' - 4"

- FIREPROOFING NOTES:**
1. STEEL COLLUMS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A CONCRETE HSS COLUMN. EXPOSED PORTION OF ROUND HSS COLLUMS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. A ROUNDED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING. ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 3. CONCEALED FROM VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 4. EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 5. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- | DRAWING NOTES: | |
|----------------|--|
| 1) | FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S00-0.1, S00-2.0, S00-3.0, S00-4.0, S00-5.0, S00-6.0, S00-7.0 AND S00-8.0. |
| 2) | REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS OF ALL STEEL BEAMS. REFER TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS. |
| 3) | BF1- ENT. INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S40-0.1, S40-2.0, S40-3.0, S40-4.0, S40-5.0, S40-6.0 AND S40-7.0 FOR ADDITIONAL INFORMATION. |
| 4) | [Dx] INDICATES THE NUMBER OF 3/4" DIAMETER X 4" LONG LEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. BEAMS STUDS EVENLY ALONG THE BEAM. |
| 5) | [M] INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER REFER TO TYPICAL DETAIL 7.1 AND 9.0 FOR ADDITIONAL INFORMATION. |
| 6) | [HSS] INDICATES A 5/16" FLAT WELDED AROUND (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE AROUND WELDED REFER TO TYPICAL DETAIL 2 ON DRAWING S00-8.0. |
| 7) | < X' > INDICATES UPWARD CRAWLER AT THE MID-SPAN OF THE MEMBER. |
| 8) | 5-14" INDICATES SPAIN DIRECTION OF 2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4" REINFORCE WITH 6#- W2-14W2-1 WWR. |
| 9) | 1-10" INDICATES SPAIN DIRECTION OF 1 1/2" DEEP, 20 GAUGE TYPE B. GALVANIZED STEEL ROOF DECK. |
| 10) | 3" NCAS INDICATES SPAIN DIRECTION OF 3" DEEP, 18/20 GAUGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK. |
| 11) | 4" LW INDICATES SPAIN DIRECTION OF 1 1/2" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 1 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4" REINFORCE WITH 6#- W2-14W2-1 WWR. |
| 12) | FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR FRAMING INFORMATION. REFER TO DETAILS 1, 2 AND 3 ON DRAWING S00-8.0. |
| 13) | 6" HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 20 GAUGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6" REINFORCE WITH 6#- W2-14W2-1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S00.07 FOR ADDITIONAL INFORMATION. SEE 3/4" DIA. X 8" LONG LEADED STUDS. |
| 14) | [S] INDICATES A ROOF DRAIN. REFER TO TYPICAL, STRUCTURAL DETAILS 1 AND 2 ON DRAWING S00-8.0 AND DETAIL 1 ON DRAWING S00-8.0. FOR DECKING SUPPORT REFER TO DETAIL 6 ON DRAWING S00-8.0. FOR PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS. |
| 15) | CT INDICATES A COLUMN TERMINATES AT THIS LEVEL. |
| 16) | WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 8 ON DRAWING S00-7.0. |
| 17) | OR INDICATES A CMJ WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S00-4.0 FOR REINFORCEMENT. DETAIL 8 ON DRAWING S00-6.0 FOR CONNECTION OF STEEL WALLS TO BEAMS AND DETAIL 7 ON DRAWING S00-6.0 FOR CONNECTIONS TO STEEL BEAMS. |
| 18) | OR INDICATES A CONCRETE SLAB AT THE TOP OF THE WALL. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF WALLS RELATES TO THE STRUCTURE. |
| 19) | 8" x 2" PM PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM OF 2" NORMAL WEIGHT CONCRETE TOPPING. PLANK STRENGTH AND CAPACITY MUST BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOURS FIRE RATING. |
| 20) | 10" x 2" PM PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM OF 2" NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOURS FIRE RATING. |
| 21) | FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS. |
| 22) | WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM. |
| 23) | mmmm INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S00-8.0. |
| 24) | 9/16" INDICATES SPAIN DIRECTION OF 9/16" DEEP, 20 GAUGE GALVANIZED STEEL ROOF DECK. |
| 25) | X'X'X'X' INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/HVAC PROJECTS. SEE COORDINATE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S00-6.0 FOR ADDITIONAL INFORMATION. |

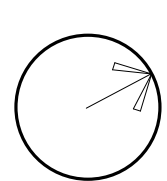
- FRAMING ELEVATION NOTES:**
- 1.) TYPICAL UPSIDE-OF-DECK ELEVATION = (162' - 0") AT THE ROOF LEVEL, IN THE AREA BOUNDED BY GRID (AA) - (AA.9) AND (6) - (13.9). UNLESS NOTED OTHERWISE AS (X' - X"), (+X' - X"), OR HILO.
 - 2.) TYPICAL UPSIDE-OF-DECK ELEVATION = (163' - 4") AT THE ELEVATOR ROOF AREA  C/D.
 - 3.) COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
 - 4.) SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.



KEY PLAN

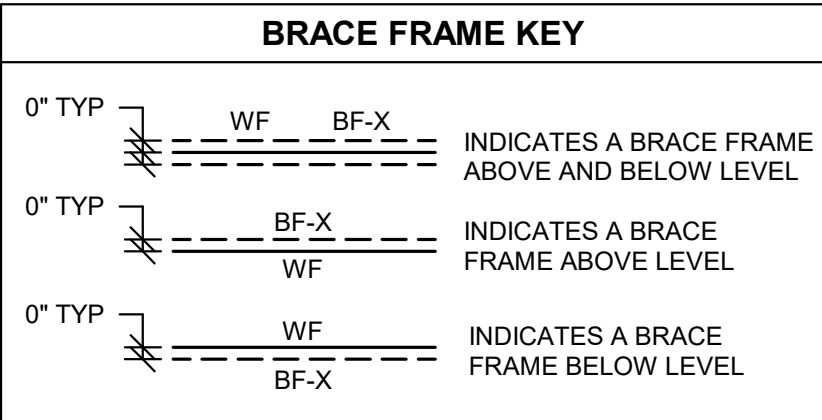
PROJECT NORTH

MAGNETIC NORTH



Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: ED
Date: FEBRUARY 24,
2023

S1-1-5C



DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Wattham, MA
02453

Planning Architects Interior
Tel: 877.221.1100
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

FIREPROOFING NOTES:

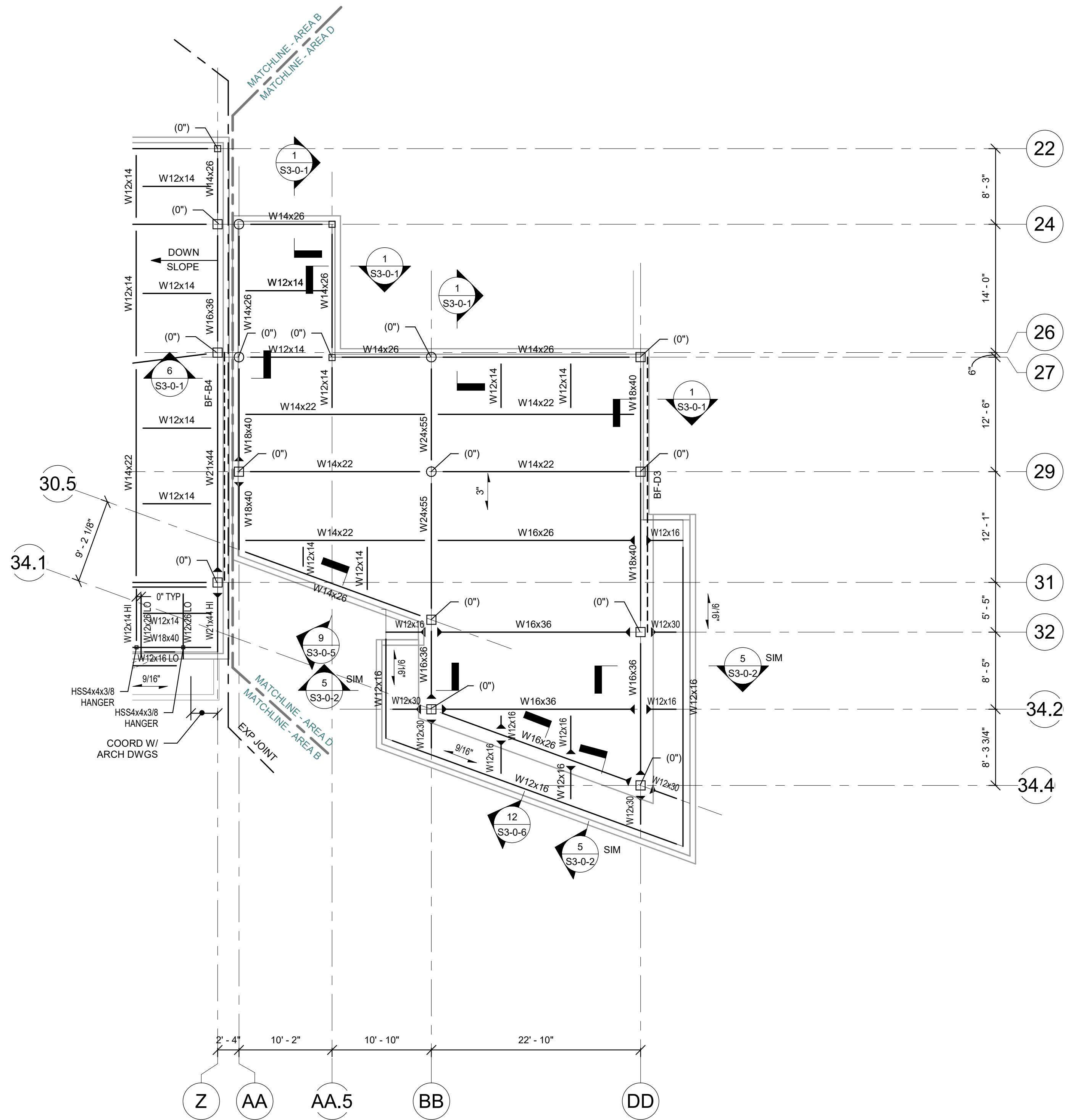
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- STEEL BEAMS AND KICKERS SHOWN ON THIS DRAWING, SUPPORTING ROOF SHALL RECEIVE 1-HOUR RATING BY CEMENTITIOUS FIREPROOFING. METAL ROOF DECK TO RECEIVE 1-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAMES GIRTS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAMES SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW HORIZONTAL HSS TUBES SUPPORTING CURTAINWALL CW2 SHALL RECEIVE 2-HOUR RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

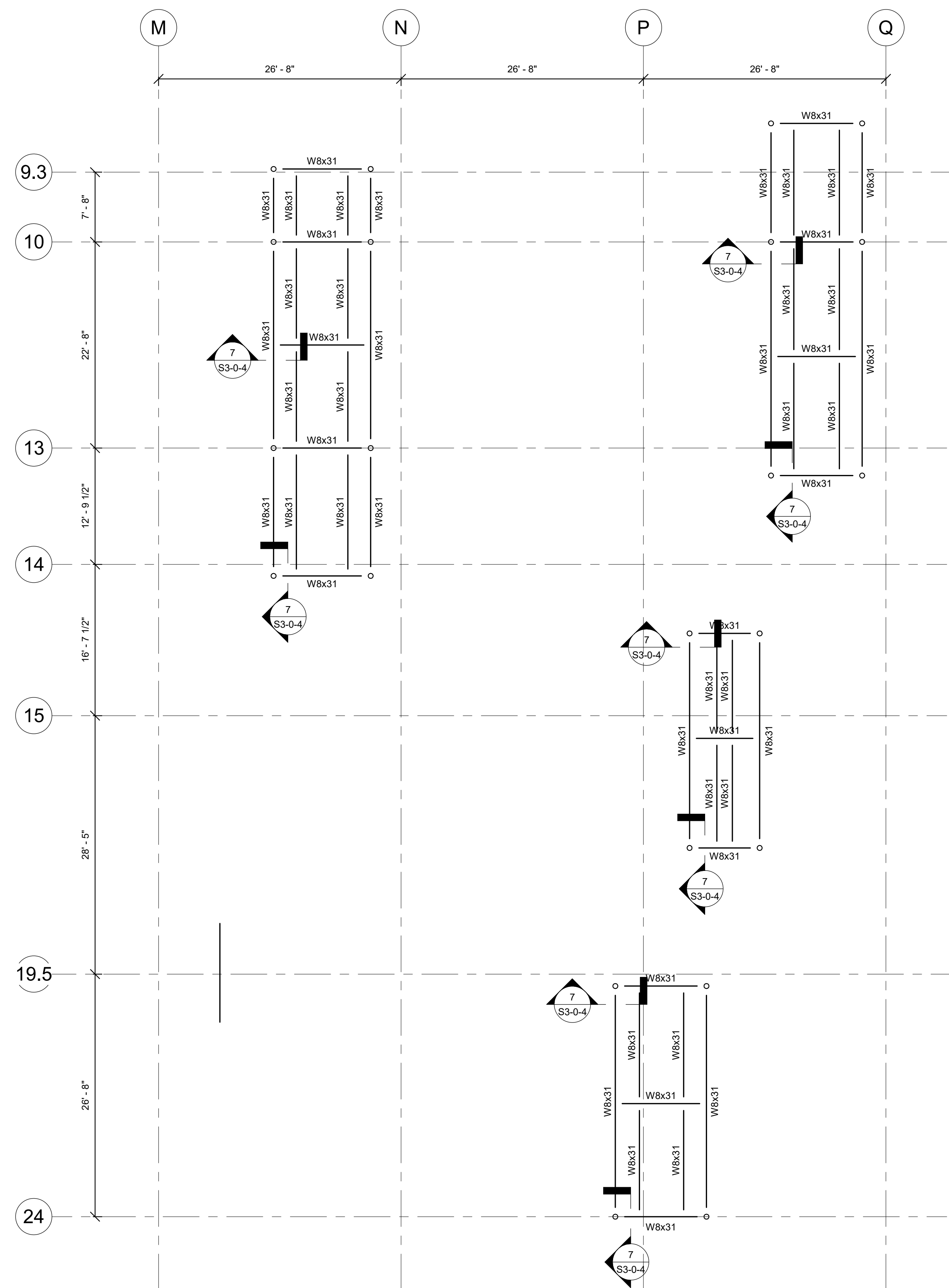
FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. PITCH ALL STEEL UNIFORMLY TO LOW POINTS AT THE COLUMNS AND RENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- BF-1 ETC., INDICATES A BRACED BAY. REFER TO BRACED FRAME ELEVATIONS AND DETAILS ON DRAWINGS S4-0-1, S4-0-2, S4-0-3, S4-0-4, S4-0-5, S4-0-6, S4-0-7 AND S4-0-8 FOR ADDITIONAL INFORMATION.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER x 4 1/4" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-4.
- INDICATES A 3/16" FILLET WELD ALL AROUND. HSS BEAM TO HSS COLUMN WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 5-1/4" INDICATES SPAN DIRECTION OF 7" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 3 1/4" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 5 1/4". REINFORCE WITH 6#5 - W2, 1W2, 1 WWR.
- 1-1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 1820 GAGE TYPE NCAS, GALVANIZED CELLULAR ACOUSTIC STEEL ROOF DECK.
- 4" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" LIGHT WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4". REINFORCE WITH 6#5 - W2, 1W2, 1 WWR.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAILS 1, 2 AND 3 ON DRAWING S0-0-8.
- HATCHED AREA INDICATES LOCATION OF CONCRETE SLAB WITH 3" DEEP, 18 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 4" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 6". REINFORCE WITH 6#5 - W2, 1W2, 1 WWR. REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-7 FOR ADDITIONAL INFORMATION. USE 3/4" DIA x 5' LONG HEADED STUDS.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 2 ON DRAWING S0-0-8 AND DETAIL 1 ON DRAWING S0-0-6. FOR DECKING SUPPORT, REFER TO DETAIL 6 ON DRAWING S0-0-7. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WF INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-7.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 8 ON DRAWING S0-0-4 FOR REINFORCEMENT. DETAIL 1 ON DRAWING S0-0-5 FOR CONNECTION OF SHEAR WALLS TO BEAMS AND COLUMNS, AND DETAIL 7 ON DRAWING S0-0-5 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 8" x 2" PC PLANK INDICATES SPAN OF 8" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- 10" x 2" PC PLANK INDICATES SPAN OF 10" DEEP PRESTRESSED, PRECAST CONCRETE HOLLOW CORE PLANK WITH A MINIMUM 2" OF NORMAL WEIGHT CONCRETE TOPPING. PLANK AND CONCRETE TOPPING SLAB TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD CAPACITY OF 150 PSF. PRECAST CONCRETE PLANK TO BE DESIGNED FOR MINIMUM OF 2 HOUR FIRE RATING.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- WF INDICATES A SPICE CONNECTION ALONG A CONTINUOUS STEEL BEAM. DESIGN SPICE CONNECTION FOR FULL CAPACITY OF STEEL BEAM.
- INDICATES A SLAB DEPRESSION. REFER TO DETAILS 1 ON DRAWING S0-0-6.
- 9-1/2" INDICATES SPAN DIRECTION OF 9-1/2" DEEP, 20 GAGE GALVANIZED STEEL ROOF DECK.
- XX'XXX" INDICATES OPENING IN WEB OF STEEL BEAM FOR MECH/ELECT/PLUMB/FIRE PROTECT/ETC COORDINATE WITH APPLICABLE DRAWING FOR OPENING SIZE. SEE TYPICAL DETAIL 5 AND 6 ON S0-0-4 FOR ADDITIONAL INFORMATION.

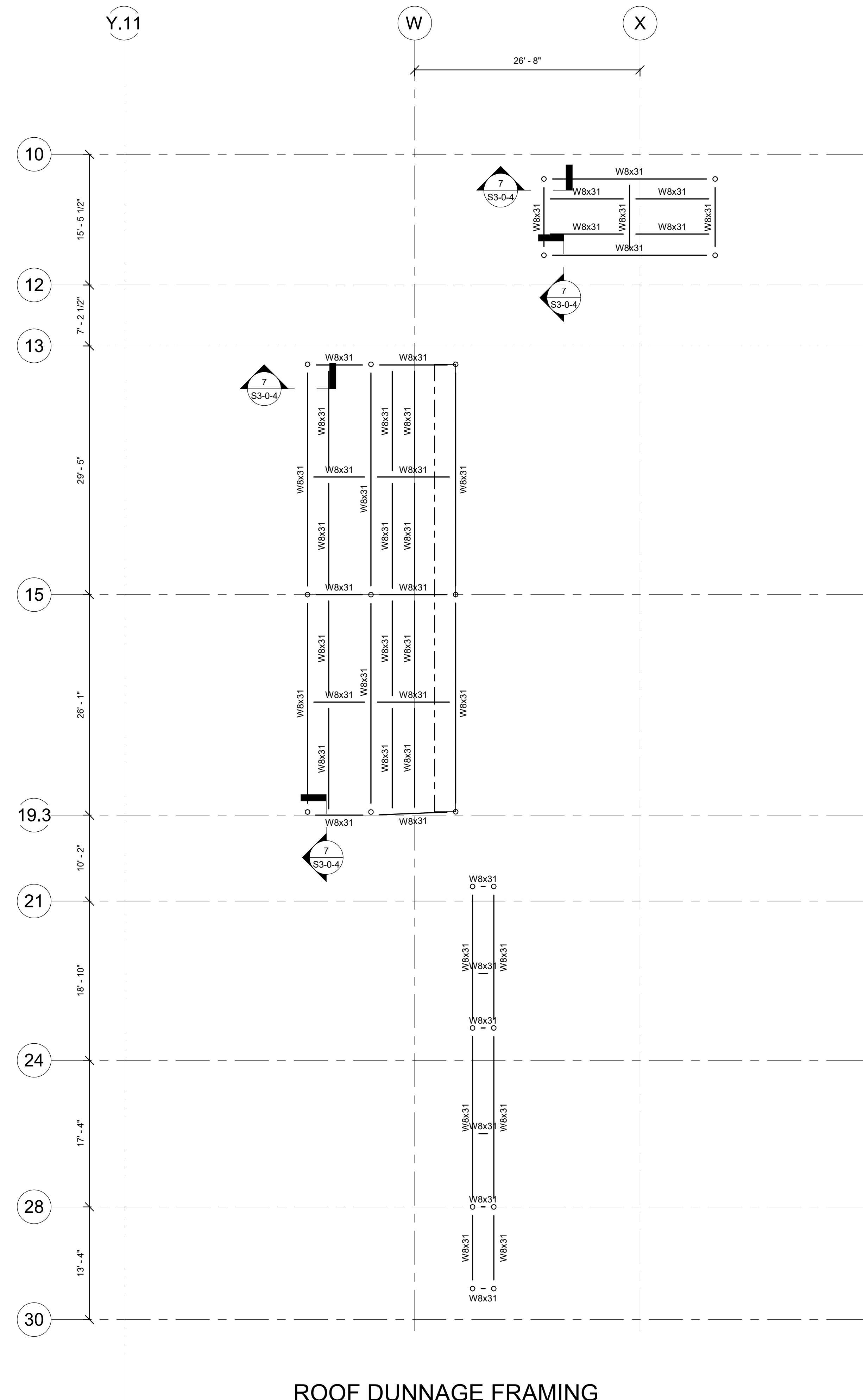
FRAMING ELEVATION NOTES:

- TYPICAL UNDERSIDE-OF-DECK ELEVATION = (162' - 0") AT THE ROOF LEVEL, IN THE AREA BOUNDED BY GRIDS (AA) - (DD) AND (24) - (34.4). UNLESS NOTED OTHERWISE AS (X' - Y'), (X' - Y'), (X' - Y'), OR HI/LO.
- COORDINATE ALL ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- SLOPE STEEL UNIFORMLY TO COLUMN ELEVATIONS SHOWN ON PLANS.

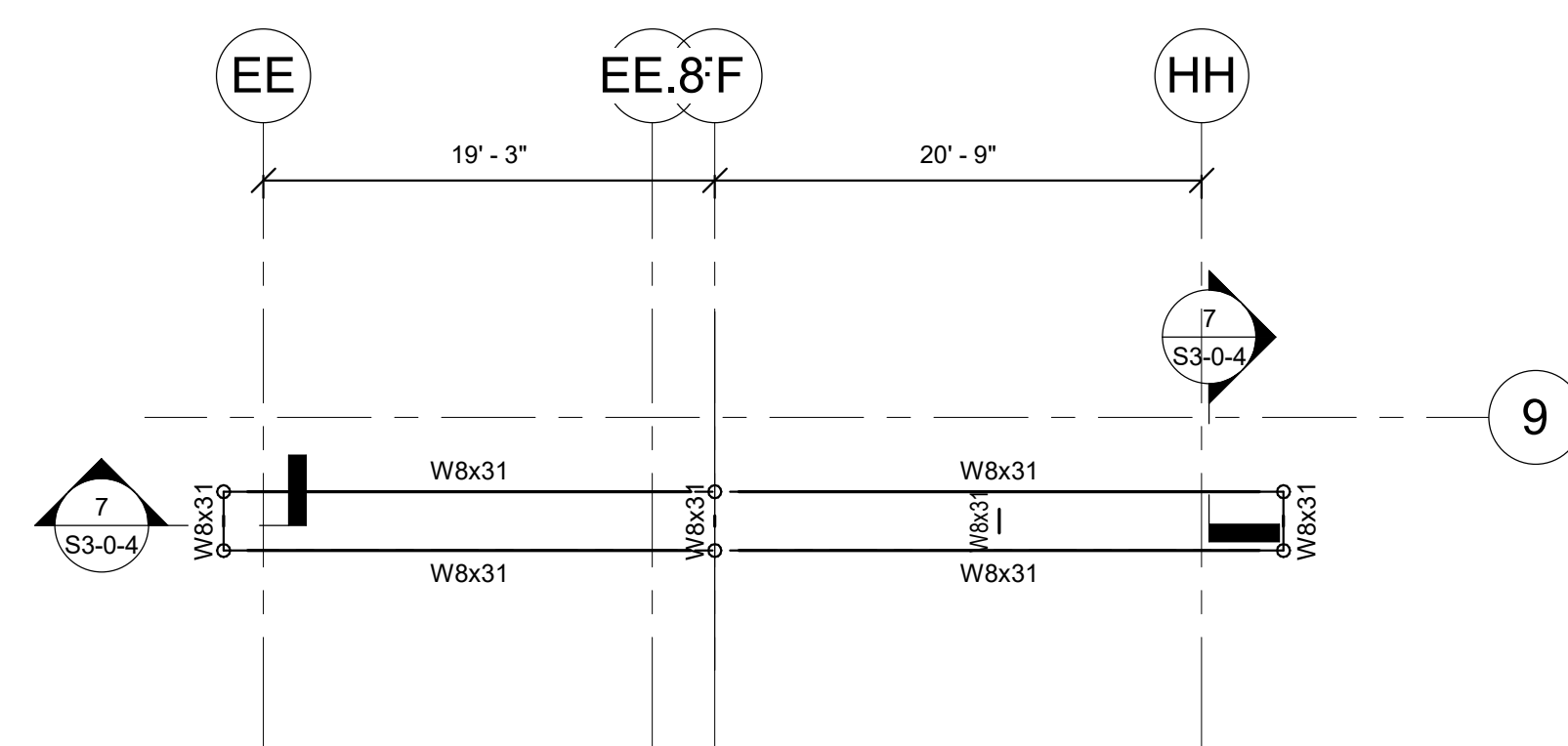




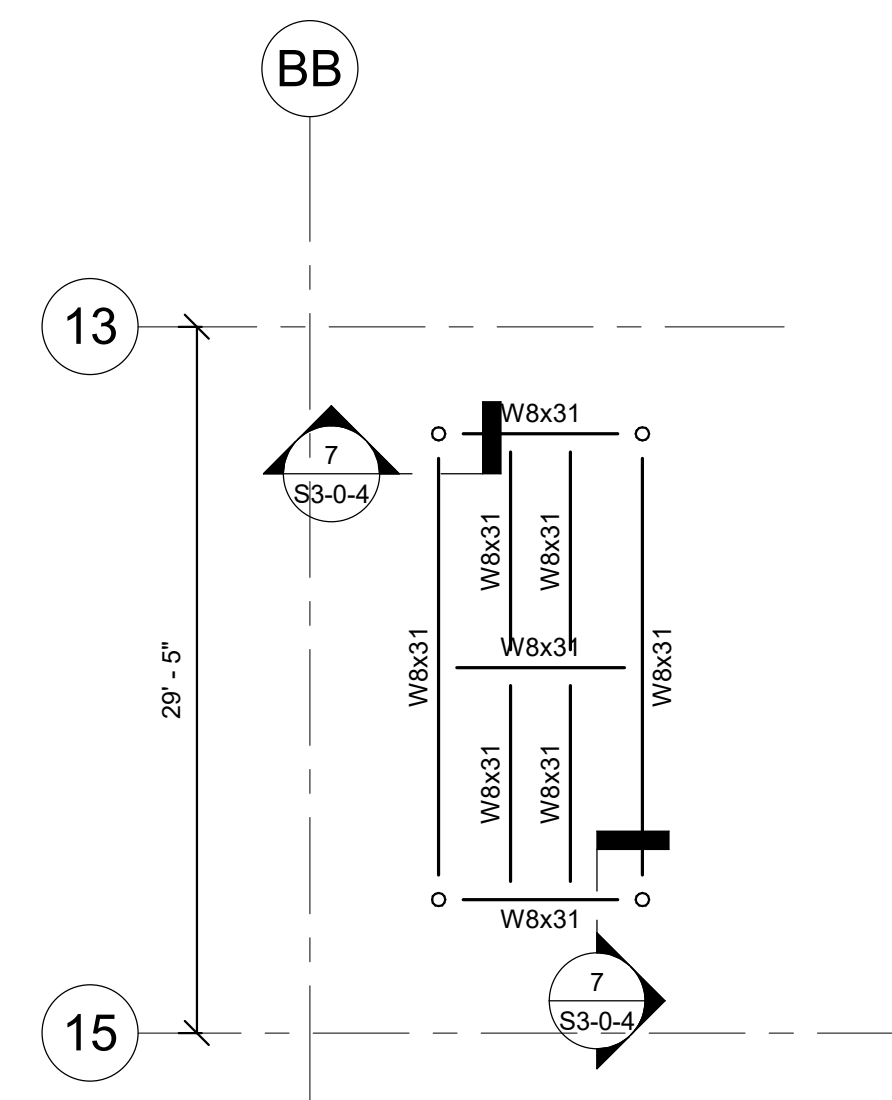
ROOF DUNNAGE FRAMING
PART PLAN - AREA A



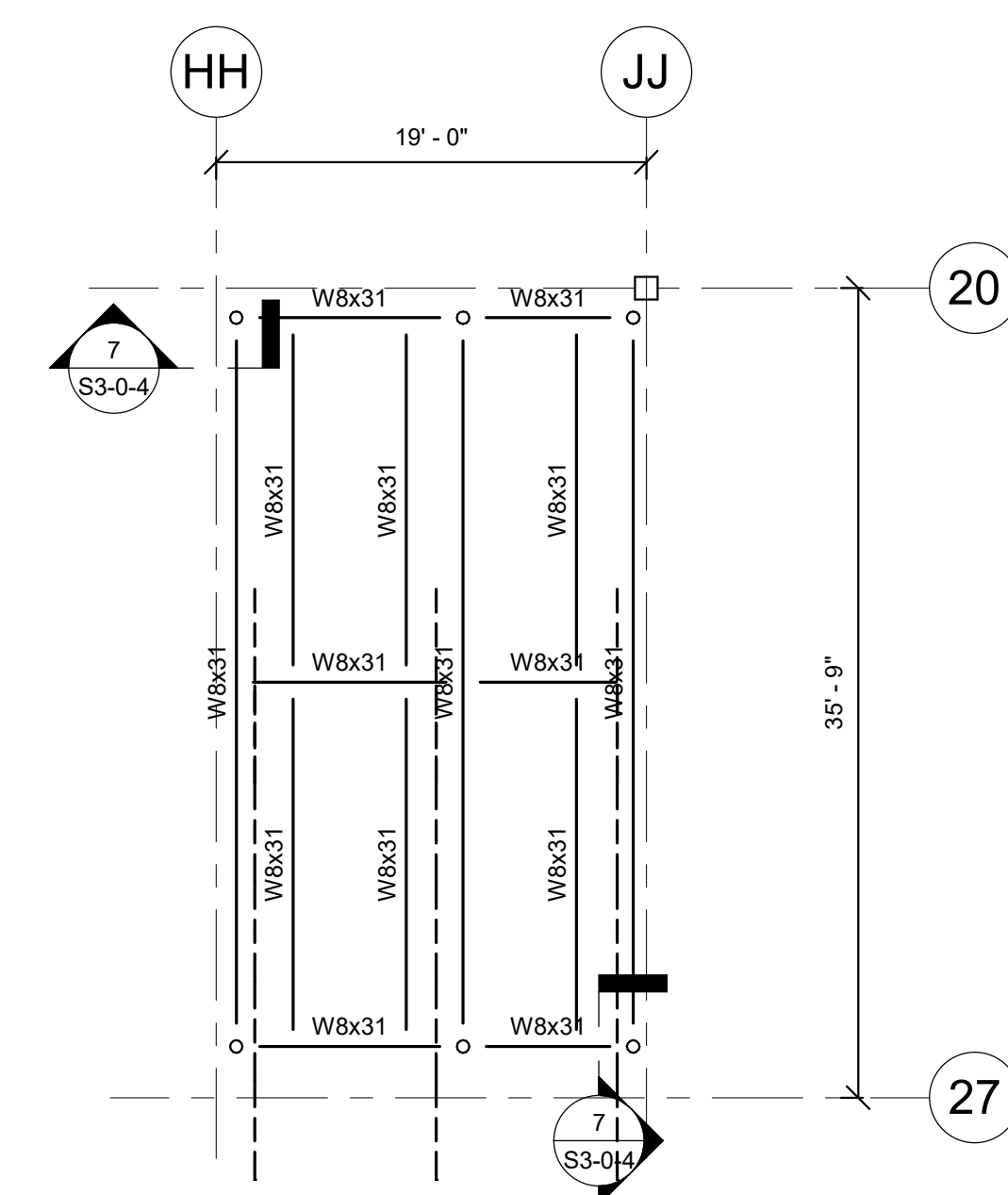
ROOF DUNNAGE FRAMING
PART PLAN - AREA B



ROOF DUNNAGE FRAMING
PART PLAN - AREA C



ROOF DUNNAGE FRAMING
PART PLAN - AREA C



ROOF DUNNAGE FRAMING
PART PLAN - AREA D

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

Planning Architecture Interior
Tel: 877.221.1100
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

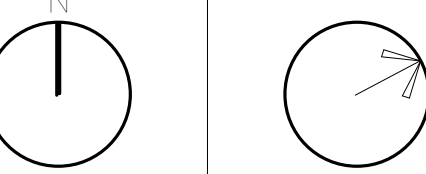
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

A B C
D

KEY PLAN

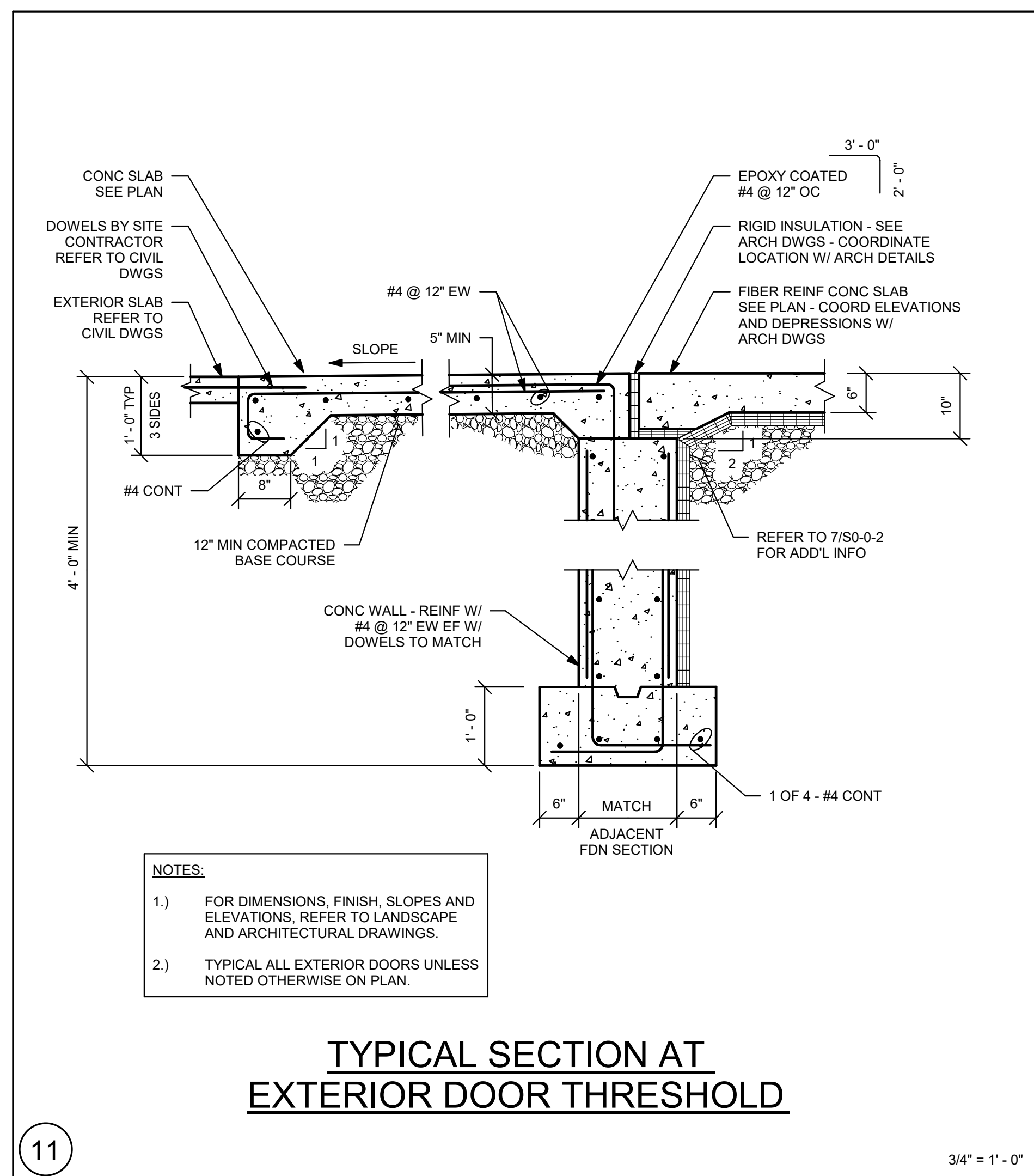
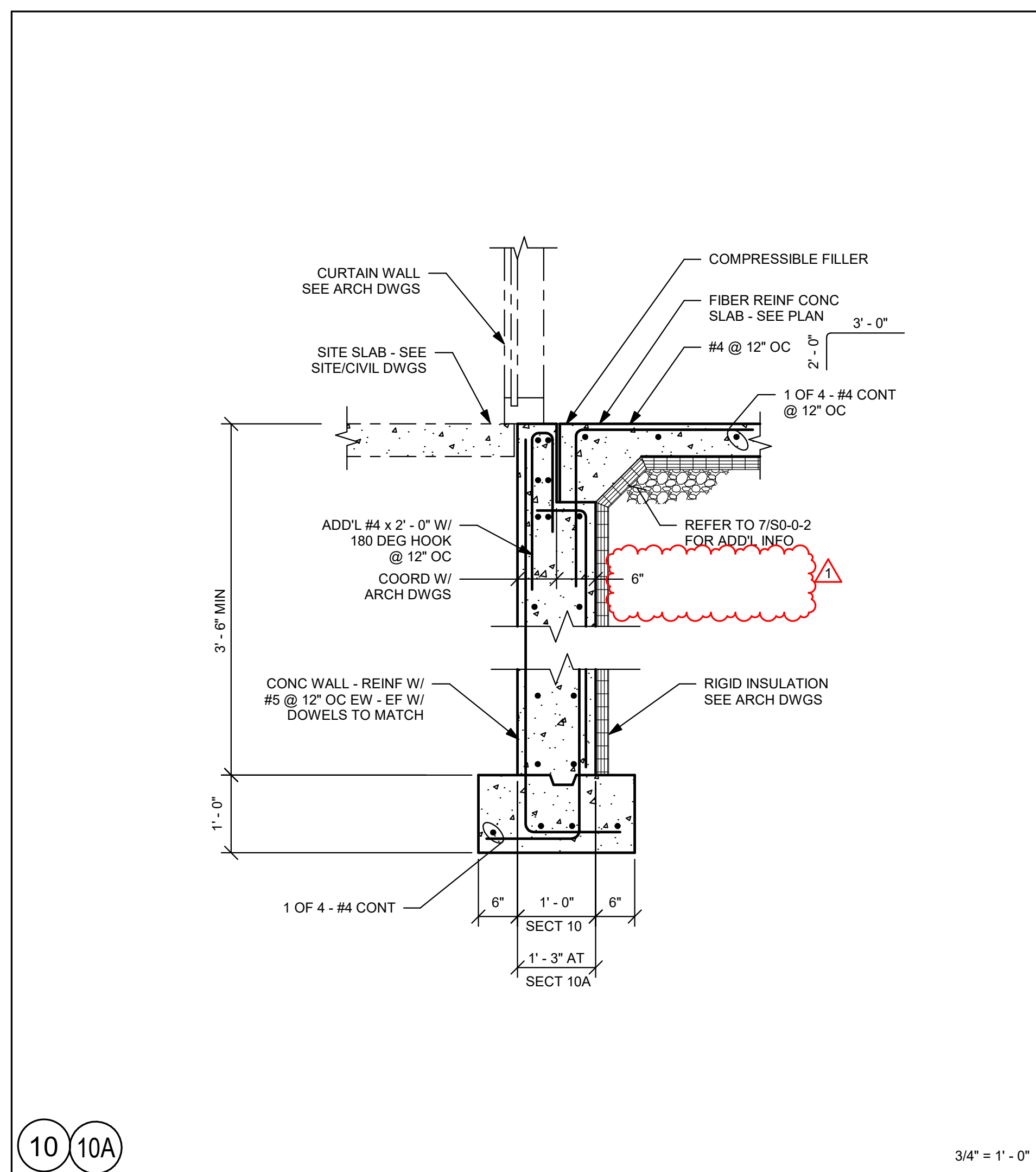
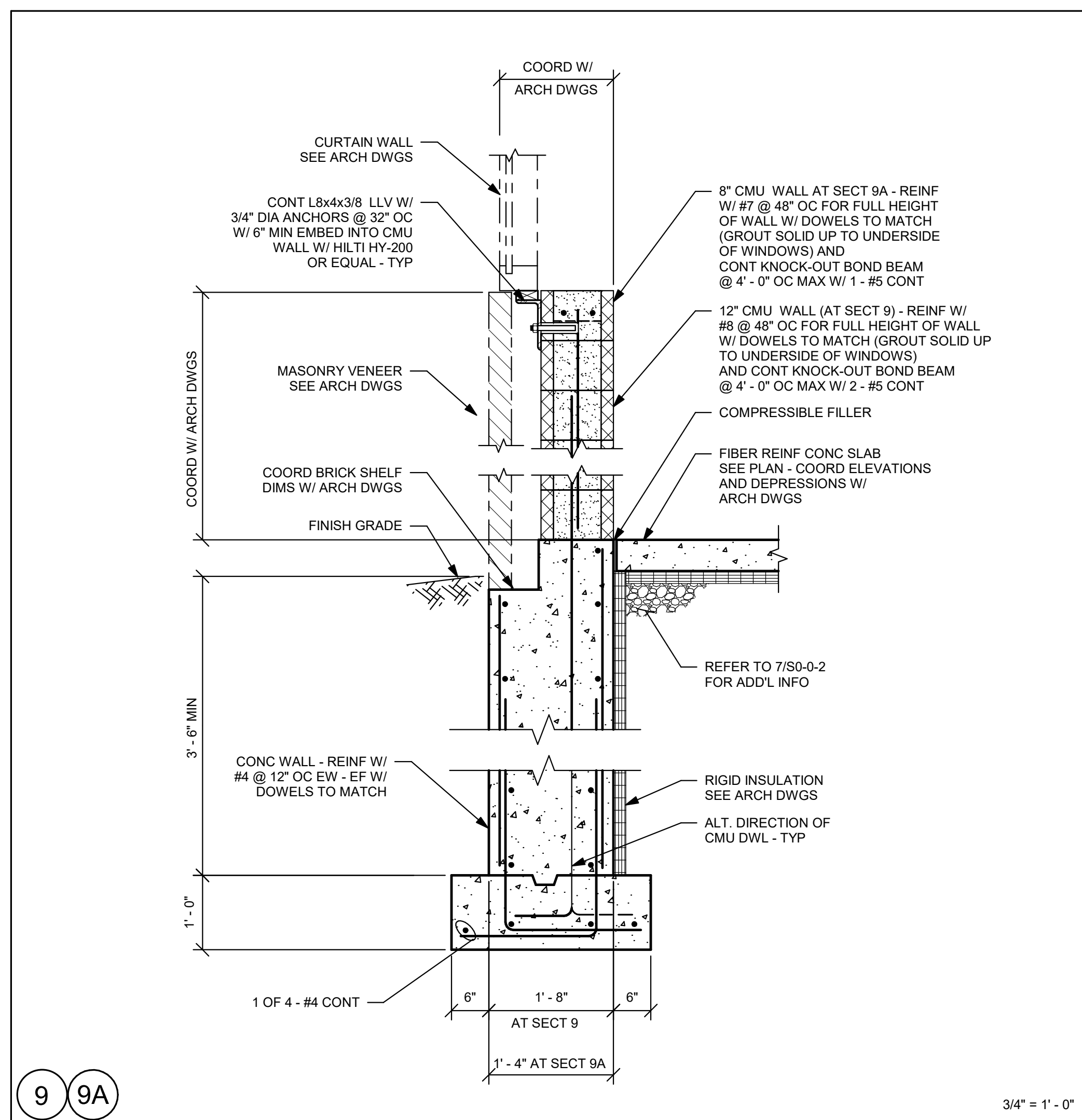
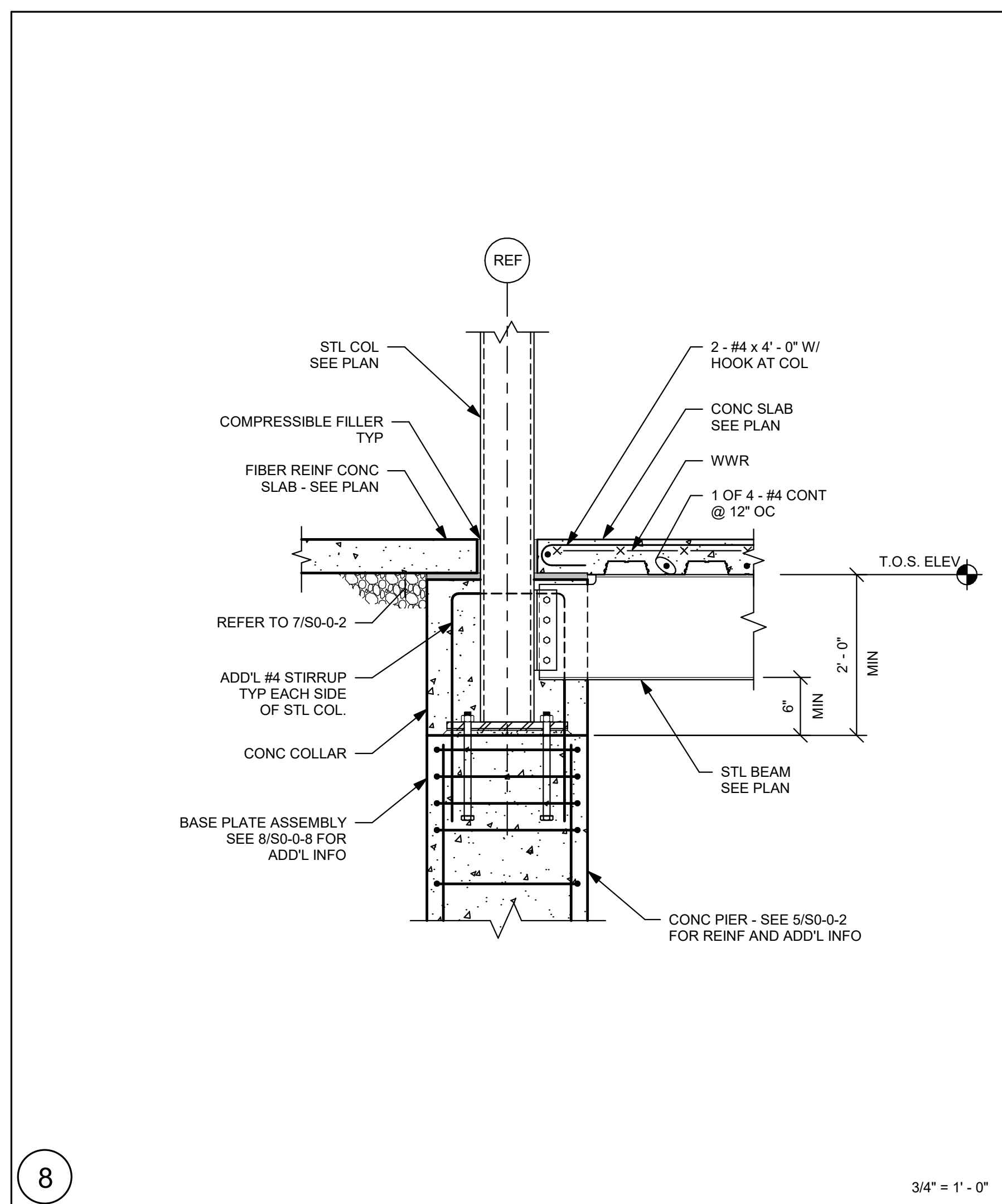
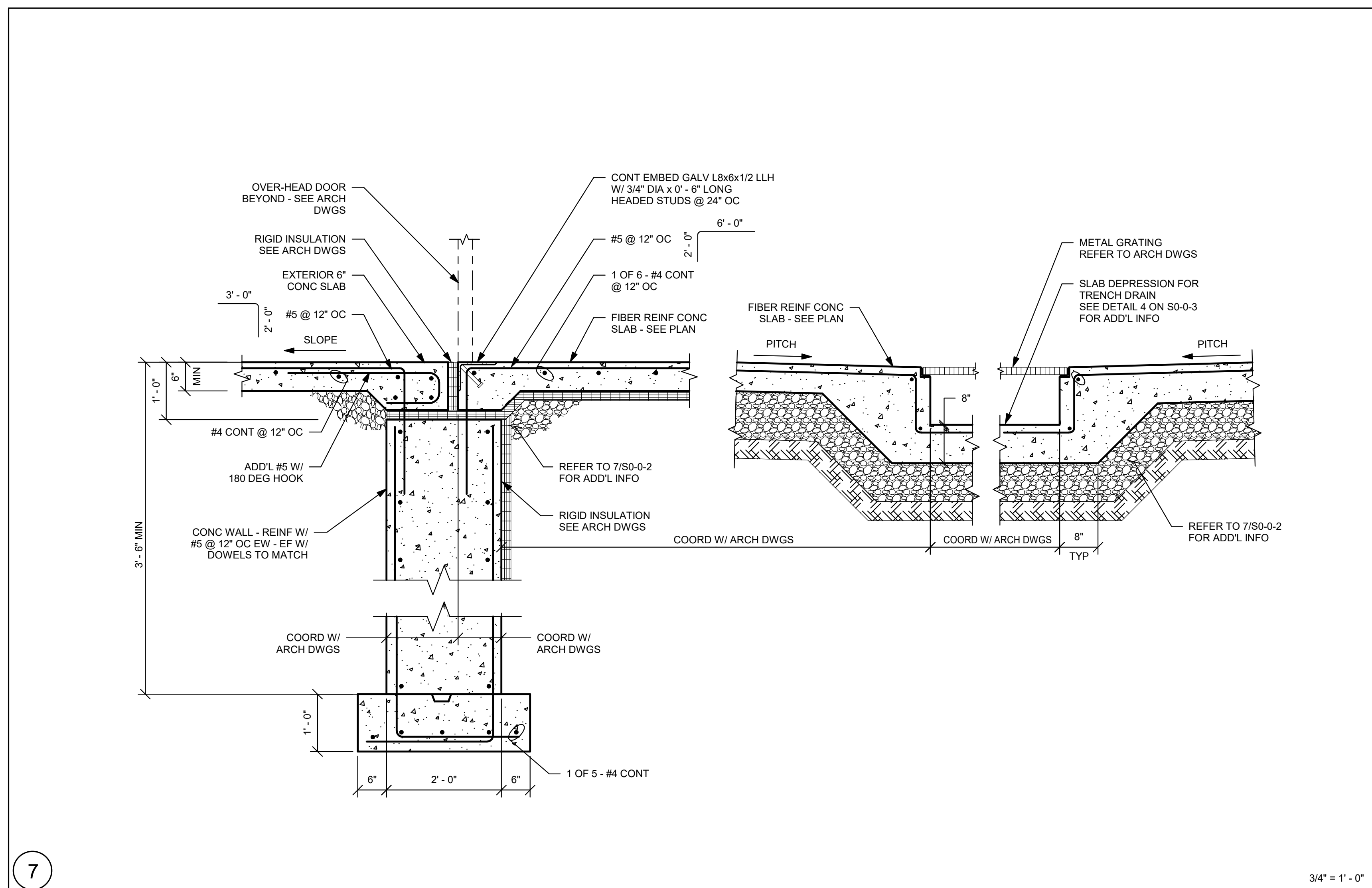
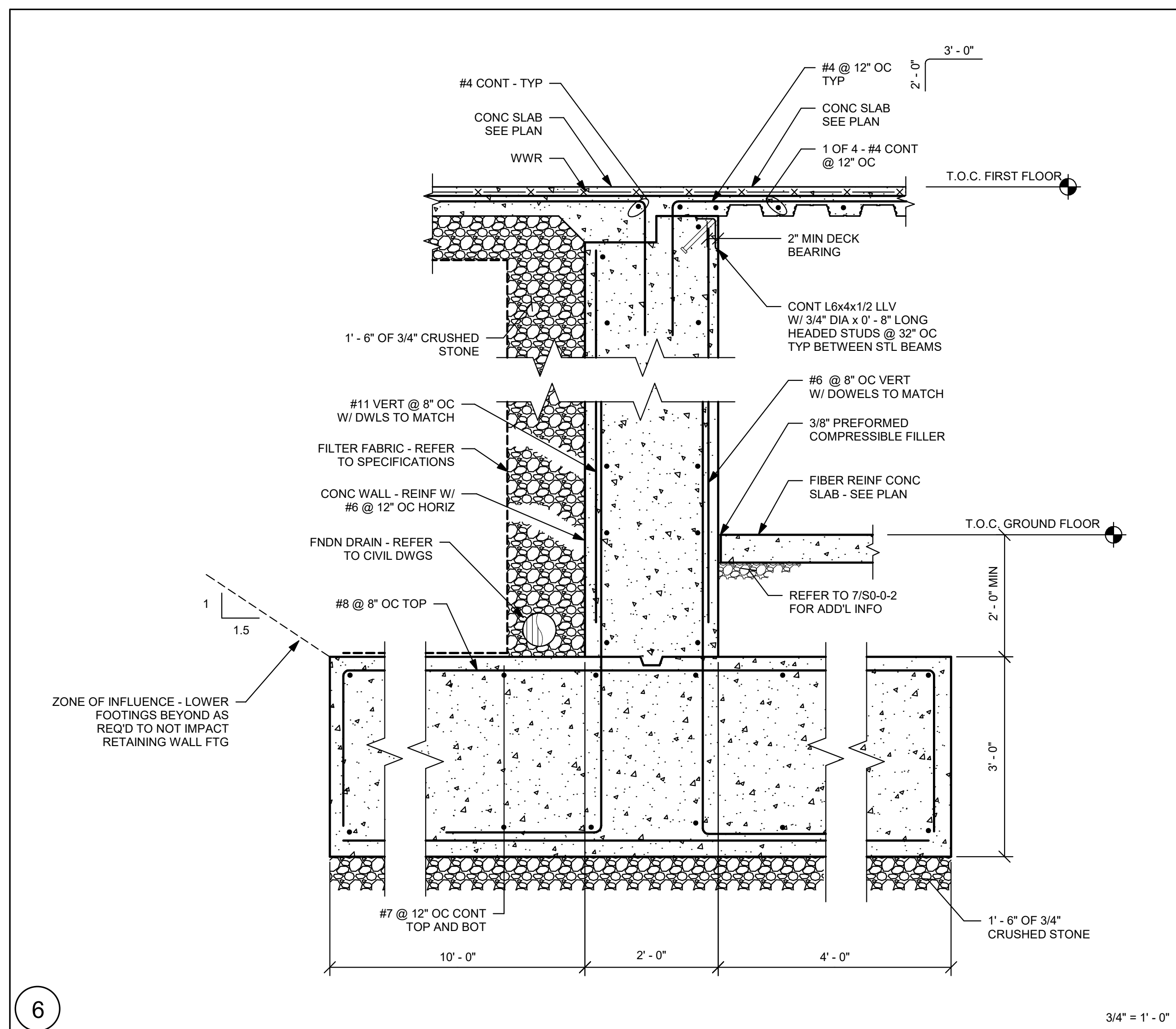
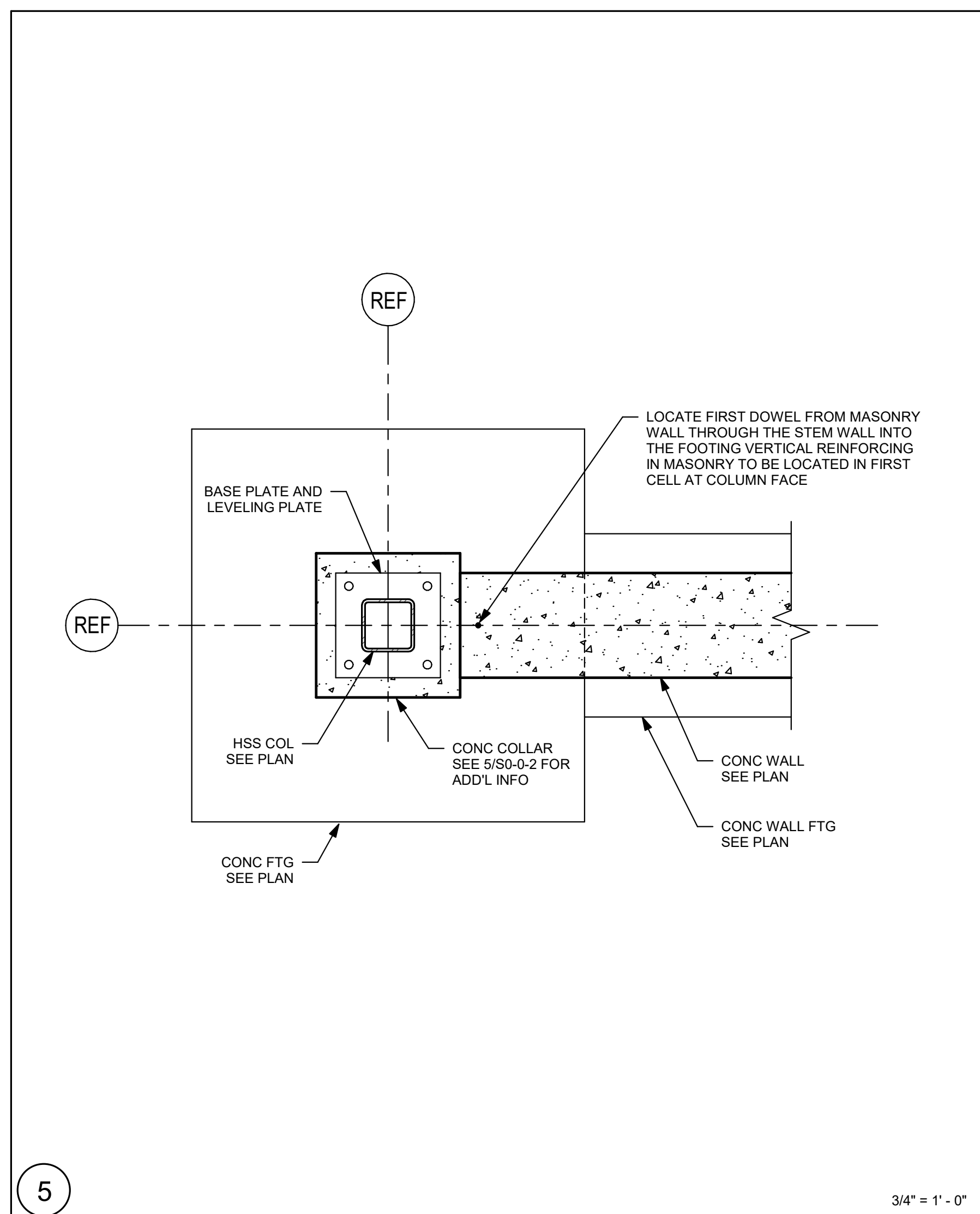
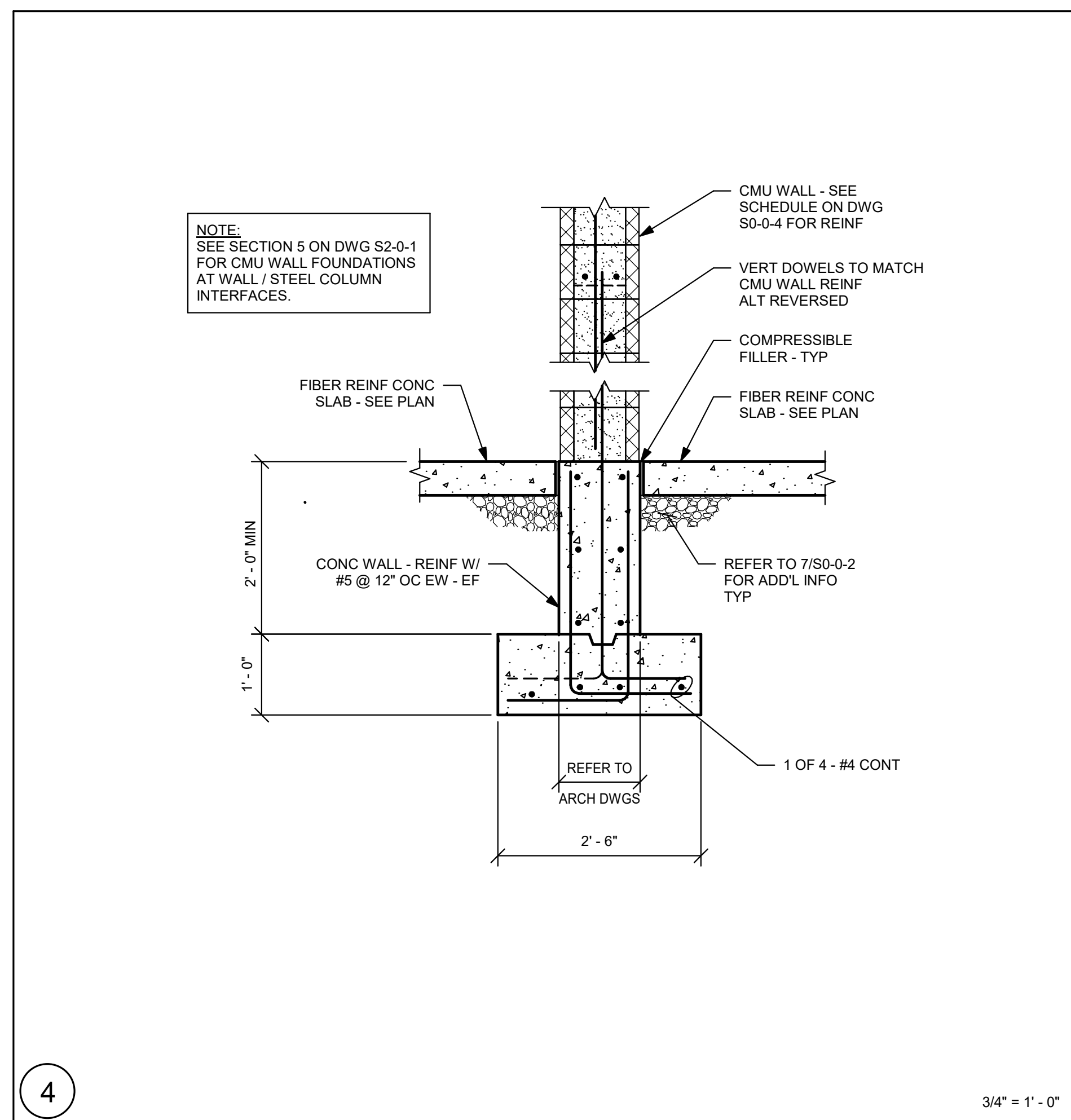
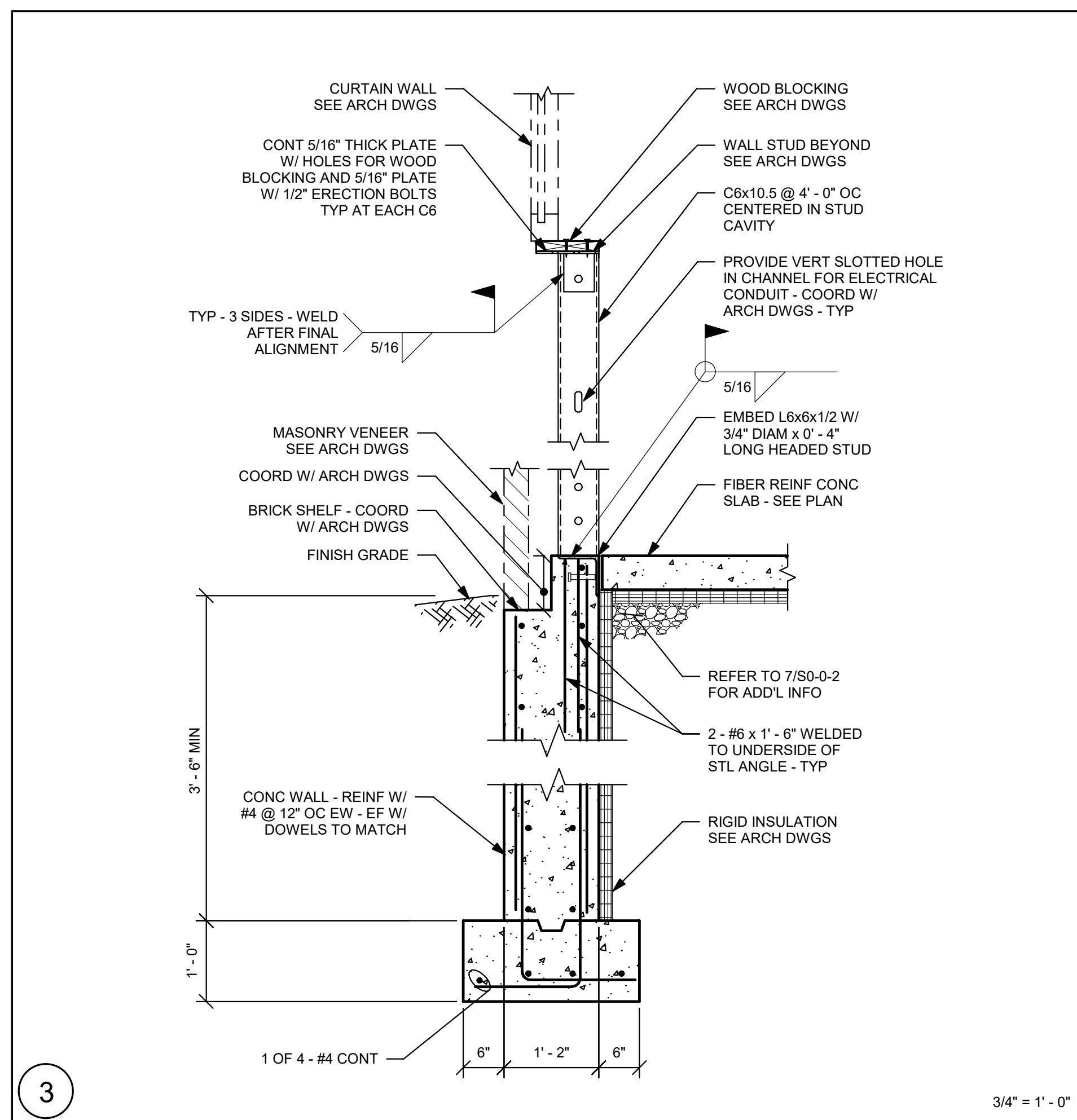
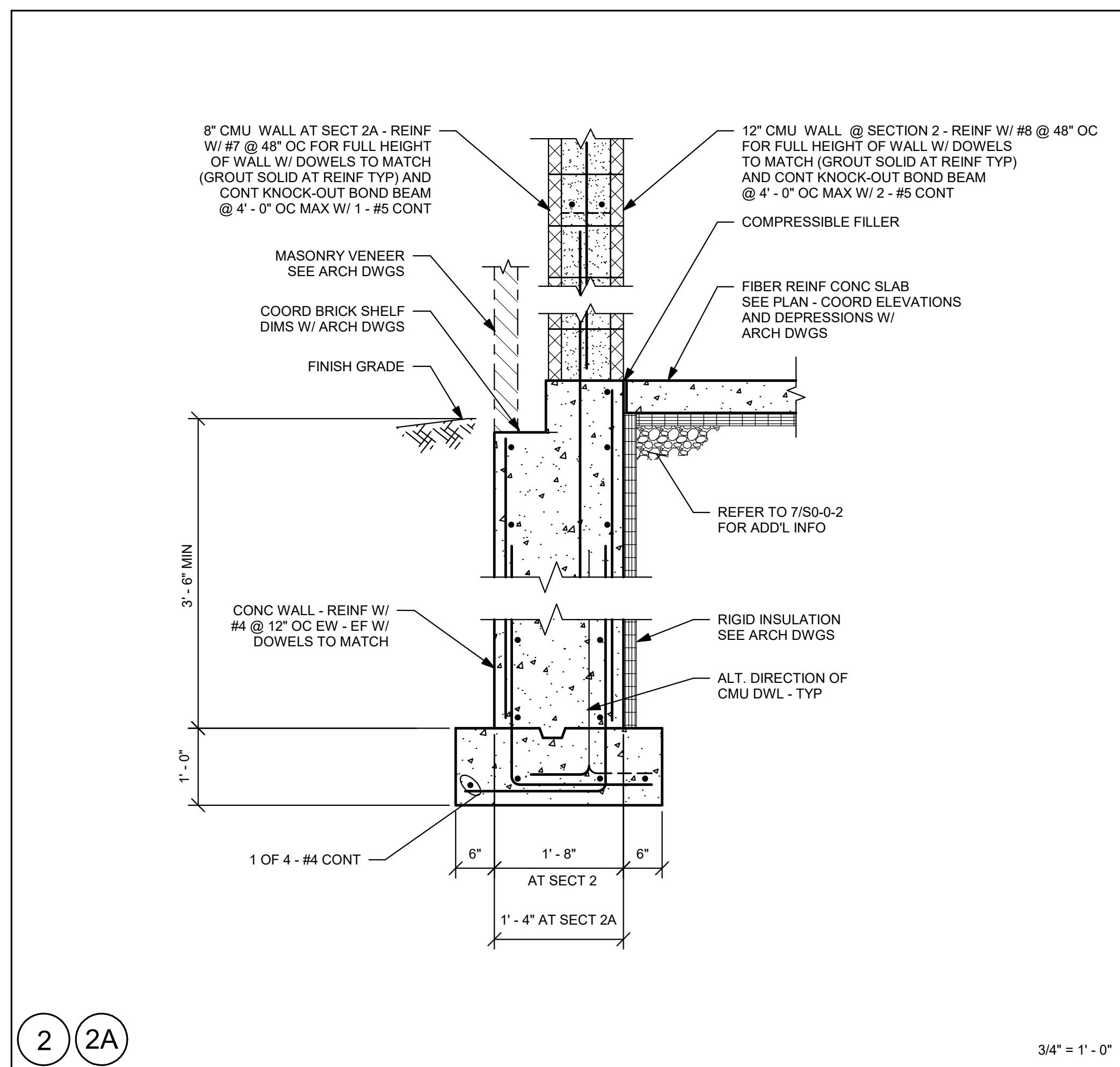
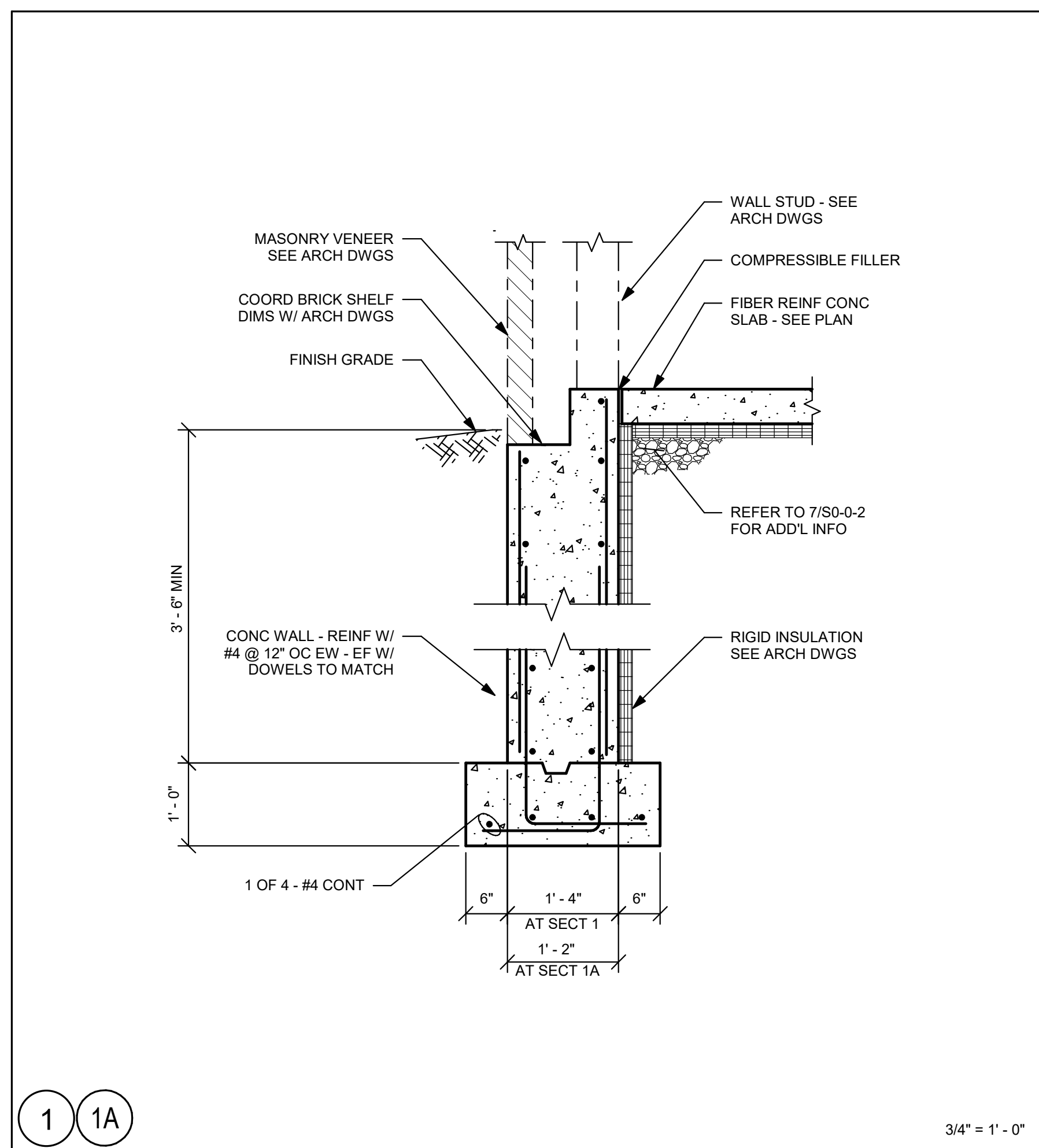
PROJECT NORTH MAGNETIC NORTH

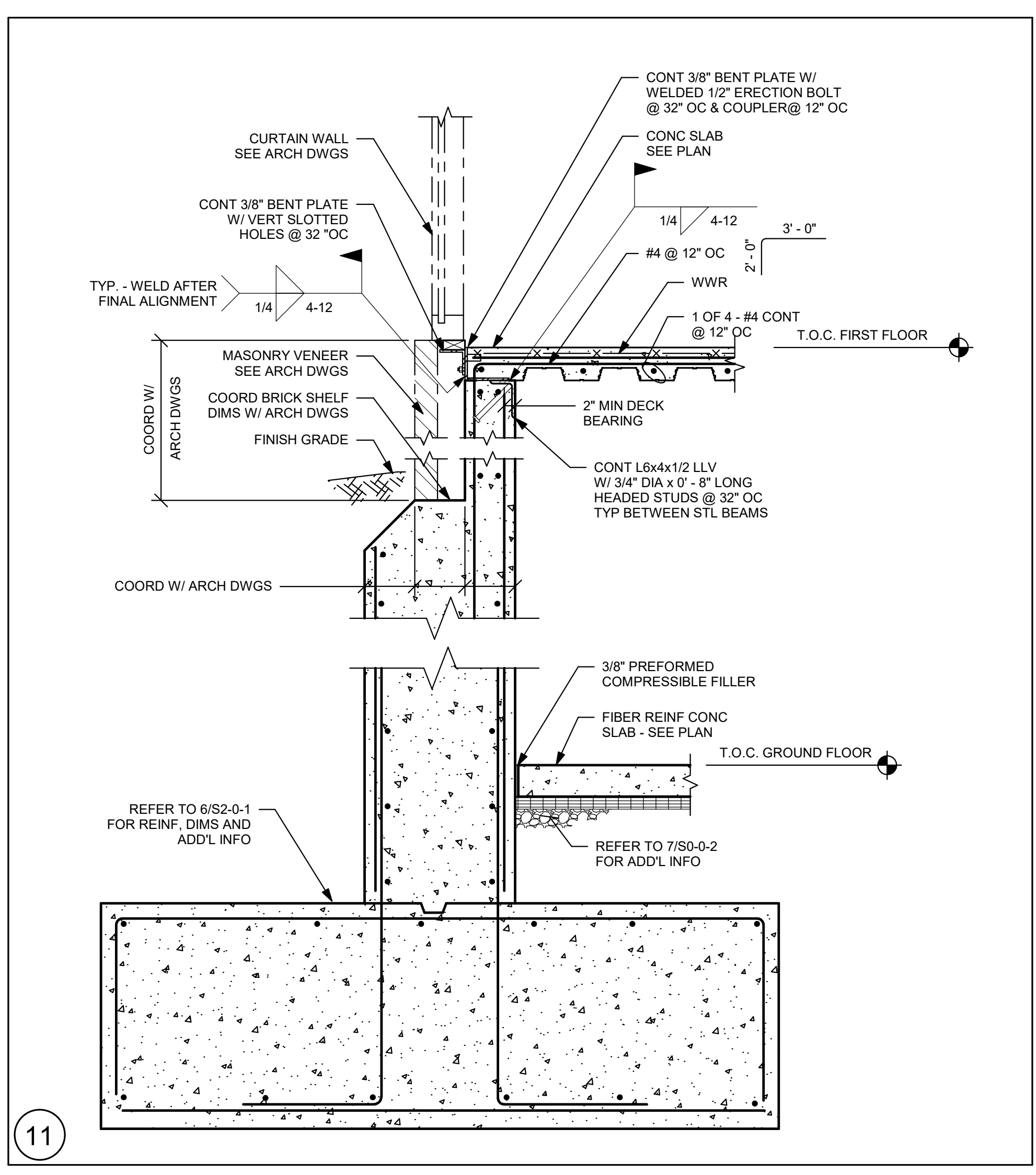
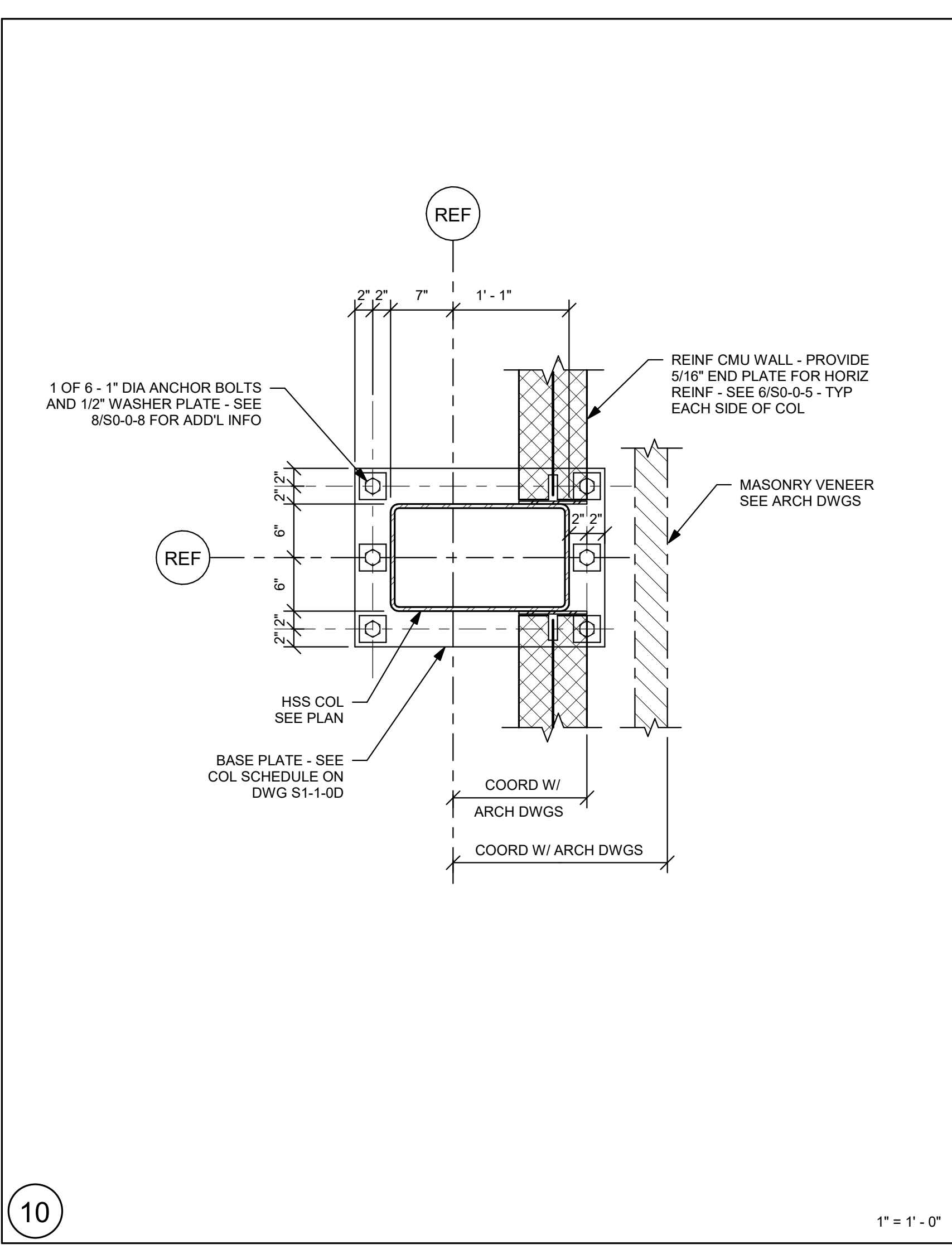
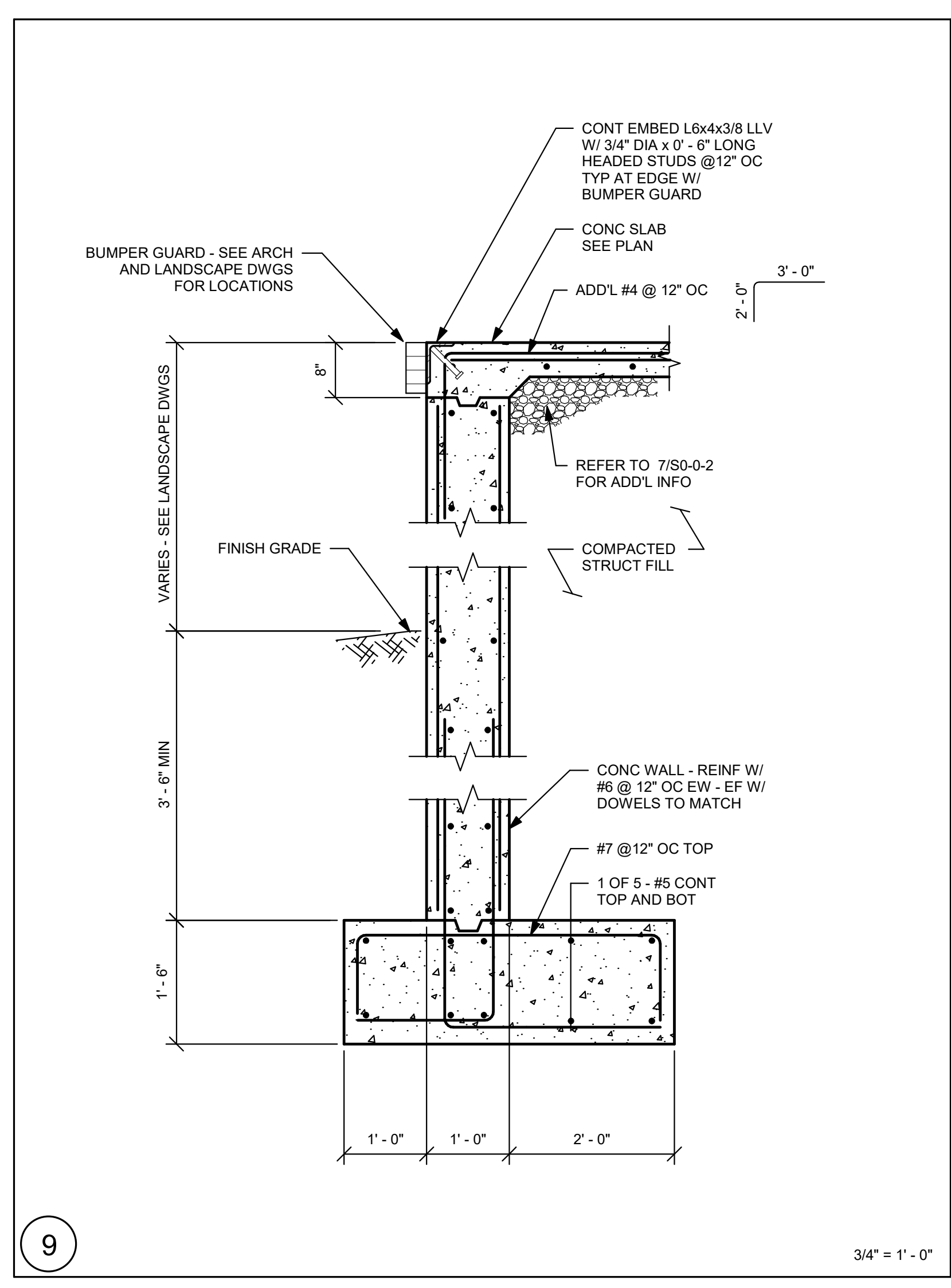
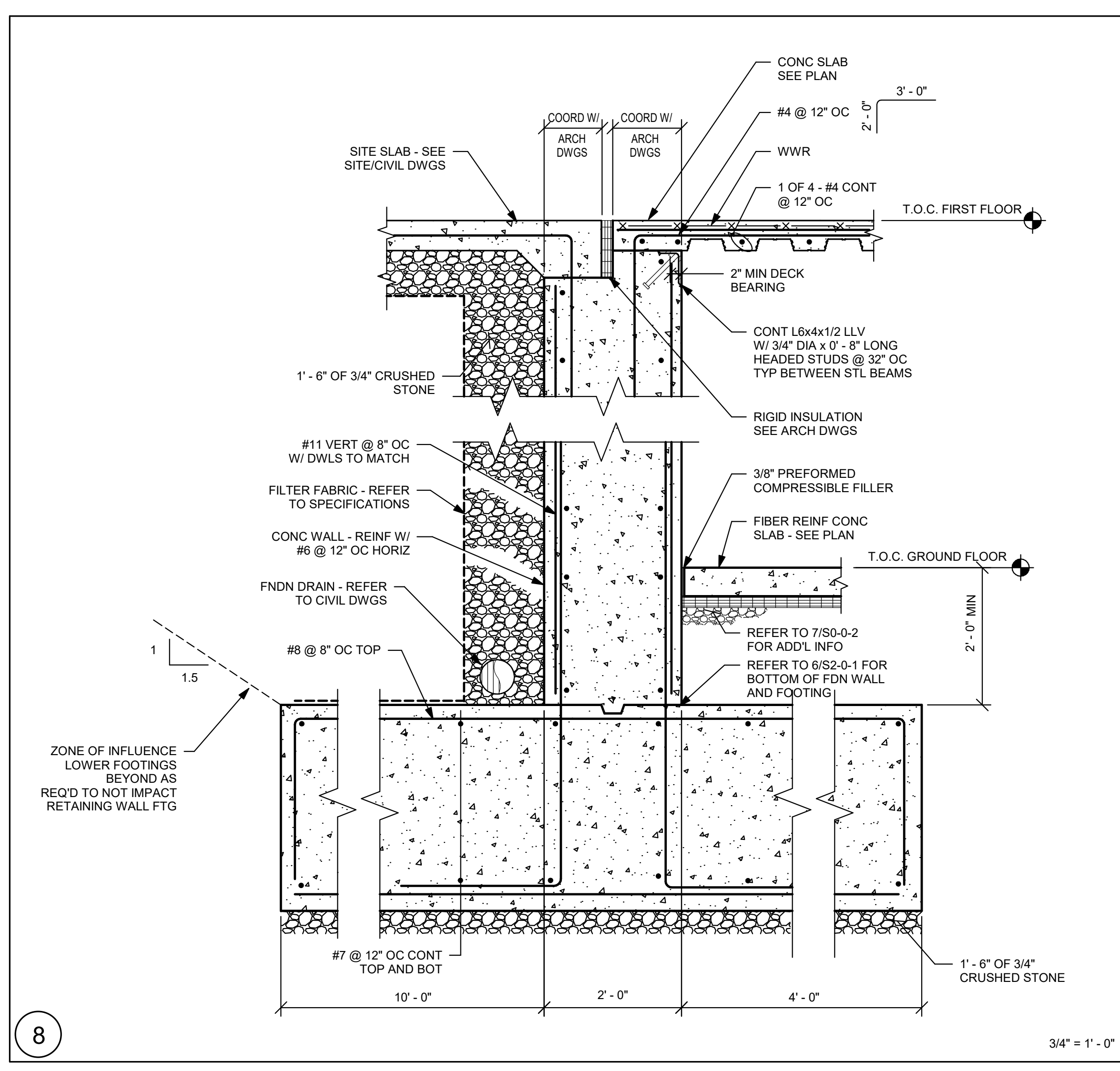
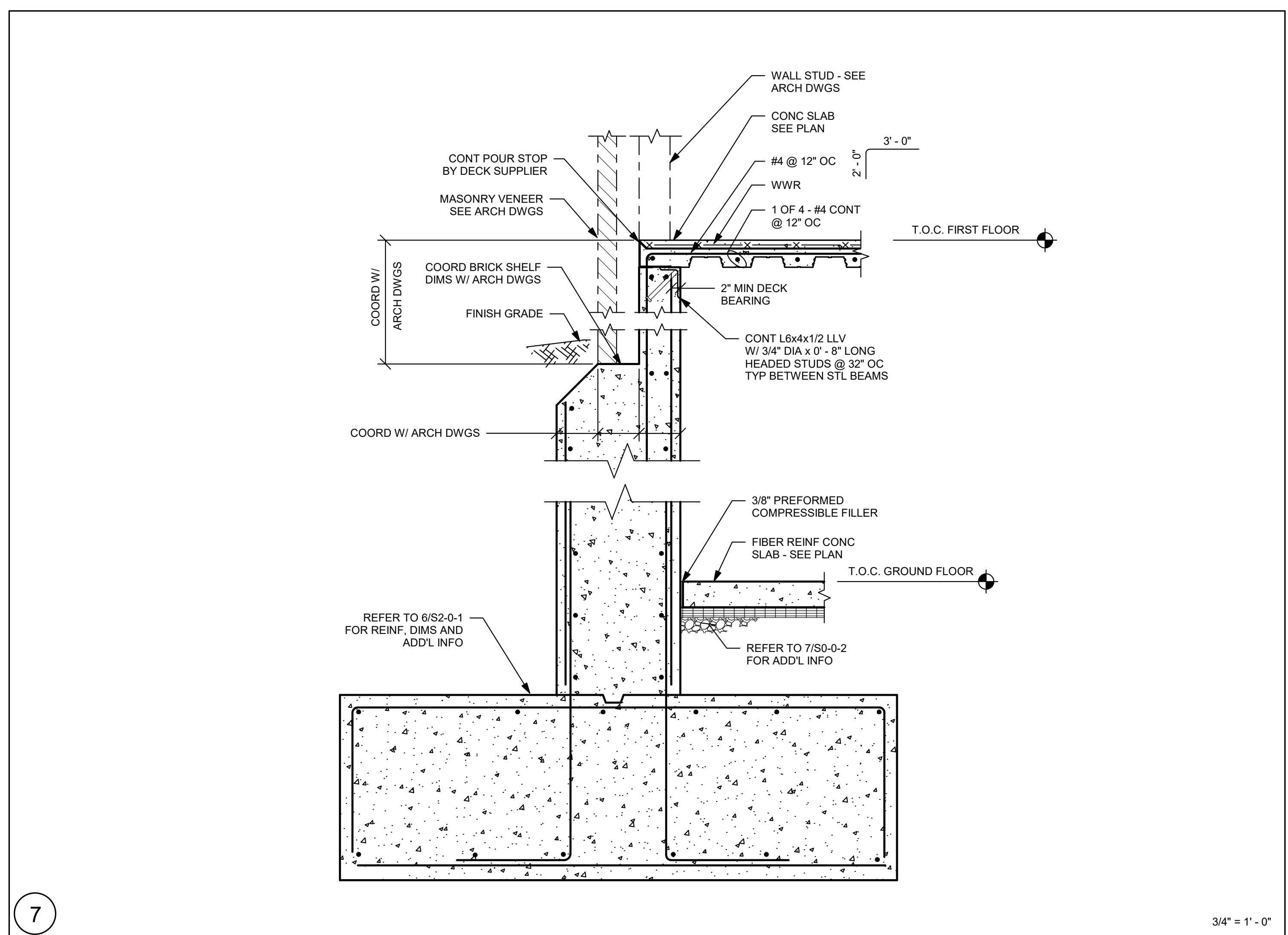
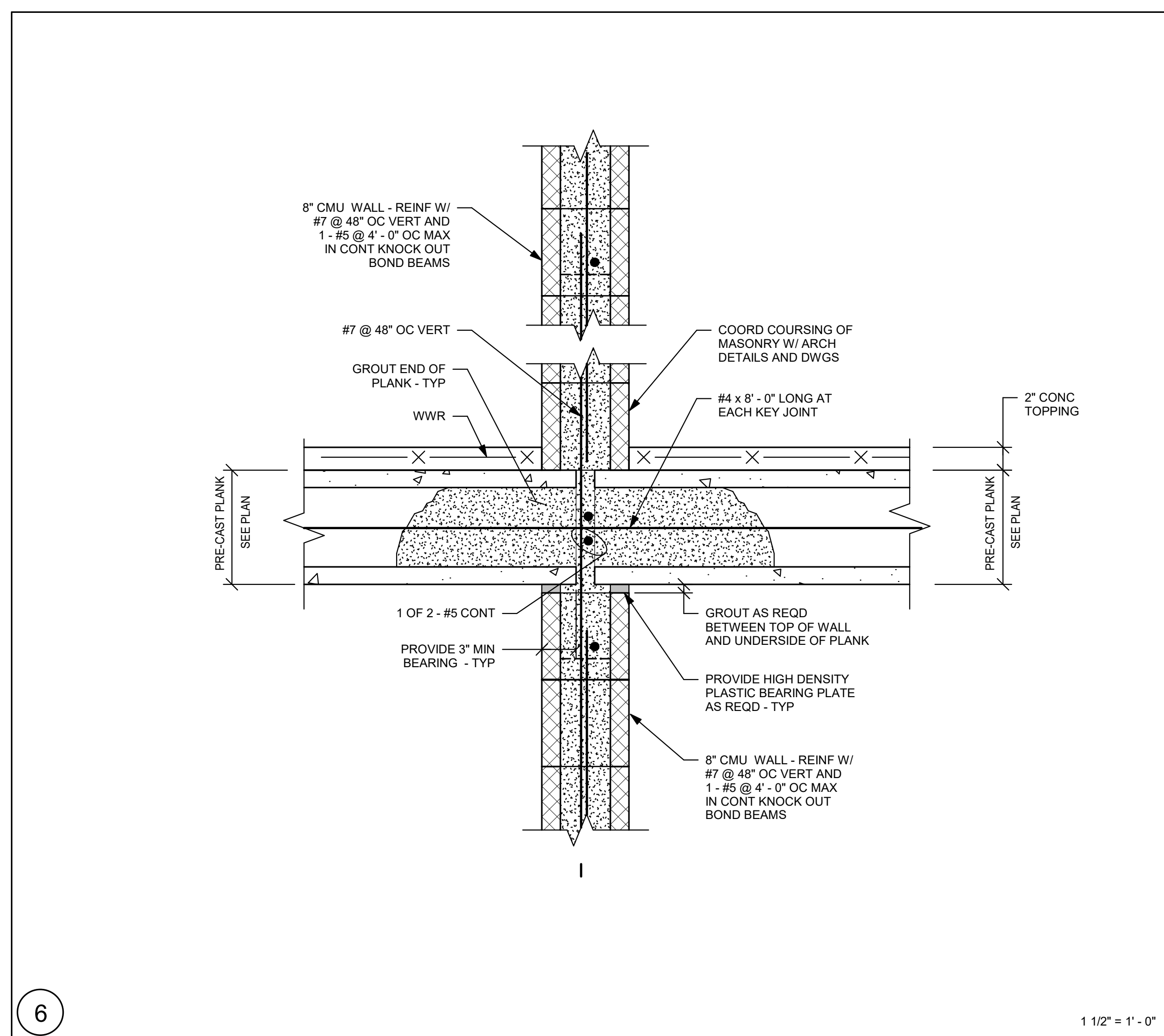
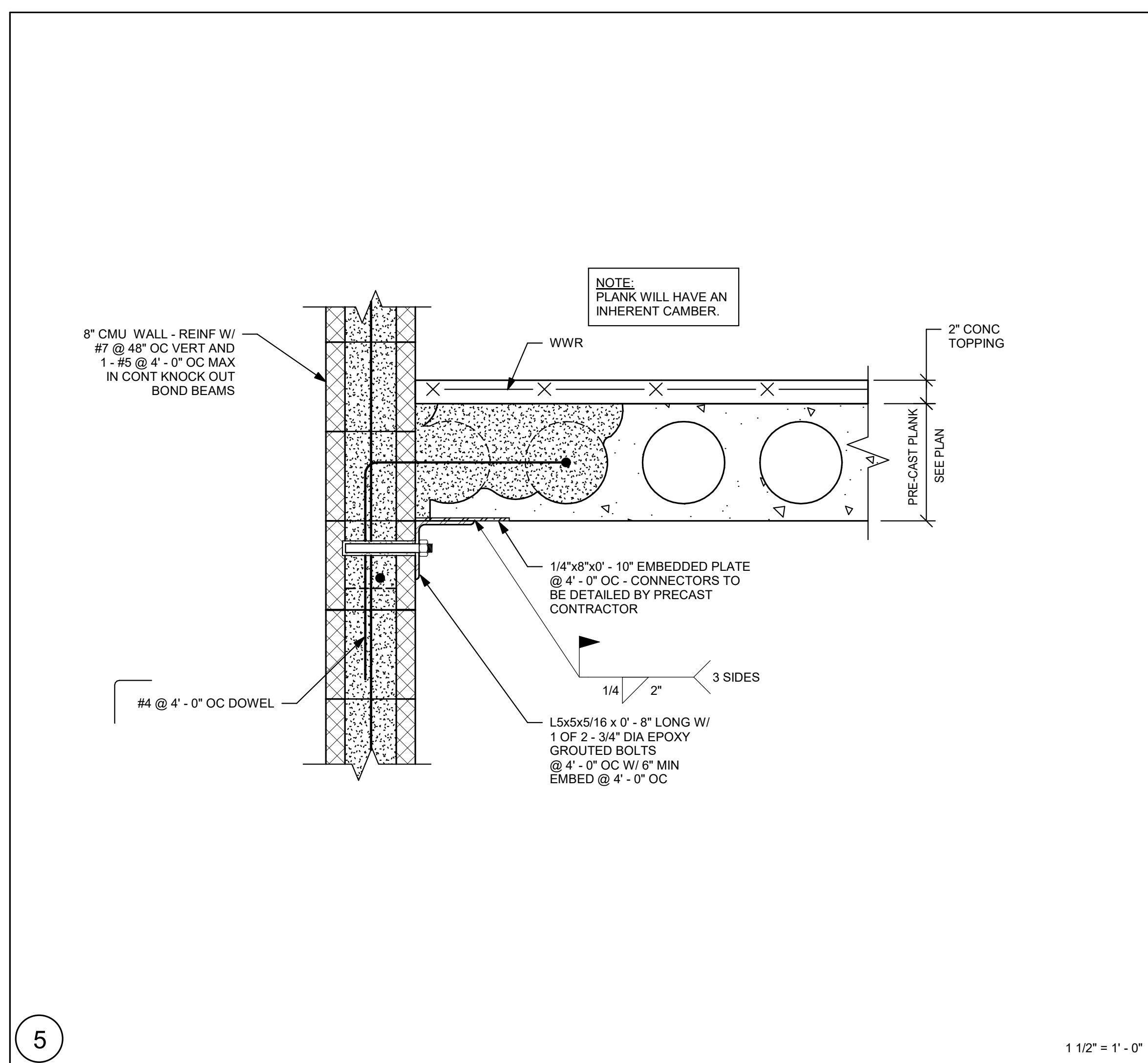
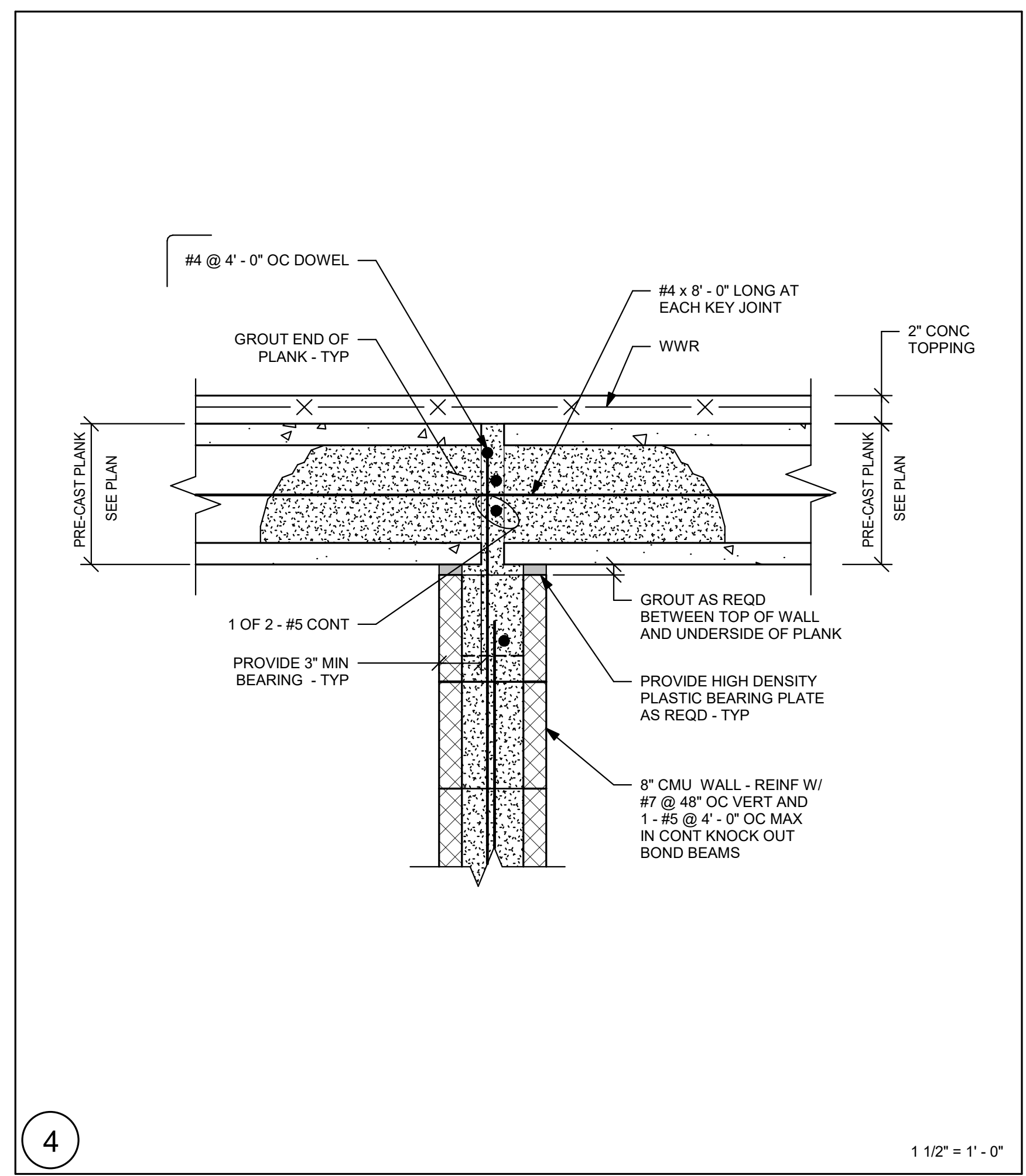
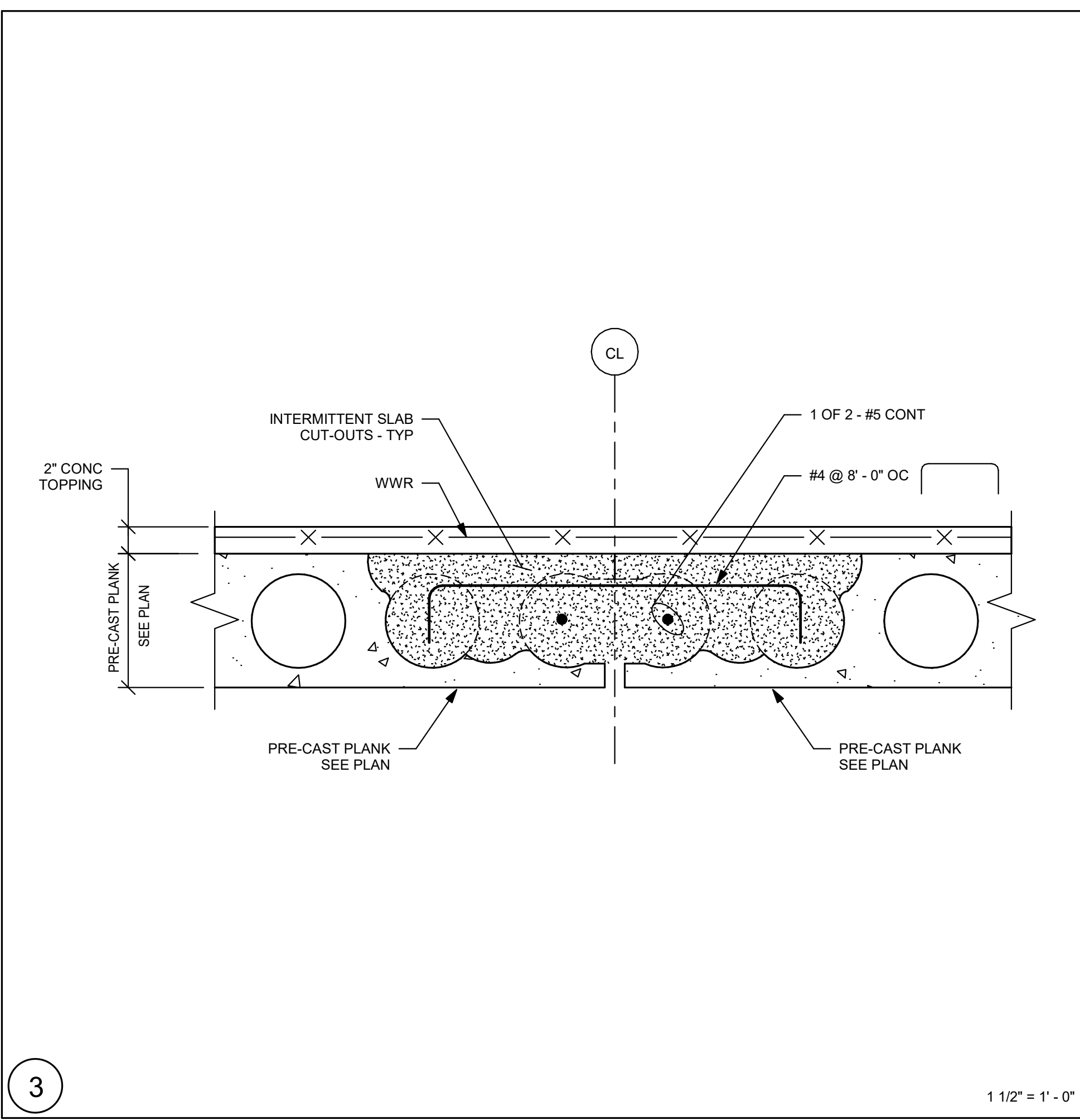
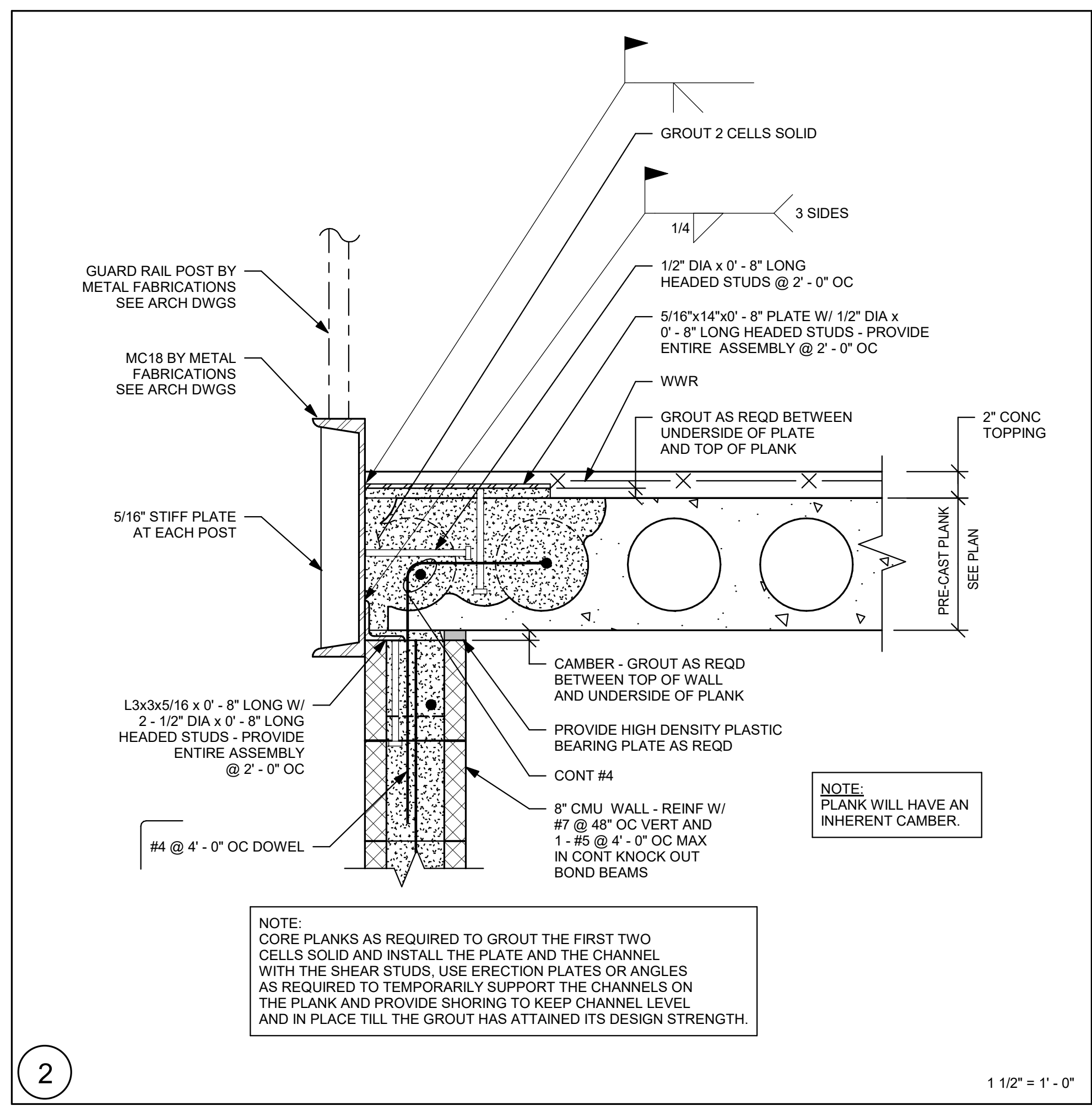
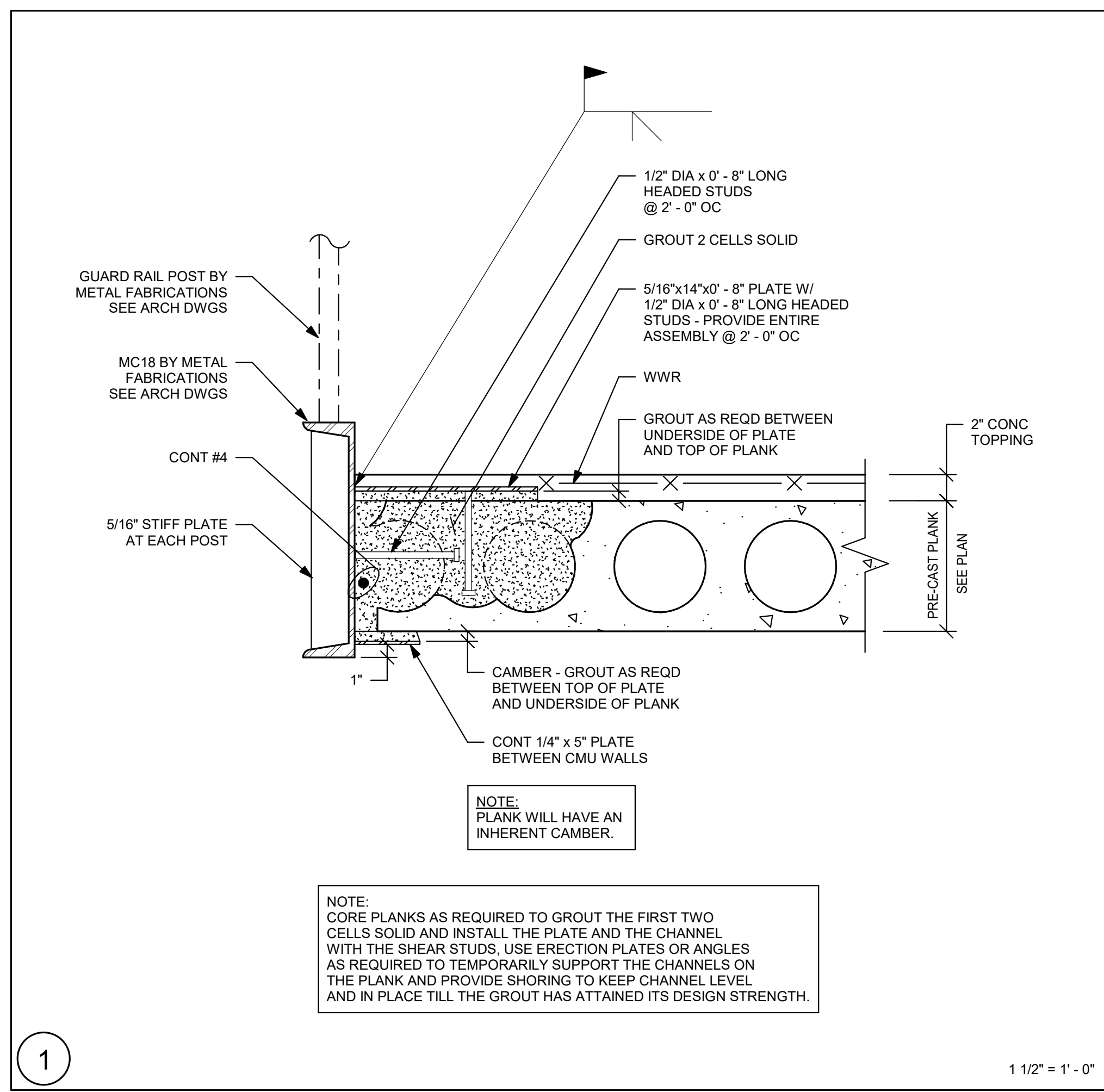


SECTIONS

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S2-0-1





DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior

Tel: 877.611.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE
FEBRUARY 24TH, 2023

KEY PLAN

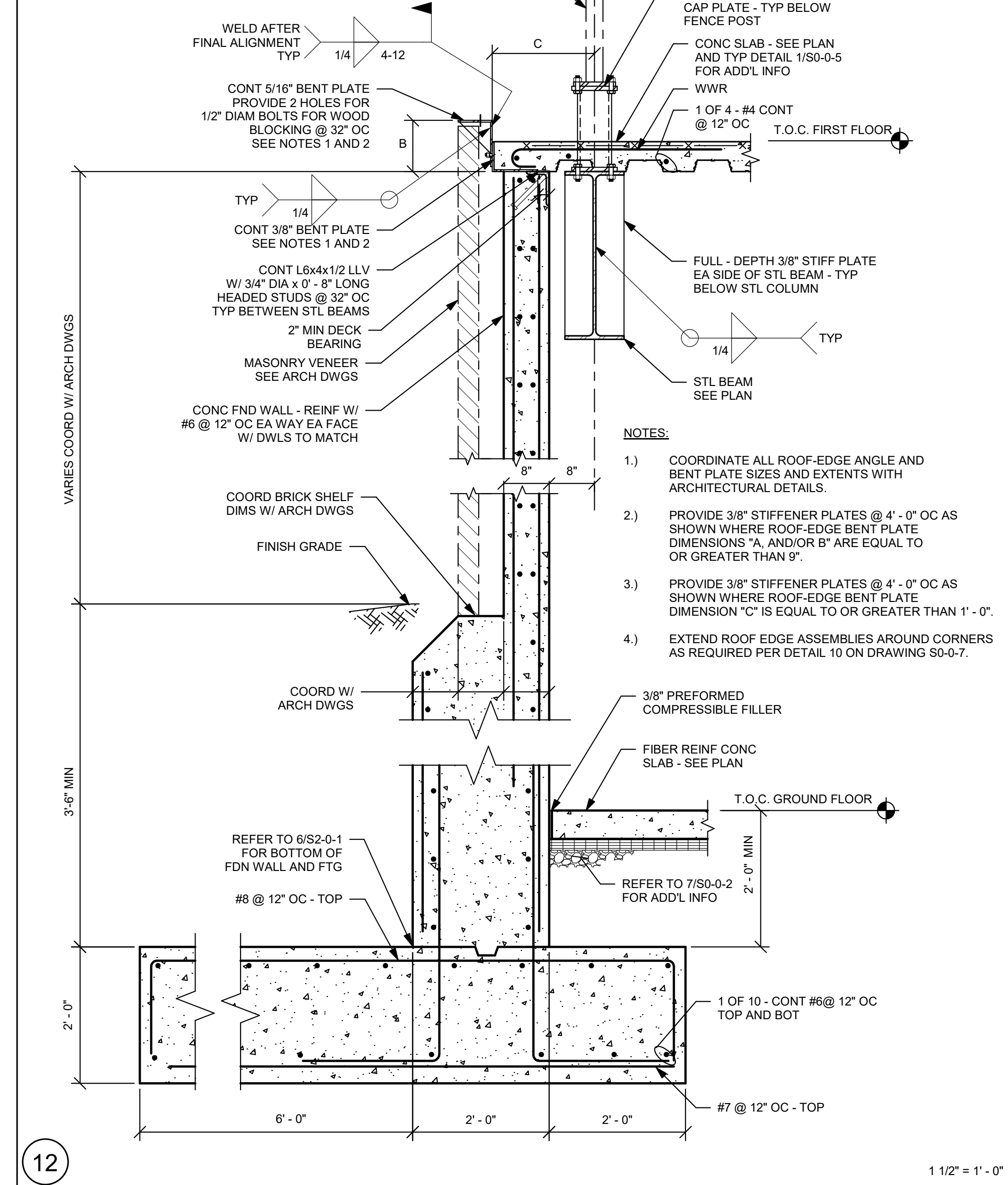
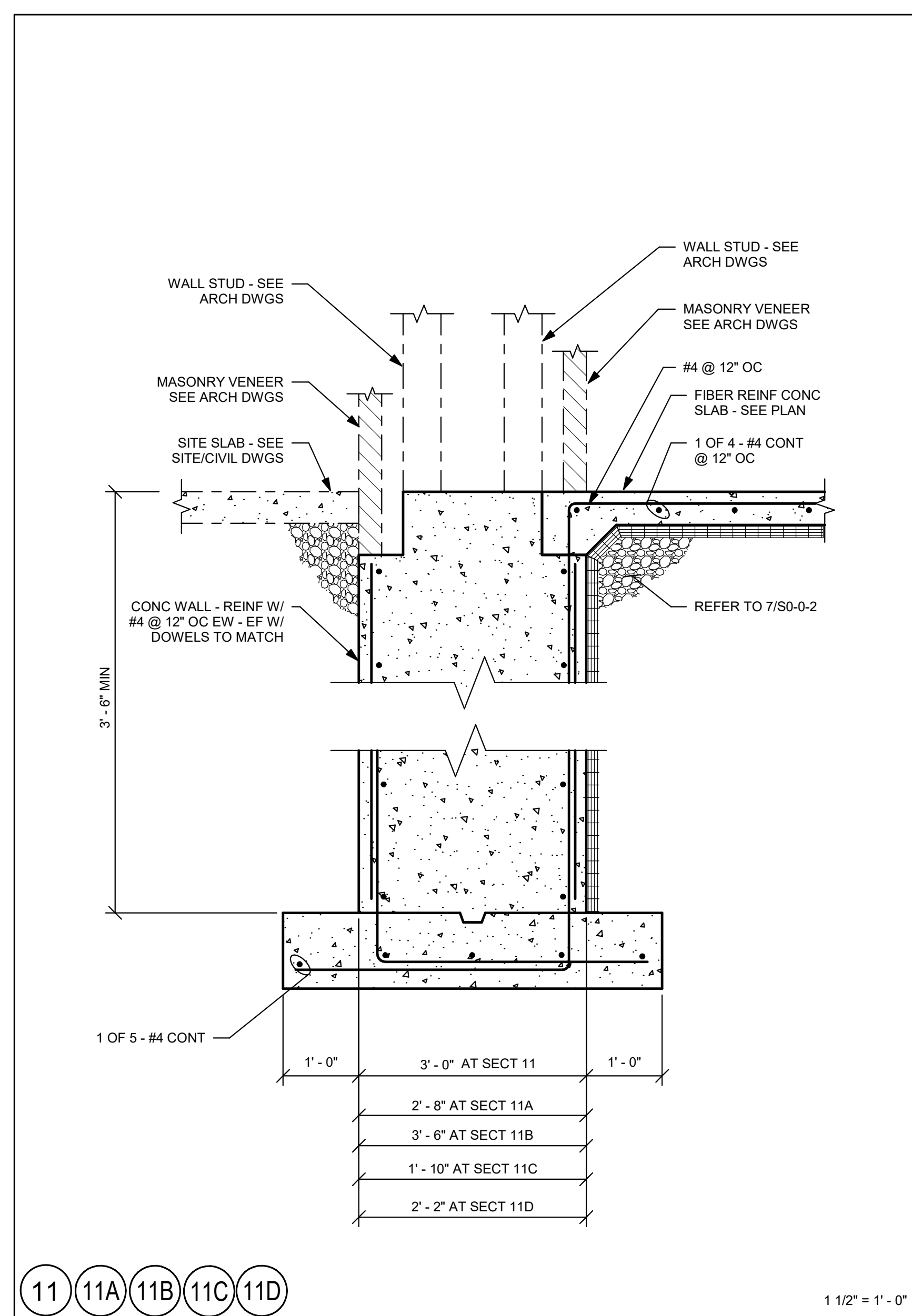
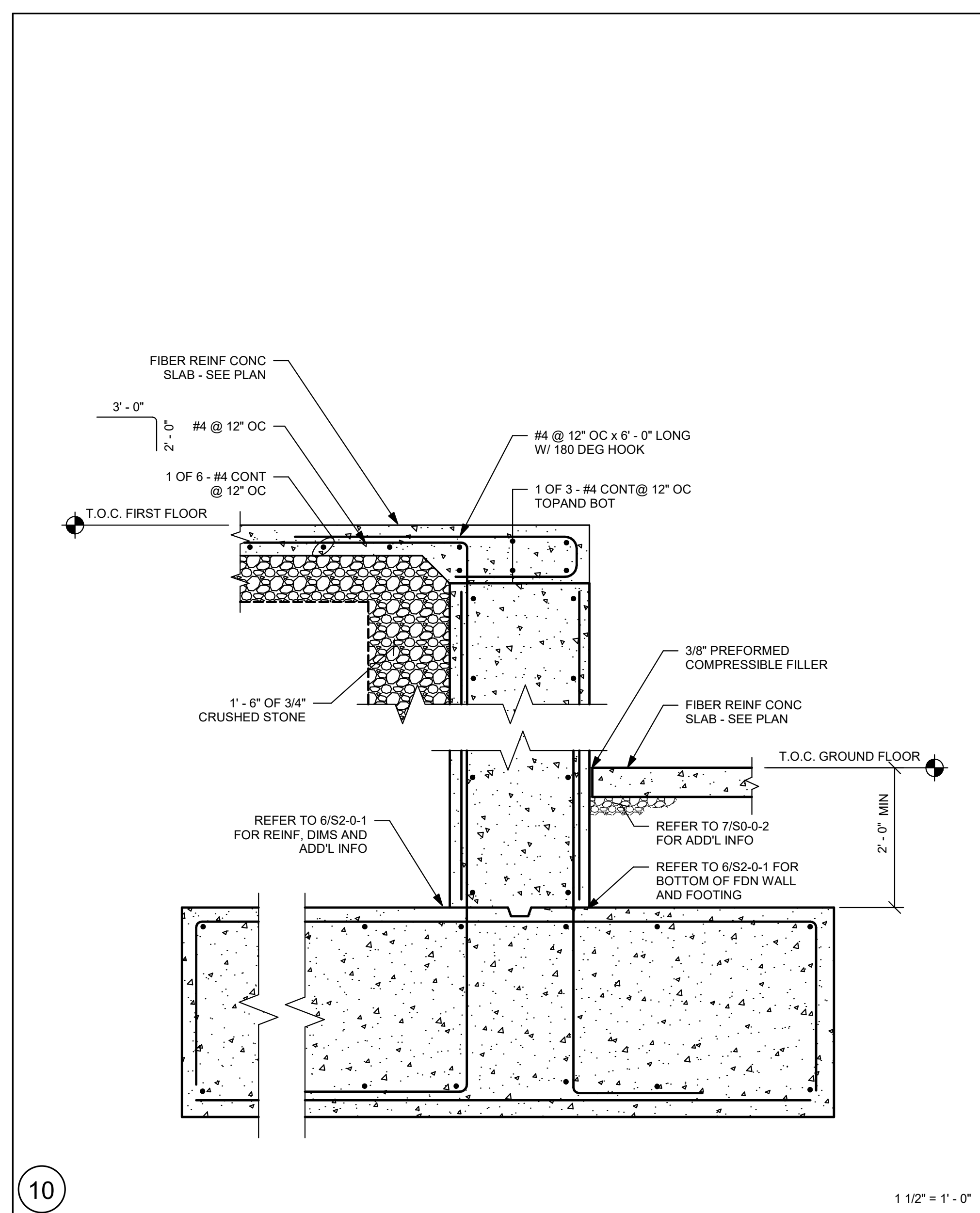
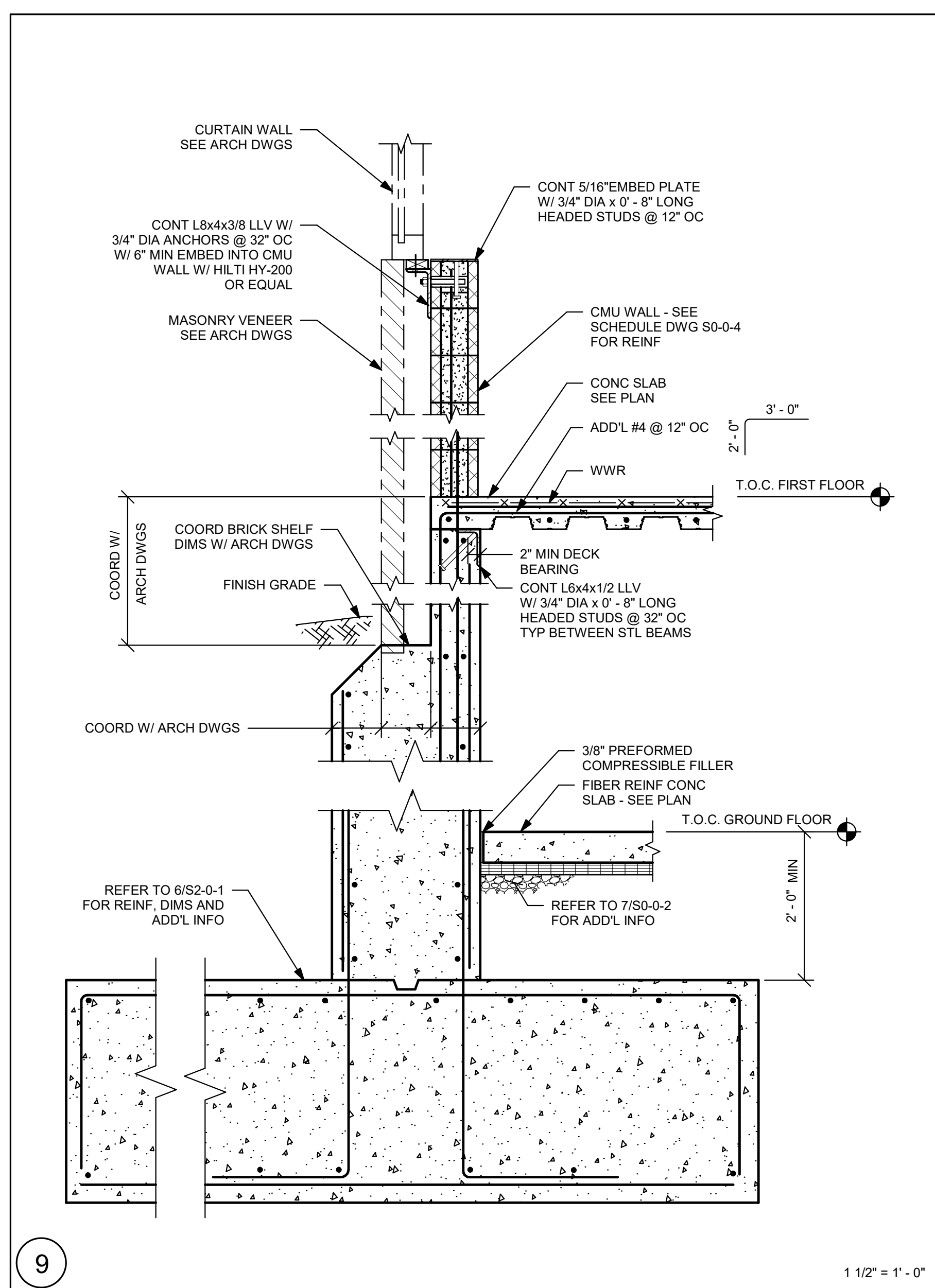
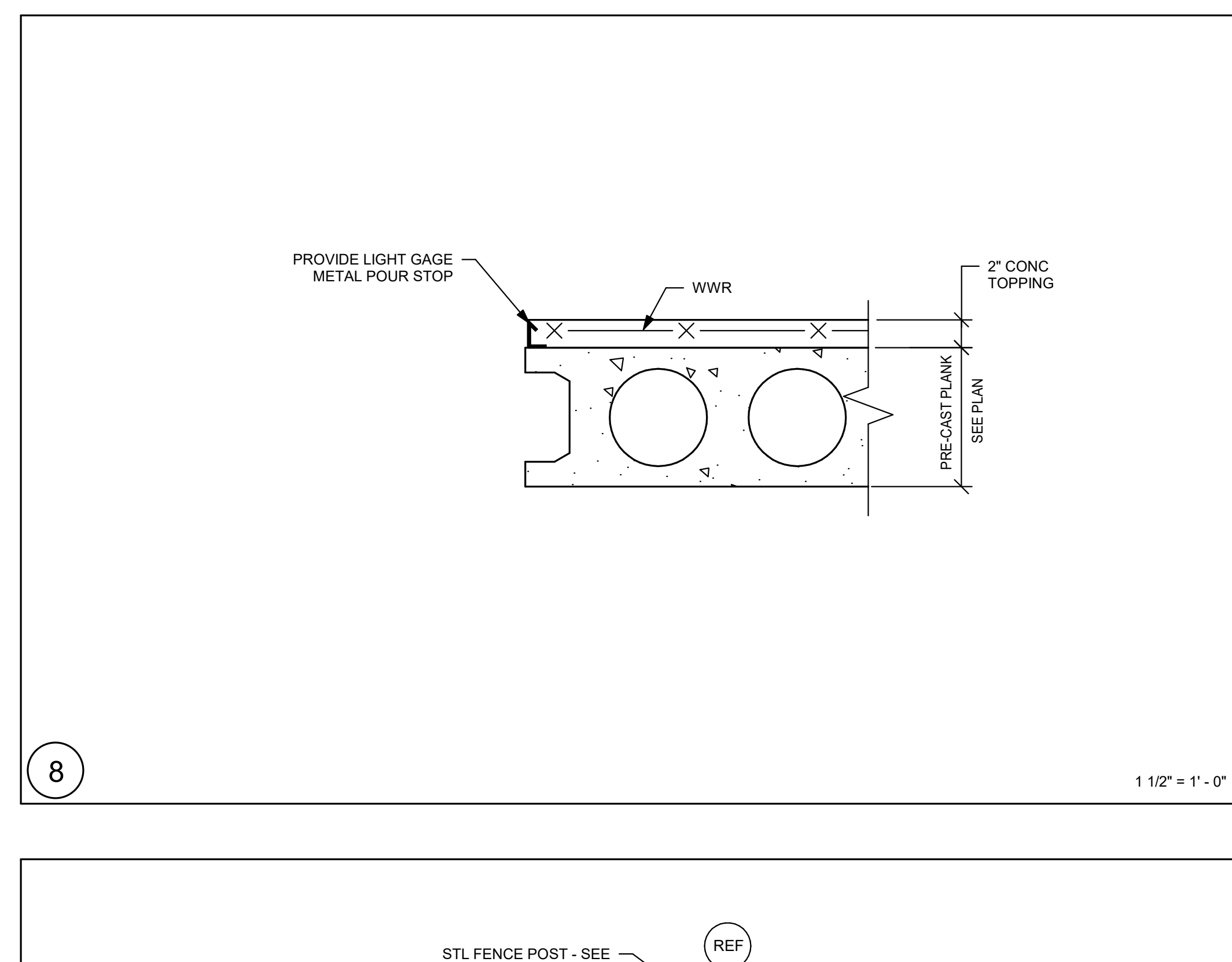
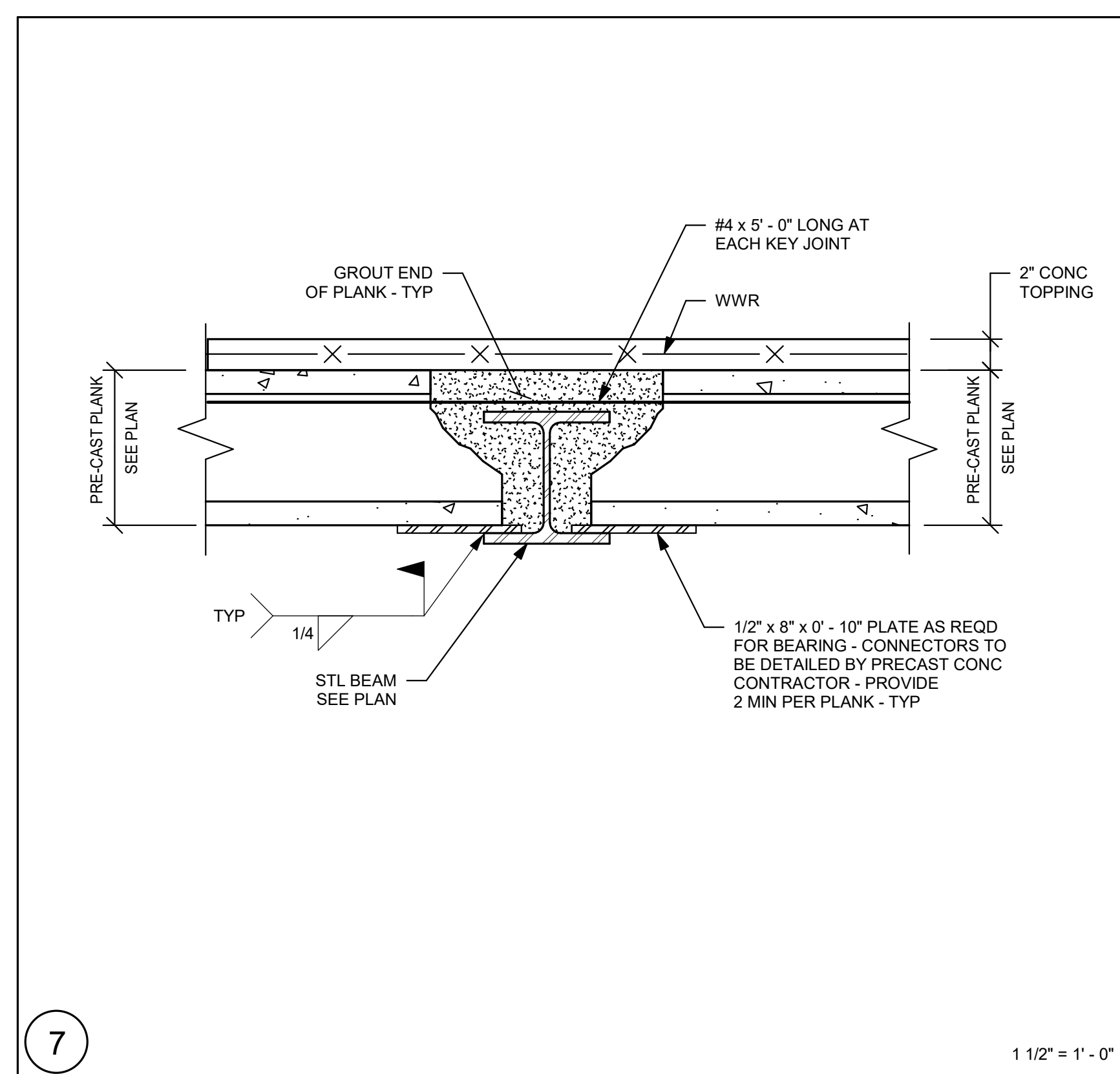
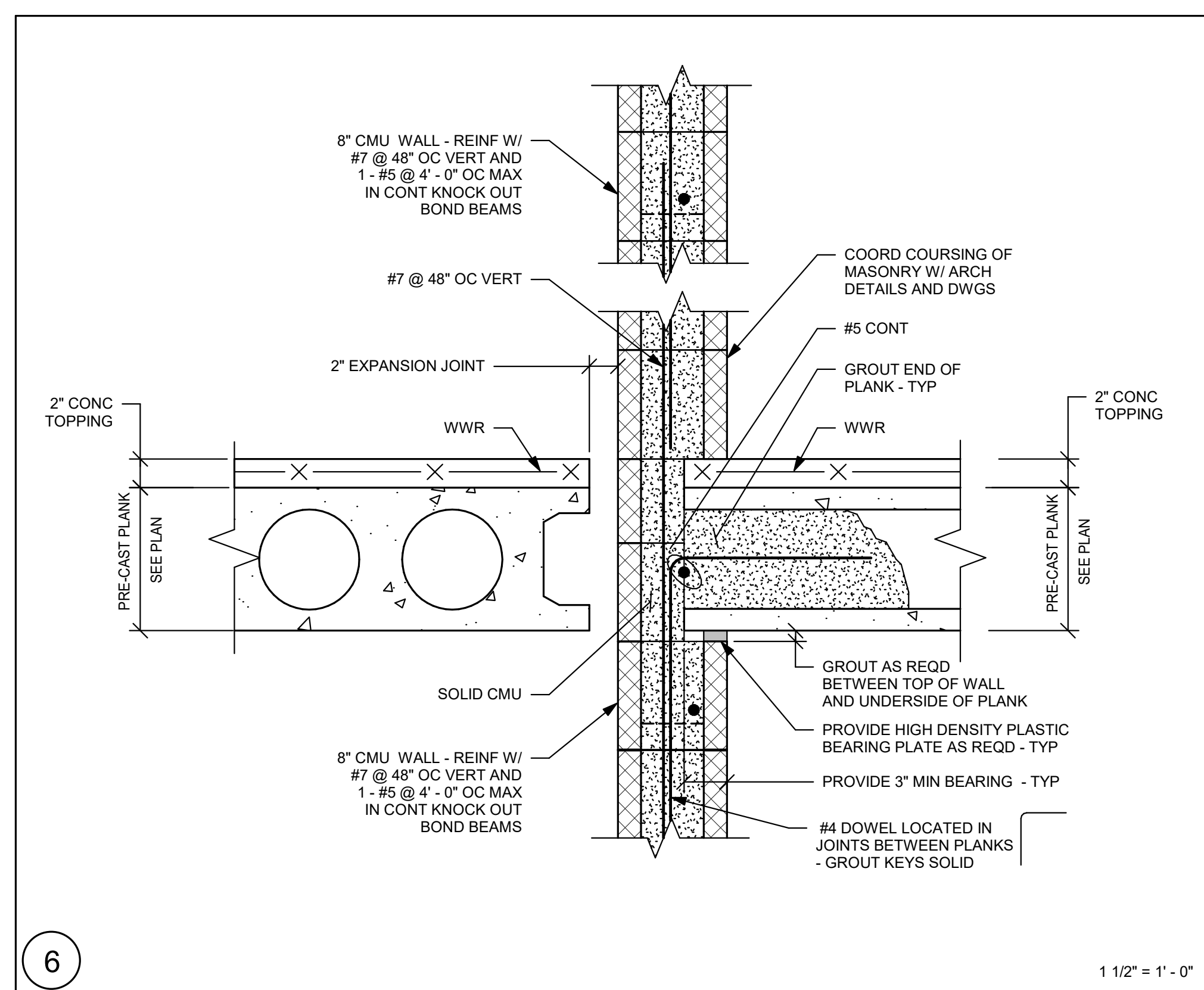
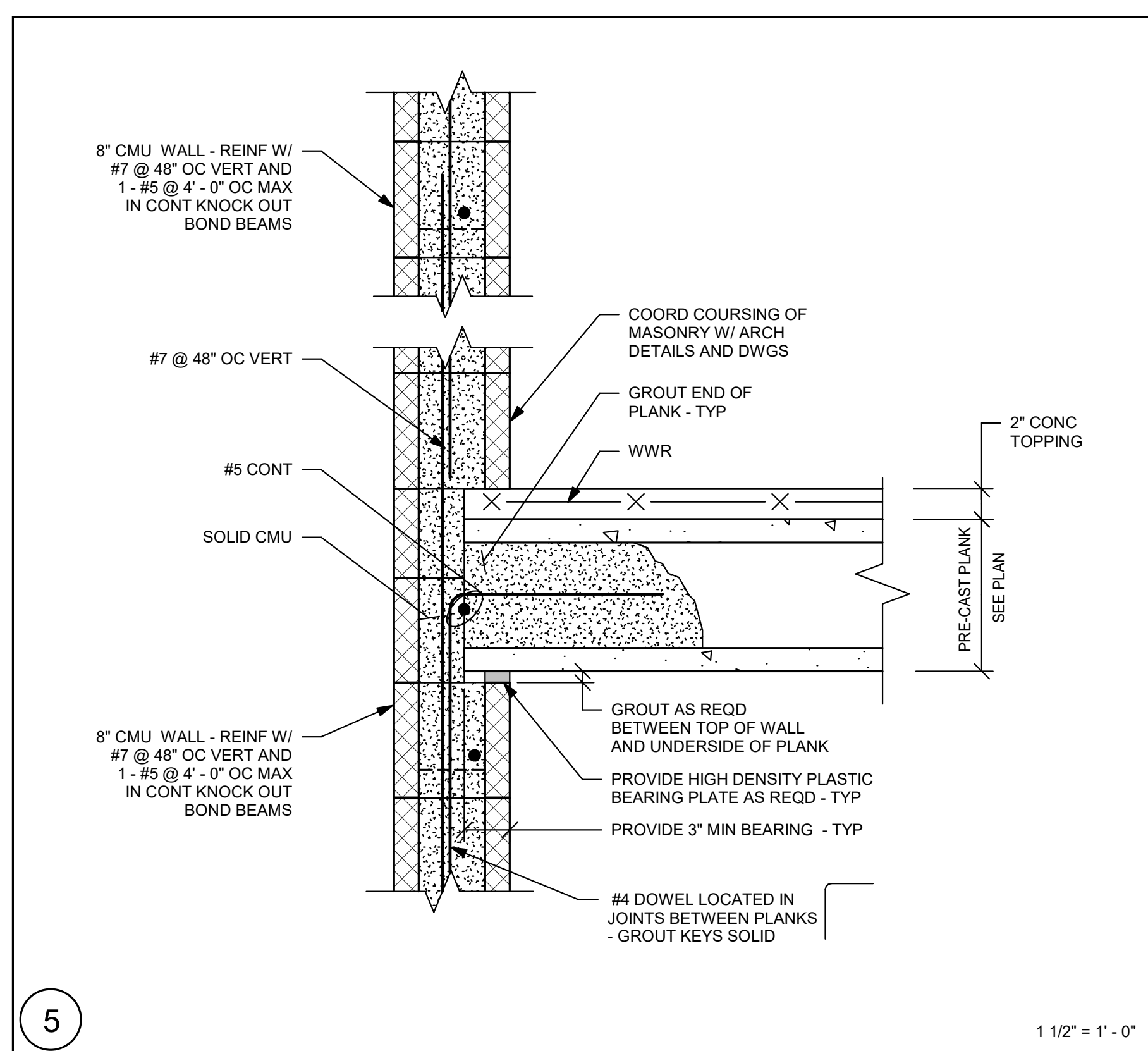
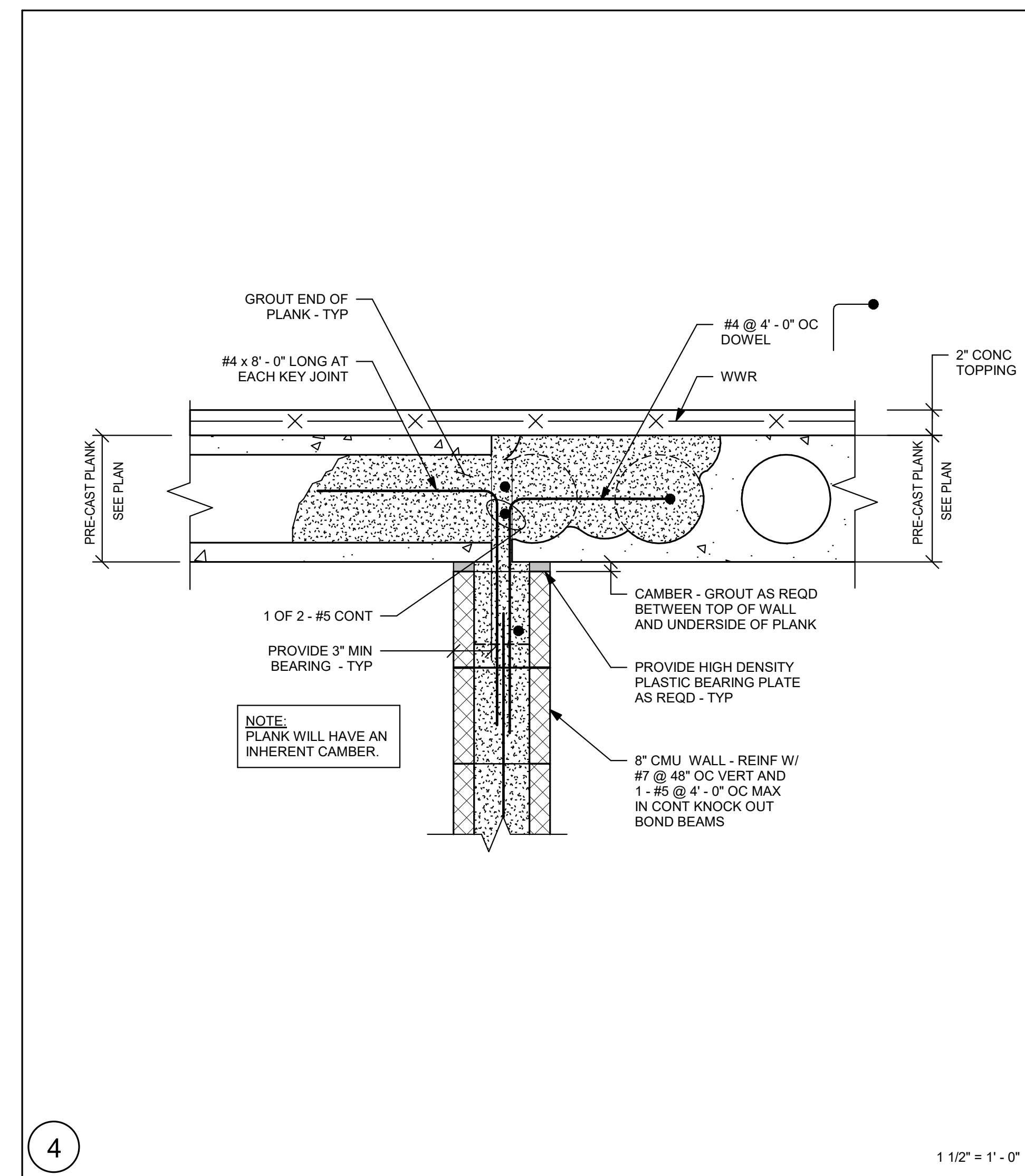
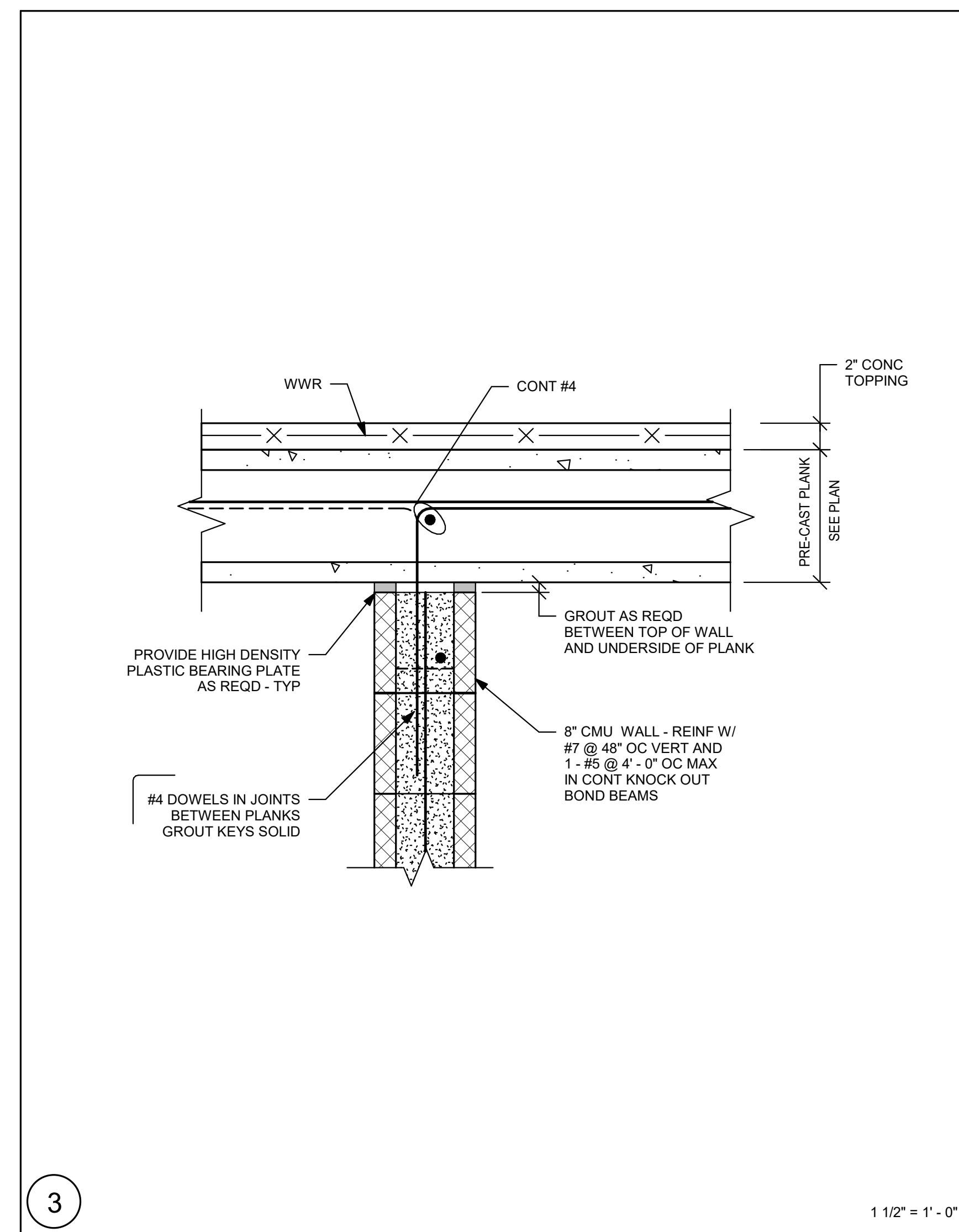
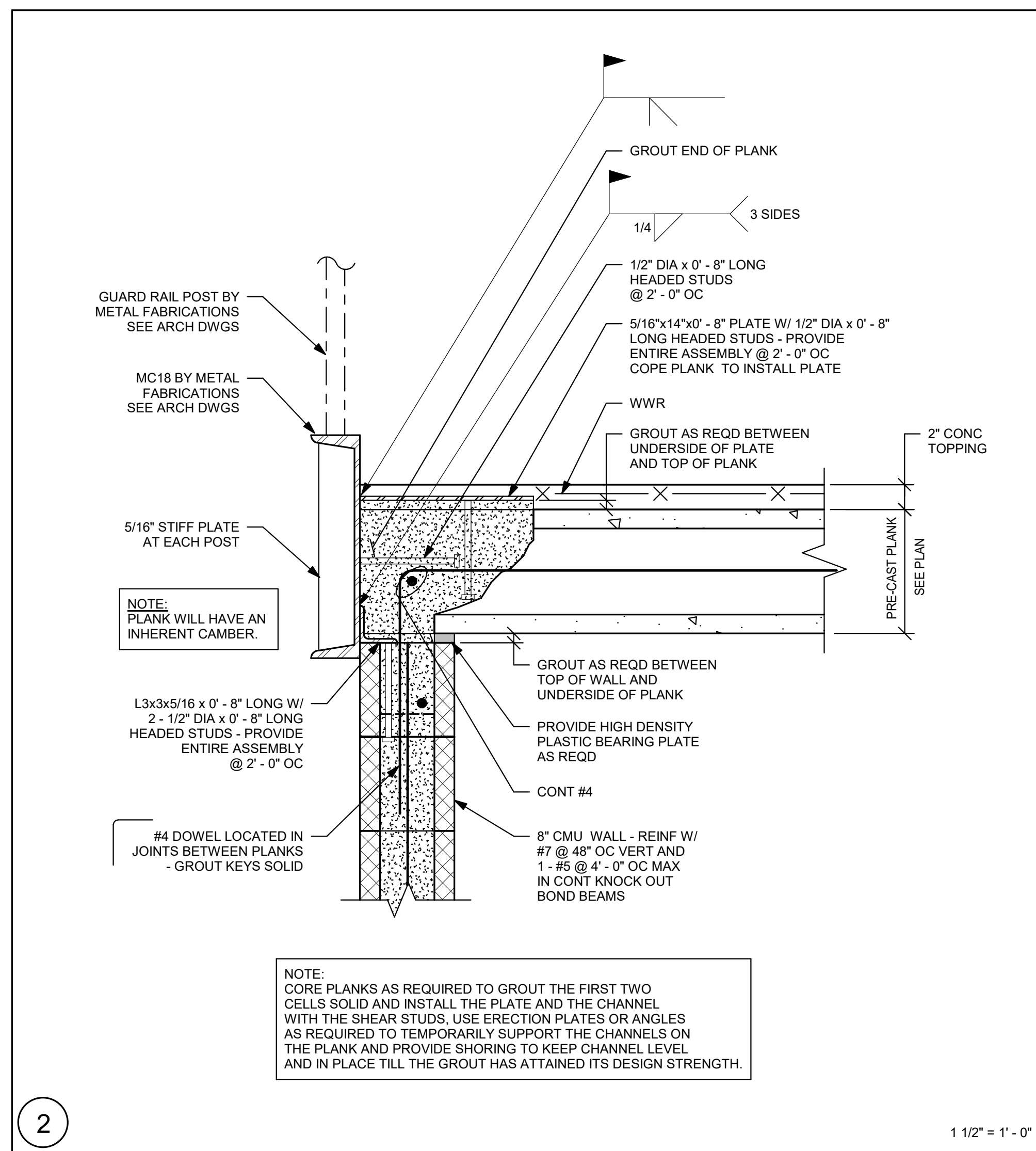
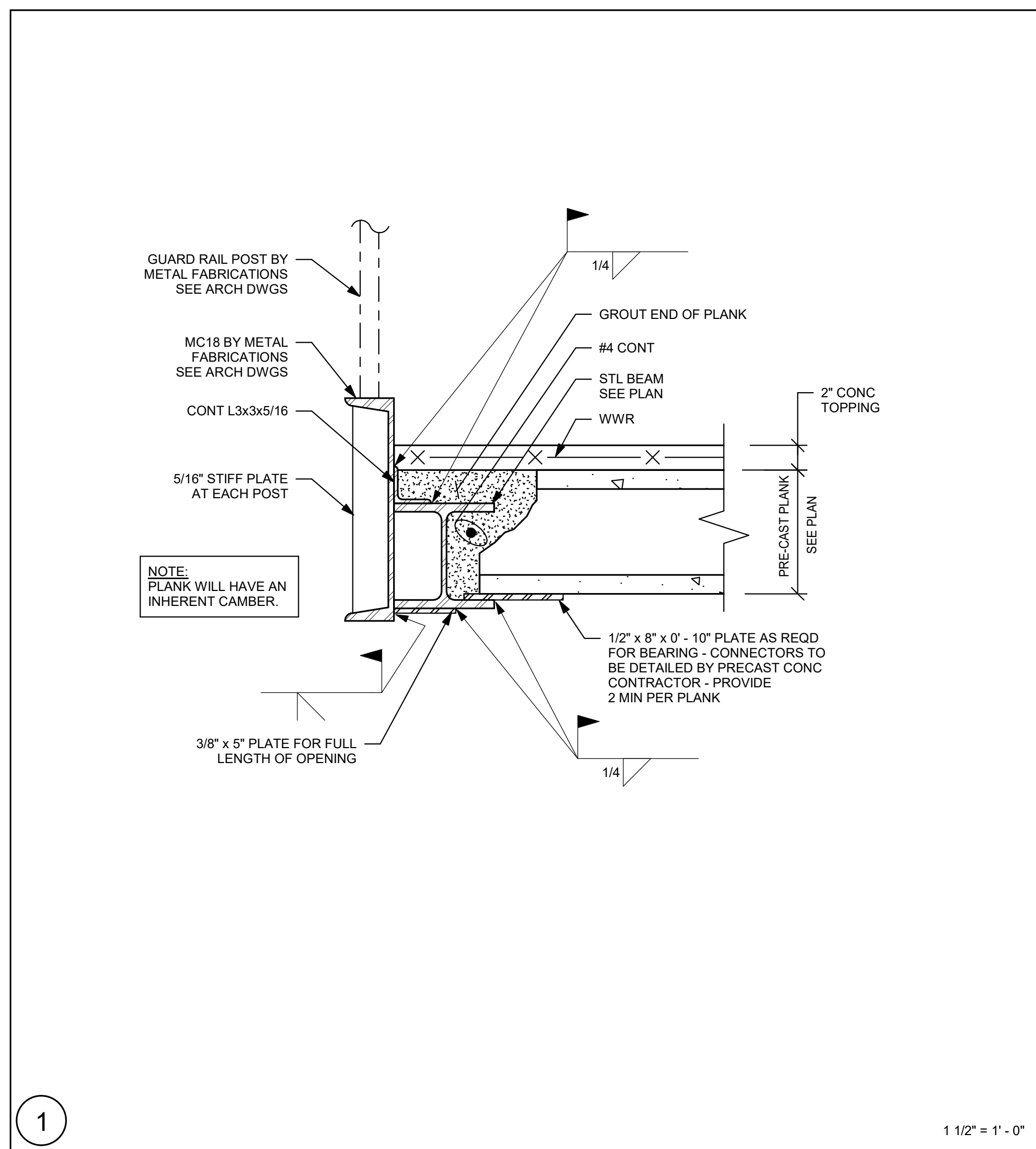
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S2-0-2



DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior

Tel: 877.661.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE
FEBRUARY 24TH, 2023

KEY PLAN

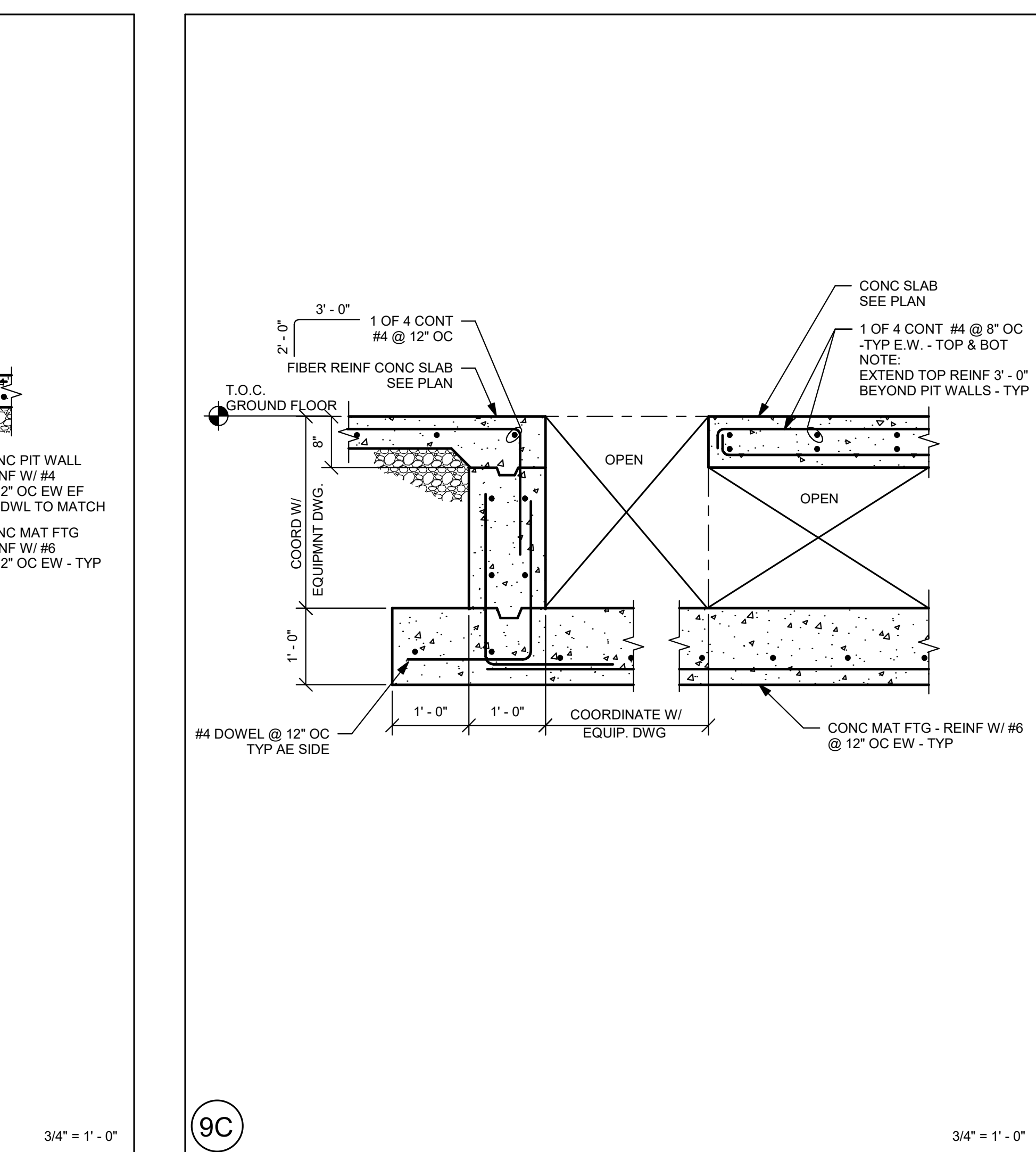
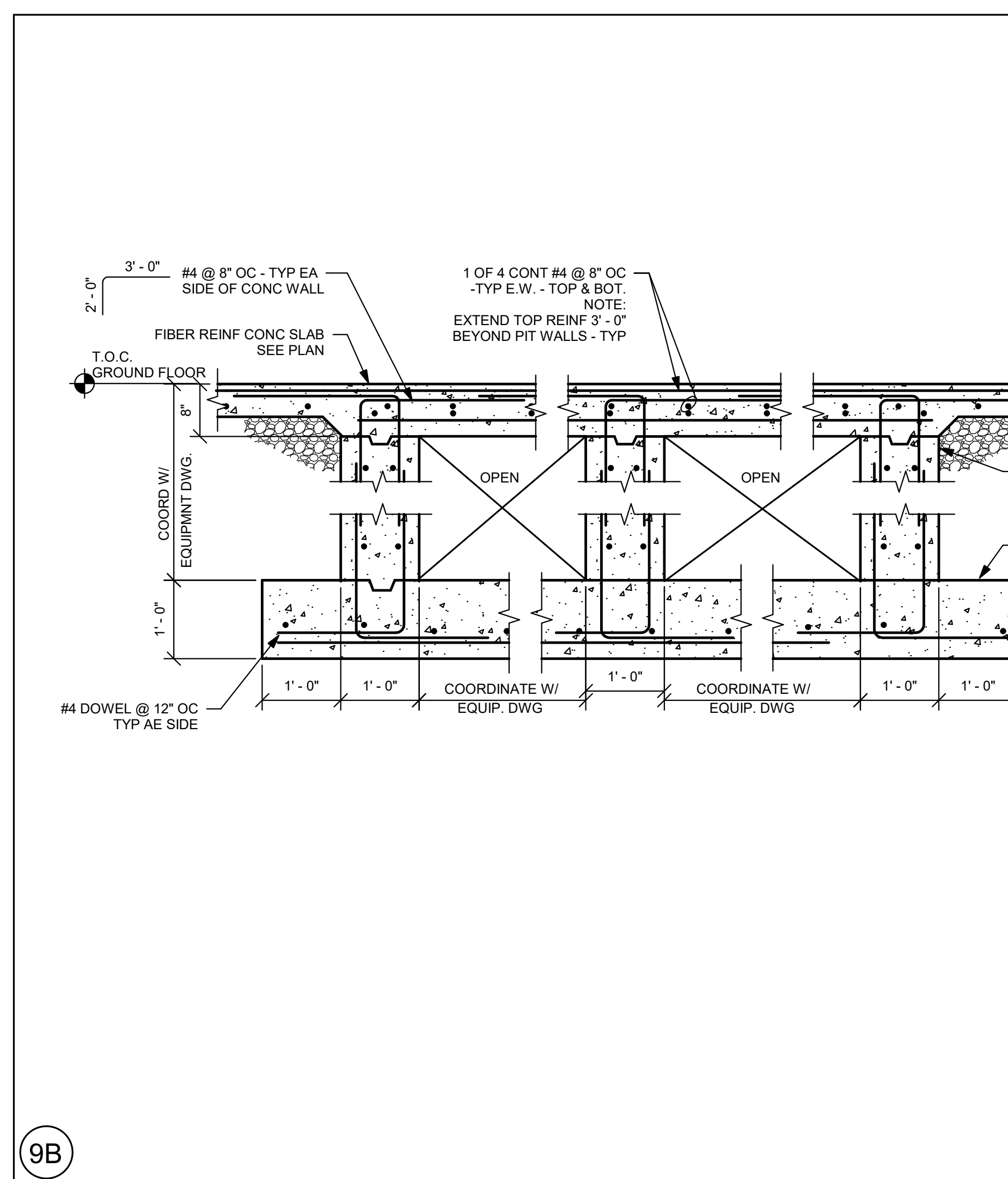
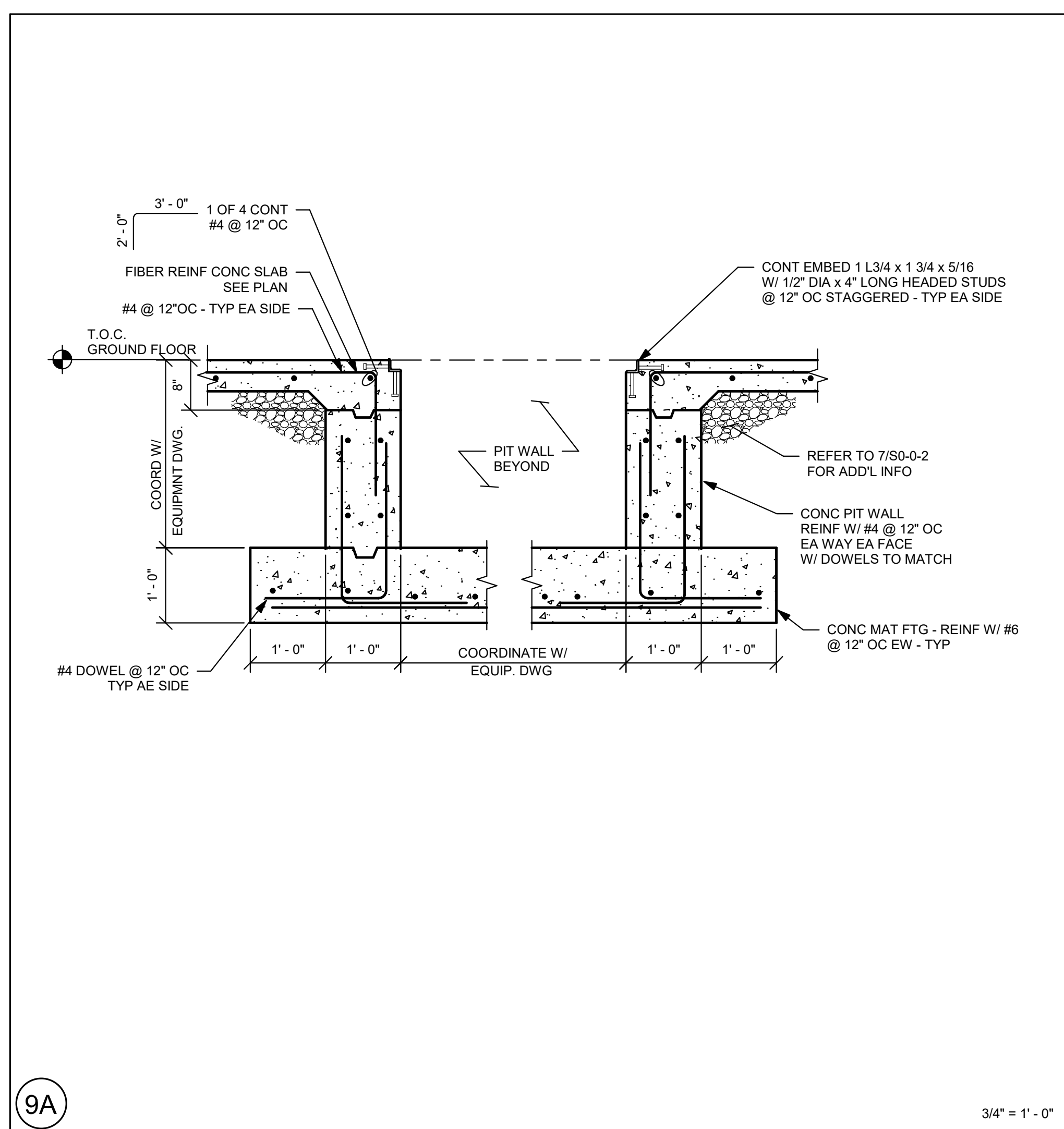
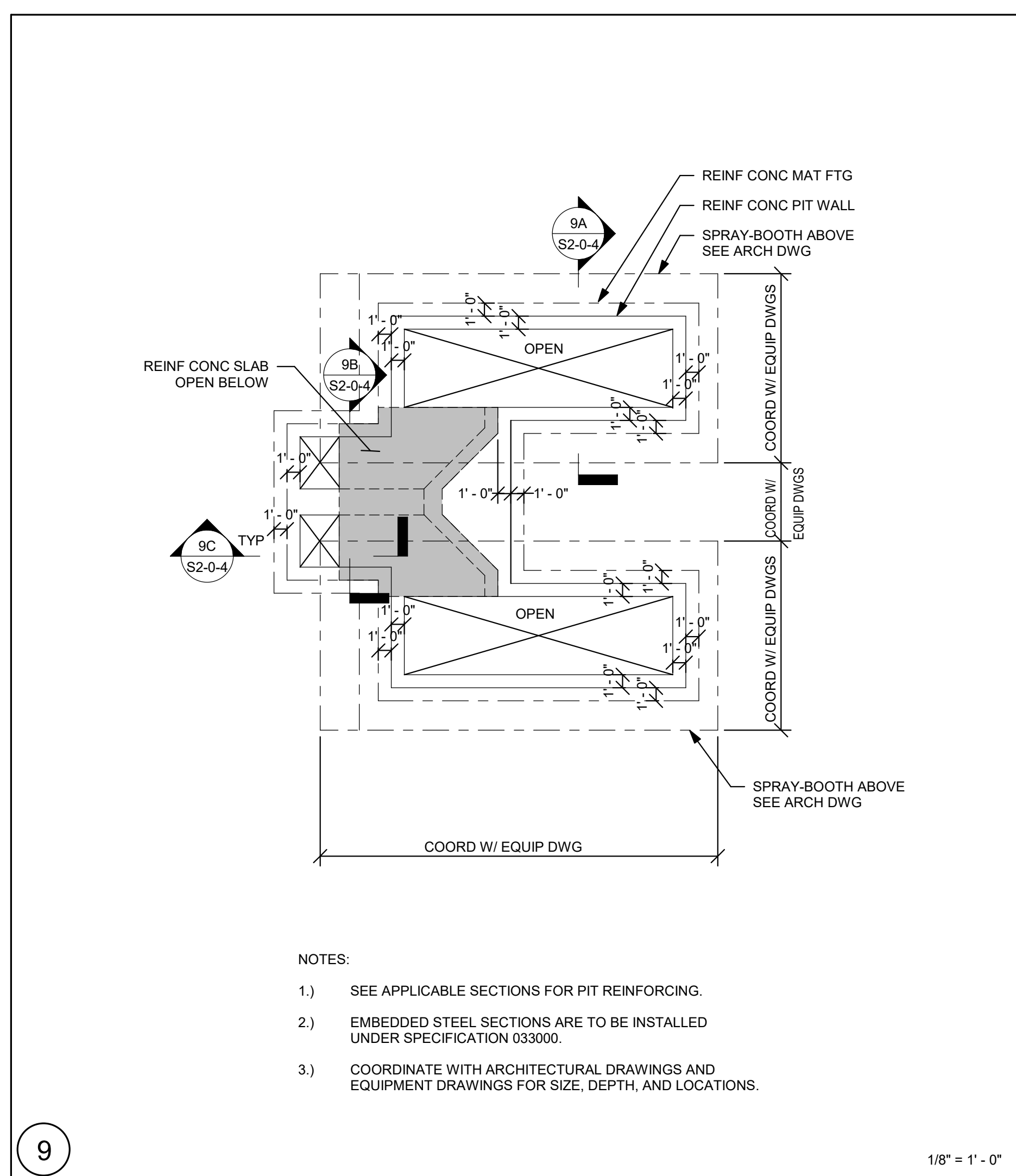
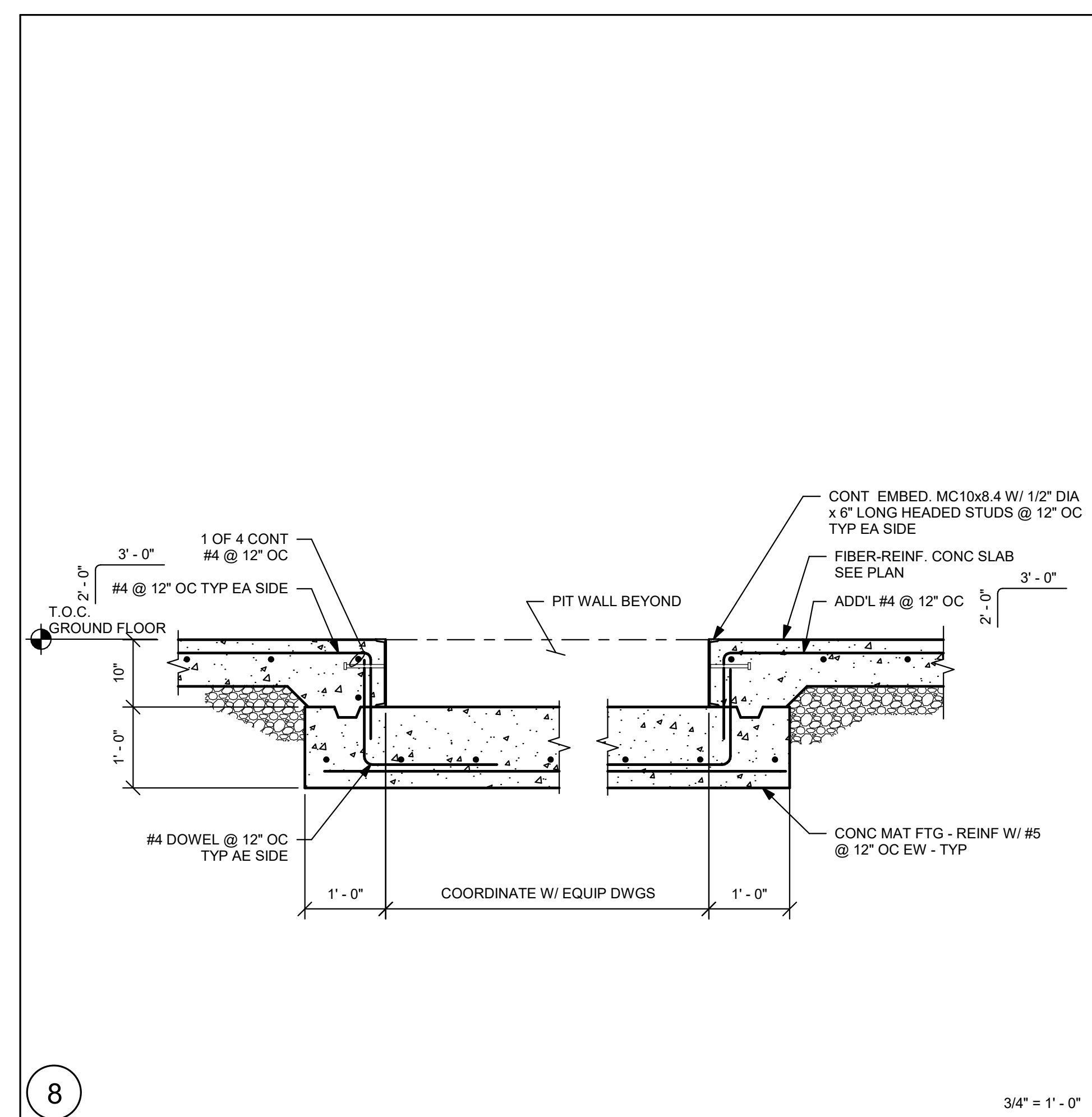
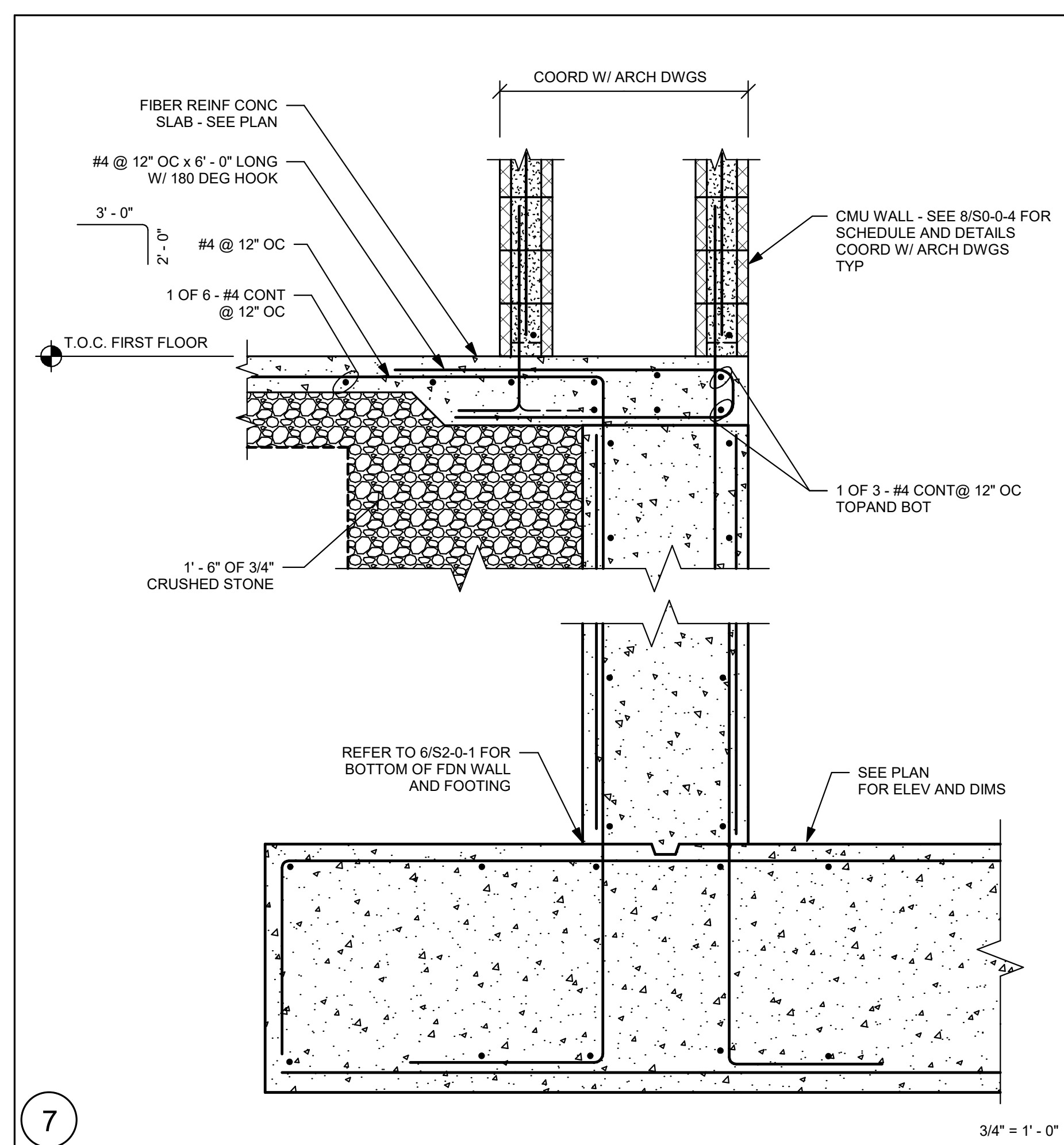
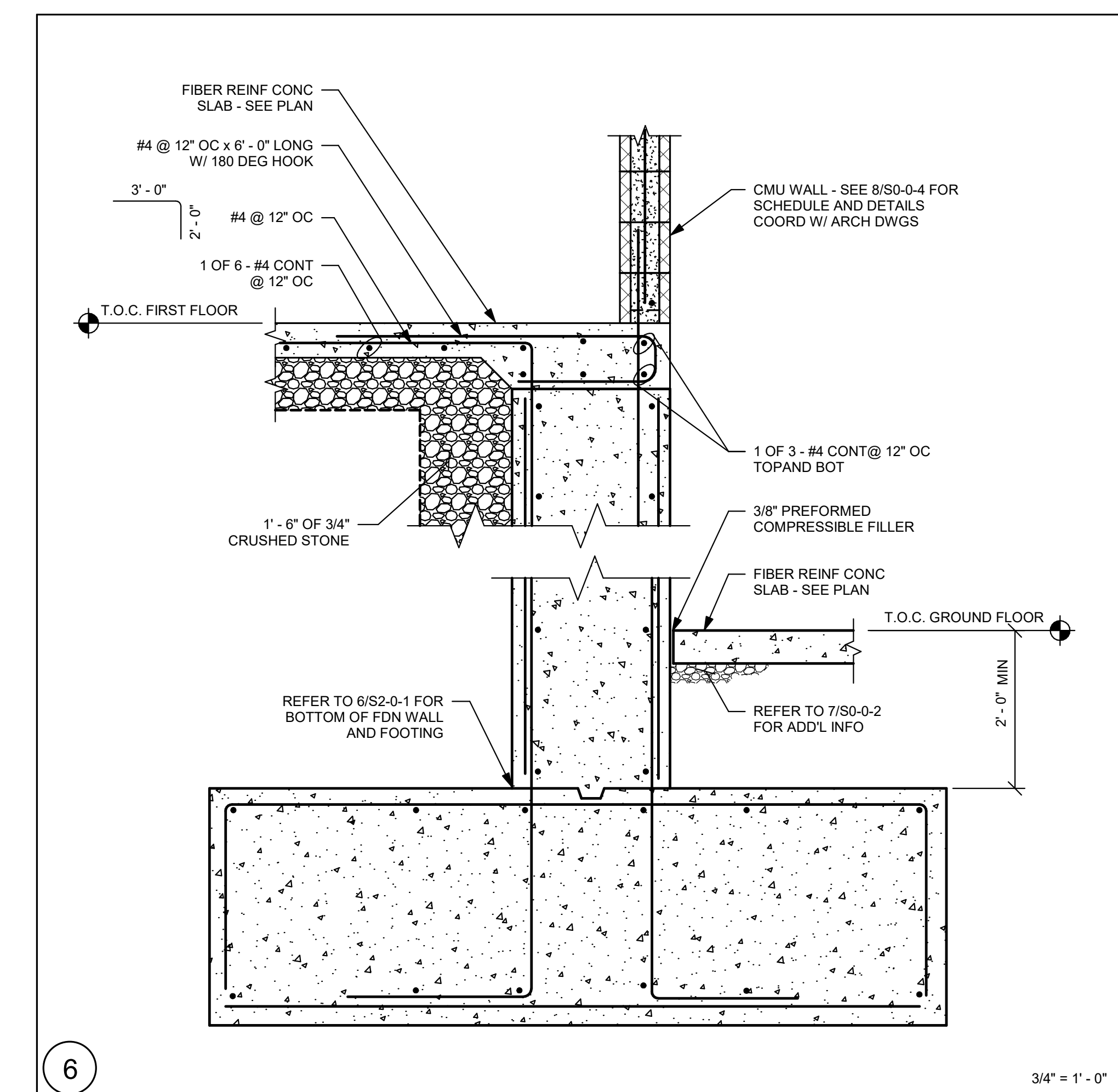
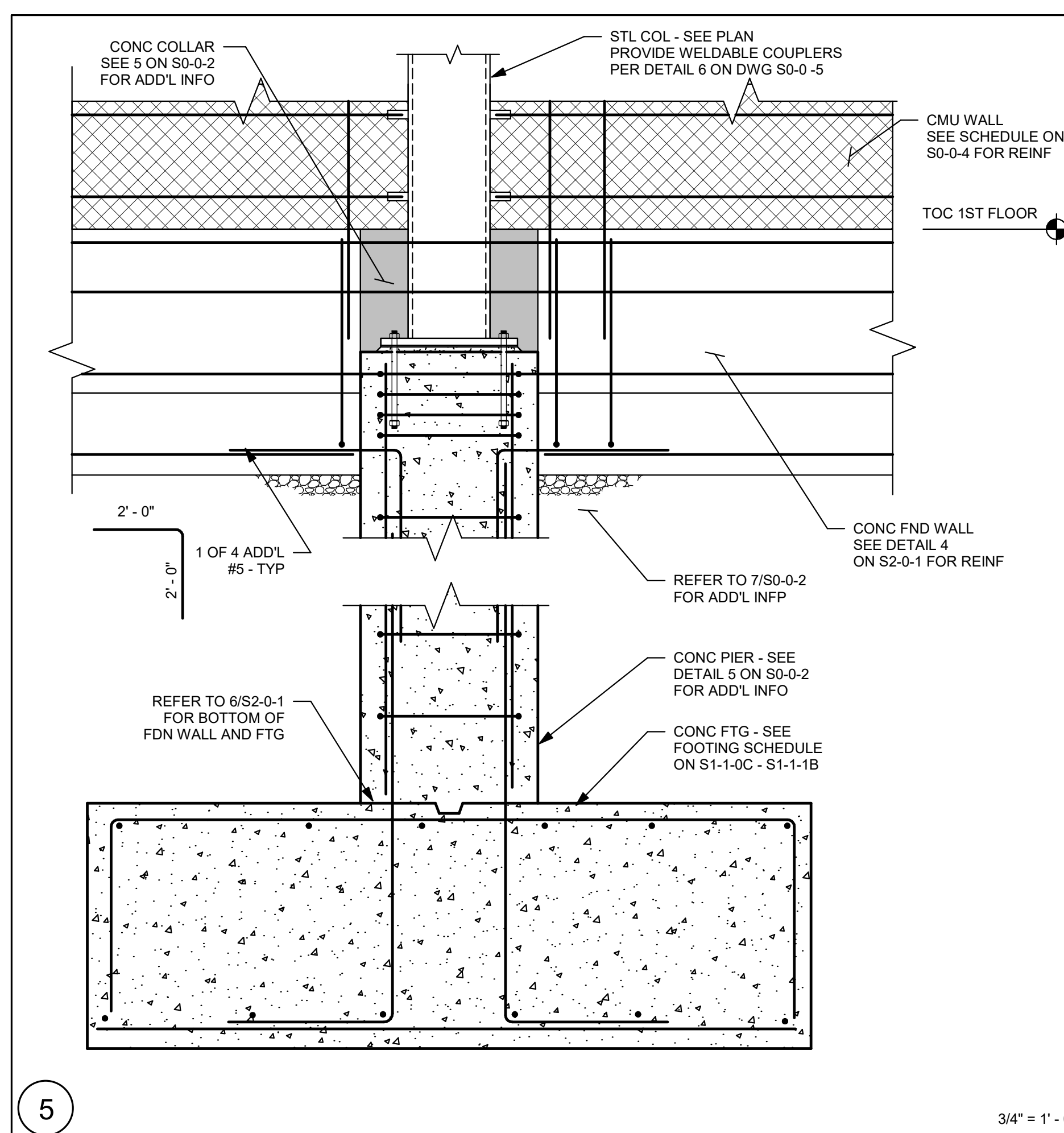
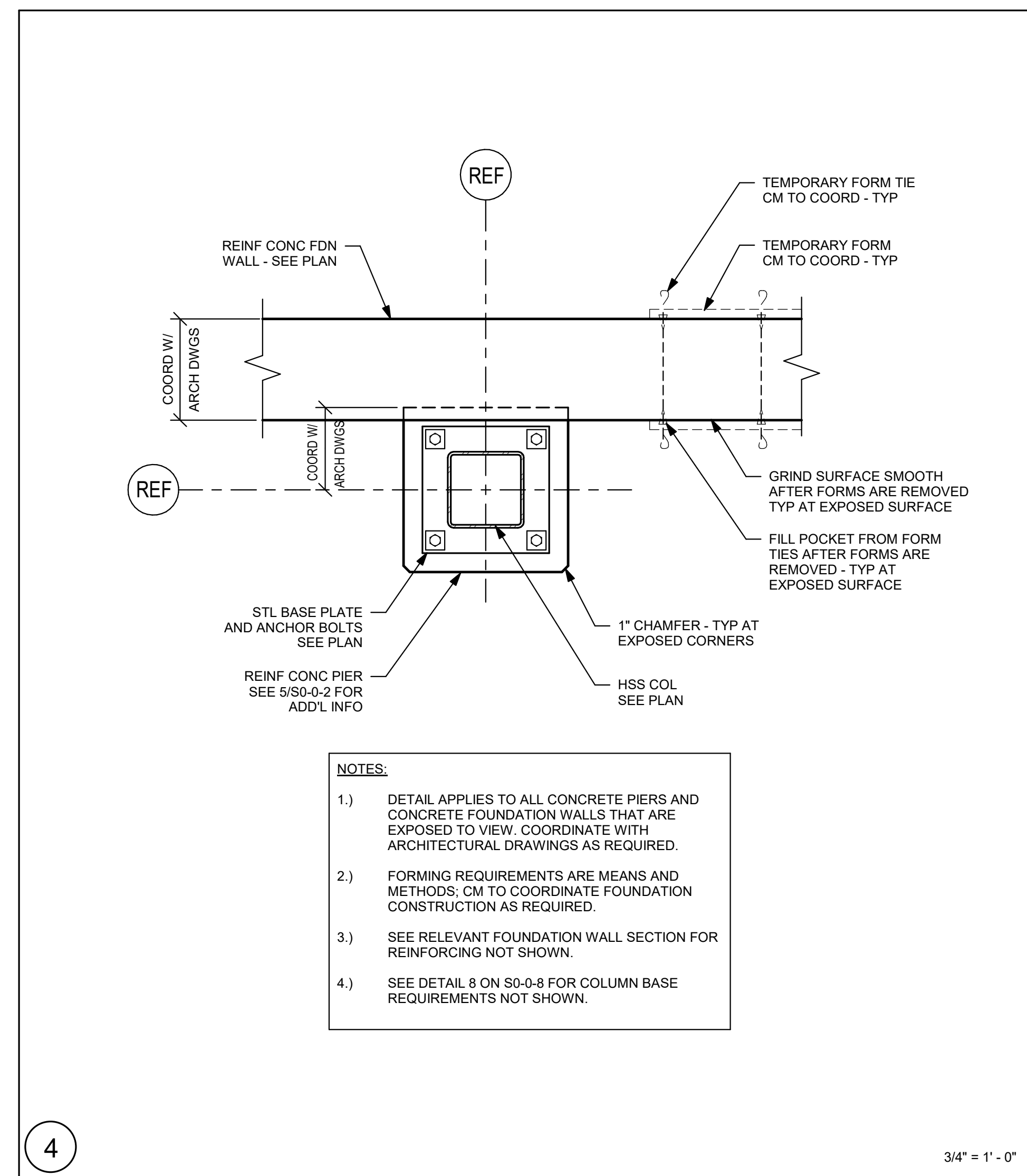
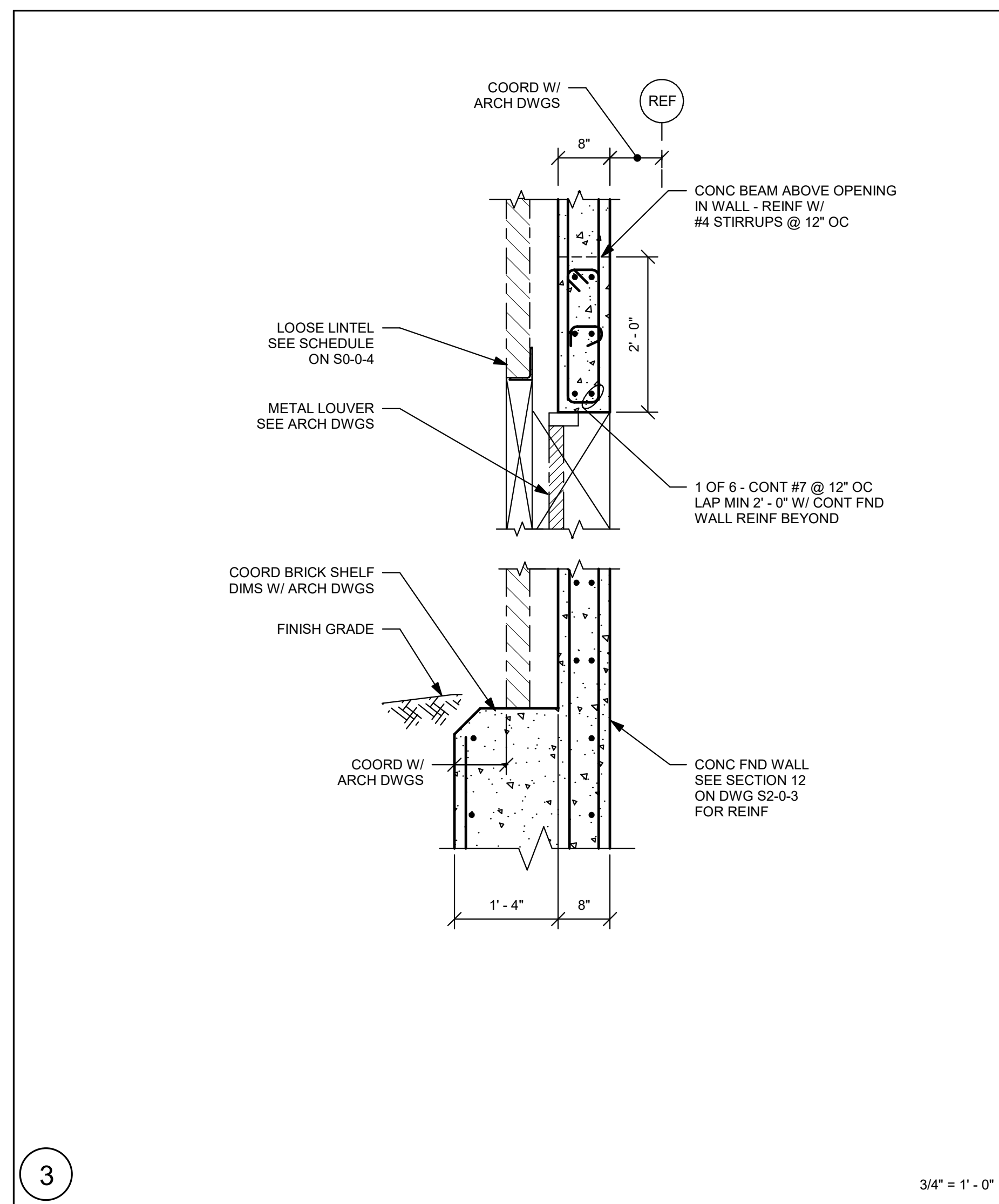
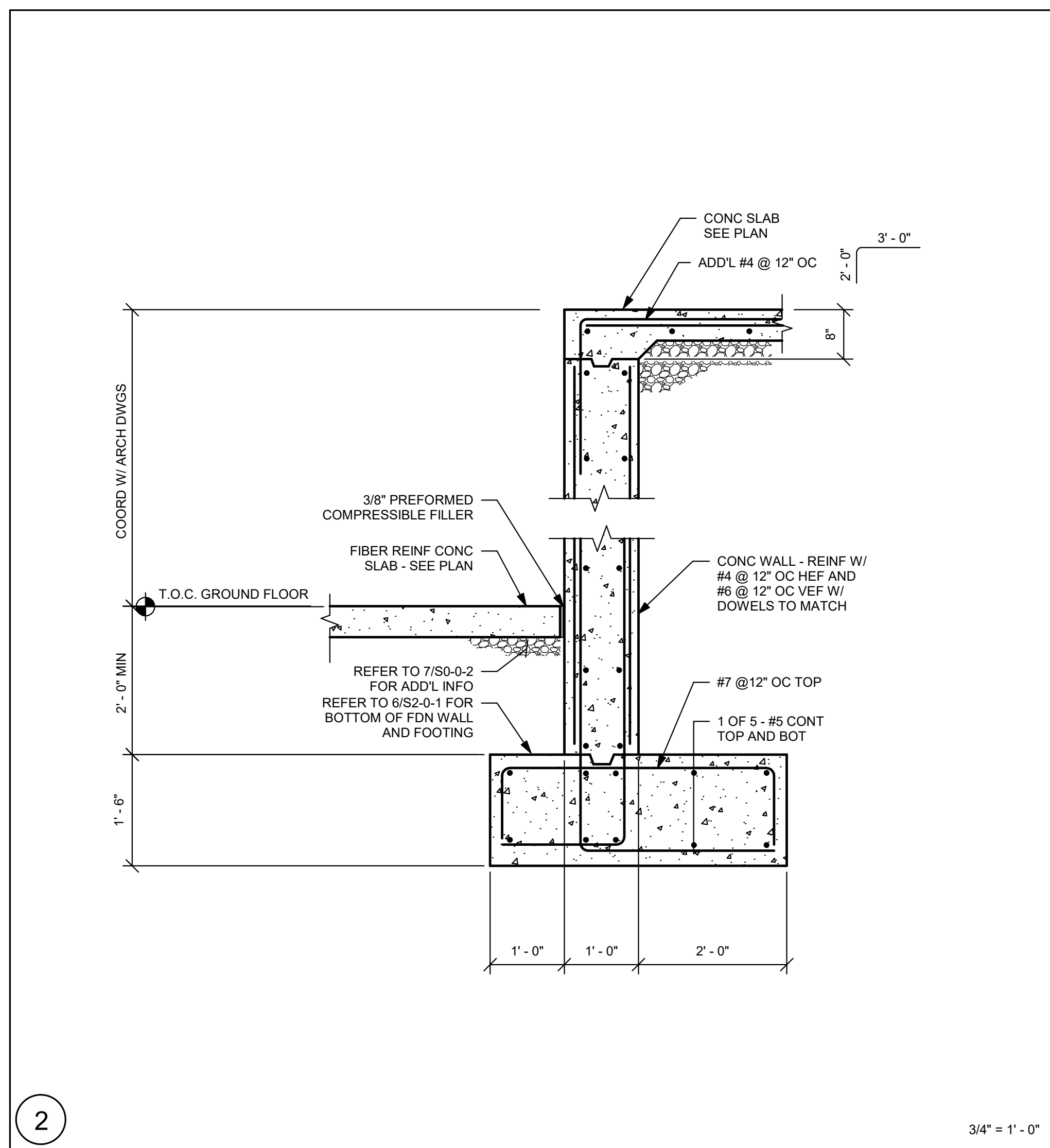
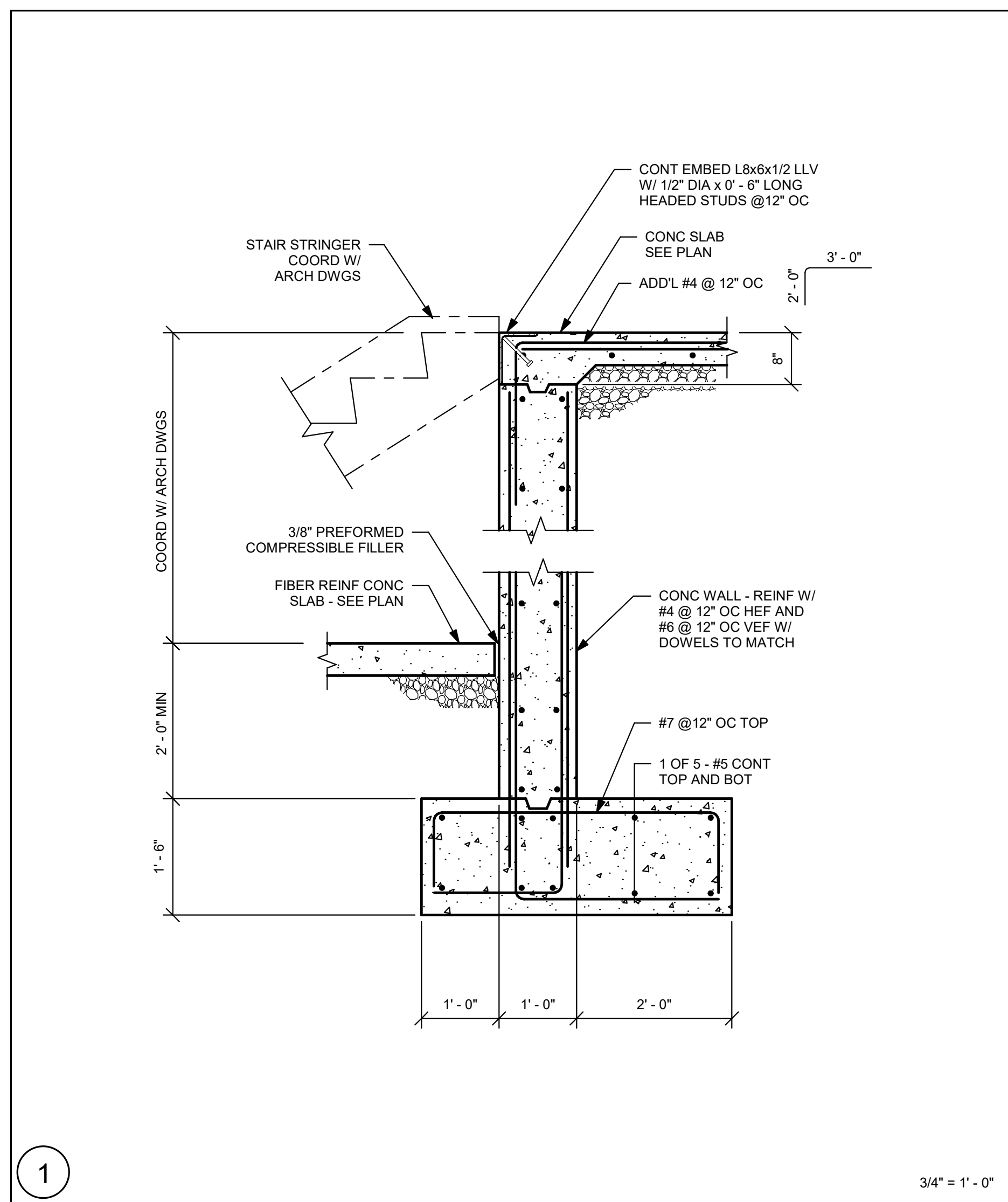
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As Indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S2-0-3



DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior

Tel: 877.221.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE
FEBRUARY 24TH, 2023

KEY PLAN

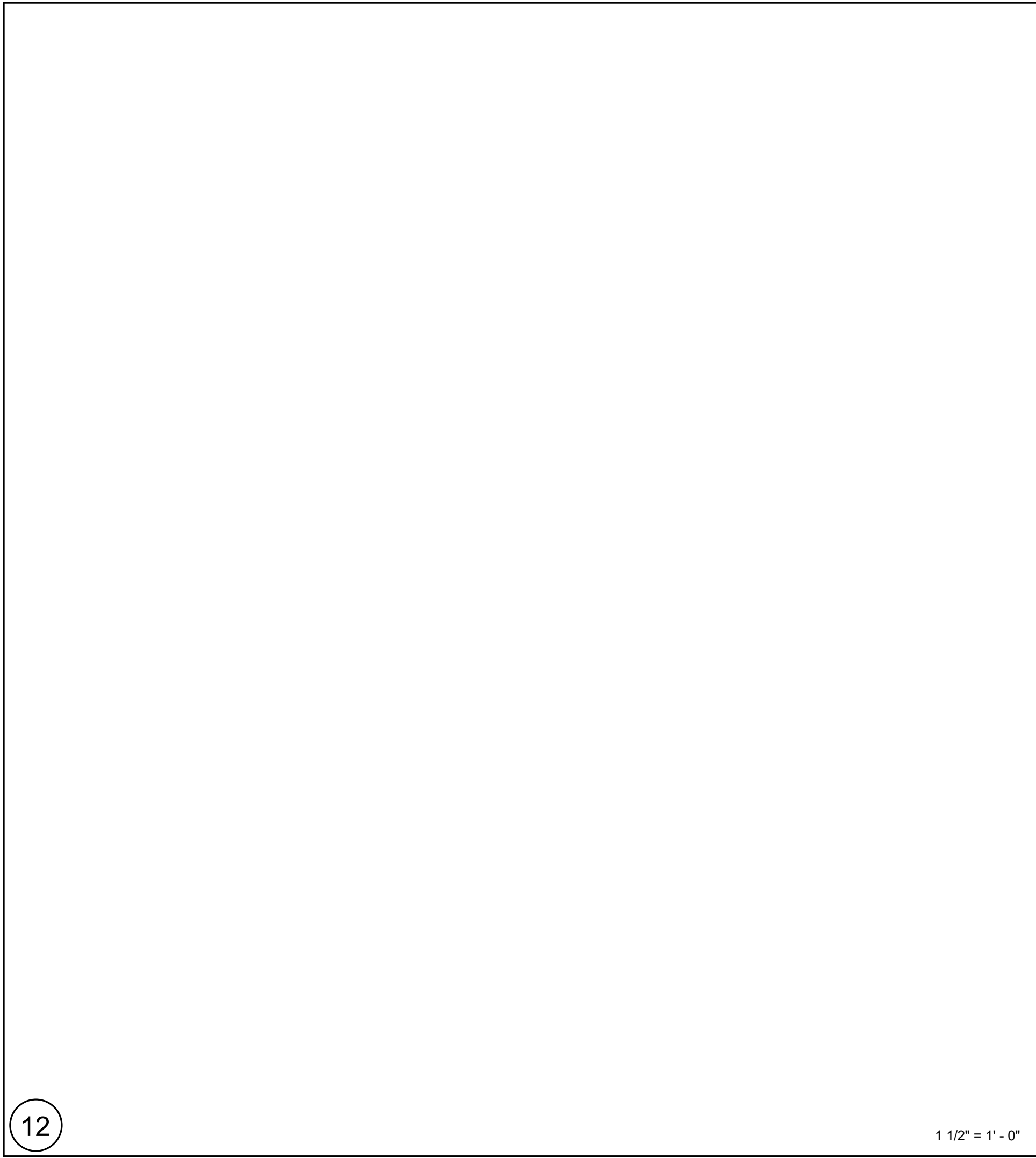
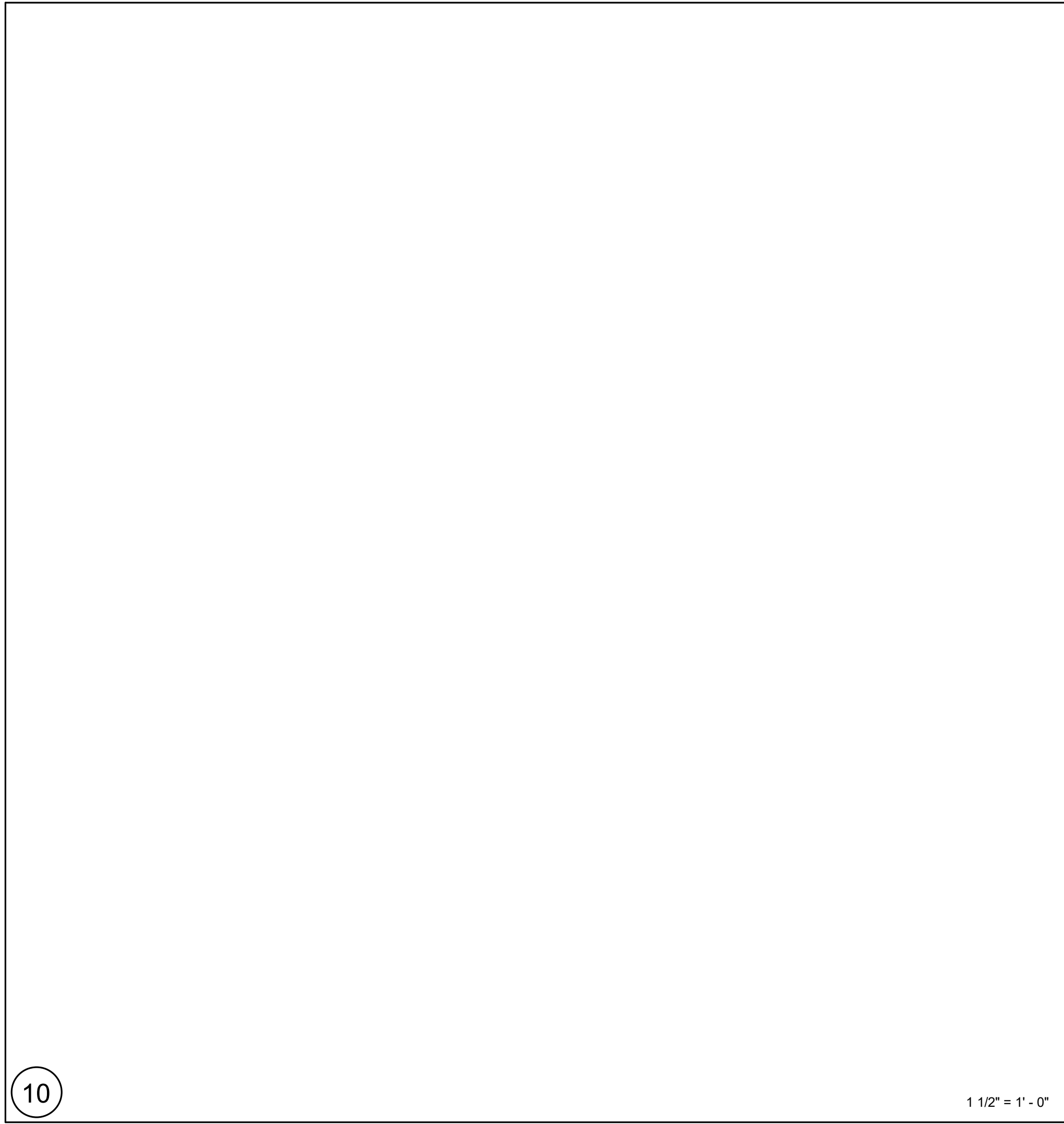
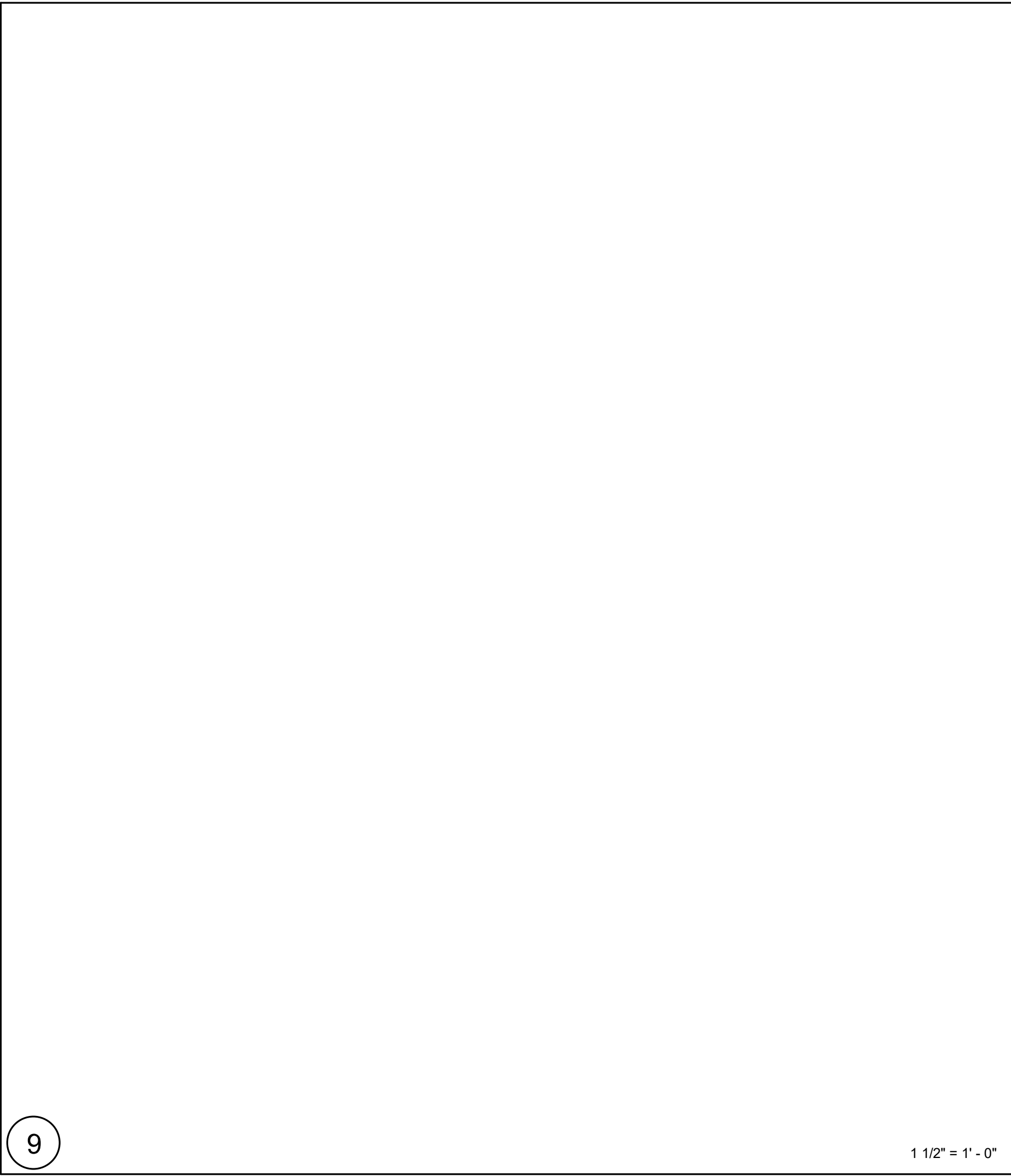
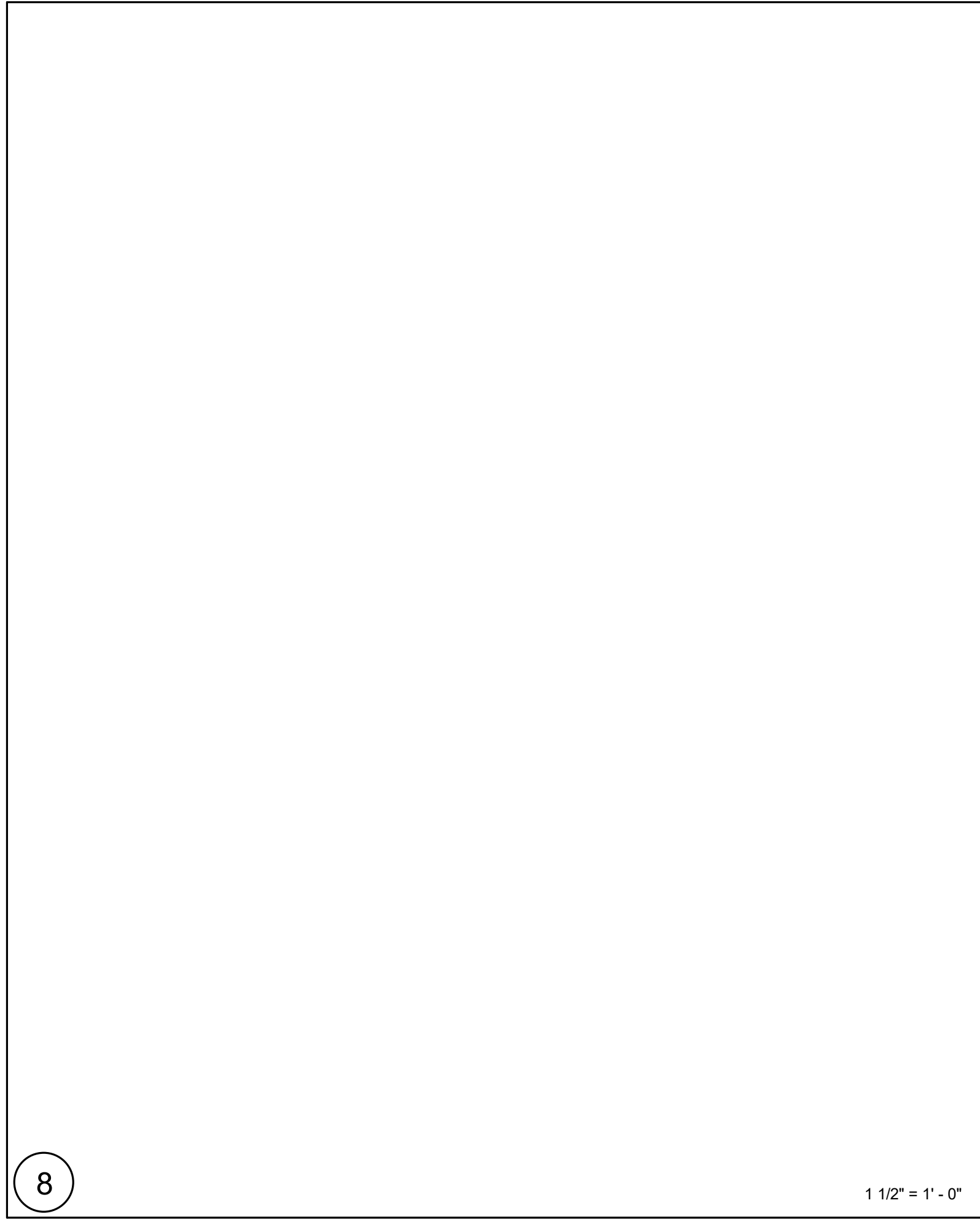
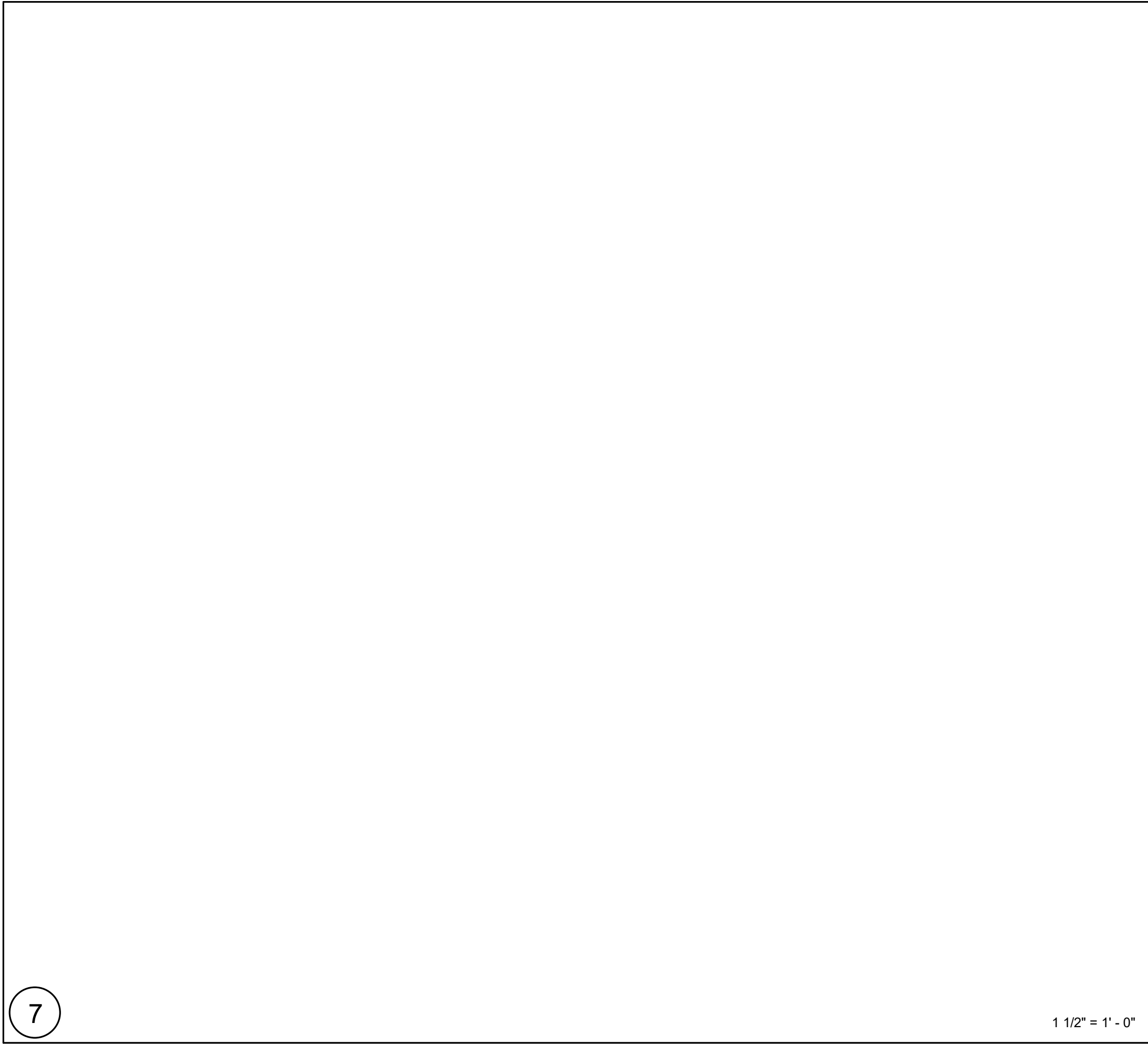
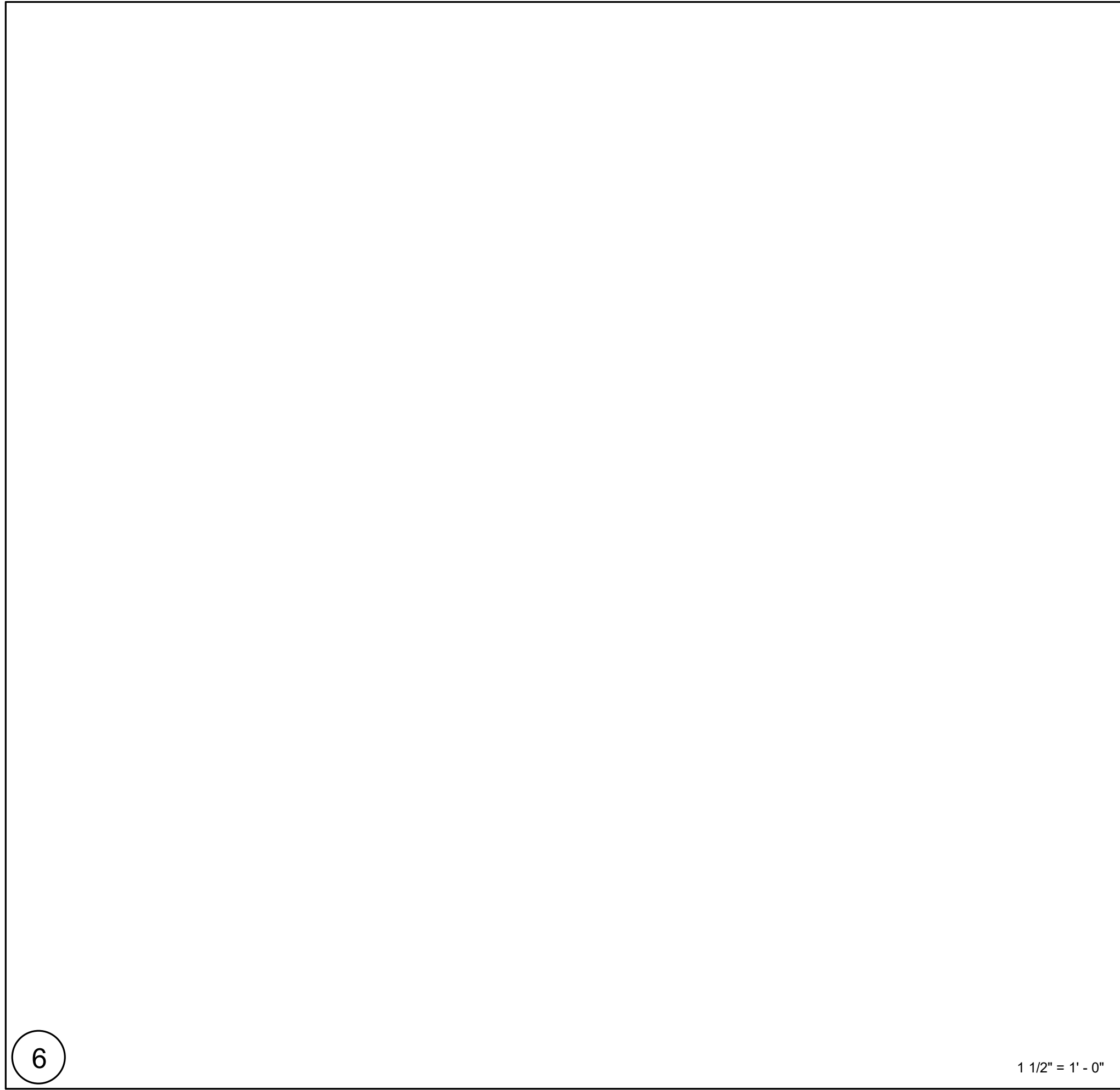
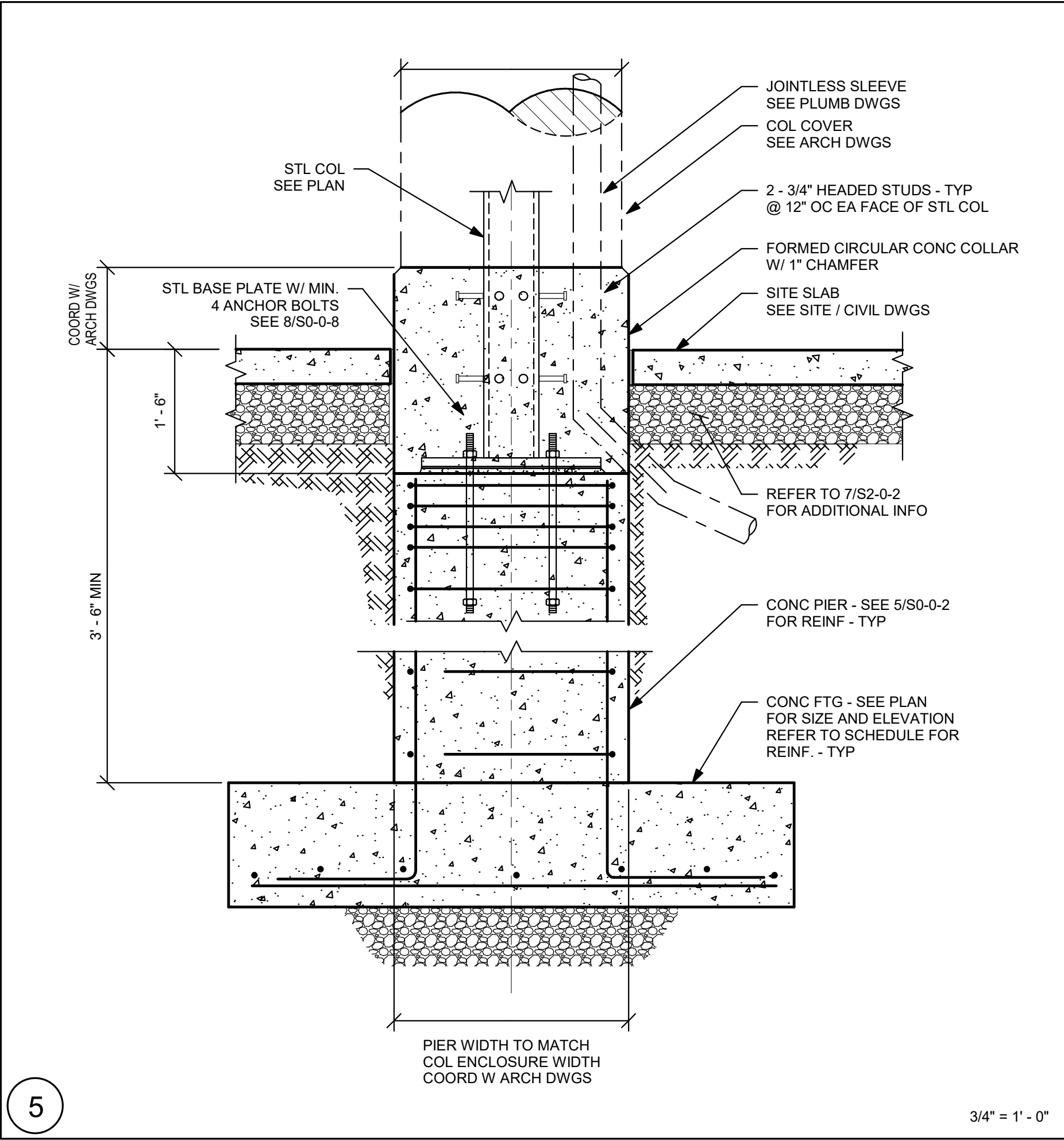
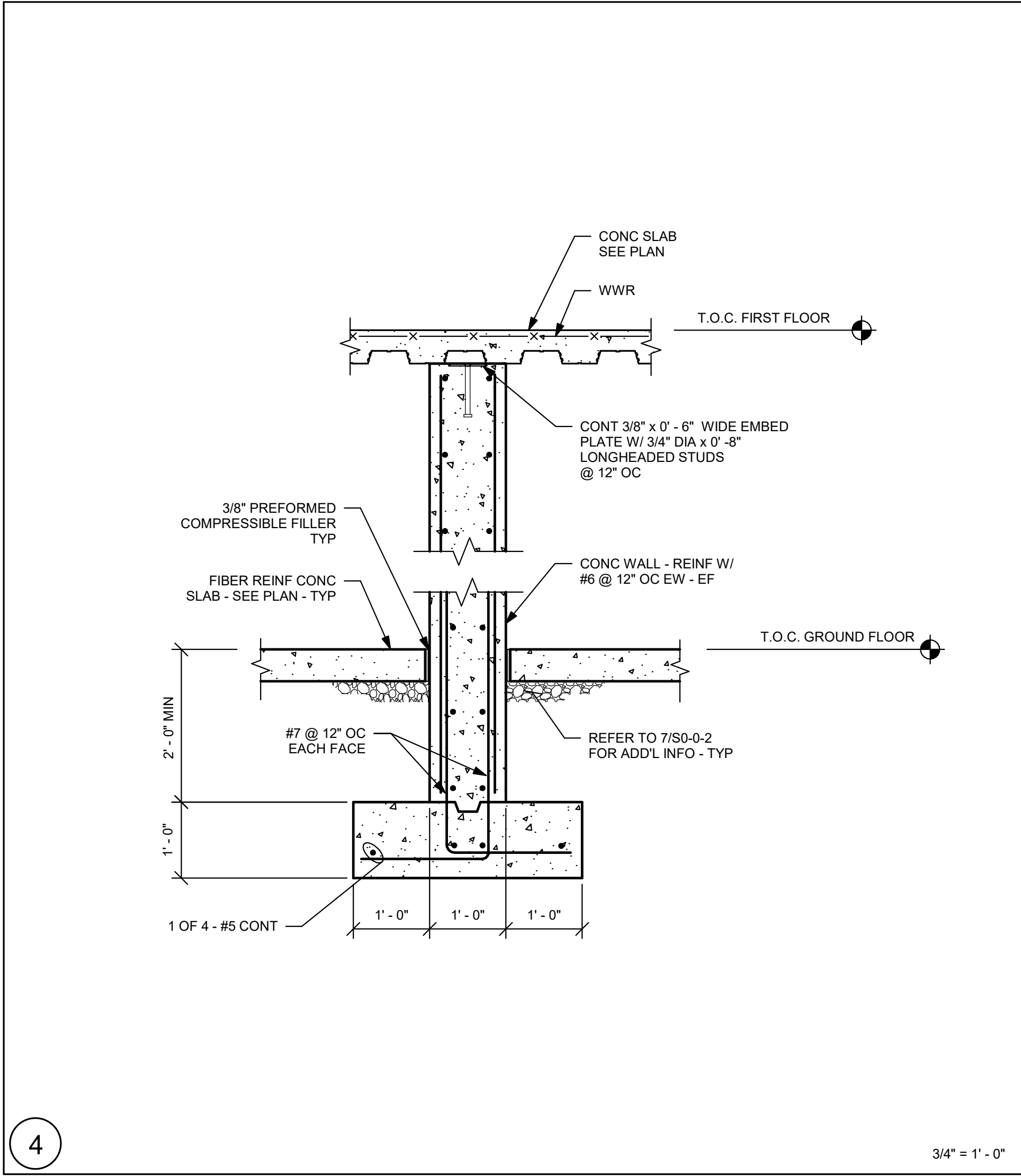
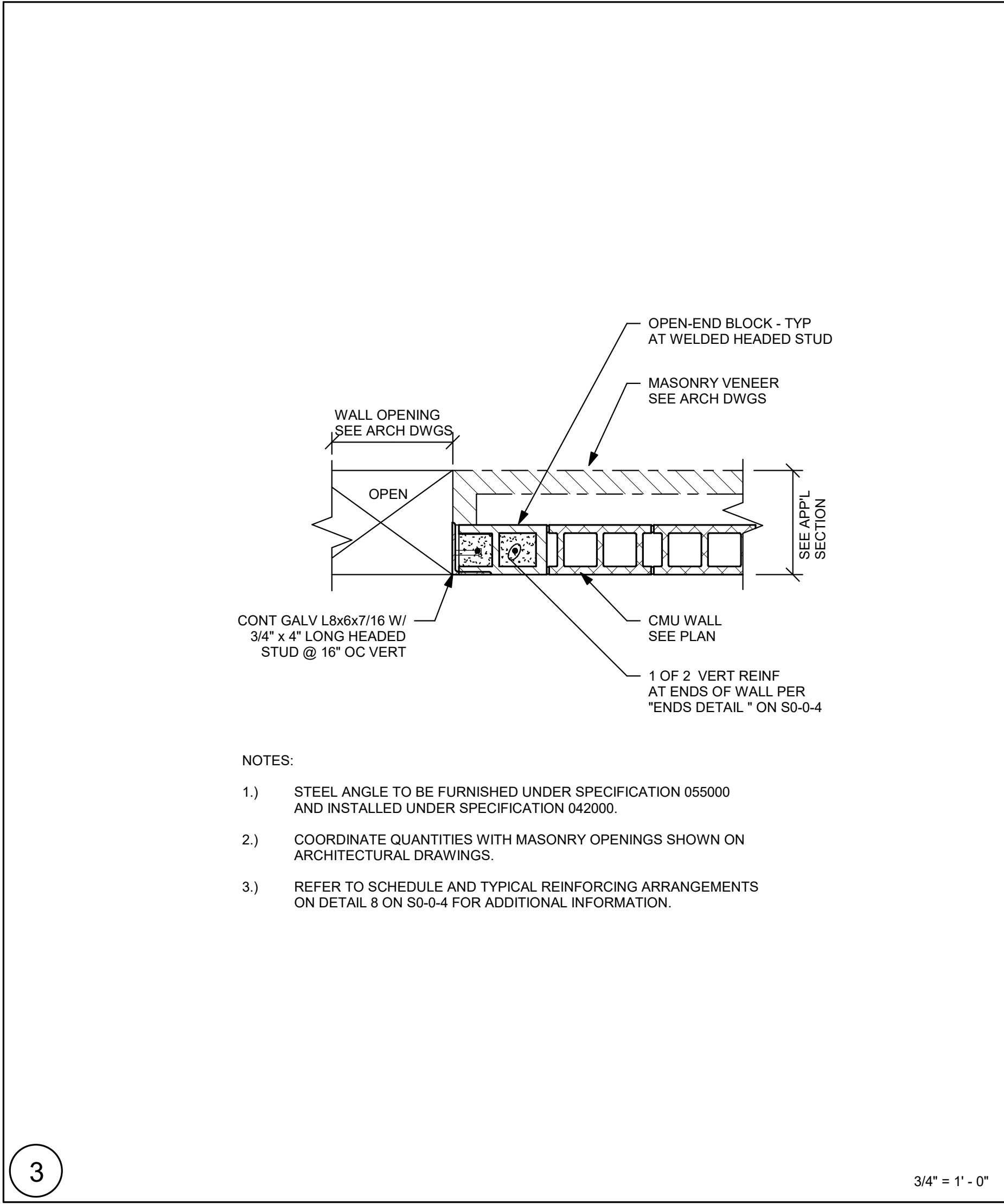
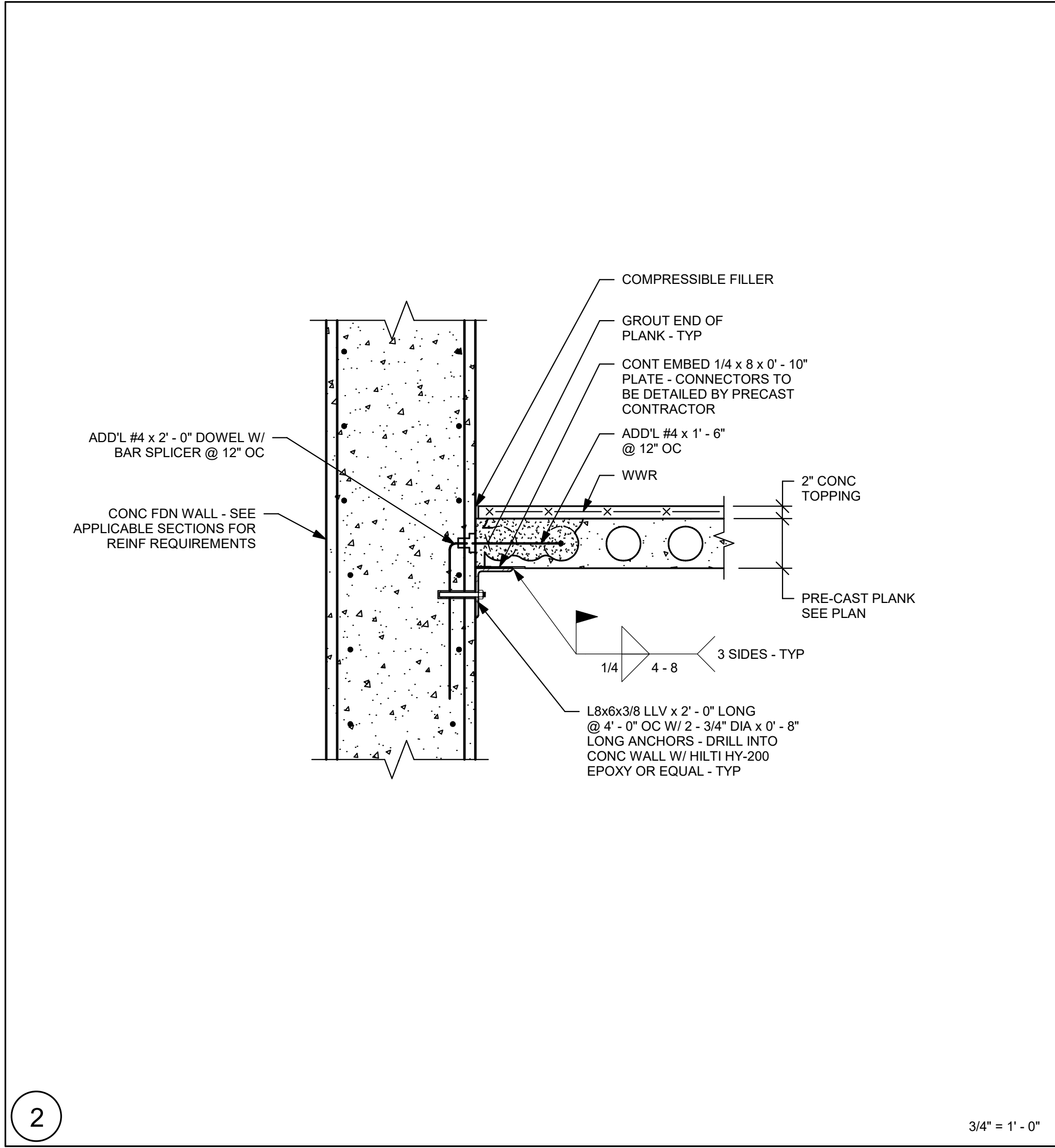
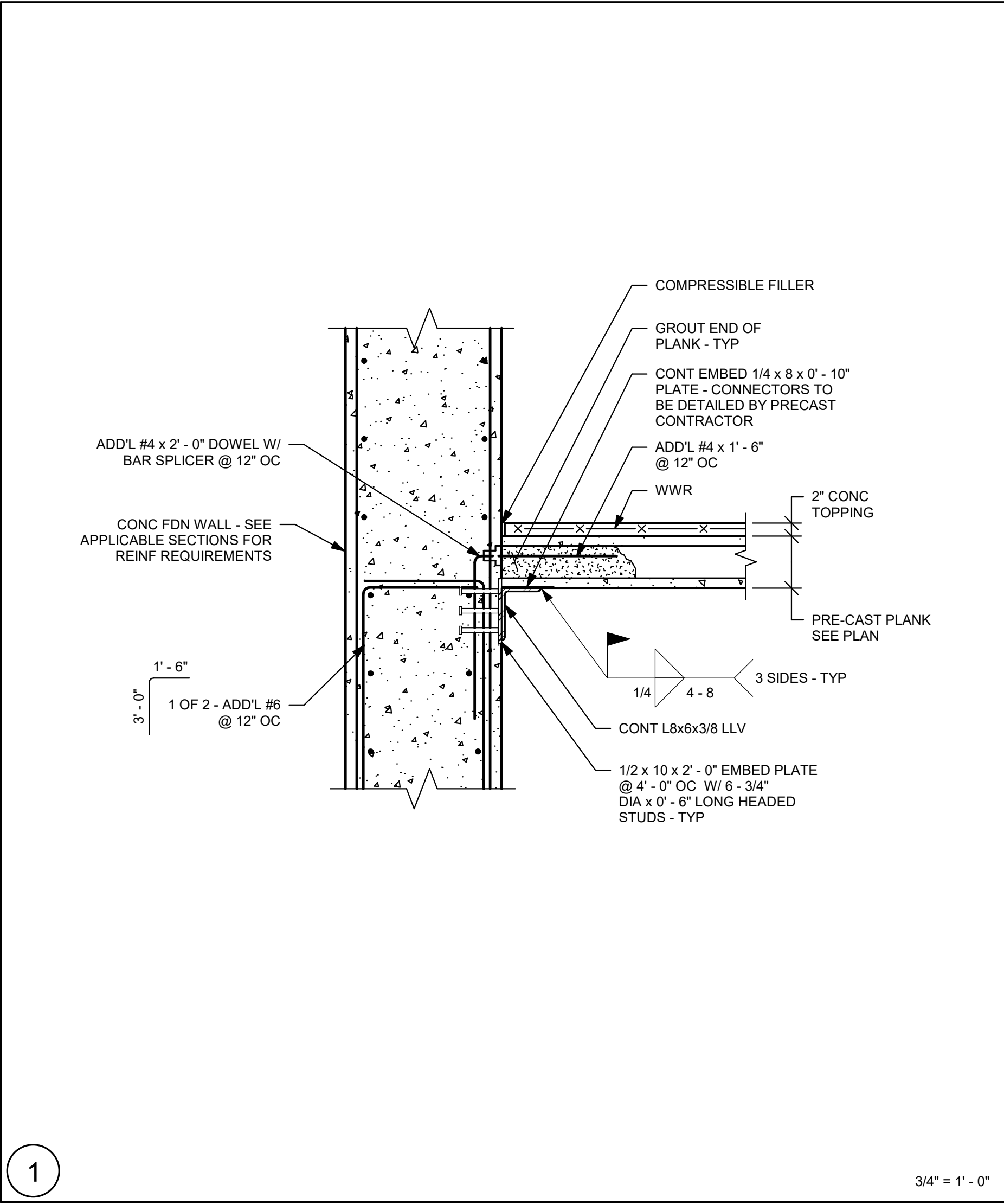
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As Indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S2-0-4



DRA

DrummeY Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

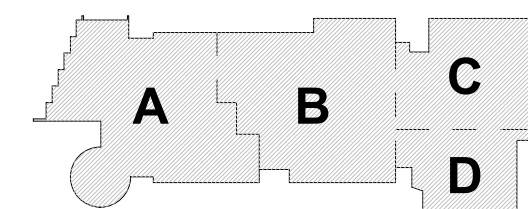
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

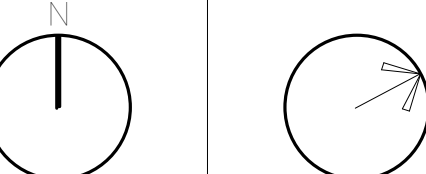
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

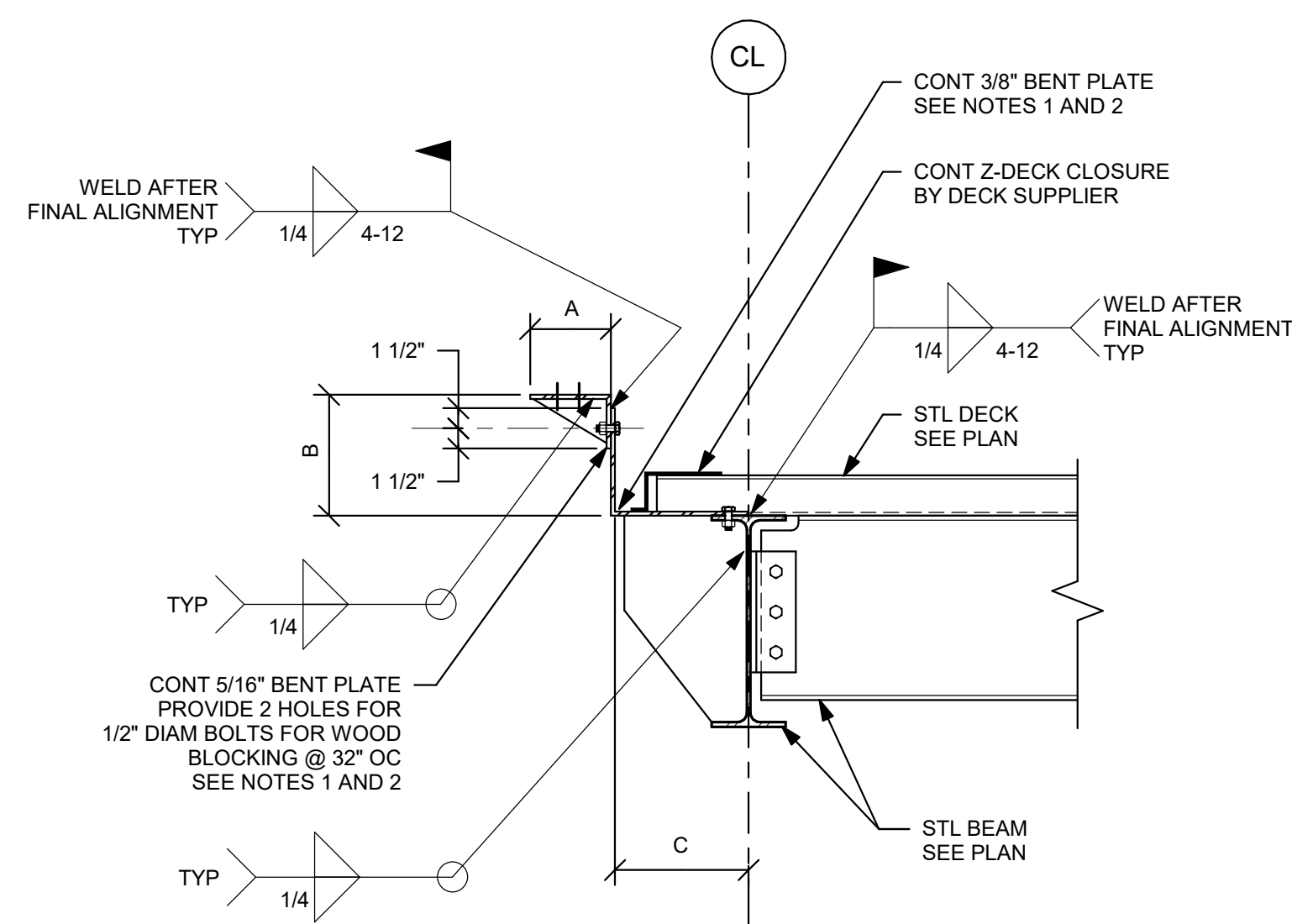
PROJECT NORTH MAGNETIC NORTH



SECTIONS

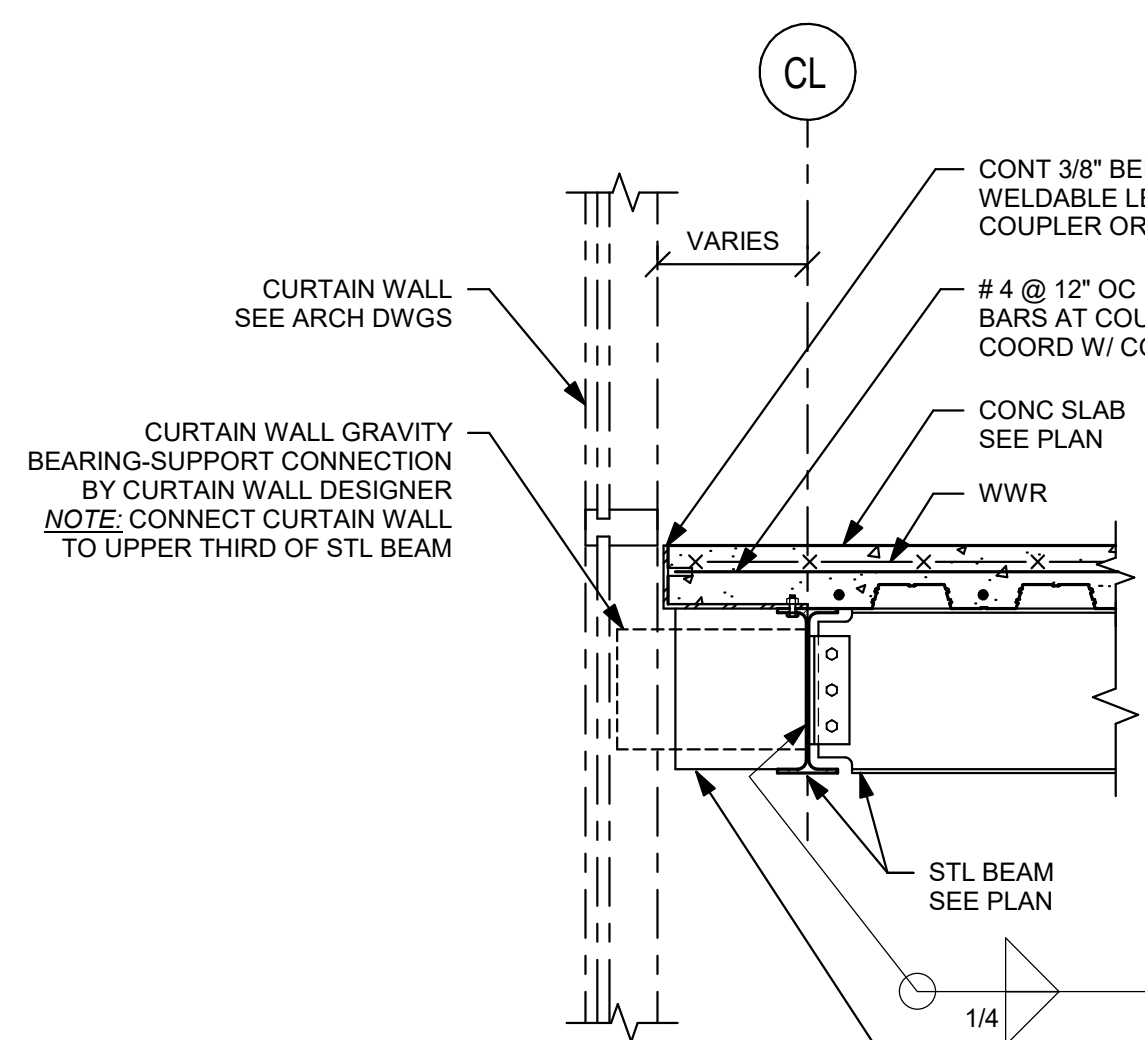
Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S3-0-1

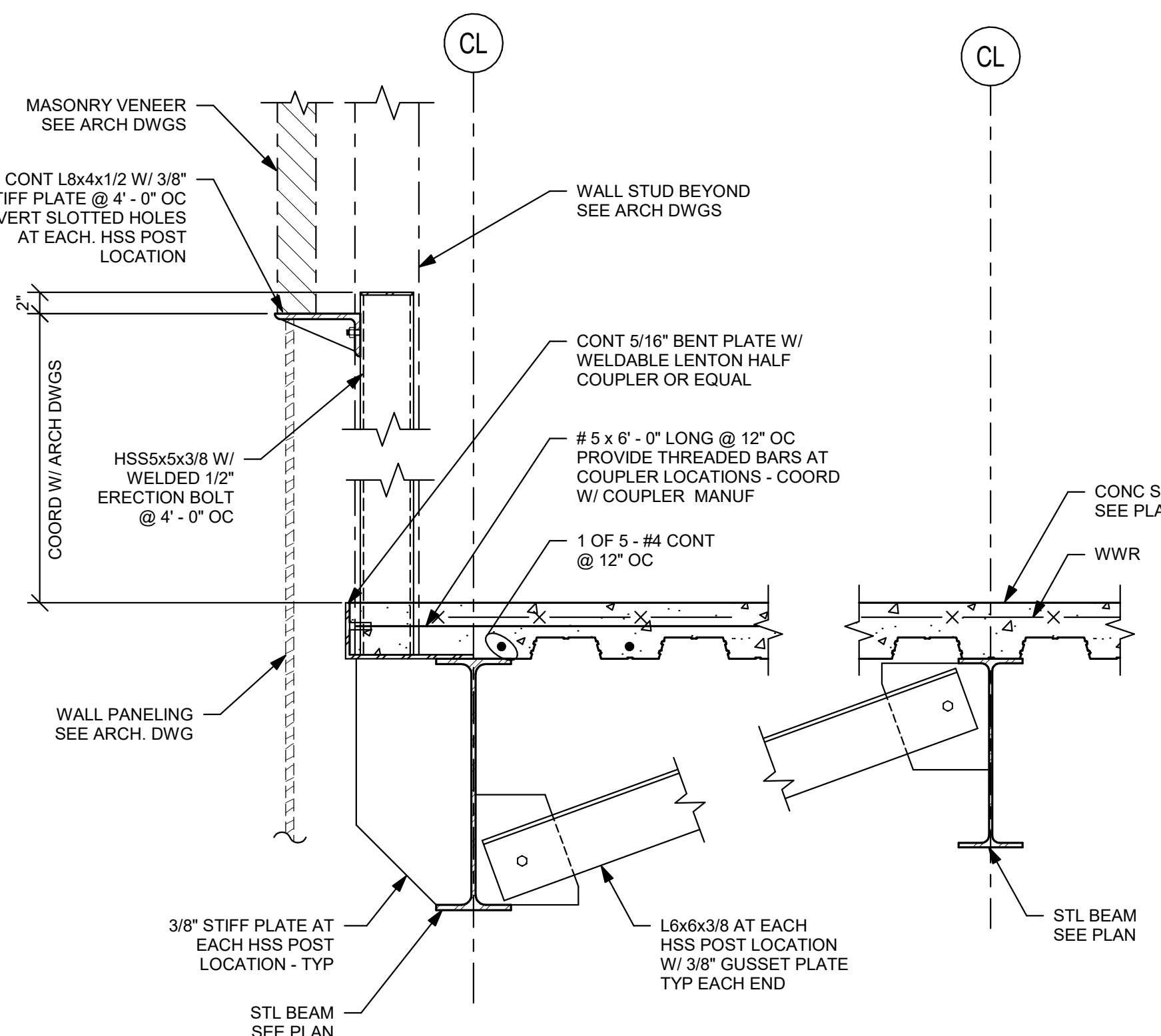
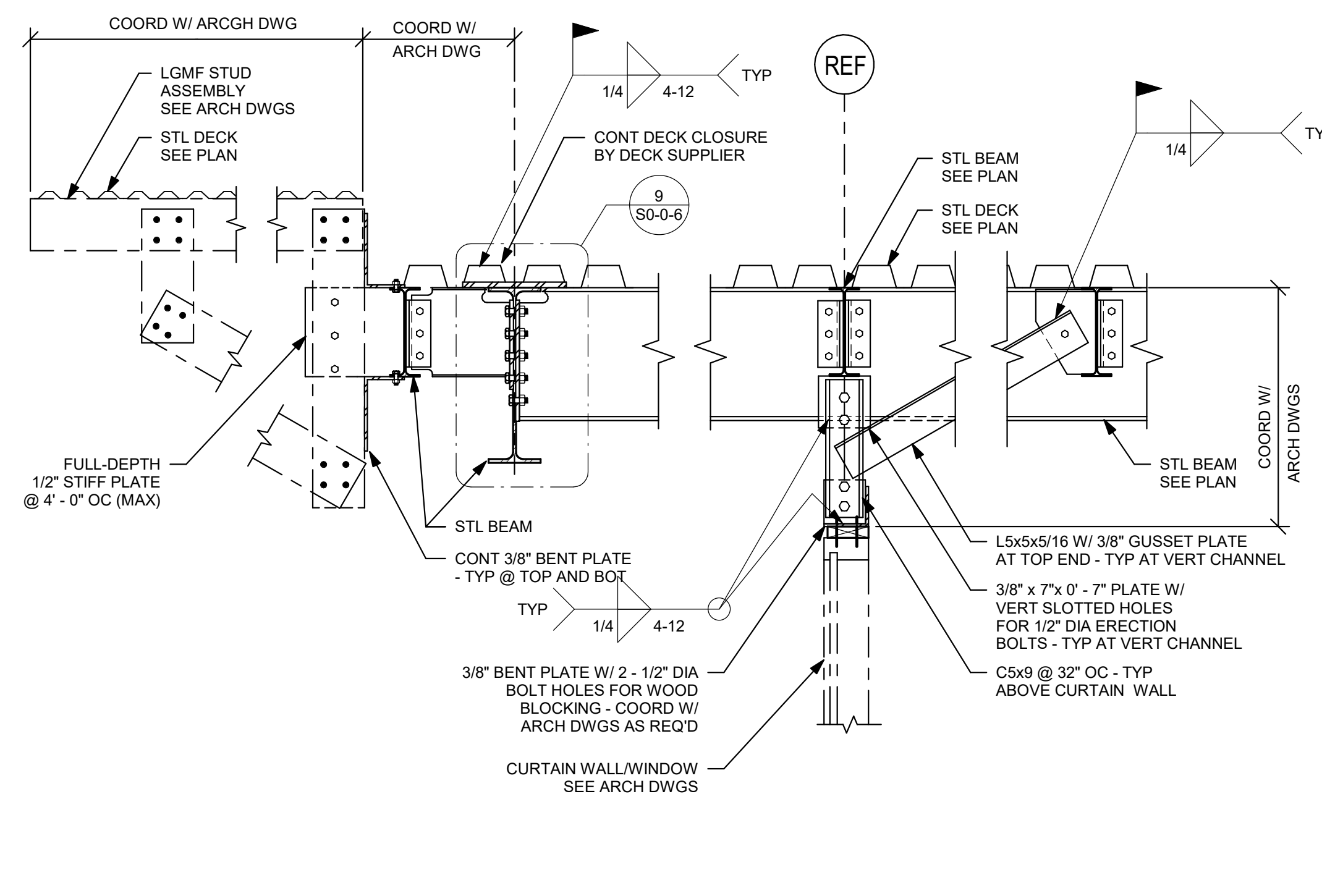
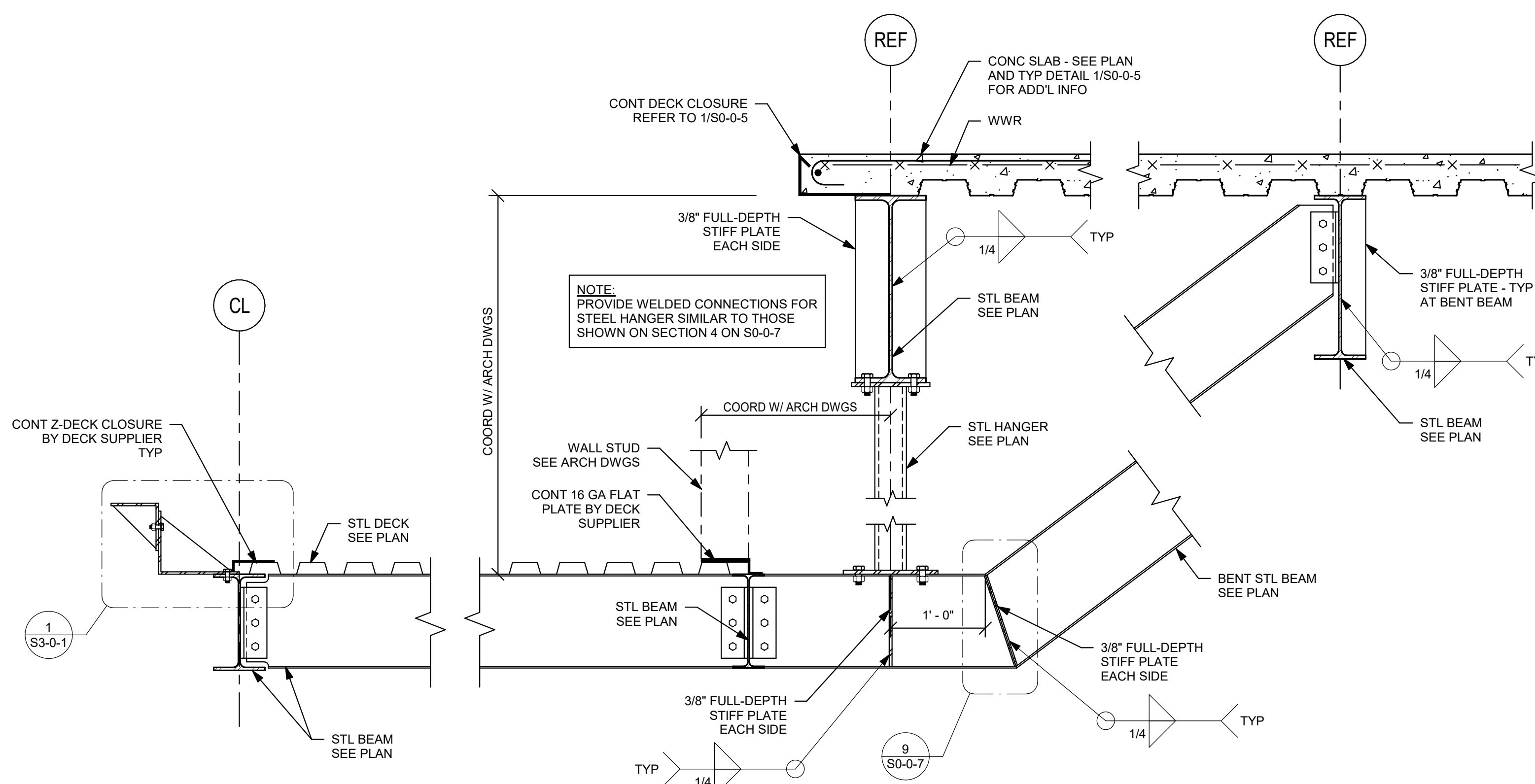
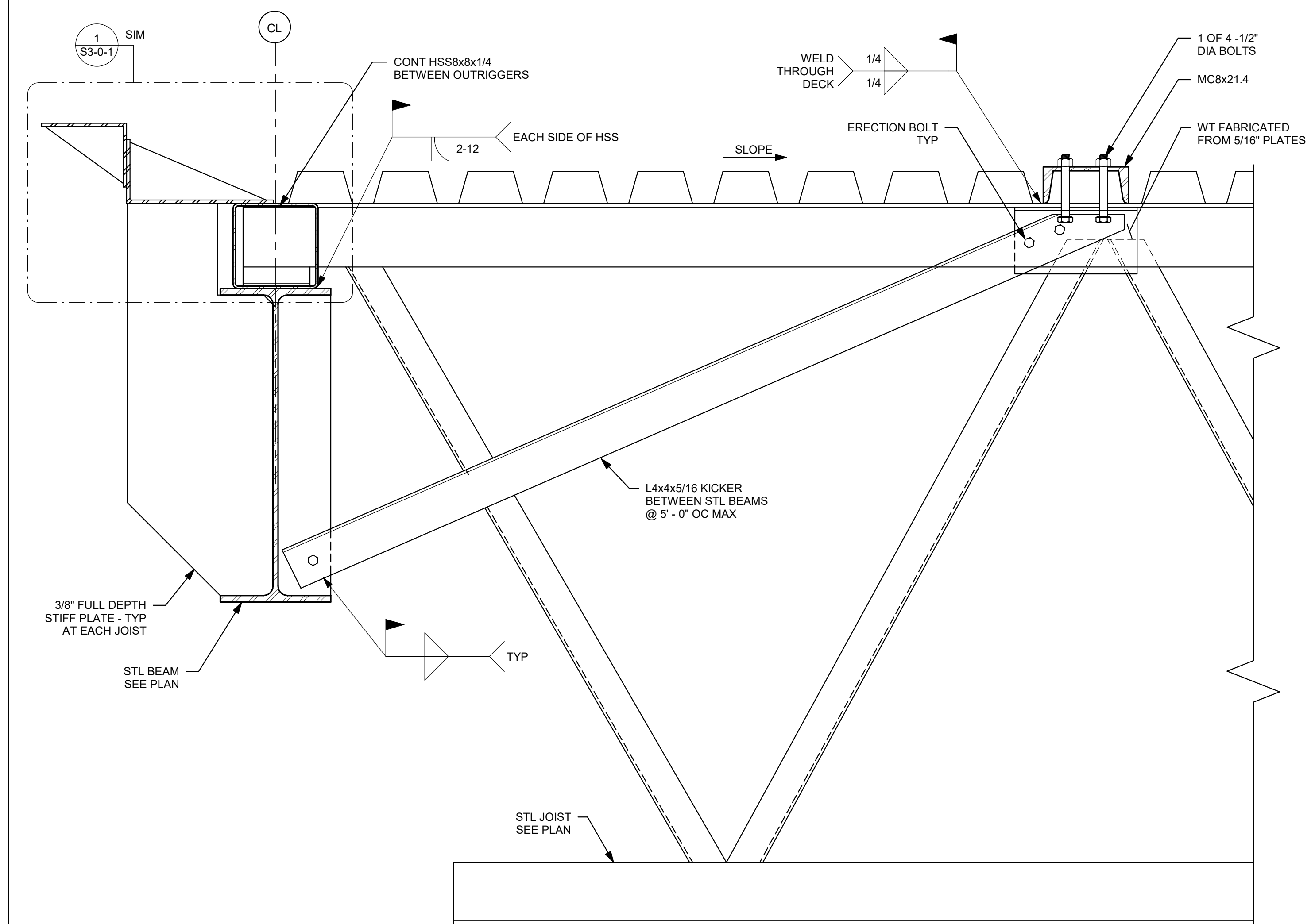
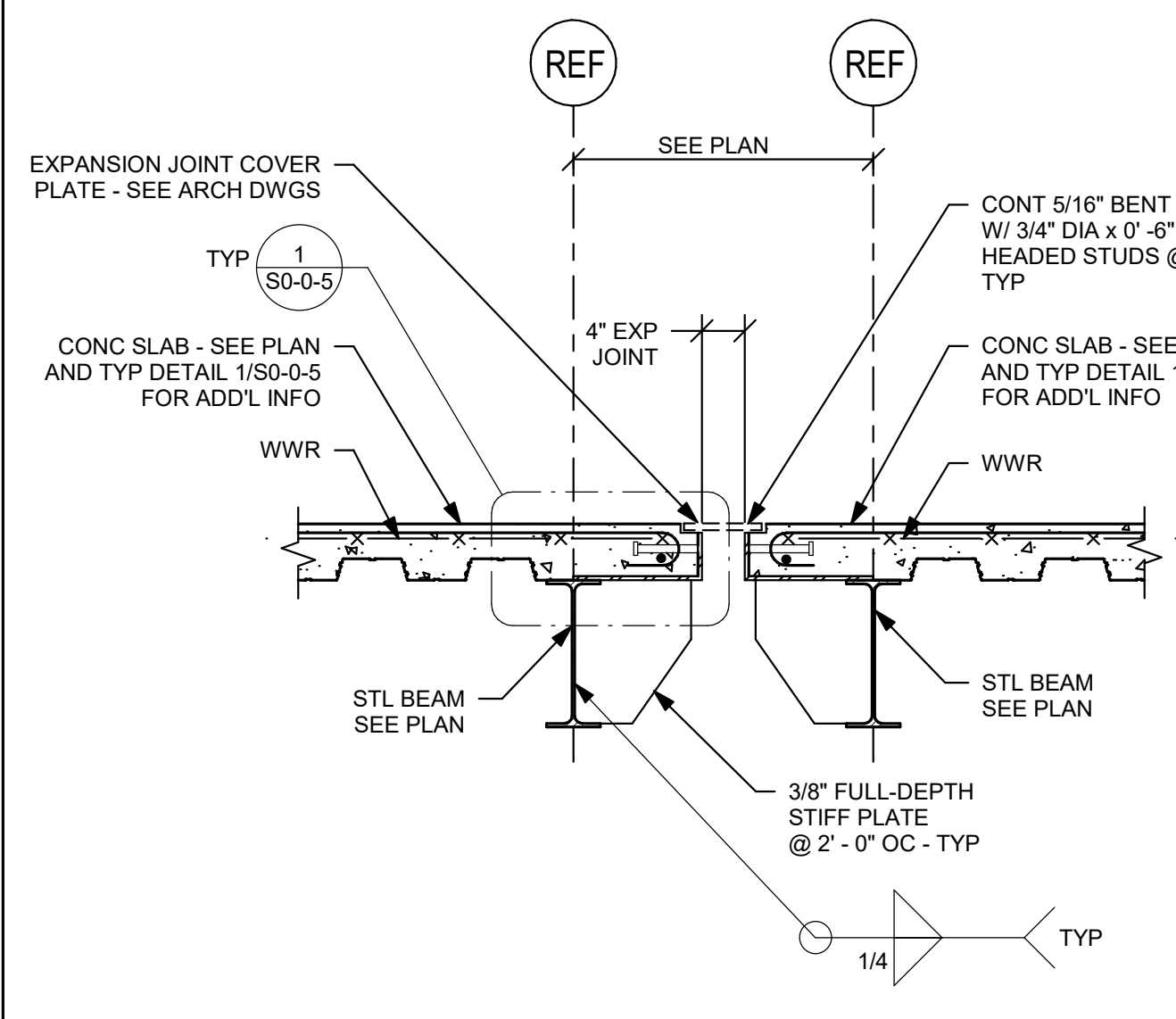
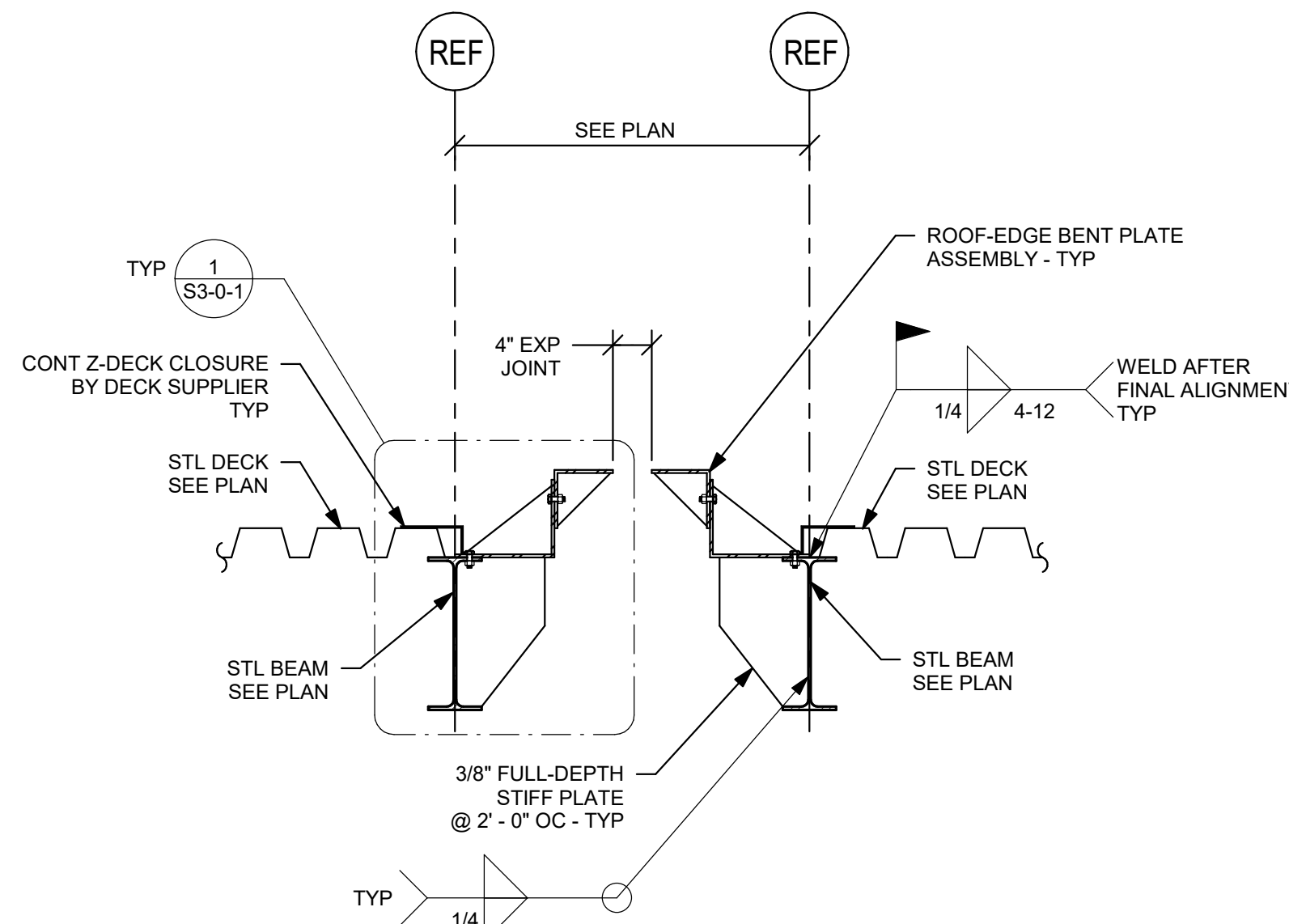
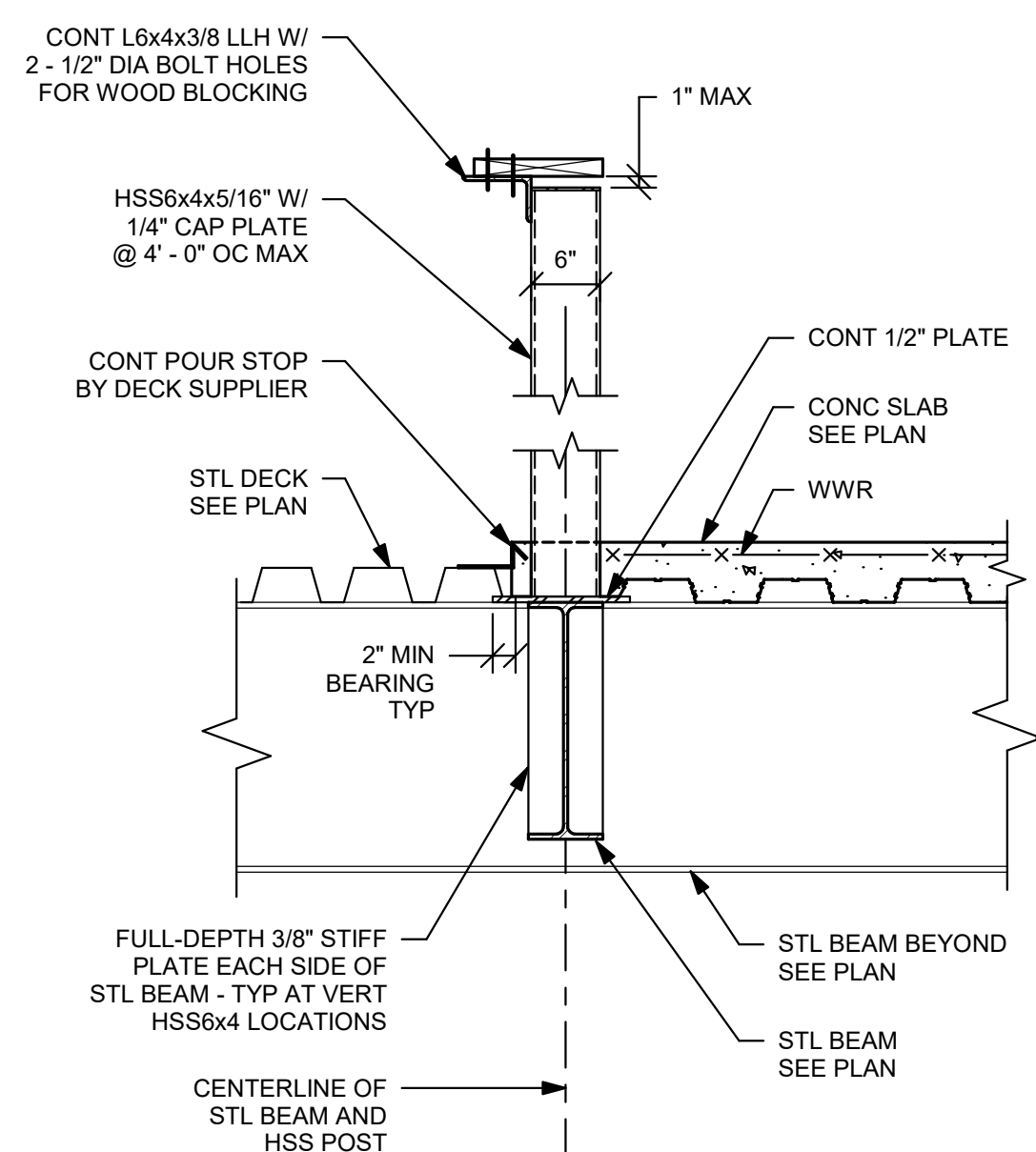
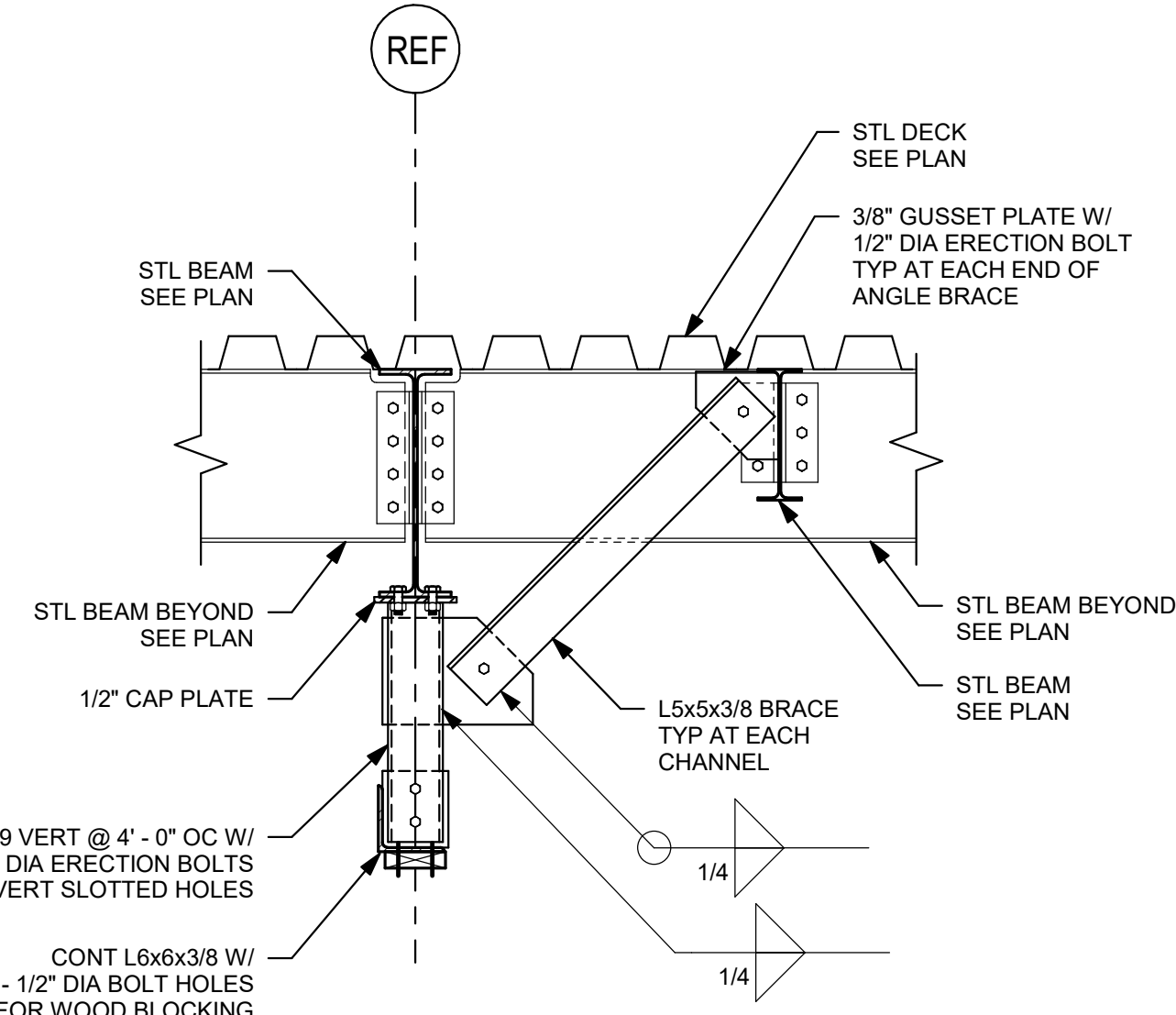
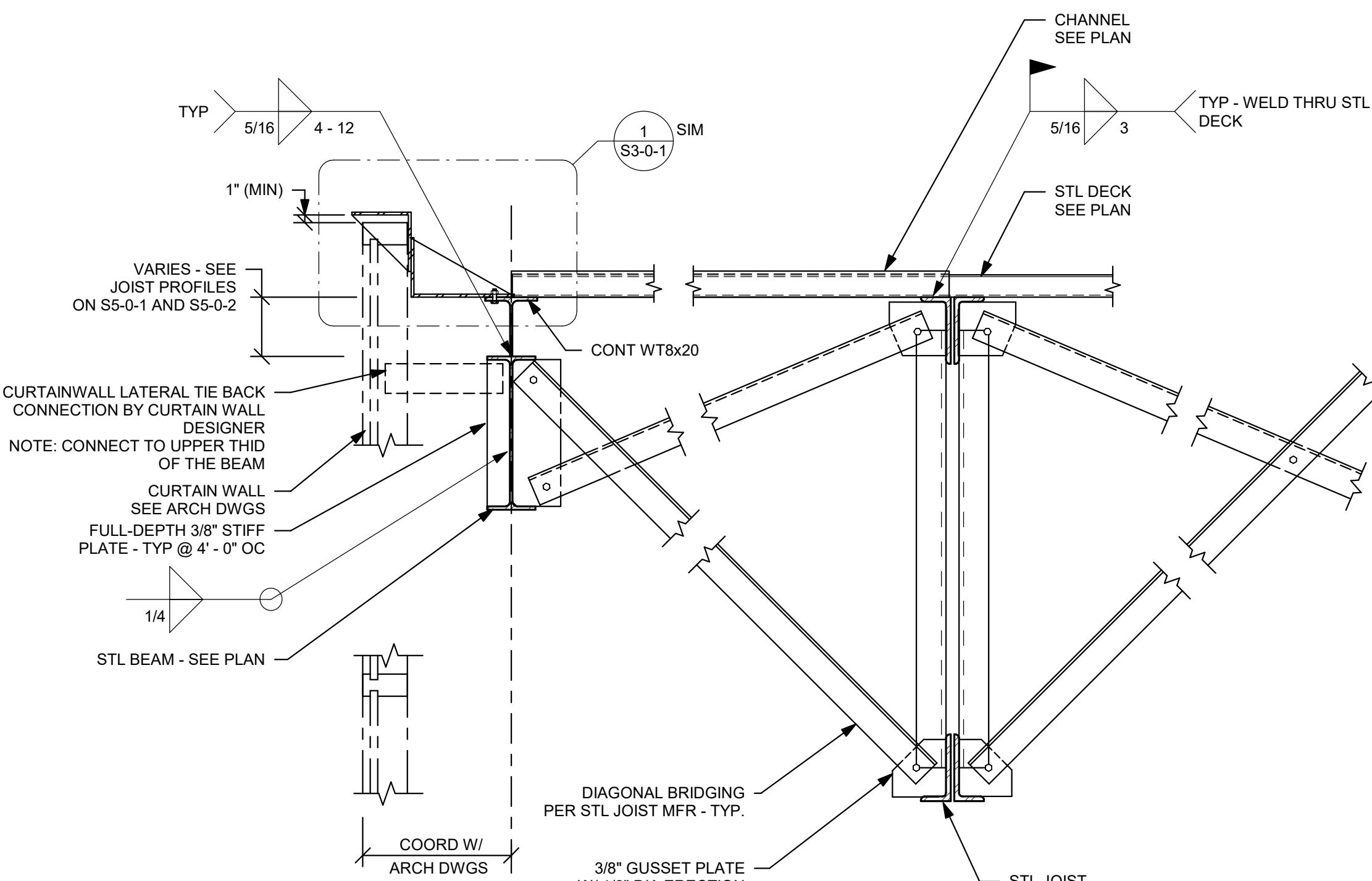


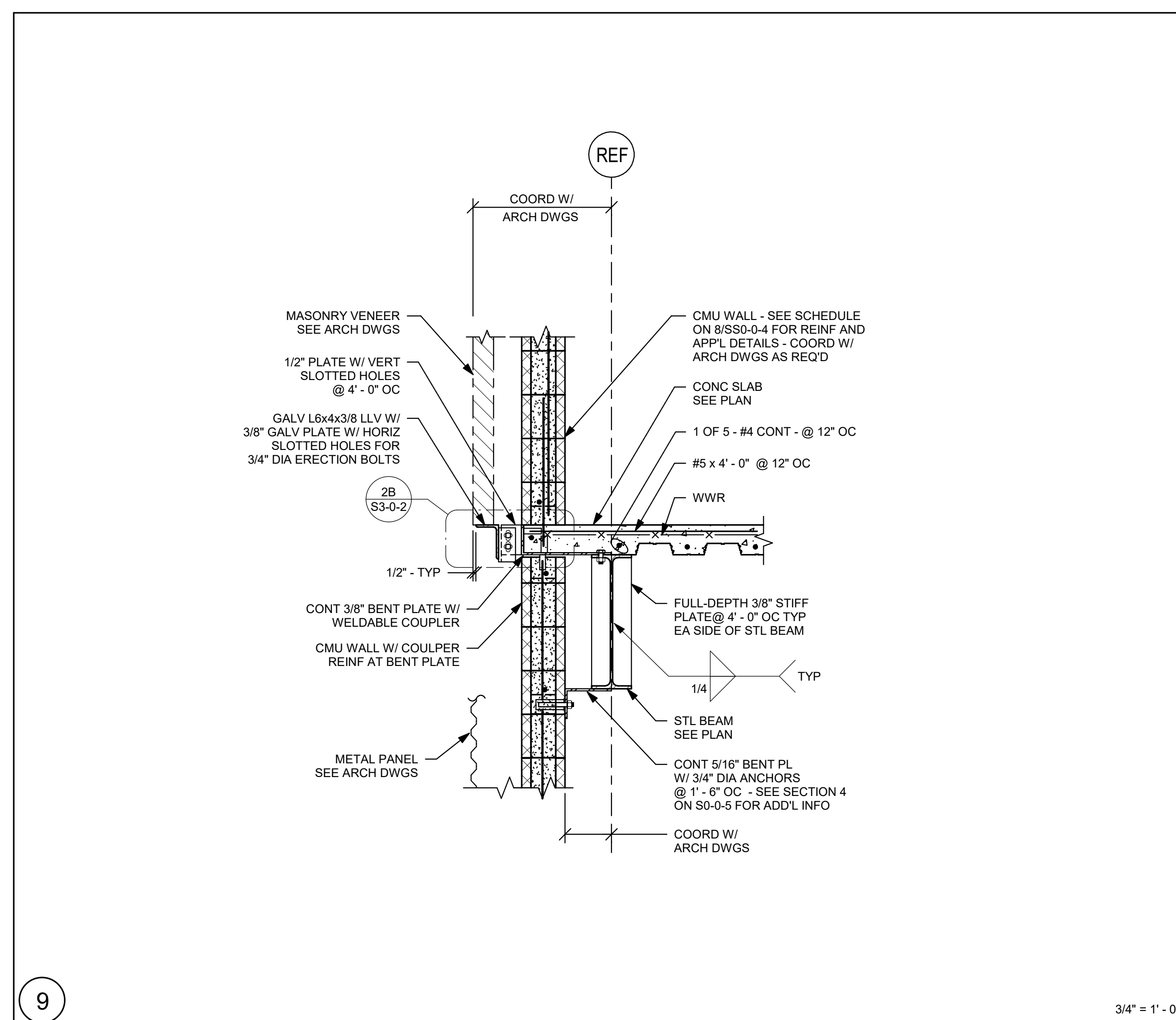
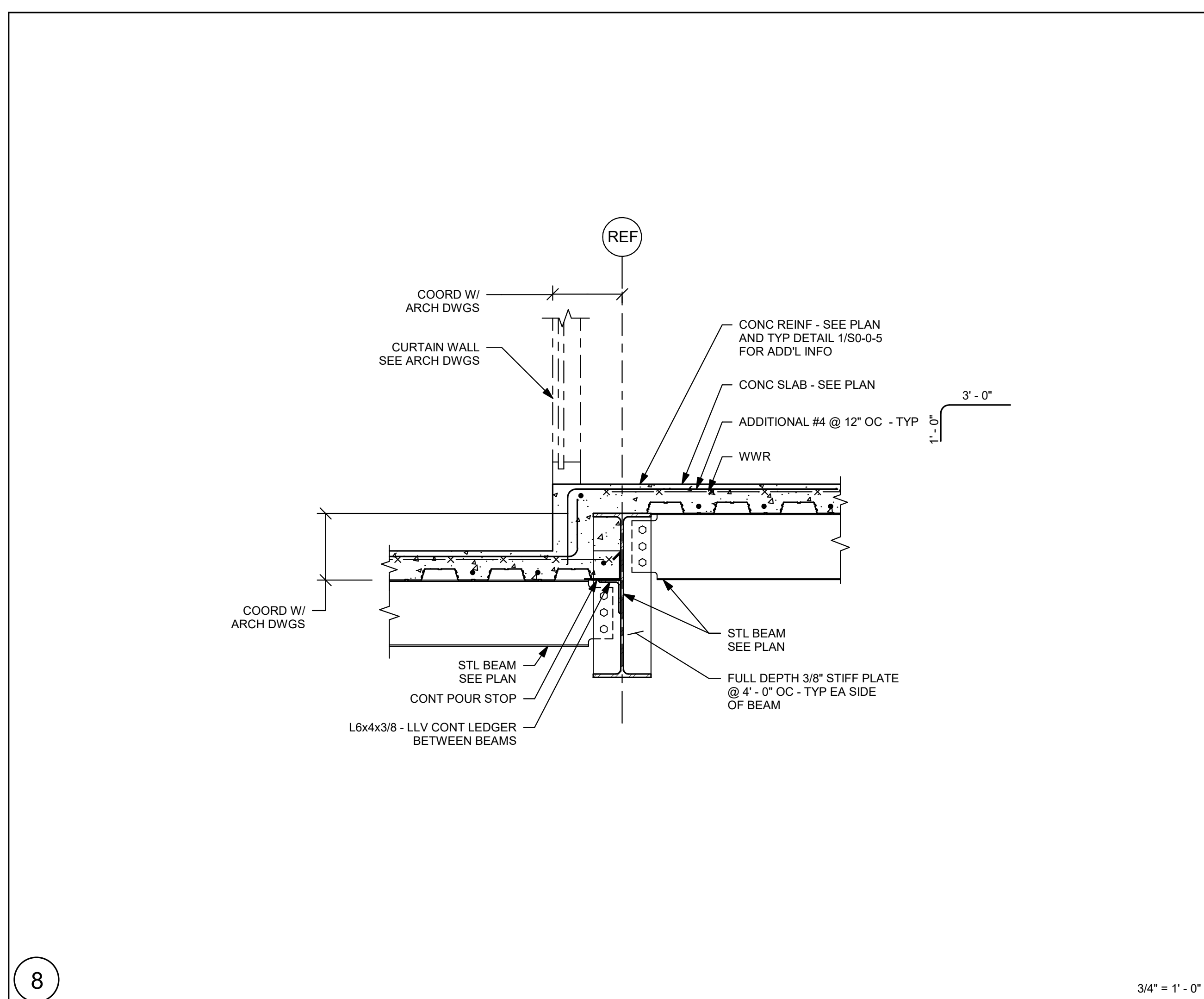
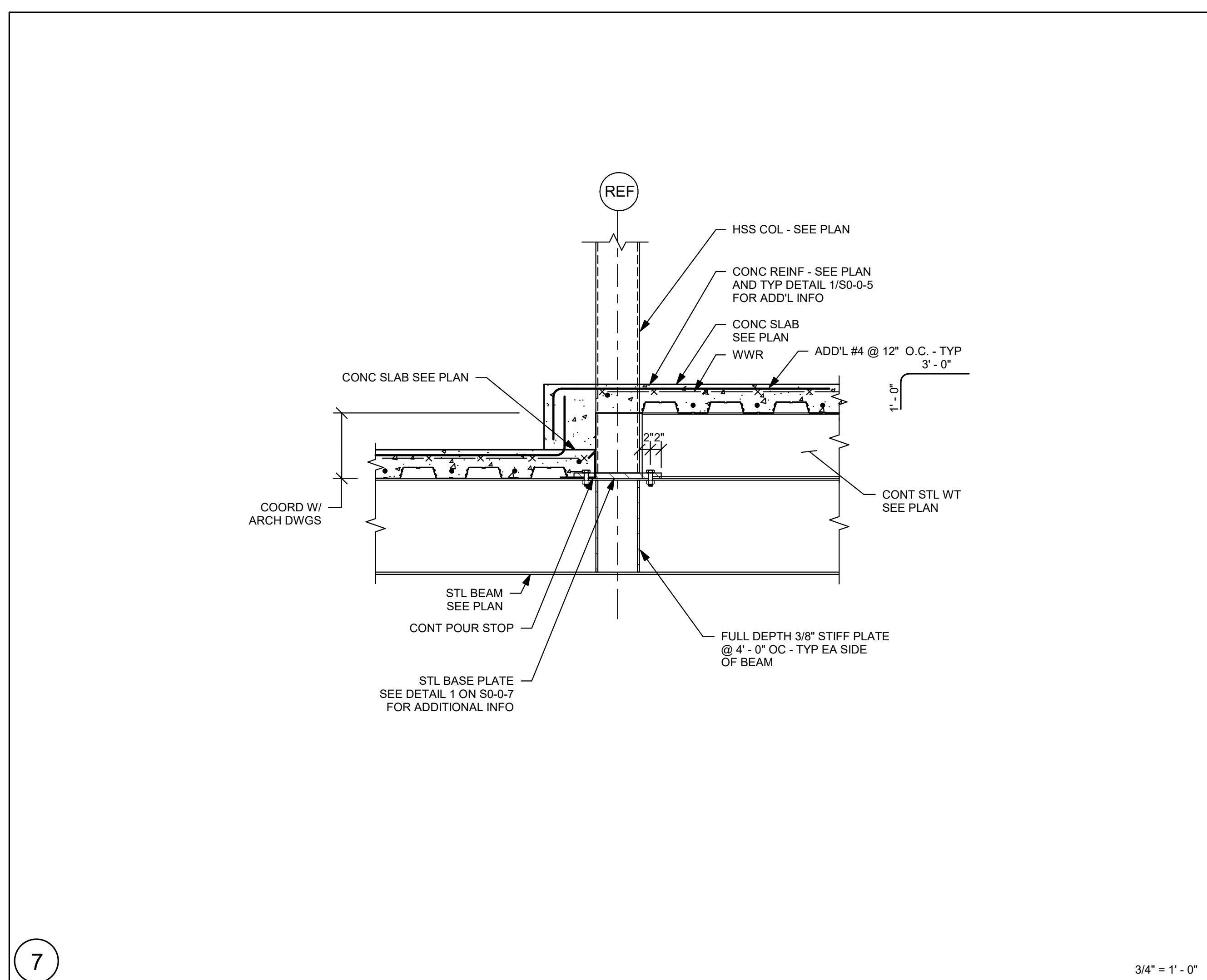
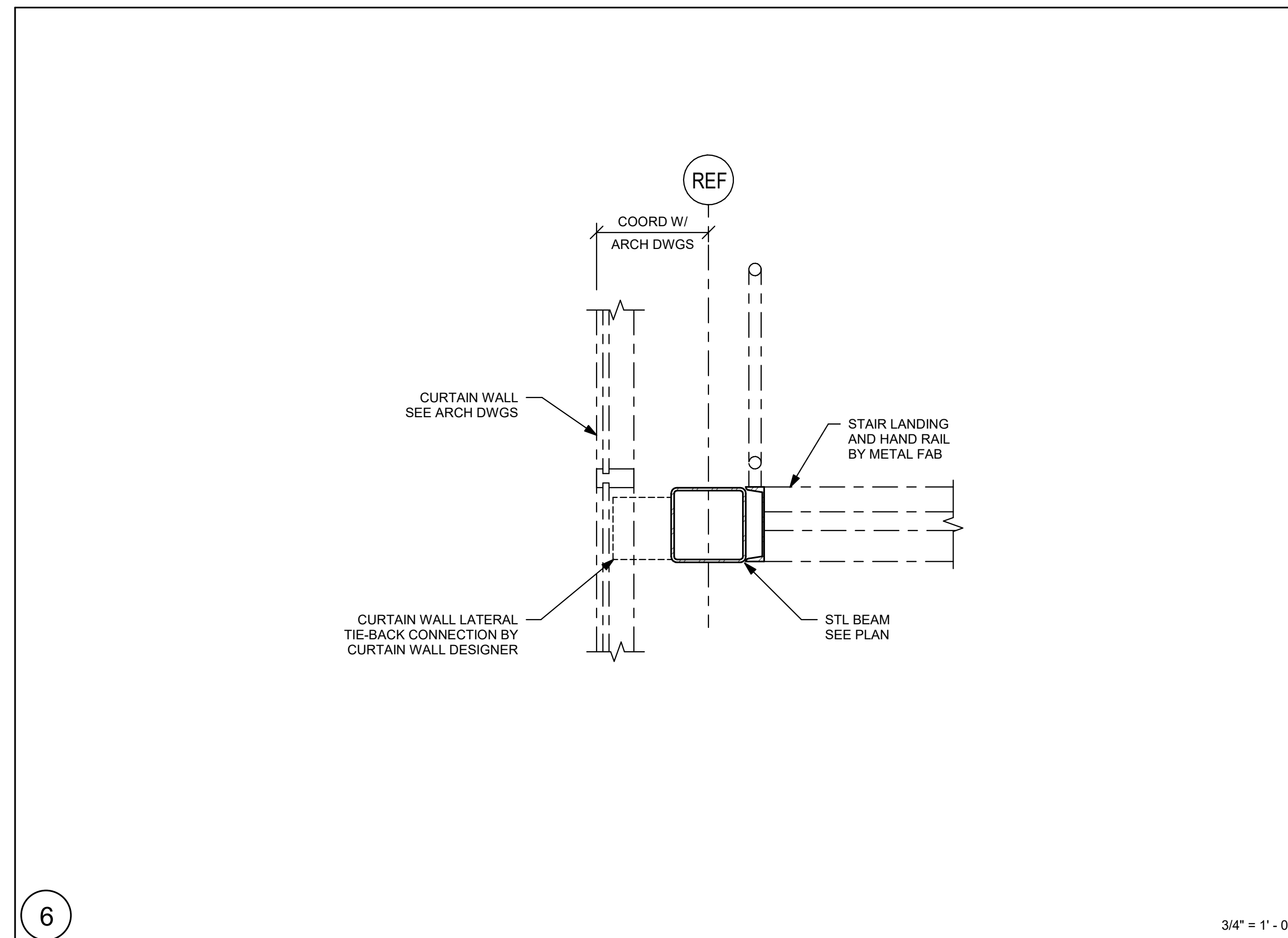
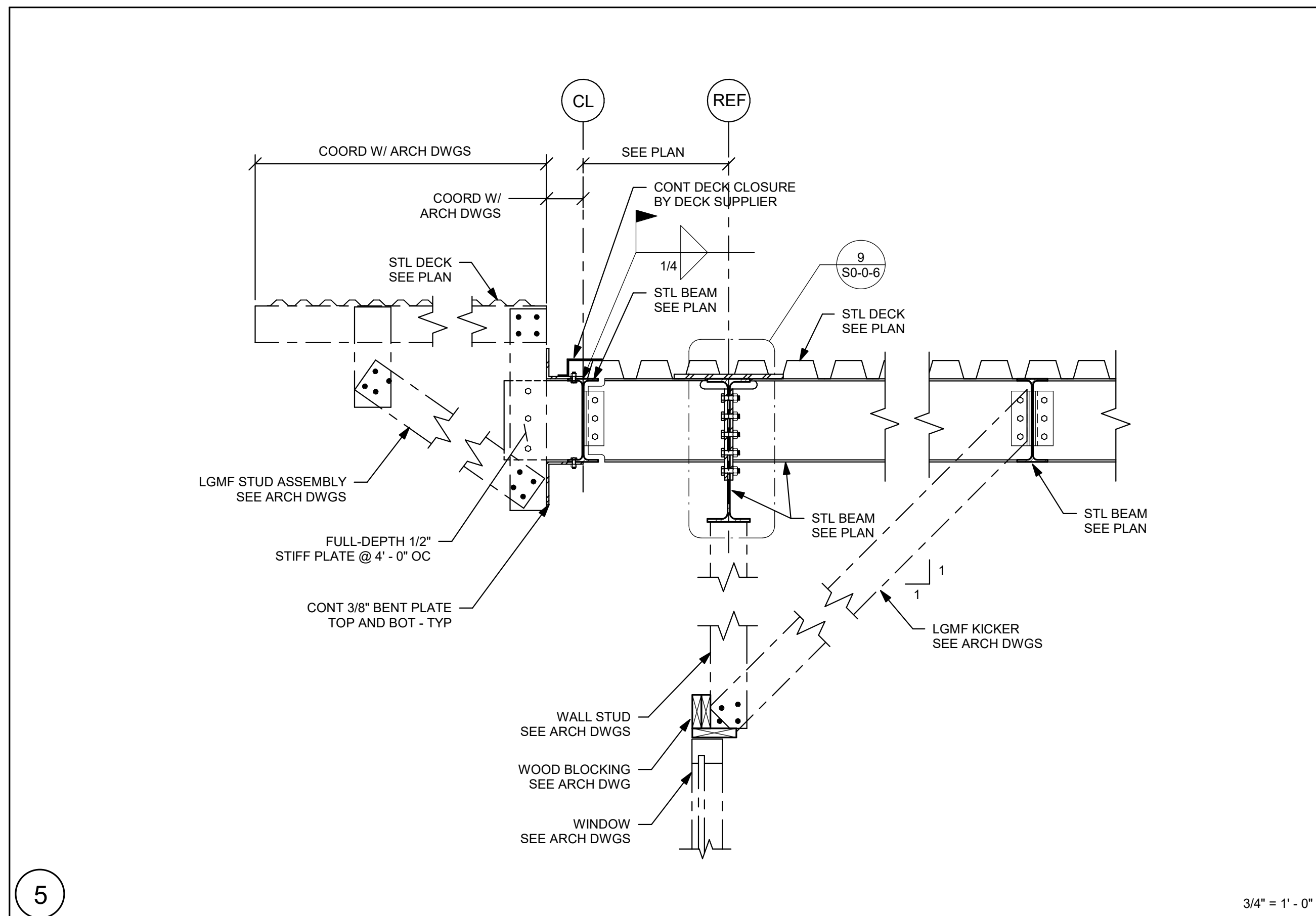
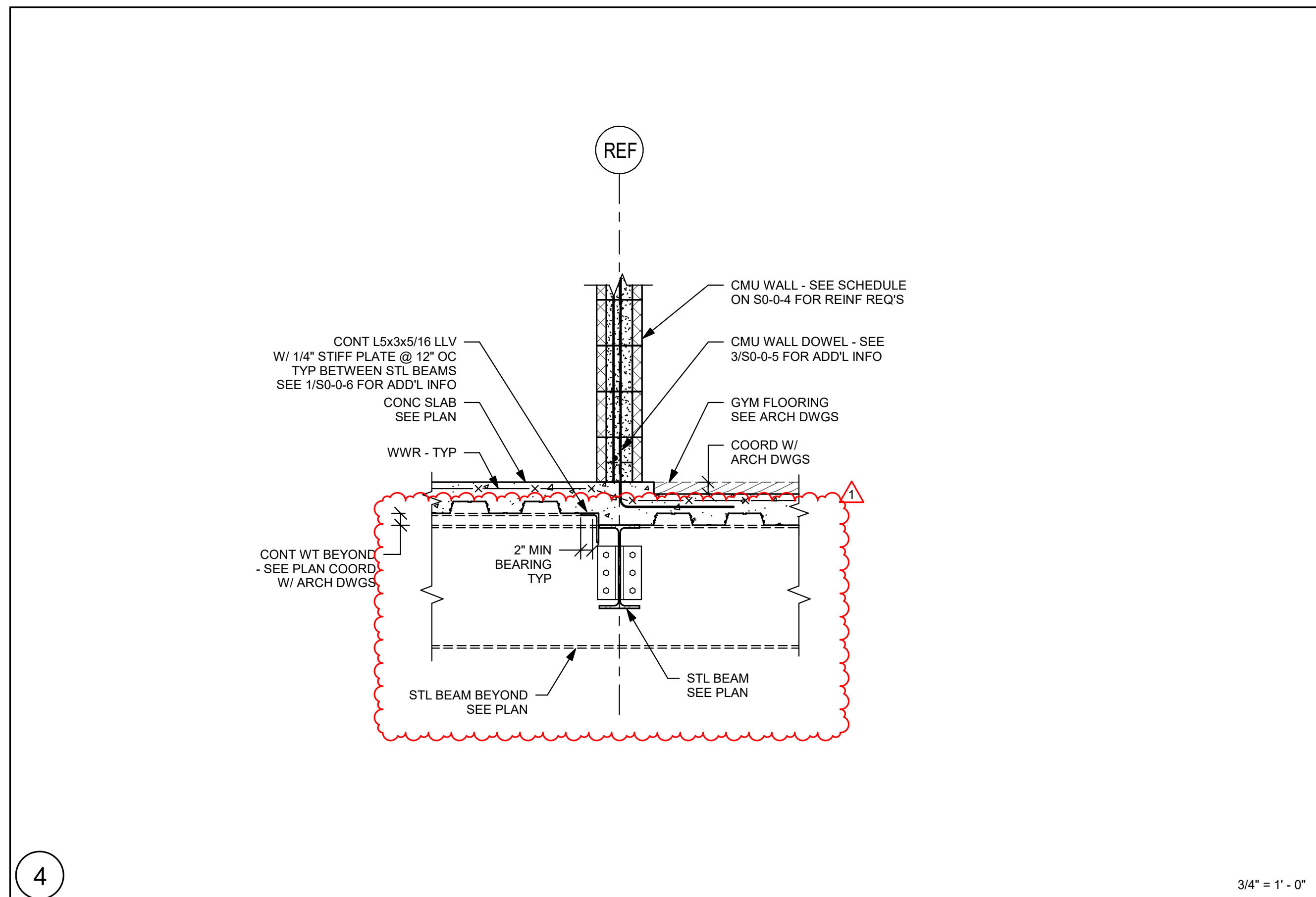
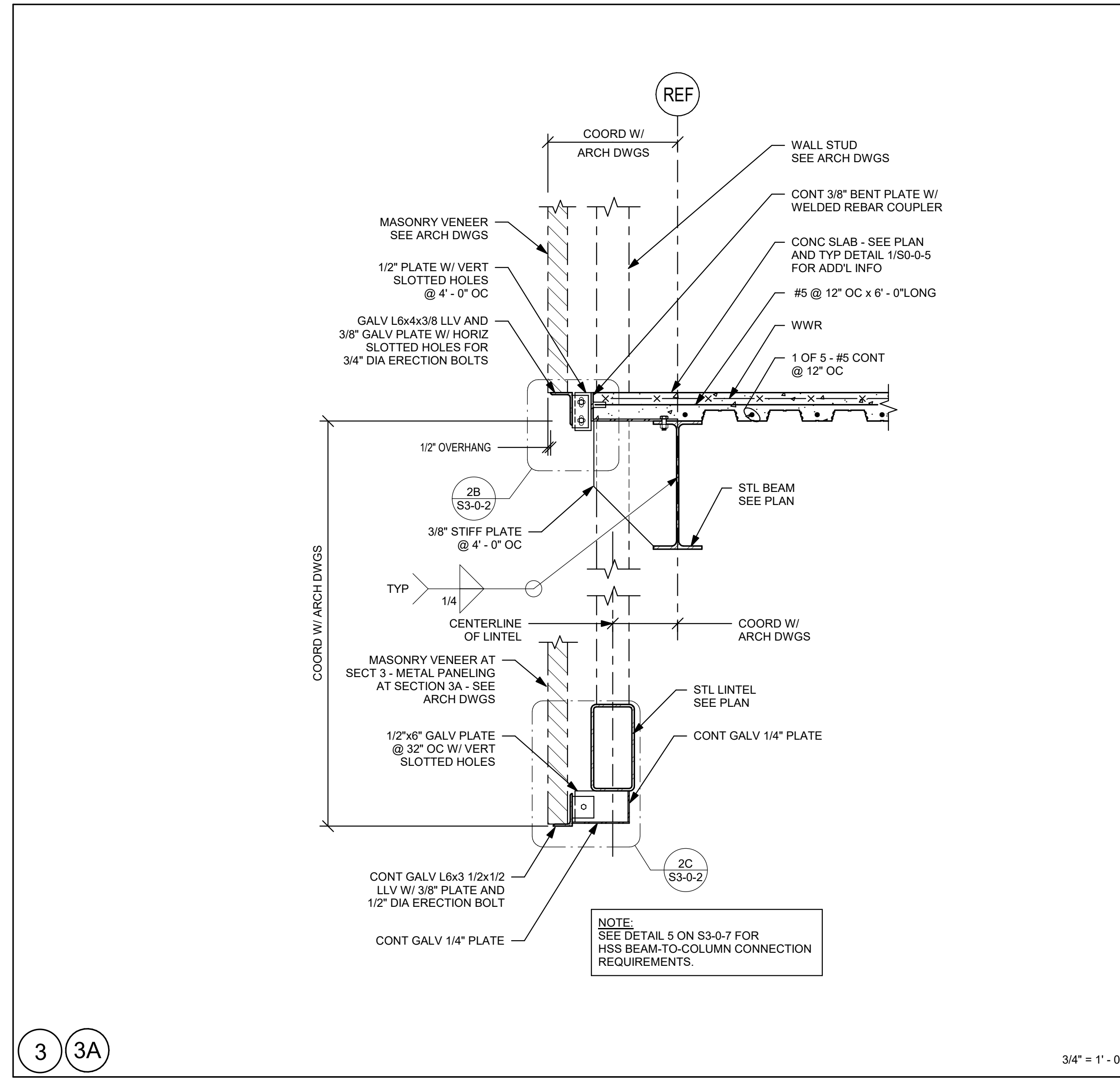
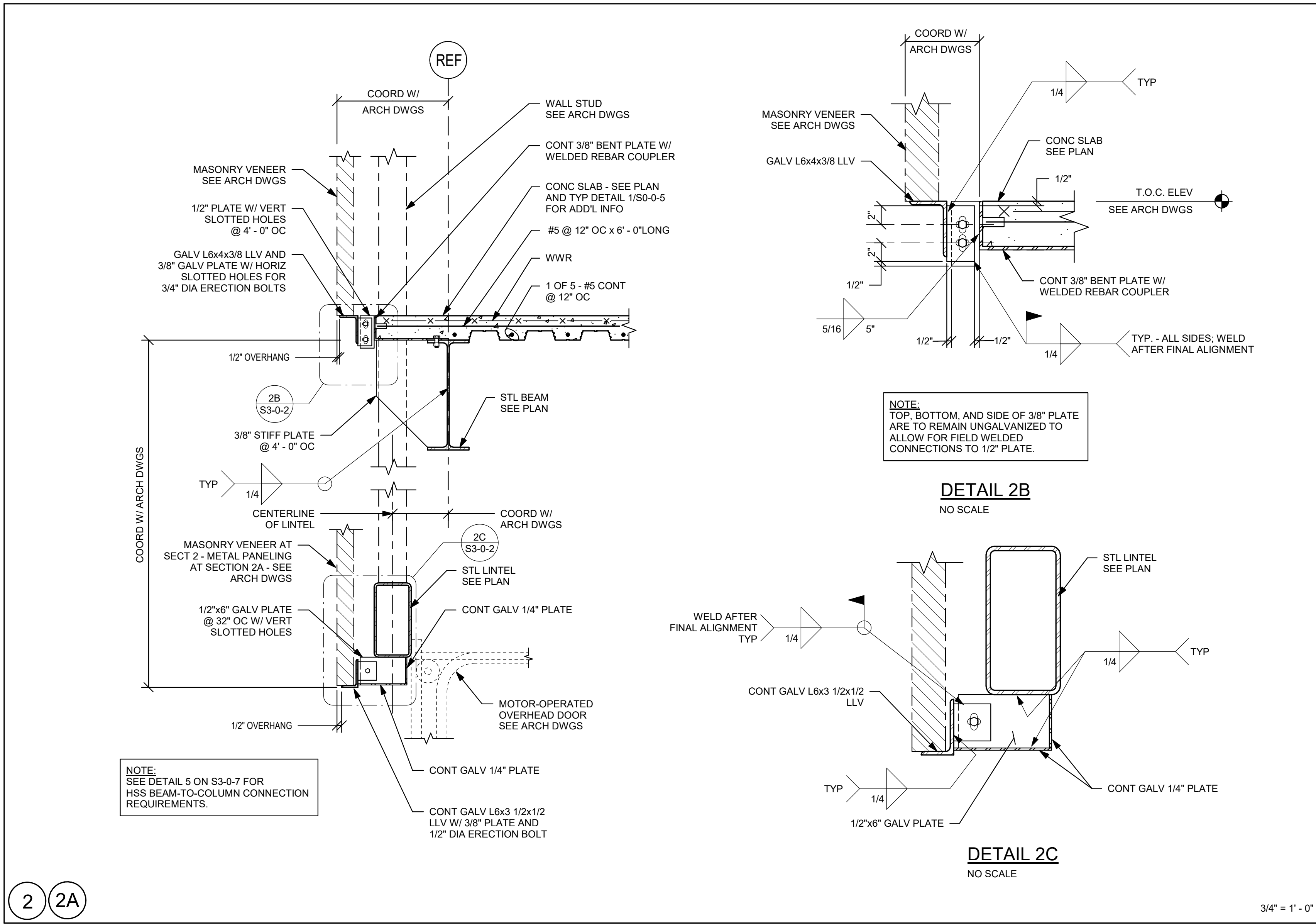
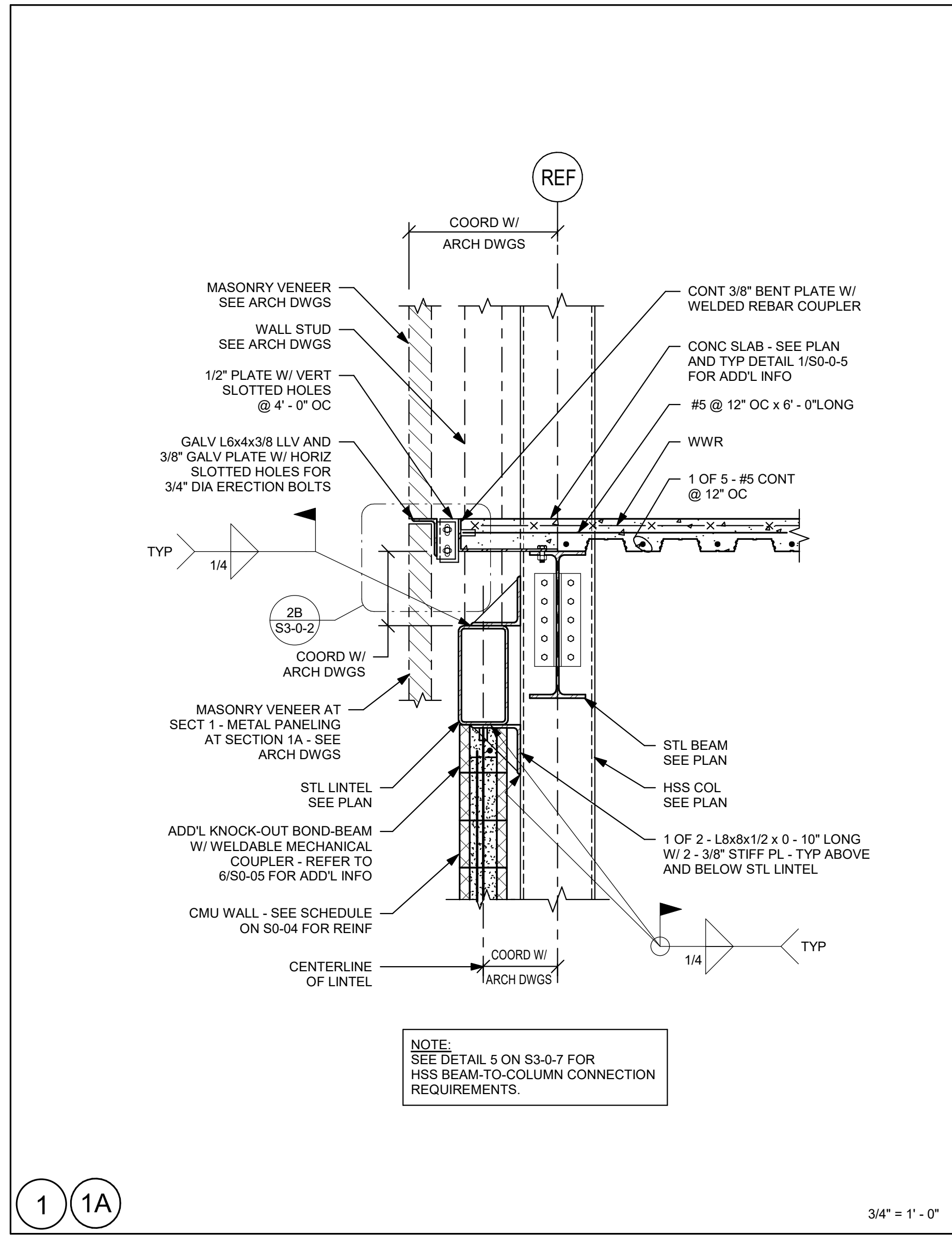
NOTES:

- COORDINATE ALL ROOF-EDGE ANGLE AND BENT PLATE SIZES AND EXTENTS WITH ARCHITECTURAL DETAILS.
- PROVIDE 3/8" STIFFENER PLATES @ 4'-0" OC AS SHOWN WHERE ROOF-EDGE BENT PLATE DIMENSIONS "A" AND/OR "B" ARE EQUAL TO OR GREATER THAN 9".
- PROVIDE 3/8" STIFFENER PLATES @ 4'-0" OC AS SHOWN WHERE ROOF-EDGE BENT PLATE DIMENSION "C" IS EQUAL TO OR GREATER THAN 1'-0".
- EXTEND ROOF EDGE ASSEMBLIES AROUND CORNERS AS REQUIRED PER DETAIL 10 ON DRAWING S0-0-7.



NOTE:
SEE DETAIL 1 ON S0-0-5 FOR
ADDITIONAL INFORMATION





DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior

Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE

FEBRUARY 24TH, 2023

KEY PLAN

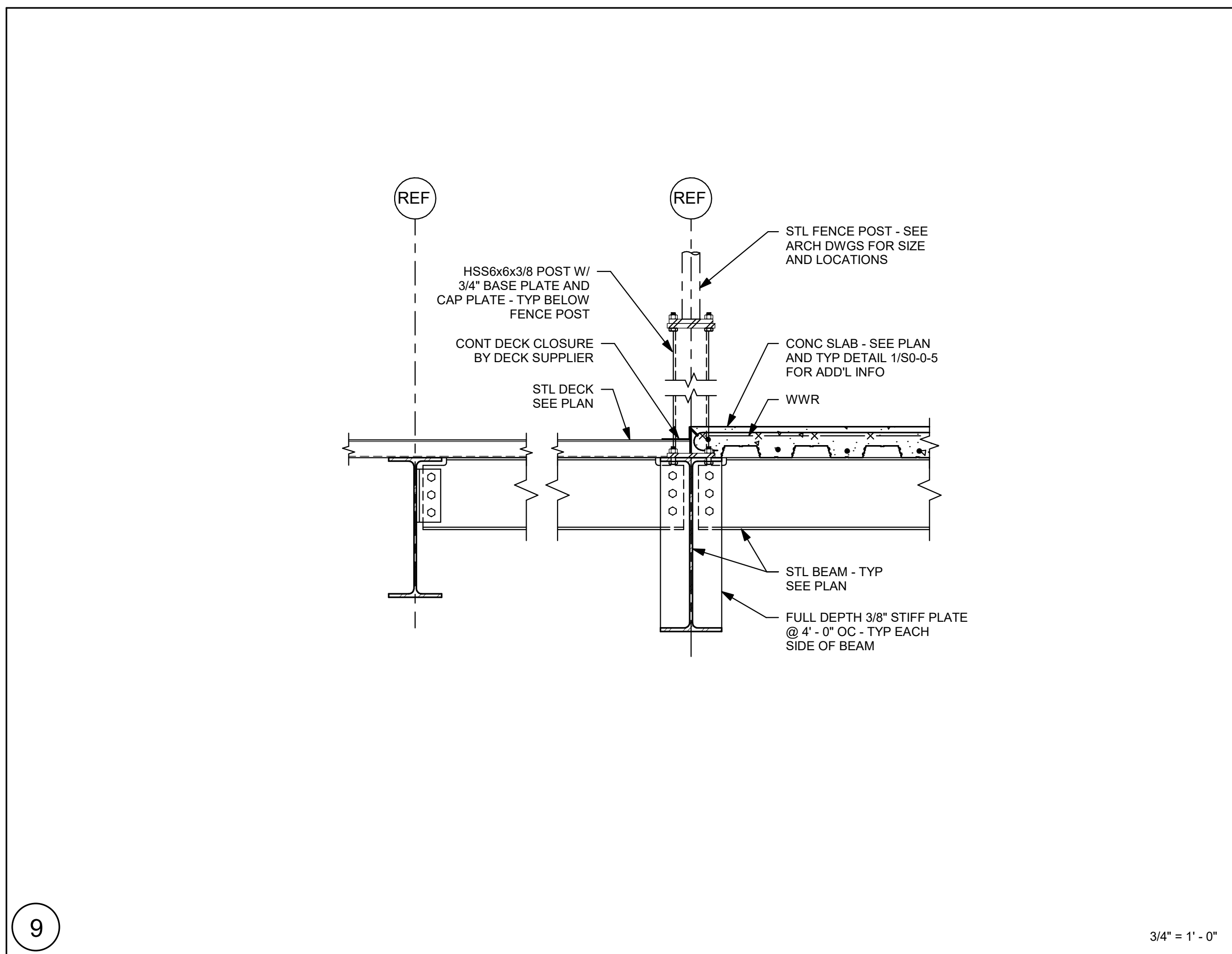
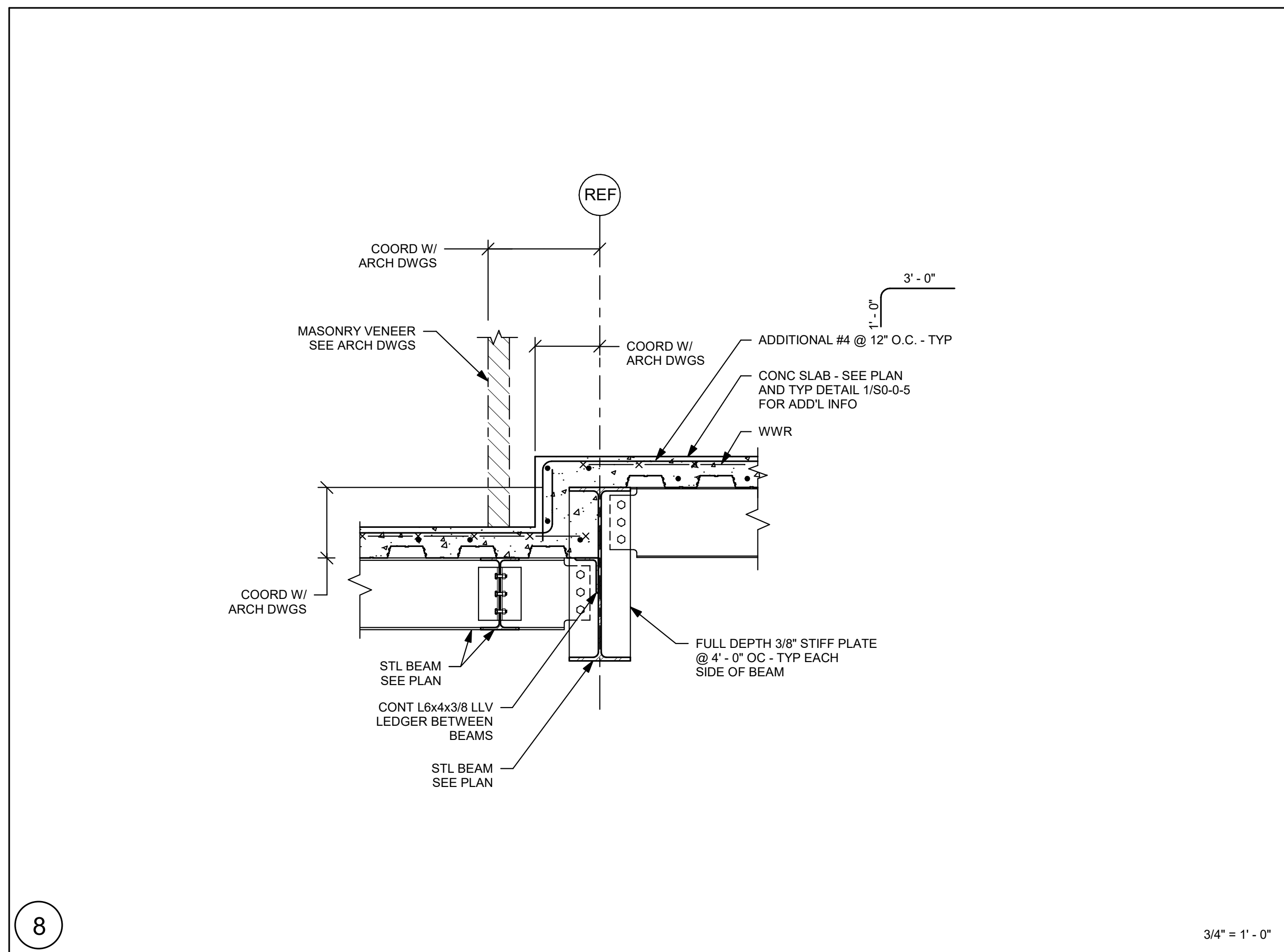
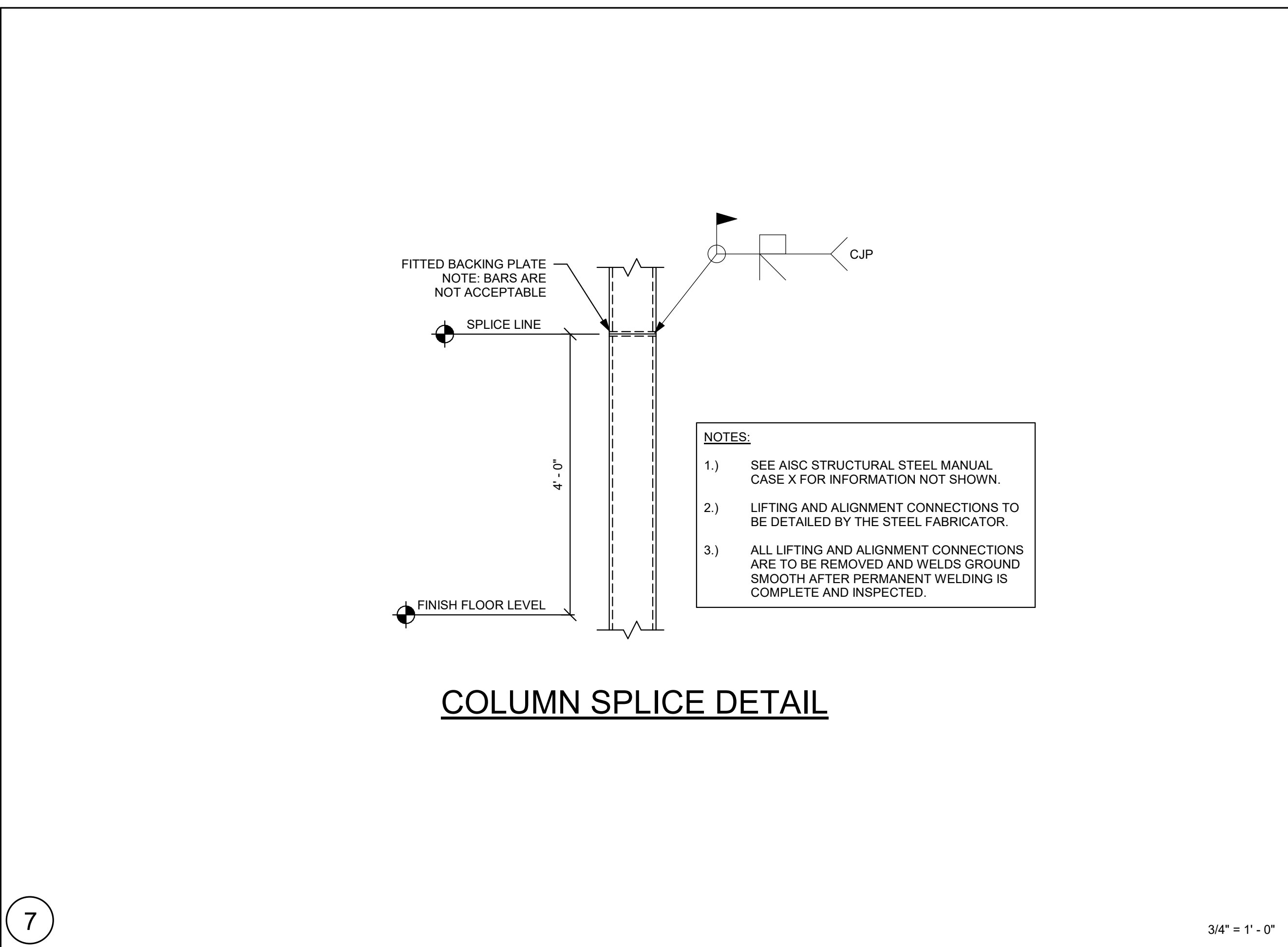
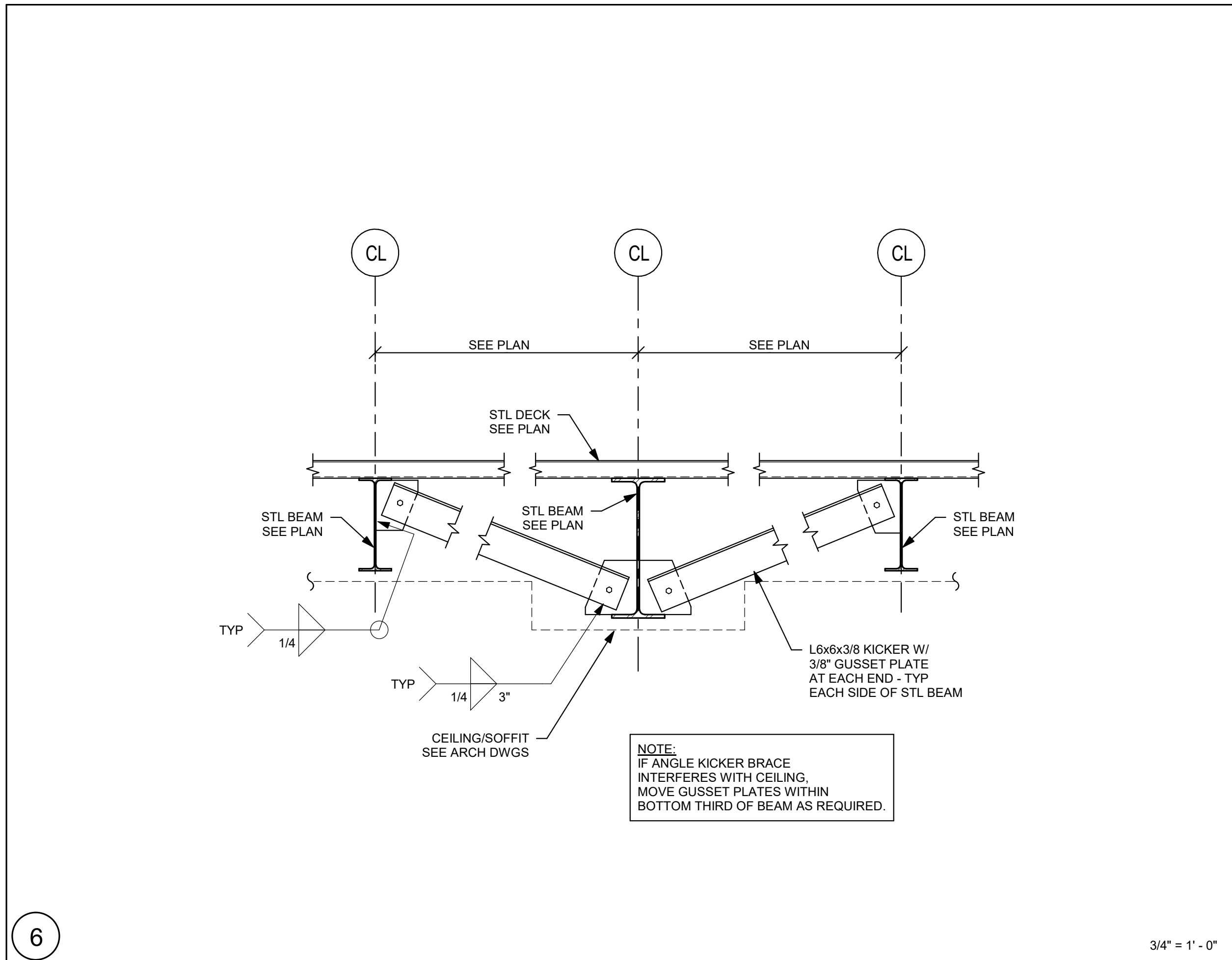
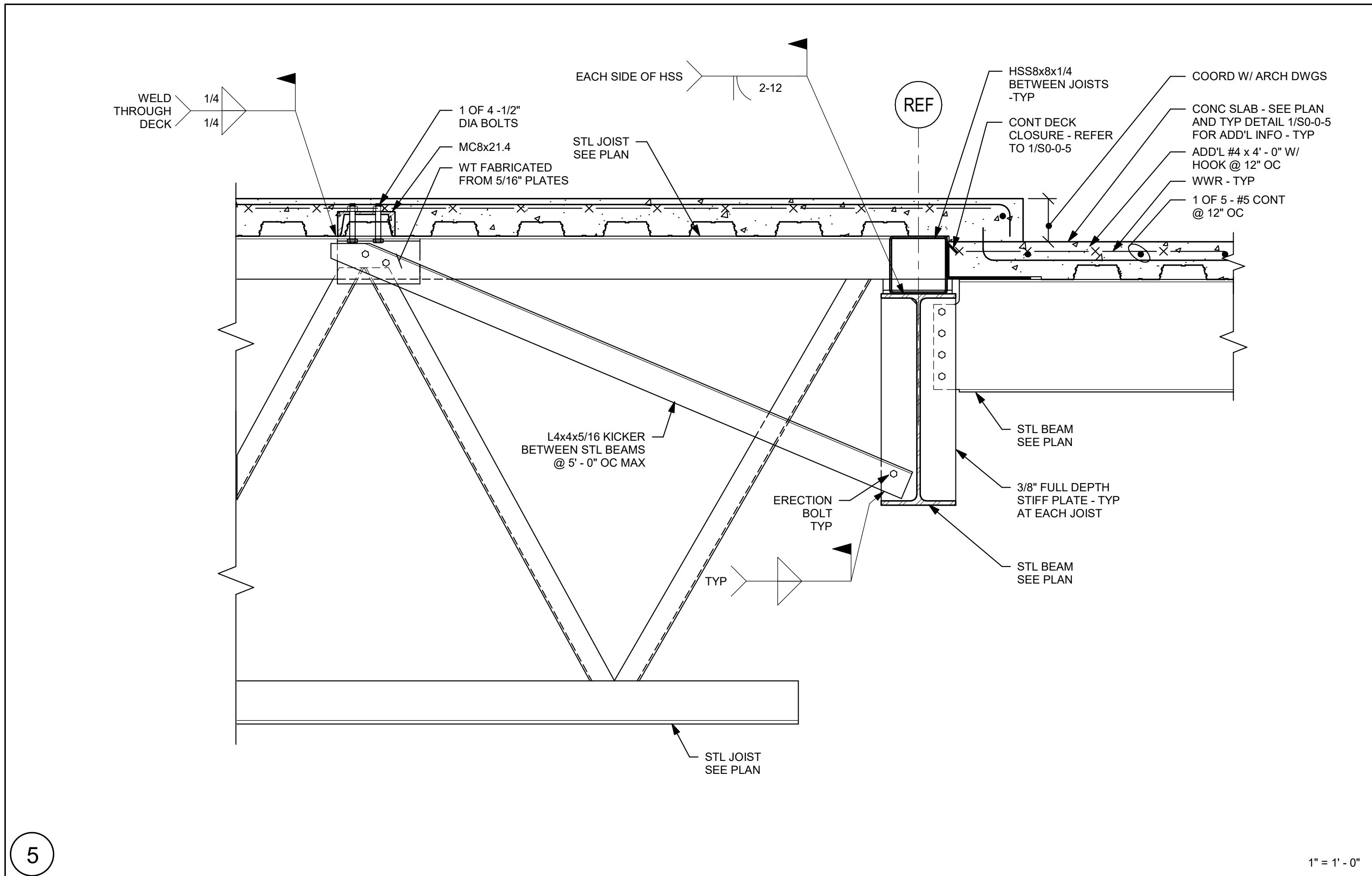
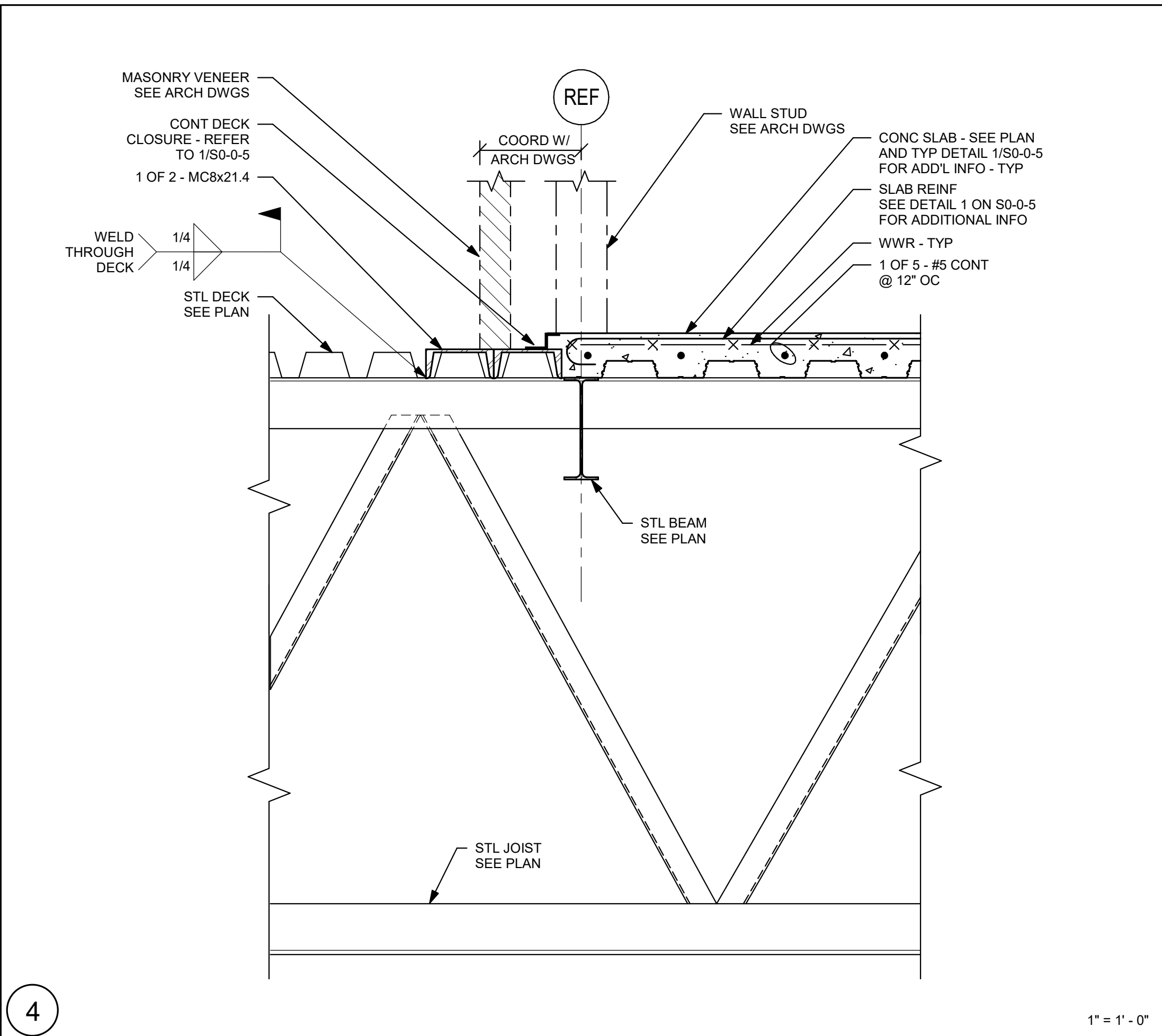
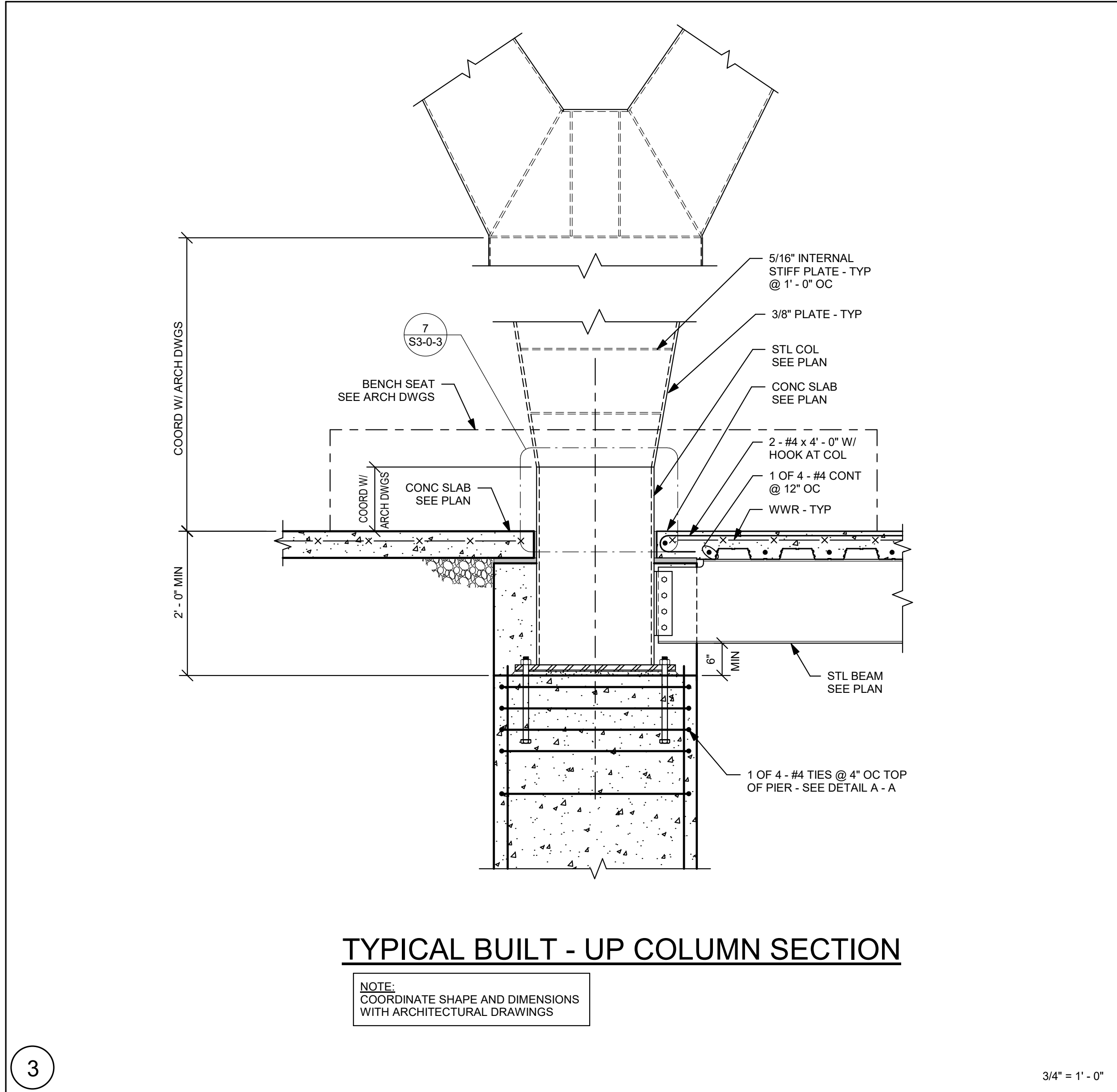
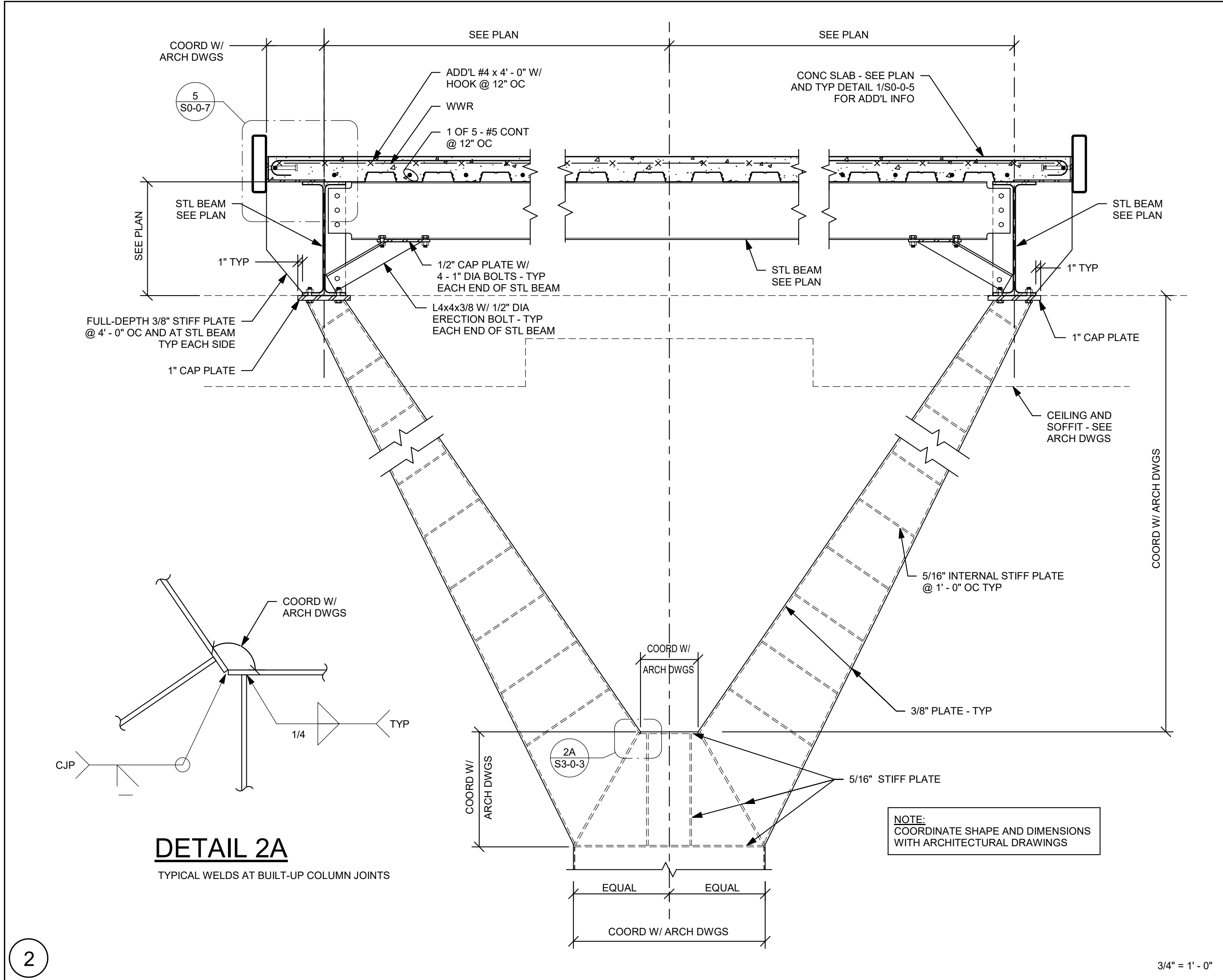
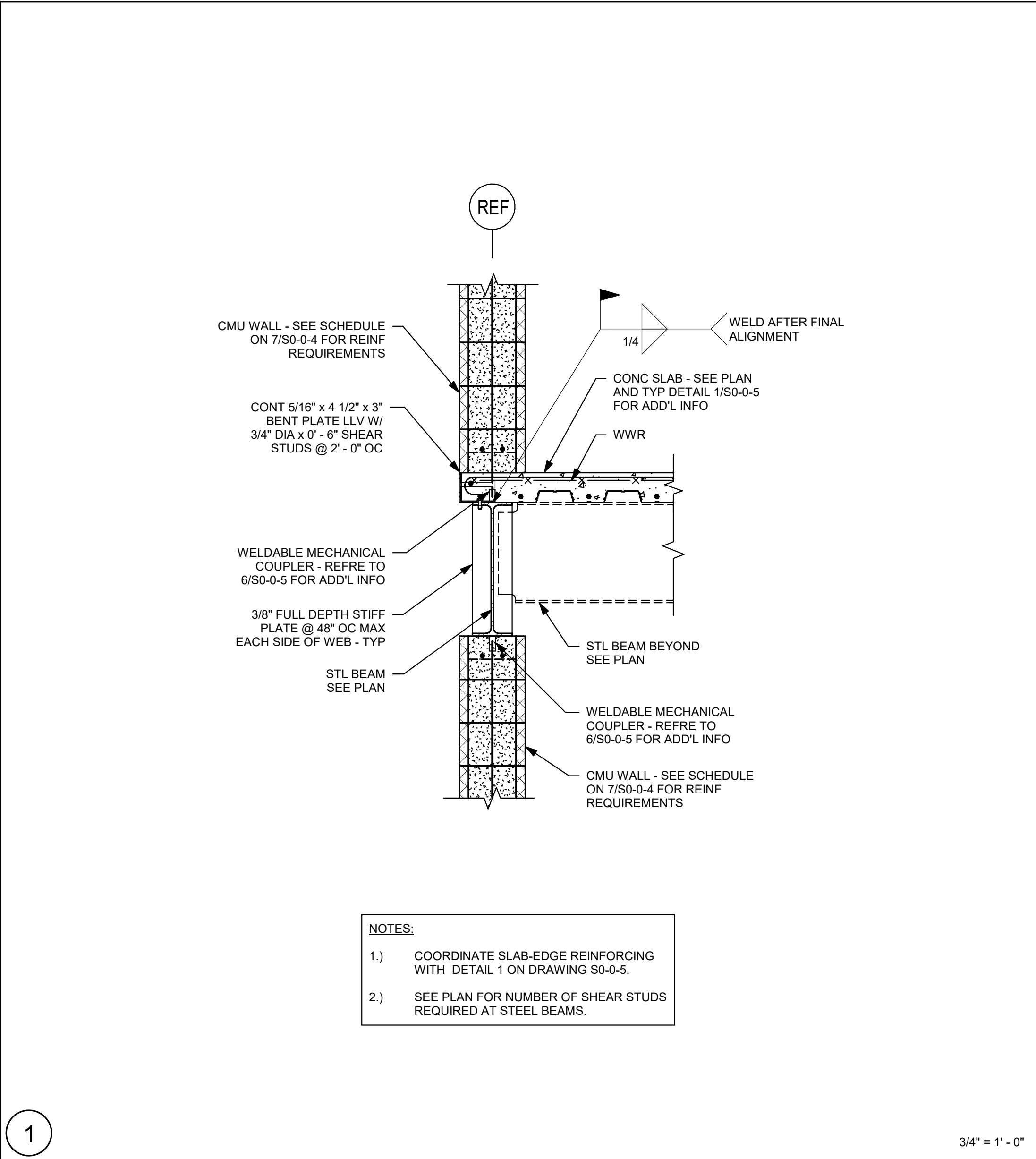
PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S3-0-2



DRA

Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior

Tel: 877.621.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE
FEBRUARY 24TH, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S3-0-3

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

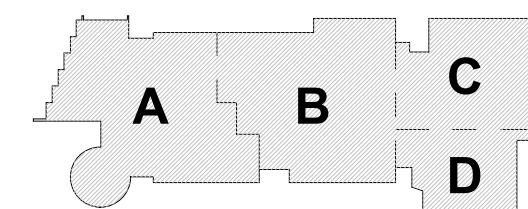
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

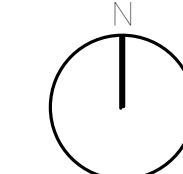
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

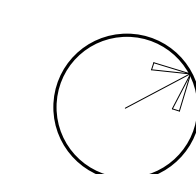


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



SECTIONS

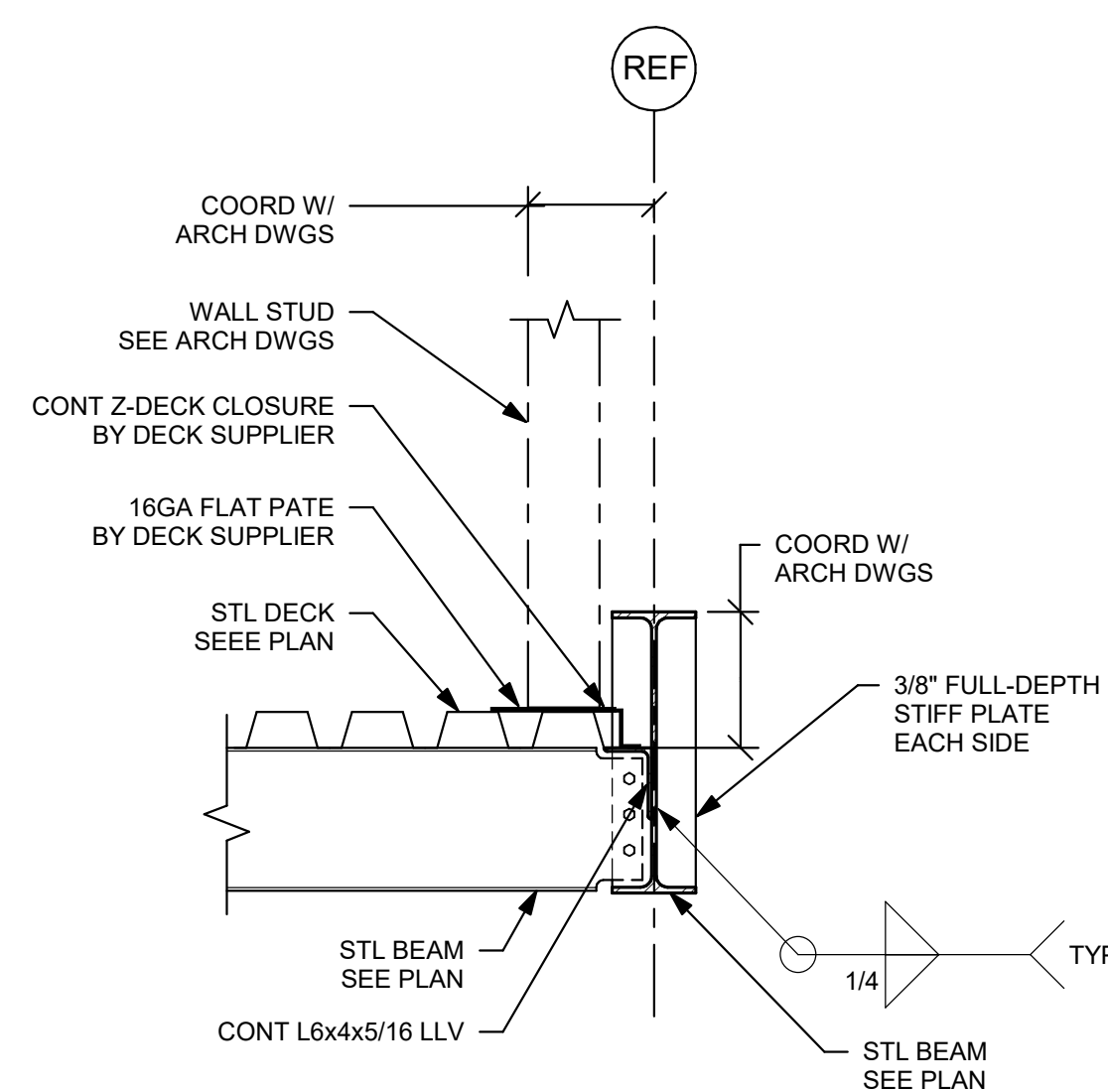
Scale: 3/4" = 1'-0"

Job No.: 20202

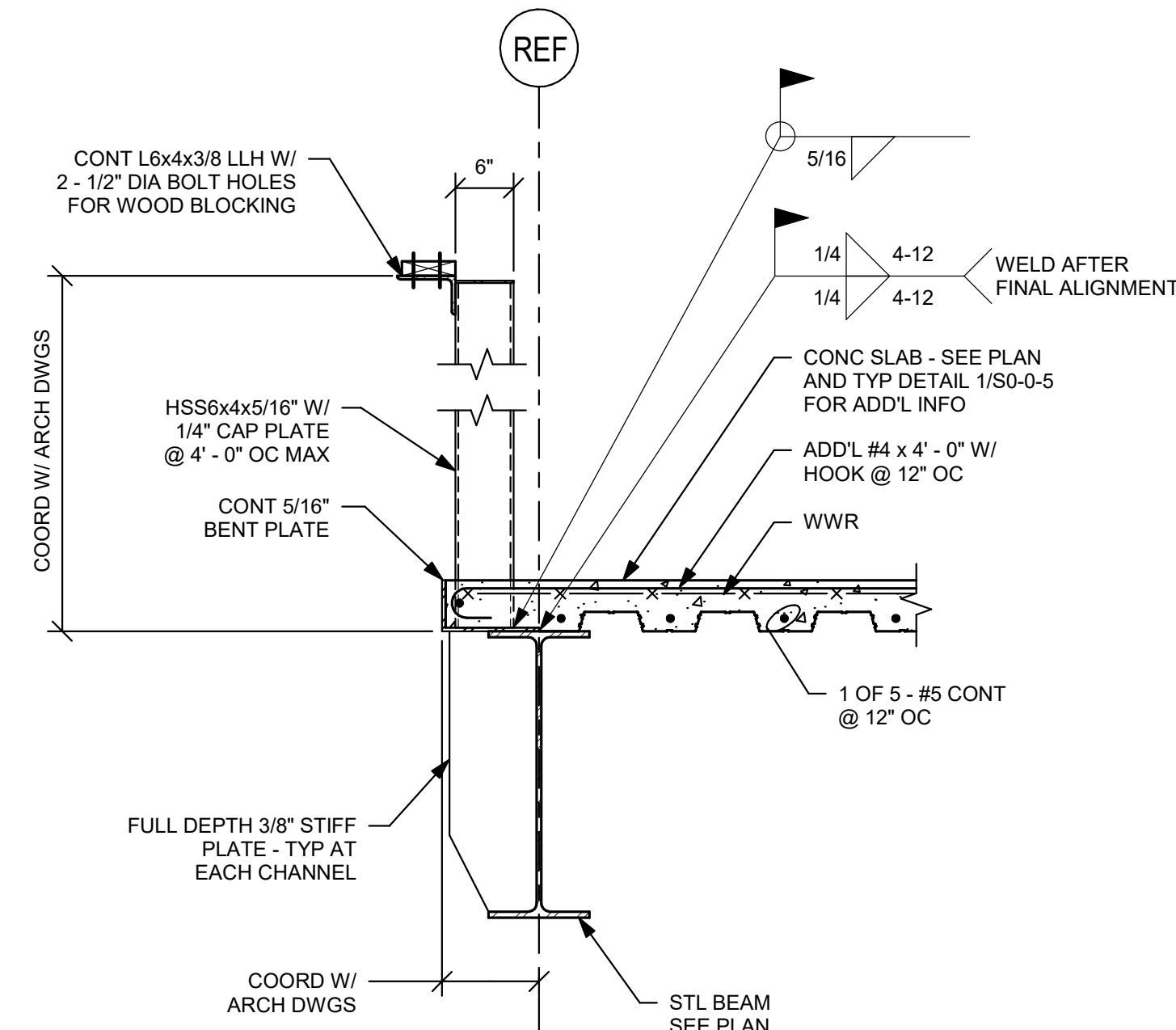
Drawn By: EDG

Date: FEBRUARY 24TH,
2023

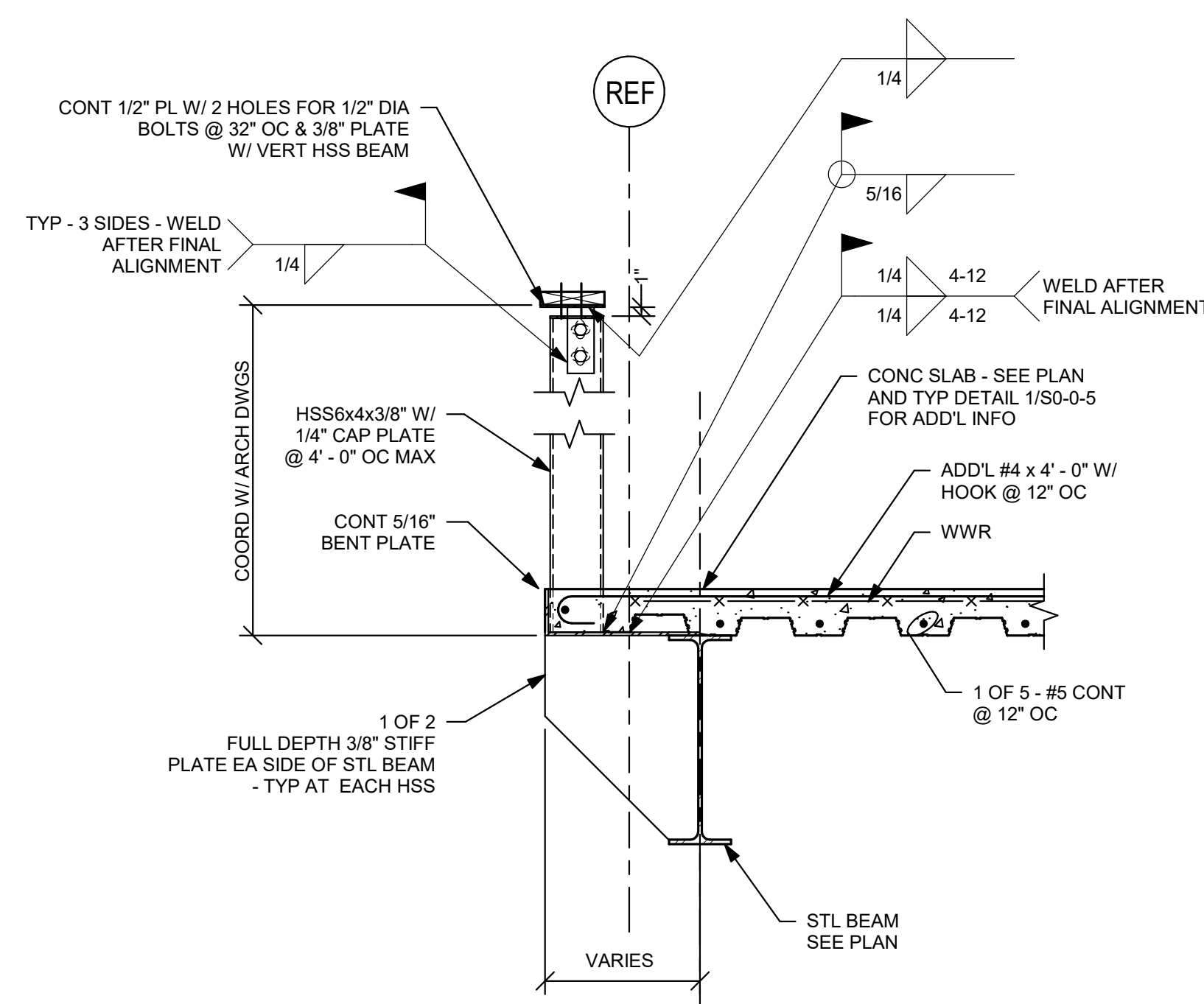
S3-0-4



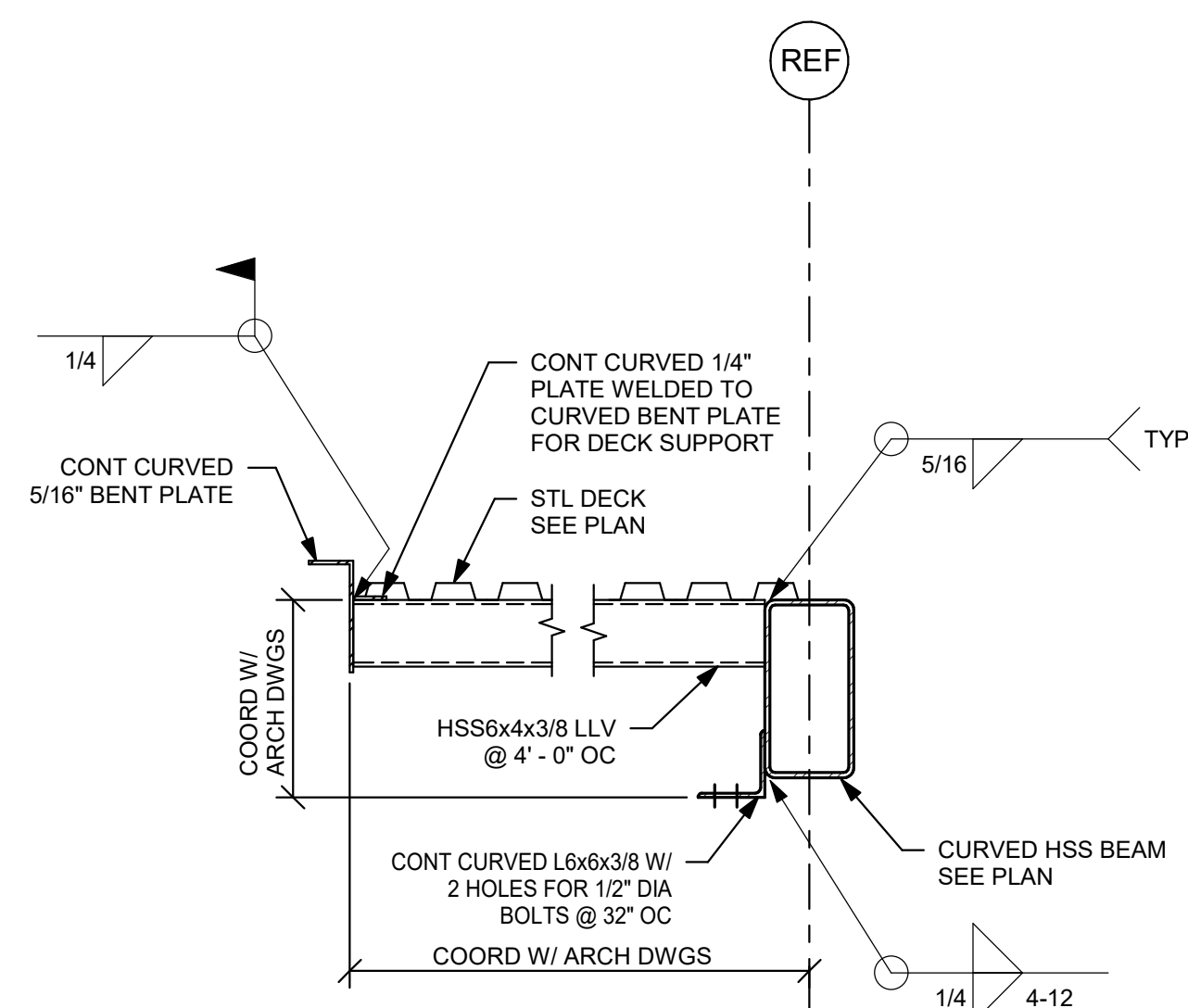
3/4" = 1'-0"



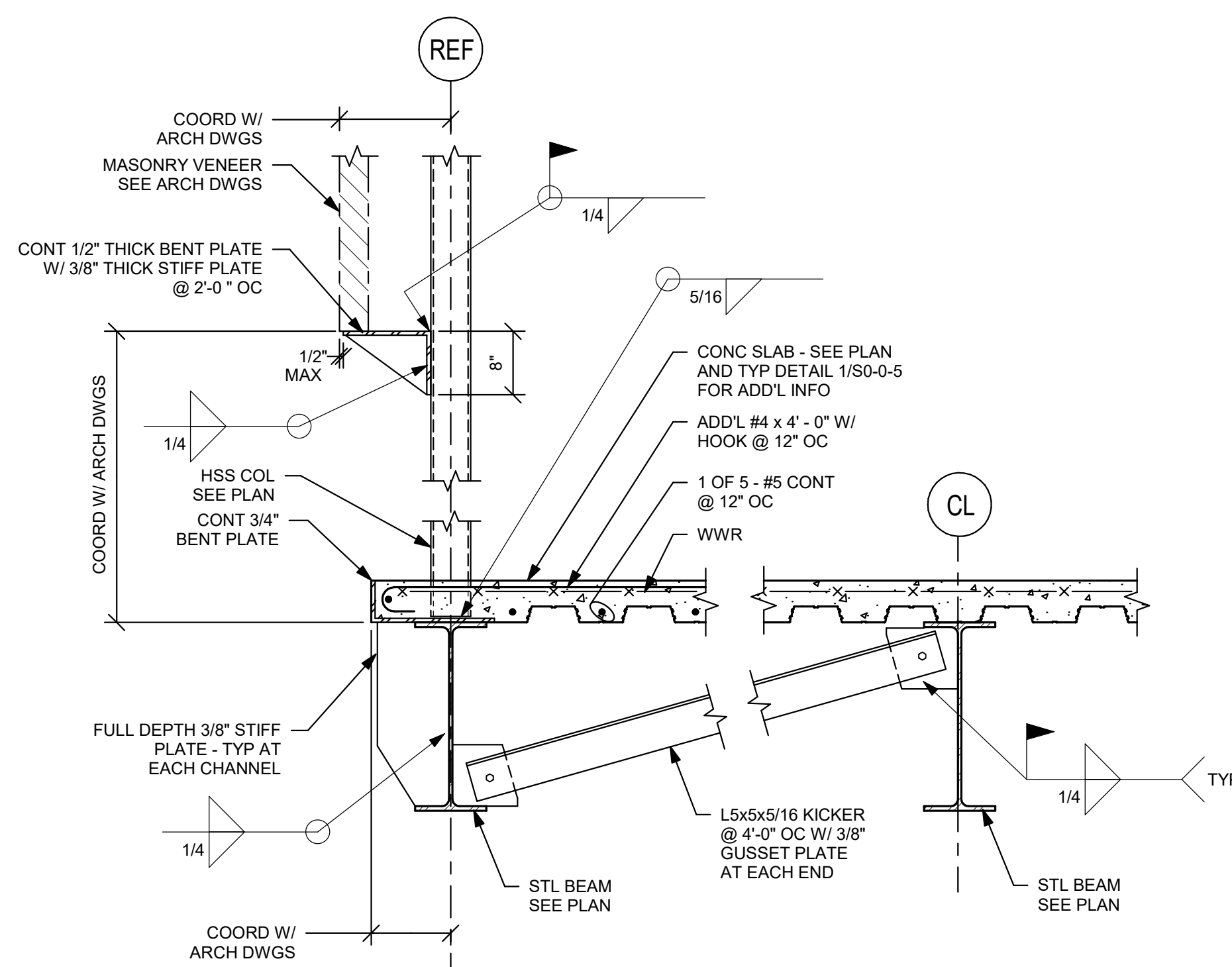
3/4" = 1'-0"



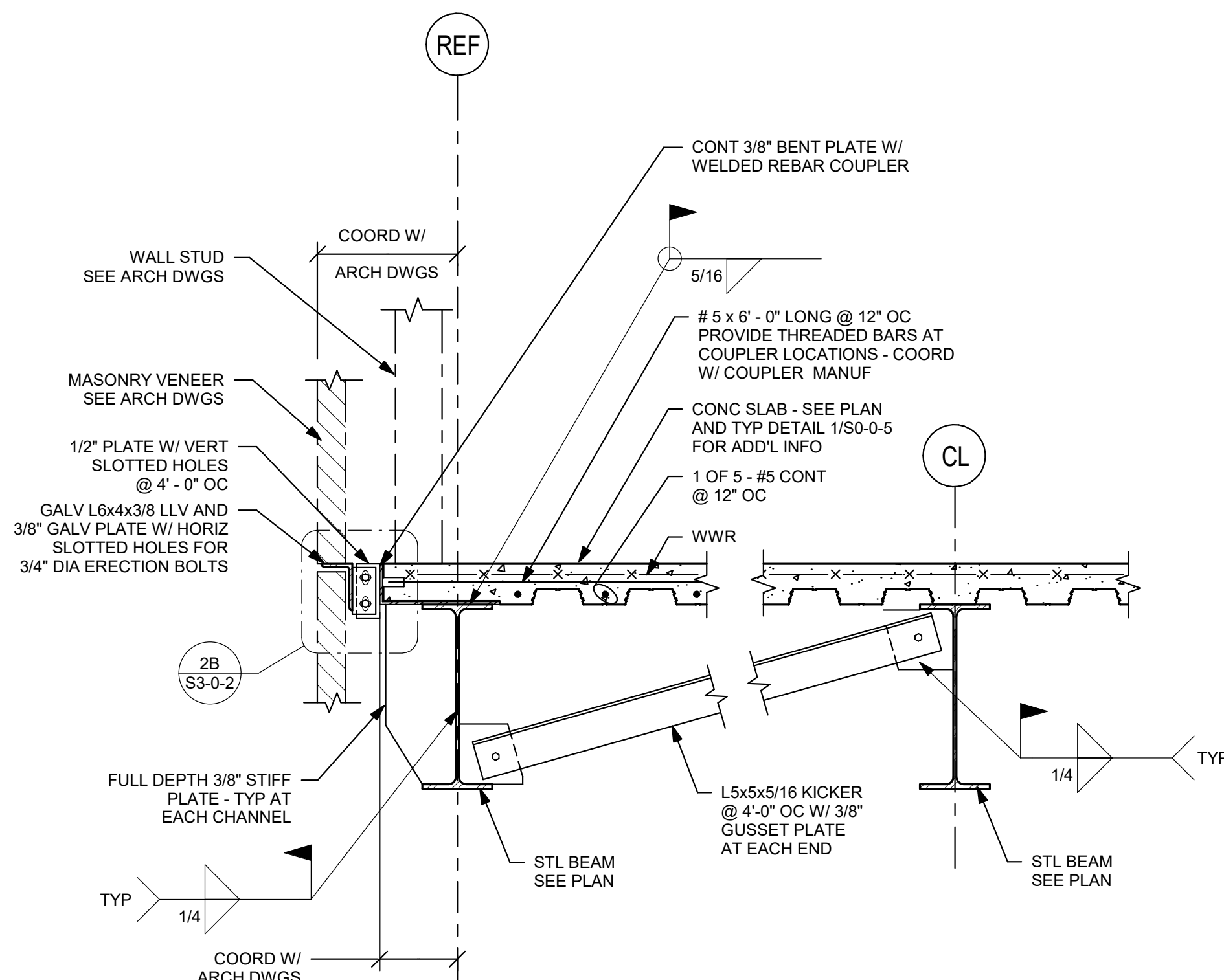
3/4" = 1'-0"



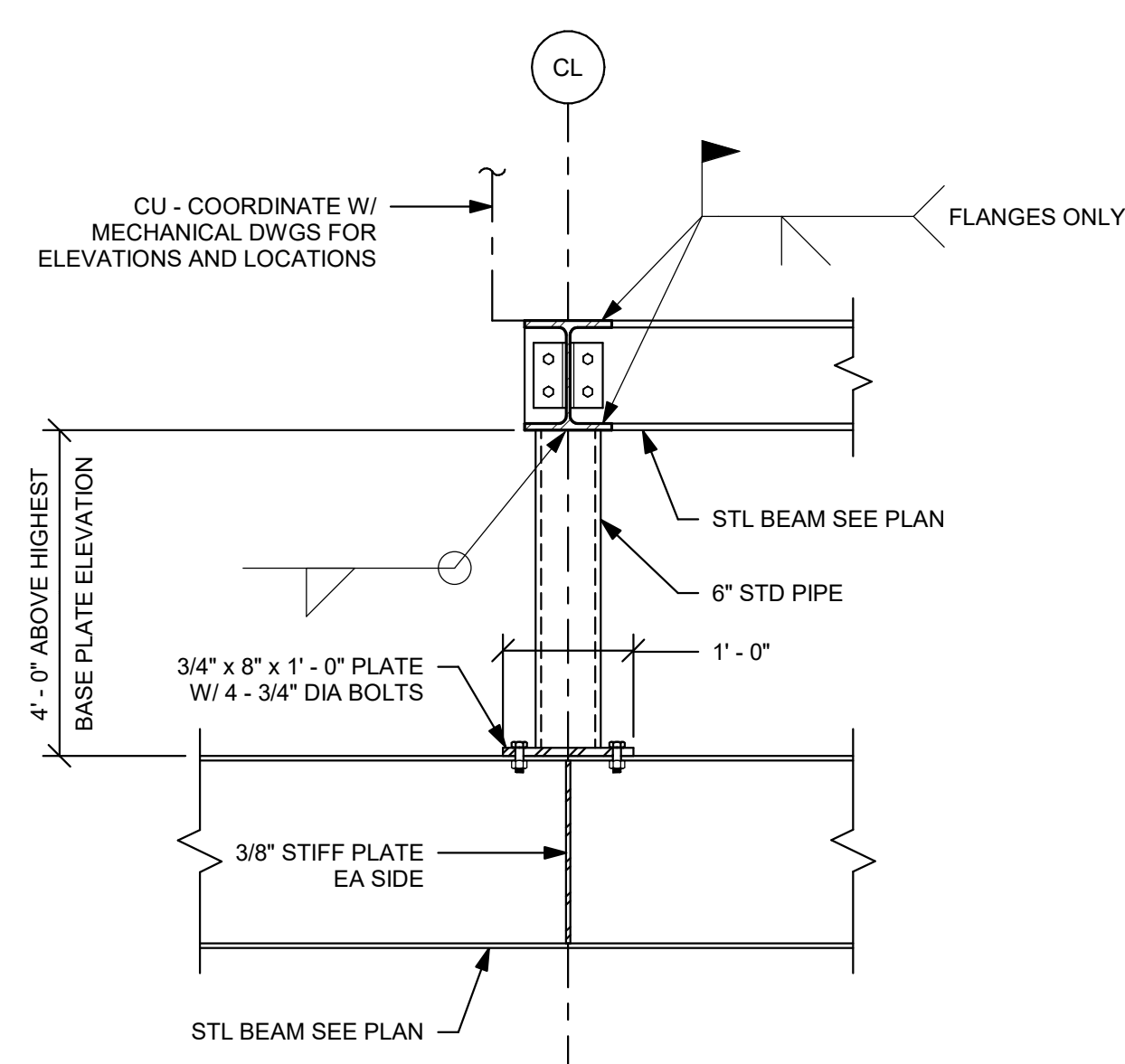
3/4" = 1'-0"



3/4" = 1'-0"



3/4" = 1'-0"

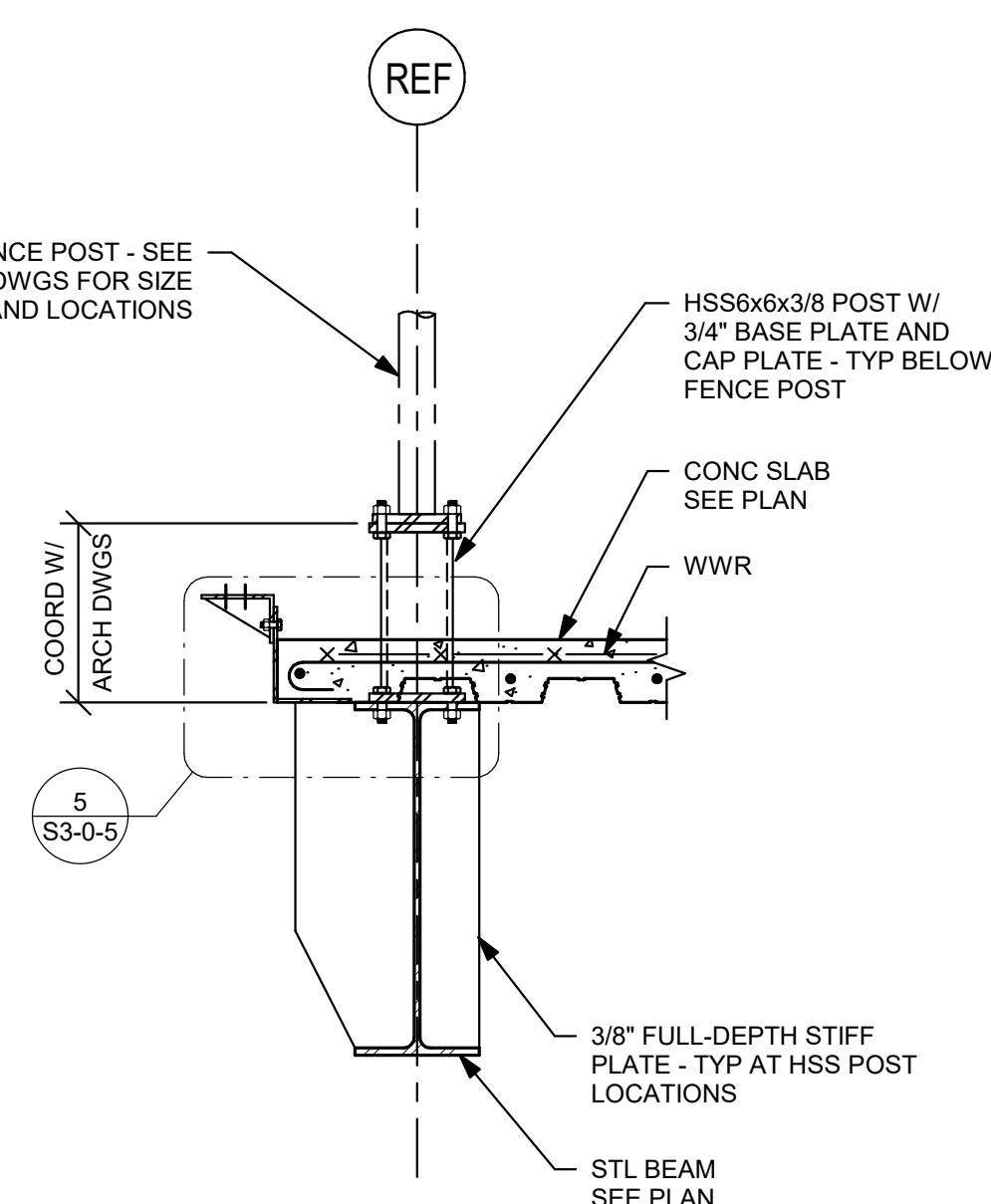


TYPICAL SUPPORT OF ROOF TOP MECHANICAL UNIT DETAIL

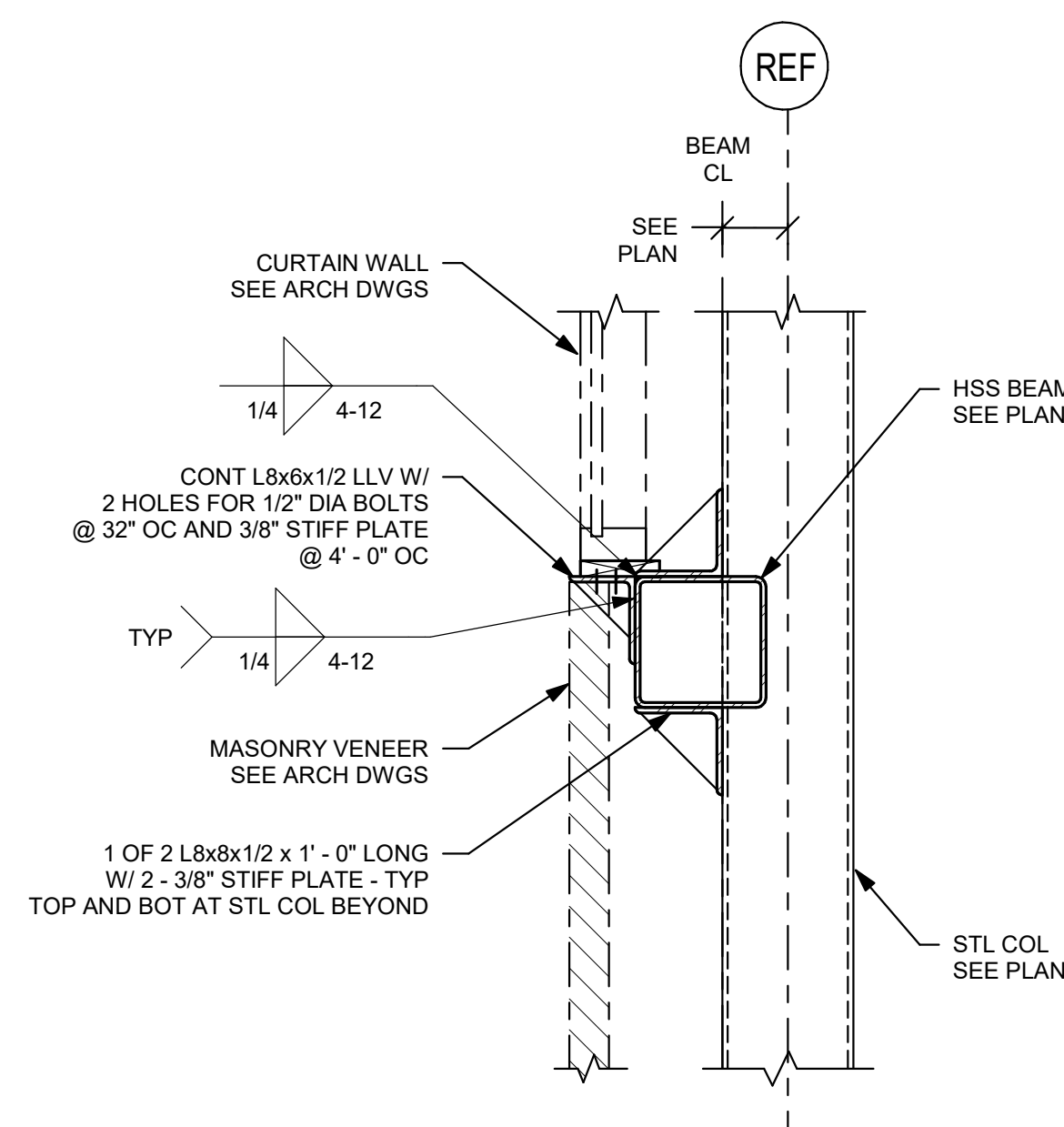
NOTES:

- 1.) ALL EXPOSED STEEL TO BE HOT-DIP GALVANIZED.
- 2.) TOUCH UP ALL FIELD WELDS WITH ZINC RICH PAINT

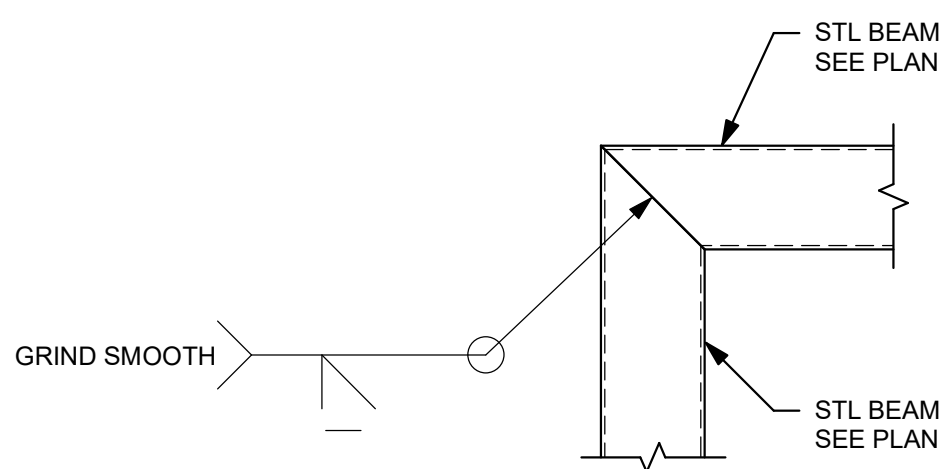
3/4" = 1'-0"



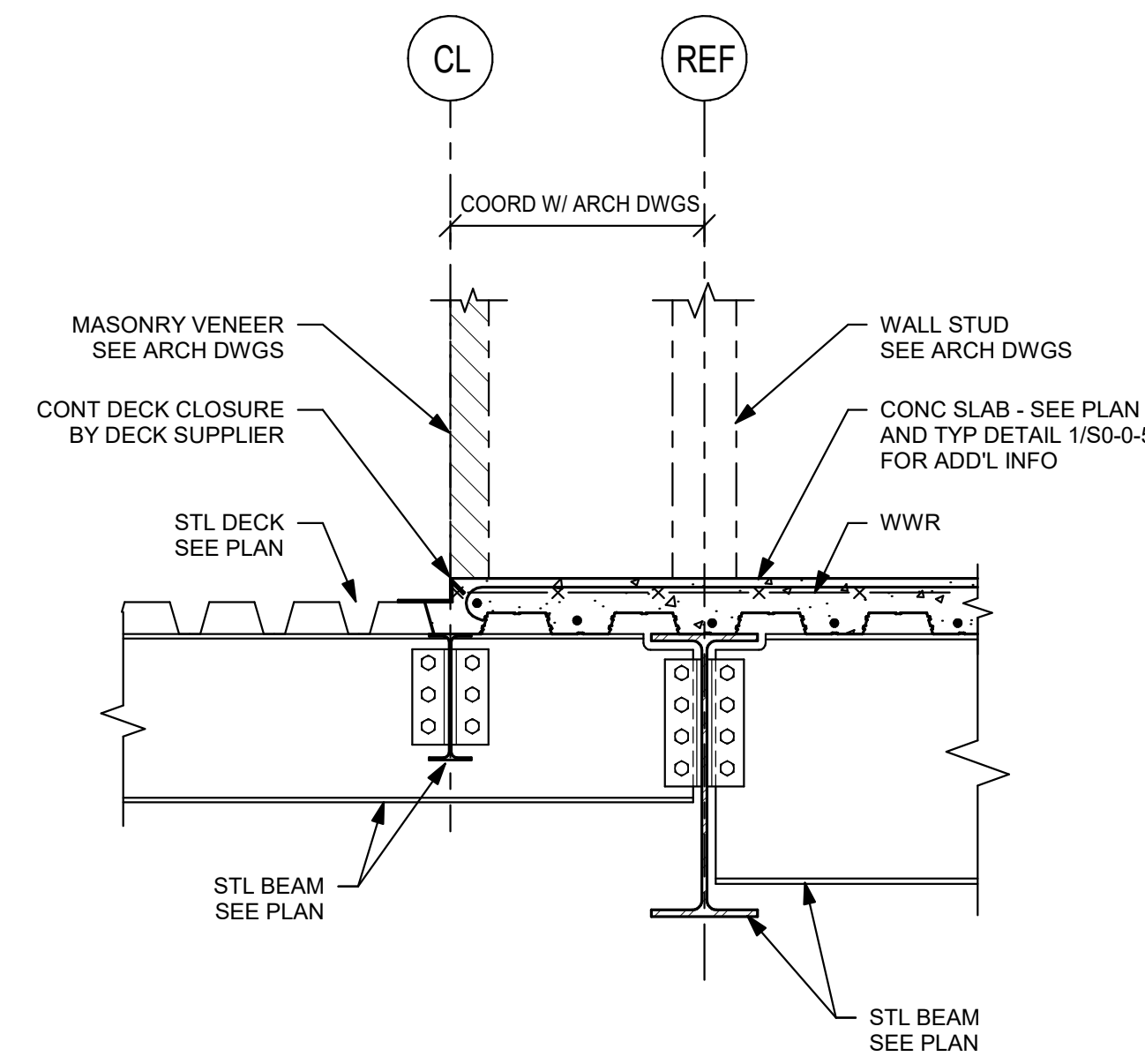
3/4" = 1'-0"



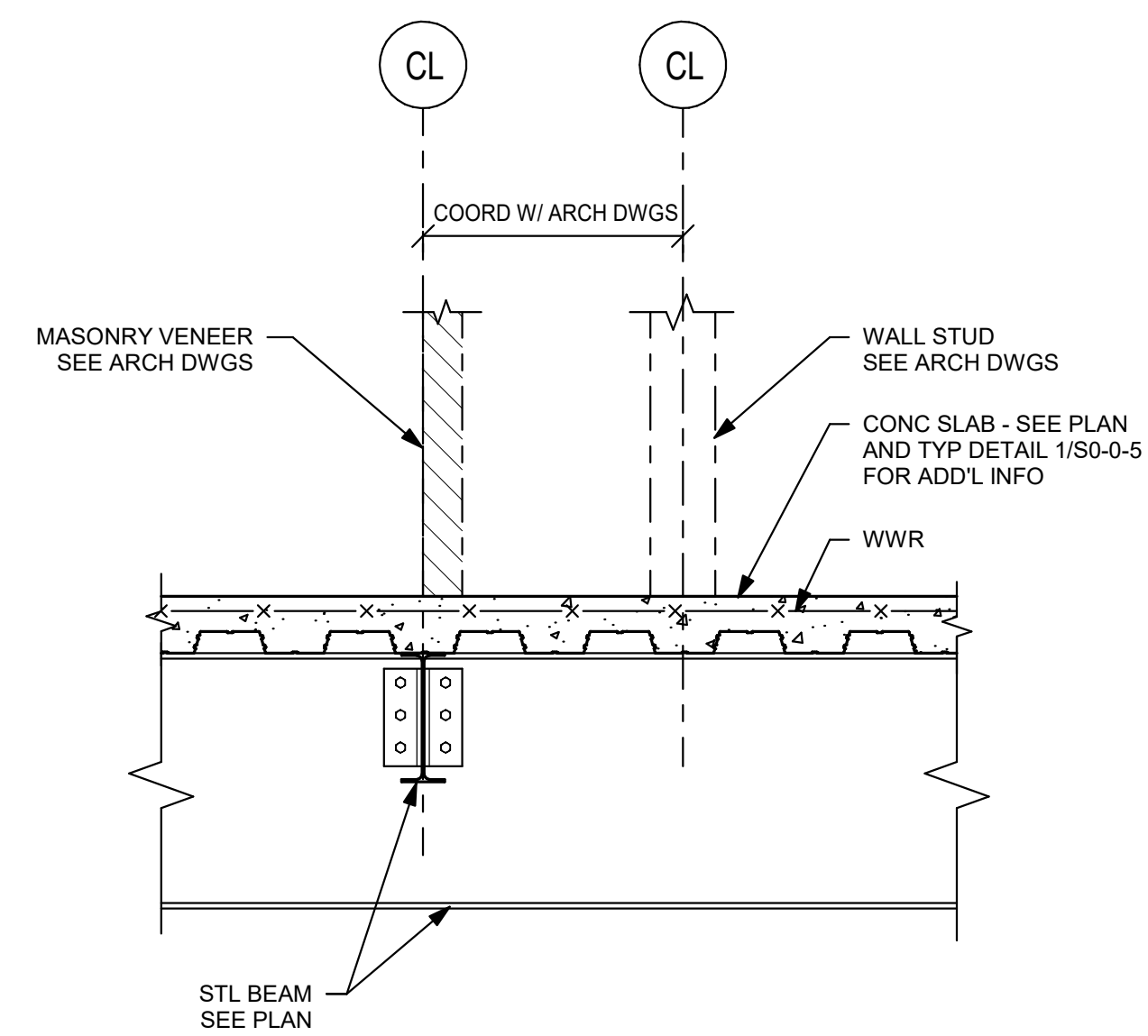
3/4" = 1'-0"



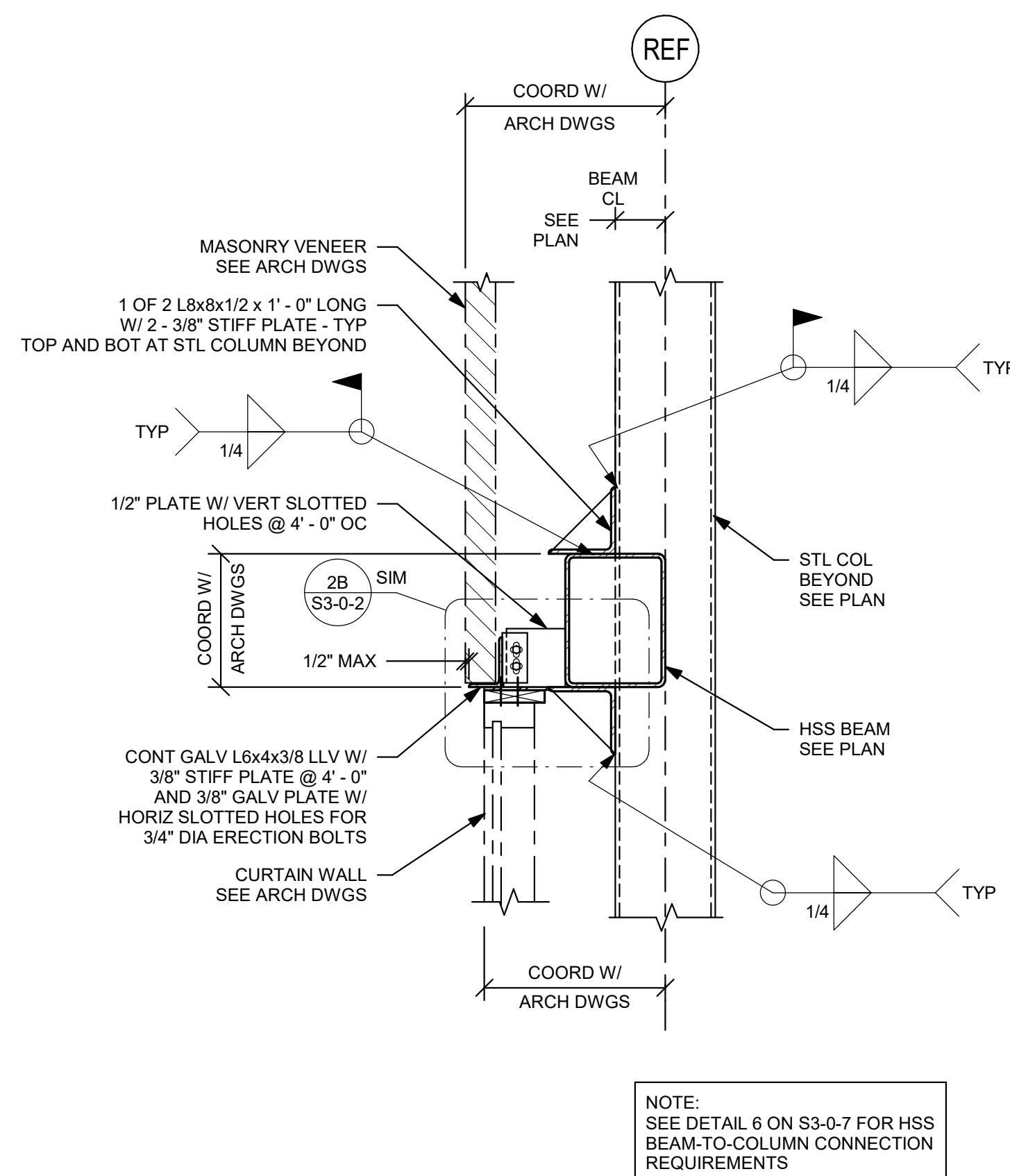
3/4" = 1' - 0"



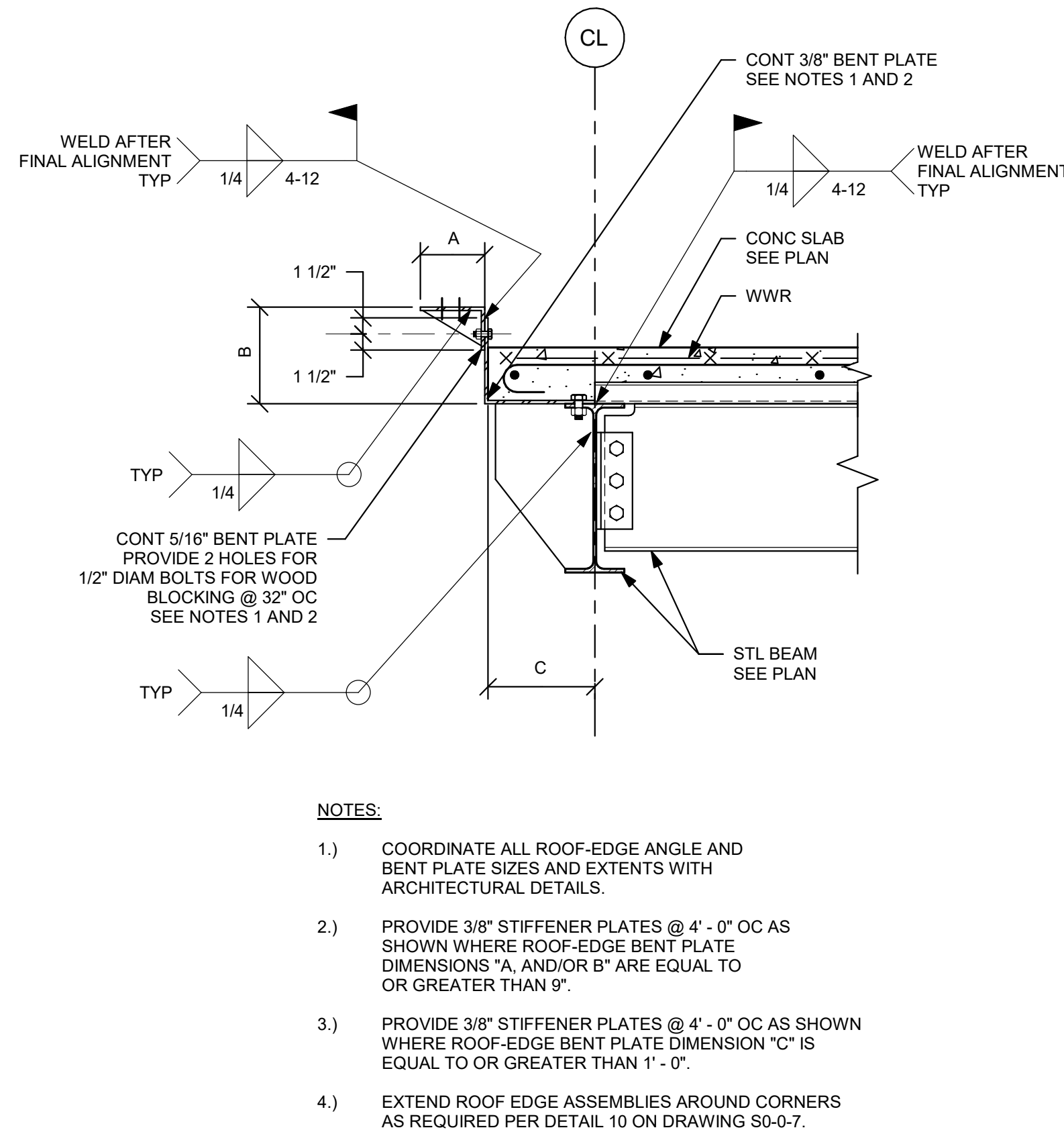
3/4" = 1' - 0"



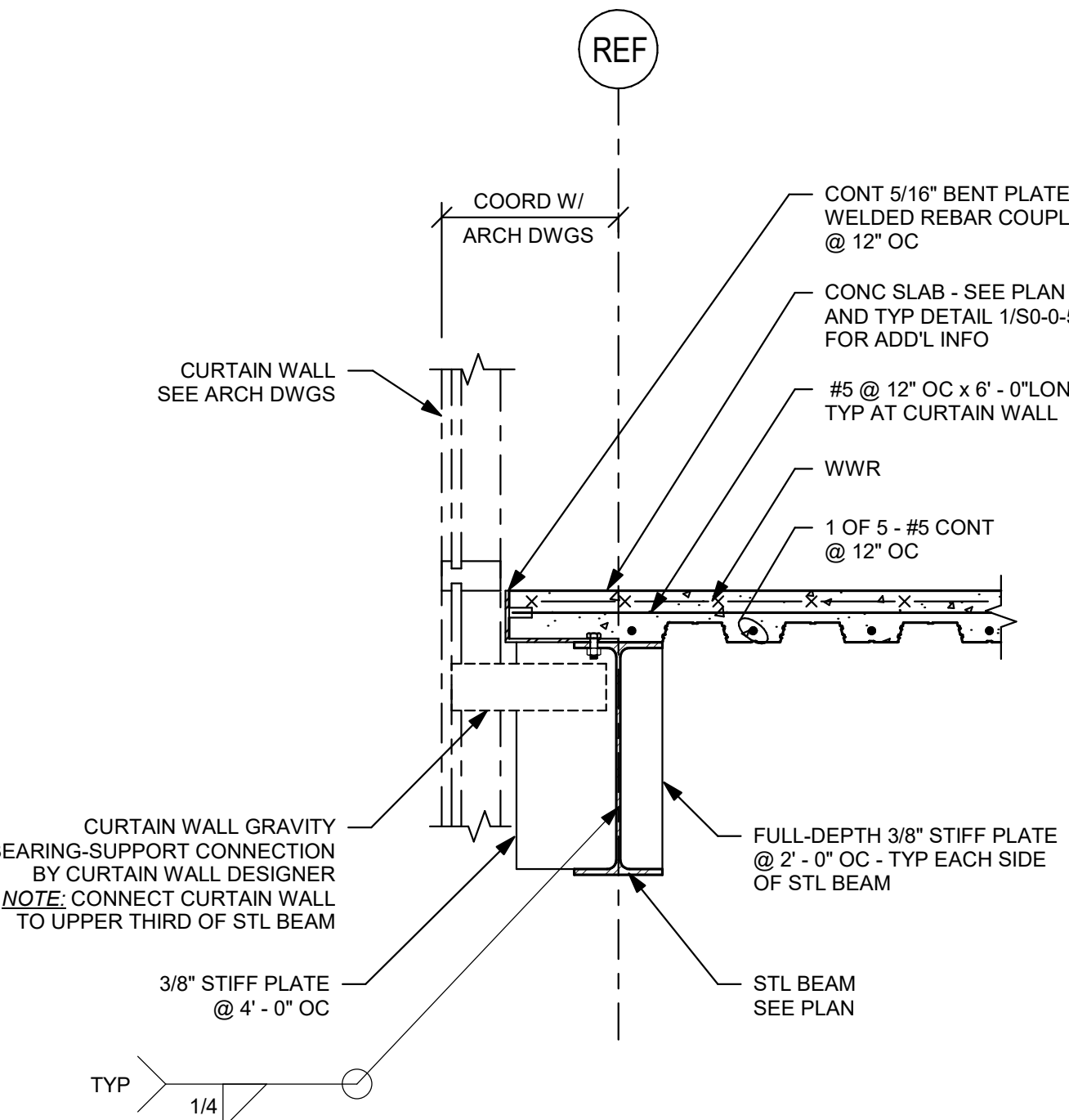
3/4" = 1' - 0"



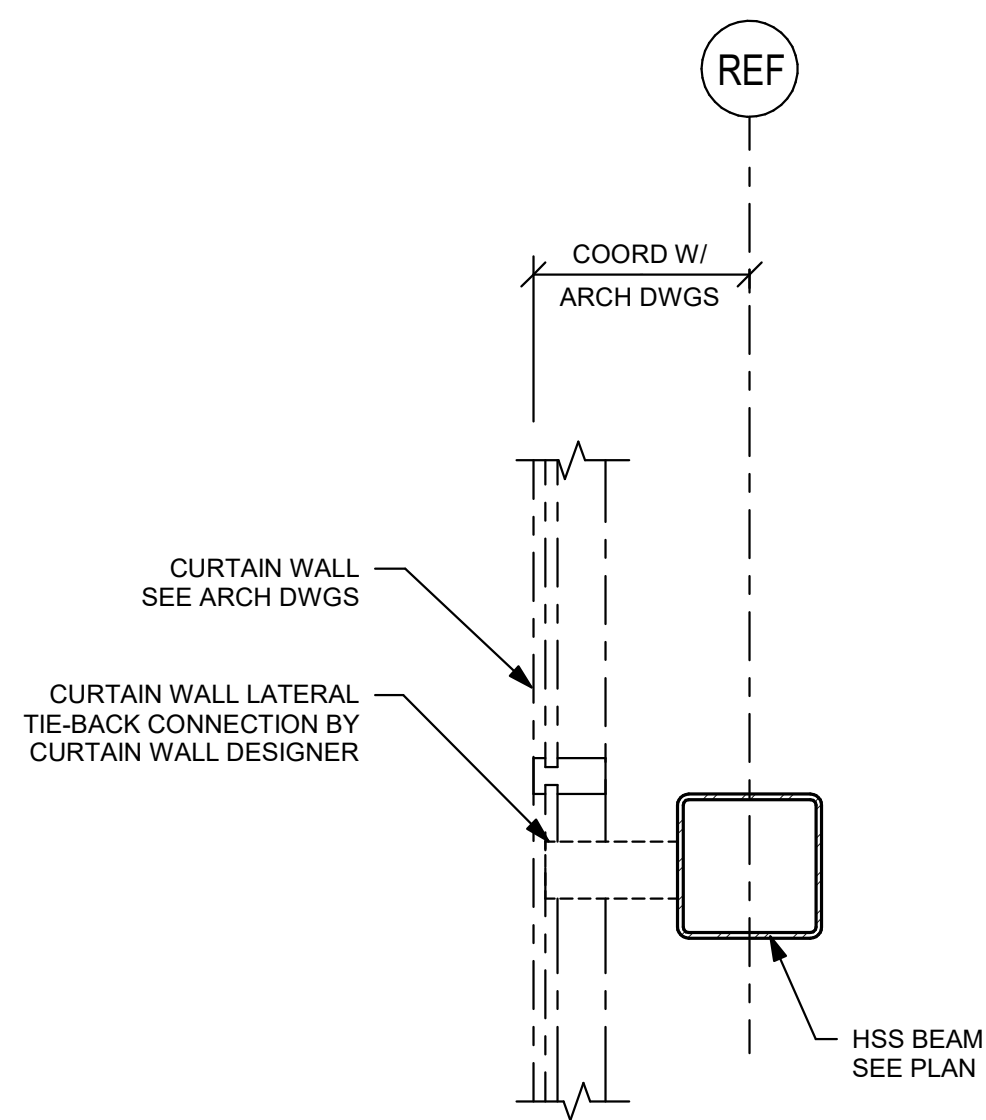
3/4" = 1' - 0"



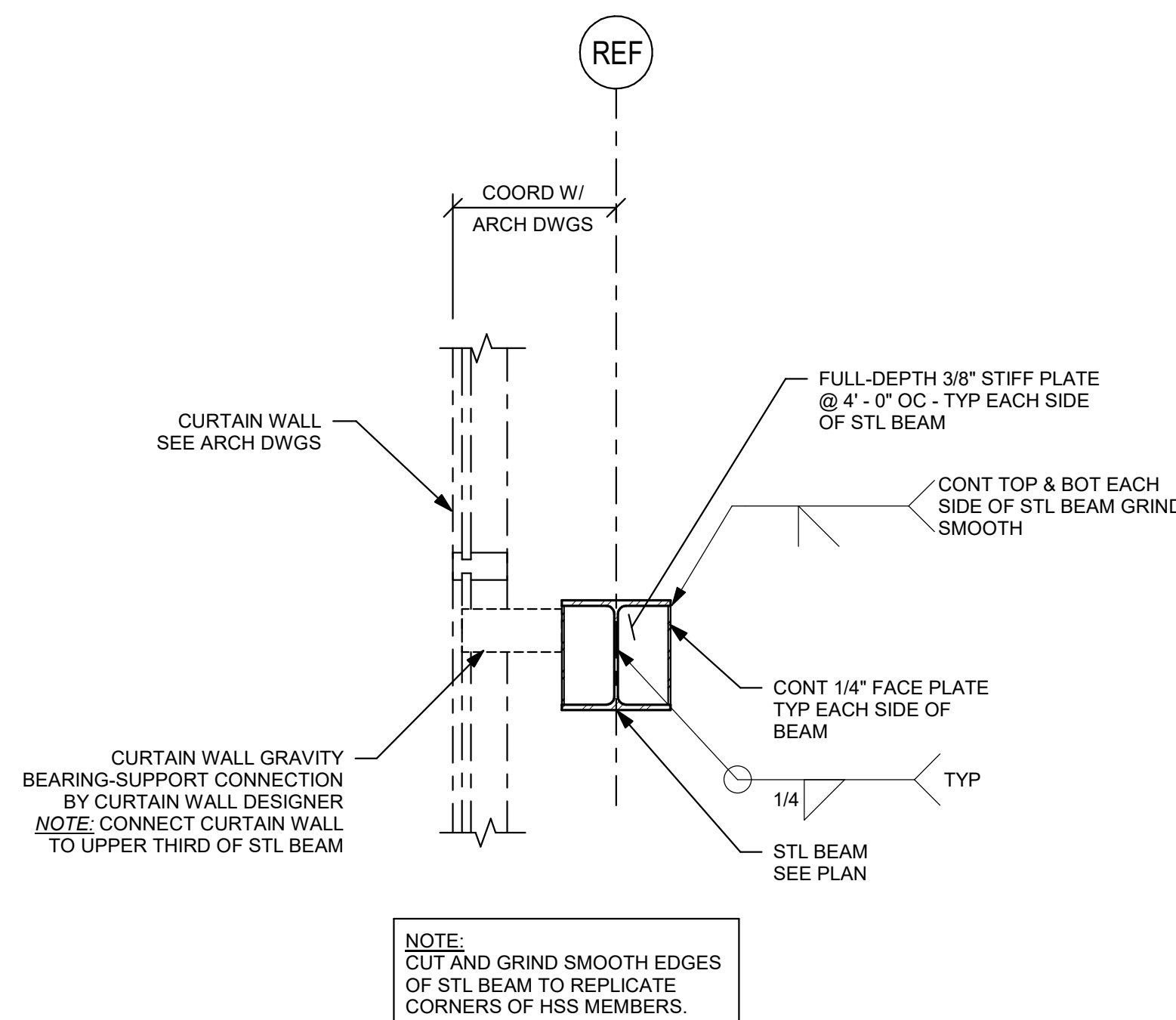
1" = 1' - 0"



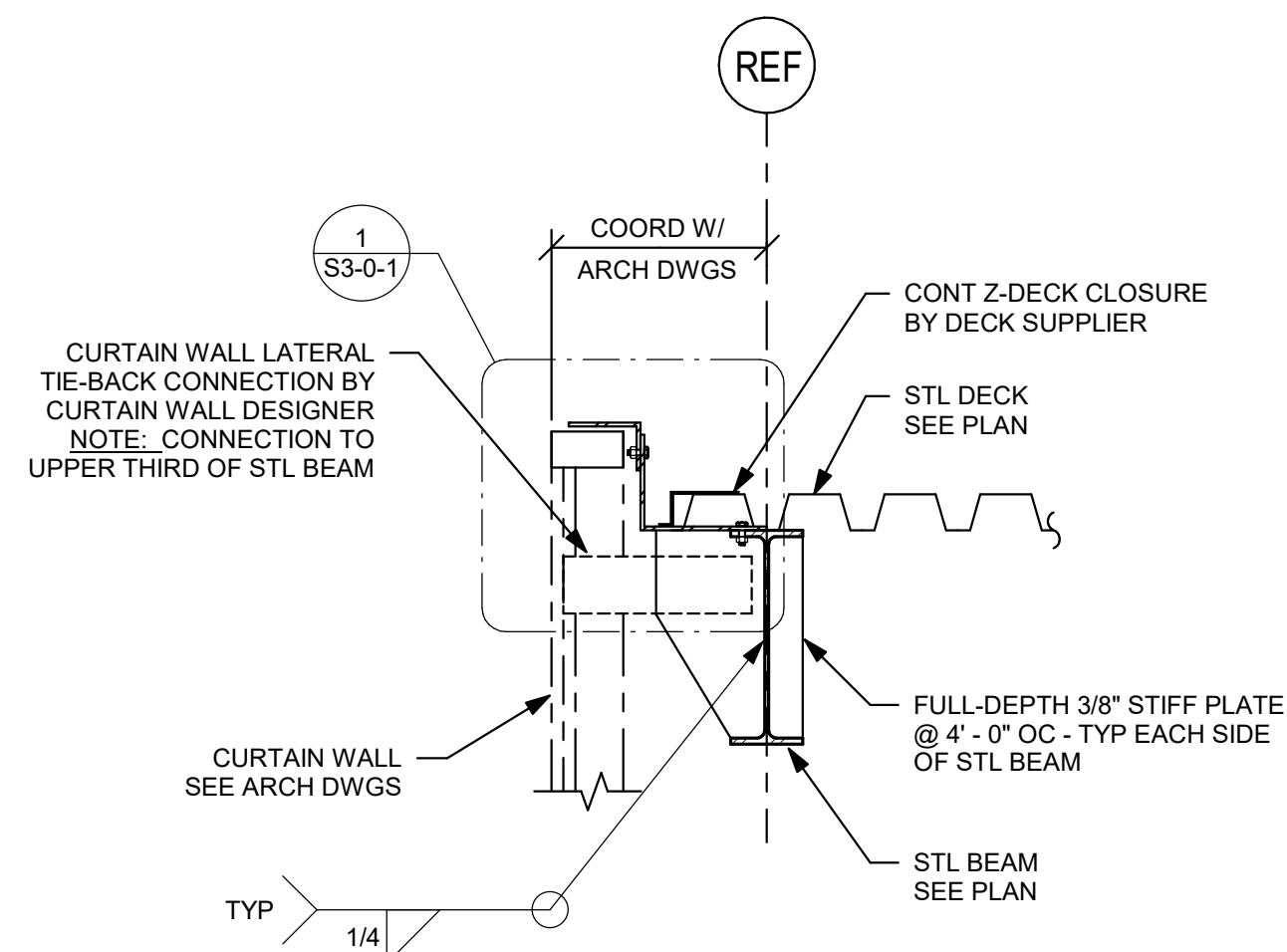
3/4" = 1' - 0"



3/4" = 1' - 0"



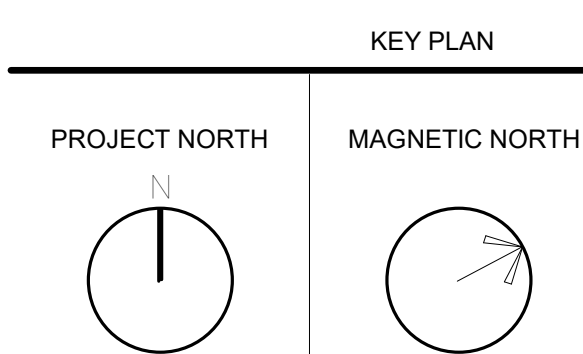
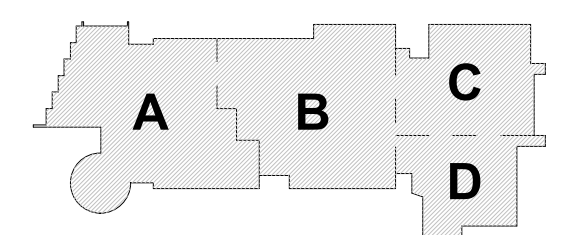
3/4" = 1' - 0"



3/4" = 1' - 0"

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

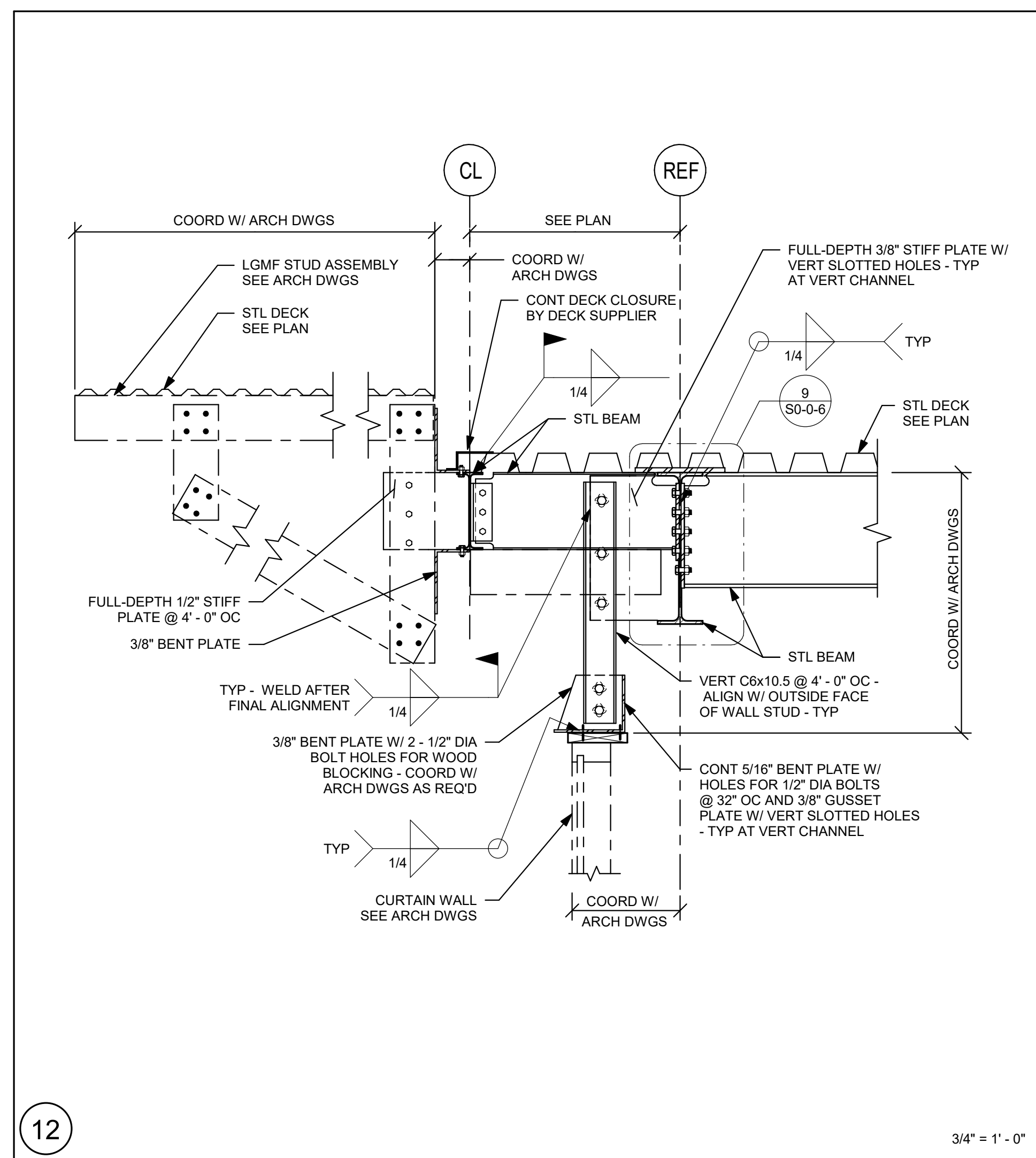
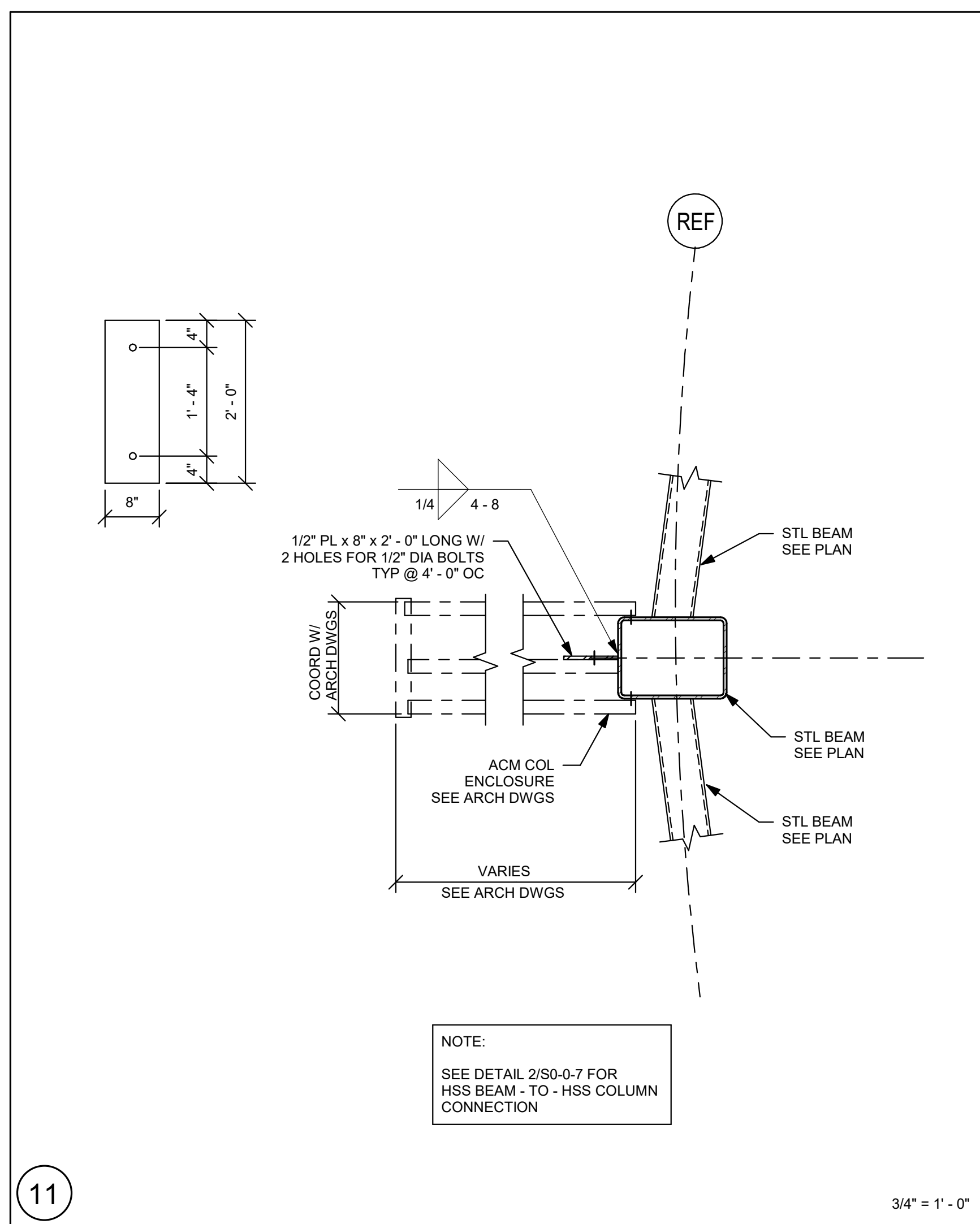
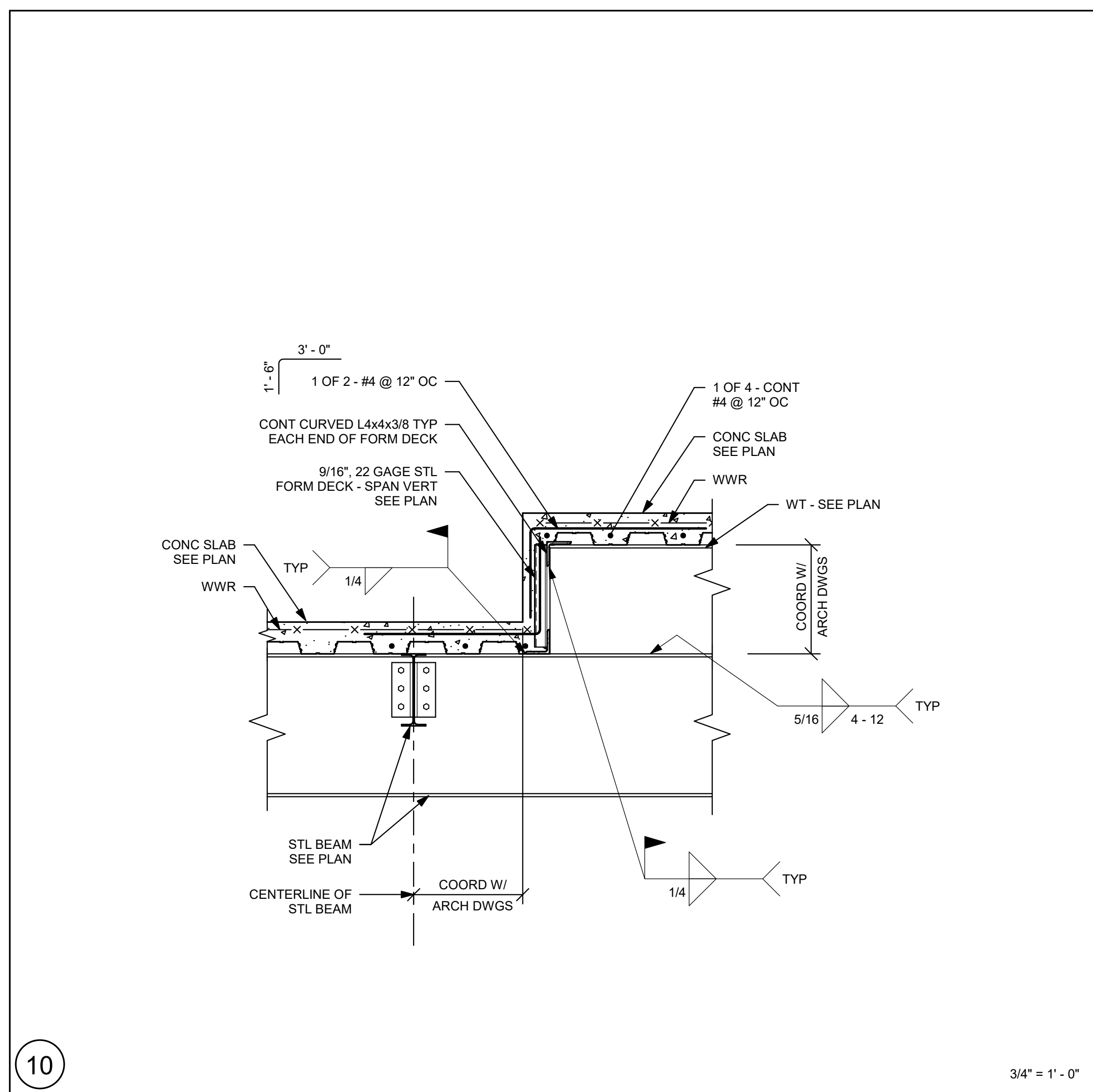
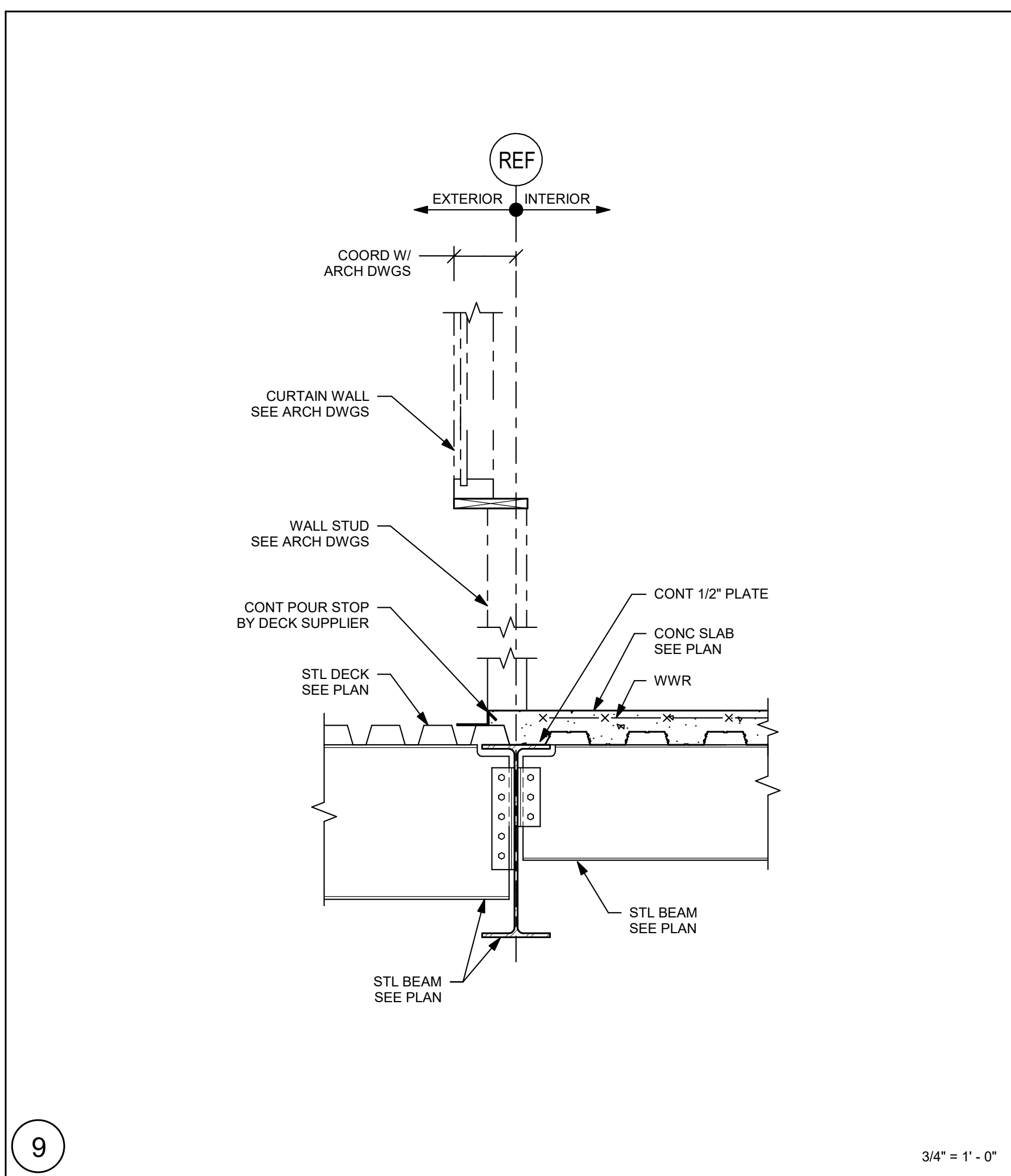
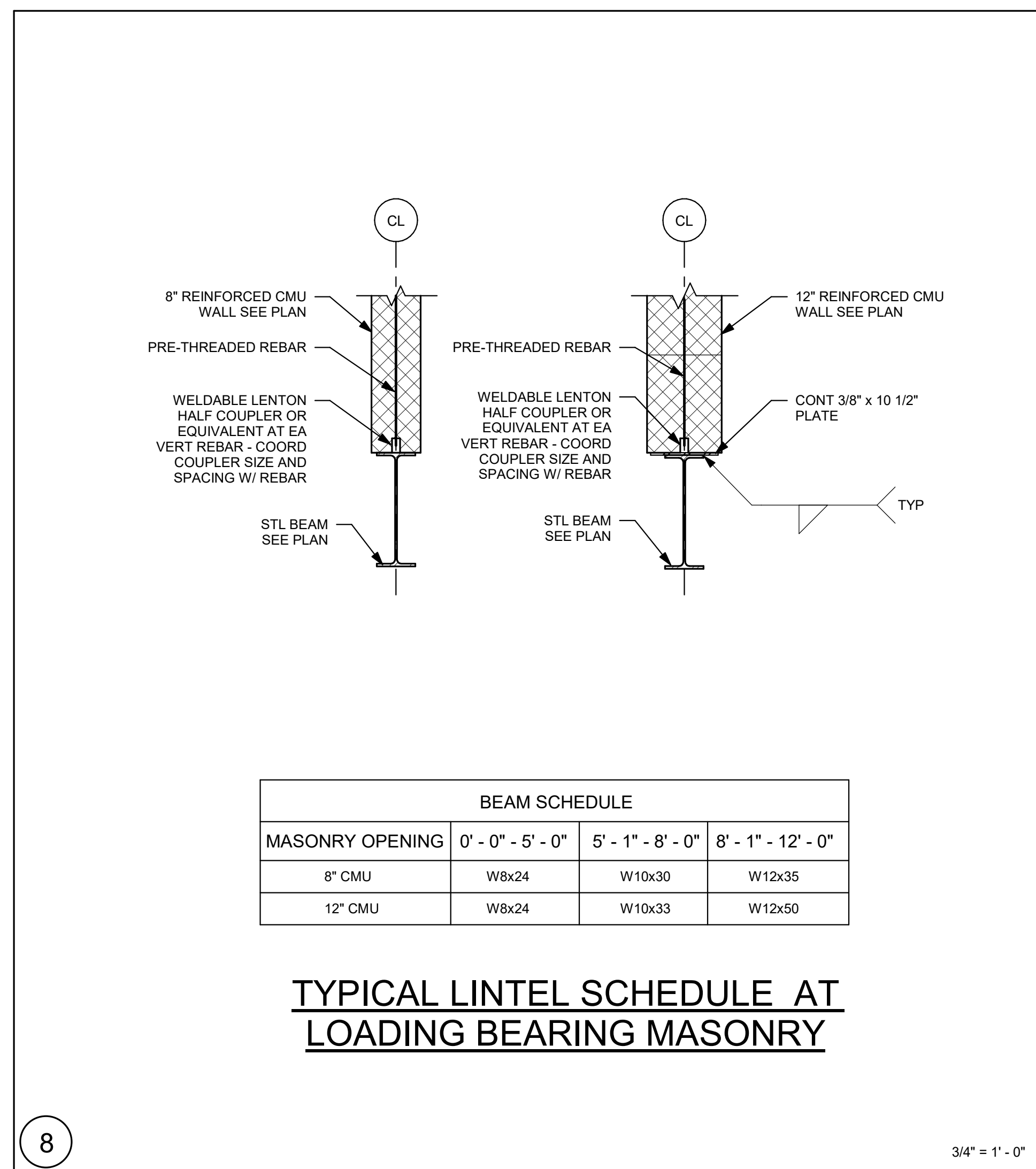
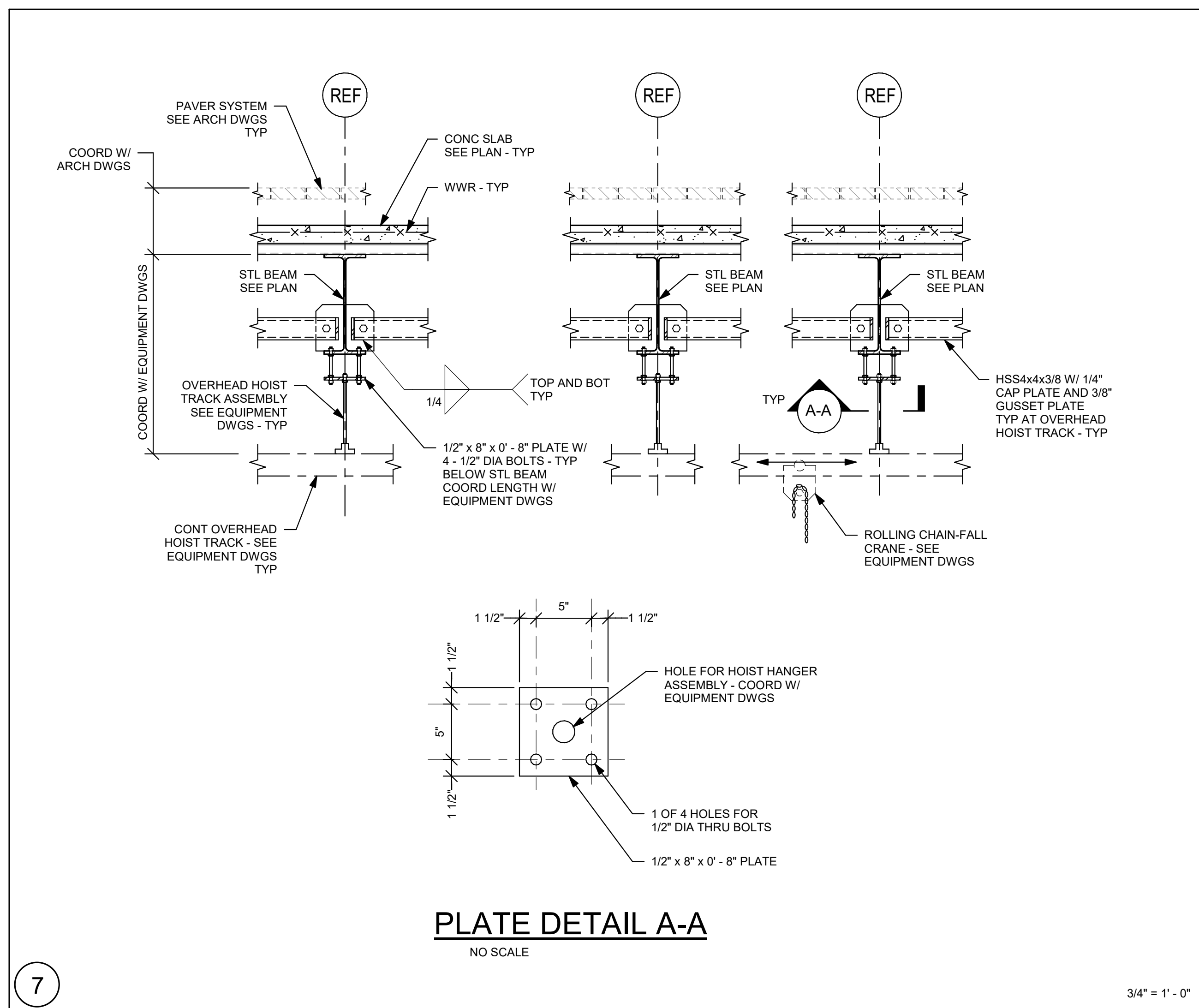
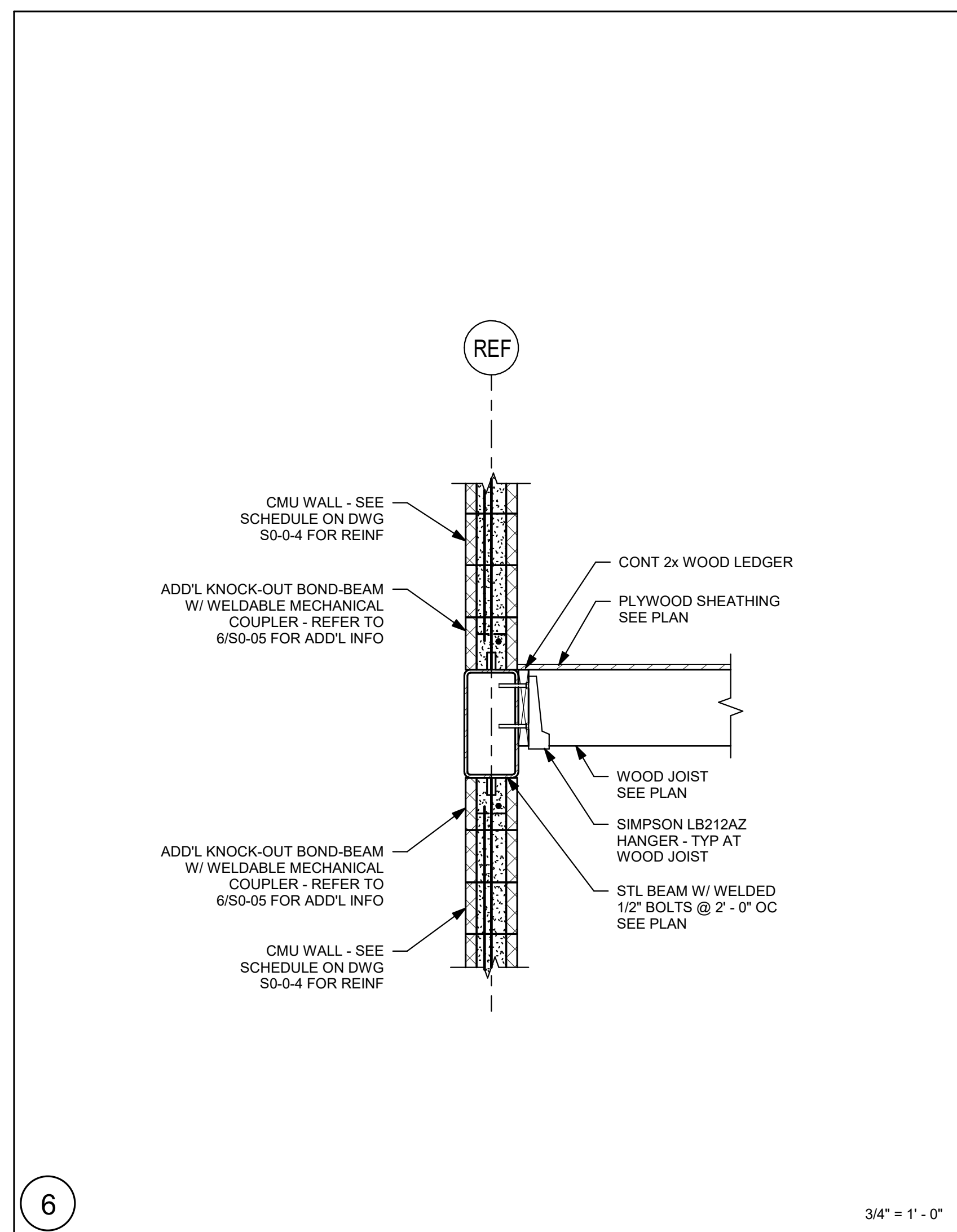
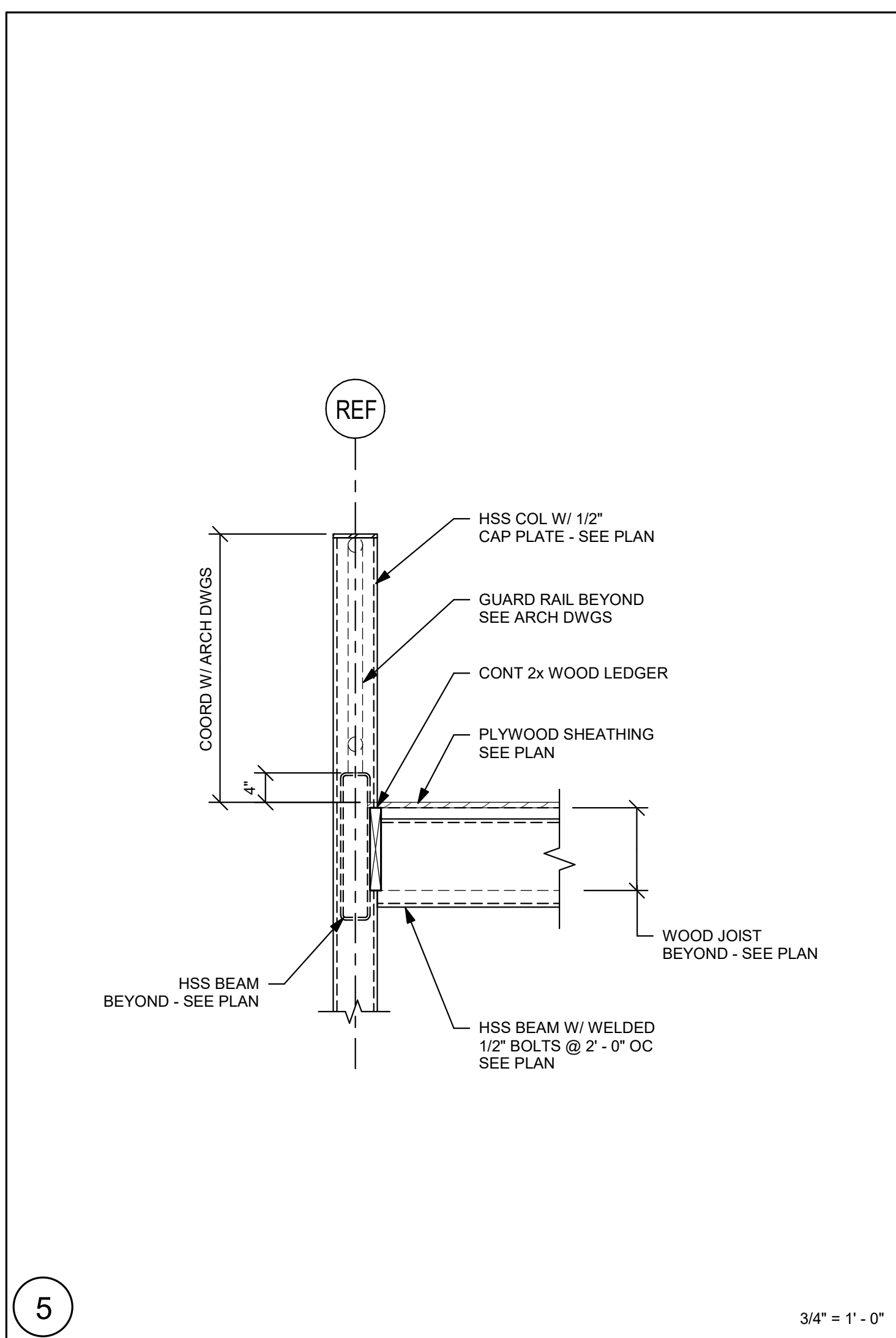
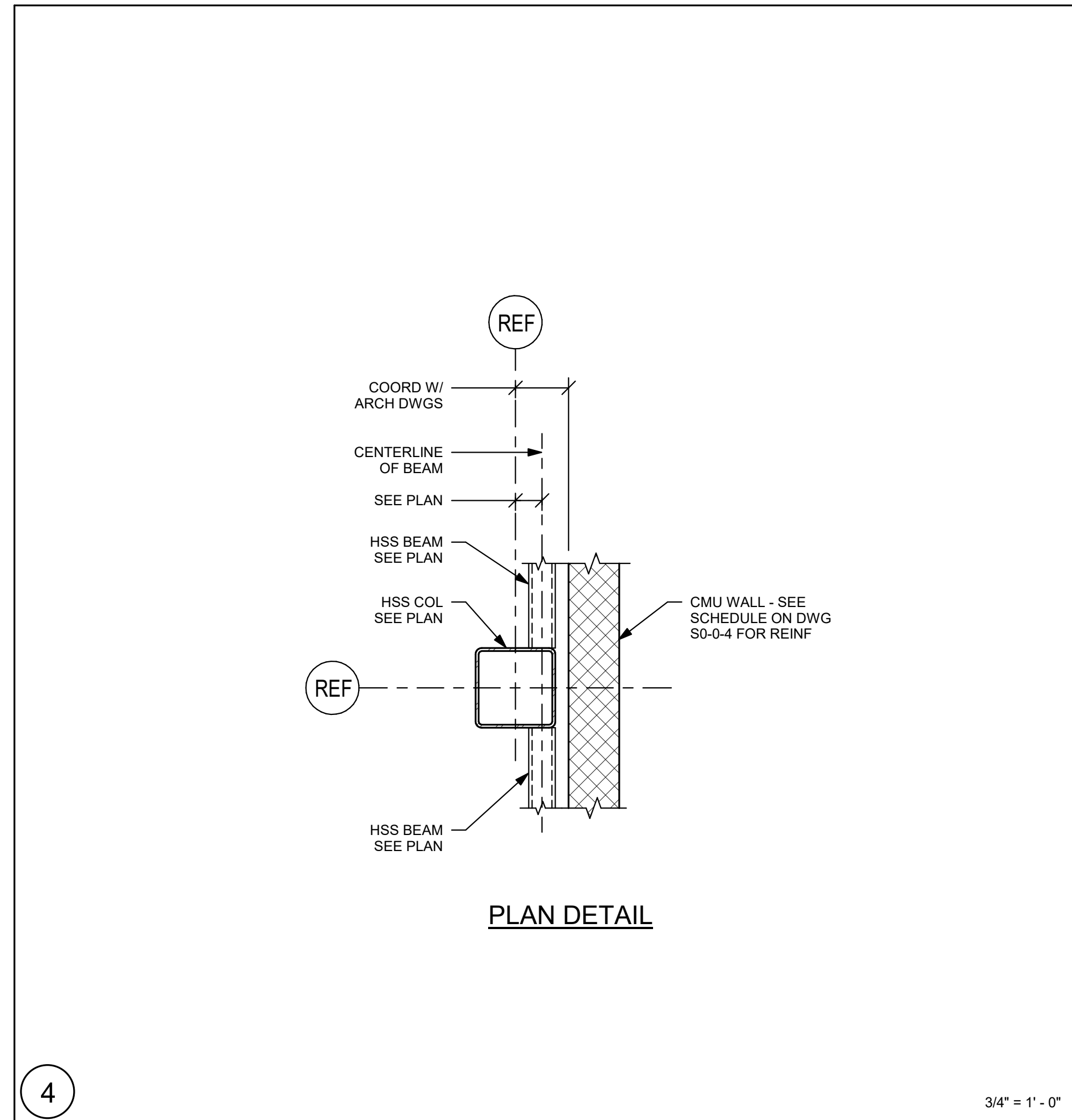
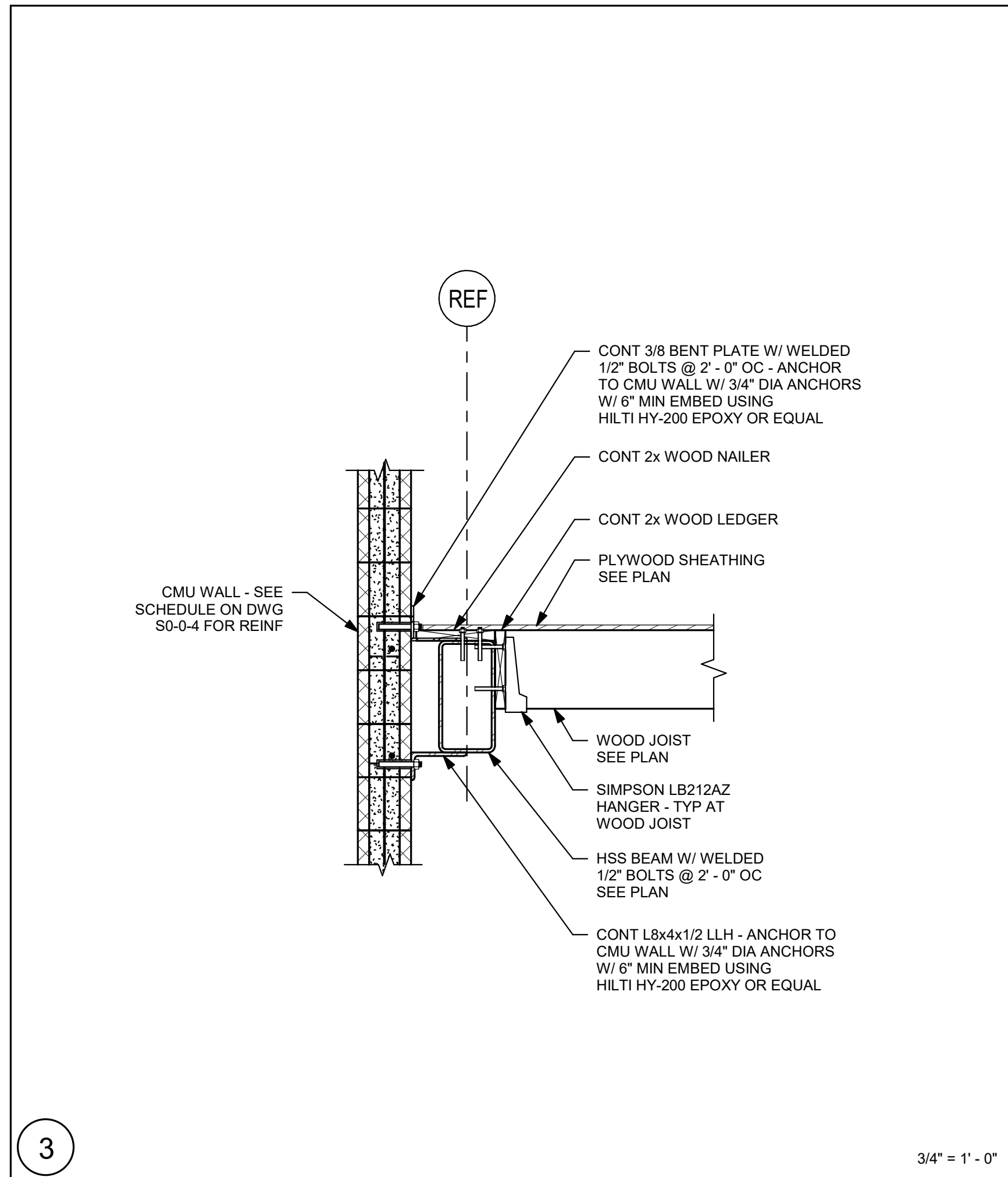
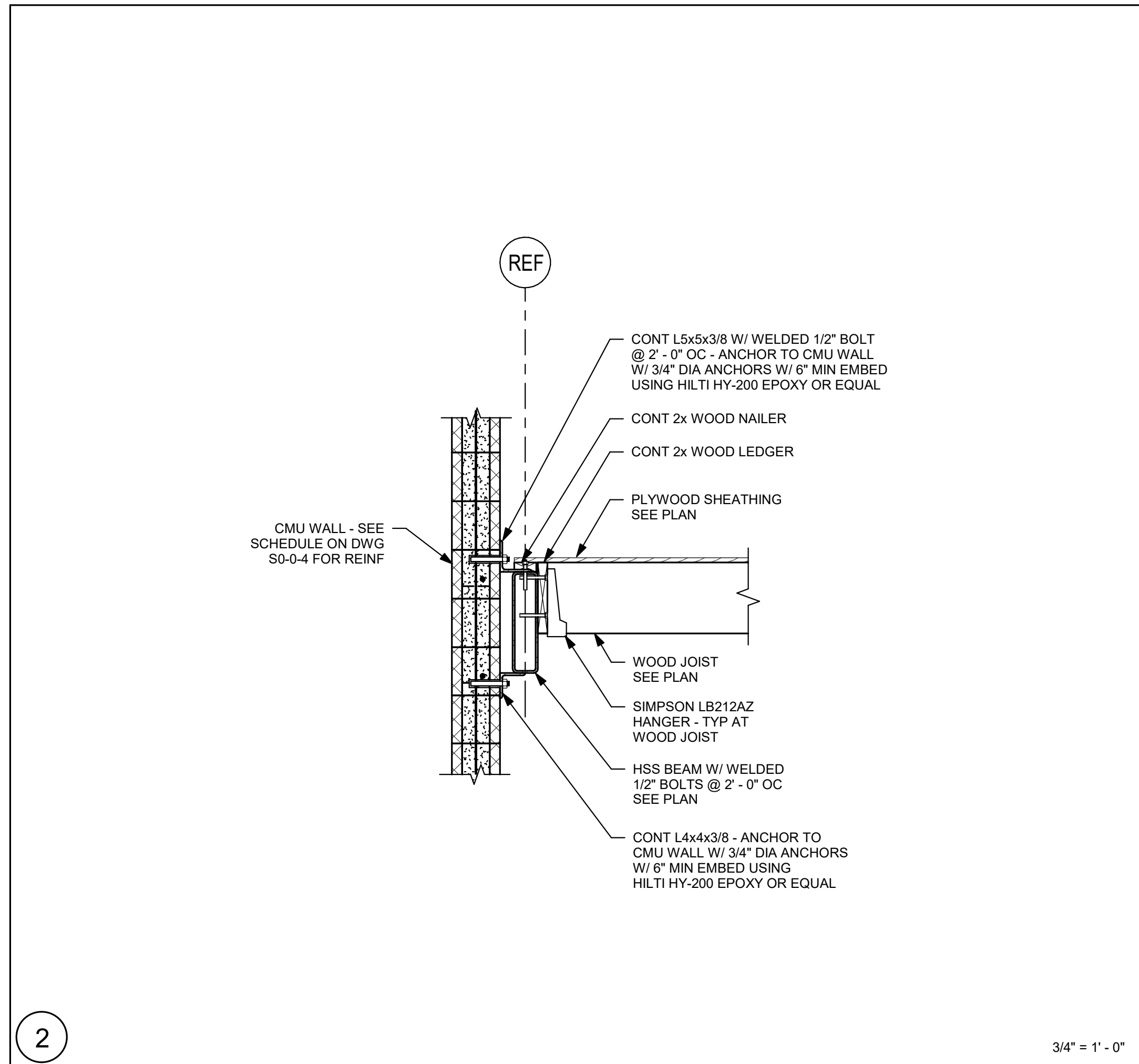
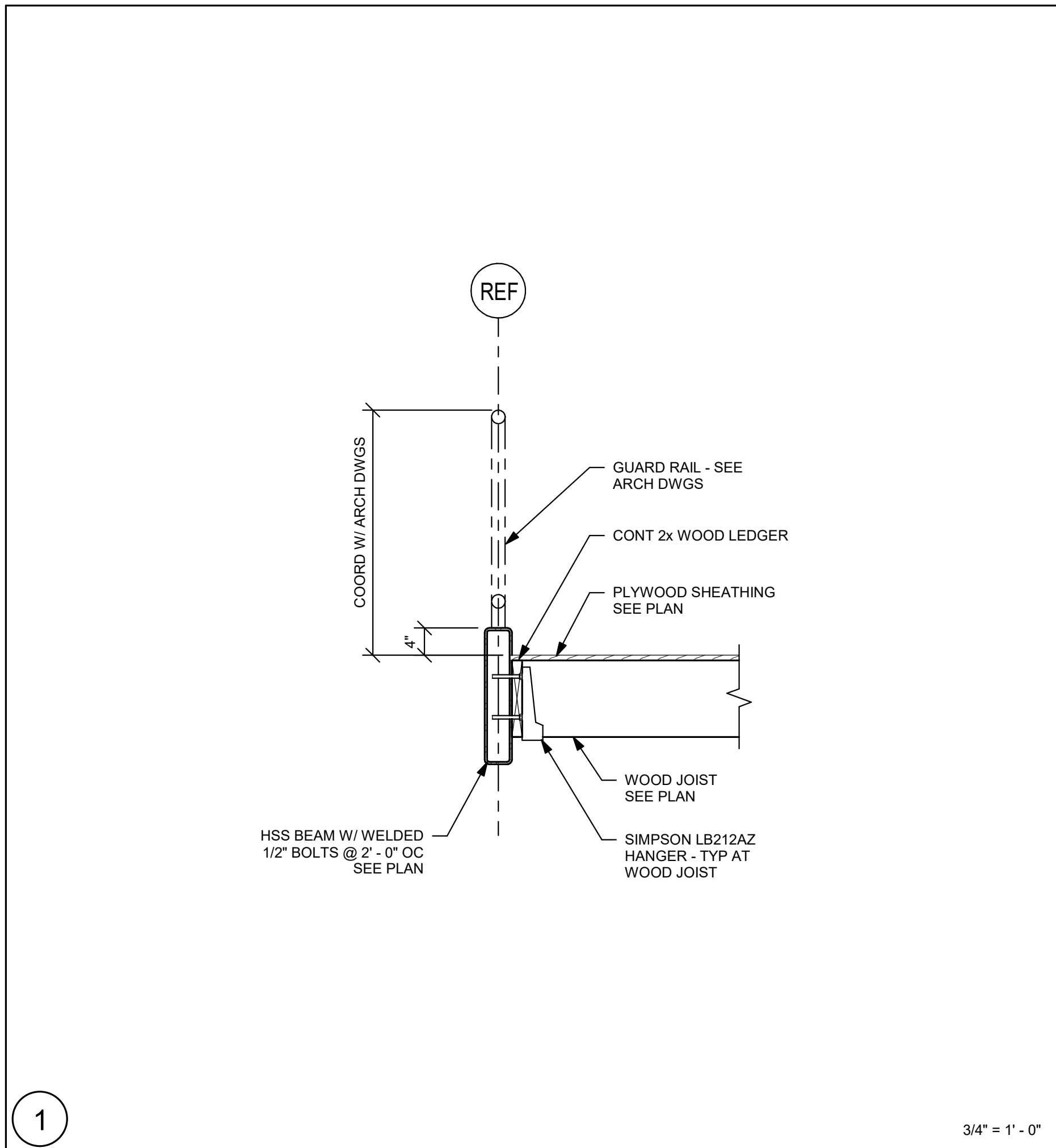
EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

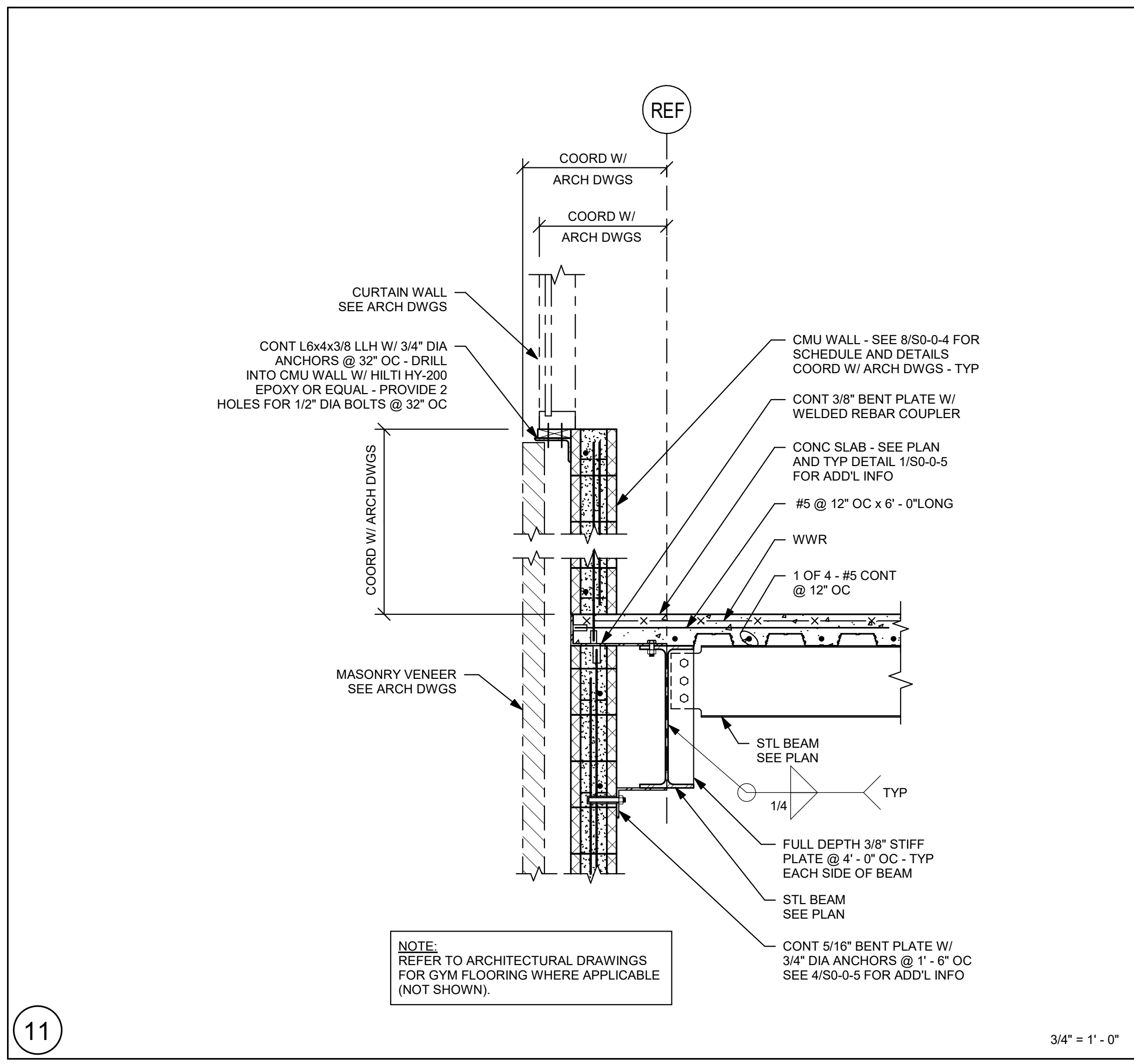
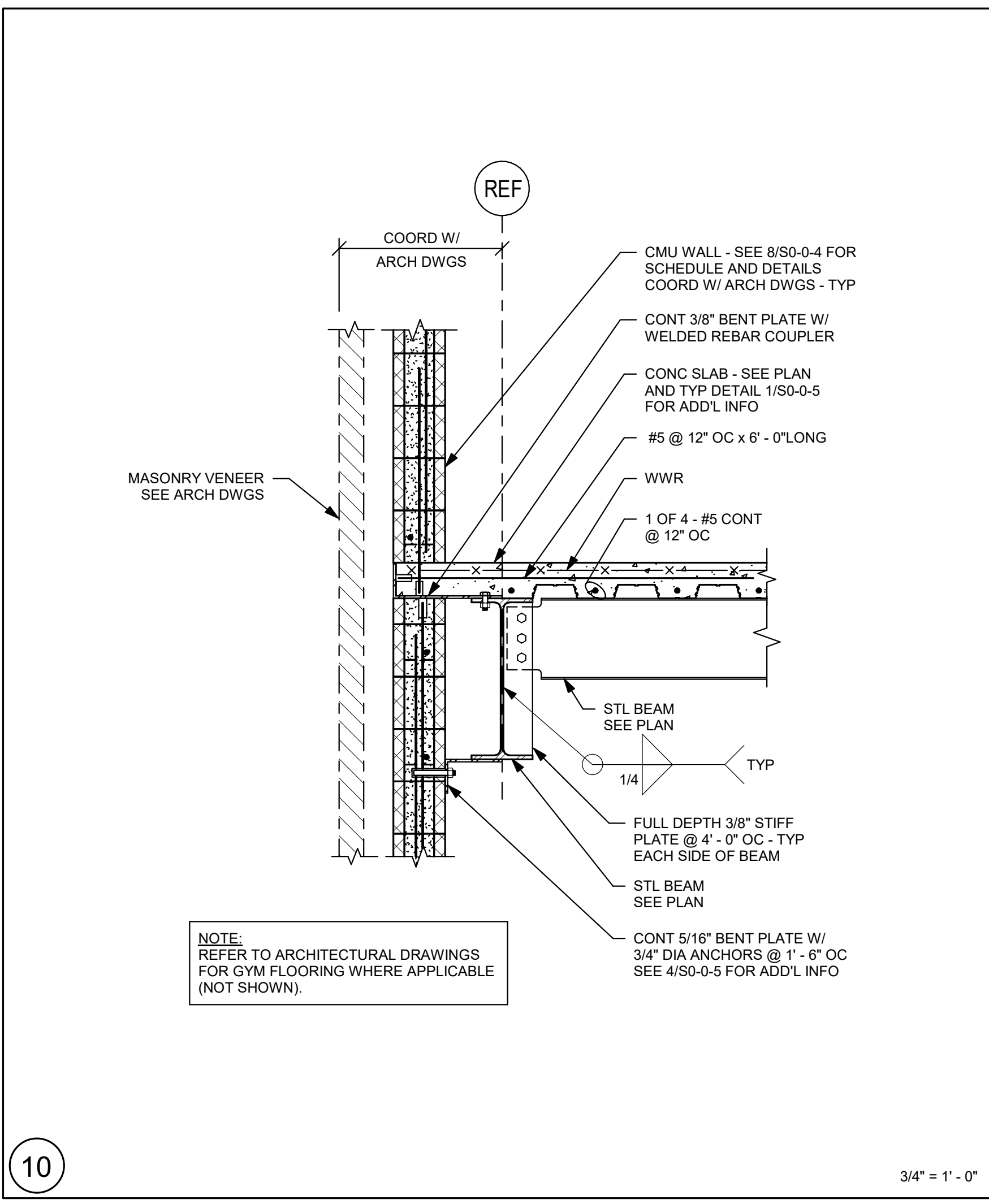
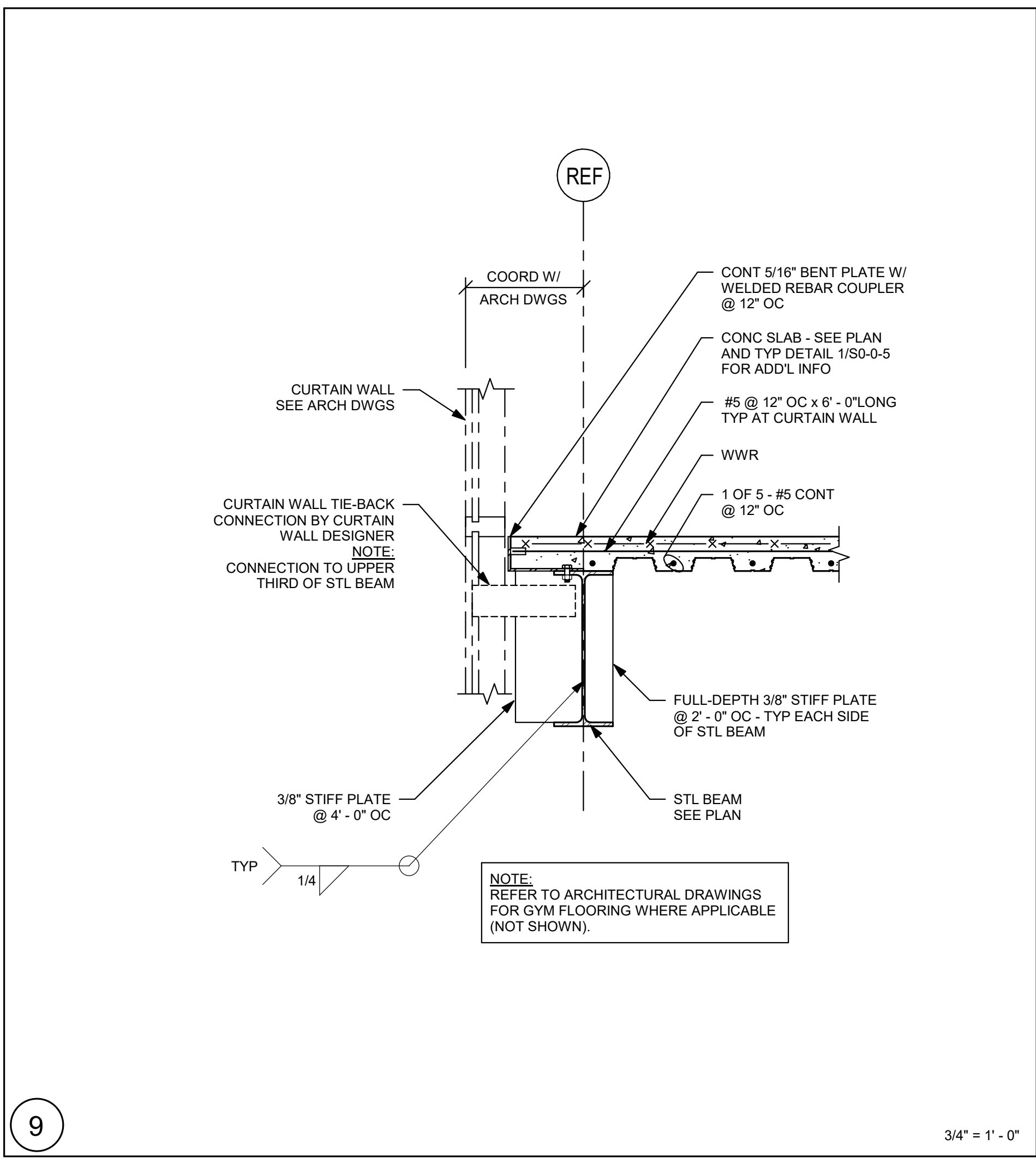
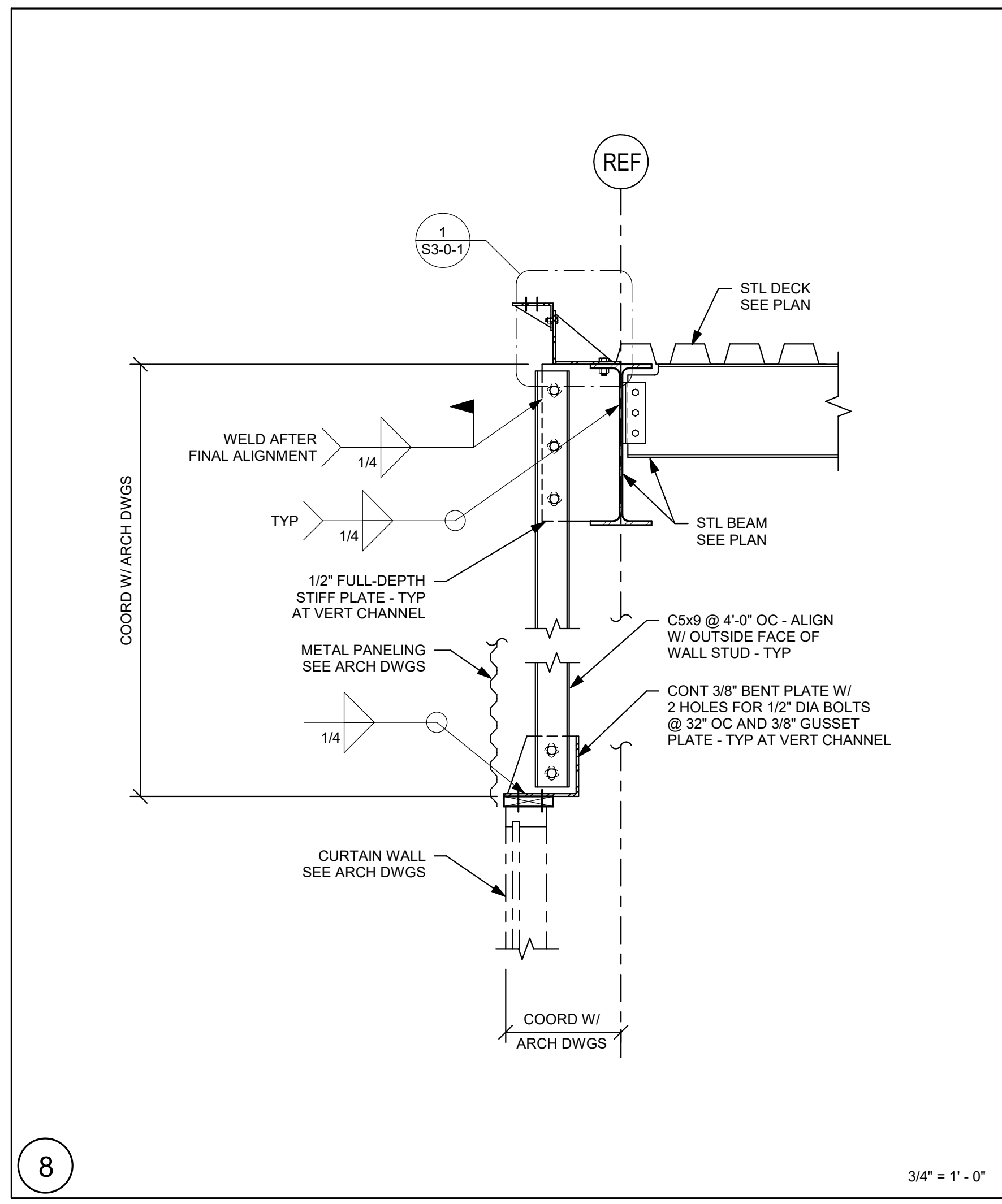
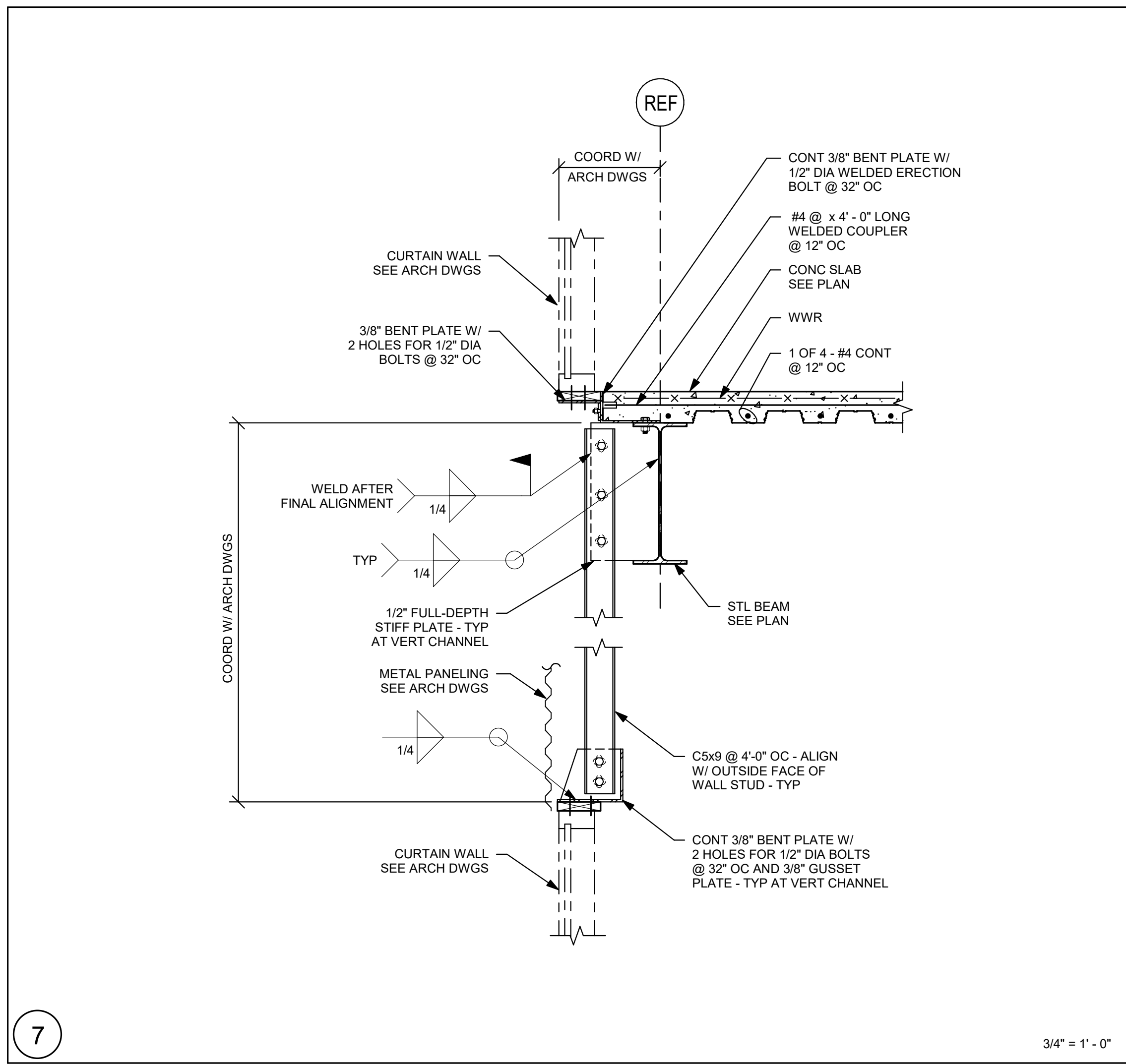
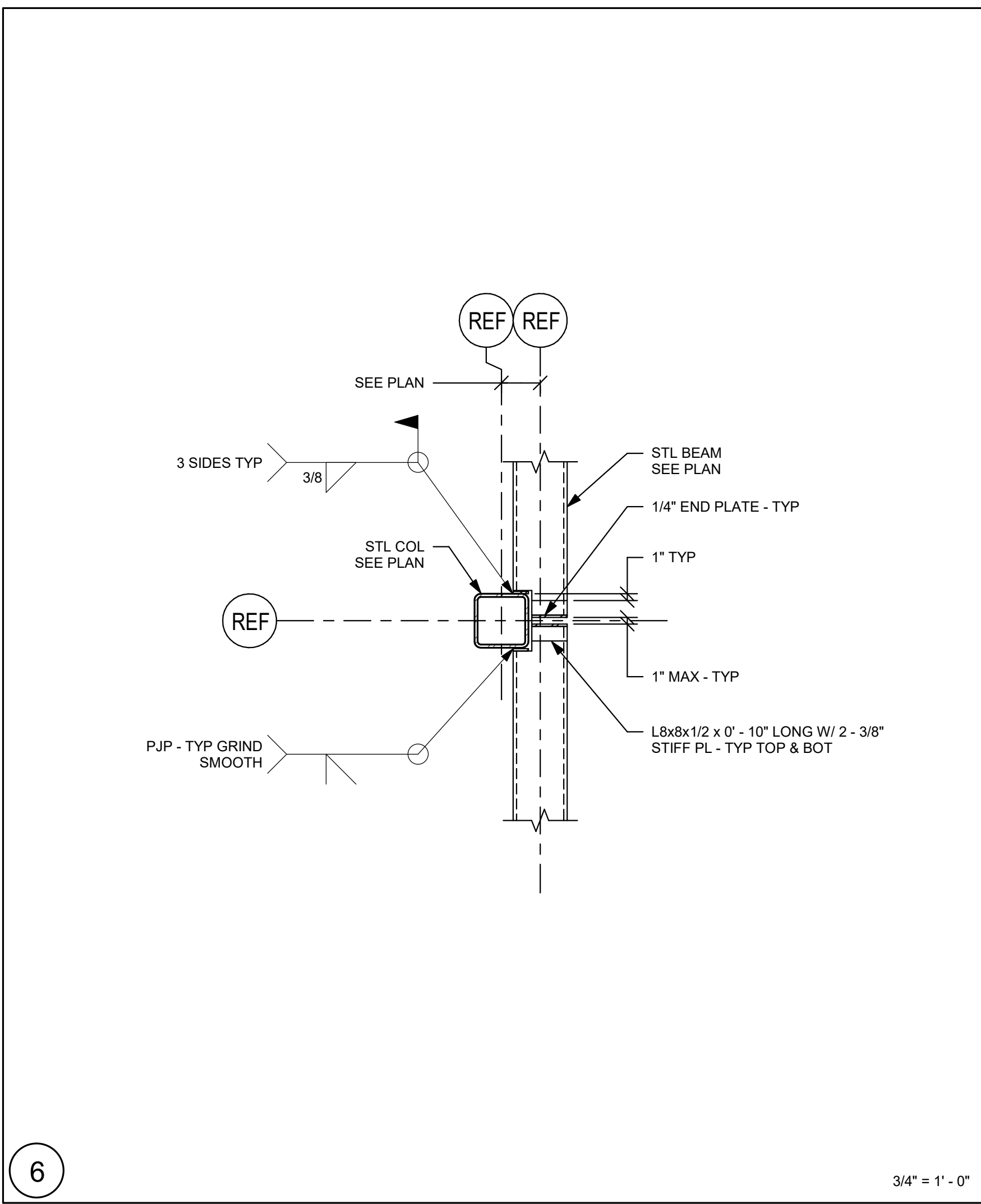
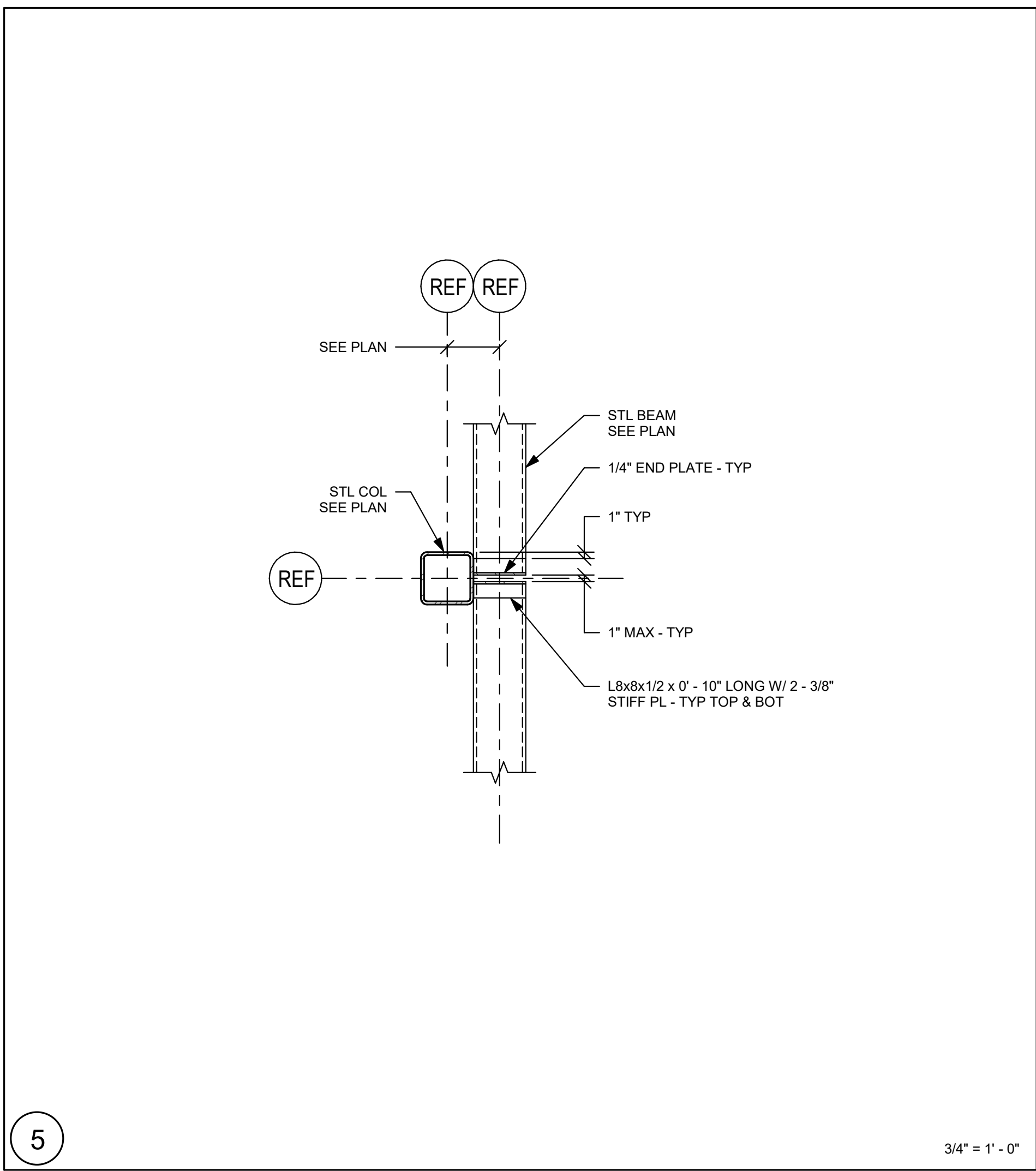
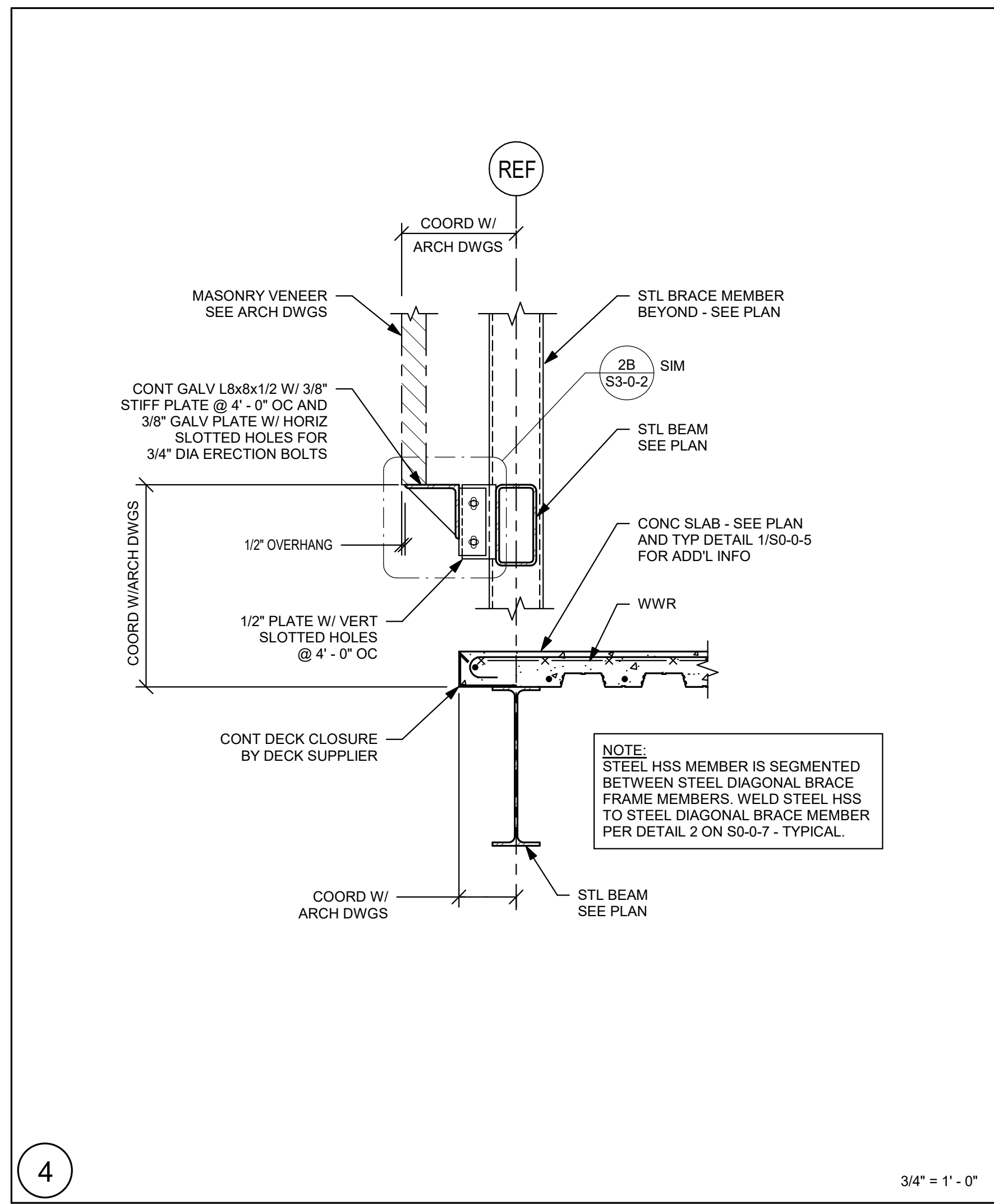
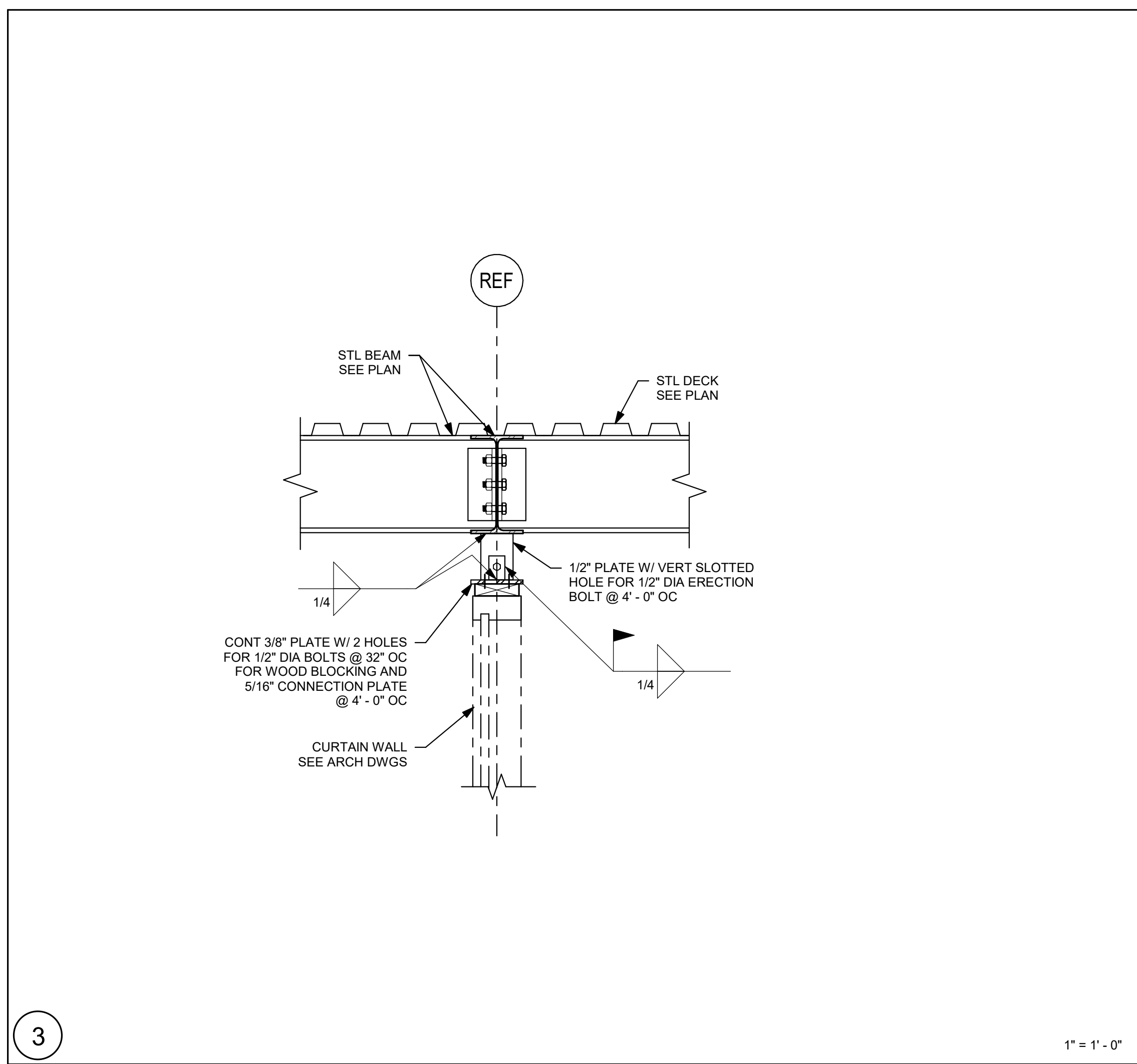
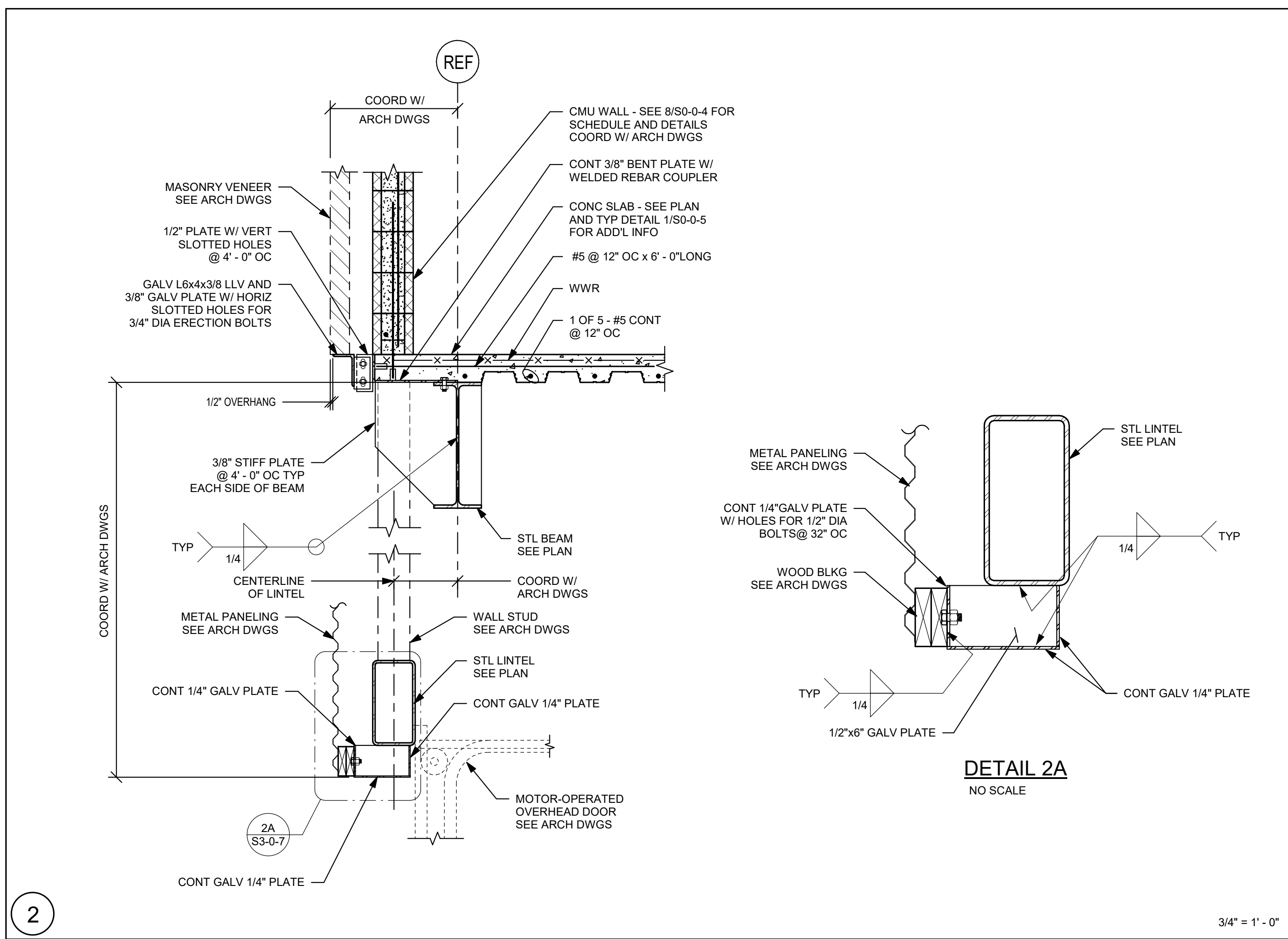
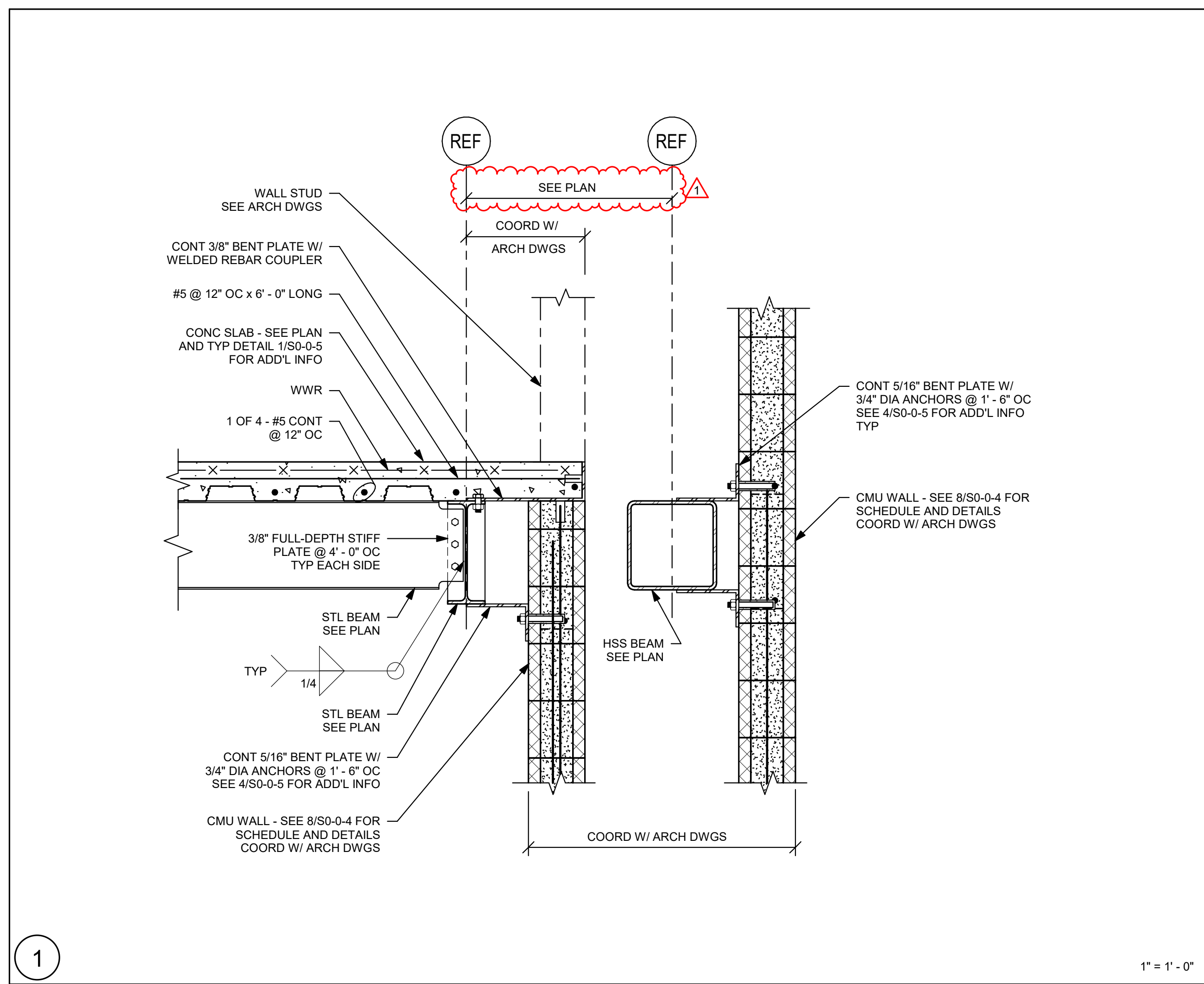


SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S3-0-5





Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE
FEBRUARY 24TH, 2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S3-0-7

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

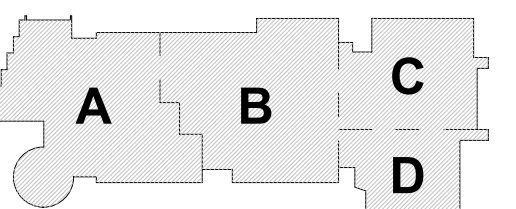
NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEYS ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

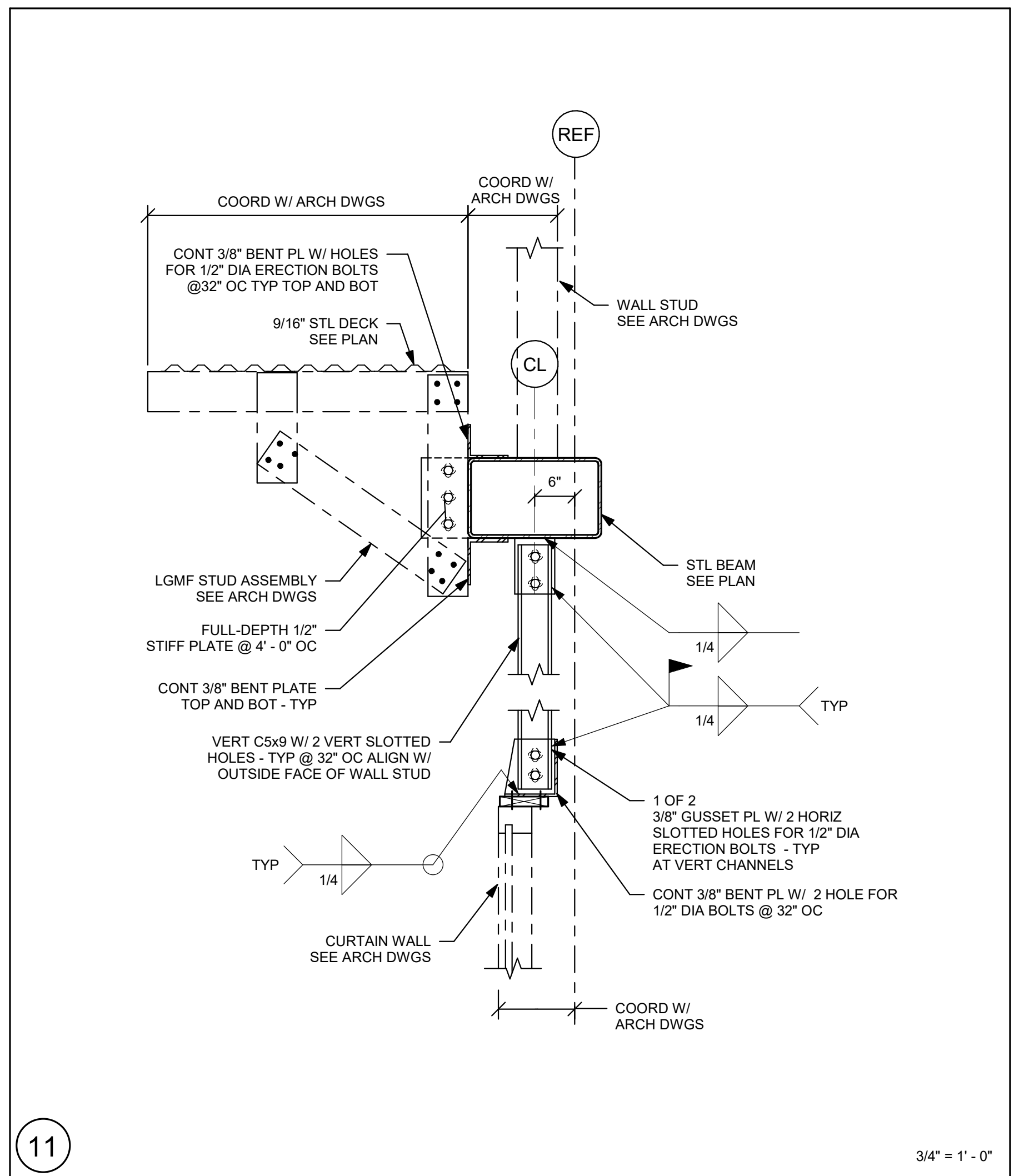
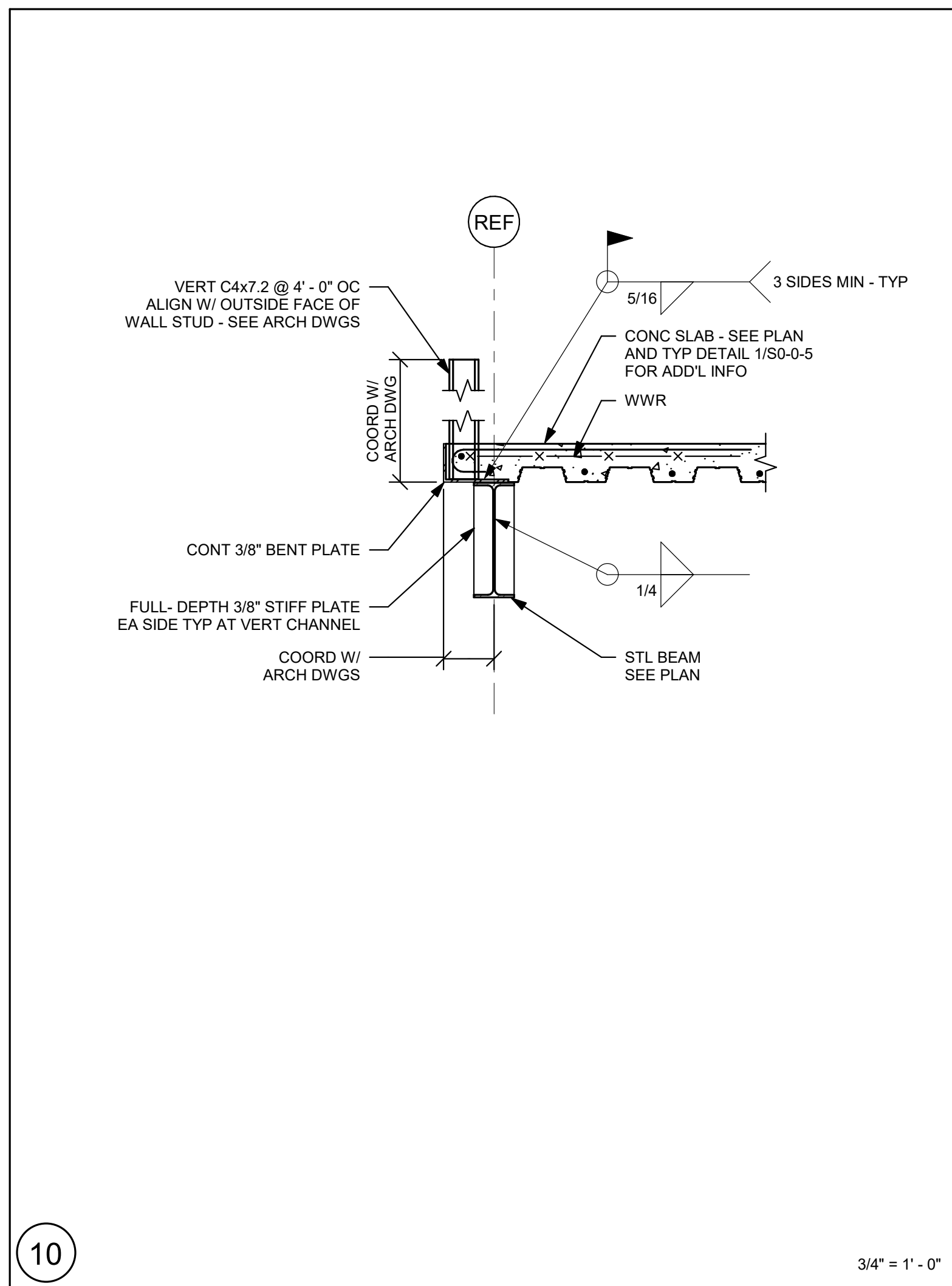
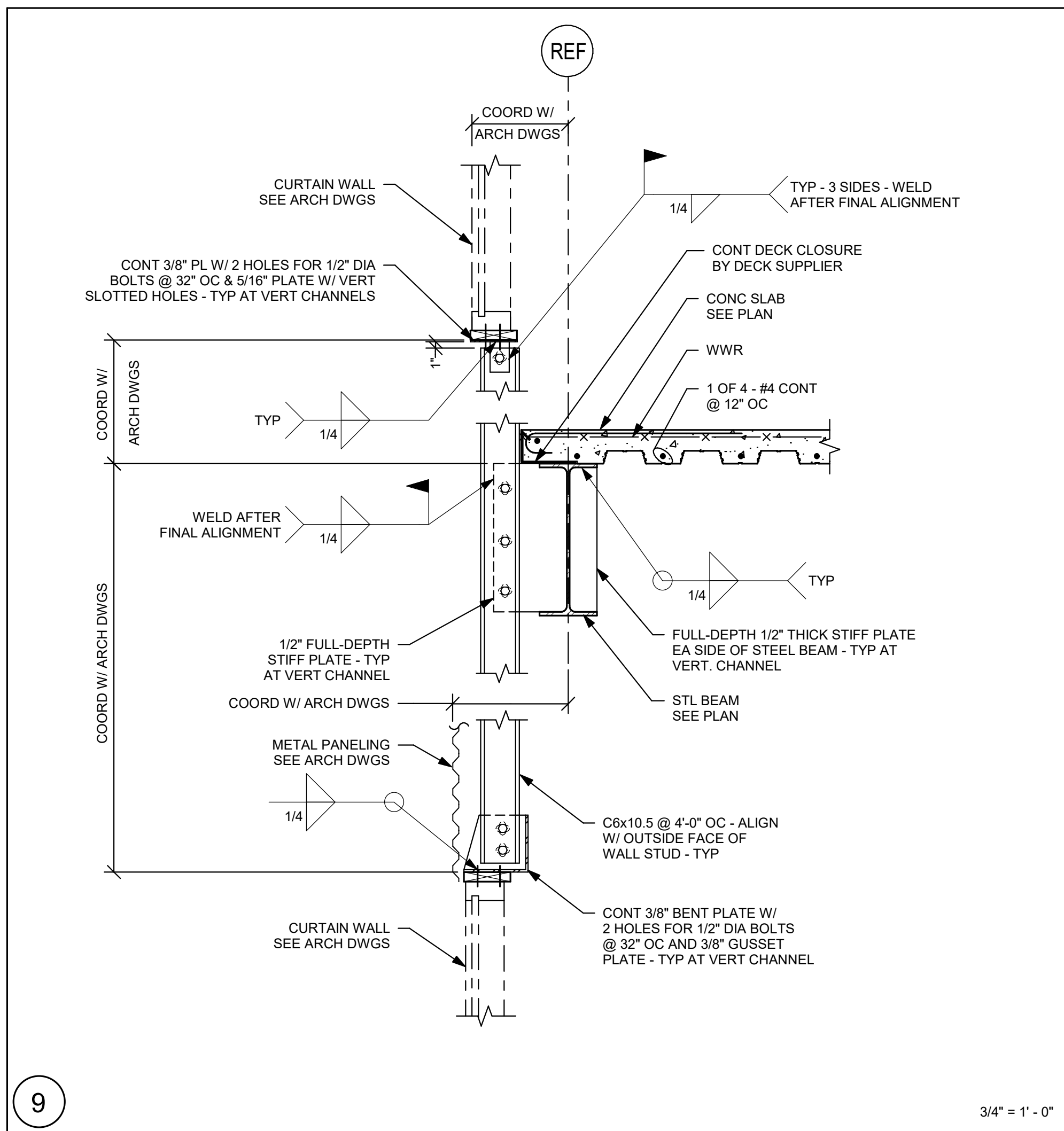
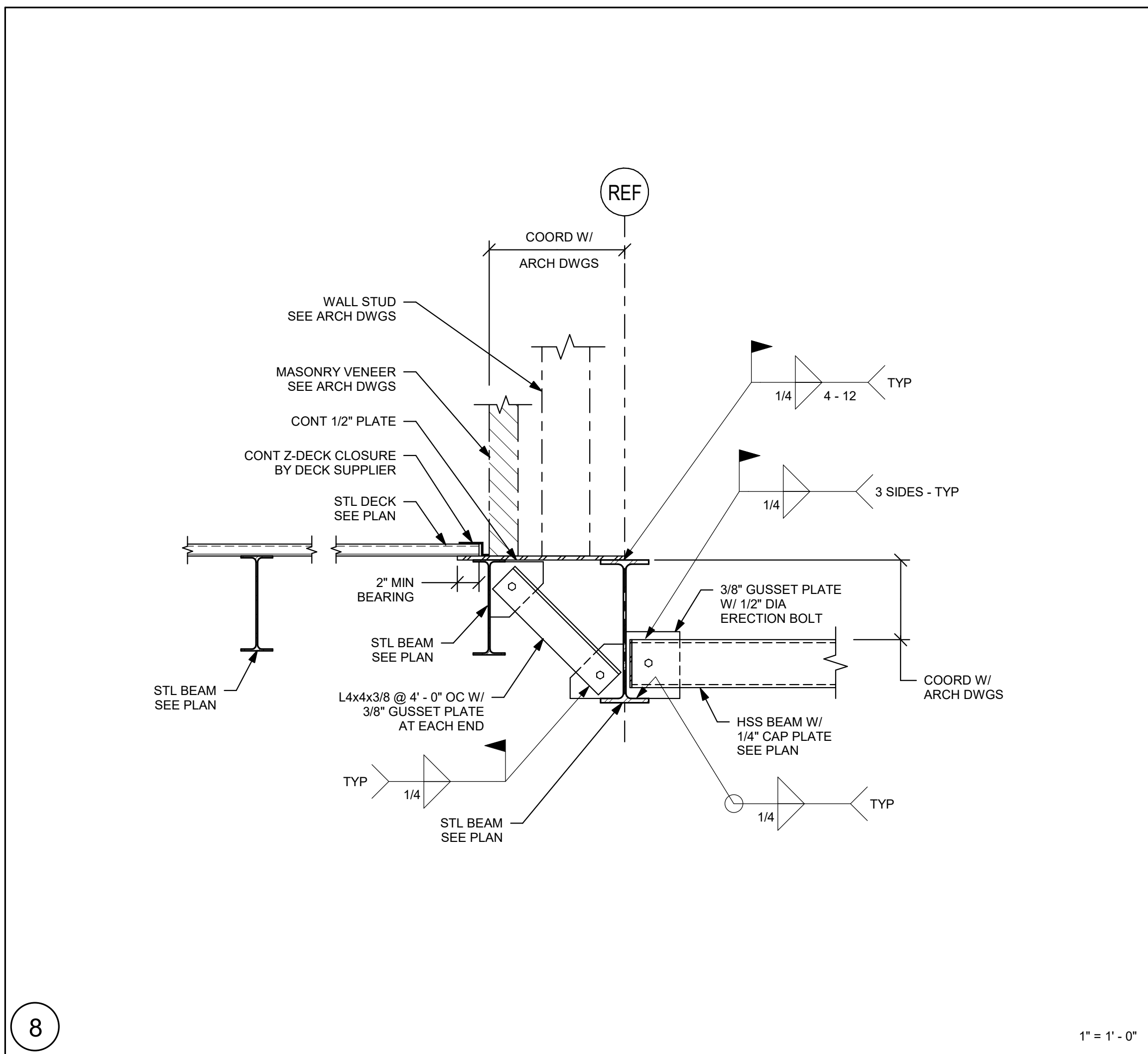
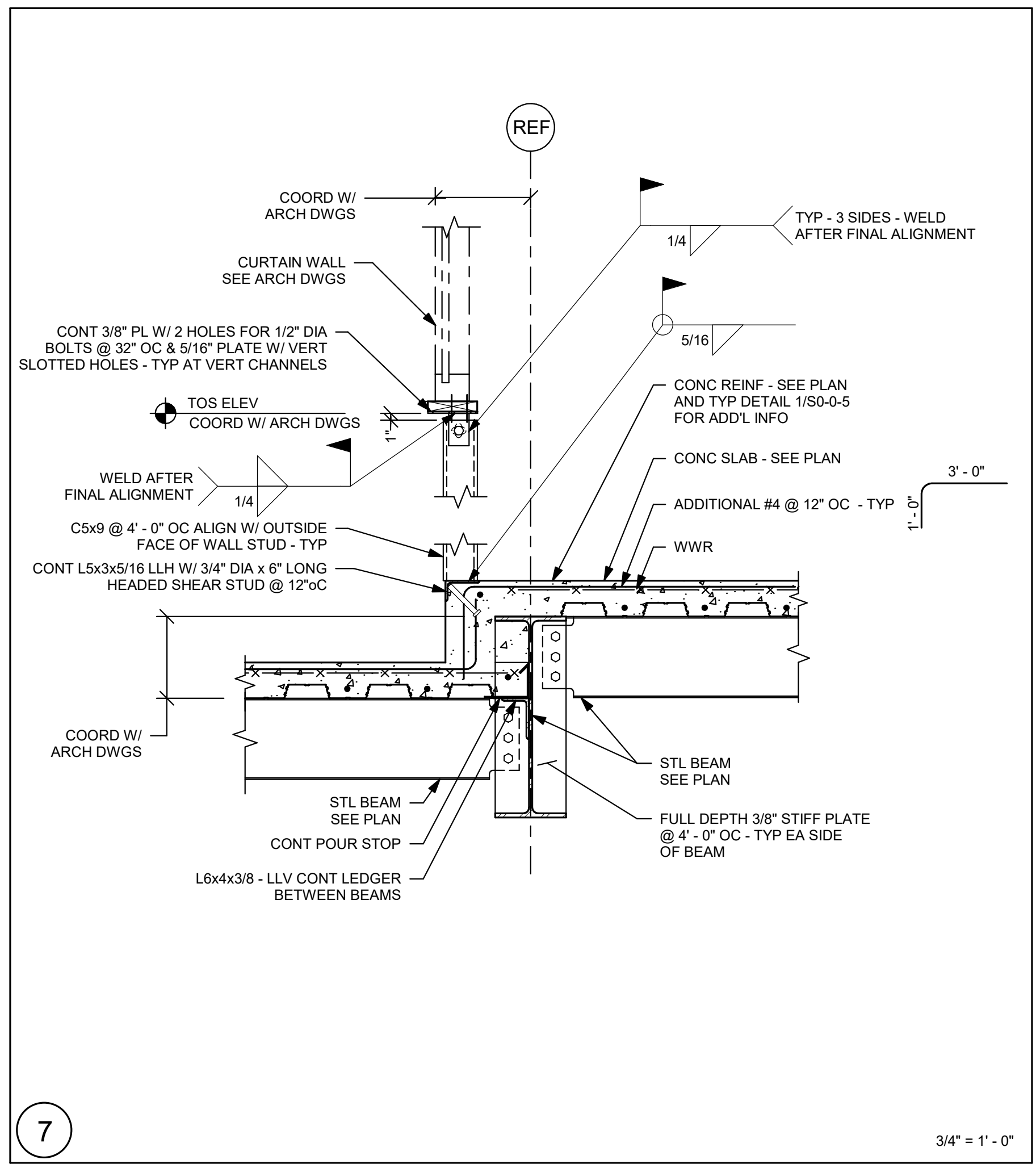
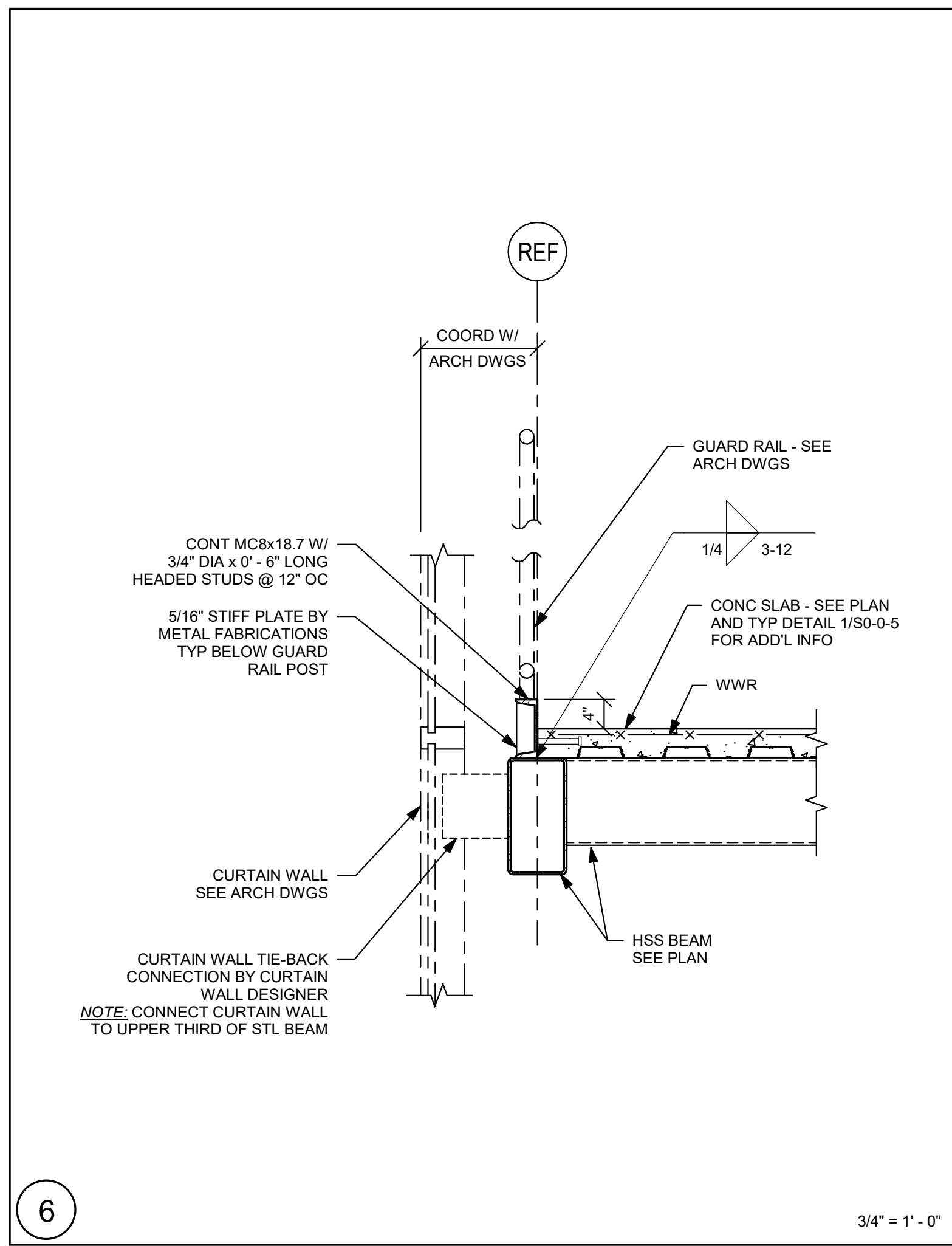
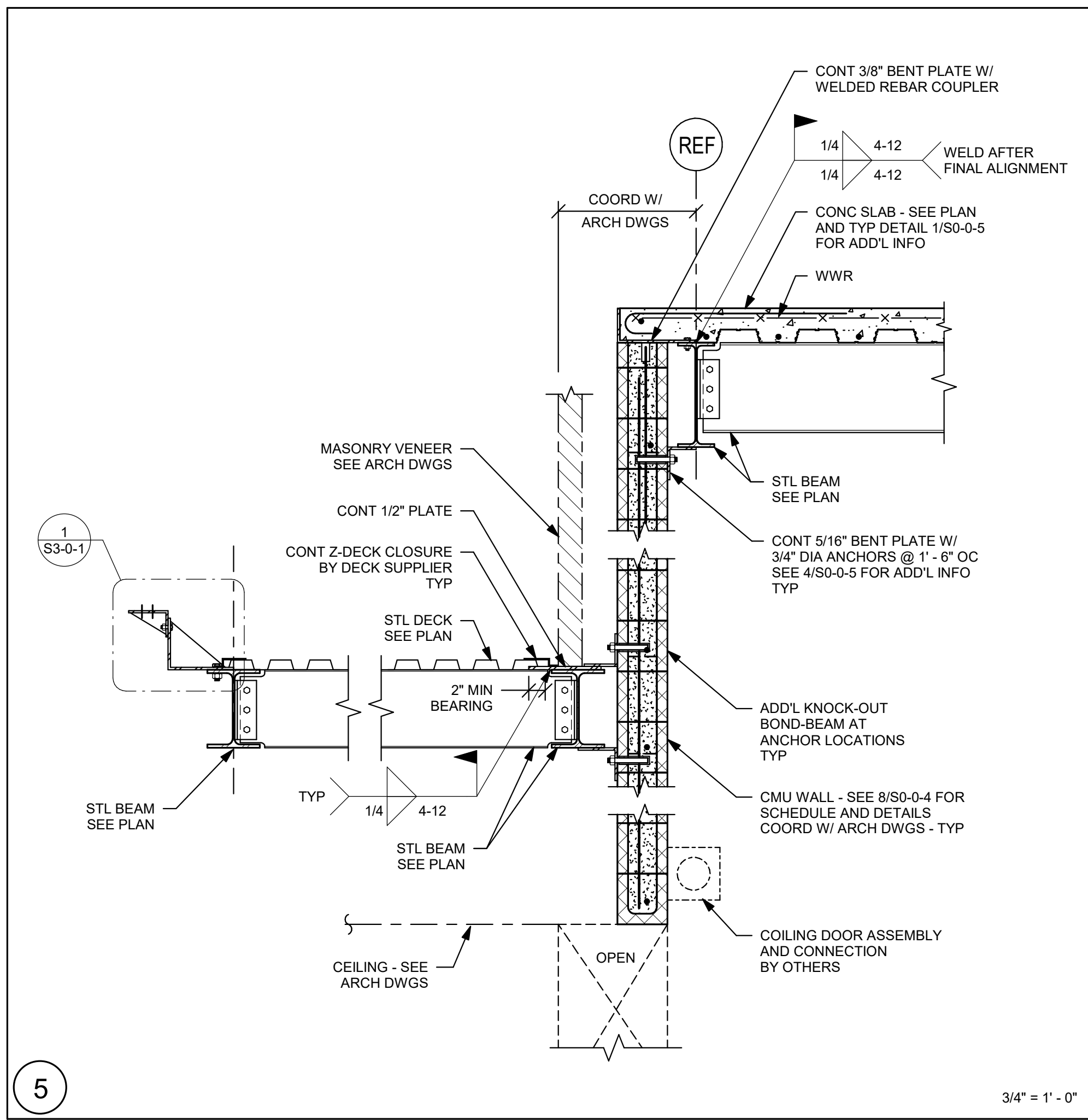
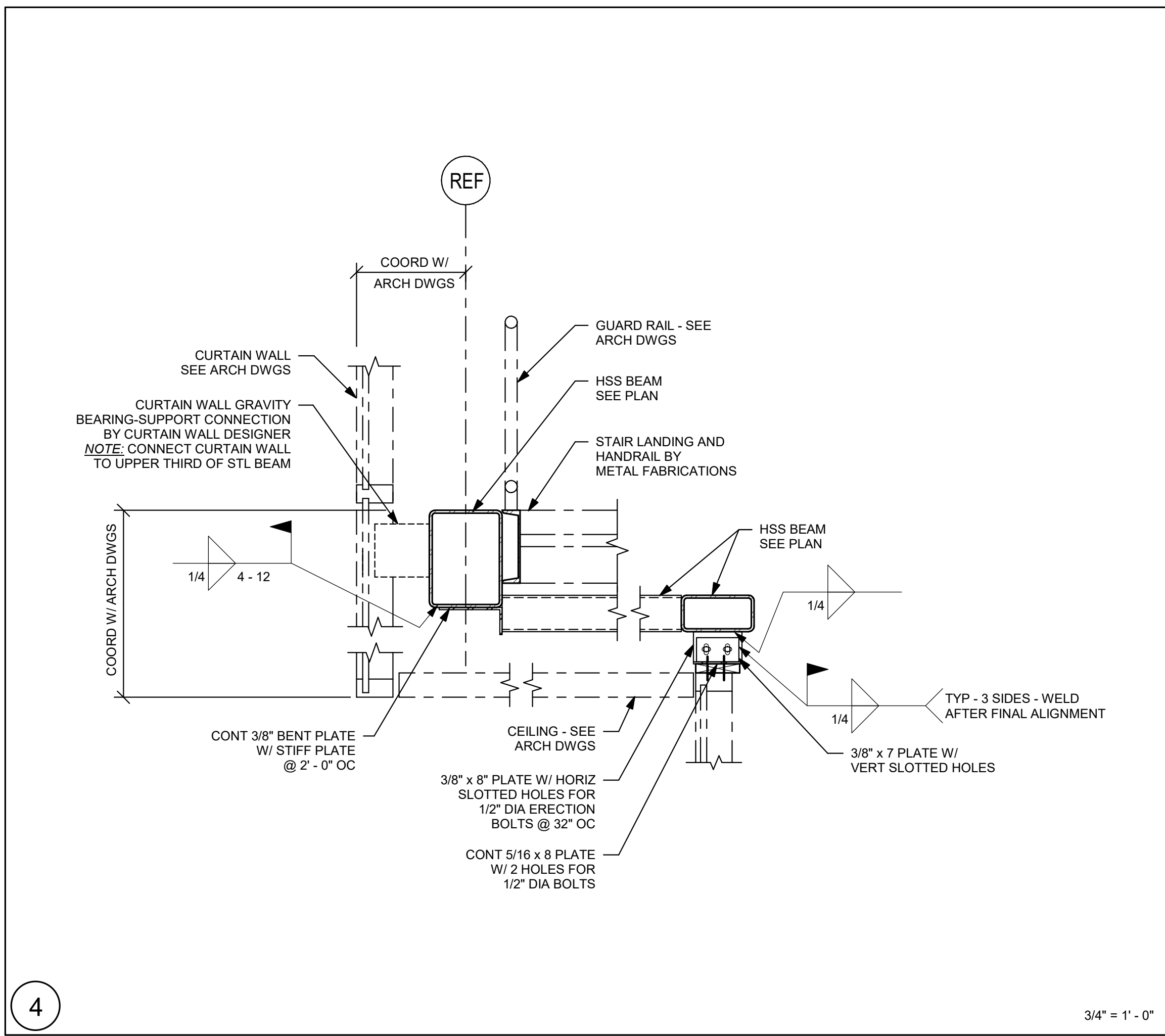
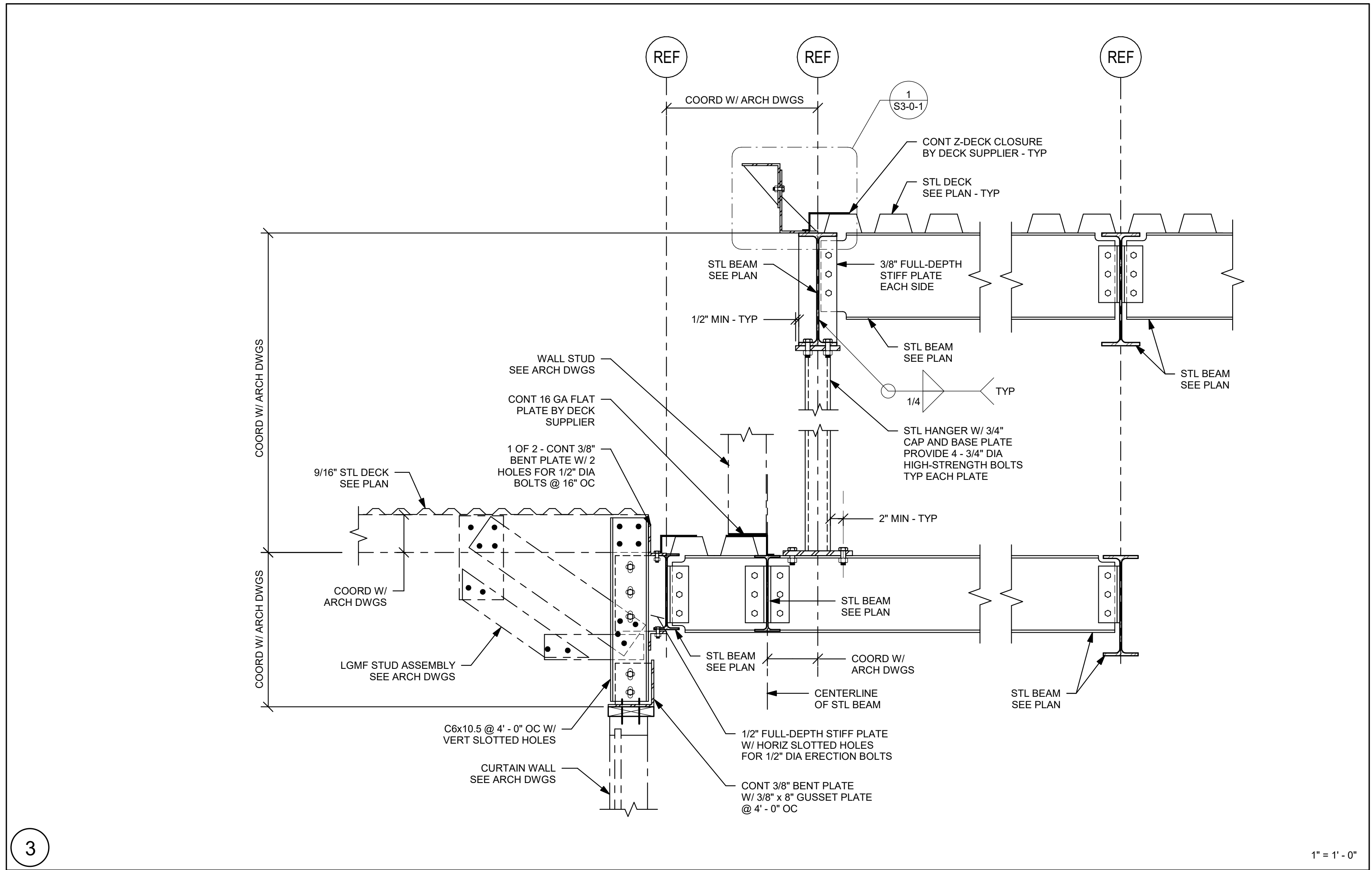
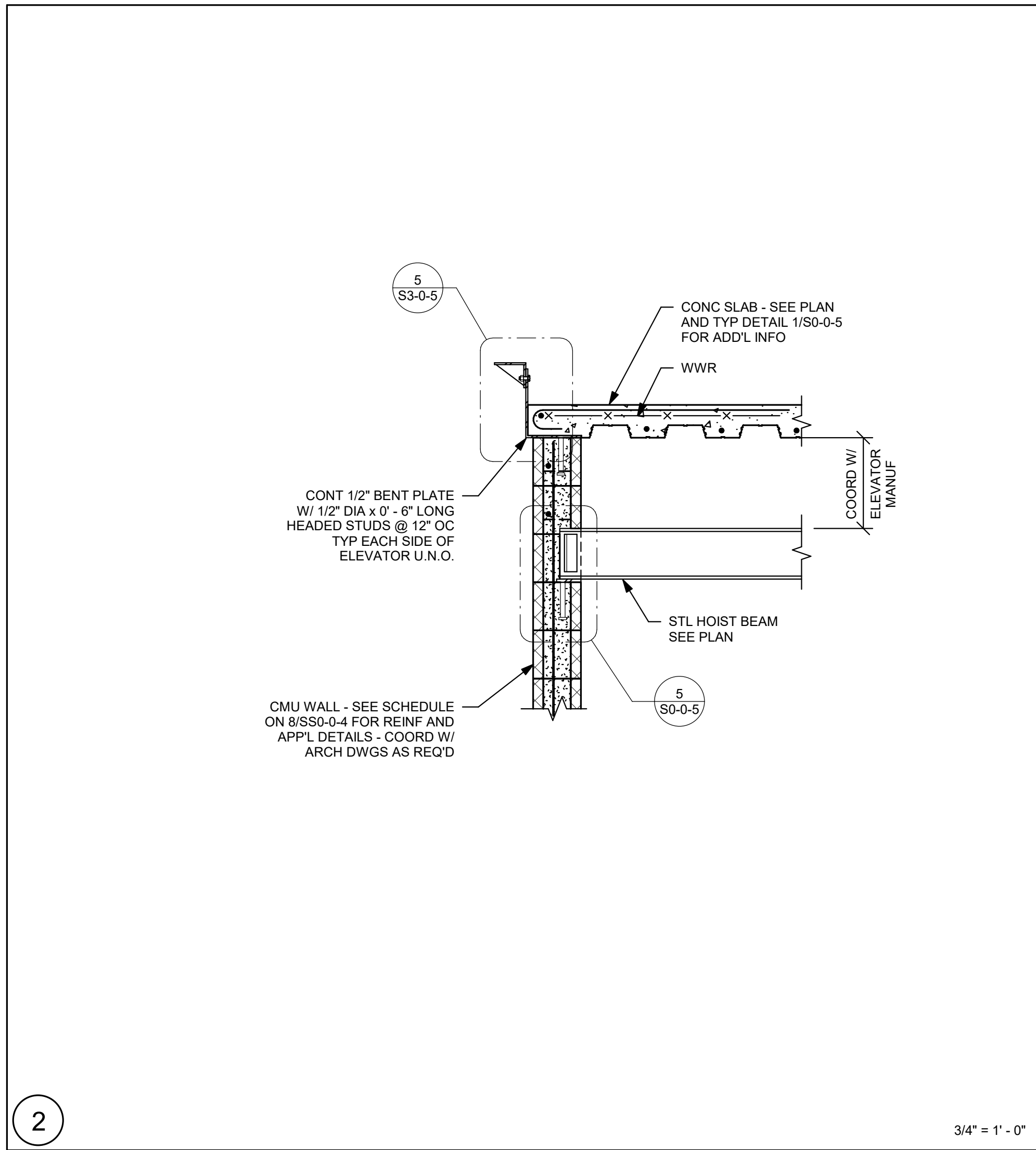
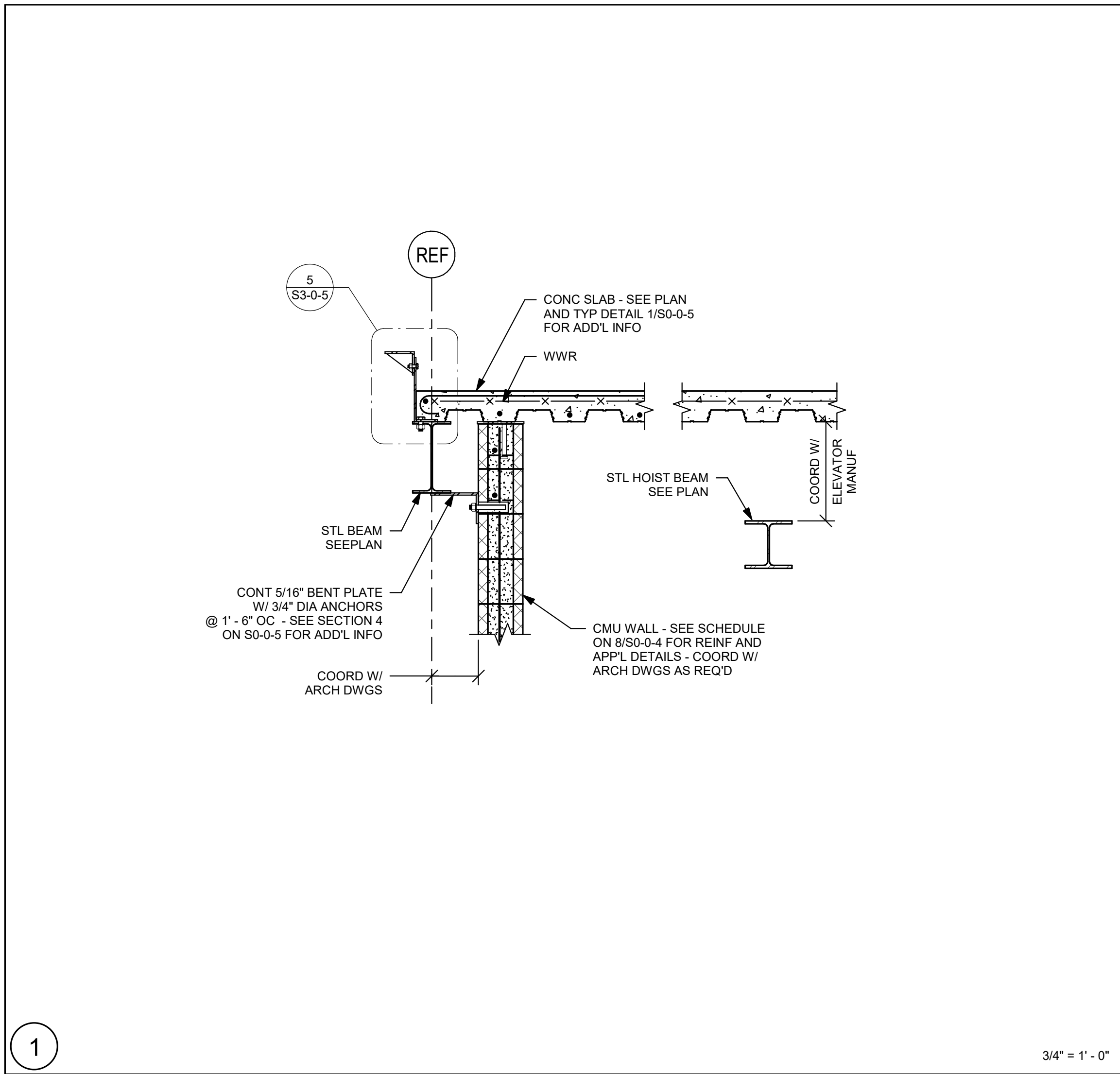


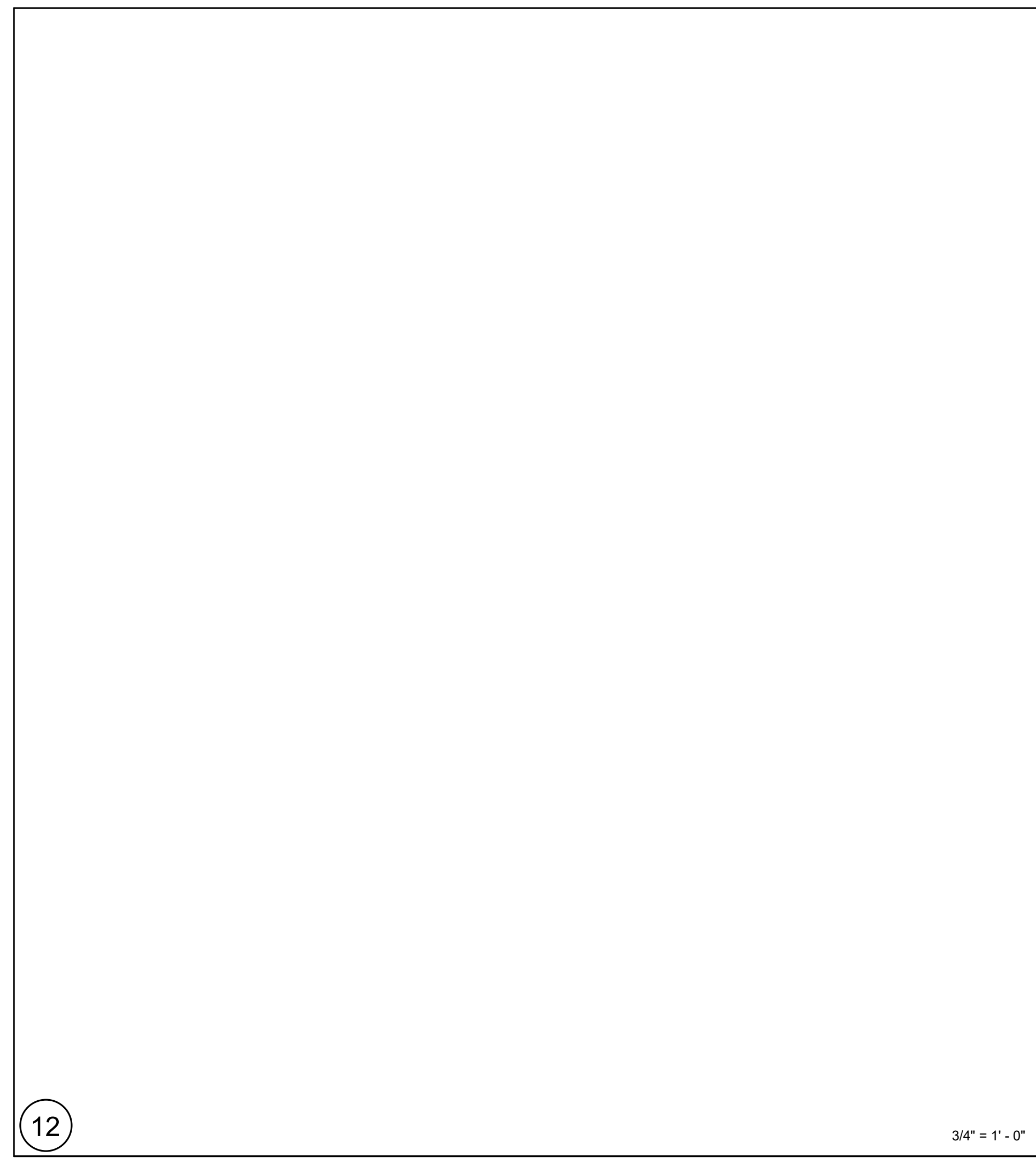
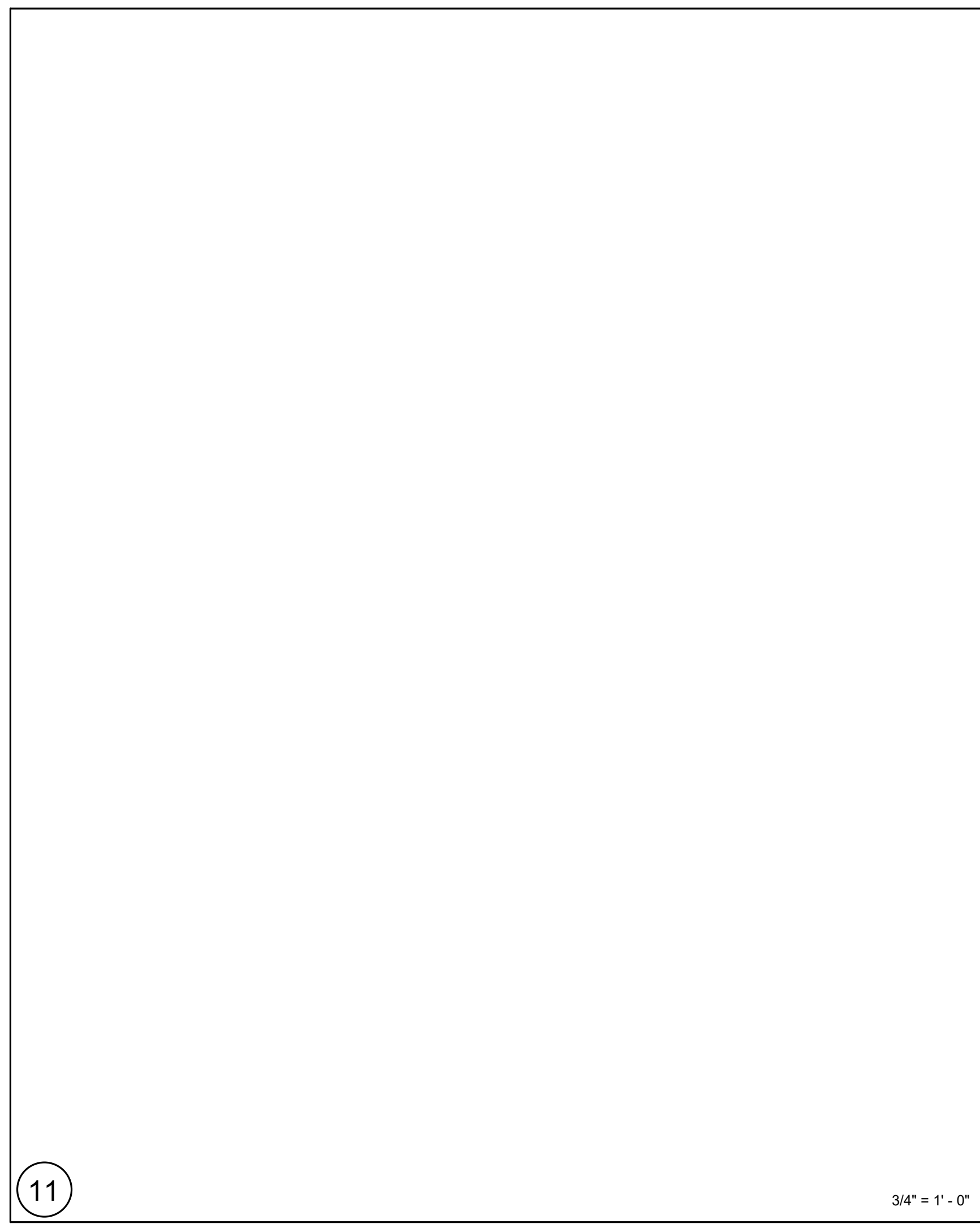
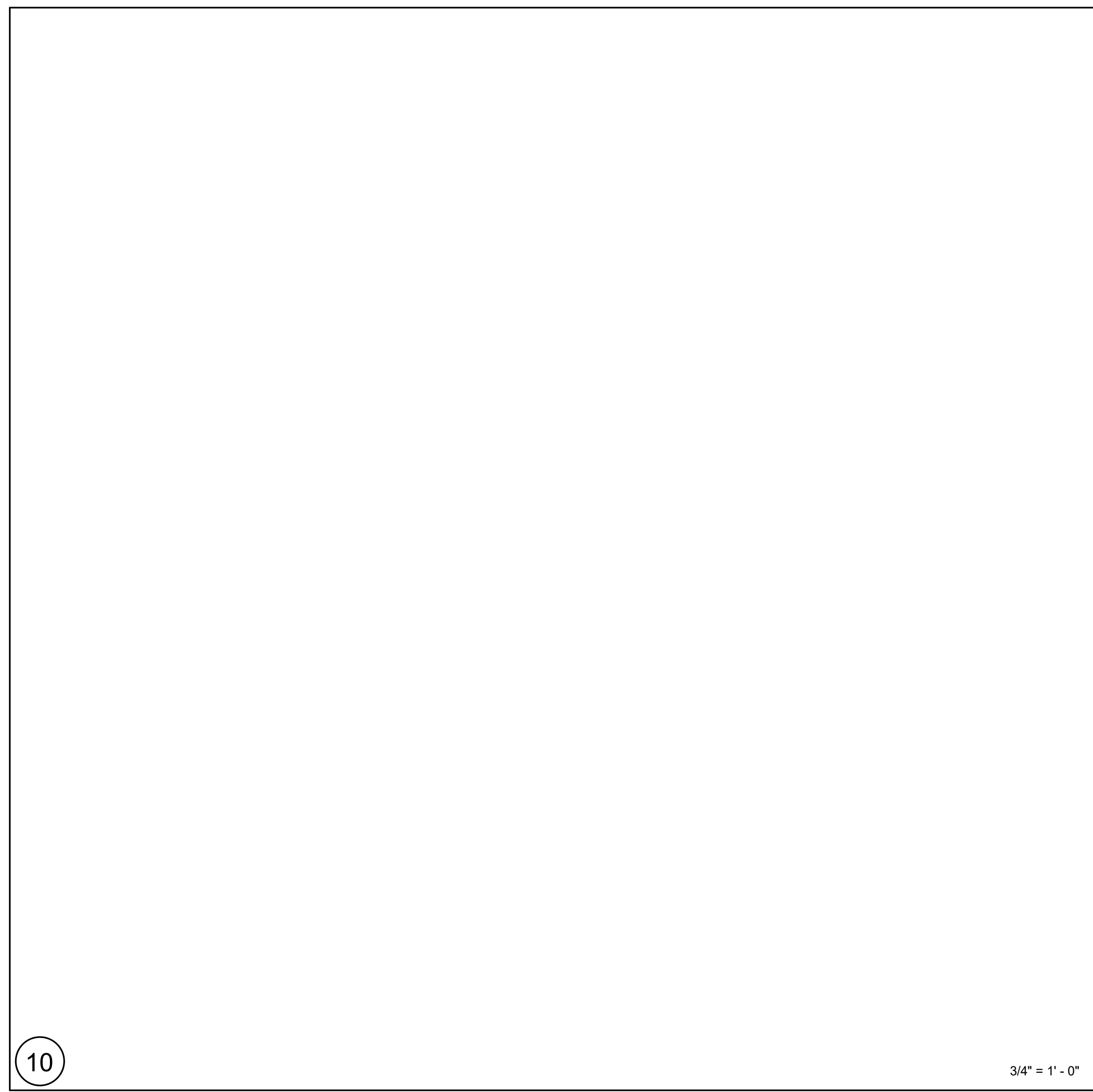
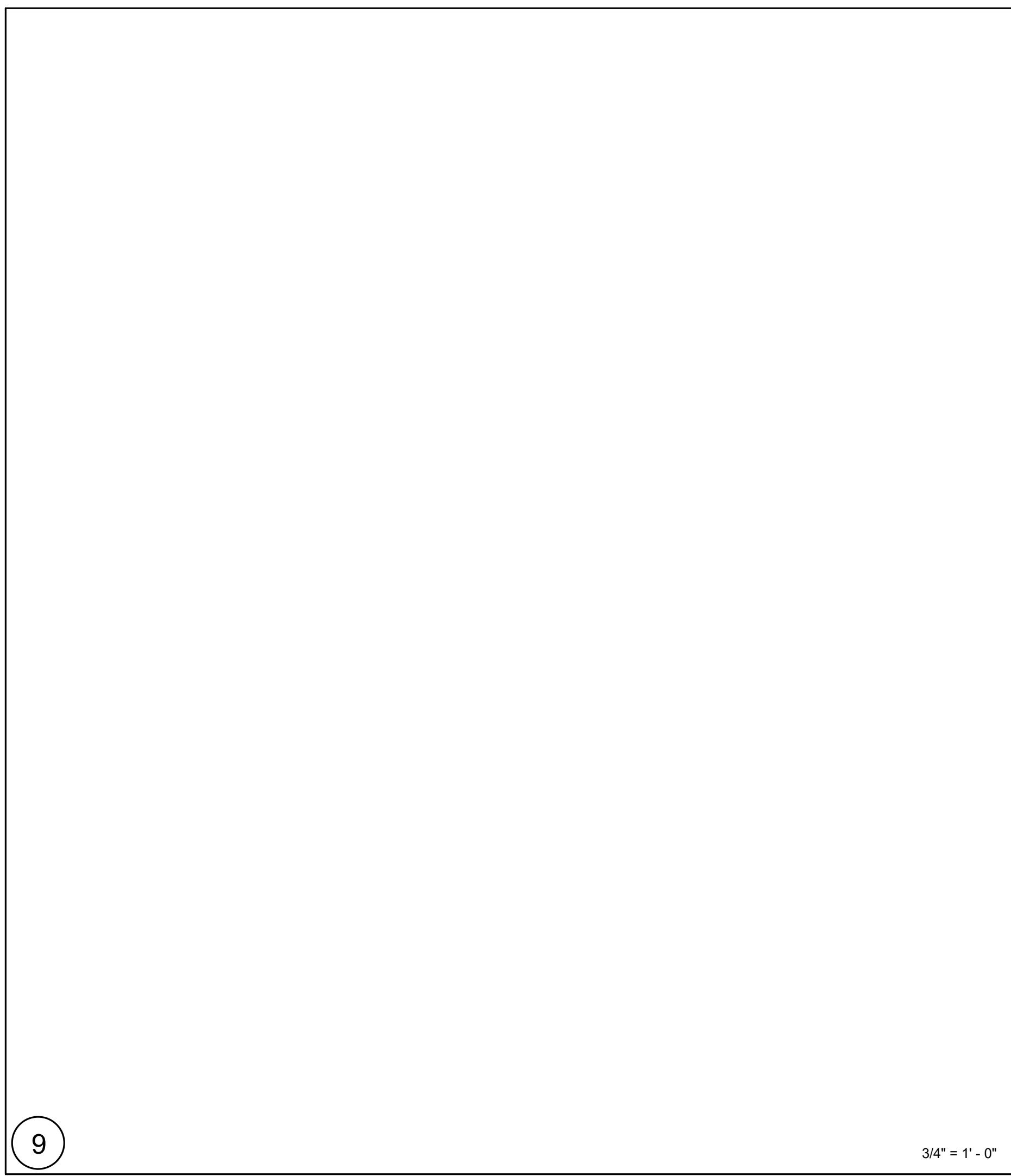
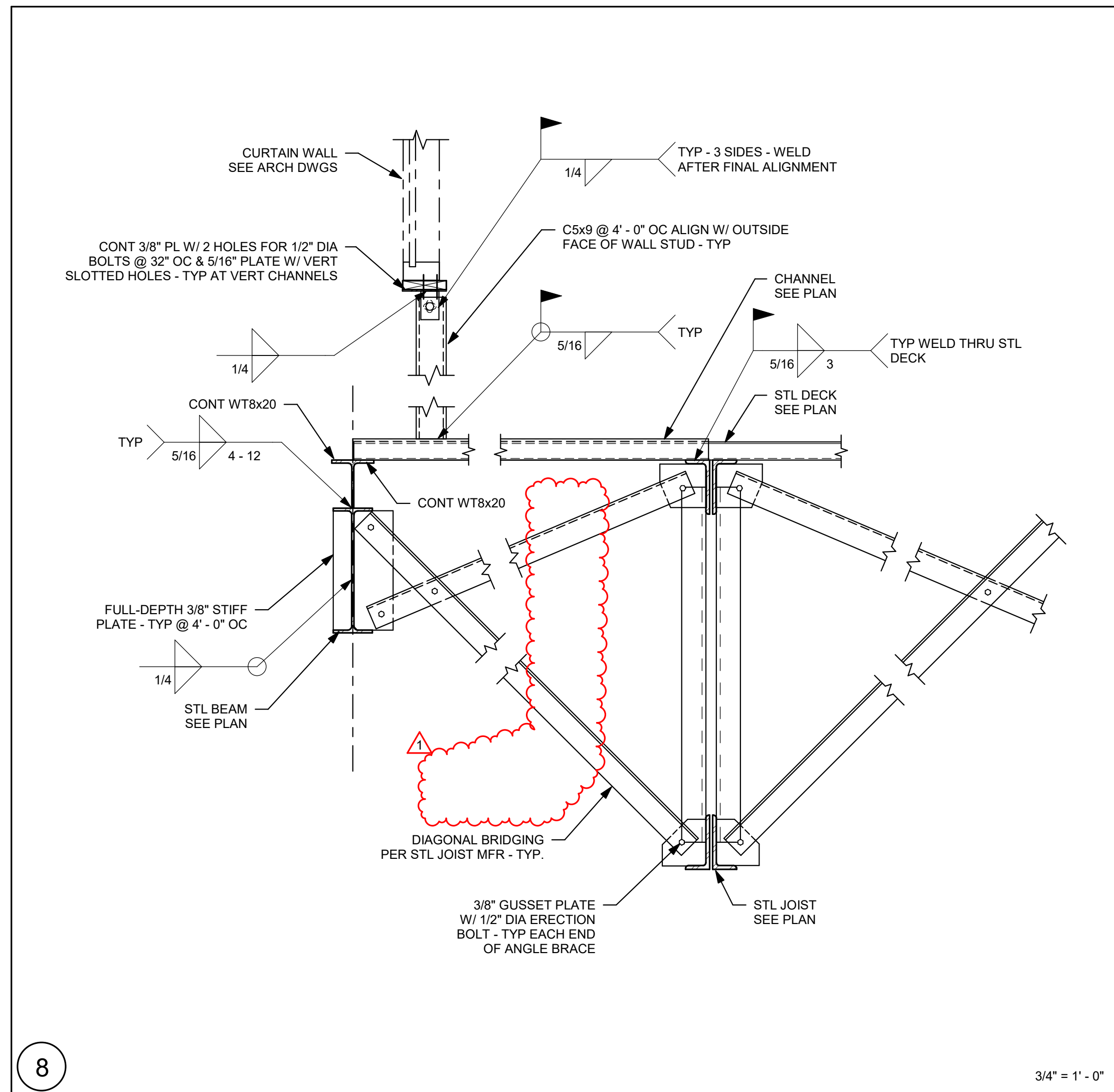
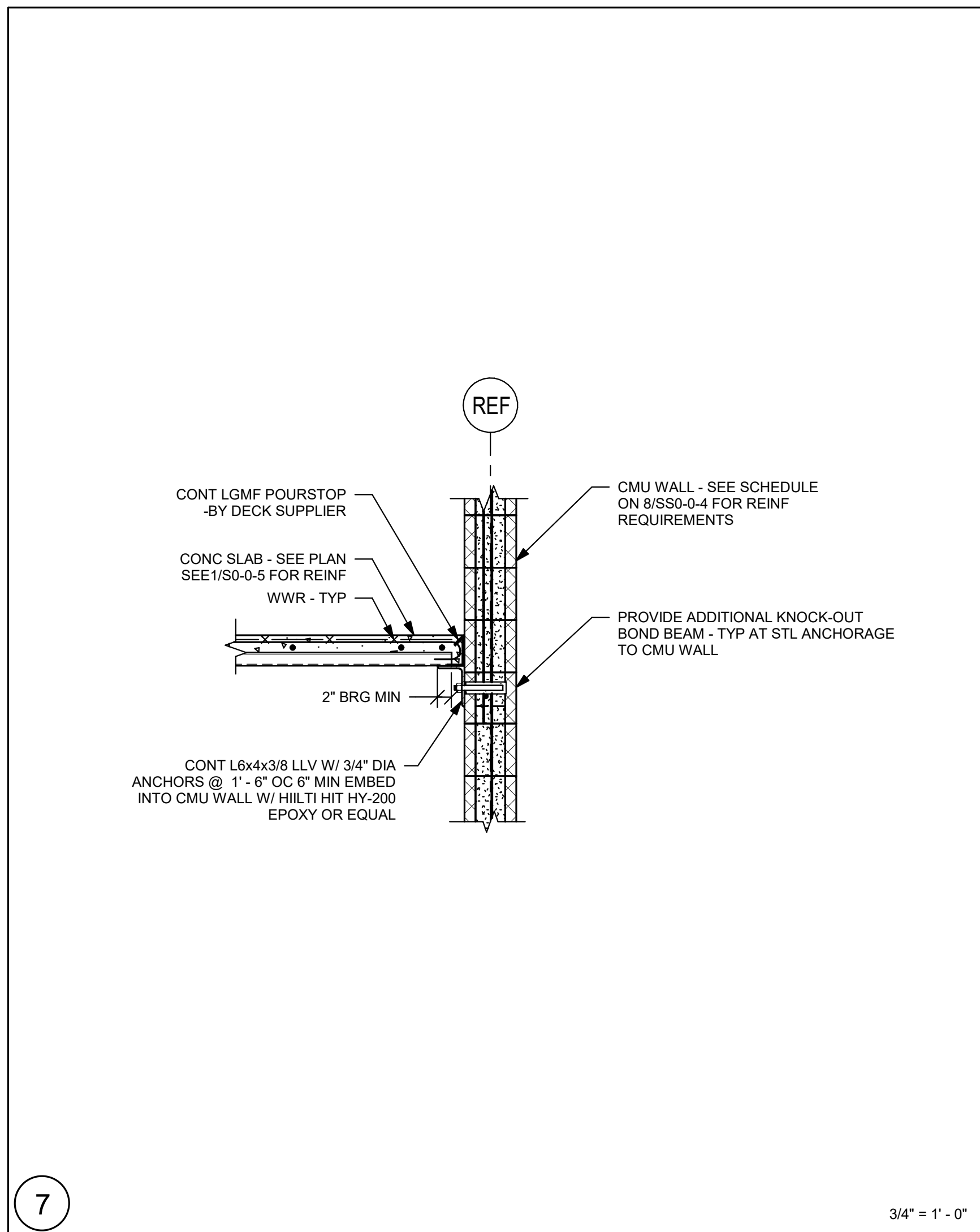
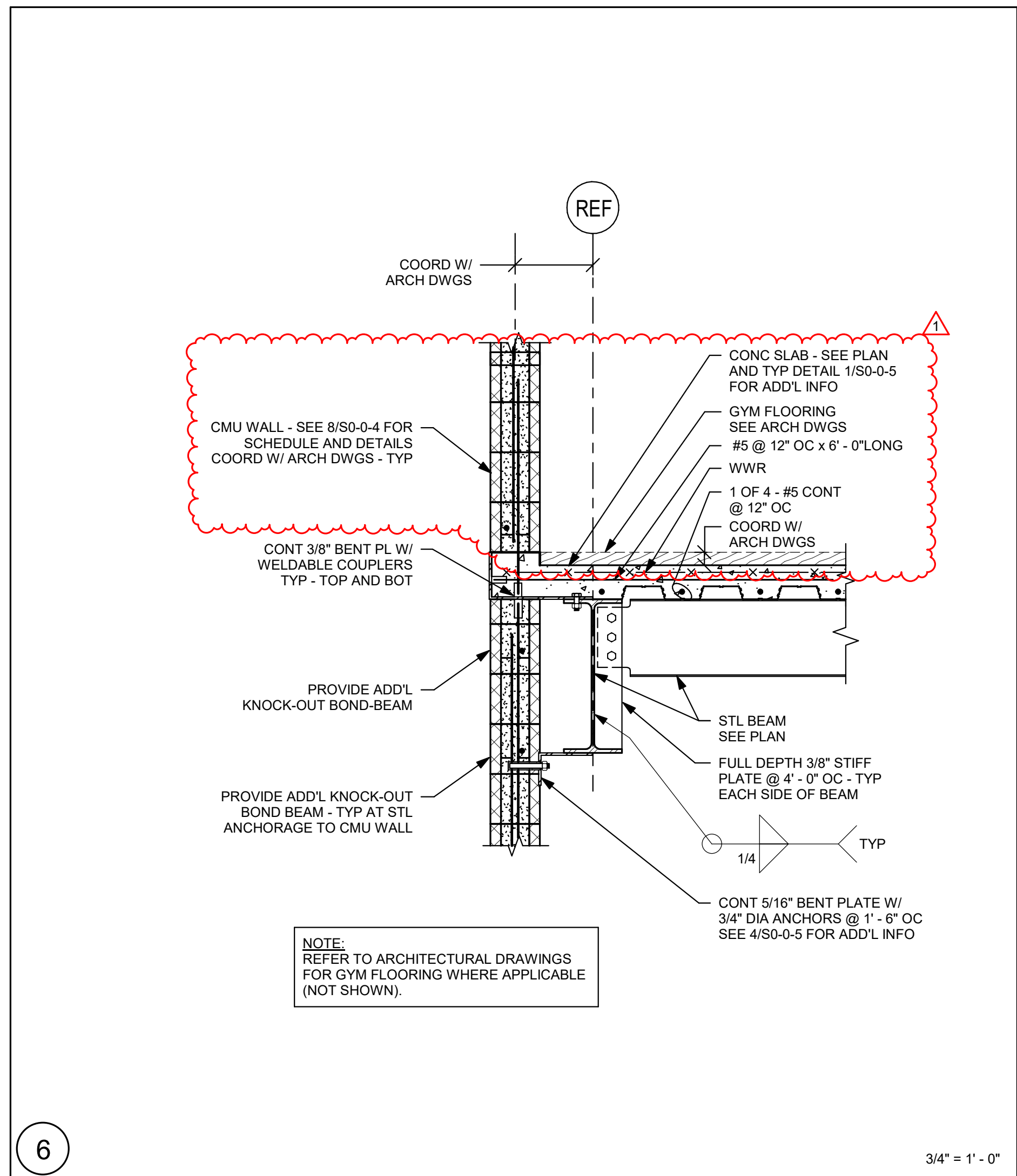
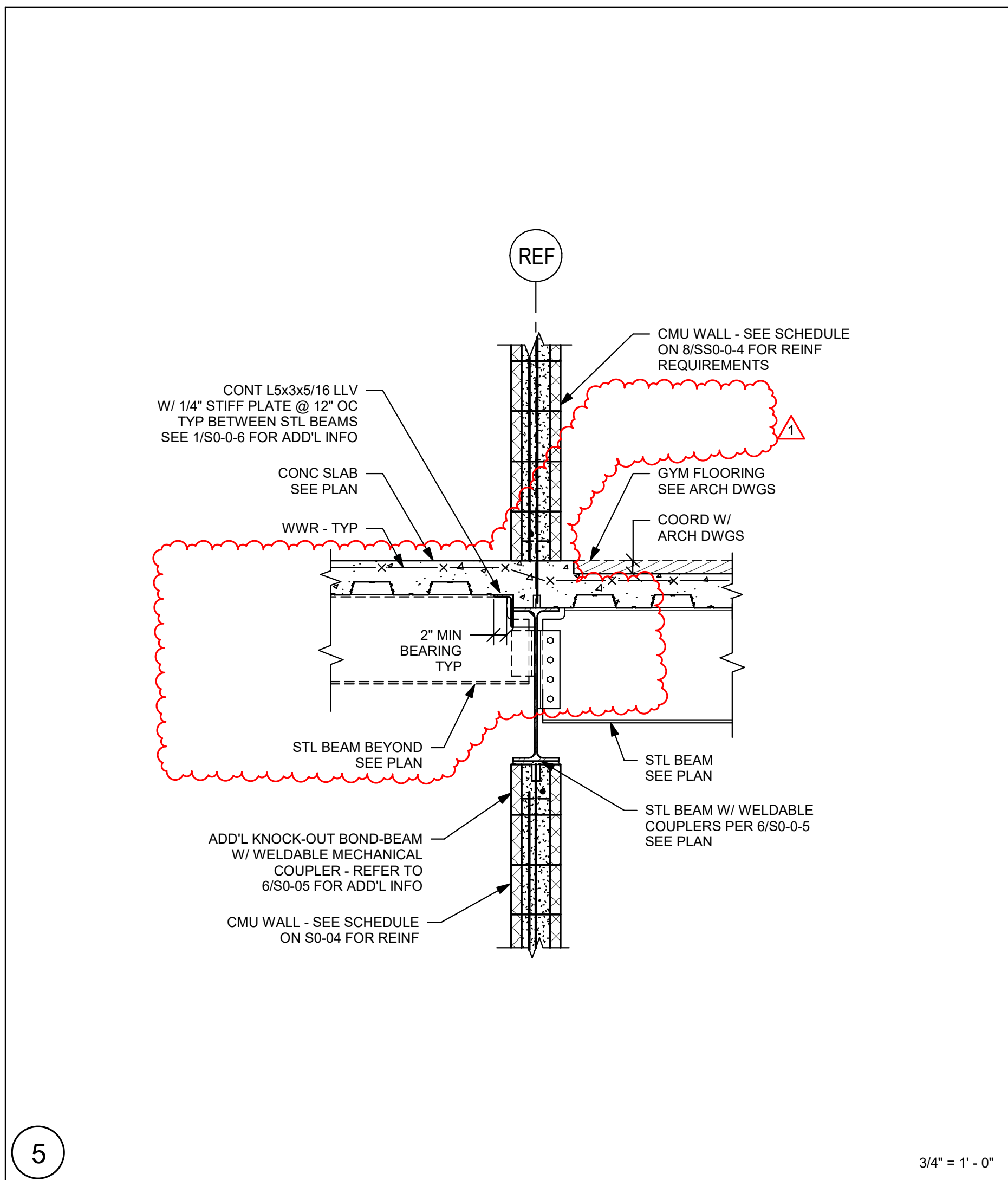
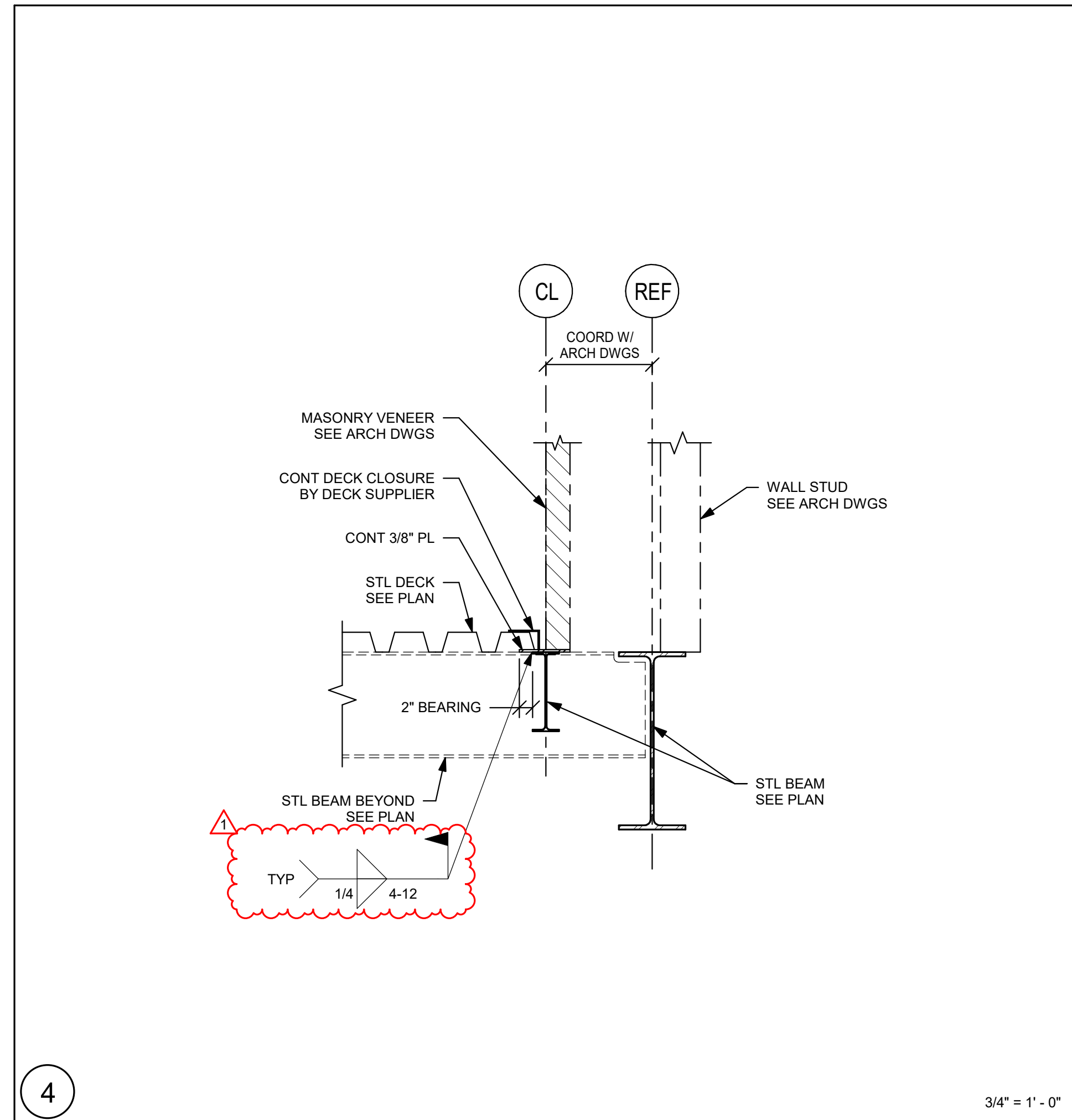
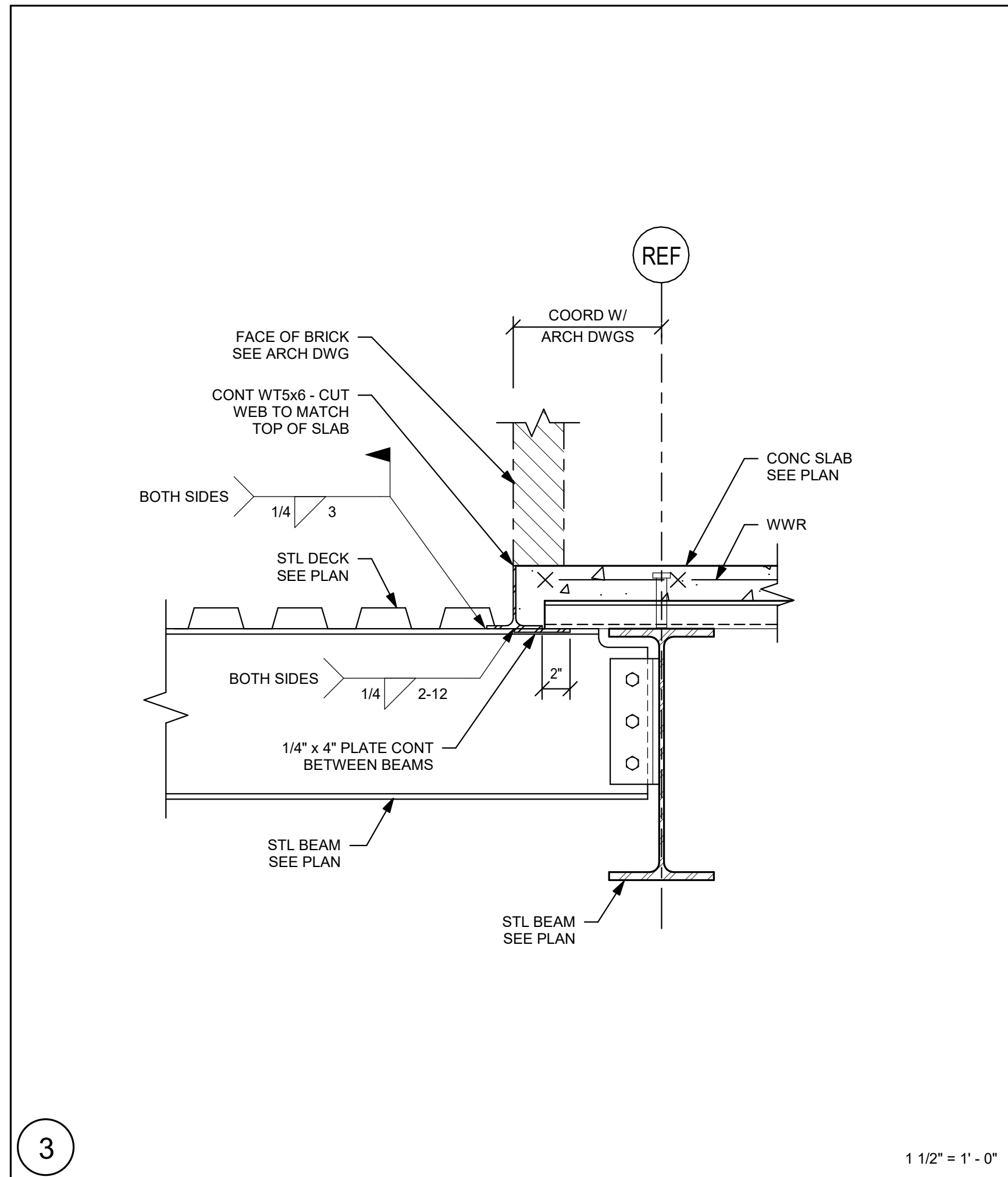
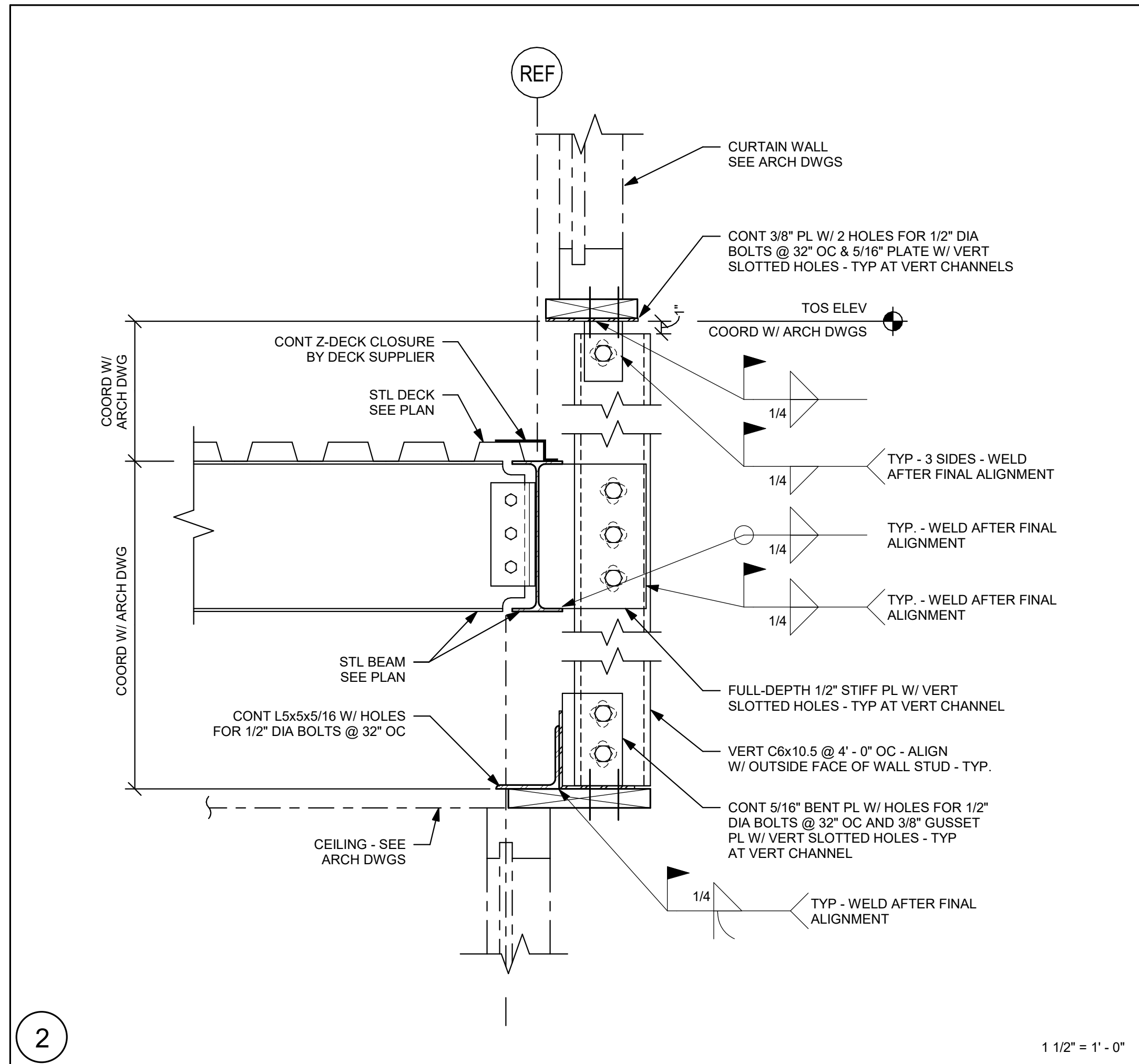
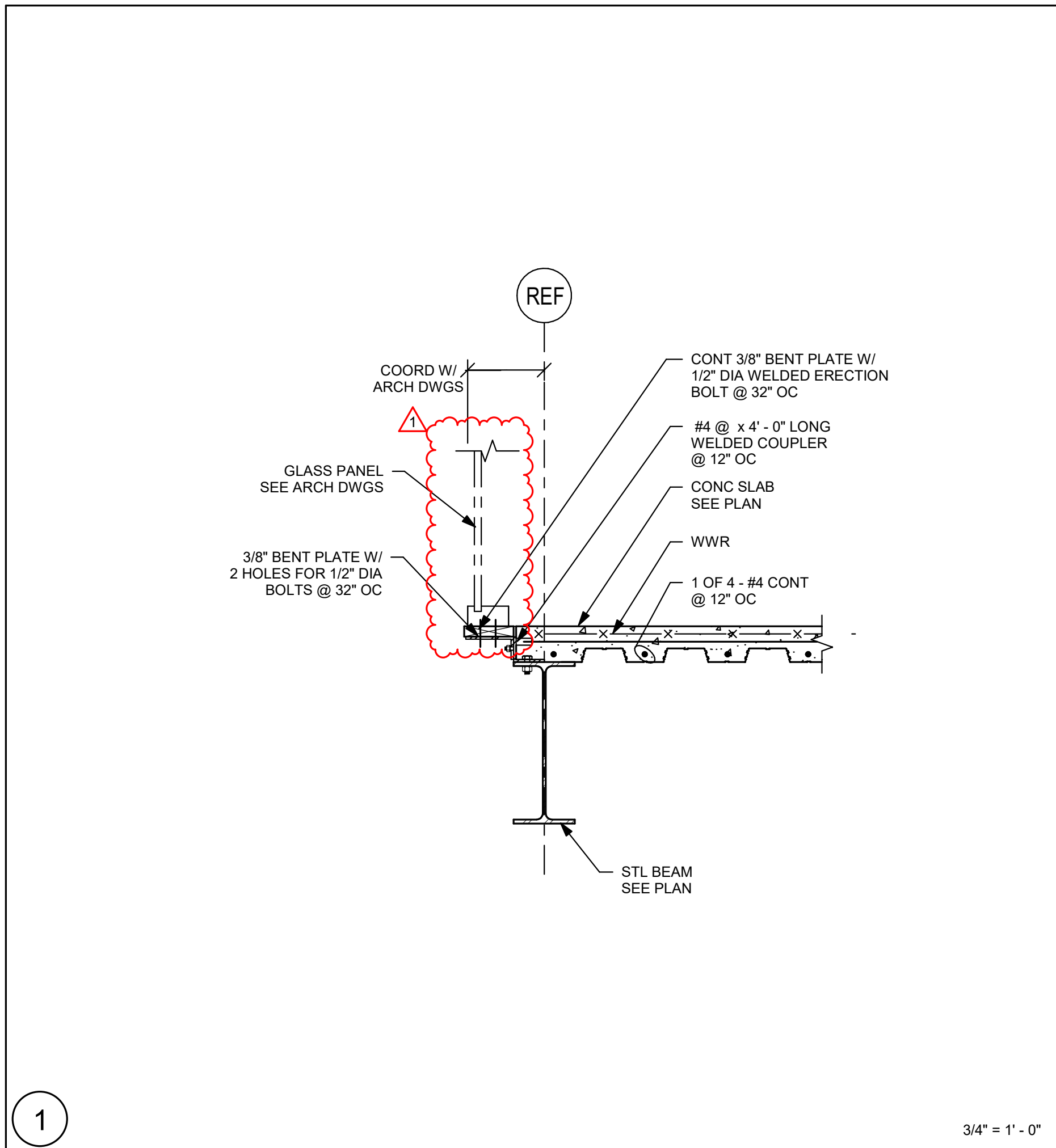
PROJECT NORTH
MAGNETIC NORTH

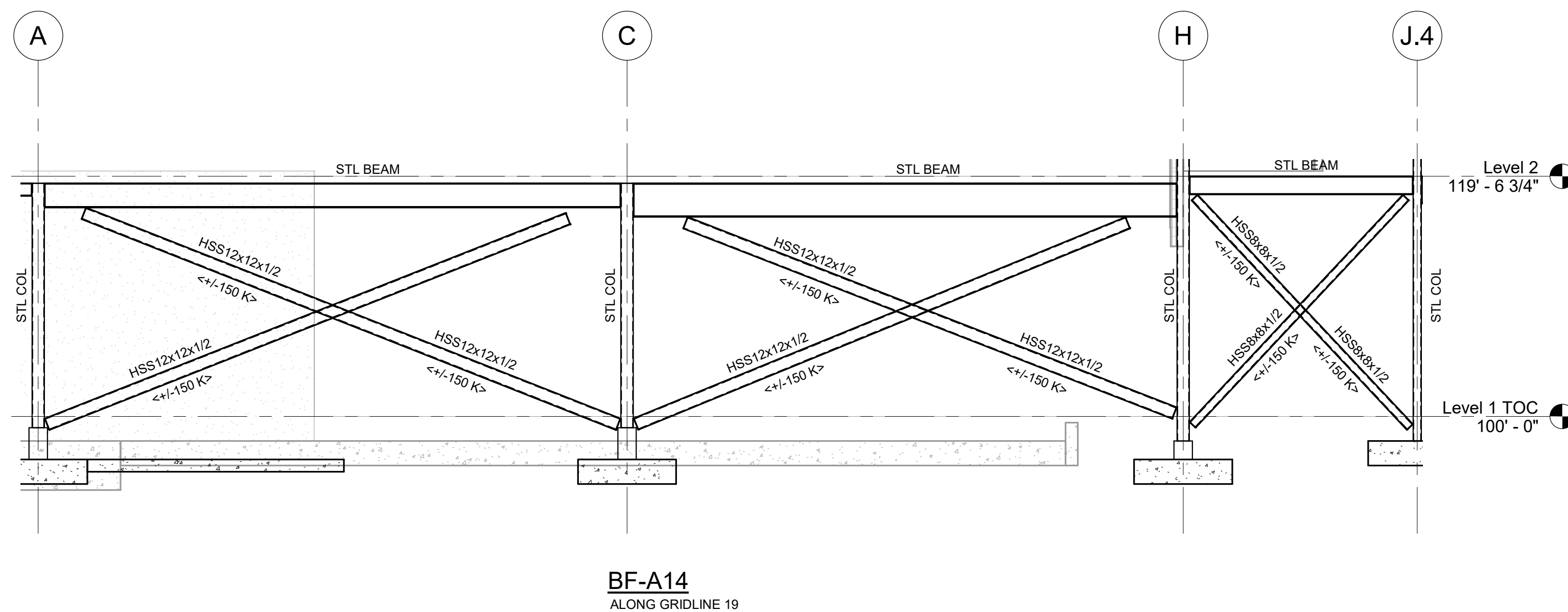
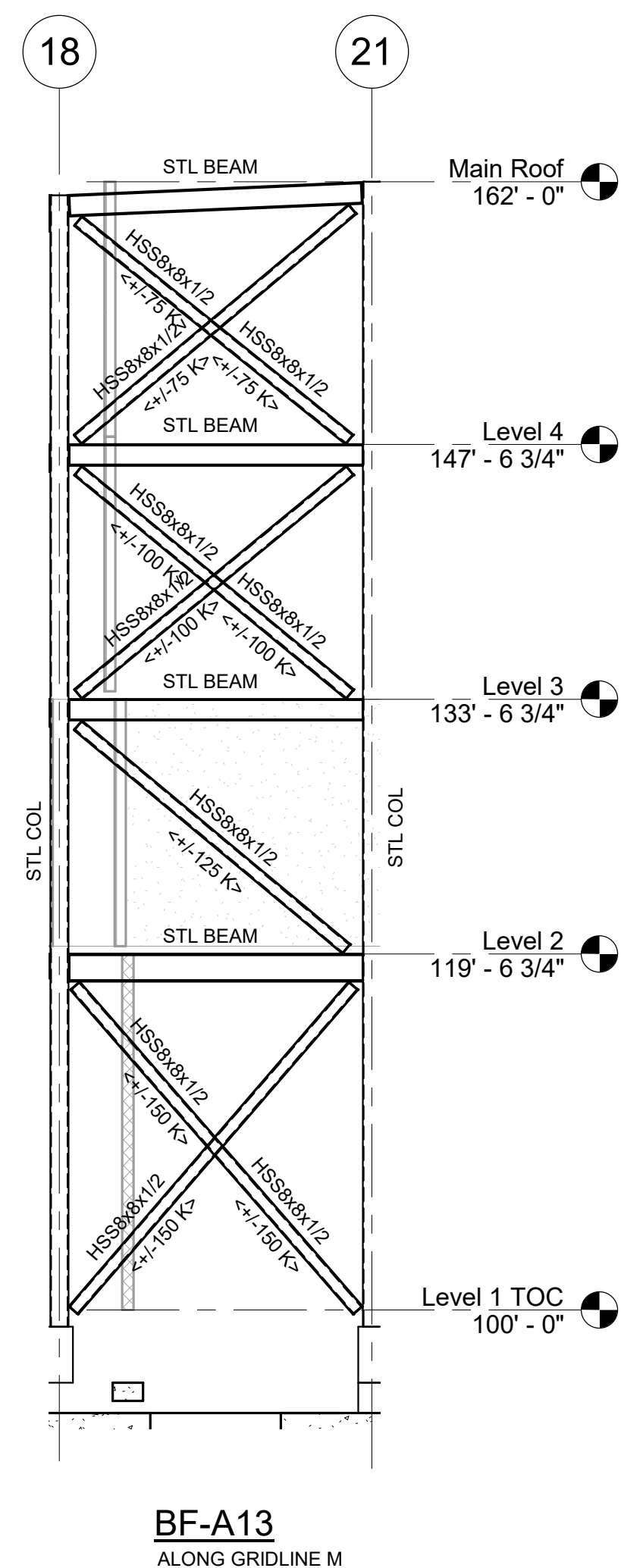
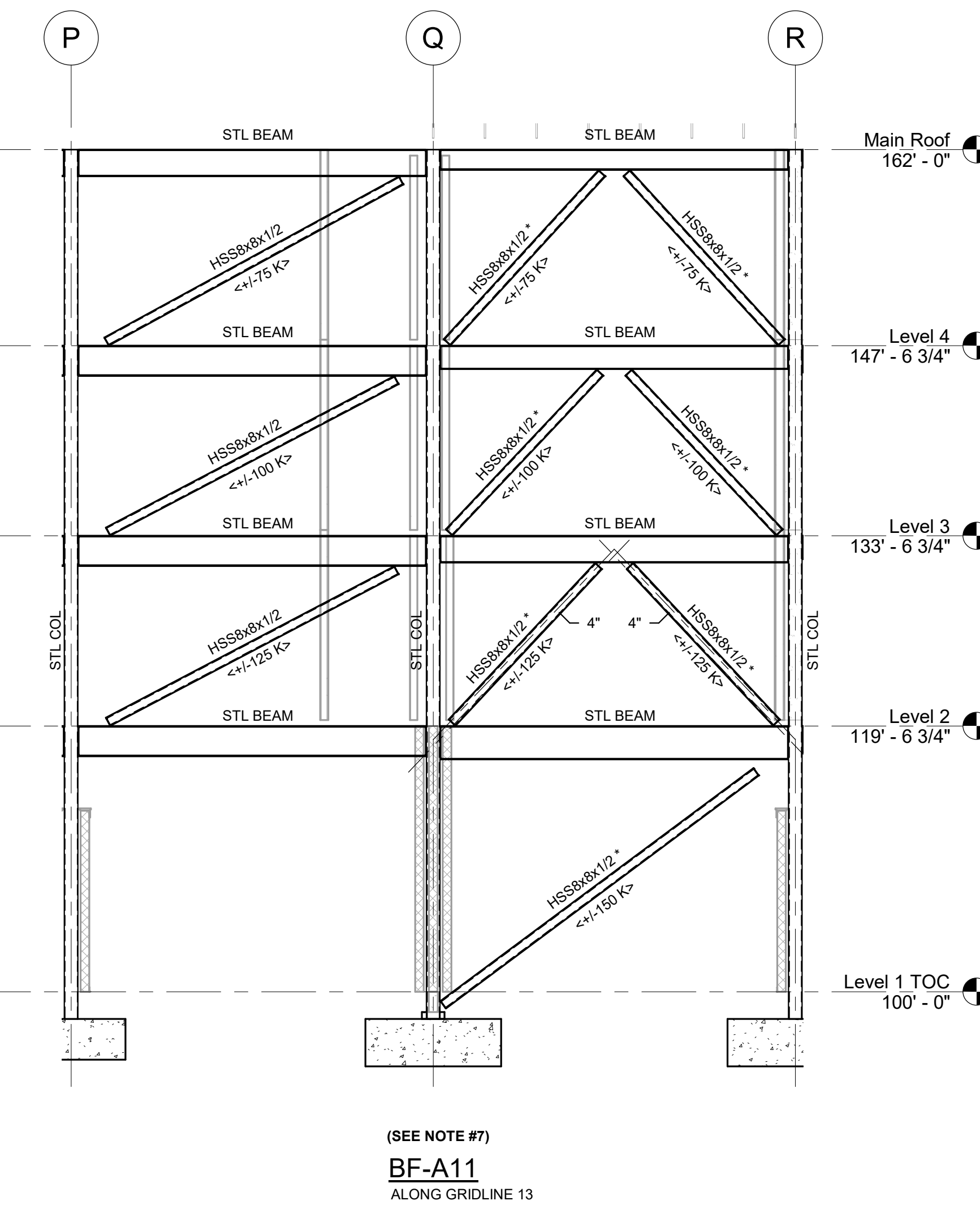
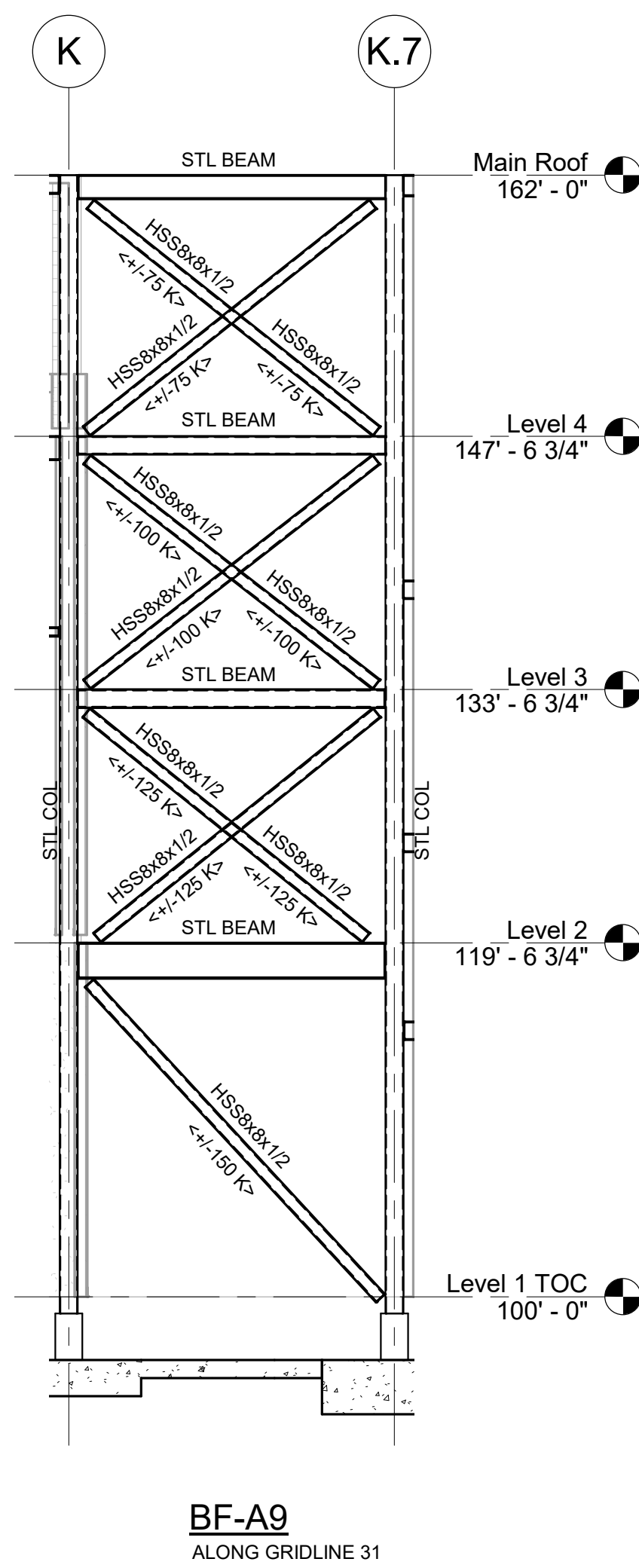
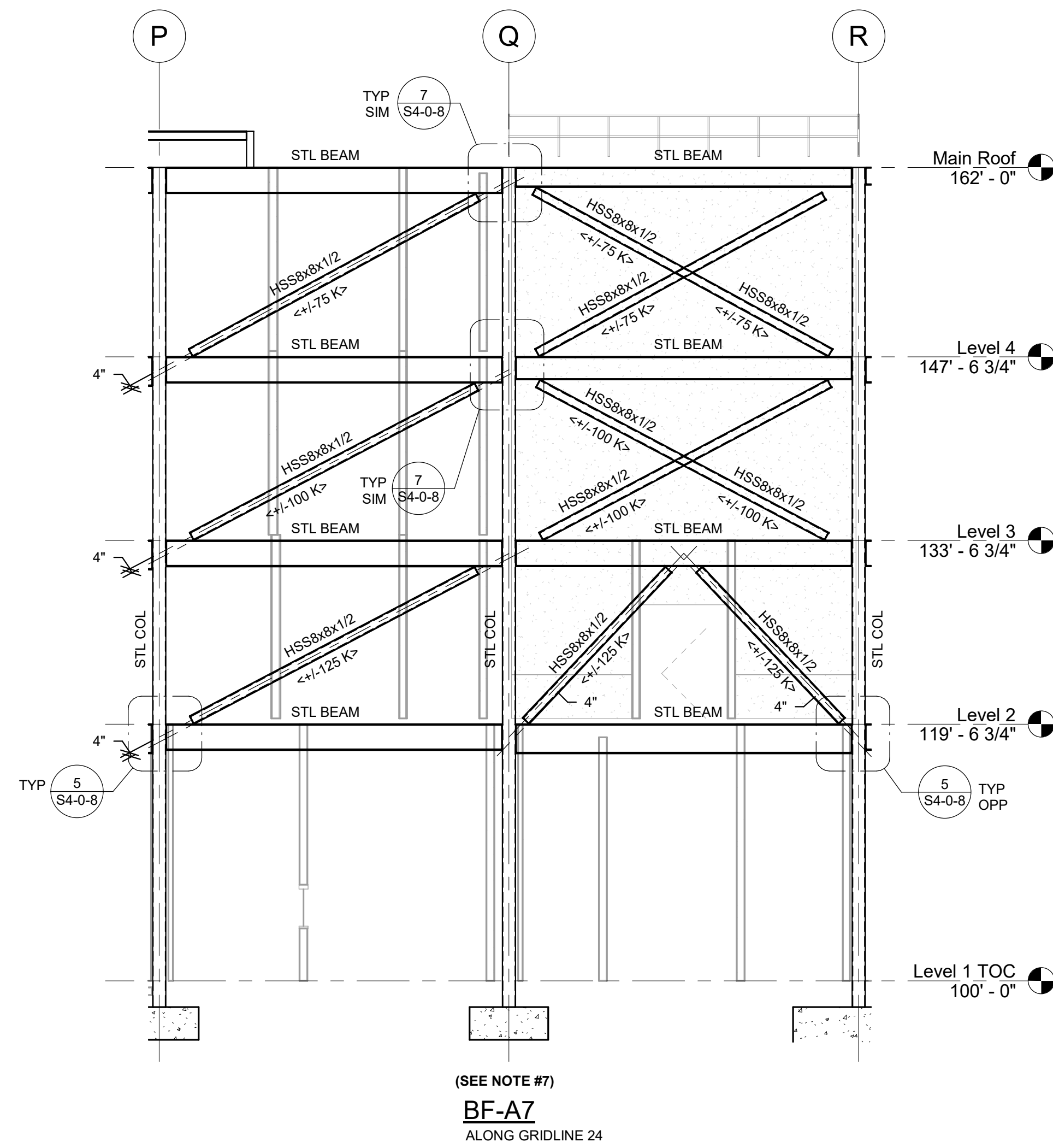
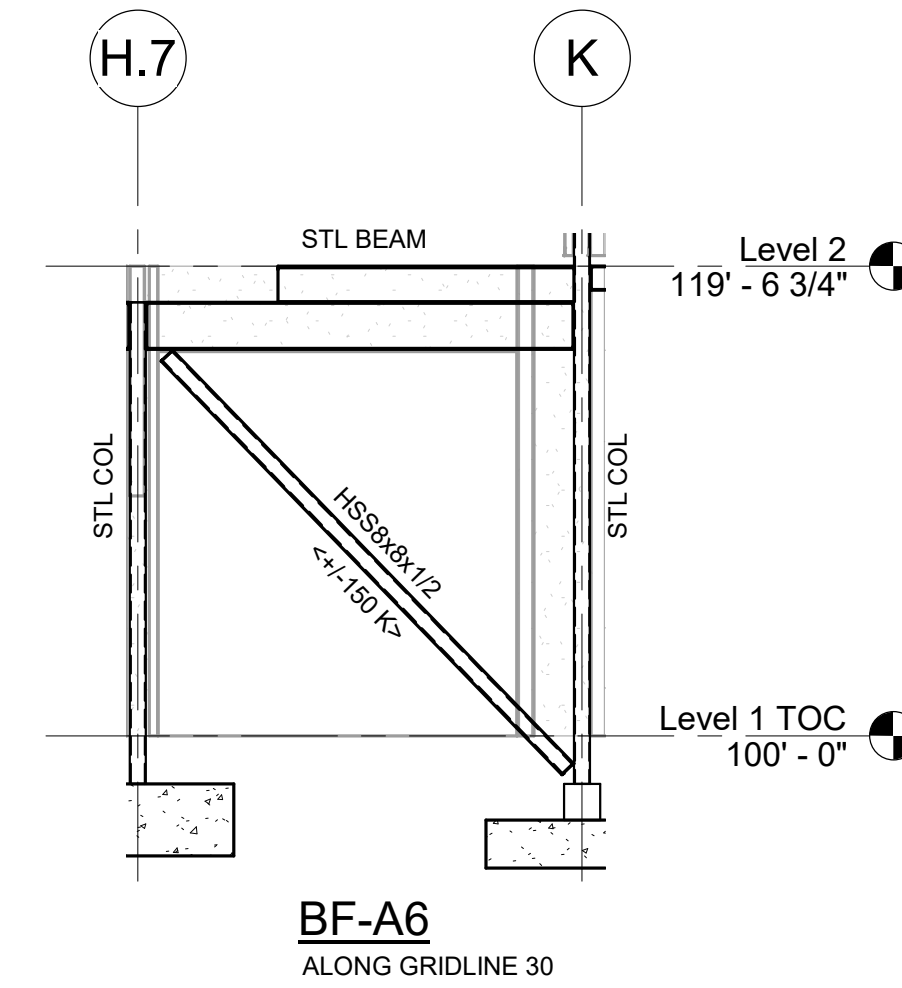
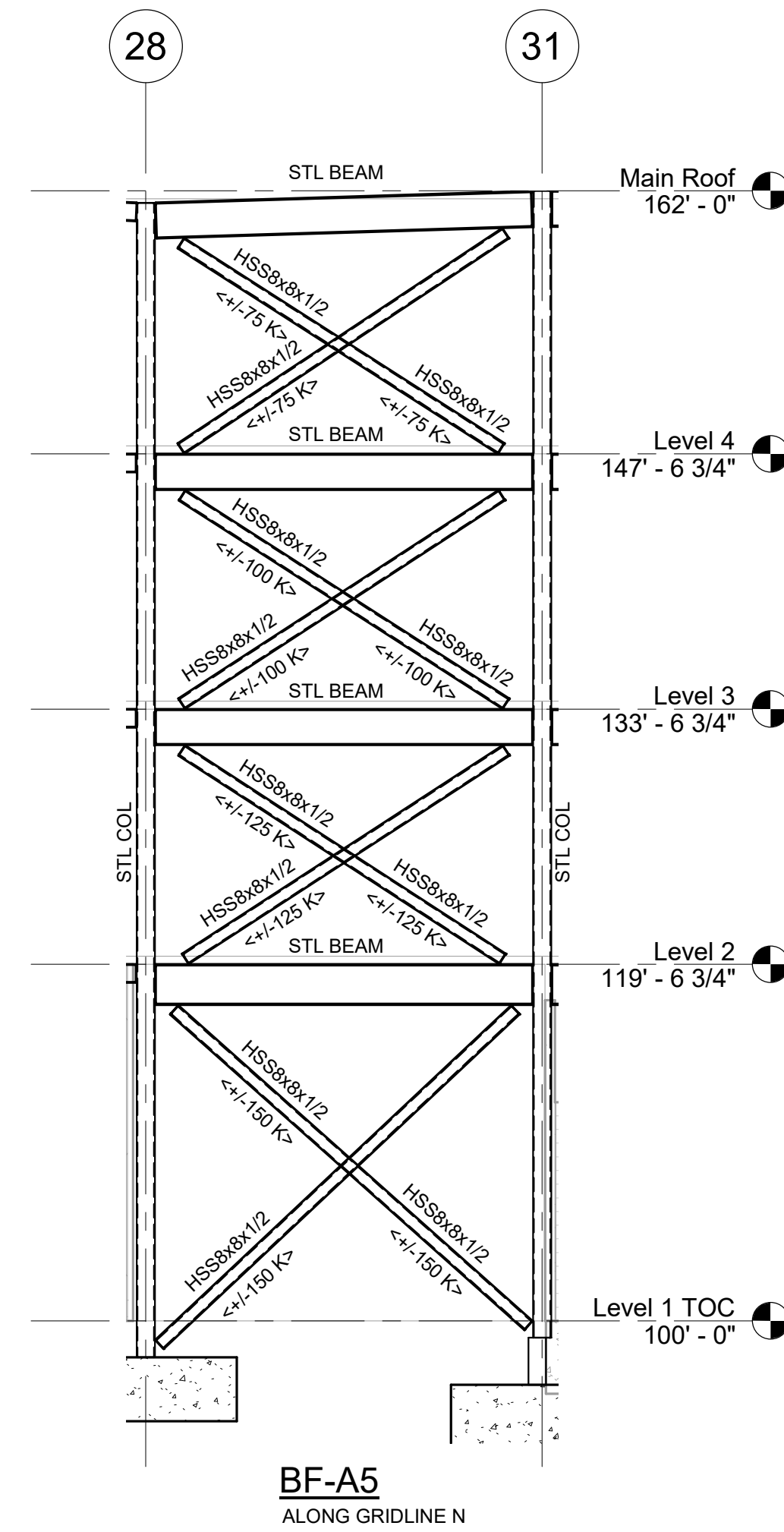
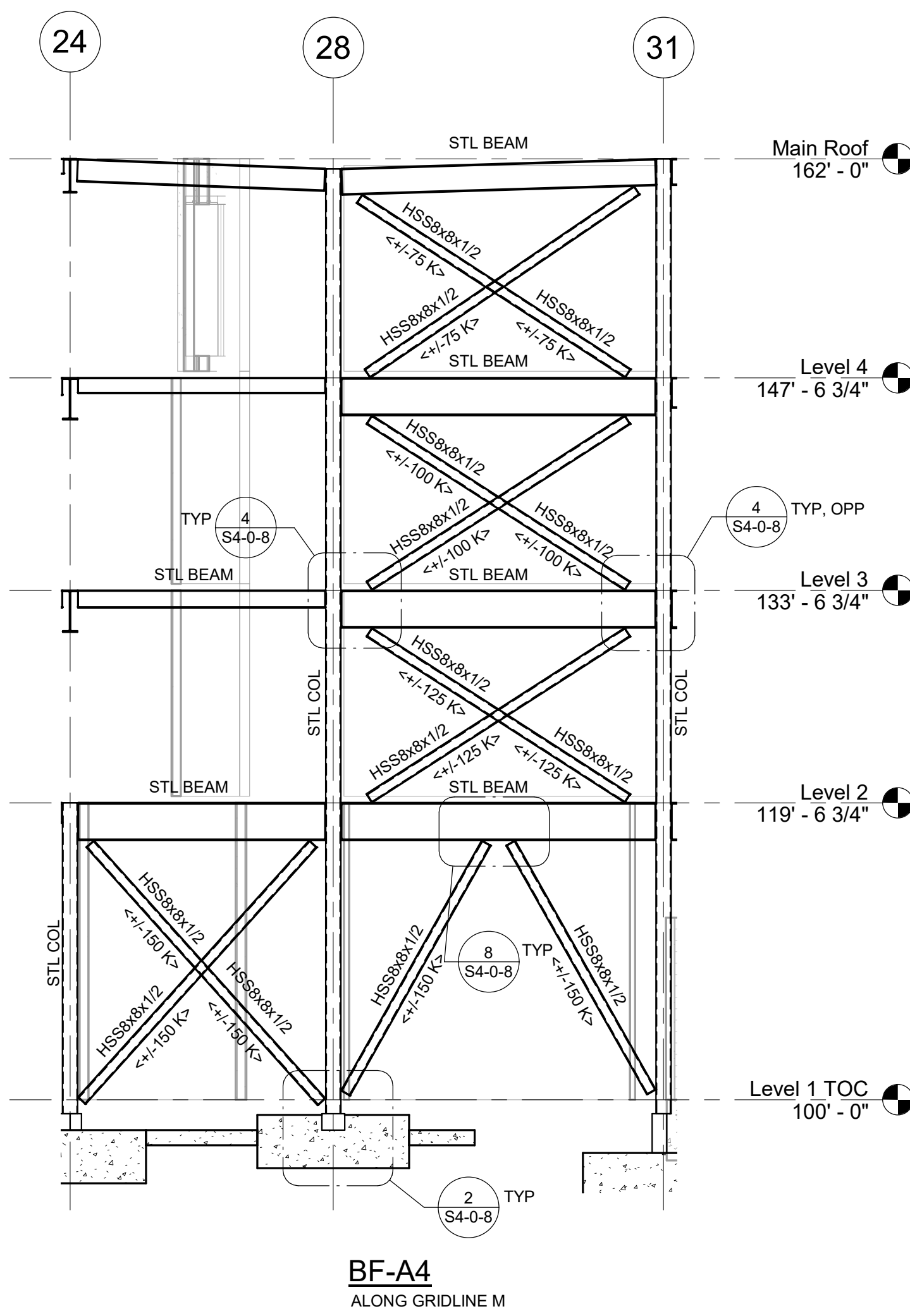
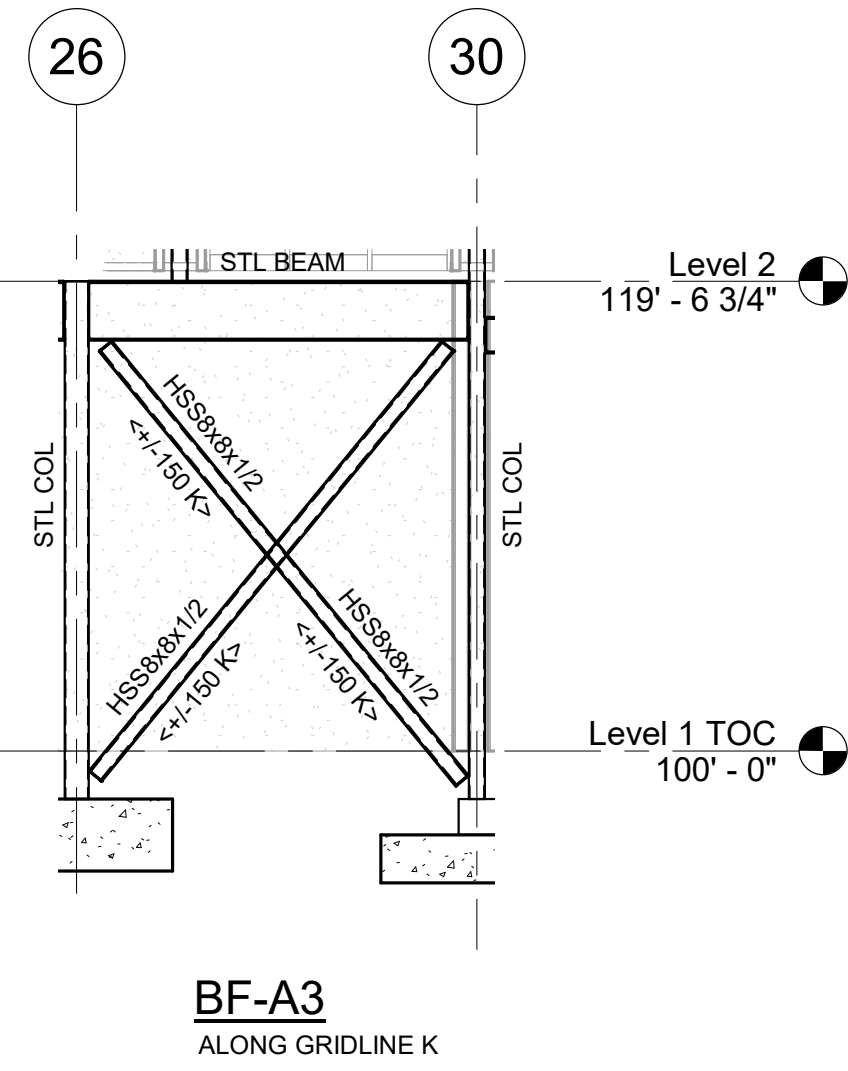
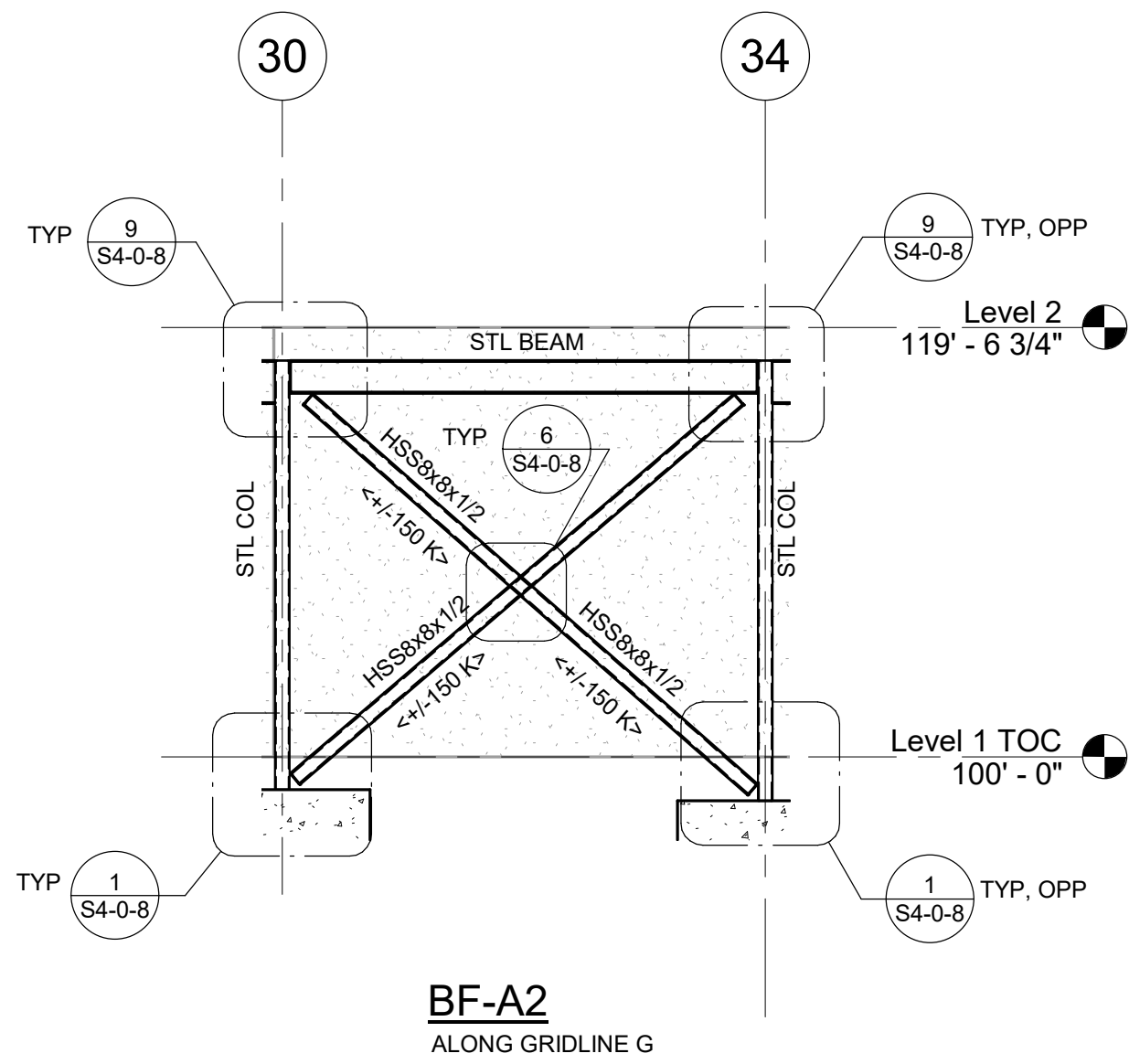
SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S3-0-8







BRACE FRAME NOTES:

1. FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
2. ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
3. DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
4. DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
5. BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
6. SEE PLANS FOR COLUMN AND BEAM SIZES.
7. CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
8. * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, INCLUDING STEEL BEAMS AND COLUMNS TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

FIREPROOFING NOTES:

1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
2. CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
3. EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
4. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.



Drumme Rosane Anderson, Inc.
225 Oakland Road Studio 205
South Windsor, CT 06074
Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

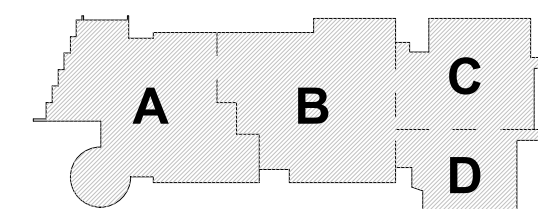
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

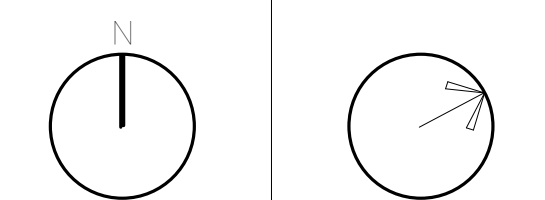
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

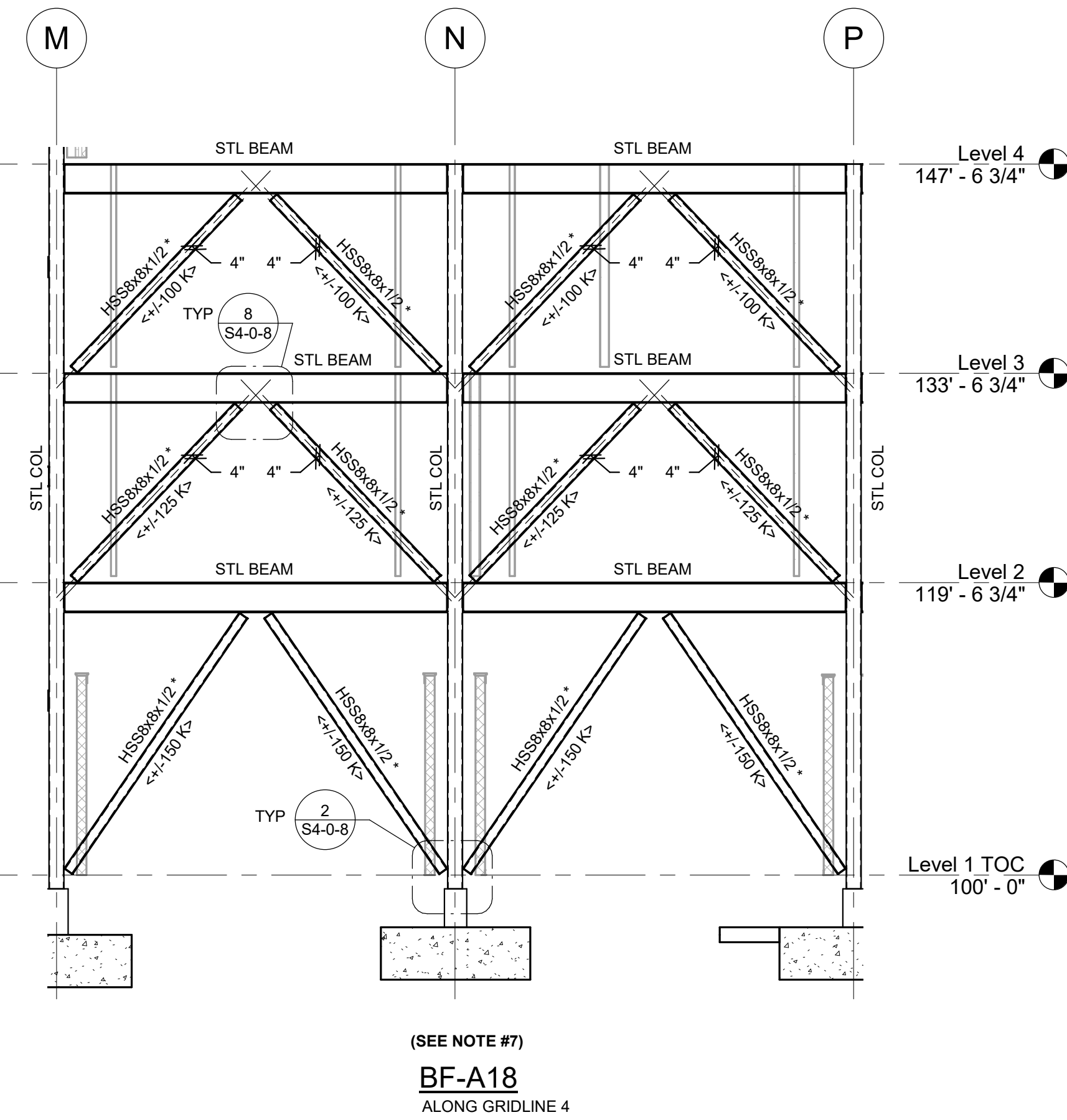
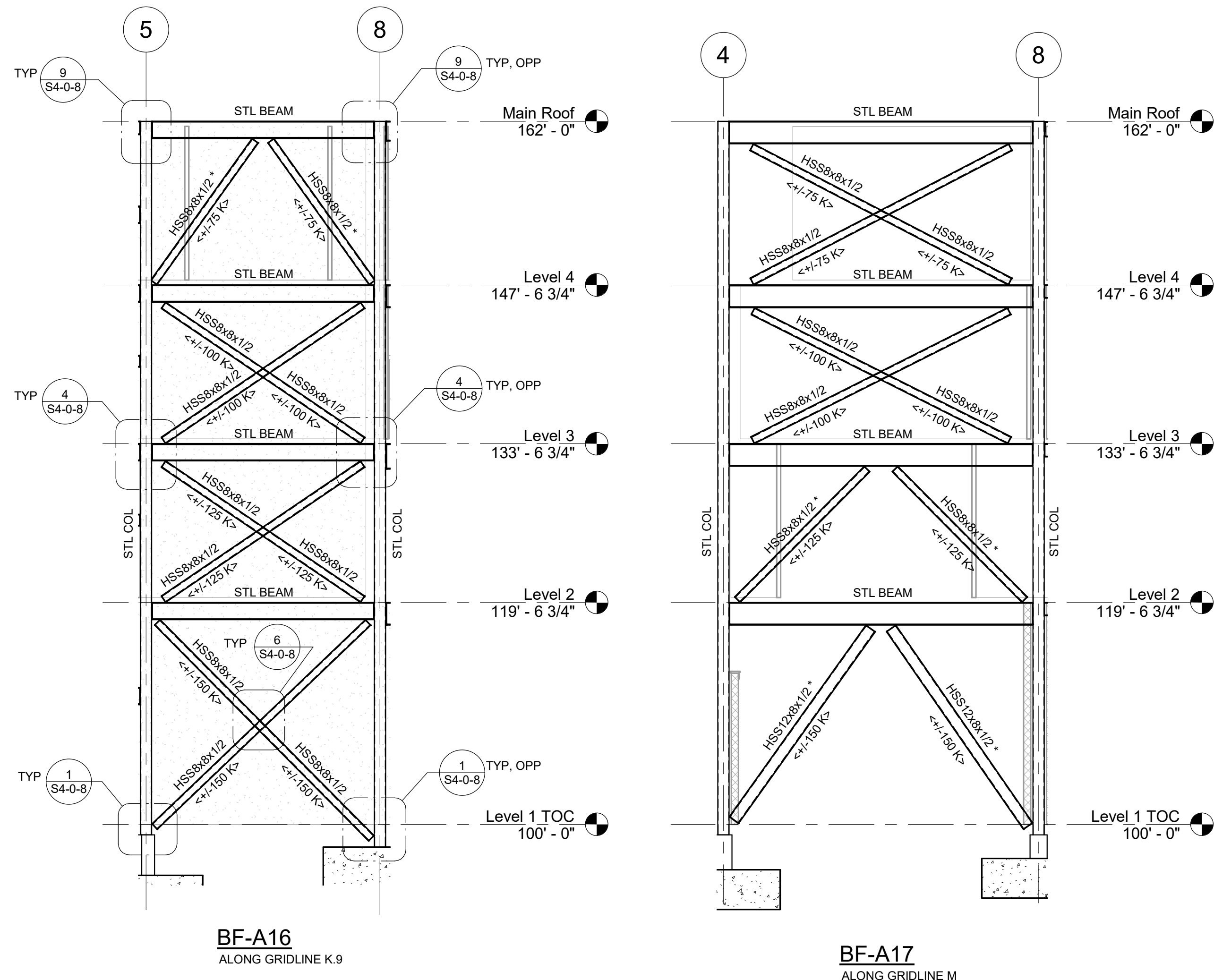
PROJECT NORTH MAGNETIC NORTH



BRACE FRAME ELEVATIONS - AREA A

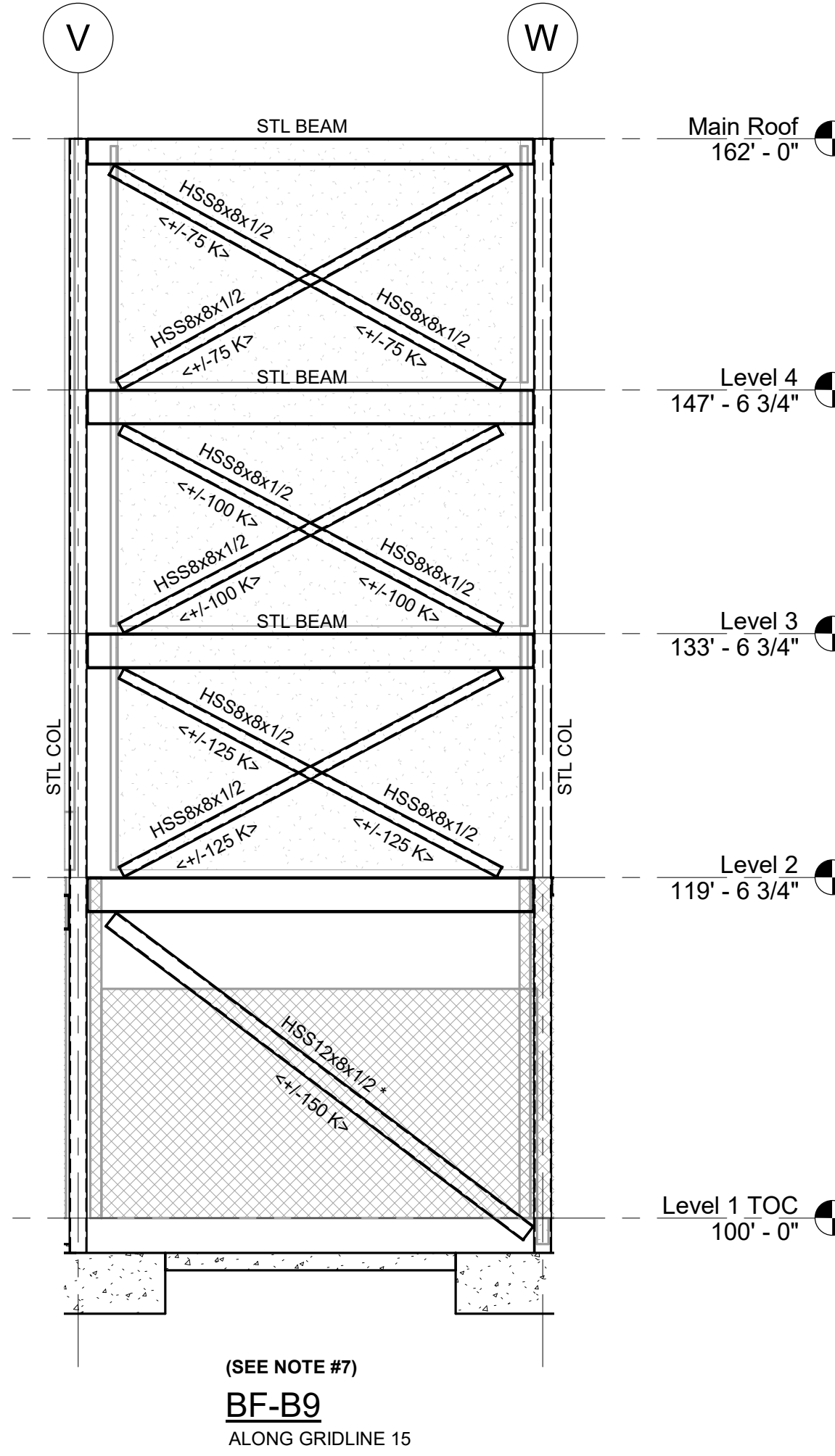
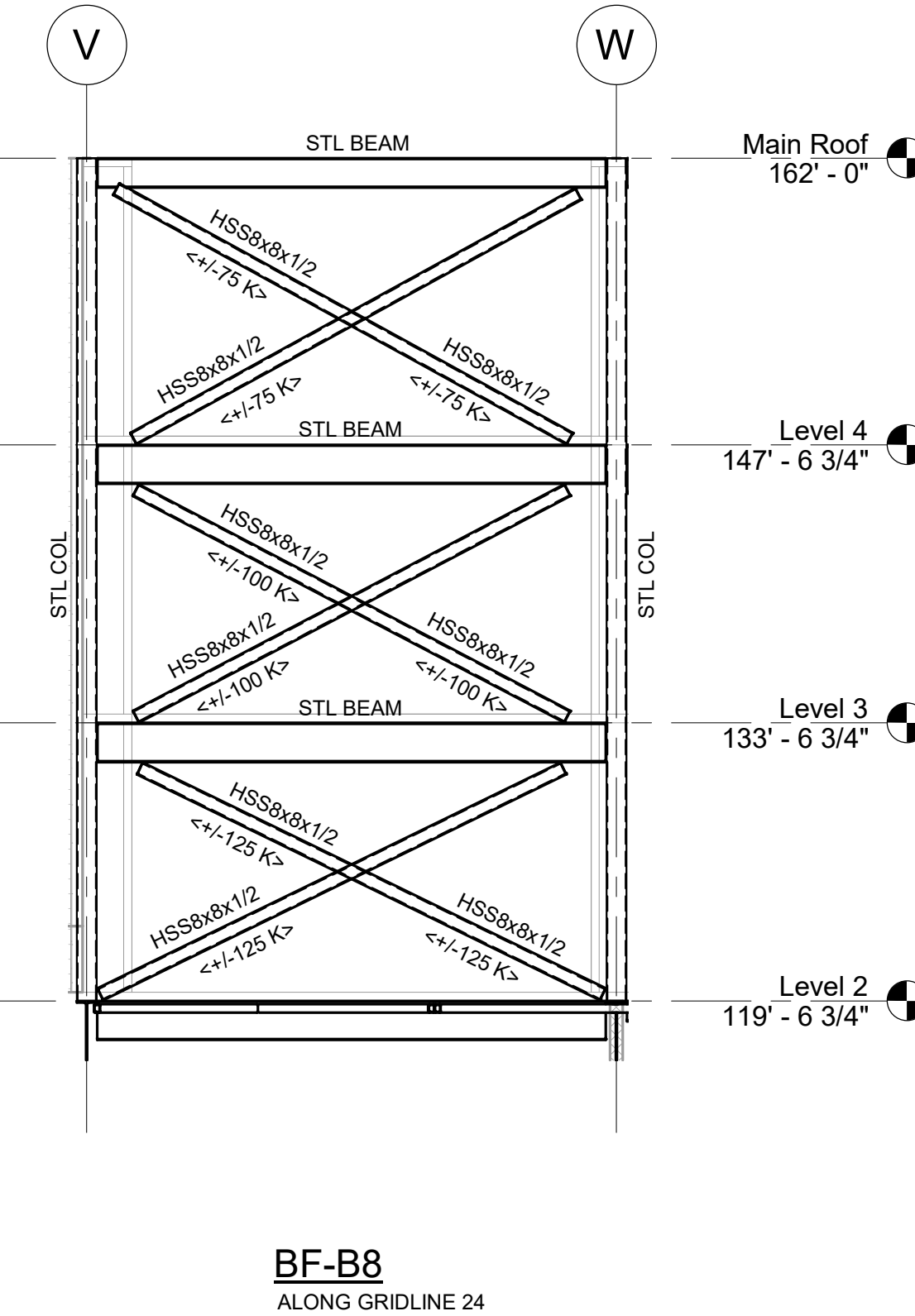
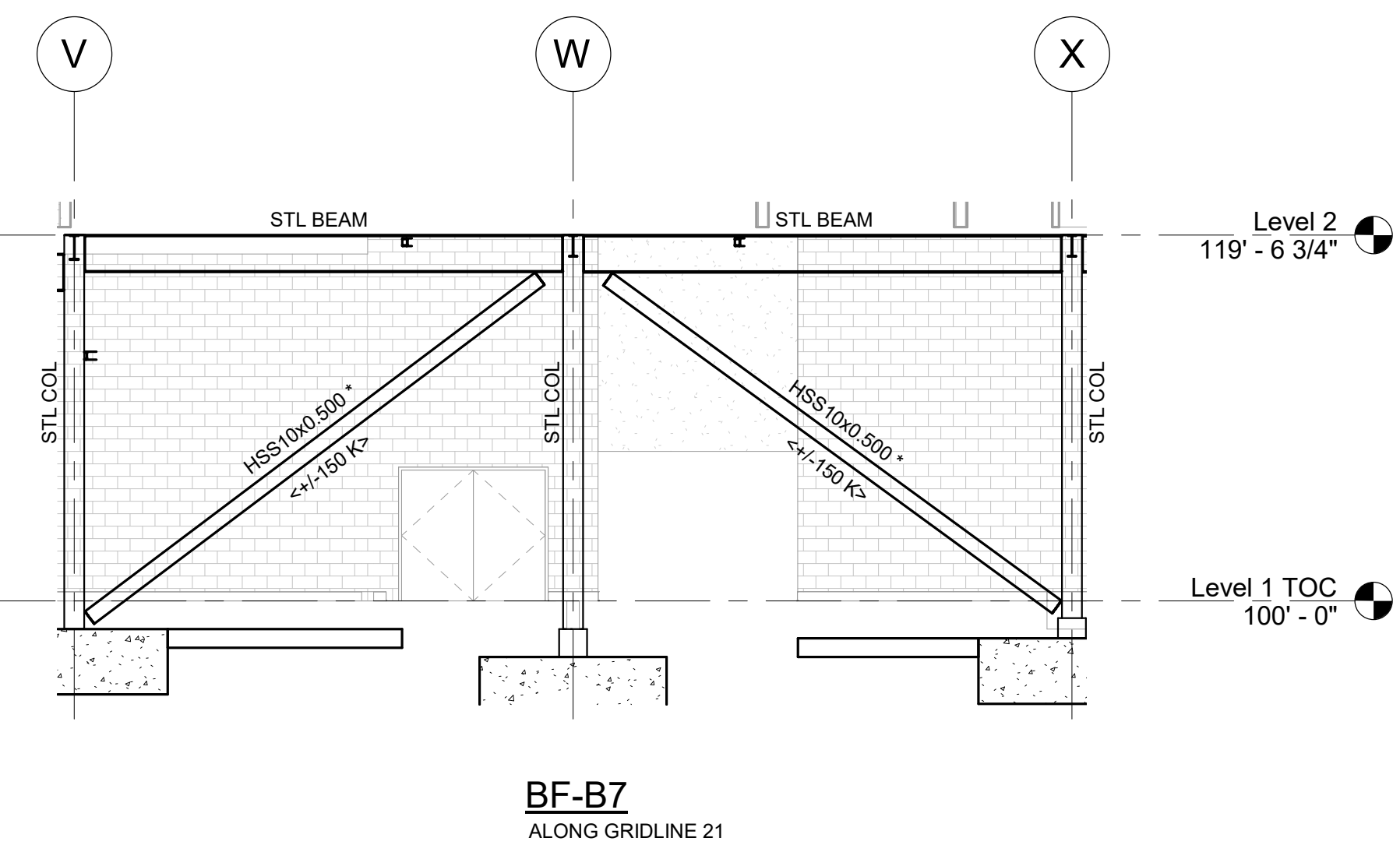
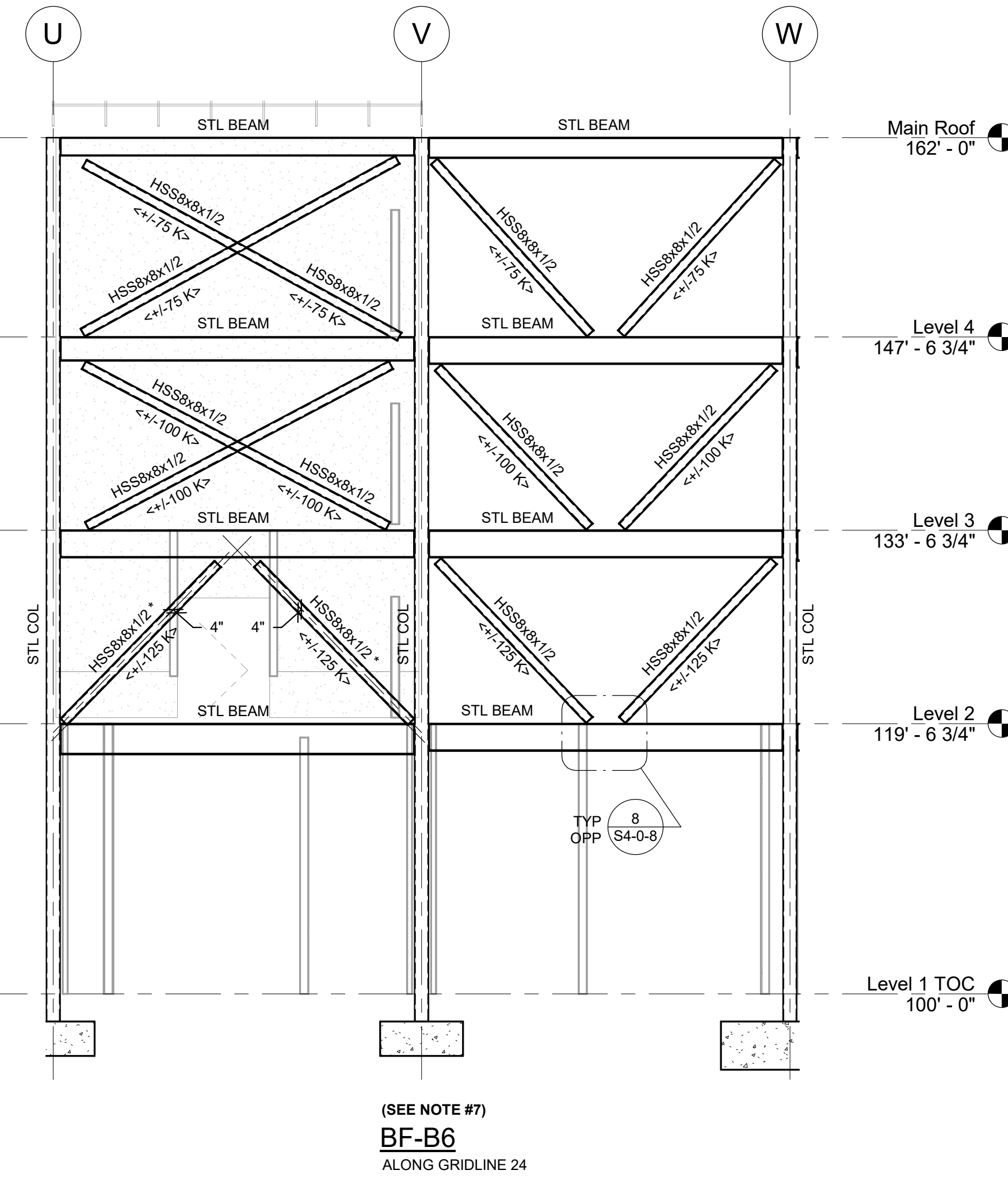
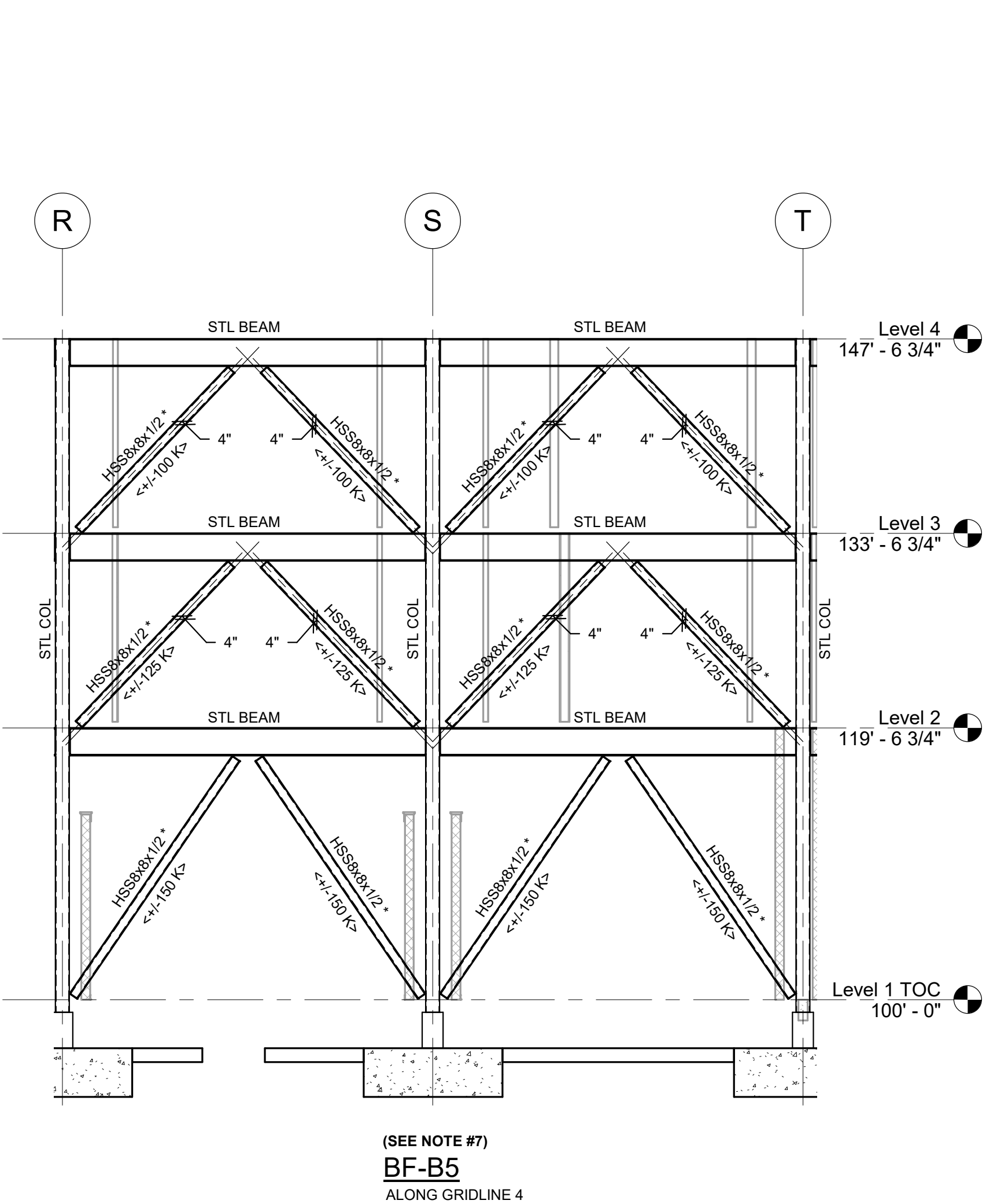
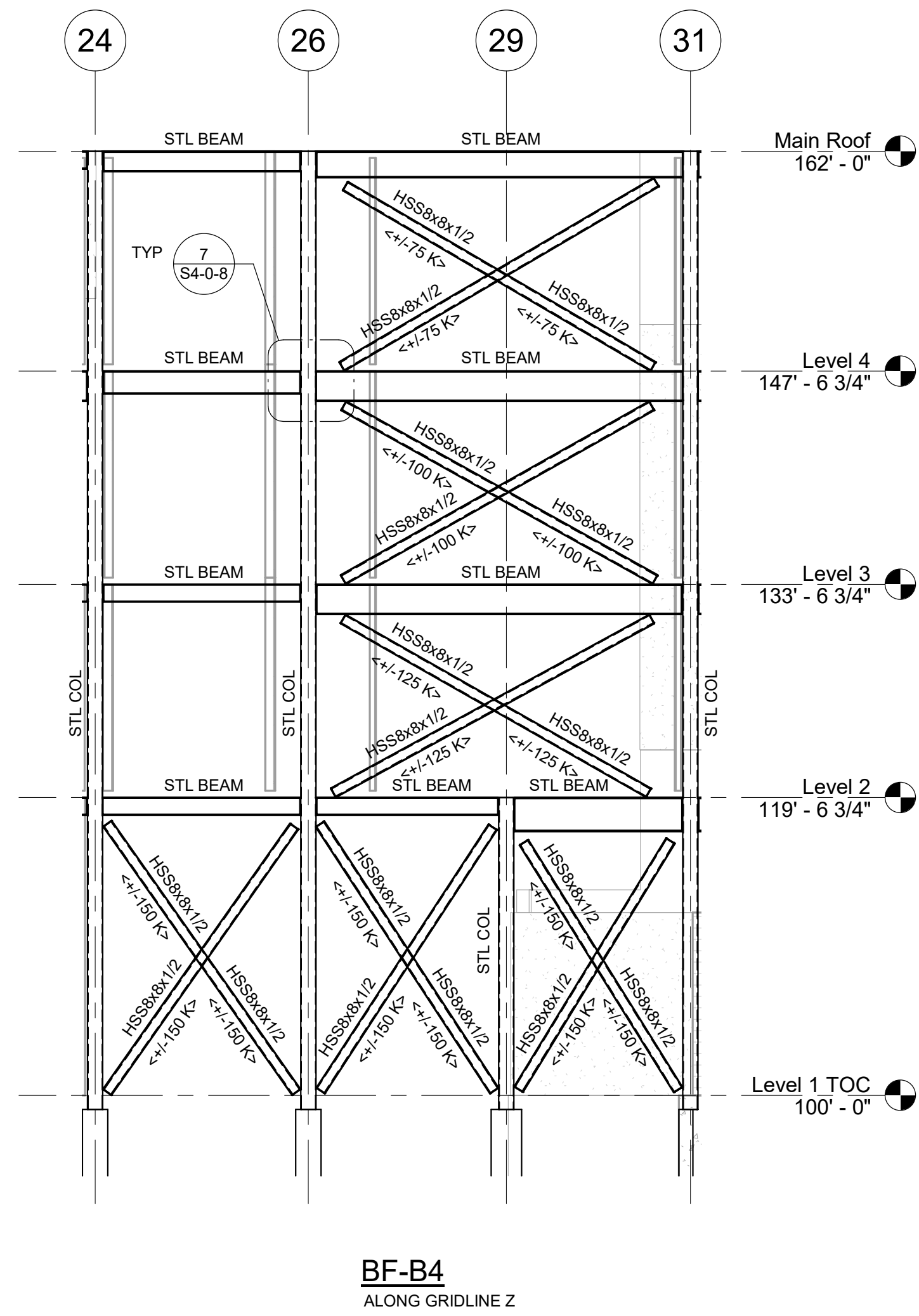
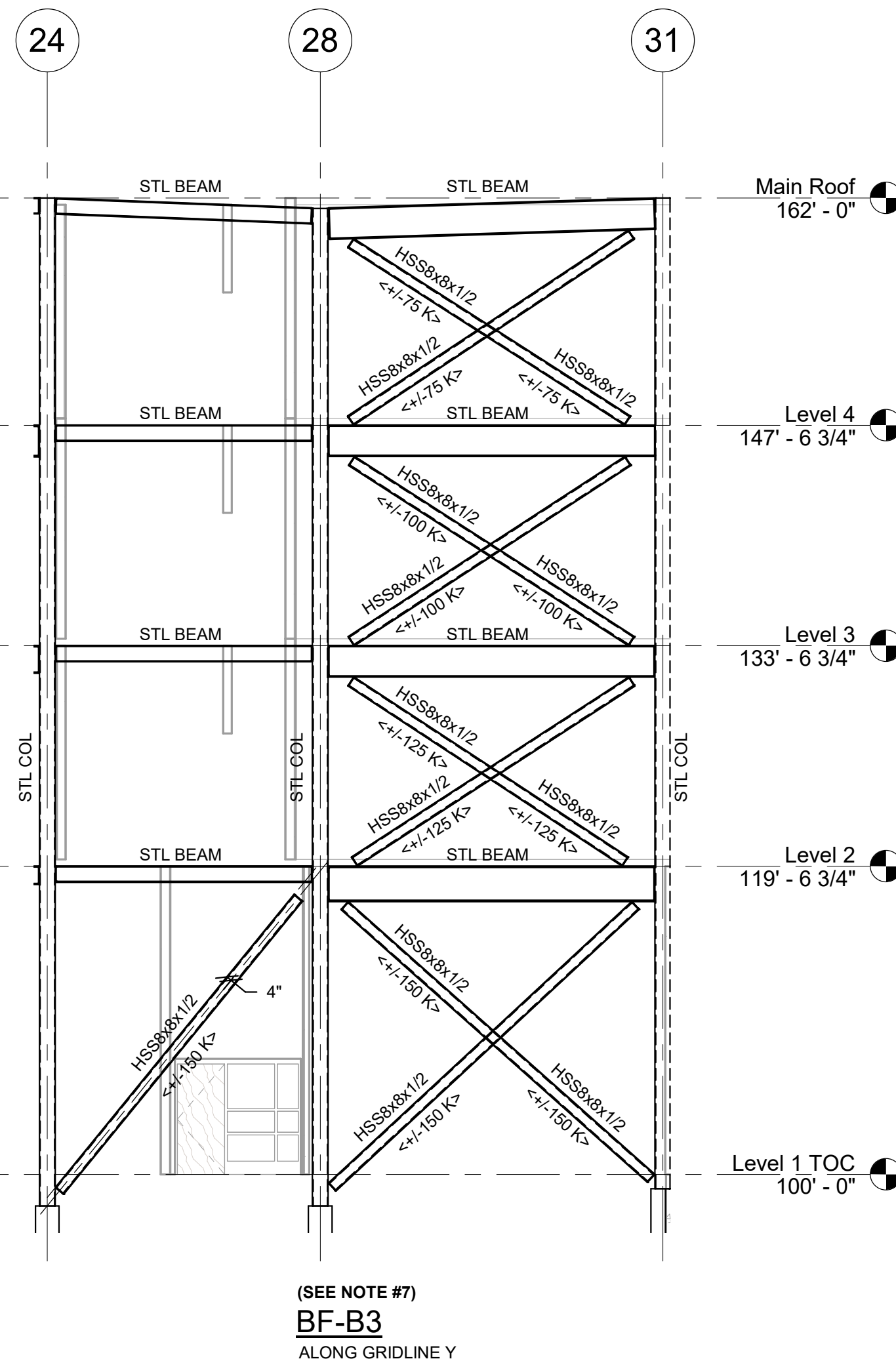
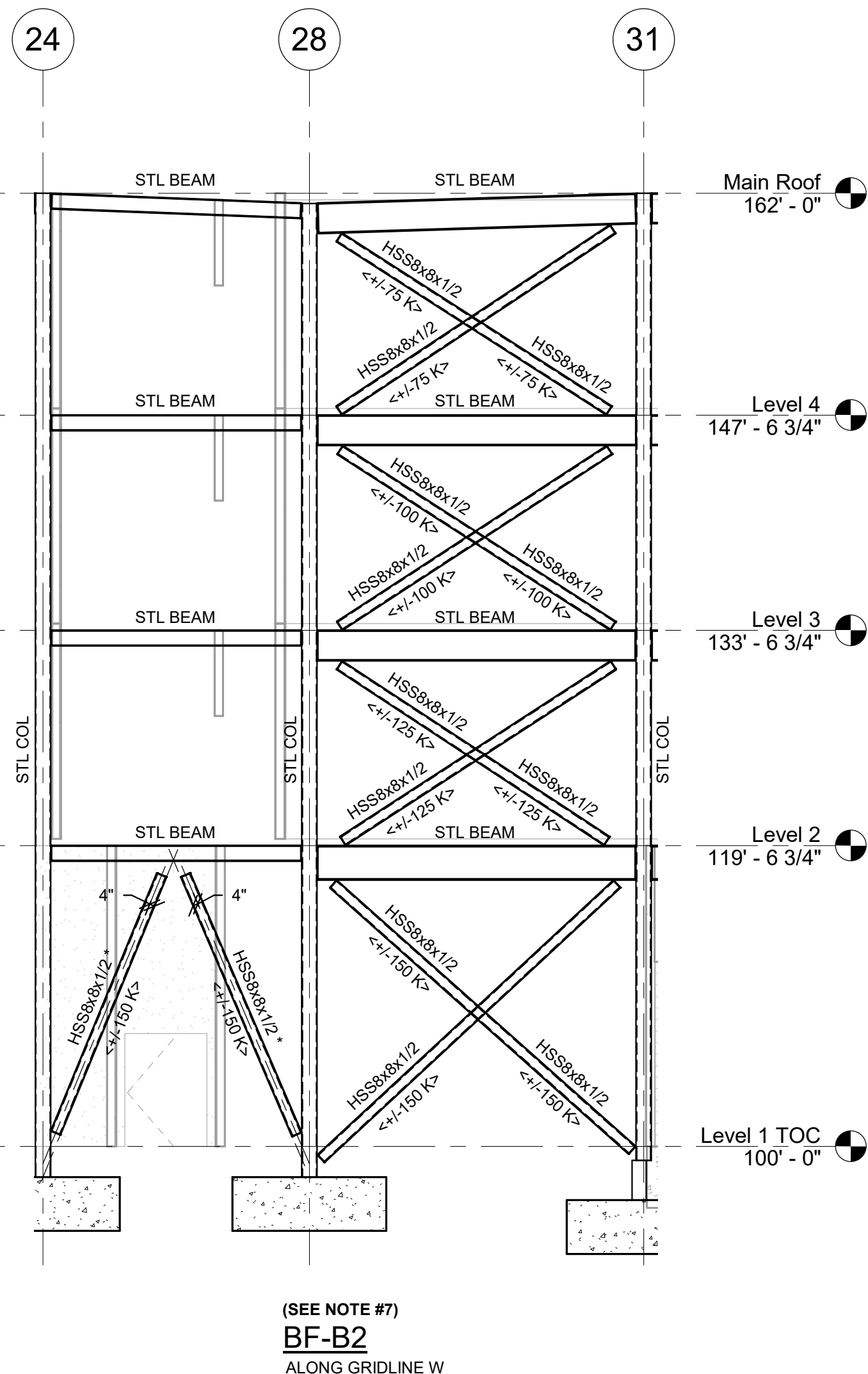
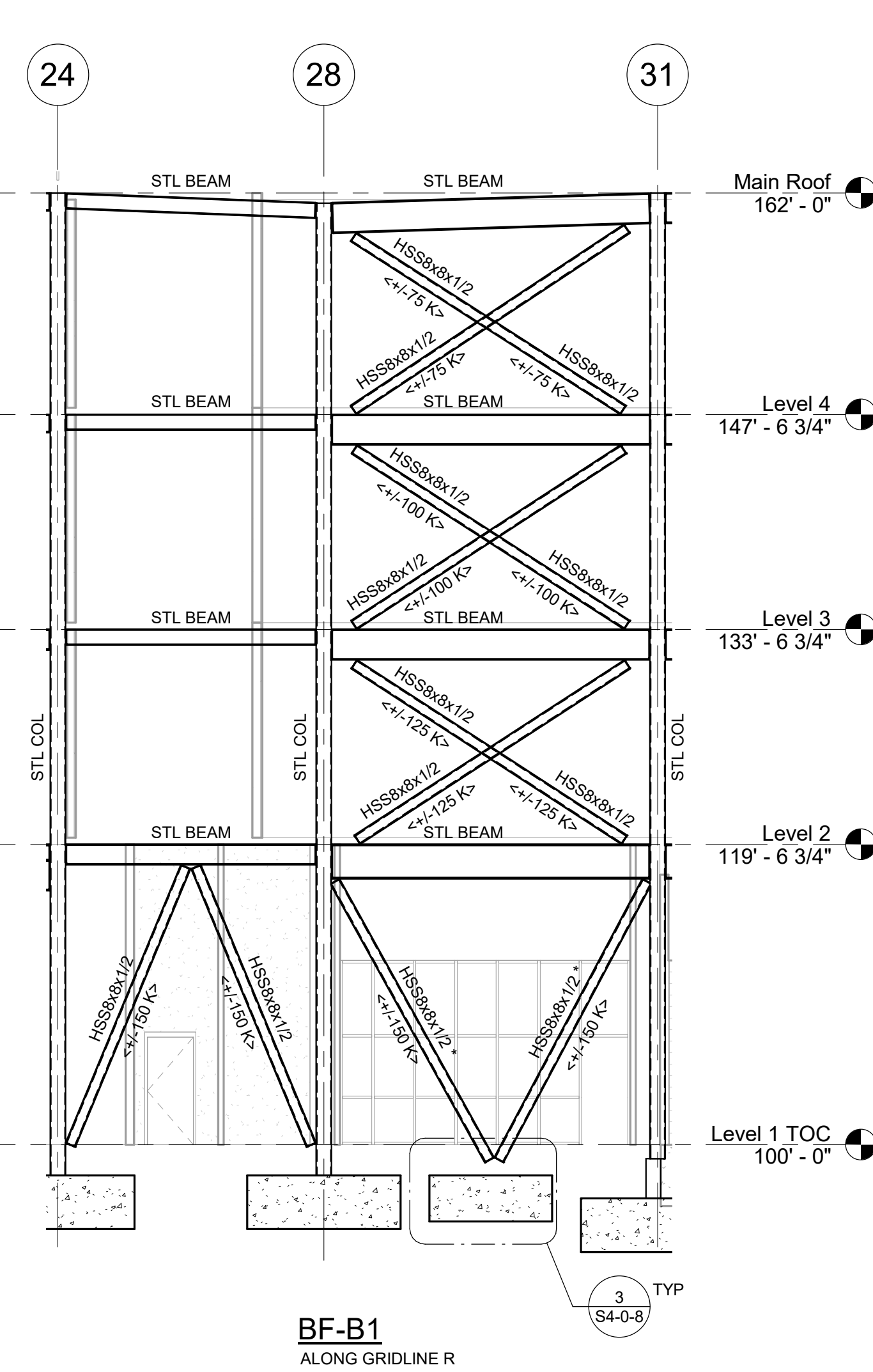
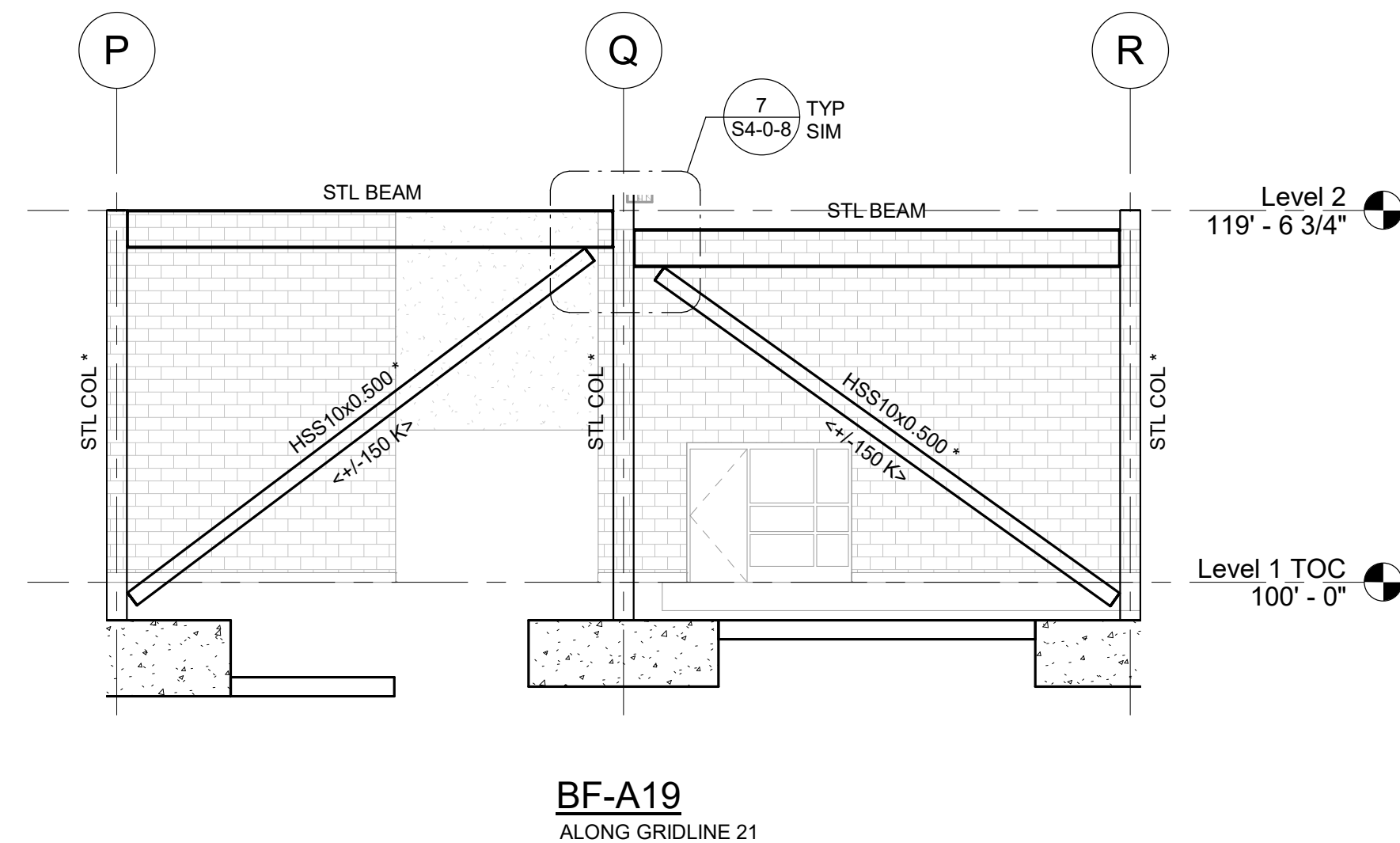
Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S4-0-1



- FIREPROOFING NOTES:**
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 - EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 - COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- BRACE FRAME NOTES:**
- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 - ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
 - DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER -50K (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 - DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLAB AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 - BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 - SEE PLANS FOR COLUMN AND BEAM SIZES.
 - CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 - *SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS, WP, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.



**NORTHEAST
METRO TECH**

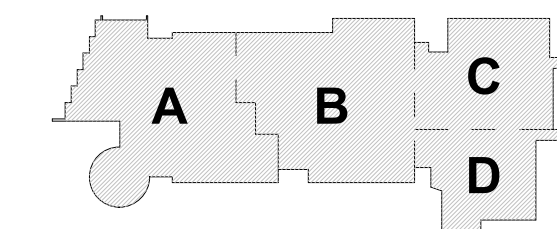
100 Hemlock Rd.
Wakefield, MA 01880

EDG

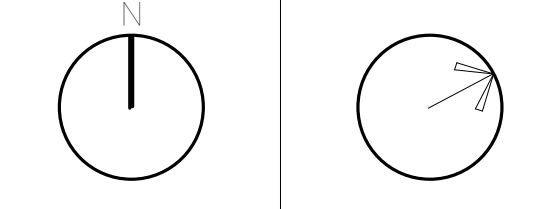
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMSEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



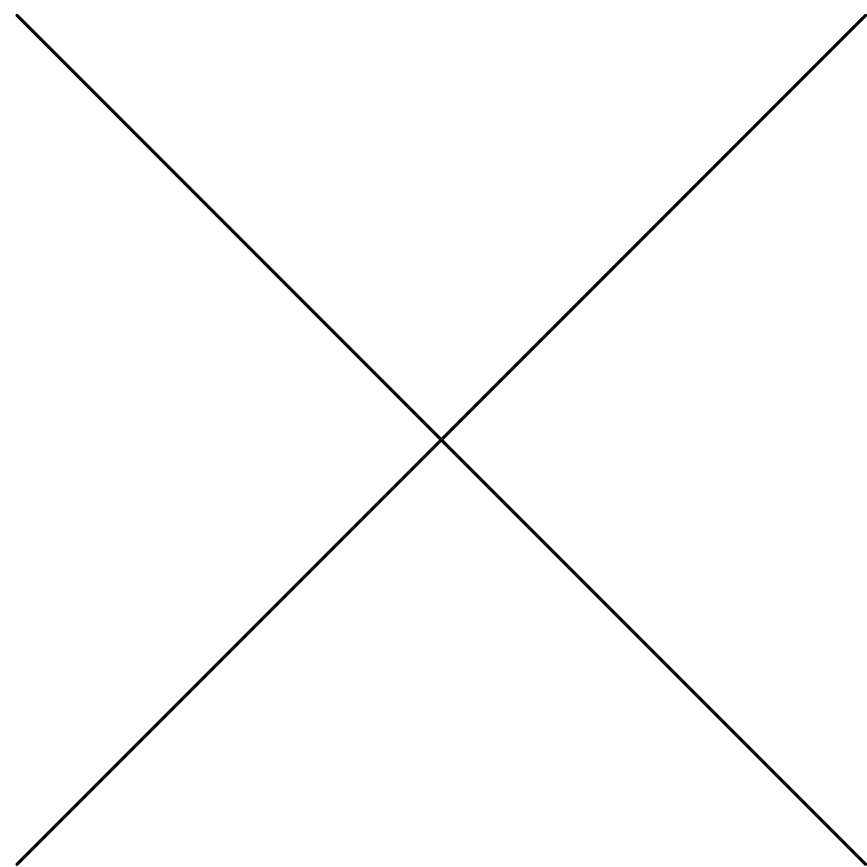
PROJECT NORTH
MAGNETIC NORTH



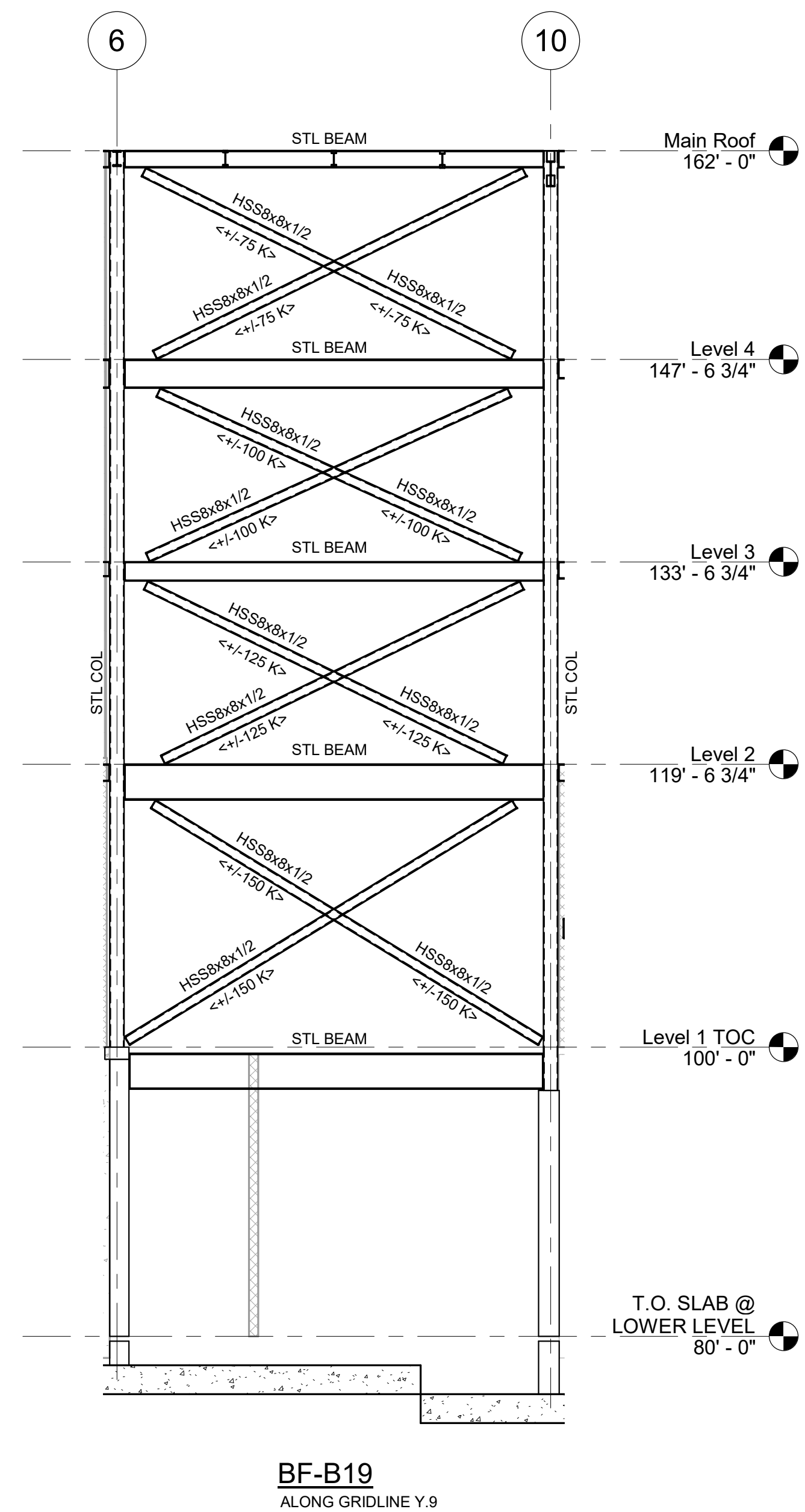
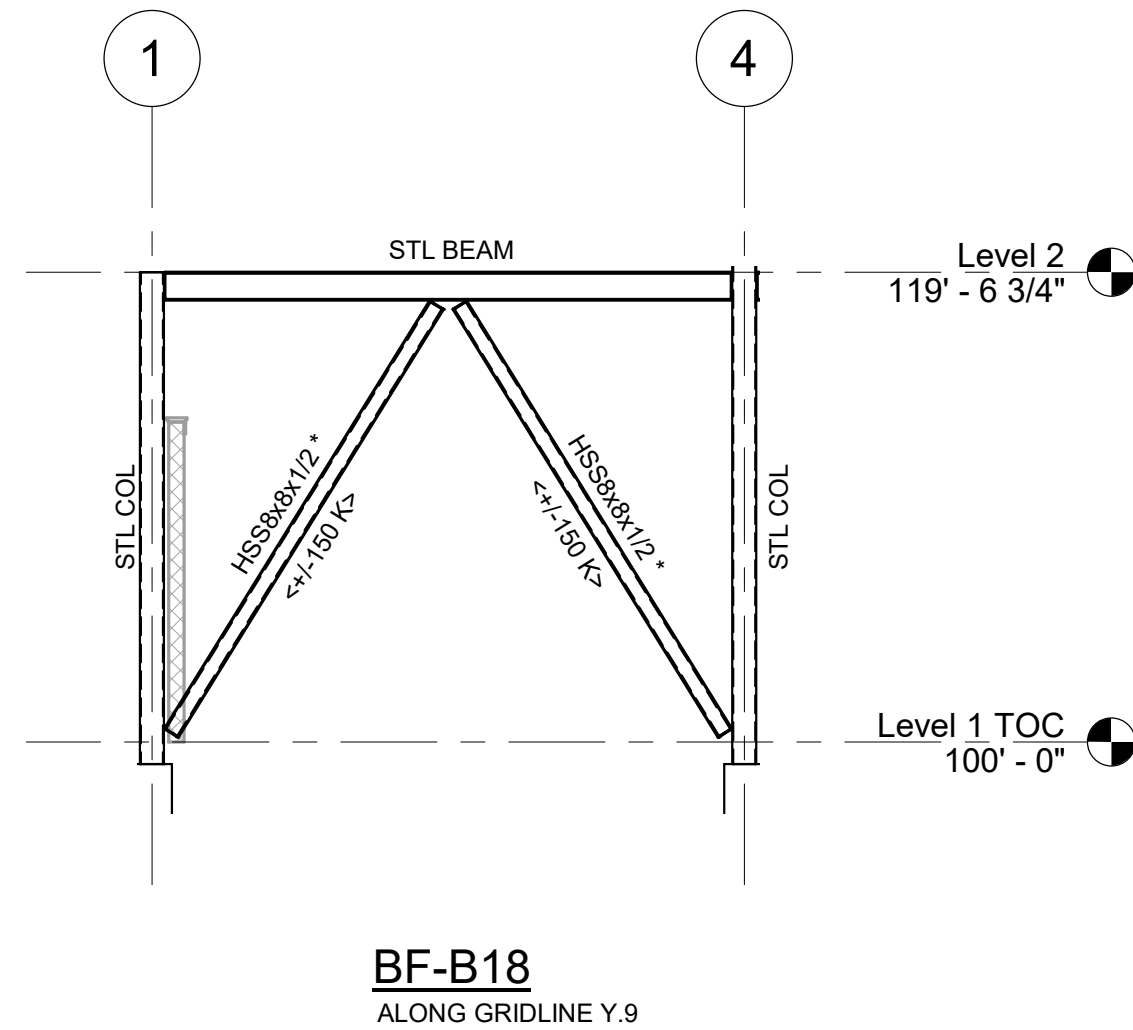
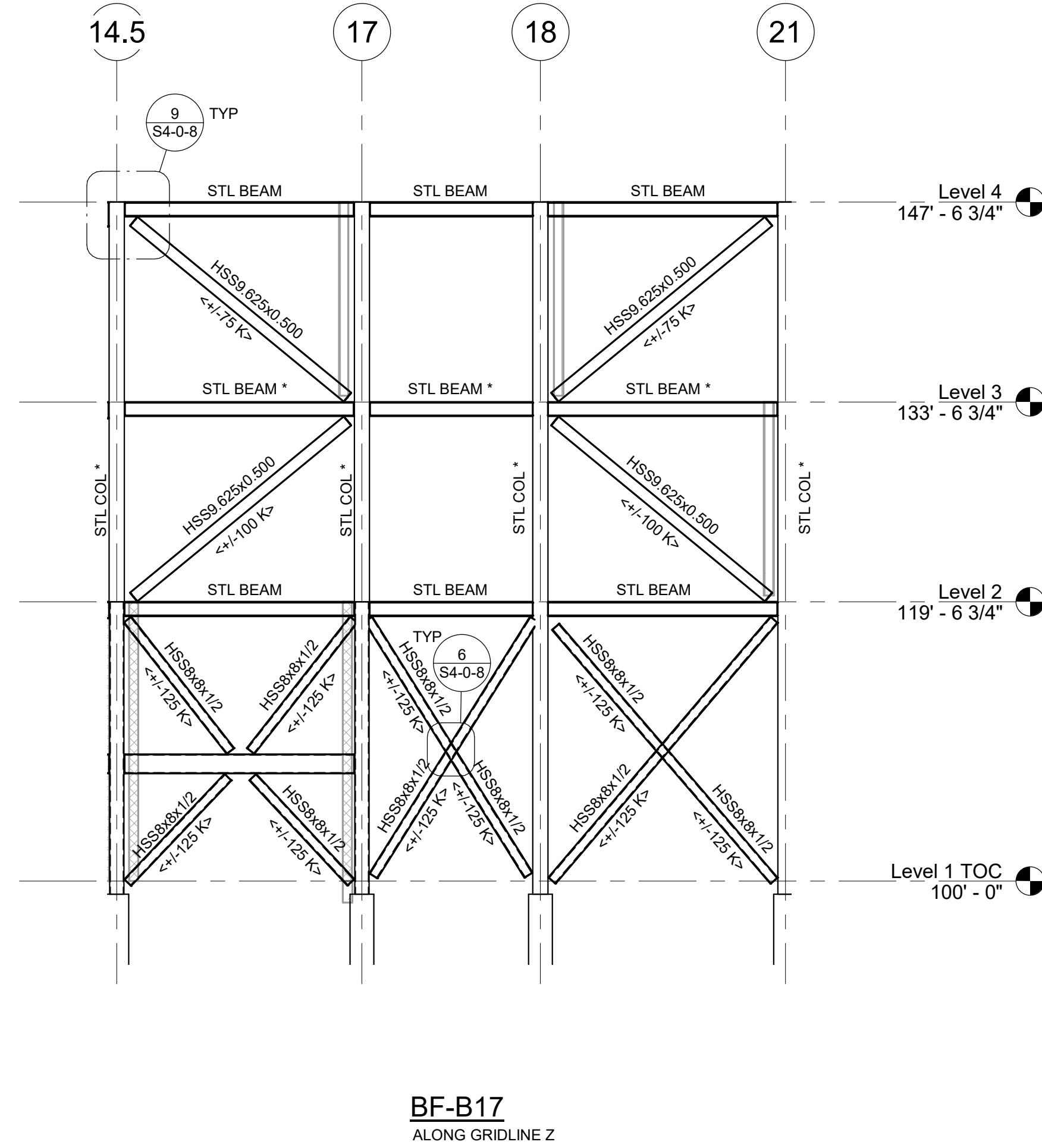
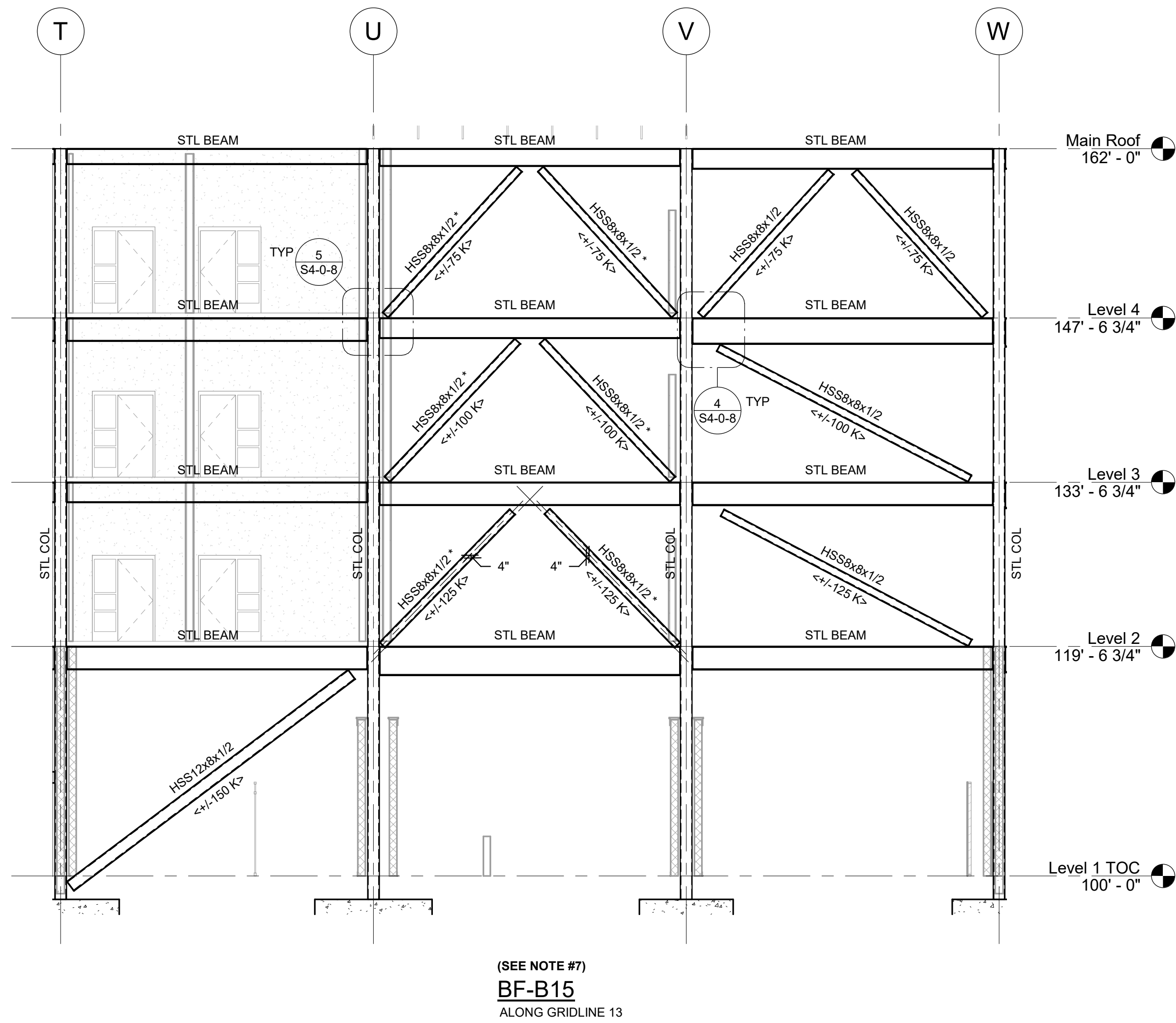
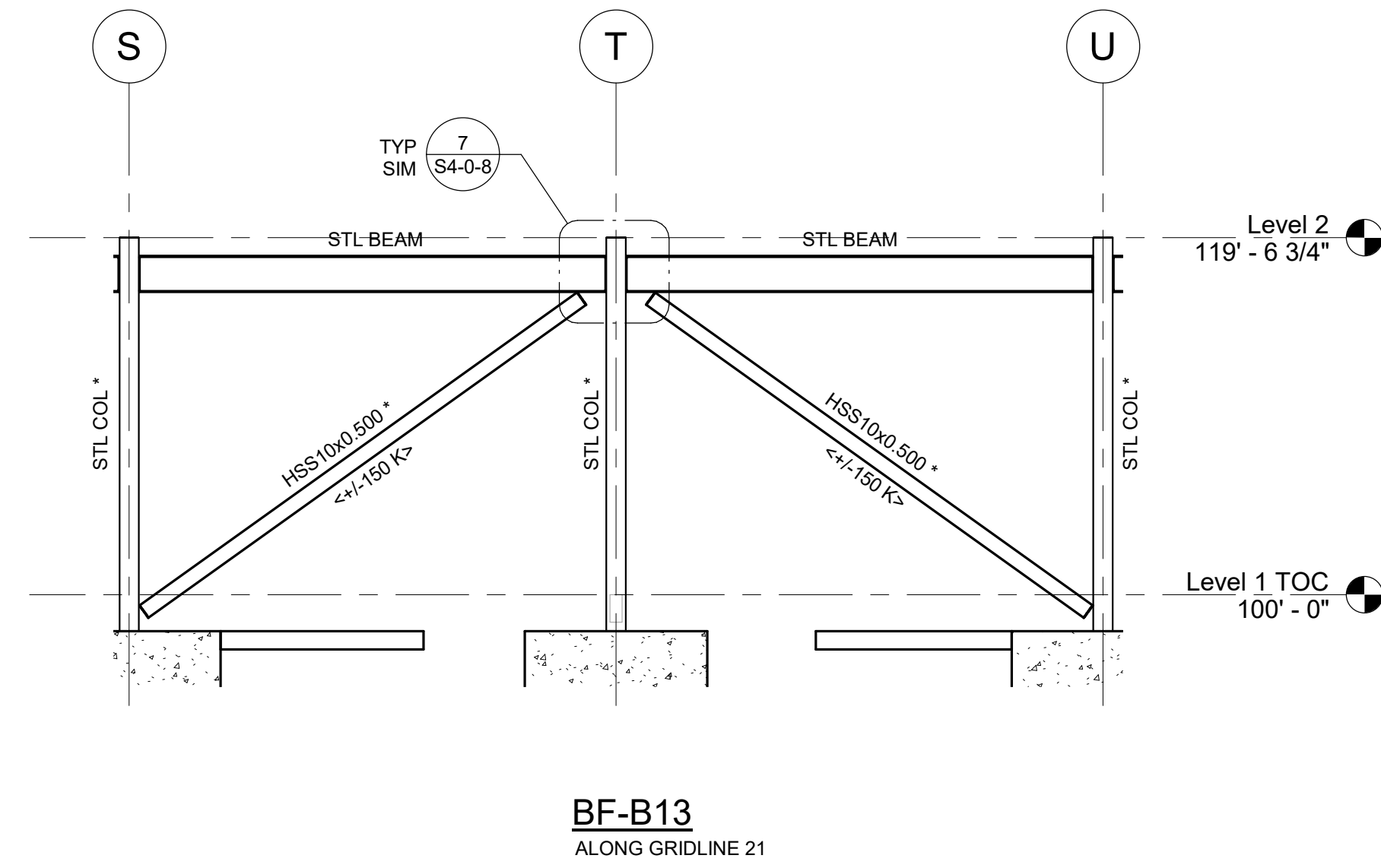
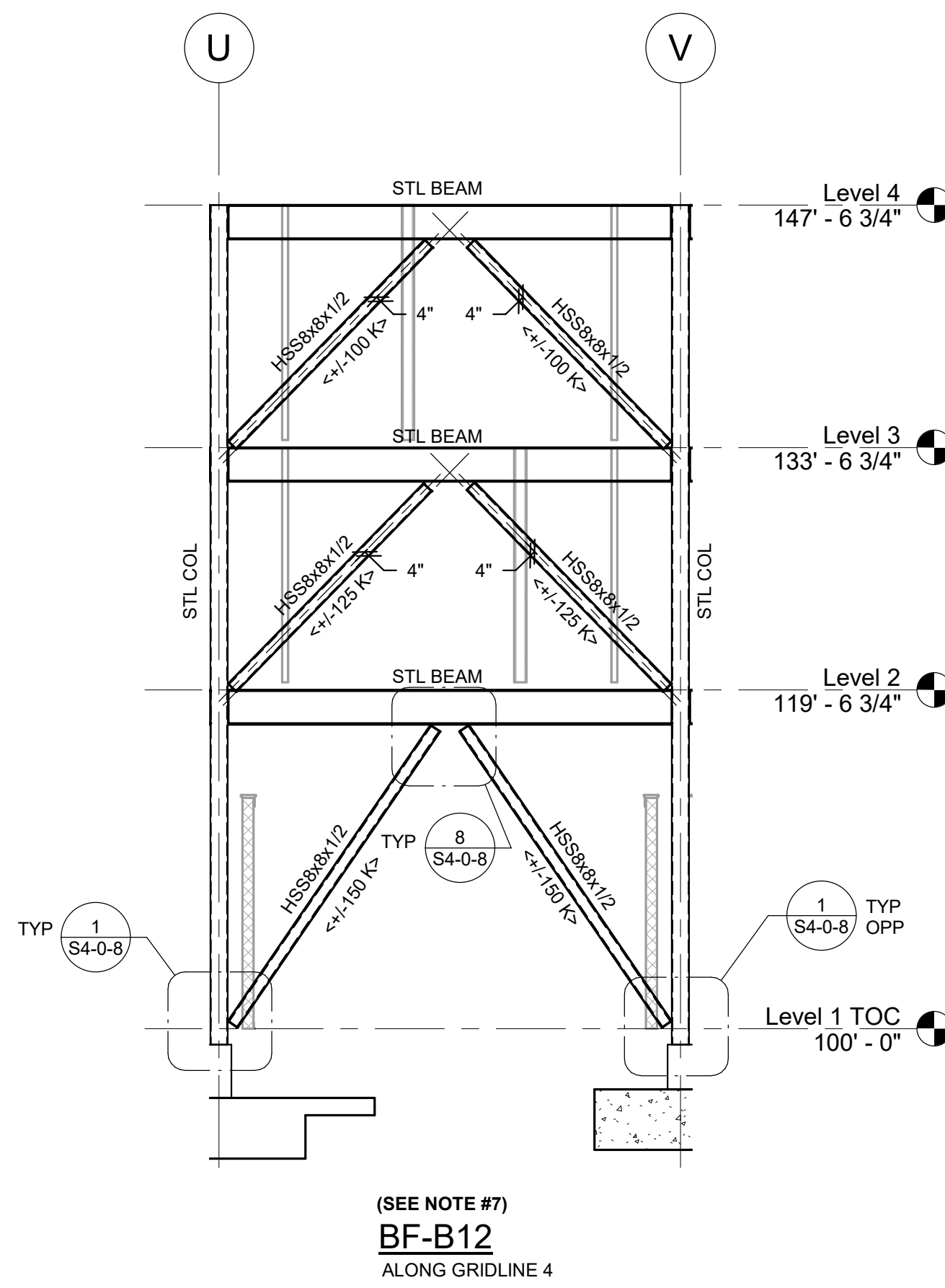
**BRACE FRAME
ELEVATION -
AREAS A + B**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

S4-0-2



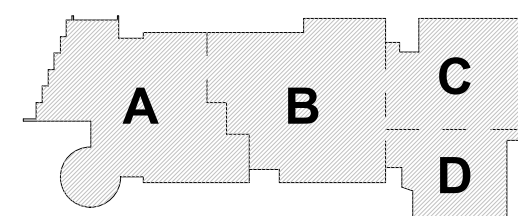
NOT USED
BF-10B

**FIREPROOFING NOTES:**

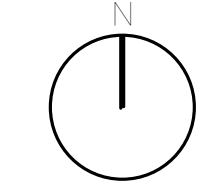
- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME NOTES:

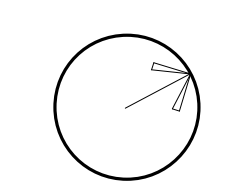
- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
- ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
- DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
- DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
- BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
- * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

**KEY PLAN**

PROJECT NORTH



MAGNETIC NORTH

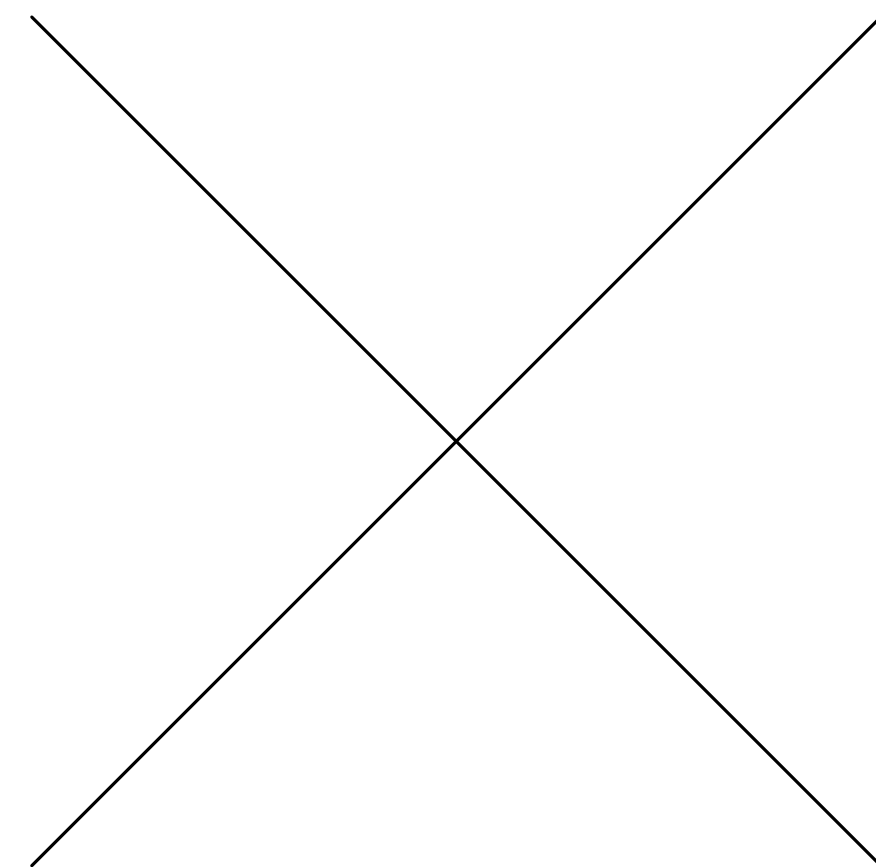
**BRACE FRAME
ELEVATION -
AREA B**

Scale: 1/8" = 1'-0"

Job No.: 20202

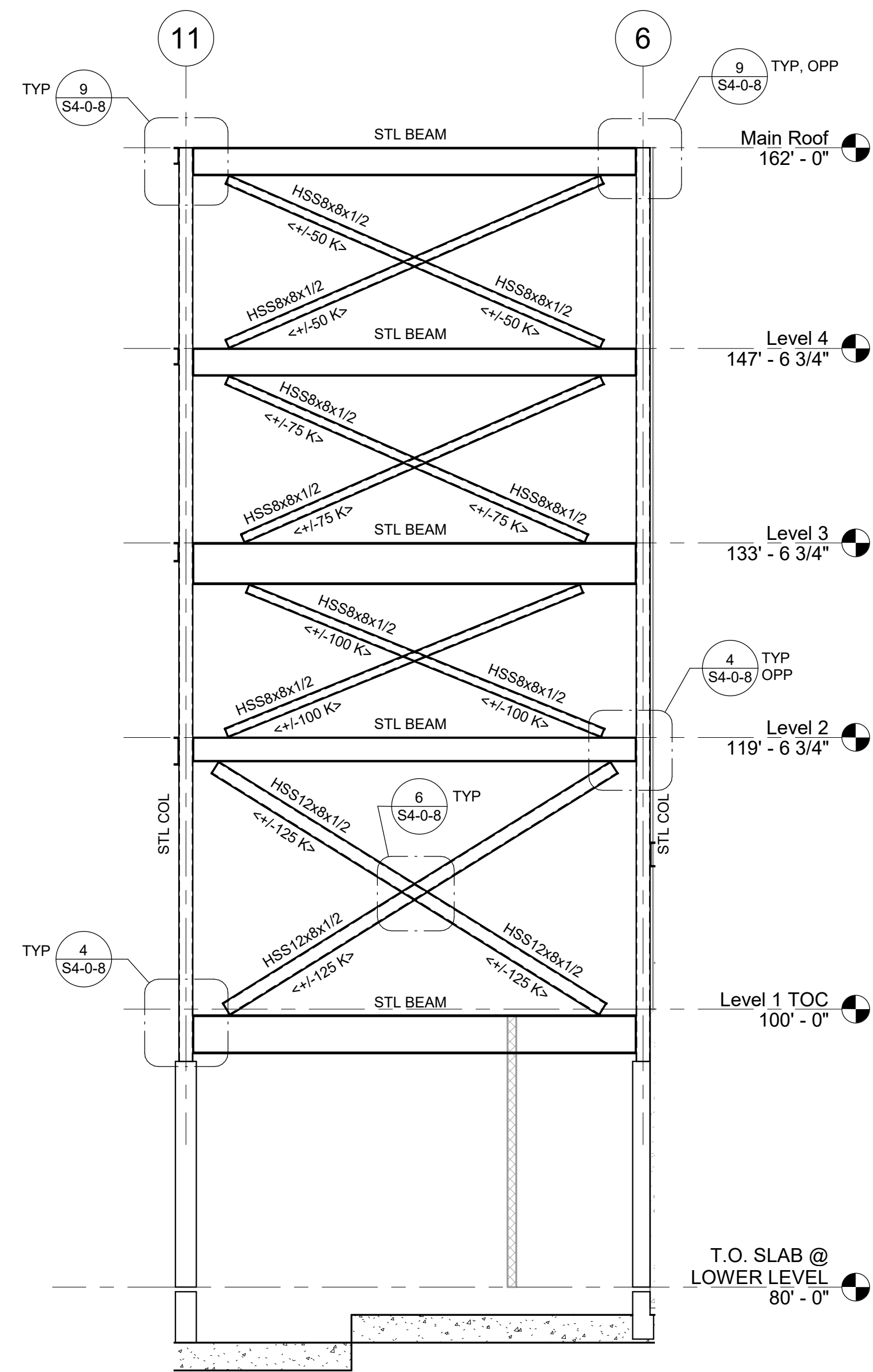
Drawn By: EDG

Date: FEBRUARY 24TH,
2023**S4-0-3**

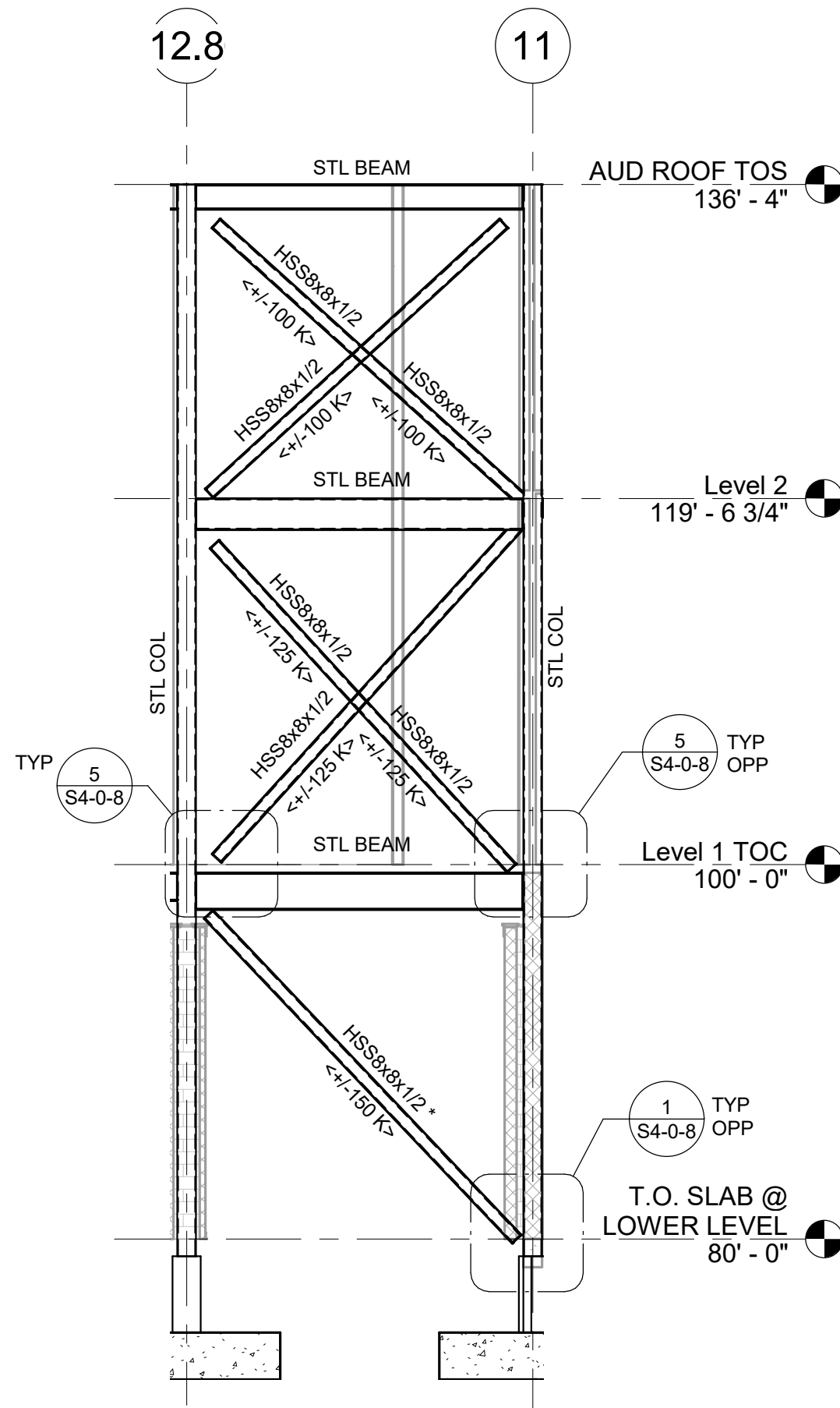


NOT USED

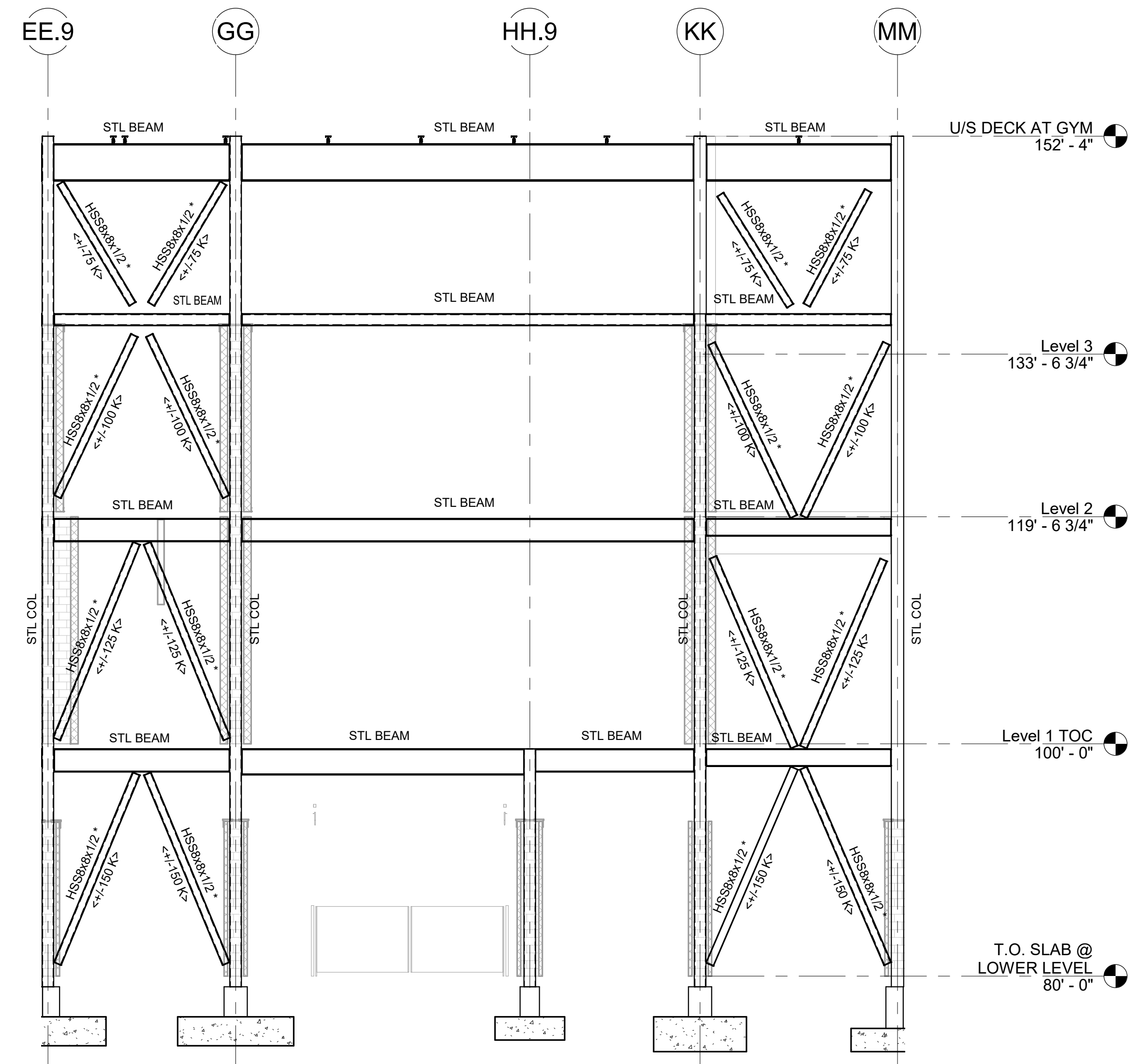
BF-C1



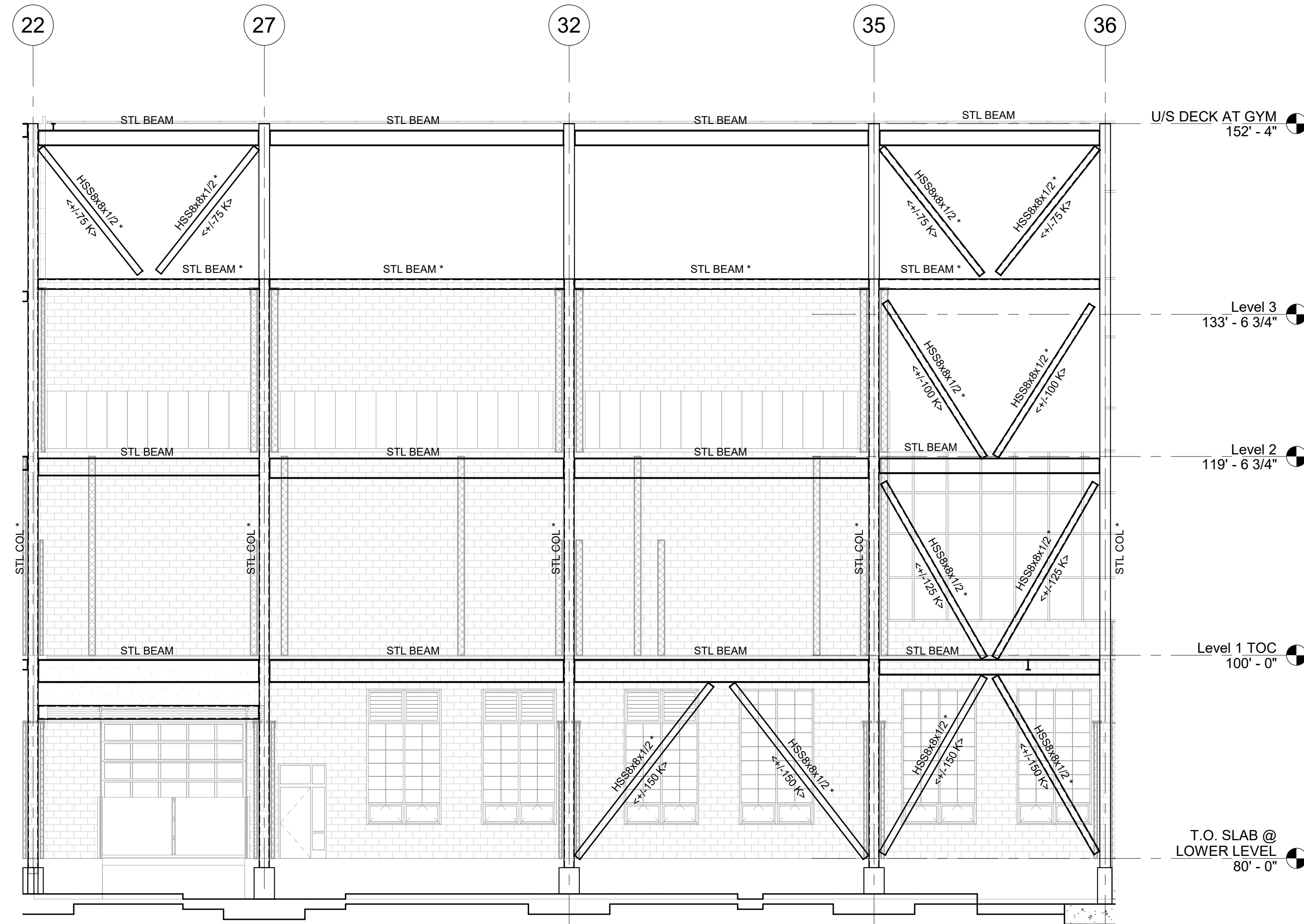
BF-C2
ALONG GRIDLINE AA



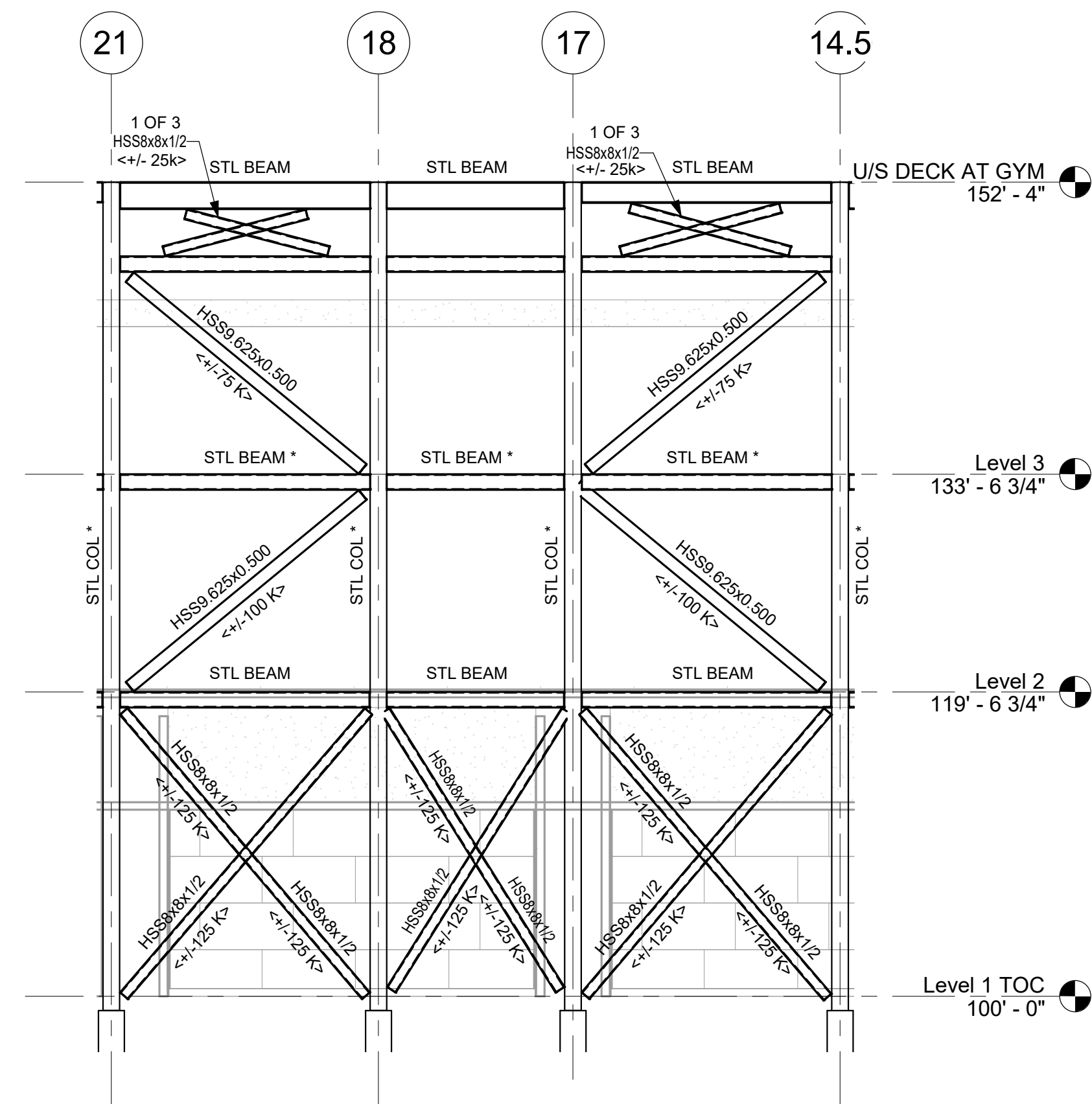
BF-C3
ALONG GRIDLINE PP



BF-D1 AND SW-D3
ALONG GRIDLINE 96



BF-D2 AND SW-D2
ALONG GRIDLINE MM



BF-D4
ALONG GRIDLINE AA

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

BRACE FRAME NOTES:

- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
- ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
- DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER: <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
- DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
- BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
- * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Planning Architecture Interior
Tel: 817.261.1100
www.dra.com

NORTHEAST
METRO TECH

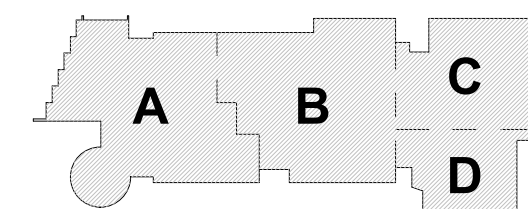
100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

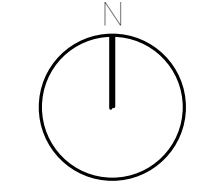
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

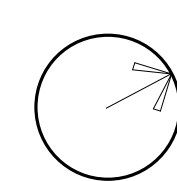


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



BRACED FRAME
ELEVATION C +
D

Scale: 1/8" = 1'-0"

Job No.: 20202

Drawn By: EDG

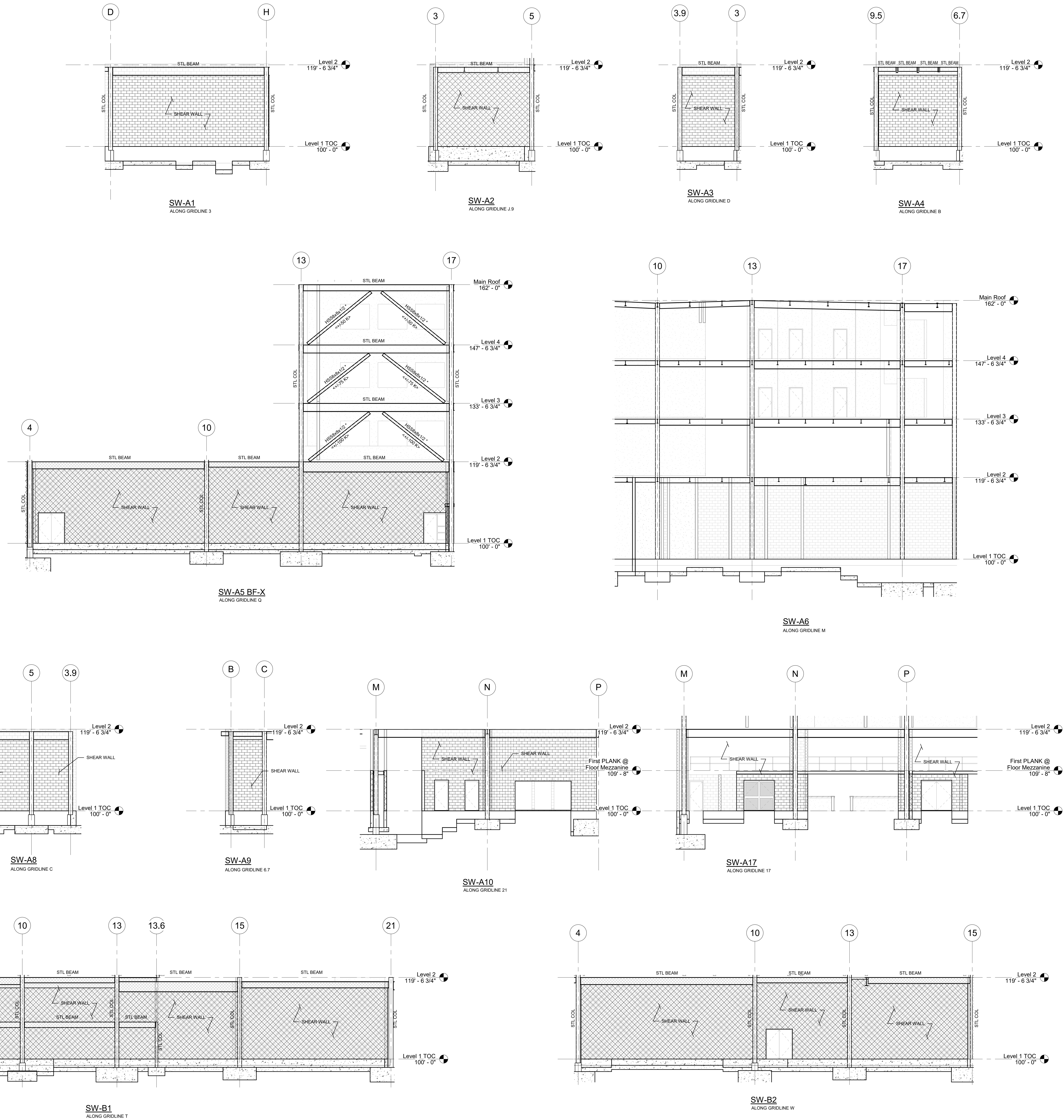
Date: FEBRUARY 24TH,
2023

S4-0-4

- FIREPROOFING NOTES:**
1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 3. EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 4. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- BRACE FRAME NOTES:**
- 1.) FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 - 2.) ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
 - 3.) DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 - 4.) DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 - 5.) BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 - 6.) SEE PLANS FOR COLUMN AND BEAM SIZES.
 - 7.) CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 - 8.) * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WF*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

- SHEAR WALL NOTES:**
1. ELEVATIONS ARE SCHEMATIC ONLY, AND INTENDED TO SHOW CONFIGURATION OF SHEAR WALLS.
 2. SEE PLANS FOR COLUMN AND BEAM SIZES.
 3. COORDINATE LOCATIONS OF OPENINGS WITHIN WALLS WITH ARCHITECTURAL DRAWINGS.
 4. SEE SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS AT SHEAR WALLS.
 5. SEE DETAILS ON S0-0.4 FOR ADDITIONAL REINFORCING REQUIRED AT OPENINGS IN WALLS, CONTROL JOINT ARRANGEMENTS, ETC.
 6. SEE MASONRY UNTEL DETAIL AND SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS.
 7. SEE DETAIL 6 ON S0-0.5 FOR REQUIREMENTS OF WELDABLE COUPLERS ALONG STRUCTURAL STEEL COLUMNS AND BEAMS AT CMU SHEAR WALLS.
 8. COORDINATE ADDITIONAL BOND-BEAMS AND REINFORCING REQUIRED WITHIN SHEAR WALLS WITH VARIOUS SECTIONS ON THE STRUCTURAL CONTRACT DRAWINGS.



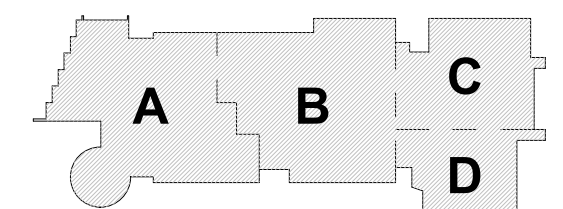
**NORTHEAST
METRO TECH**

100 Hemlock Rd.
Wakefield, MA 01880

EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

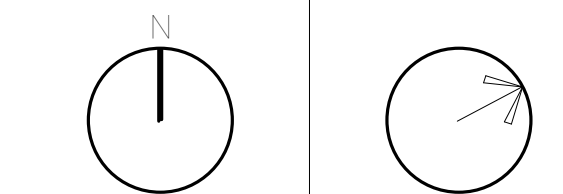
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

**EARLY
STRUCTURAL
BID PACKAGE**
FEBRUARY 24TH,
2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S4-0-5

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074
Tel: 817.261.1100
www.draa.com

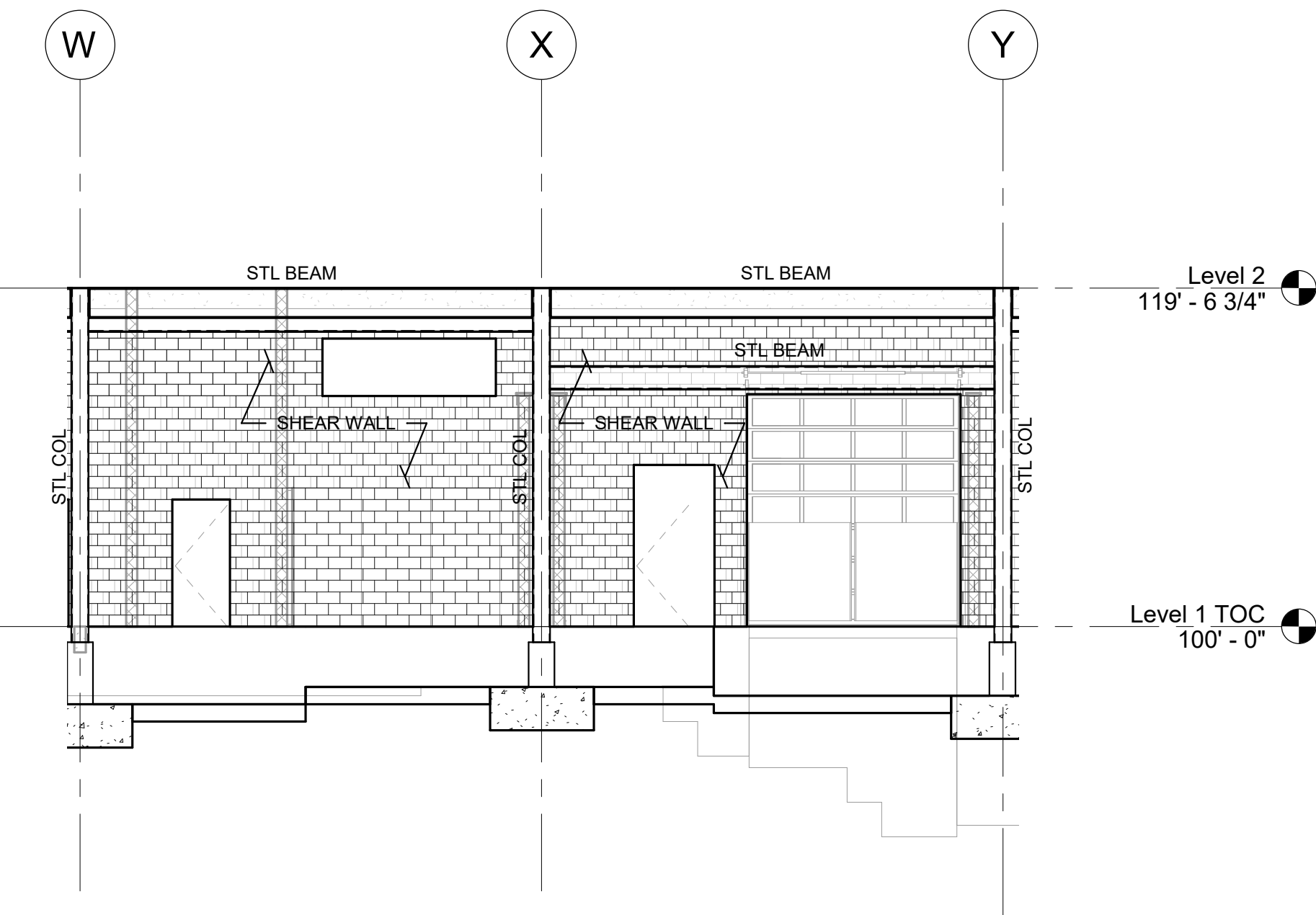
260 Charles Street
Studio 300
Waltham, MA 02453
Tel: 817.261.1100
www.draa.com

NORTHEAST
METRO TECH

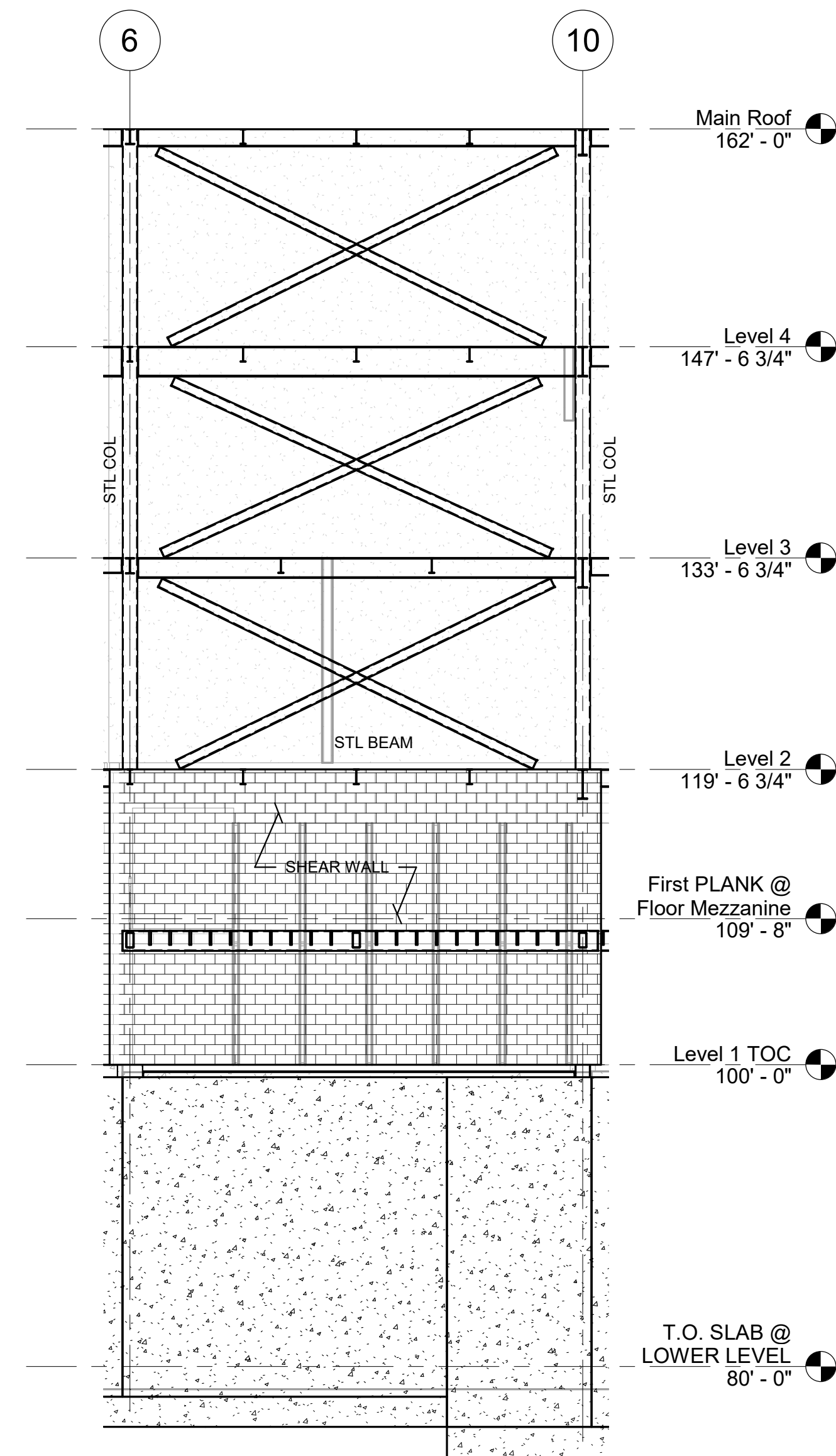
100 Hemlock Rd.
Wakefield, MA 01880



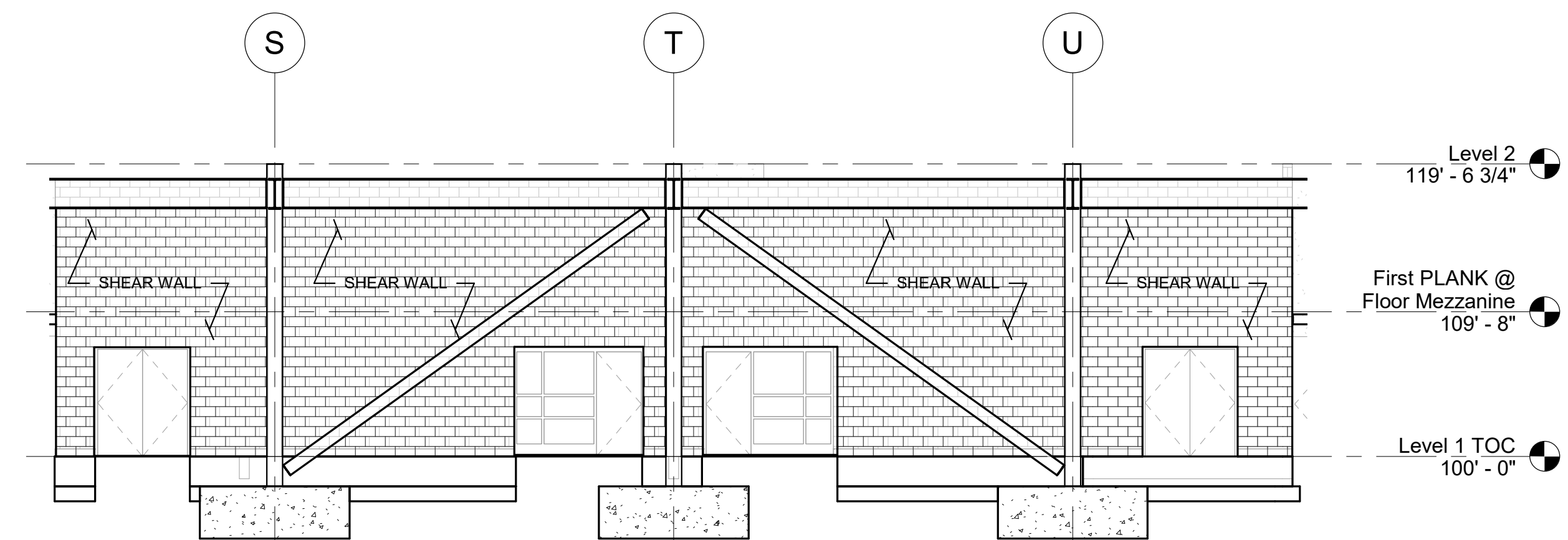
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM



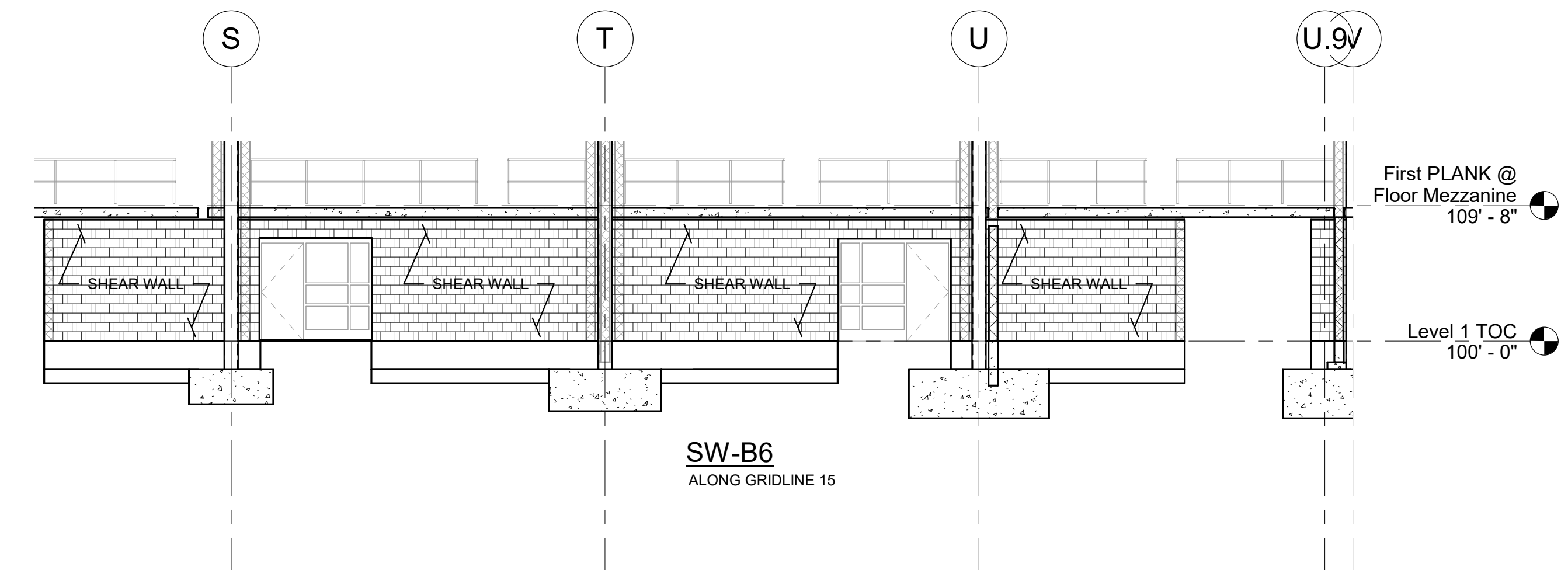
SW-B3
ALONG GRIDLINE 1



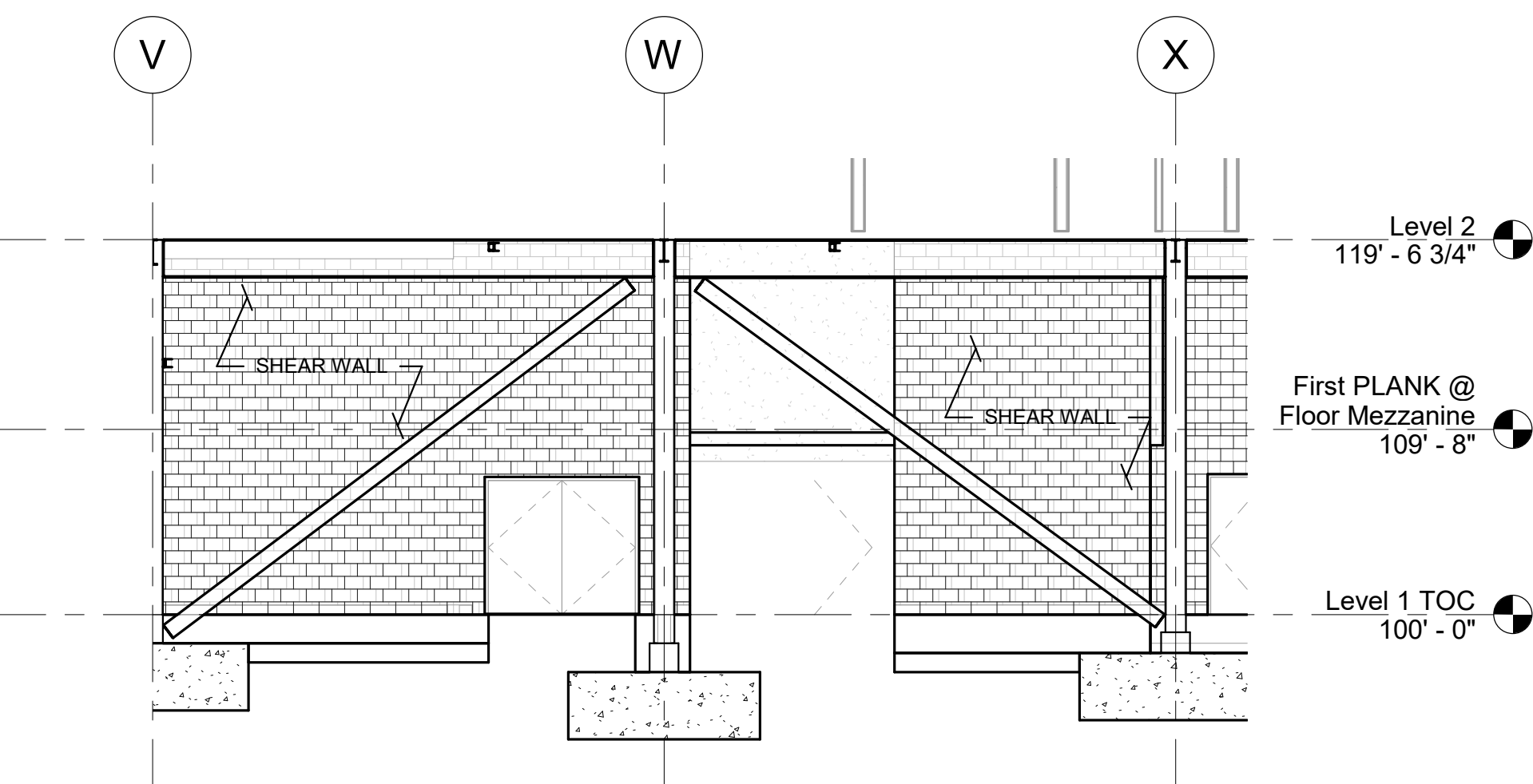
SW-B4
ALONG GRIDLINE Y.9



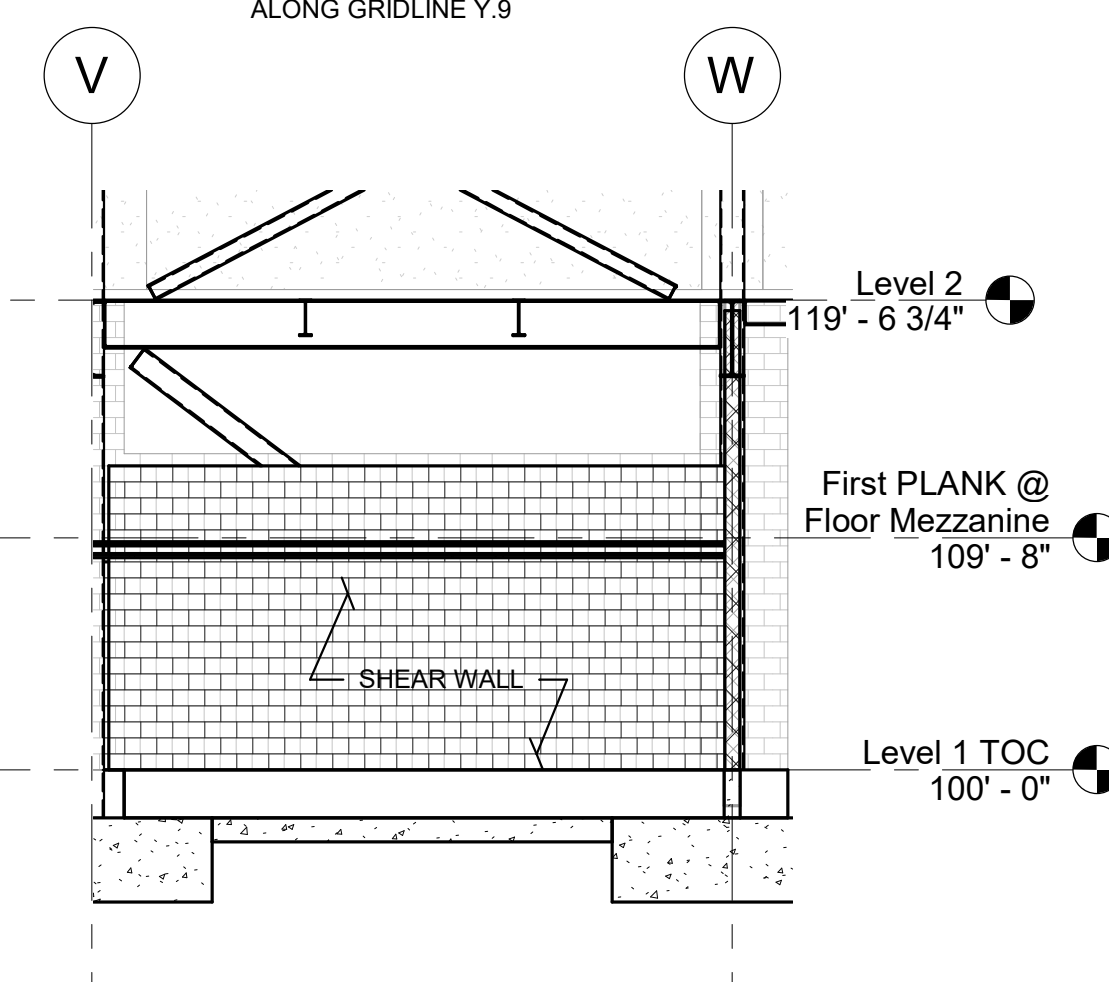
SW-B5
ALONG GRIDLINE 21



SW-B6
ALONG GRIDLINE 15



SW-B7
ALONG GRIDLINE 21

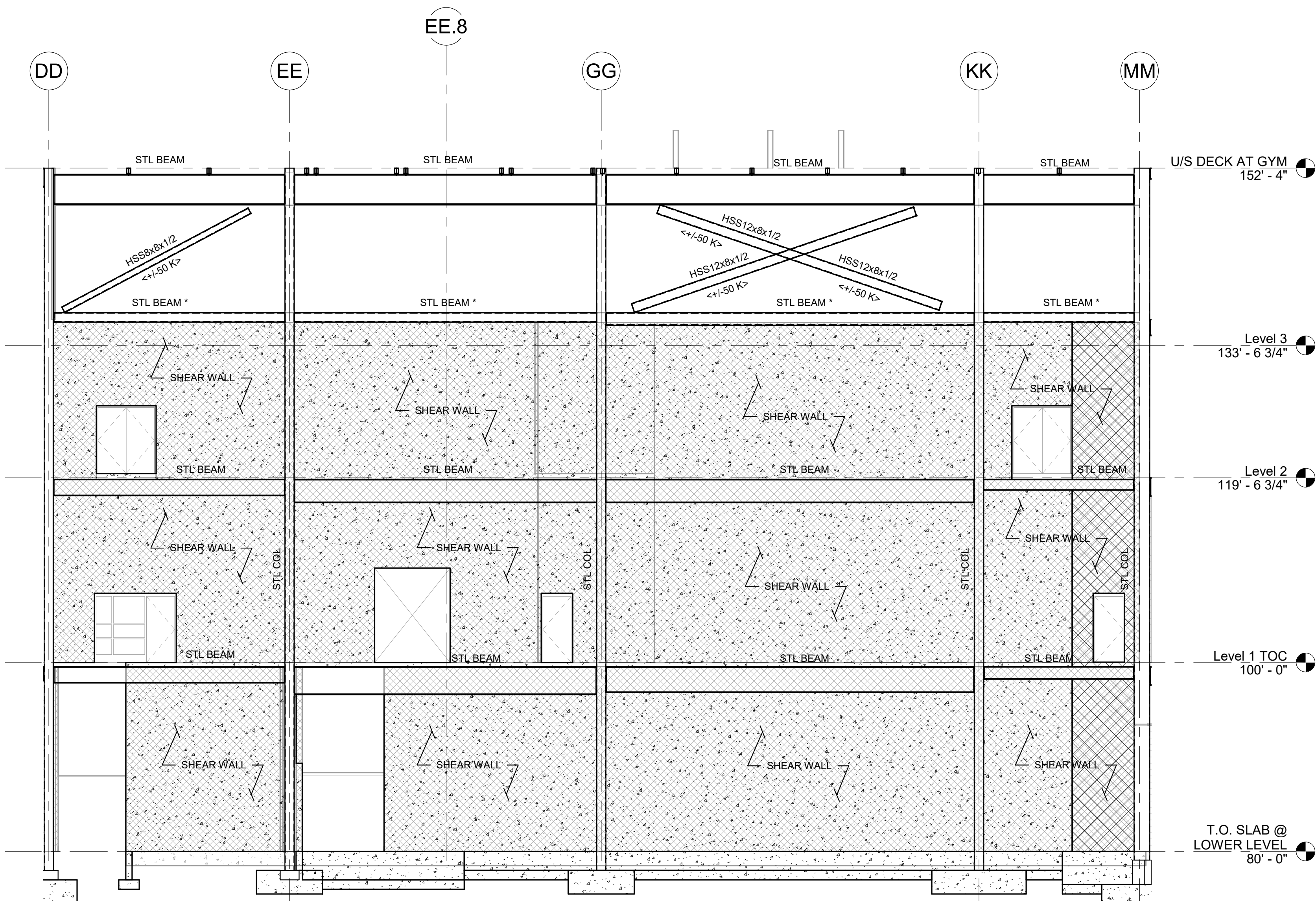


SW-B8
ALONG GRIDLINE 15

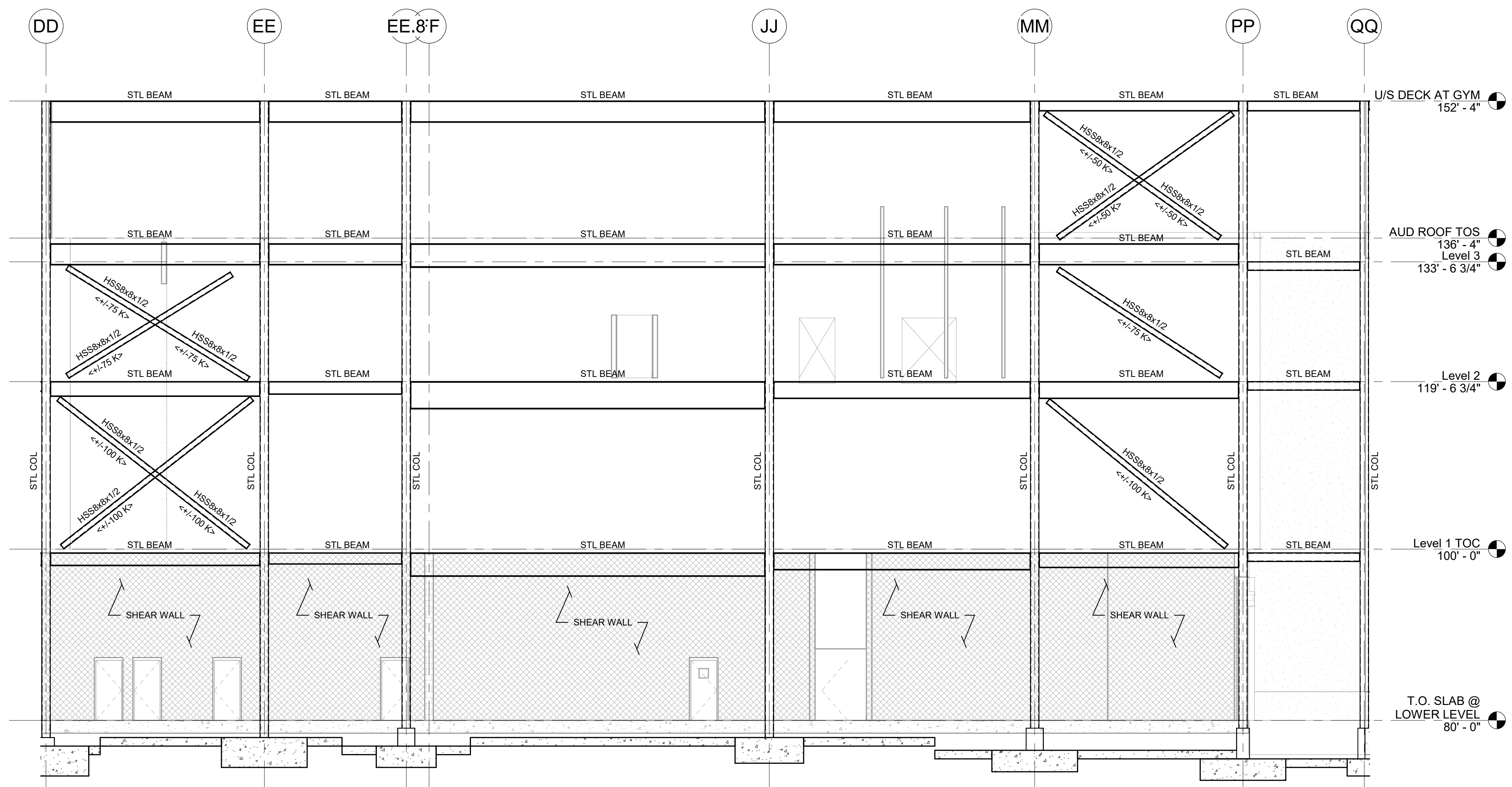
- FIREPROOFING NOTES:**
1. STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING. CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 2. CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
 3. EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
 4. COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- SHEAR WALL NOTES:**
1. ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF SHEAR WALLS.
 2. SEE PLANS FOR COLUMN AND BEAM SIZES.
 3. COORDINATE LOCATIONS OF OPENINGS WITHIN WALLS WITH ARCHITECTURAL DRAWINGS.
 4. SEE SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS AT SHEAR WALLS.
 5. SEE DETAILS ON S0-0.4 FOR ADDITIONAL REINFORCING REQUIRED AT OPENINGS IN WALLS. CONTROL JOINT ARRANGEMENTS, ETC.
 6. SEE MASONRY LINTEL DETAIL AND SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS.
 7. SEE DETAIL 6 ON S0-0.5 FOR REQUIREMENTS OF WELDABLE COUPLERS ALONG STRUCTURAL STEEL COLUMNS AND BEAMS AT CMU SHEAR WALLS.
 8. COORDINATE ADDITIONAL BOND-BEAMS AND REINFORCING REQUIRED WITHIN SHEAR WALLS WITH VARIOUS SECTIONS ON THE STRUCTURAL CONTRACT DRAWINGS.

- BRACE FRAME NOTES:**
1. FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
 2. ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
 3. DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30k> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON LRFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
 4. DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
 5. BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
 6. SEE PLANS FOR COLUMN AND BEAM SIZES.
 7. CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
 8. * SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WF*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.



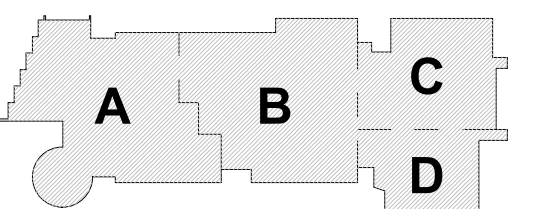
(SEE NOTE #7)
SW-C1
ALONG GRIDLINE 22



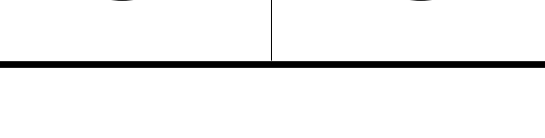
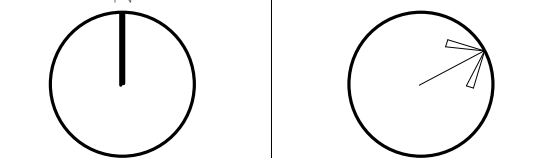
BF-C4 AND SW-C2
ALONG GRIDLINE 20

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



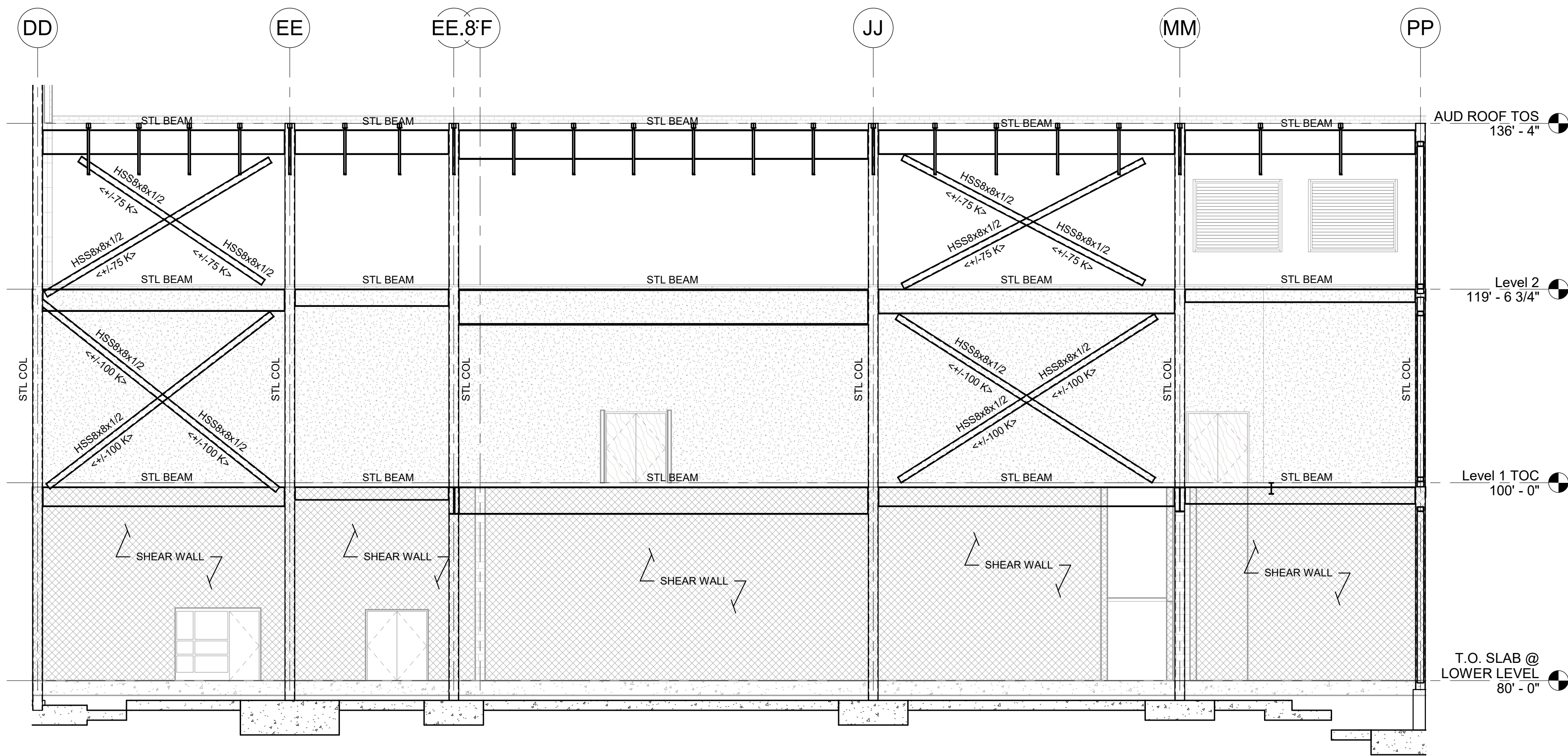
PROJECT NORTH
MAGNETIC NORTH



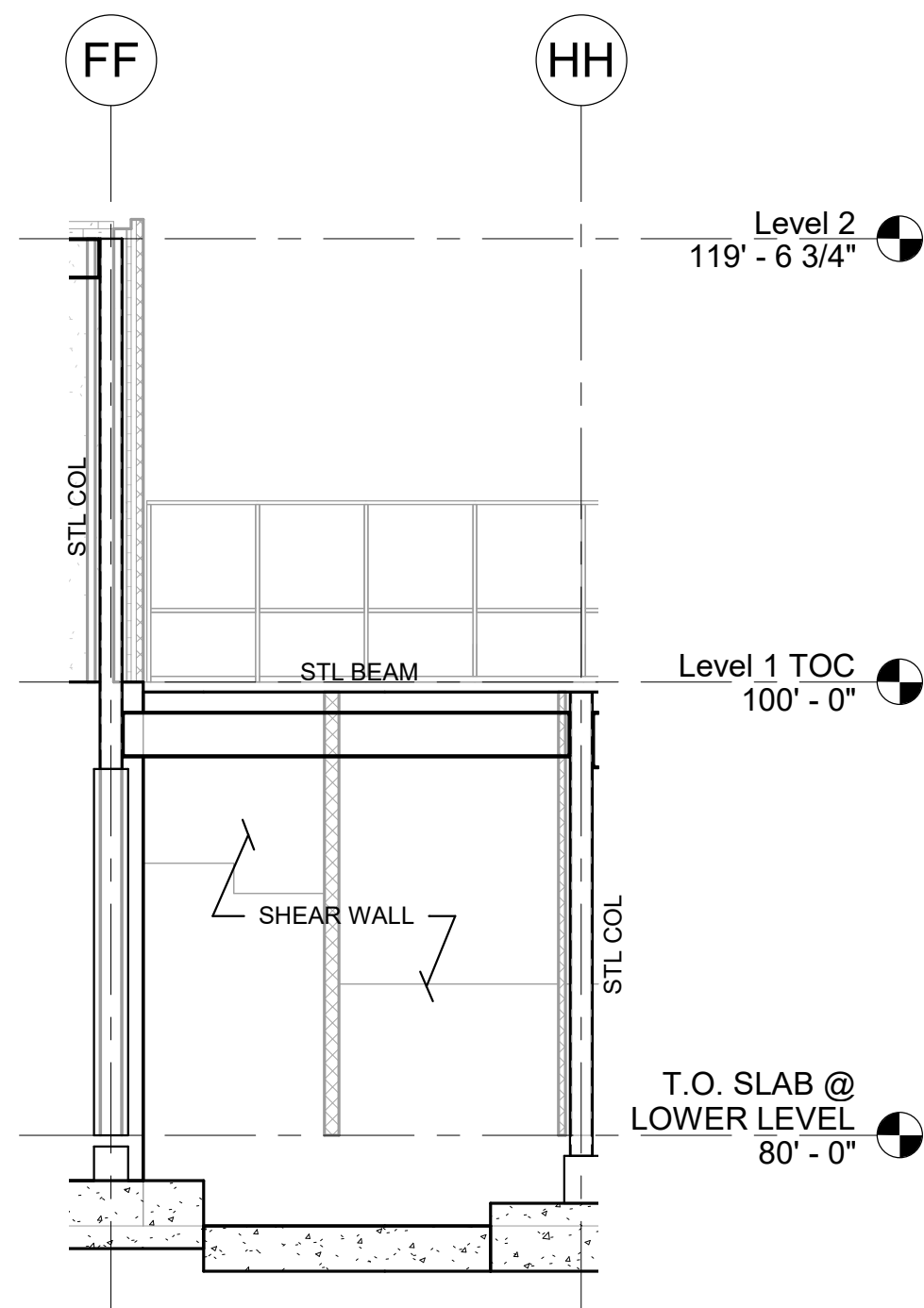
SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

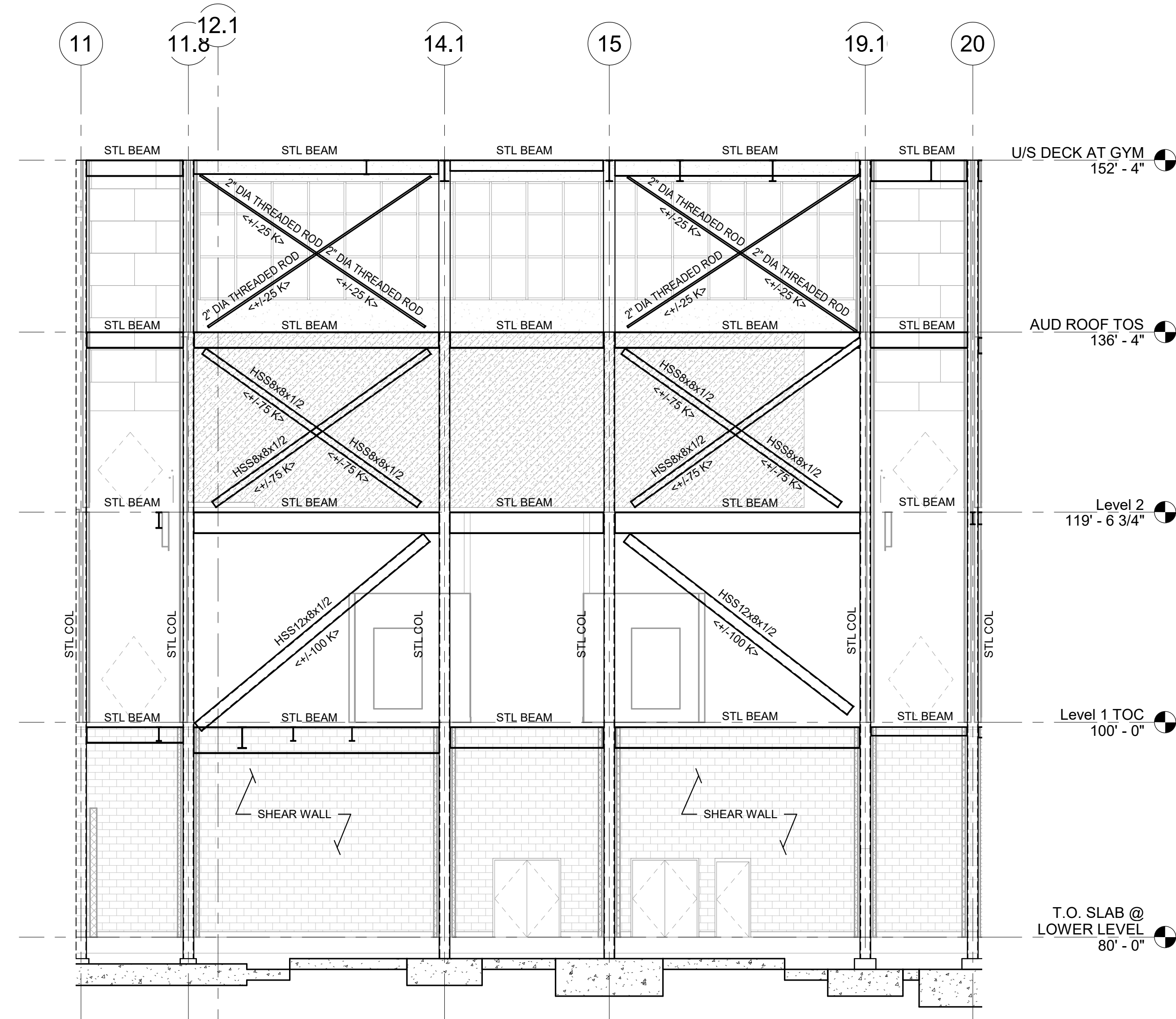
S4-0-6



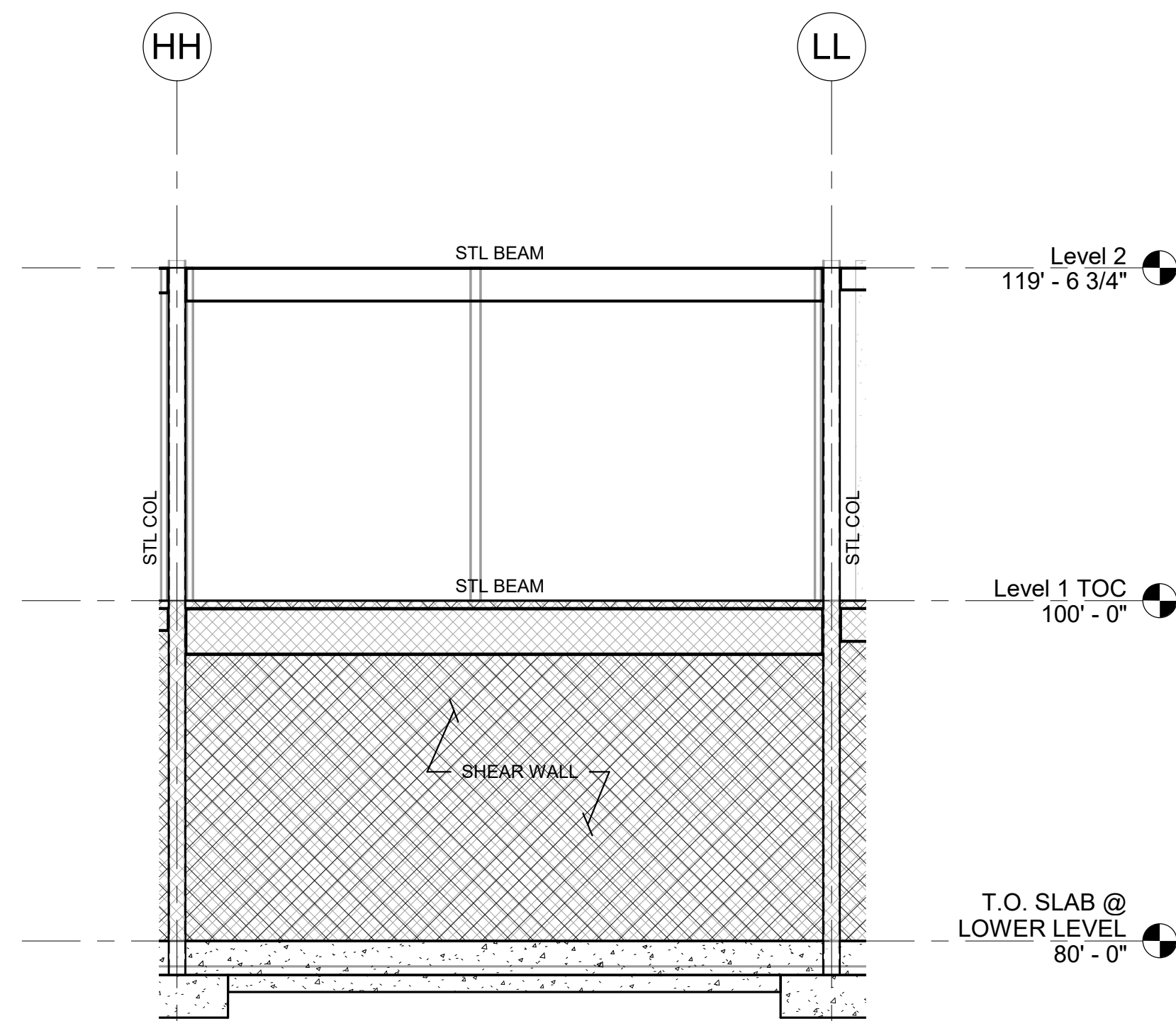
BF-C5 AND SW-C3
ALONG GRIDLINE 11



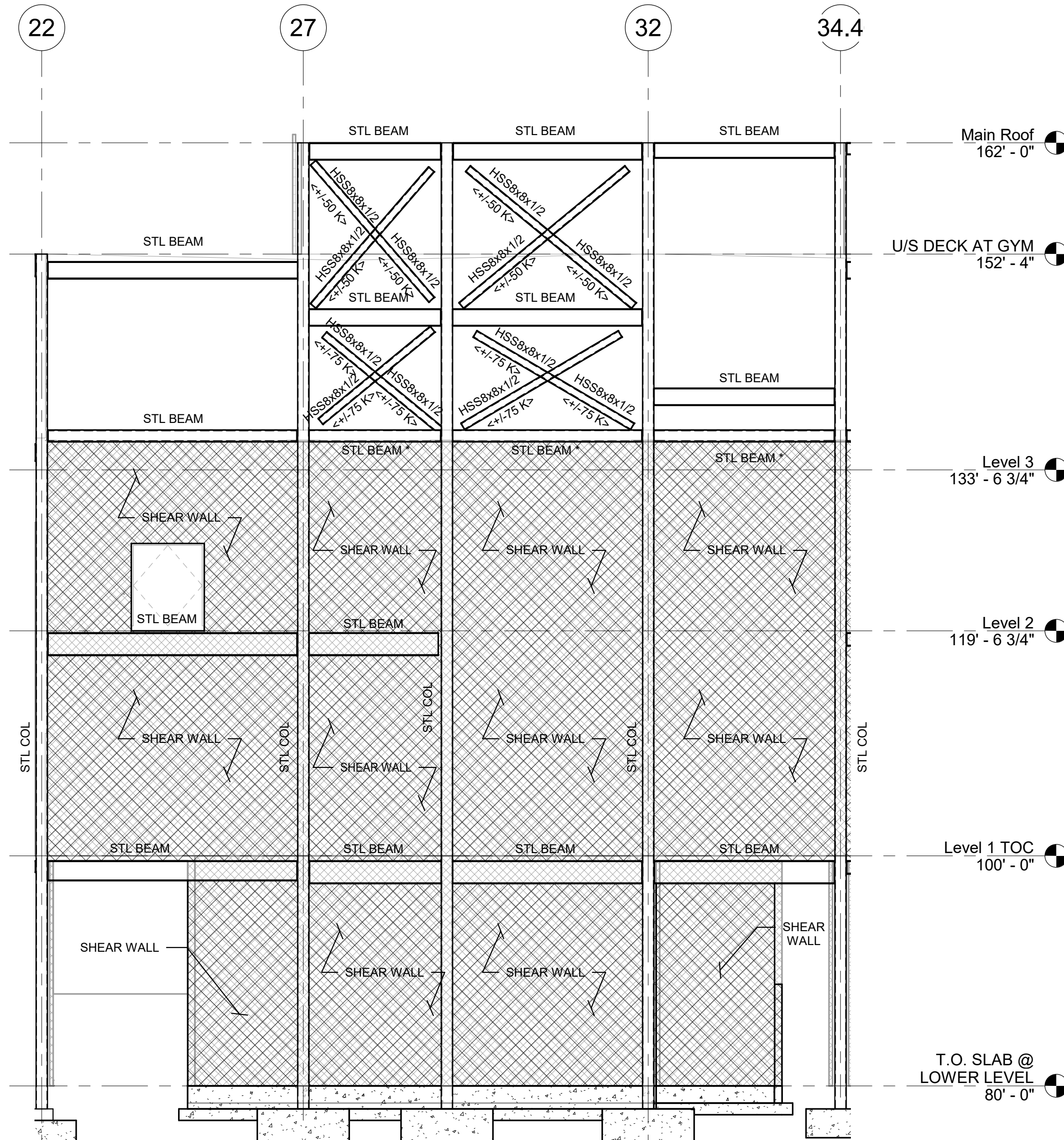
SW-C4
ALONG GRIDLINE 2



BF-C6 AND SW-C5
ALONG GRIDLINE DD



SW-C6
ALONG GRIDLINE 9



BF-D3 AND SW-D1
ALONG GRIDLINE DD

SHEAR WALL NOTES:

- ELEVATIONS ARE SCHEMATIC ONLY, AND INTENDED TO SHOW CONFIGURATION OF SHEAR WALLS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- COORDINATE LOCATIONS OF OPENINGS WITH WALLS WITH ARCHITECTURAL DRAWINGS.
- SEE SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS AT SHEAR WALLS.
- SEE DETAILS ON S0-0.4 FOR ADDITIONAL REINFORCING REQUIRED AT OPENINGS IN WALLS, CONTROL JOINT ARRANGEMENTS, ETC.
- SEE MASONRY LINTEL DETAIL AND SCHEDULE ON S0-0.4 FOR REINFORCING REQUIREMENTS.
- SEE DETAIL 6 ON S0-0.5 FOR REQUIREMENTS OF WELDABLE COUPLERS ALONG STRUCTURAL STEEL COLUMNS AND BEAMS AT CMU SHEAR WALLS.
- COORDINATE ADDITIONAL BOND-BEAMS AND REINFORCING REQUIRED WITHIN SHEAR WALLS WITH VARIOUS SECTIONS ON THE STRUCTURAL CONTRACT DRAWINGS.

BRACE FRAME NOTES:

- FABRICATOR IS RESPONSIBLE FOR BRACE CONNECTION DESIGN.
- ELEVATIONS ARE SCHEMATIC ONLY AND INTENDED TO SHOW CONFIGURATION OF BRACED FRAMES AND BRACE FORCES.
- DESIGN DIAGONAL MEMBER CONNECTIONS FOR TWICE THE AXIAL DESIGN FORCE SHOWN BELOW EACH MEMBER <30K> (TENSION OR COMPRESSION). AXIAL DESIGN FORCE IS BASED ON RFD. USE GENERAL UNIFORM FORCE METHOD FOR CONNECTION DESIGN.
- DO NOT WELD TOP END OF DIAGONAL BRACE MEMBERS IN PLACE UNTIL FLOOR SLABS AND ROOFING ARE IN PLACE. WELDS MUST BE FULLY INSPECTED AND APPROVED PRIOR TO PLACING ANY CONCRETE OR INSTALLING OTHER MATERIALS THAT WOULD COVER THE CONNECTIONS.
- BOLTED CONNECTIONS IN BRACED FRAMES SHALL BE DESIGNED AS SLIP CRITICAL CONNECTIONS.
- SEE PLANS FOR COLUMN AND BEAM SIZES.
- CENTERLINE OF BRACE MEMBER SHALL BE OFFSET FROM WORKPOINT LINE AS NOTED AS SHOWN ON ELEVATION.
- *SYMBOL AT THE END OF A STEEL BEAM SIZE (HSS*, WP*, ETC.) DENOTES EXPOSED BRACE FRAME MEMBERS, (INCLUDING STEEL BEAMS AND COLUMNS) TO RECEIVE INTUMESCENT MASTIC FIREPROOFING.

FIREPROOFING NOTES:

- STEEL COLUMNS SHOWN ON THIS DRAWING SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING UNLESS INDICATED AS A ROUND HSS COLUMN. EXPOSED TO VIEW PORTION OF ROUND HSS COLUMNS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING, CONCEALED FROM VIEW PORTION OF ROUND HSS COLUMN SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- CONCEALED FROM VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY CEMENTITIOUS FIREPROOFING.
- EXPOSED TO VIEW BRACED FRAME MEMBERS SHALL RECEIVE 2-HOUR FIRE RATING BY INTUMESCENT MASTIC FIREPROOFING.
- COORDINATE FIREPROOFING REQUIREMENTS WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Tel: 877.261.1100
www.dra.com

**NORTHEAST
METRO TECH**

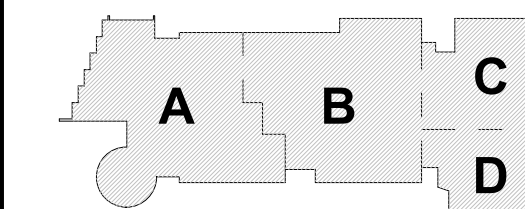
100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

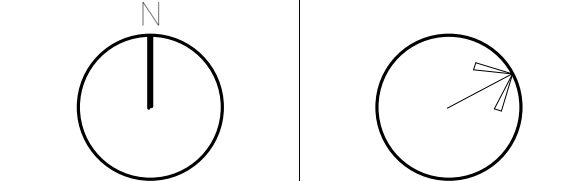
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

**EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023**



KEY PLAN

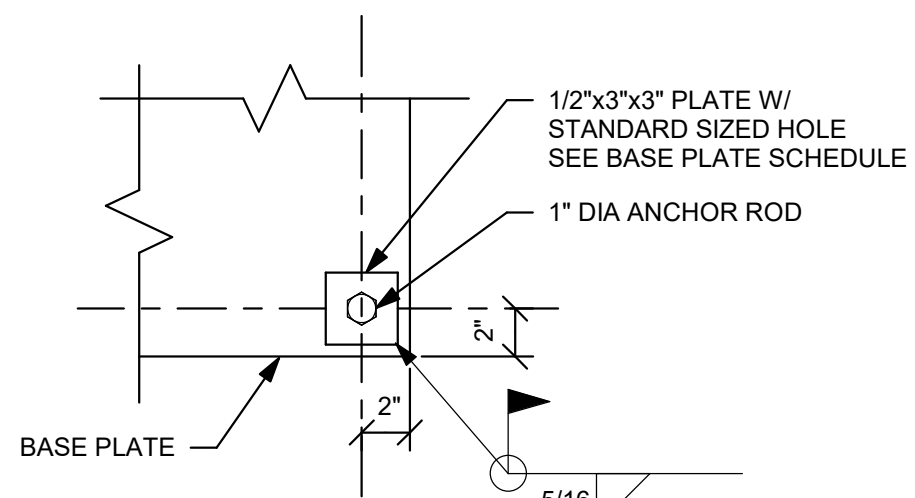
PROJECT NORTH MAGNETIC NORTH



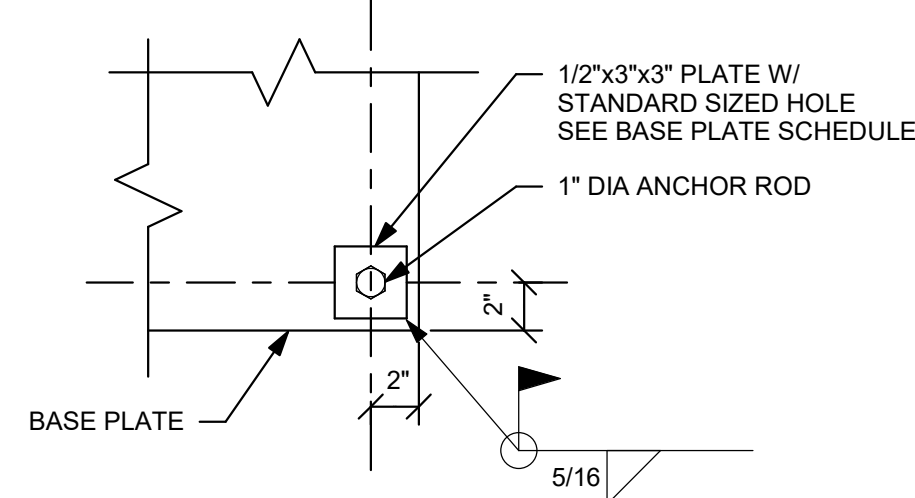
SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

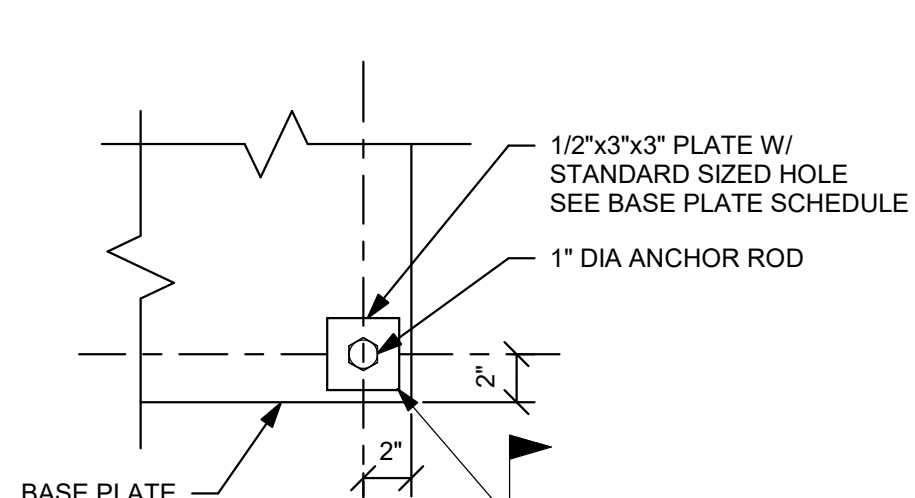
S4-0-7



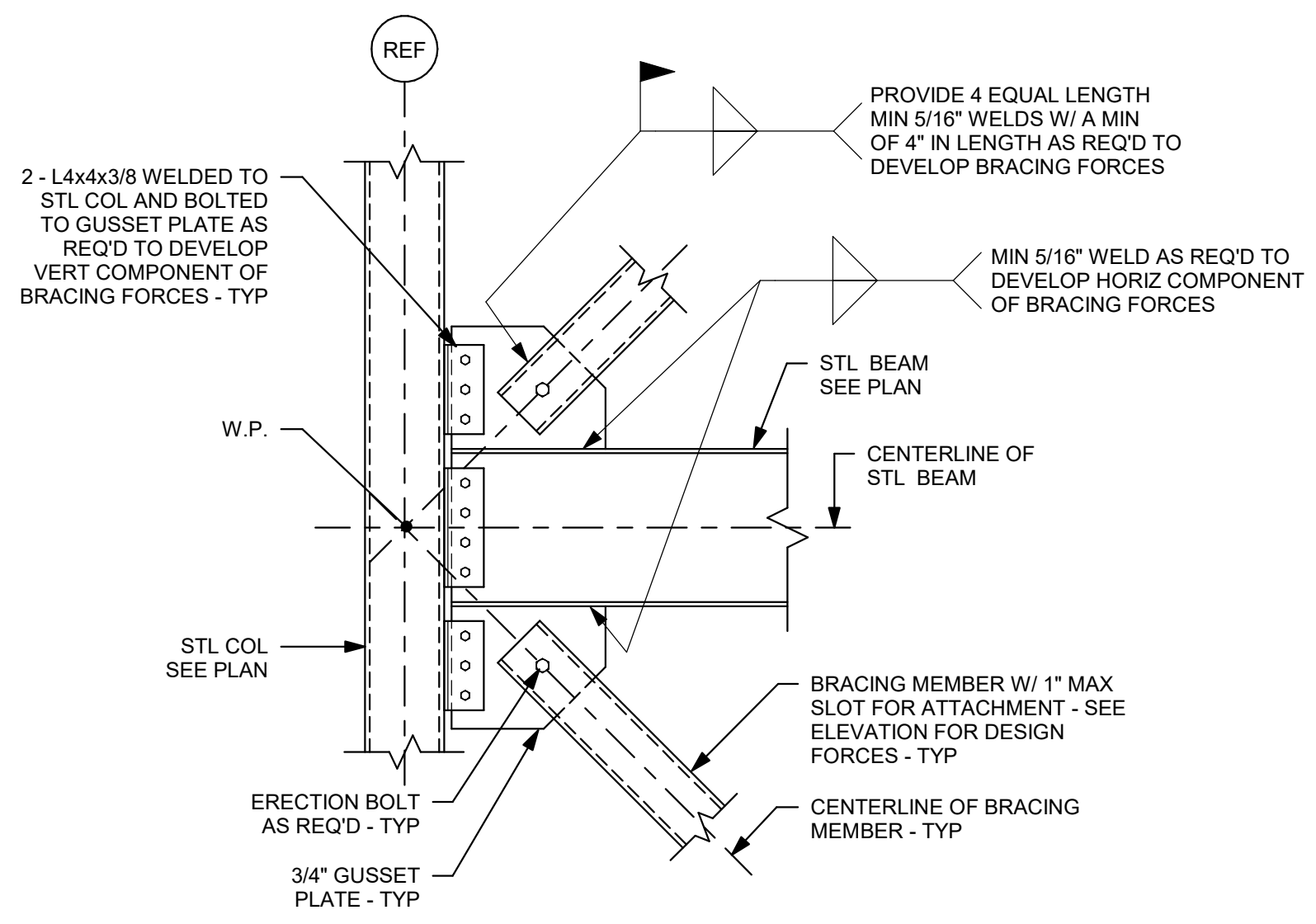
BASE PLATE DETAIL



BASE PLATE DETAIL

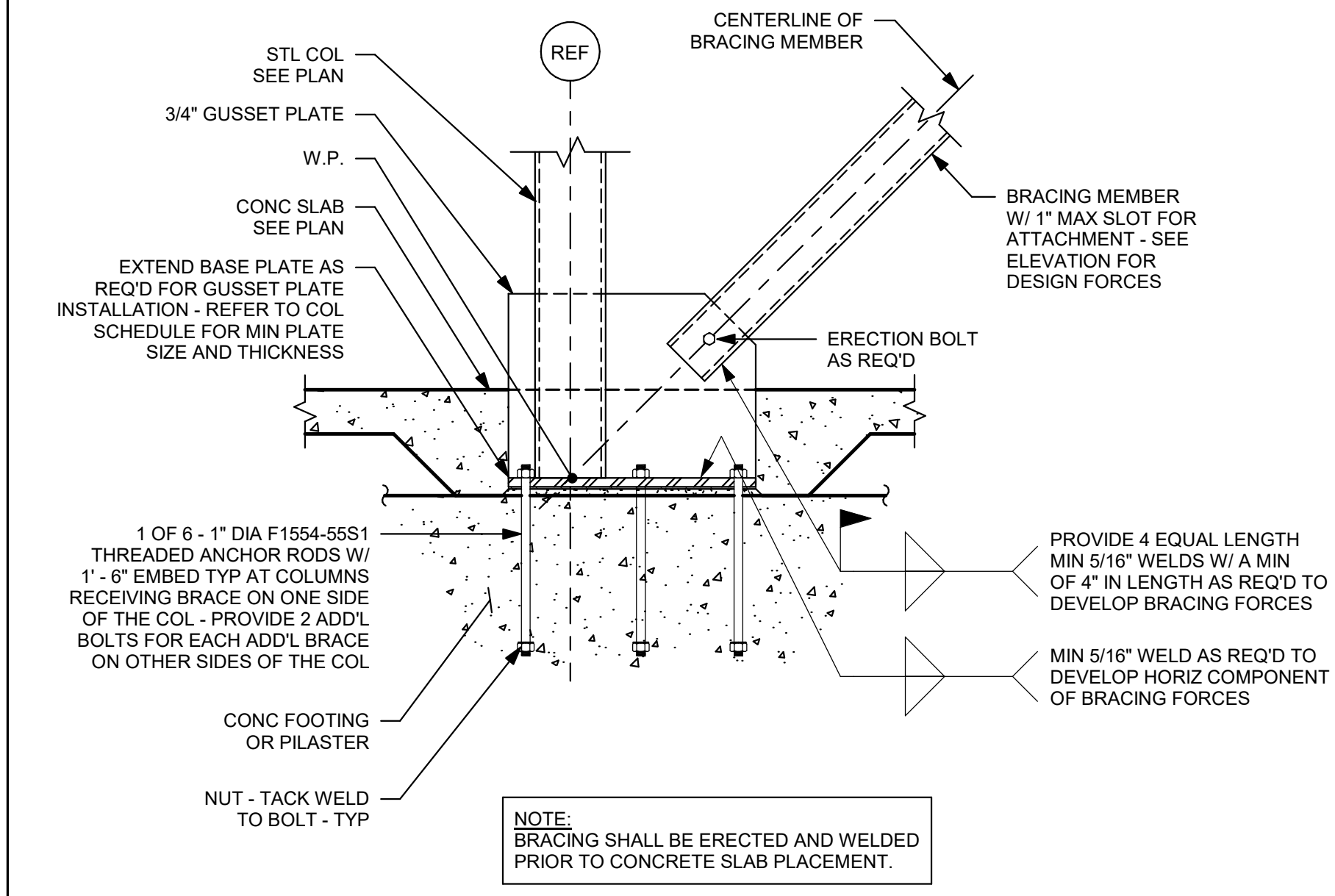


BASE PLATE DETAIL



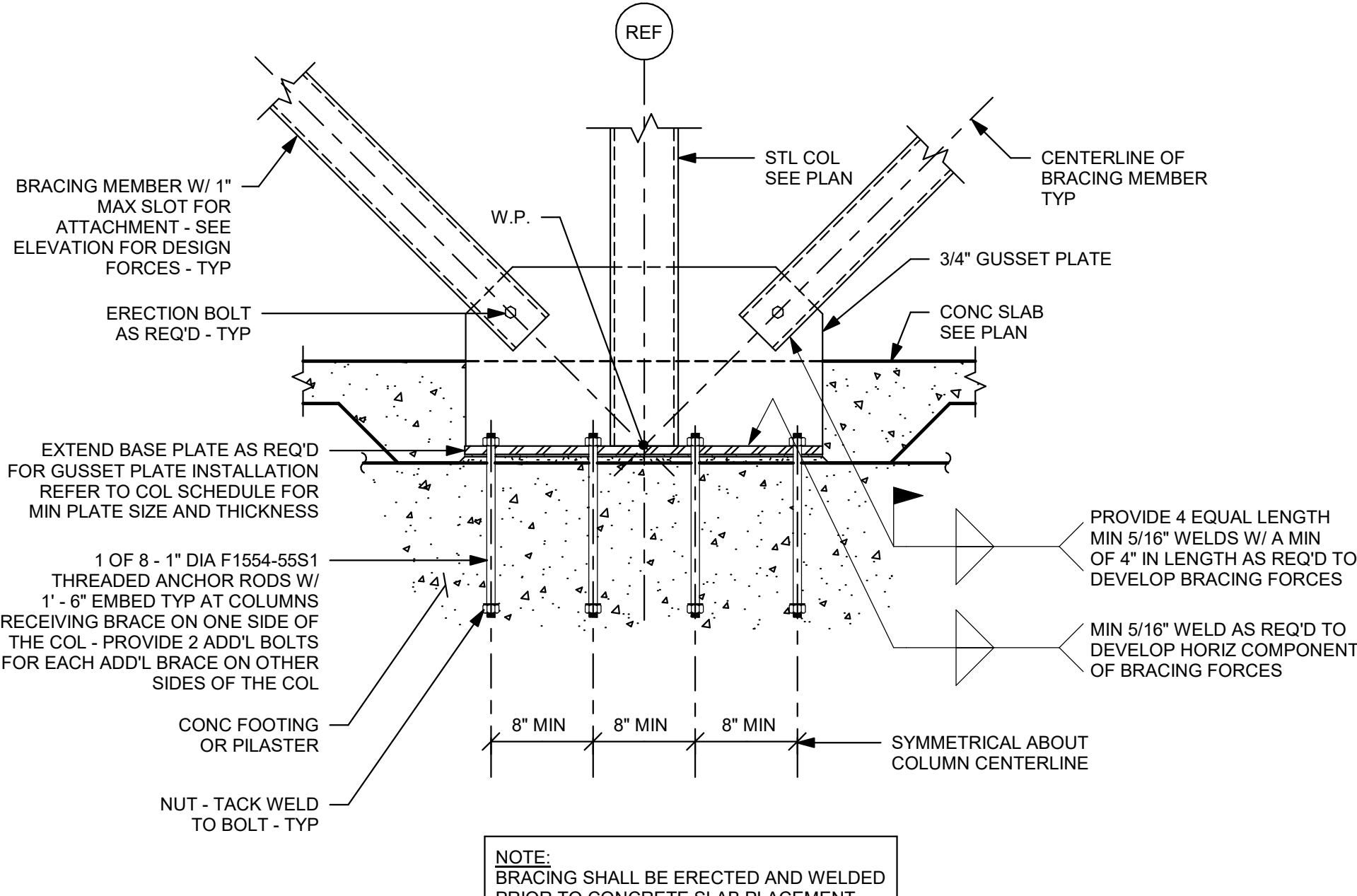
NOTES:

- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
- 2.) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
- 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.



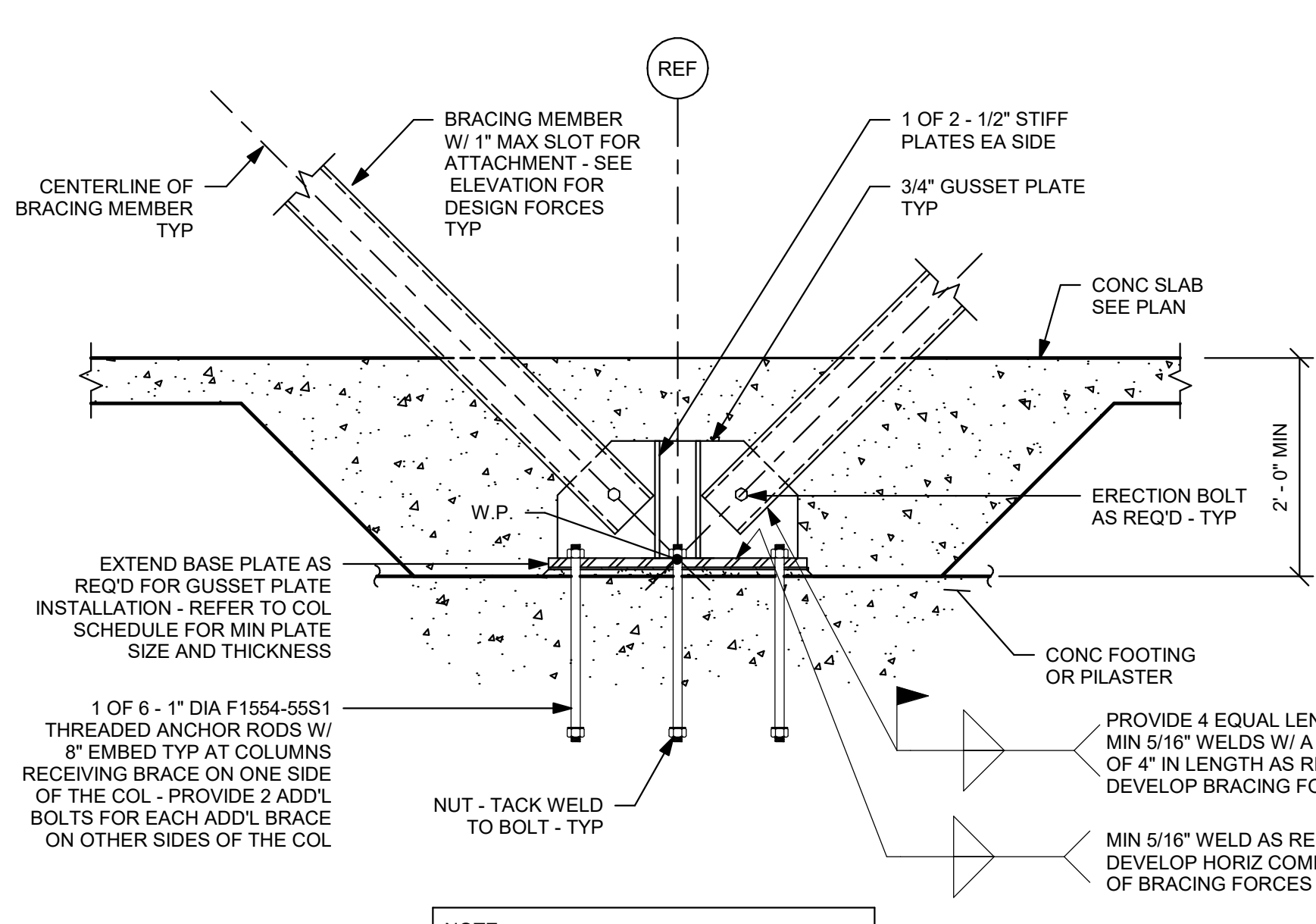
1

3/4" = 1' - 0"



2

3/4" = 1' - 0"

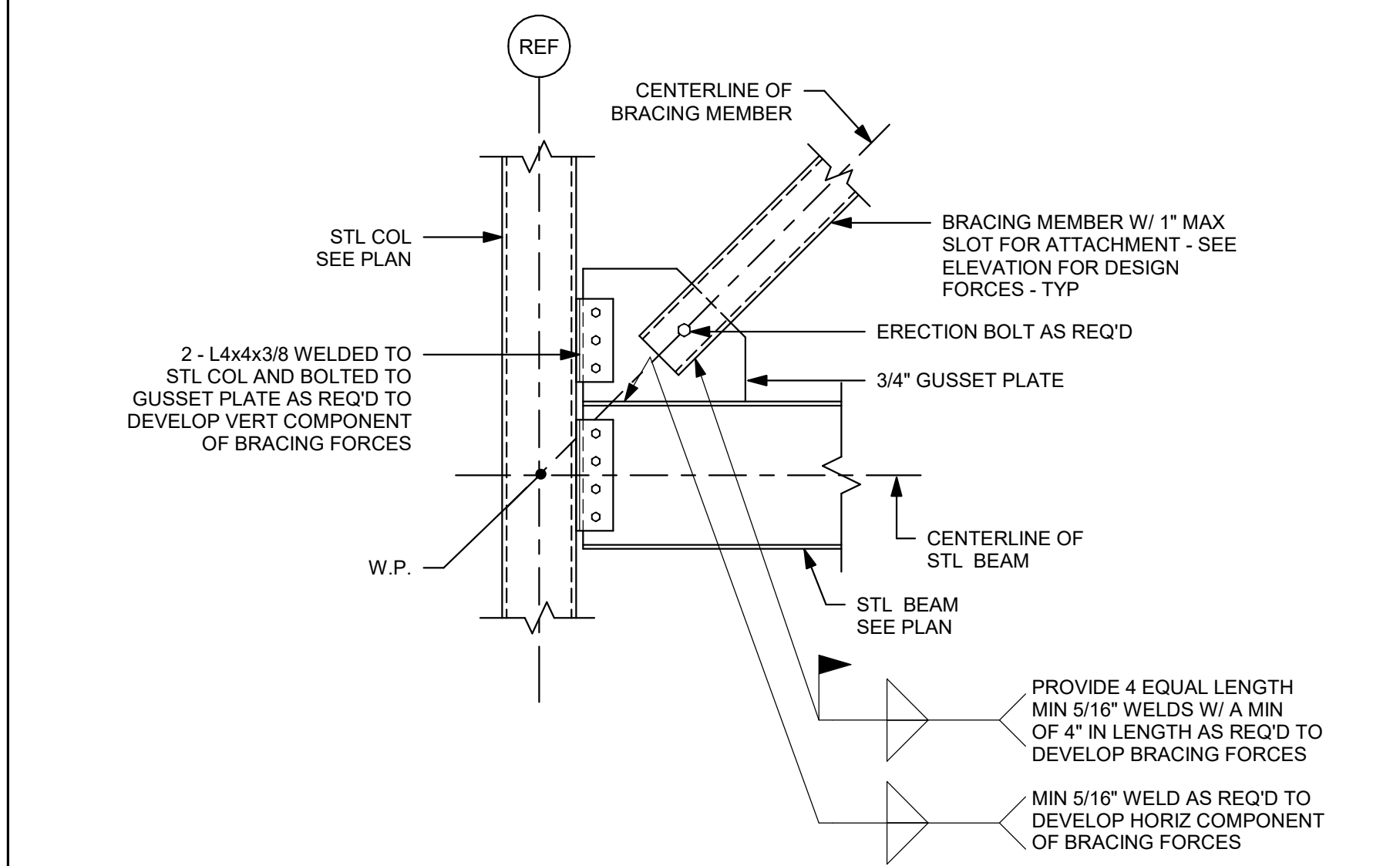


3

3/4" = 1' - 0"

4

3/4" = 1' - 0"

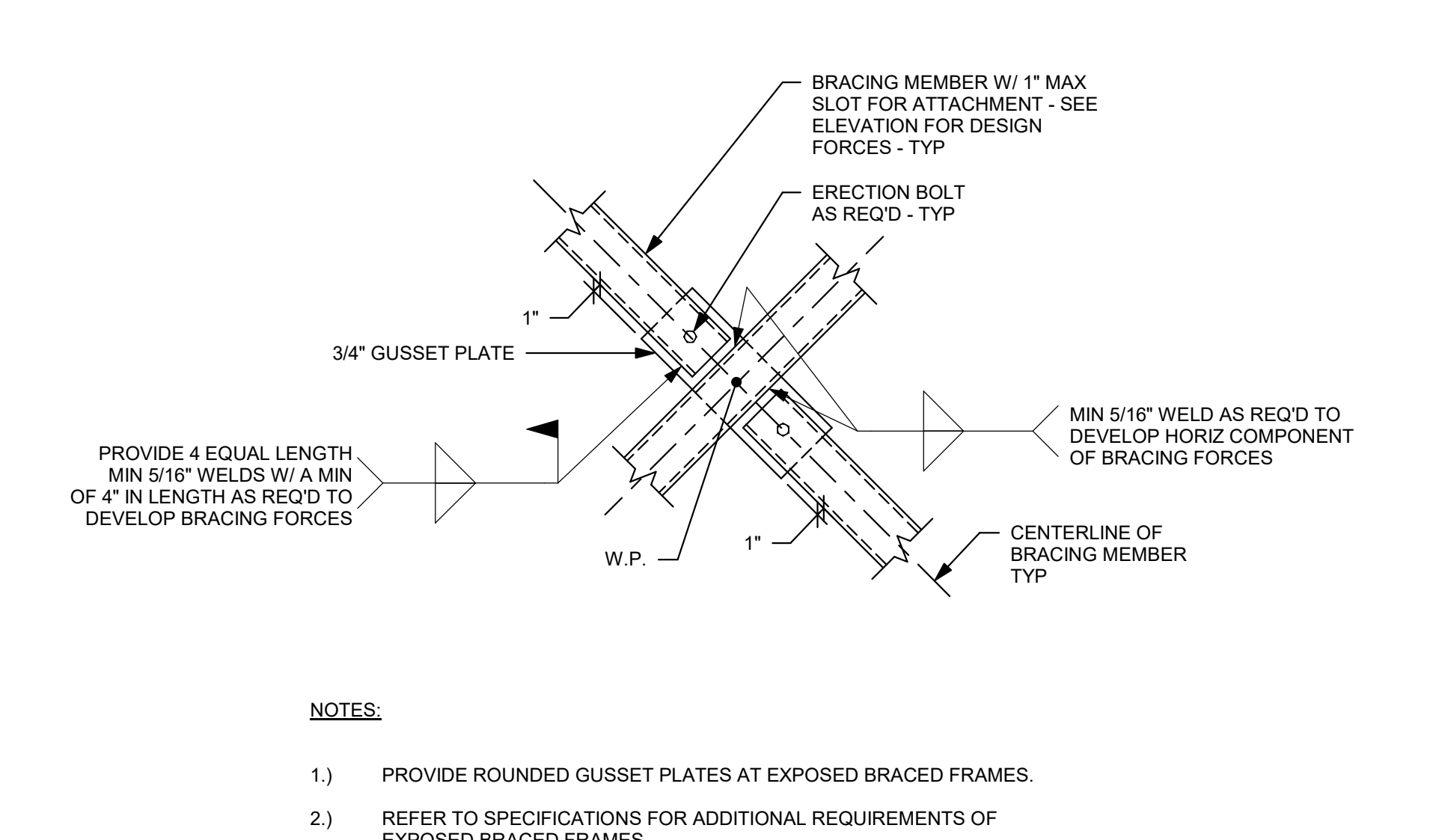


NOTES:

- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
- 2.) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
- 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

5

3/4" = 1' - 0"

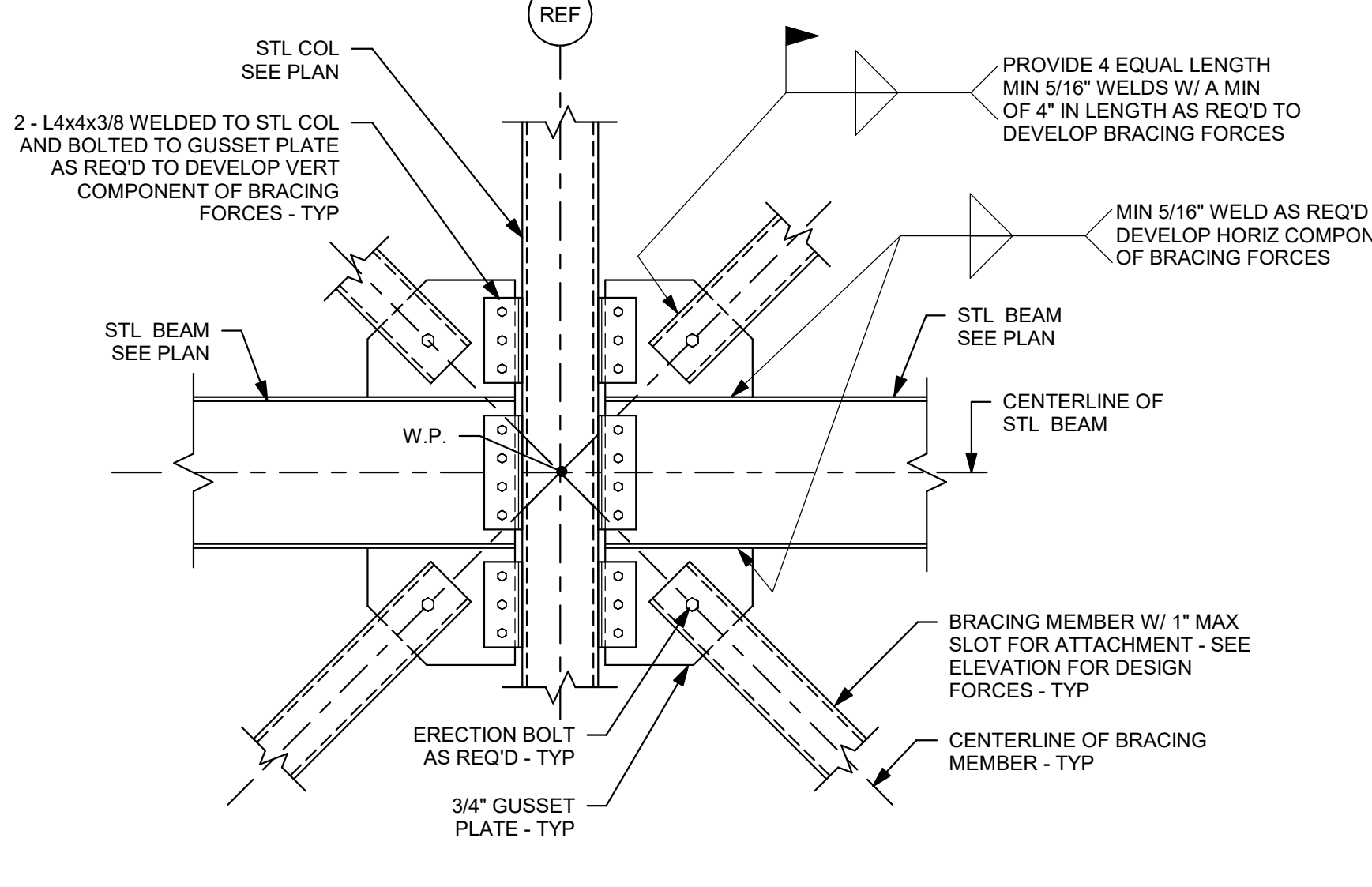


NOTES:

- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
- 2.) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
- 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.
- 4.) REFER TO ARCHITECTURAL DRAWINGS AND DETAILS FOR FINISHES AND ADDITIONAL INFORMATION.
- 5.) PROVIDE CONTINUOUS WELD WITH NO GAPS. SHOP SLOTS PROVIDED IN THE BRACE TO BE FULLY WELDED IN THE FIELD WITH NO GAPS AND GROUND SMOOTH.

6

3/4" = 1' - 0"

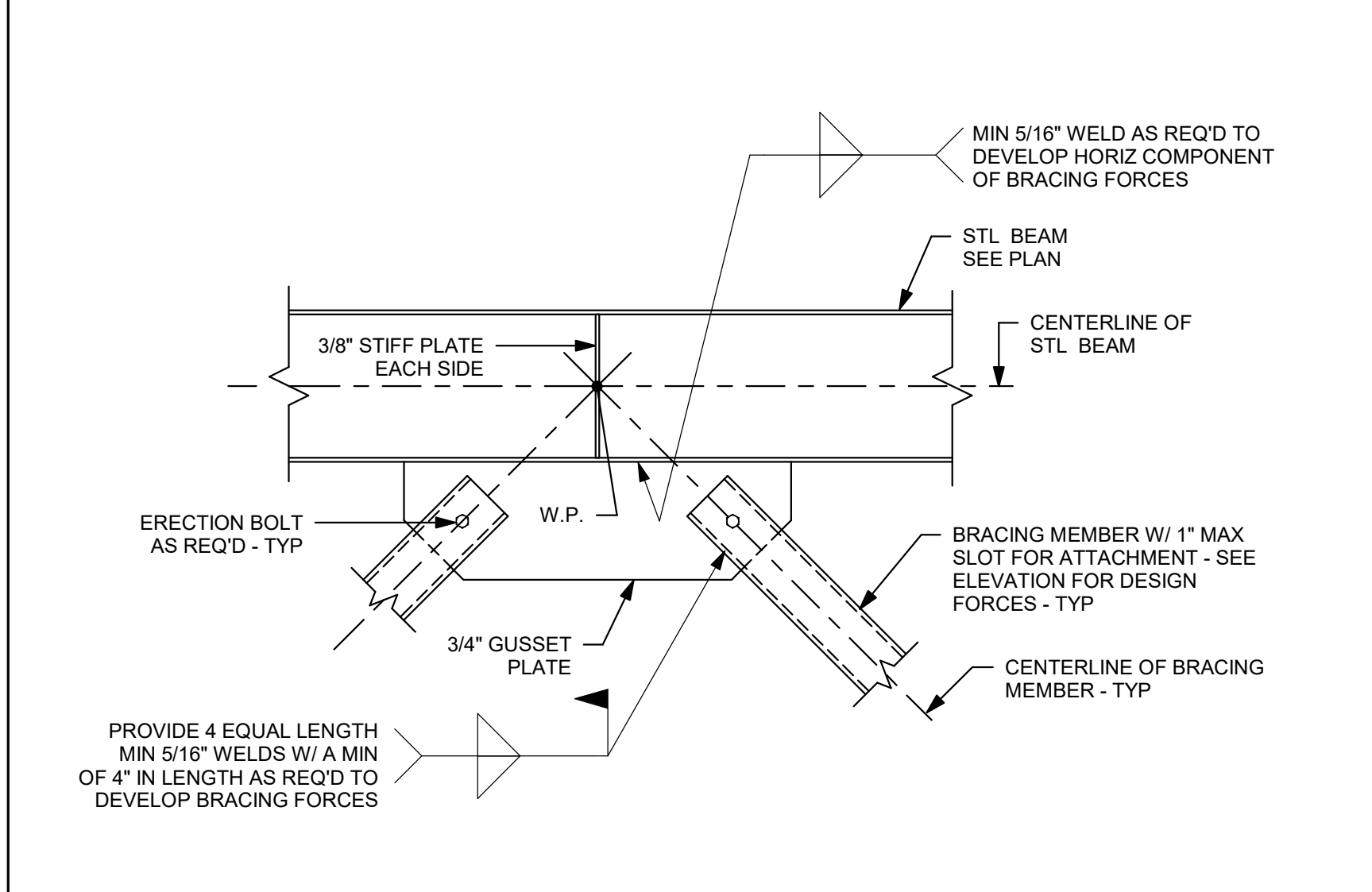


NOTES:

- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
- 2.) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
- 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

7

3/4" = 1' - 0"

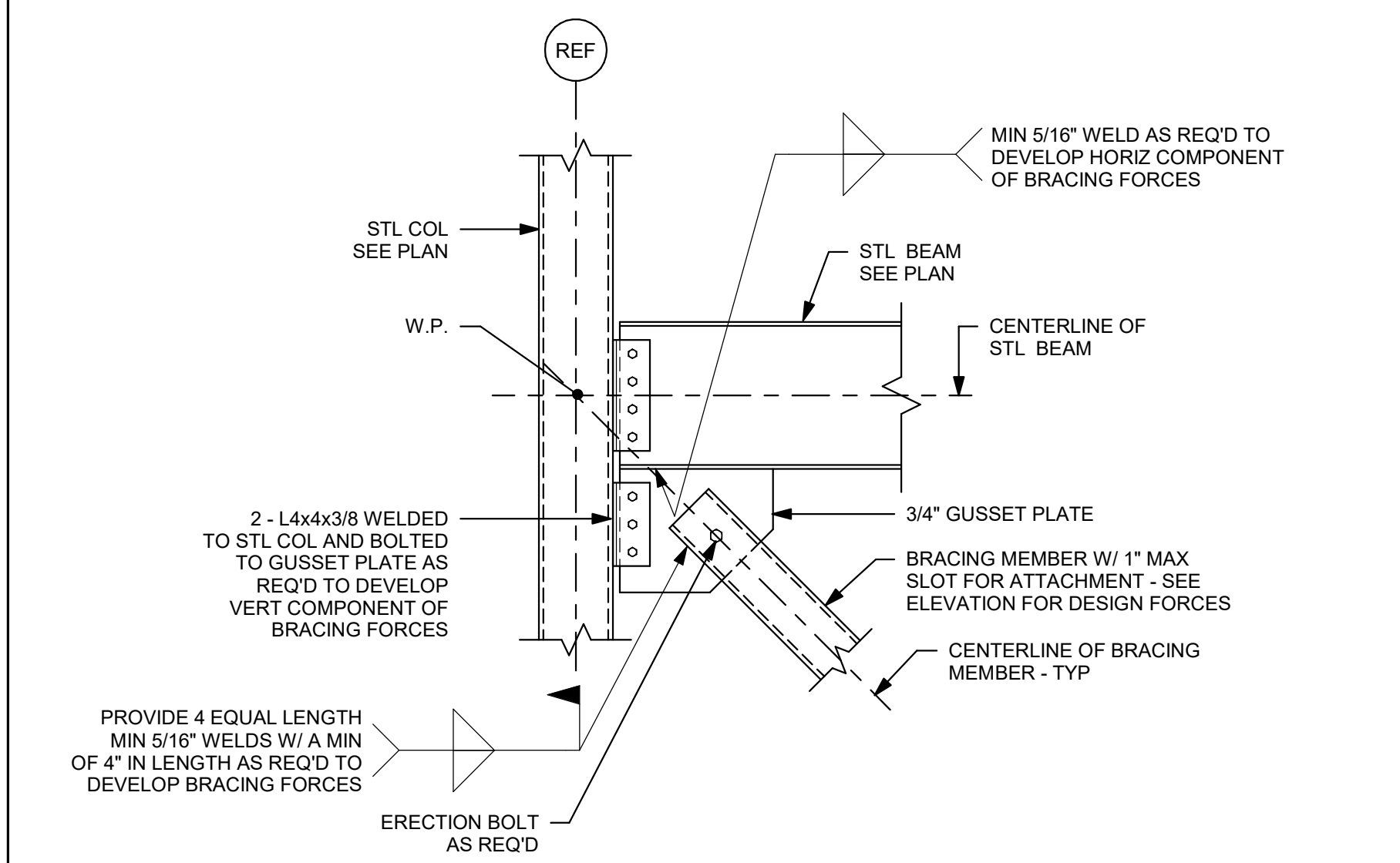


NOTES:

- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
- 2.) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
- 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

8

3/4" = 1' - 0"

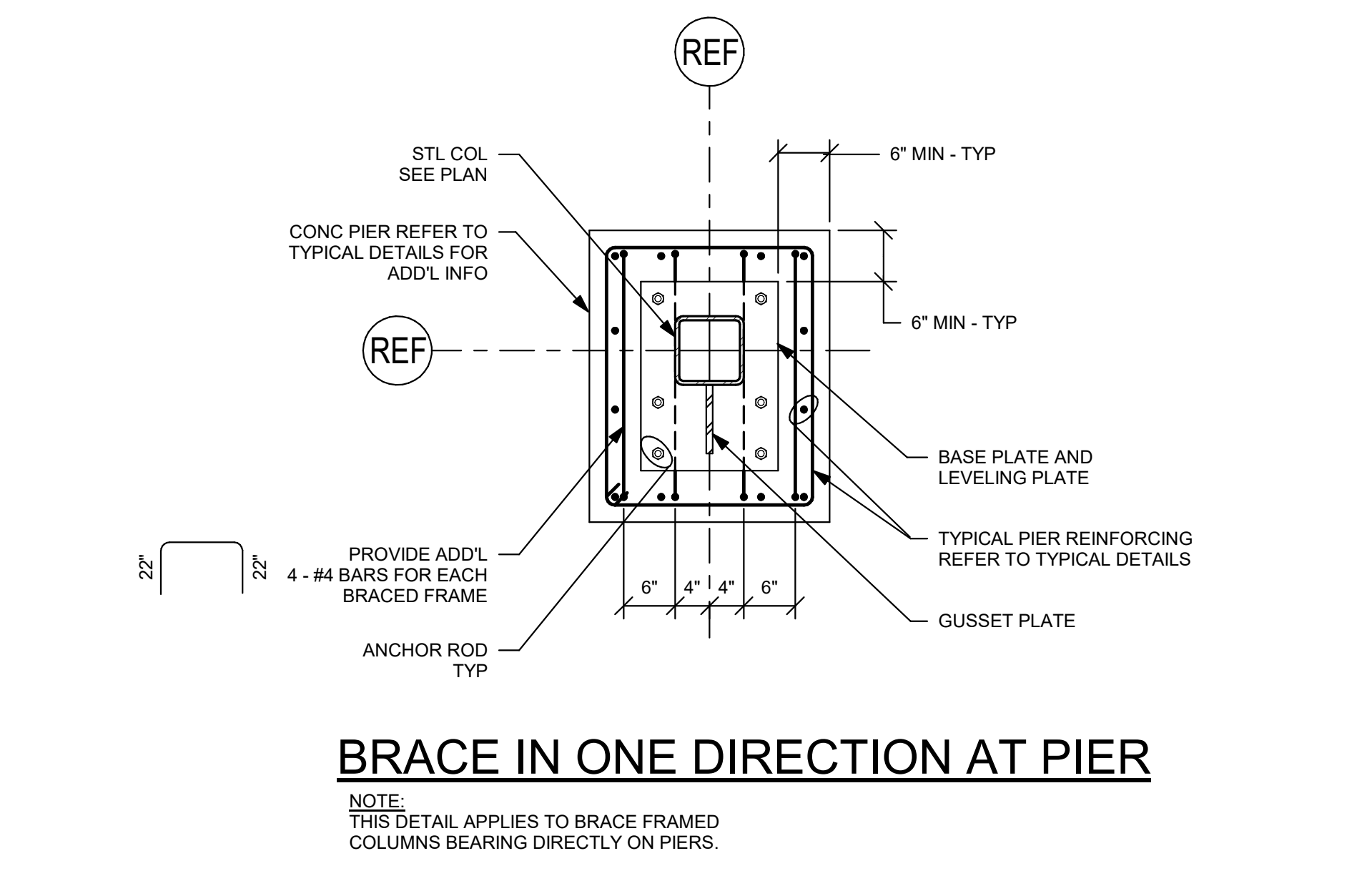


NOTES:

- 1.) PROVIDE ROUNDED GUSSET PLATES AT EXPOSED BRACED FRAMES.
- 2.) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF EXPOSED BRACED FRAMES.
- 3.) COORDINATE WITH BRACE FRAME ELEVATIONS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPOSED BRACED FRAME MEMBERS.

9

3/4" = 1' - 0"

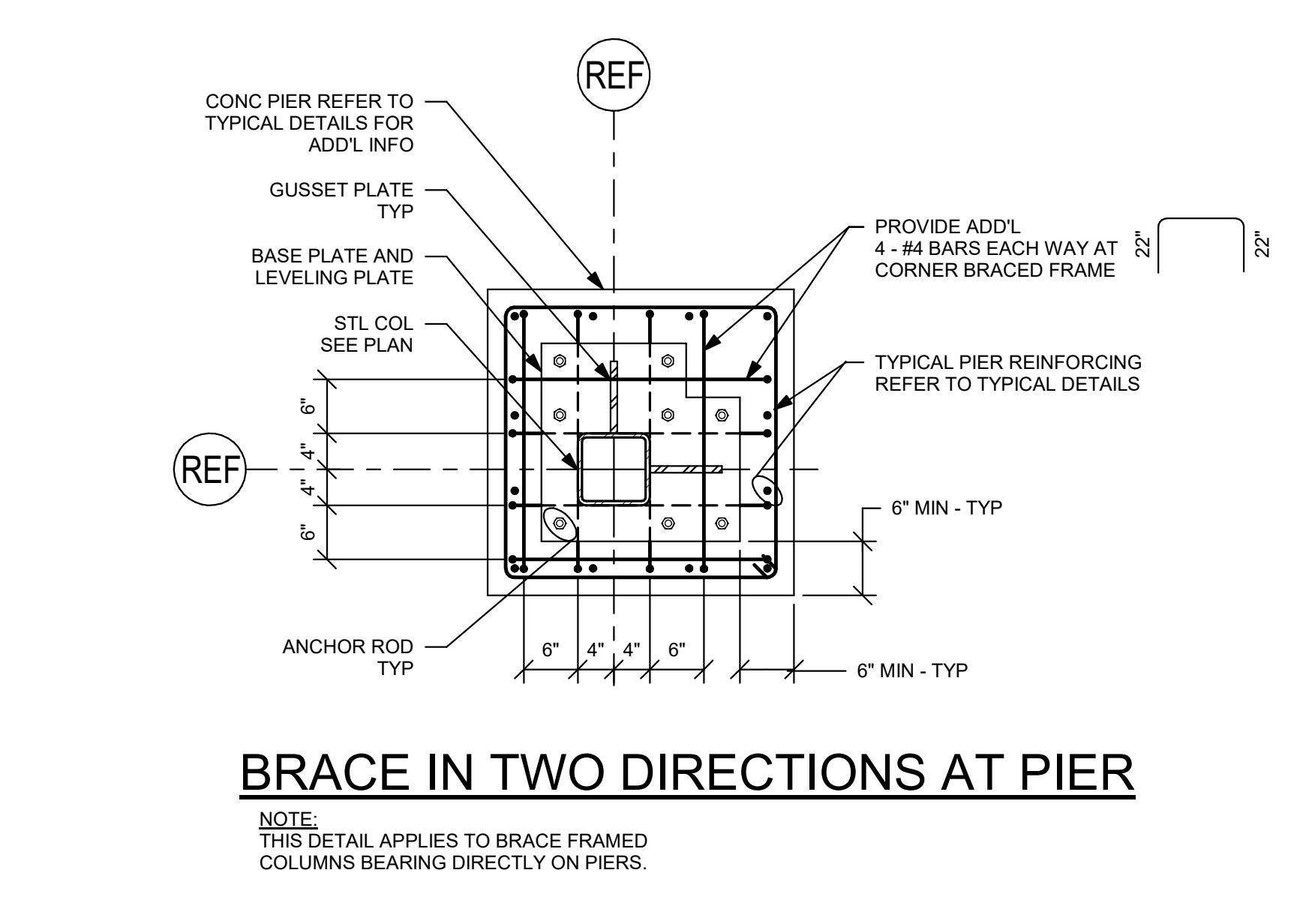


BRACE IN ONE DIRECTION AT PIER

NOTE:
THIS DETAIL APPLIES TO BRACE FRAMED
COLUMNS BEARING DIRECTLY ON PIERS.

10

3/4" = 1' - 0"



BRACE IN TWO DIRECTIONS AT PIER

NOTE:
THIS DETAIL APPLIES TO BRACE FRAMED
COLUMNS BEARING DIRECTLY ON PIERS.

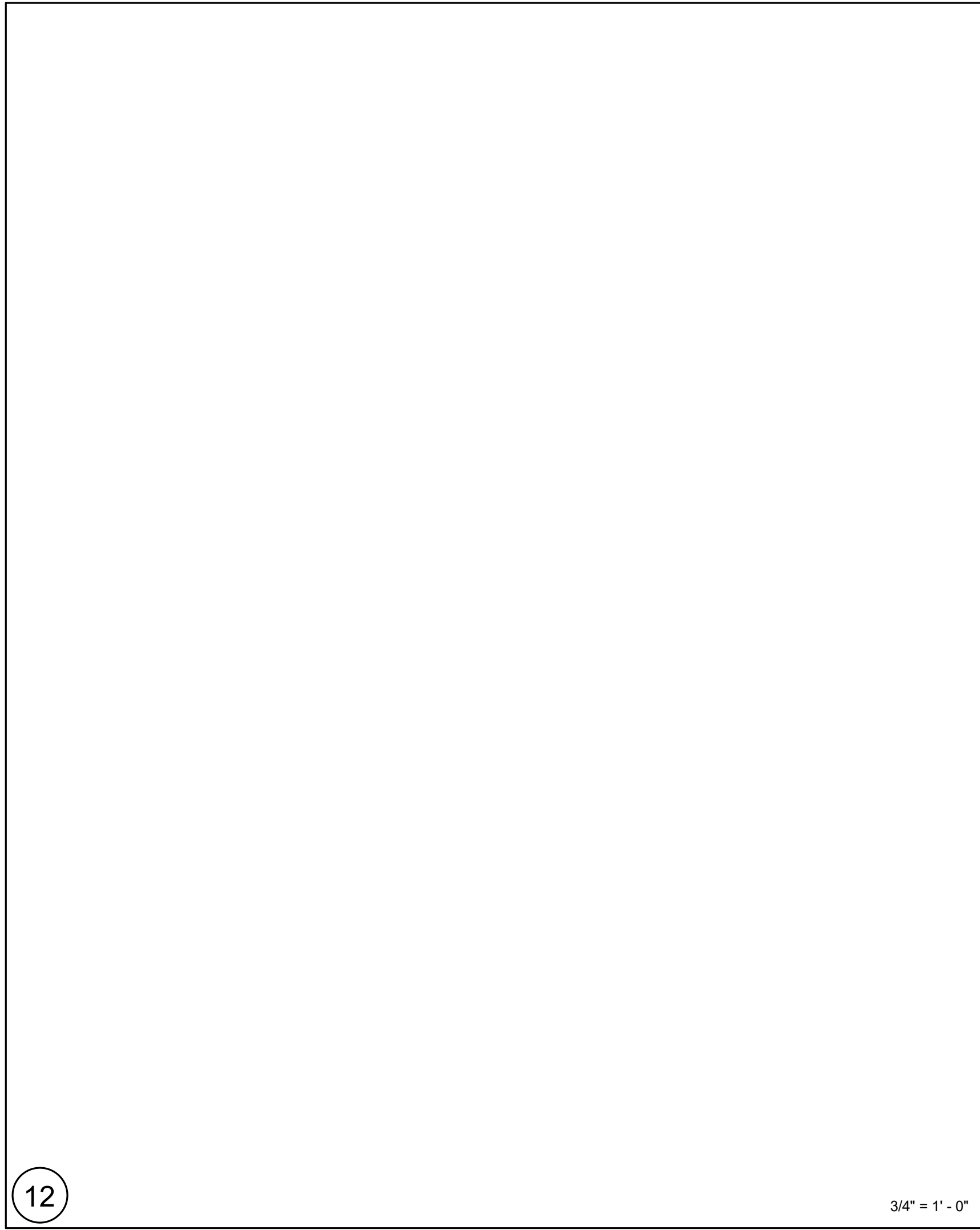
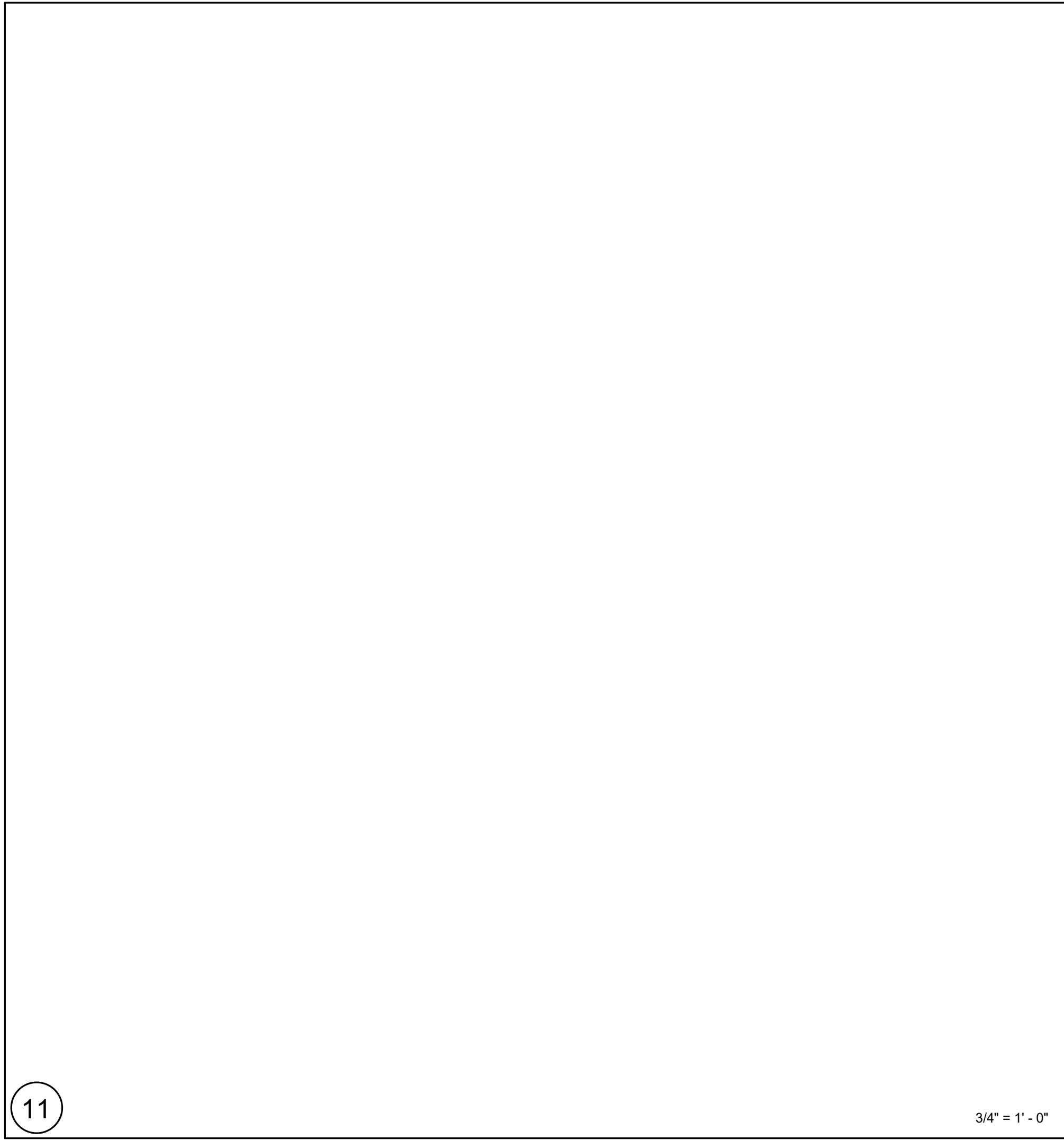
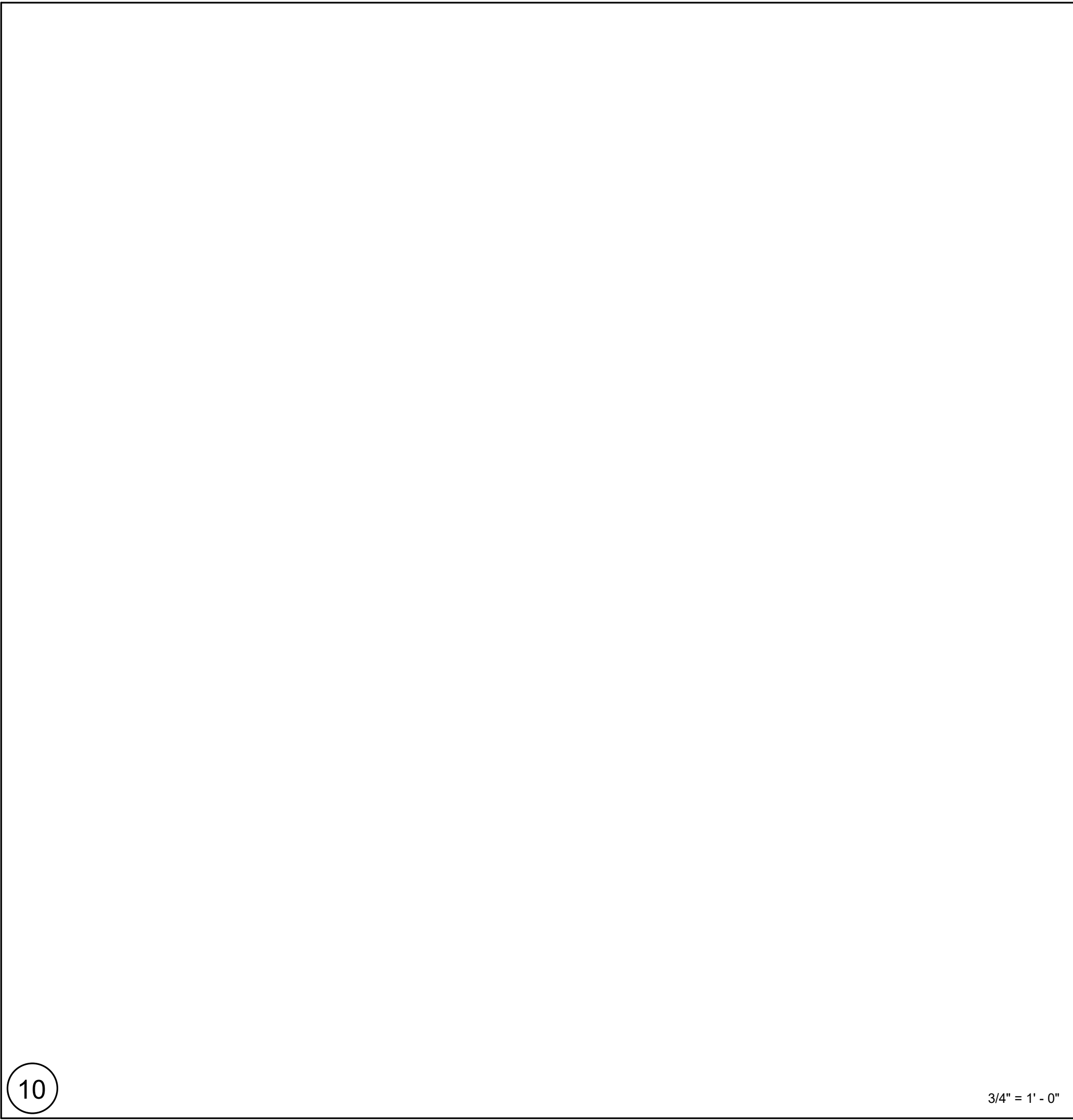
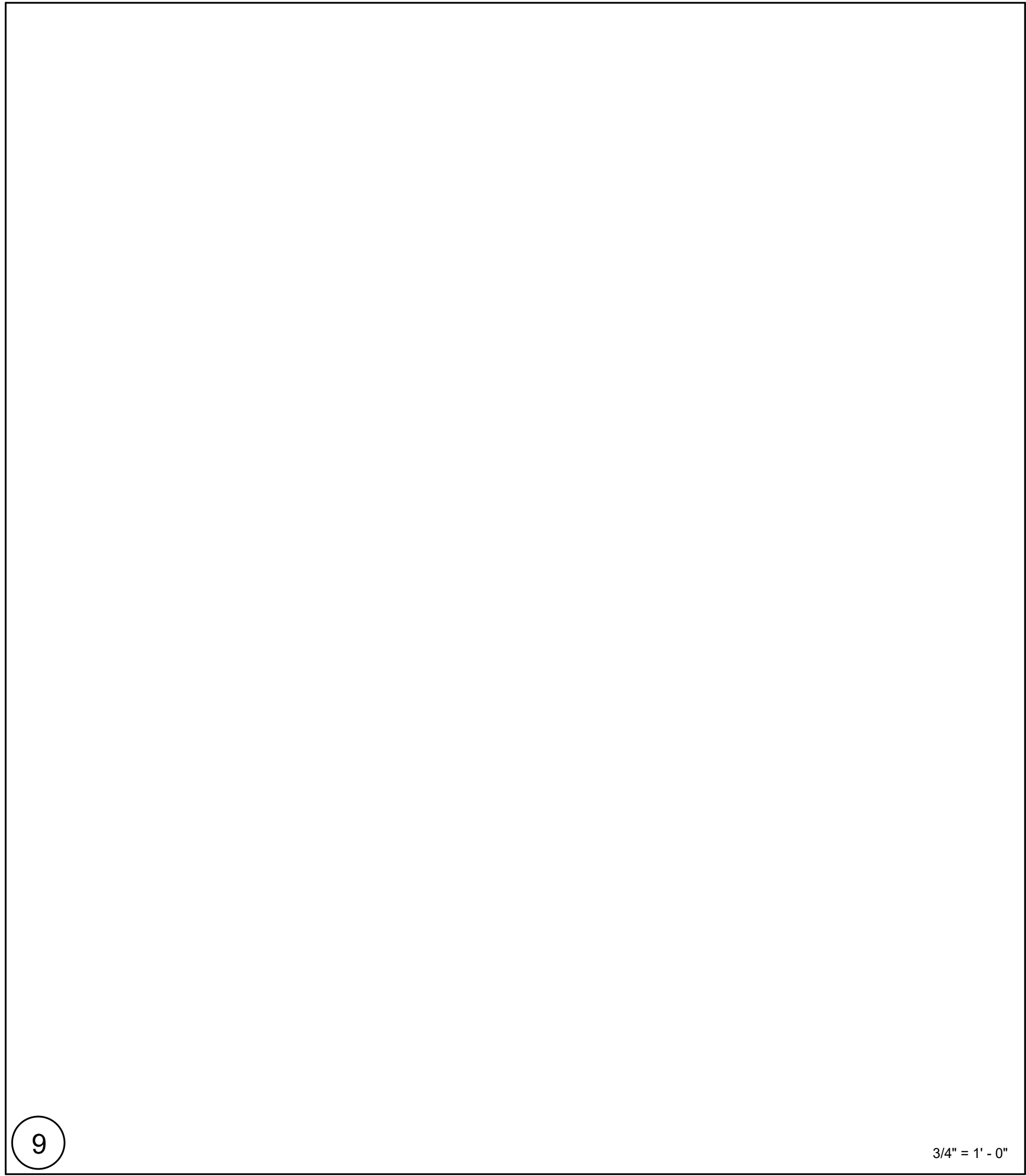
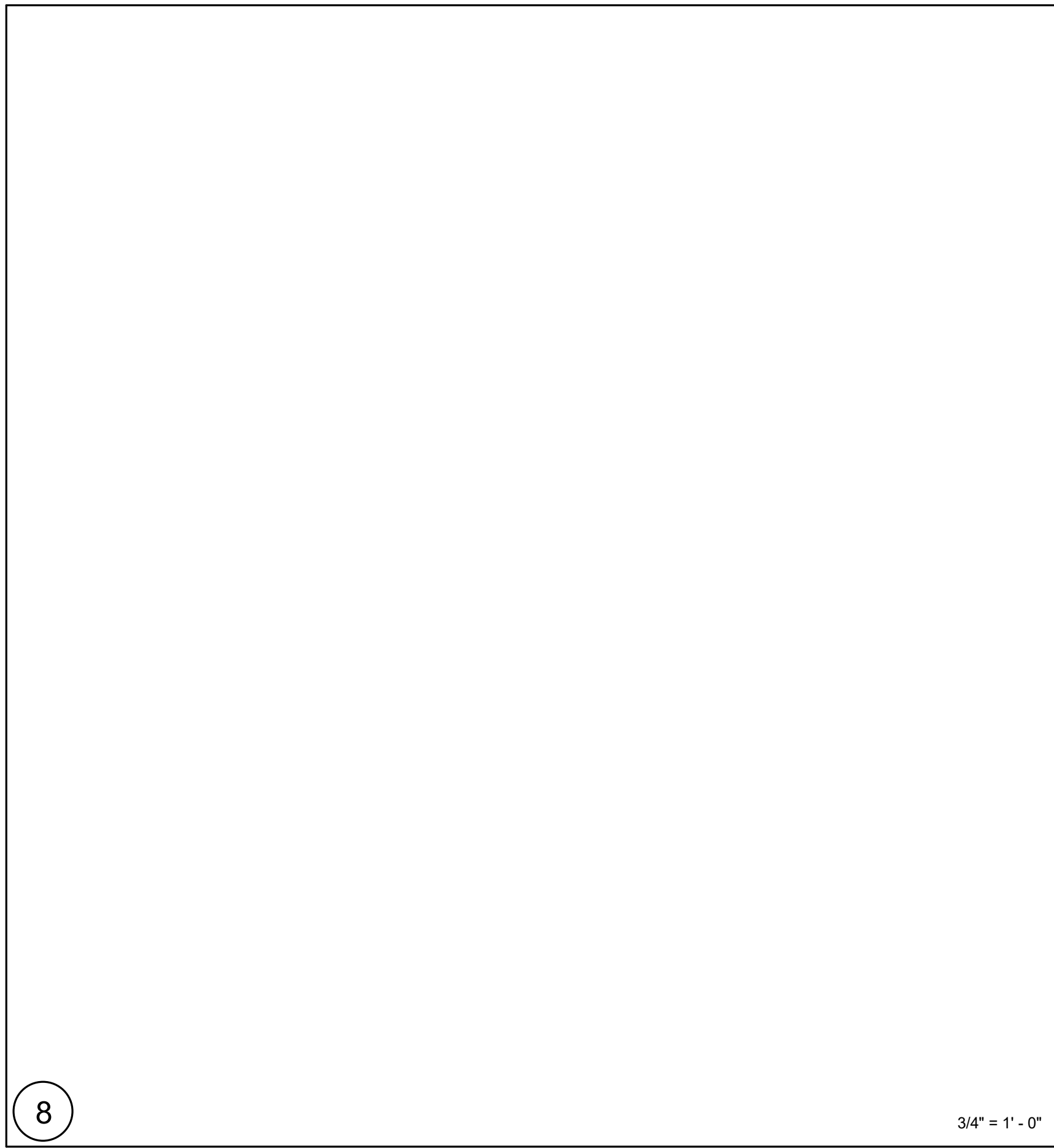
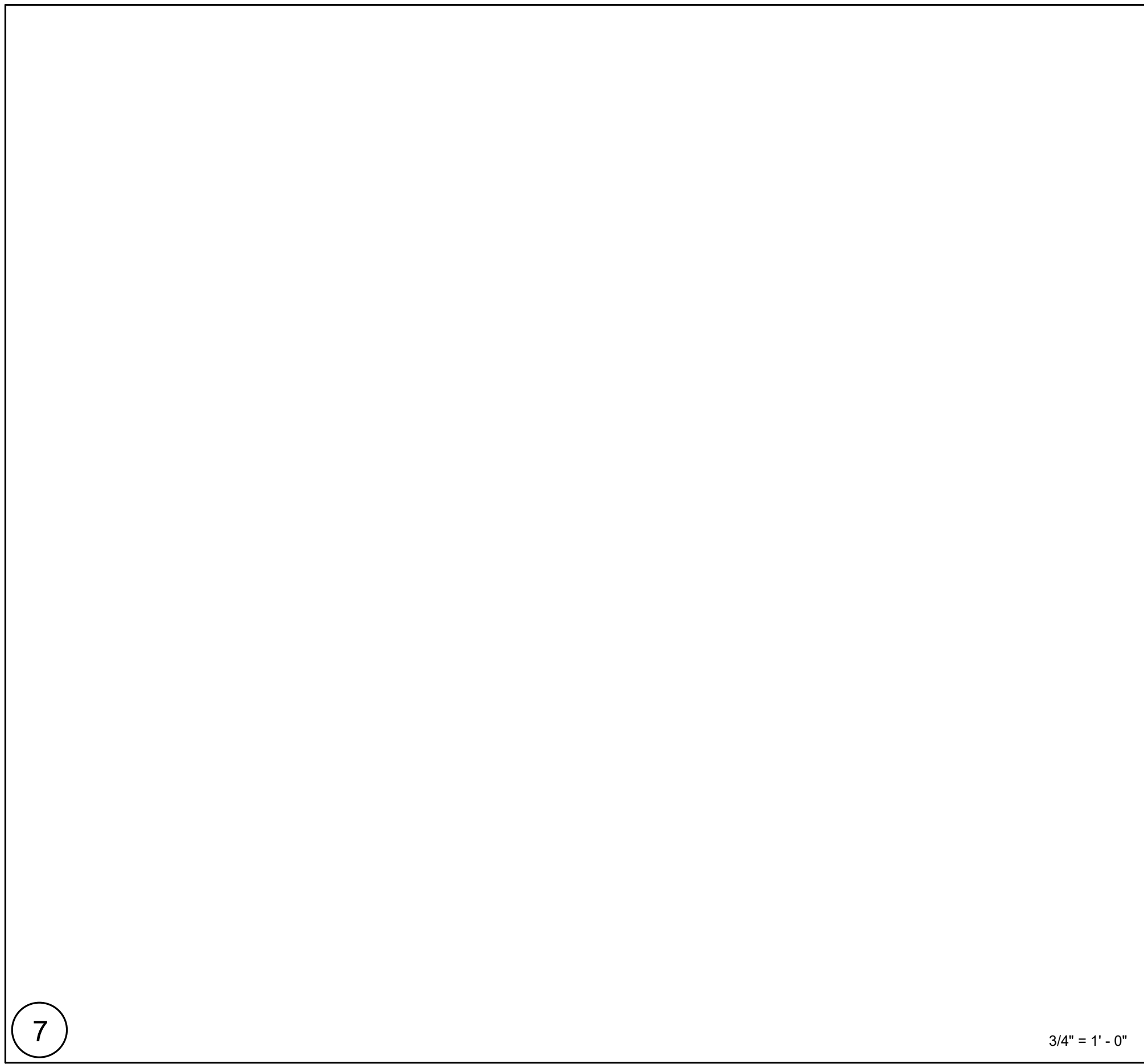
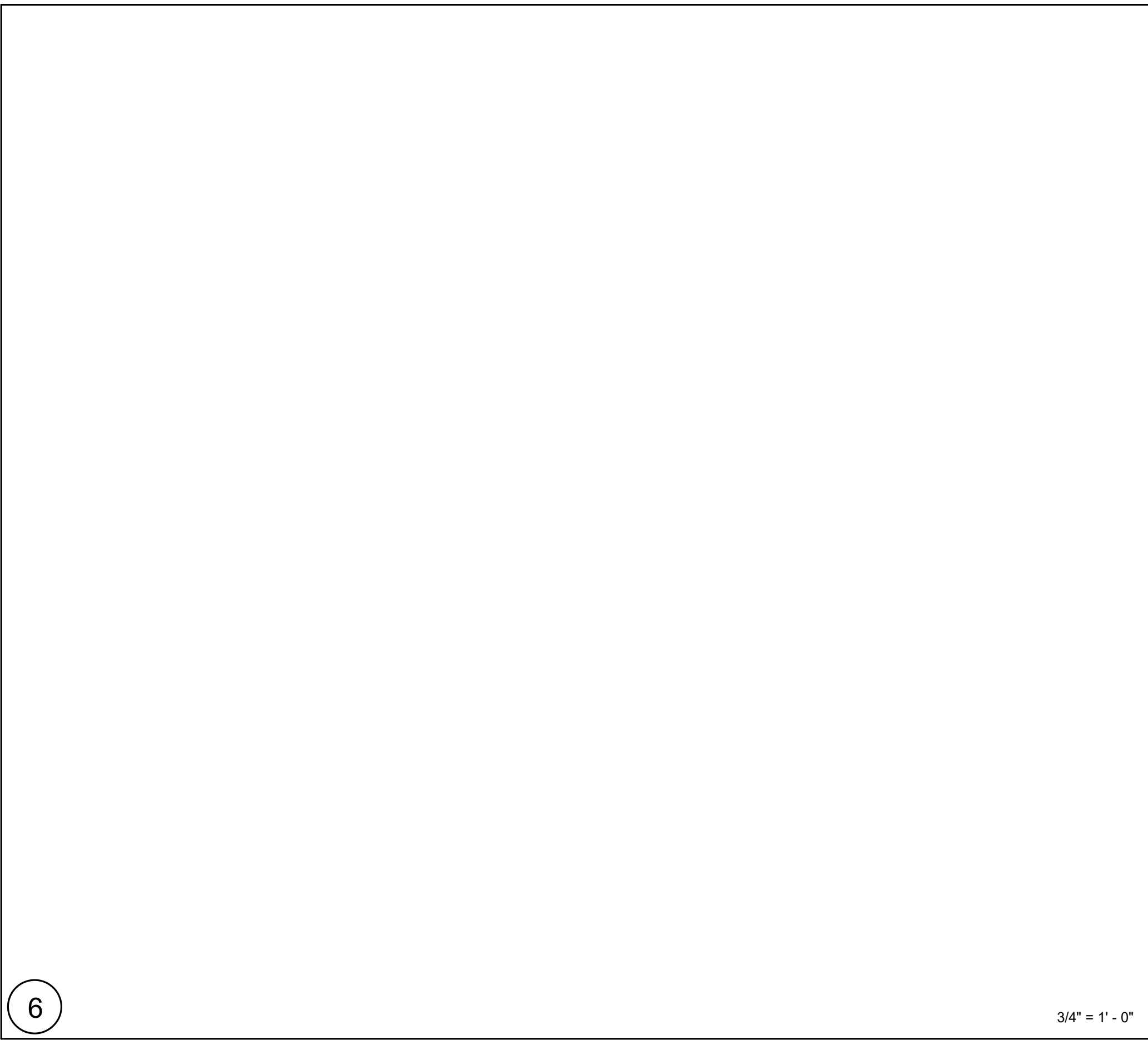
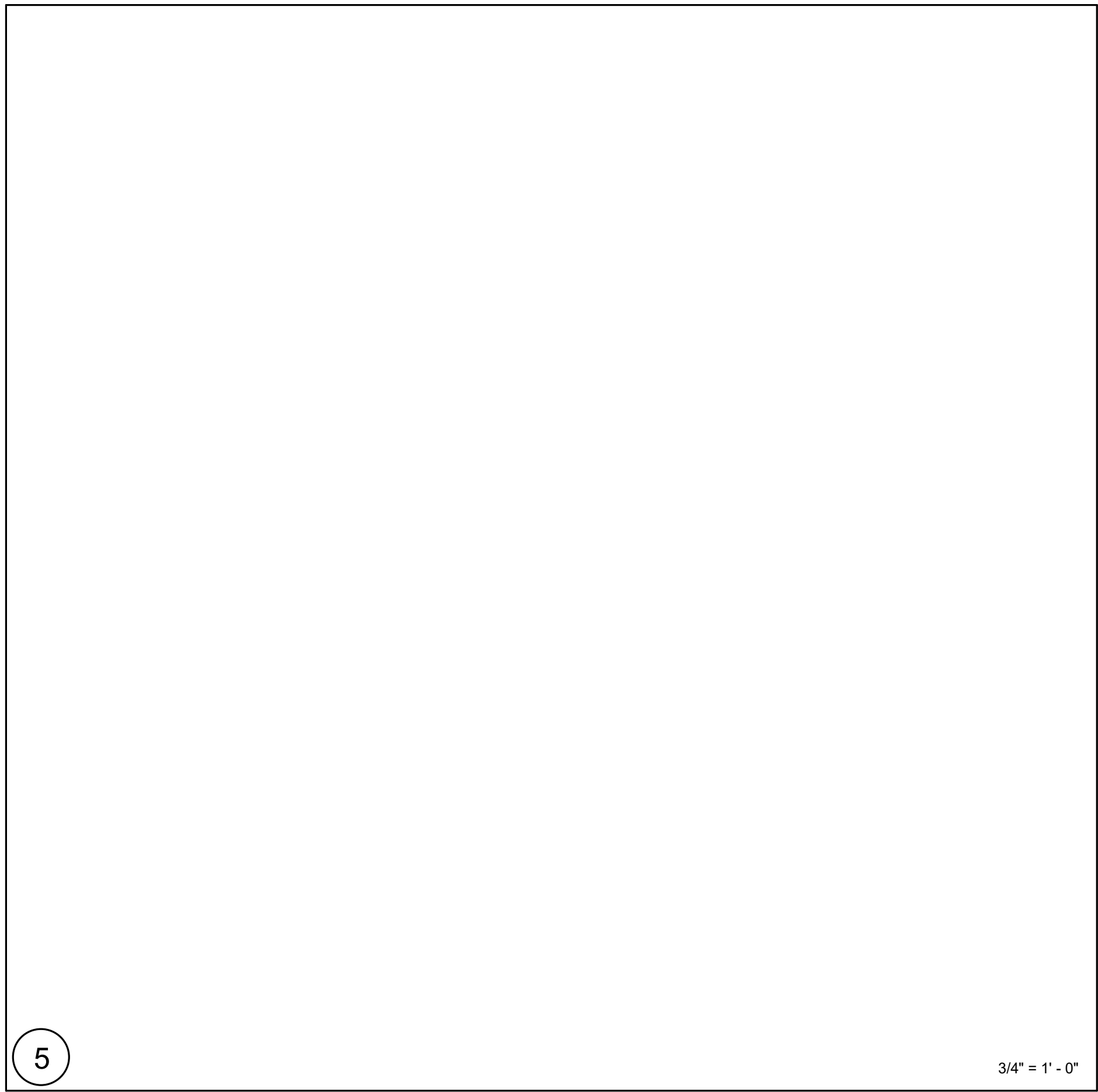
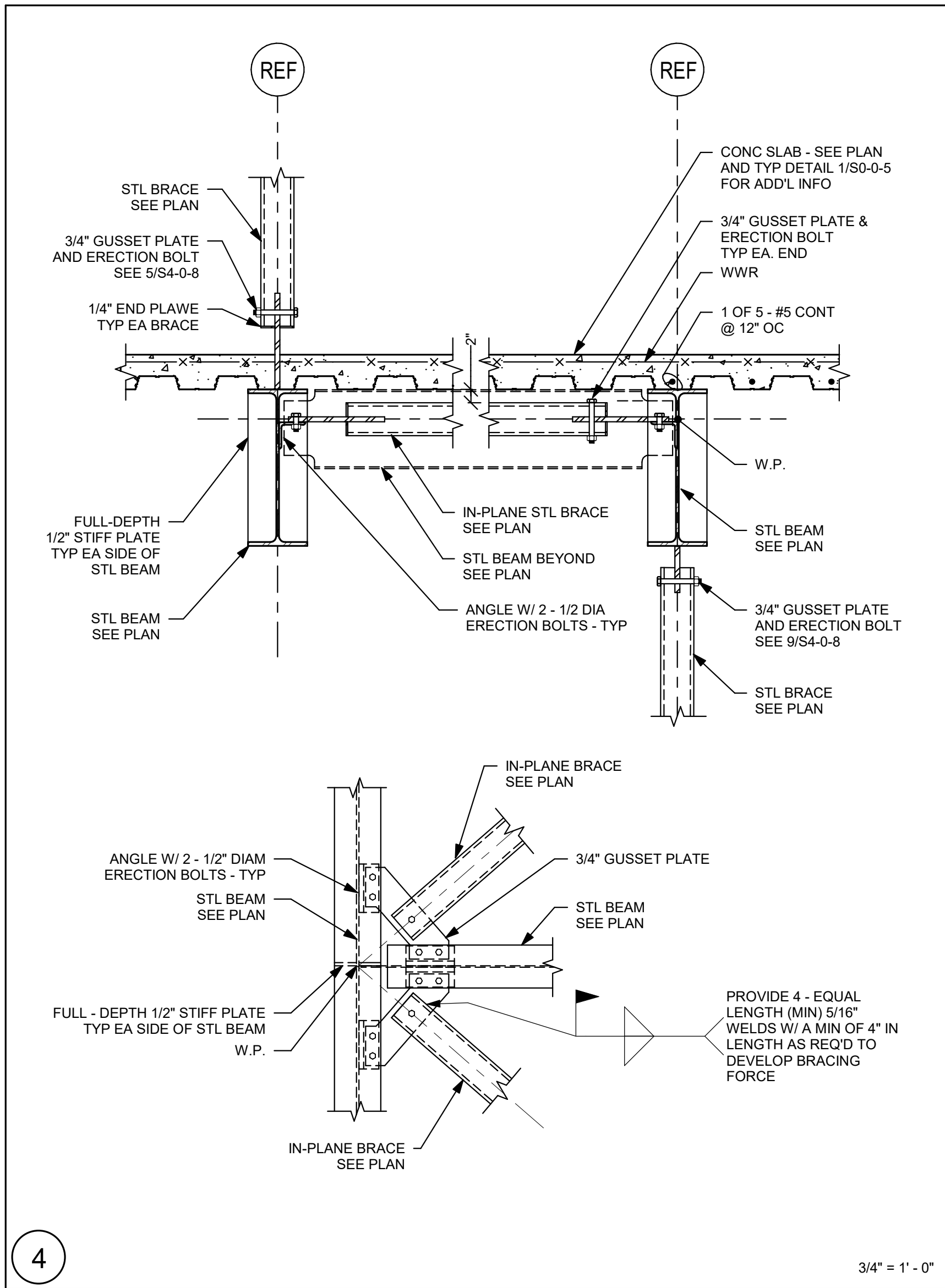
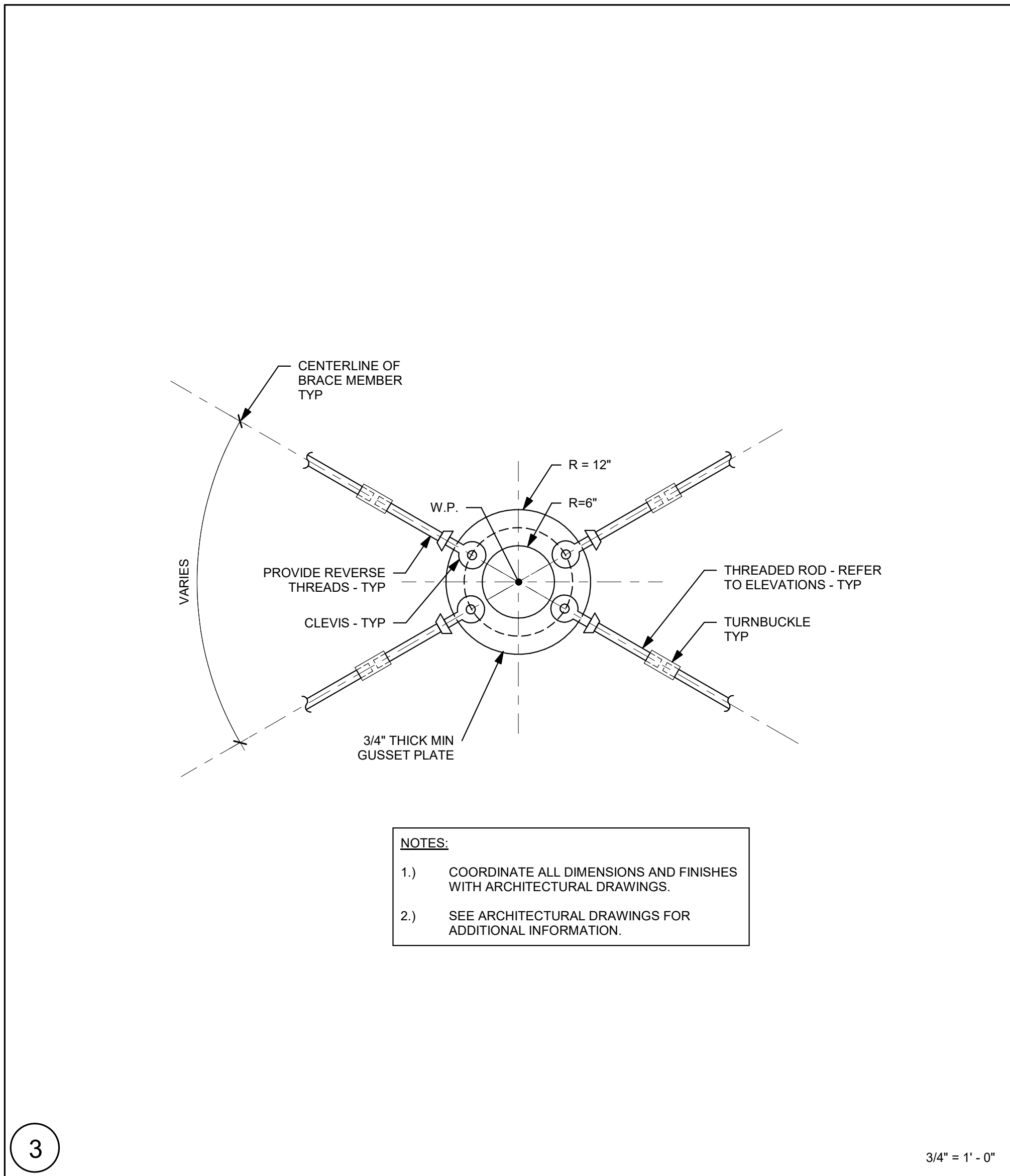
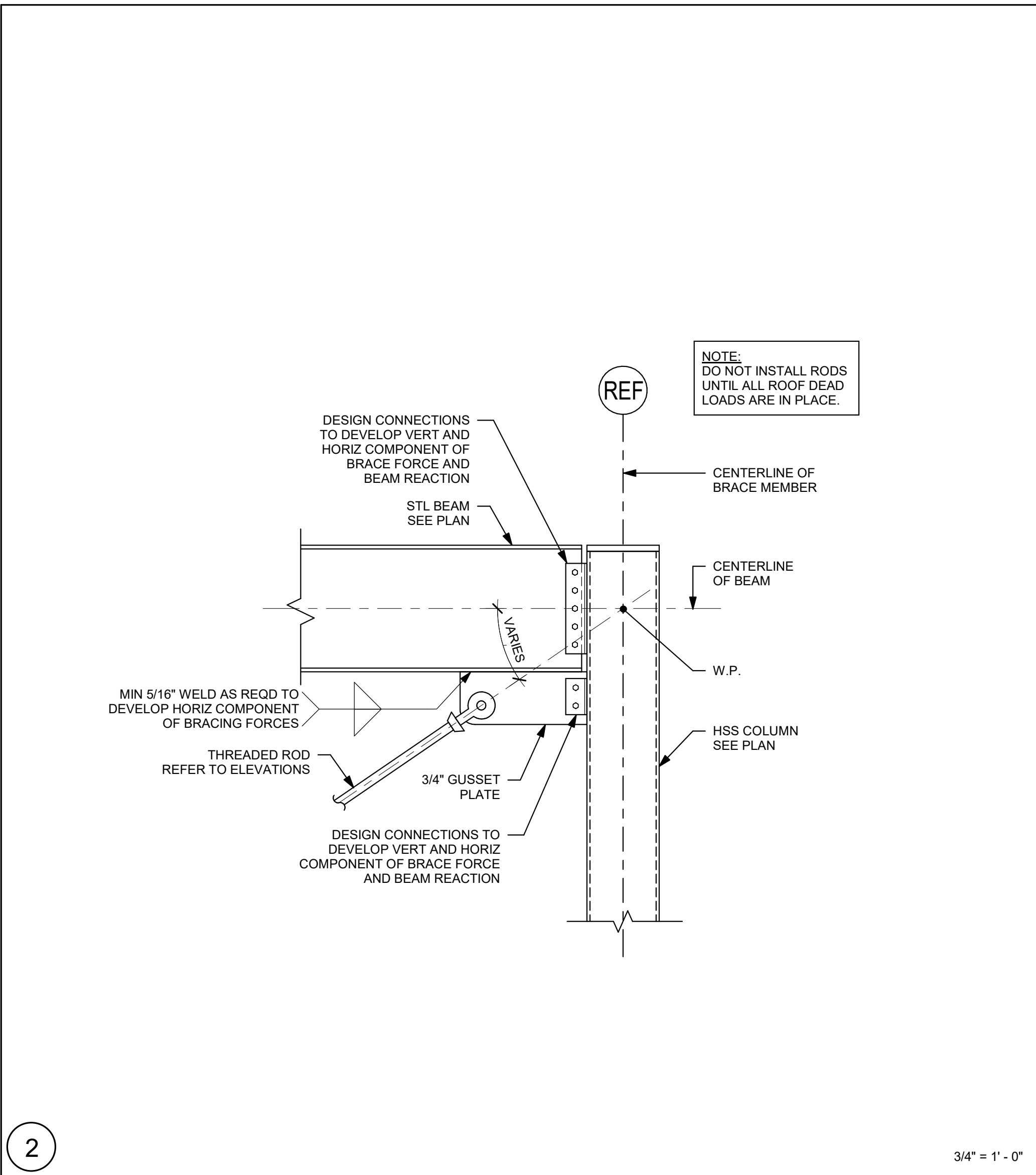
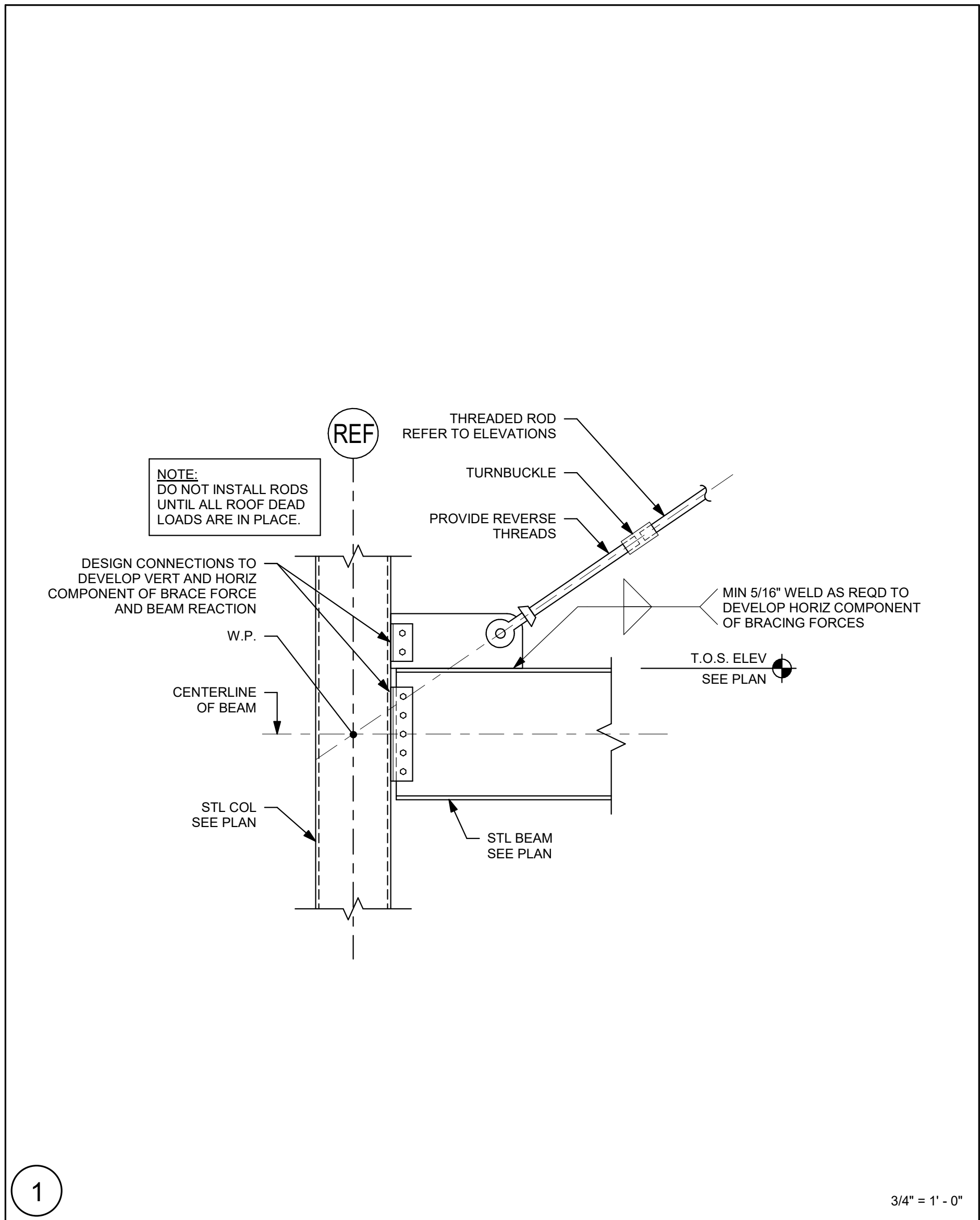
11

3/4" = 1' - 0"



12

3/4" = 1' - 0"



DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior
Tel: 877.267.1100
www.draa.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

A B C D

KEY PLAN

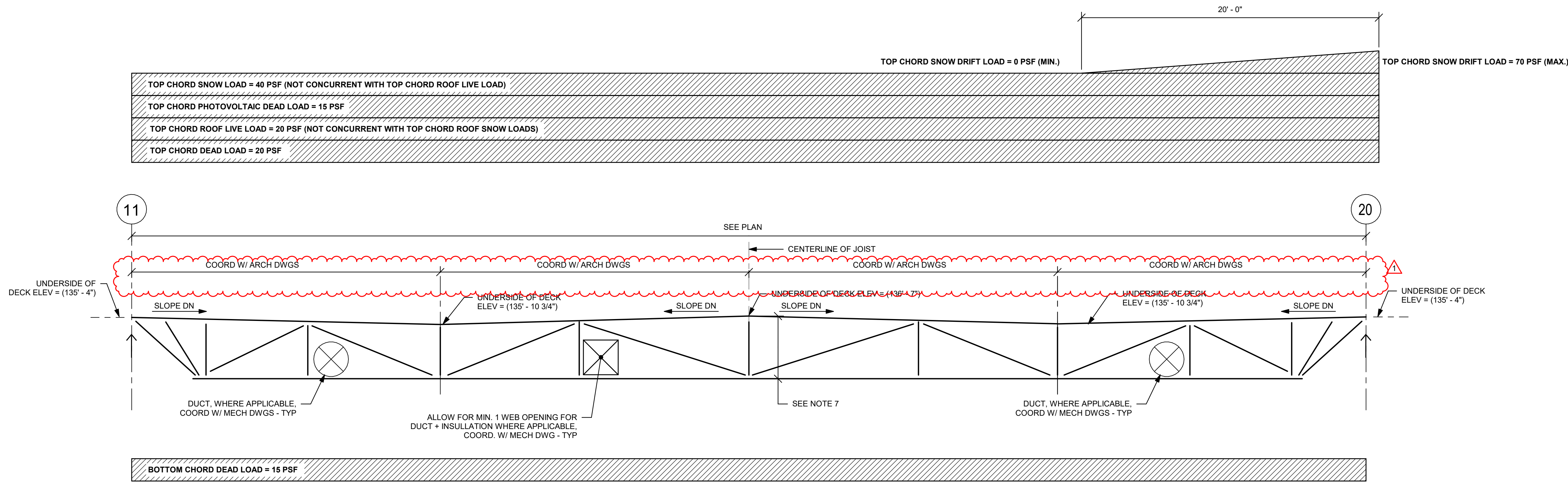
PROJECT NORTH
MAGNETIC NORTH

BRACED FRAME
DETAILS

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

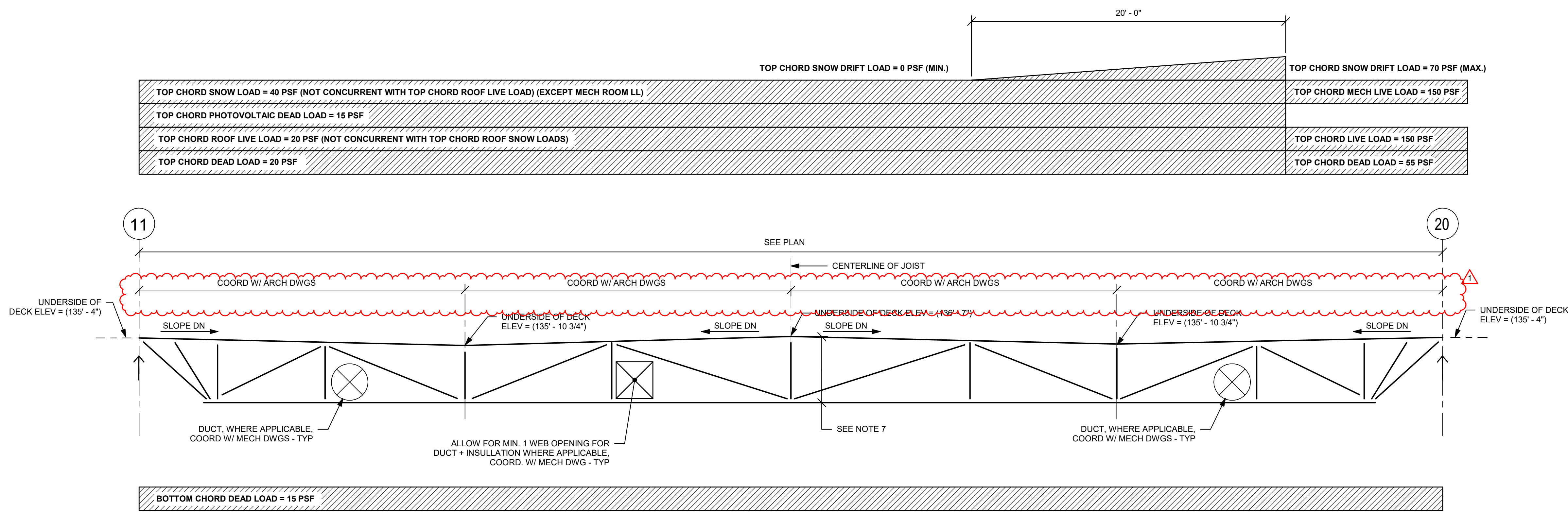
S4-0-9

© COPYRIGHT 2021
DRUMMEY ROSANE ANDERSON, INC.



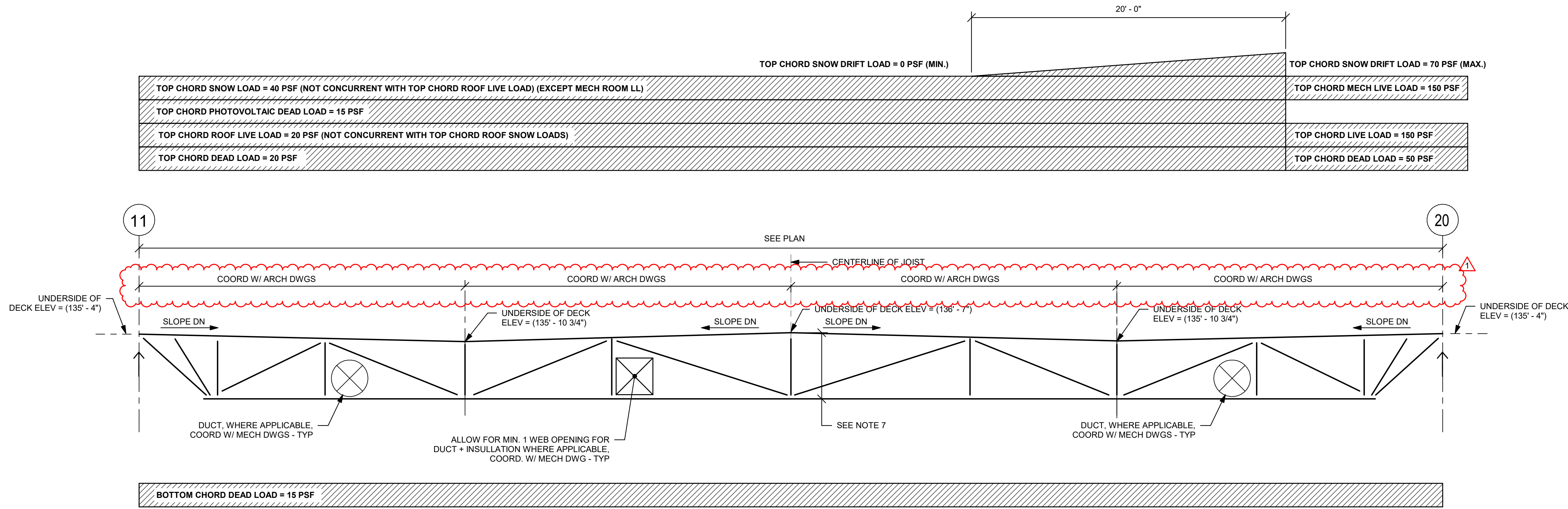
JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP1

NOTE: SELF WEIGHT OF JOIST NOT INCLUDED IN LOADS



JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP2

NOTE: SELF WEIGHT OF JOIST NOT INCLUDED IN LOADS



JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP3

NOTE: SELF WEIGHT OF JOIST NOT INCLUDED IN LOADS

JOIST NOTES:

- 1.) JOIST SEAT DEPTH VARIES (8" MIN) AT CENTERLINE OF BEARING. COORDINATE WITH TOP OF STEEL BEAM.
- 2.) IN ADDITION TO THE LOADS SHOWN IN THE DIAGRAMS, DESIGN JOISTS AT THE GYMNASIUM FOR CONCENTRATED LOADS FROM MOTORIZED GYMNASIUM CURTAIN BATTING CAGE AND BASKETBALL BACKSTOP SUPPORT POINTS. REFER TO THE ARCHITECTURAL AND CEILING DRAWINGS. REFER TO MANUFACTURERS INFORMATION FOR LOAD MAGNITUDES AND LOCATIONS.
- 3.) REFER TO SPECIFICATIONS FOR UPLIFT LOAD ON THE JOISTS. DO NOT USE DESIGN DEAD LOAD TO OFFSET UPLIFT LOADS. ONLY SELF WEIGHT OF THE JOIST AND METAL ROOF DECK CAN BE USED TO OFFSET ANY UPLIFT LOADS.
- 4.) DESIGN FOR MAXIMUM LIVE LOADS DEFLECTION OF $L/360$.
- 5.) DESIGN ALL JOISTS FOR ADDITIONAL UPWARD LOAD OF 200 POUNDS AT FIRST PANELS POINT AT EACH END OF JOIST.
- 6.) IN ADDITION TO THE SLOPE, PROVIDE CAMBER PER SJI.
- 7.) JOIST DEPTH DESIGNATION INDICATED AT THE HIGHEST POINT (AT MID-SPAN).
- 8.) JOIST SHALL BE TOP CHORD, QUADRIPIECE PITCHED UNDER-SLUNG JOIST. JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- 9.) JOIST WEB CONFIGURATION IS BY JOIST SUPPLIER. WEB CONFIGURATION SHALL BE COMPATIBLE WITH MECHANICAL DUCT LAYOUT AND CATWALK SUPPORTS.
- 10.) JOIST MANUFACTURER SHALL DESIGN AND ACCOUNT FOR JOIST CAMBER AND JOIST DEFLECTION TO LIMIT DIFFERENTIAL DEFLECTION OF ADJACENT JOISTS TO ALLOW FOR PROPER INSTALLATION OF MULTIPLE SPAN ROOF DECK WITHOUT FIELD CUTTING OF DECK. REDUCE CAMBER BY HALF AT JOISTS ADJACENT TOP STRUCTURAL STEEL FRAMING.
- 11.) ALIGN PANEL POINTS OF ALL JOISTS AS SHOWN IN JOIST PROFILES.

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Planning Architecture Interior
Tel: 877.267.1100
www.dra.com

NORTHEAST
METRO TECH

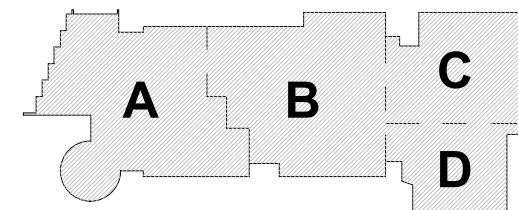
100 Hemlock Rd,
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

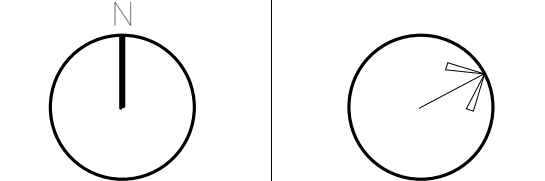
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



JOIST LOADING
DIAGRAMS

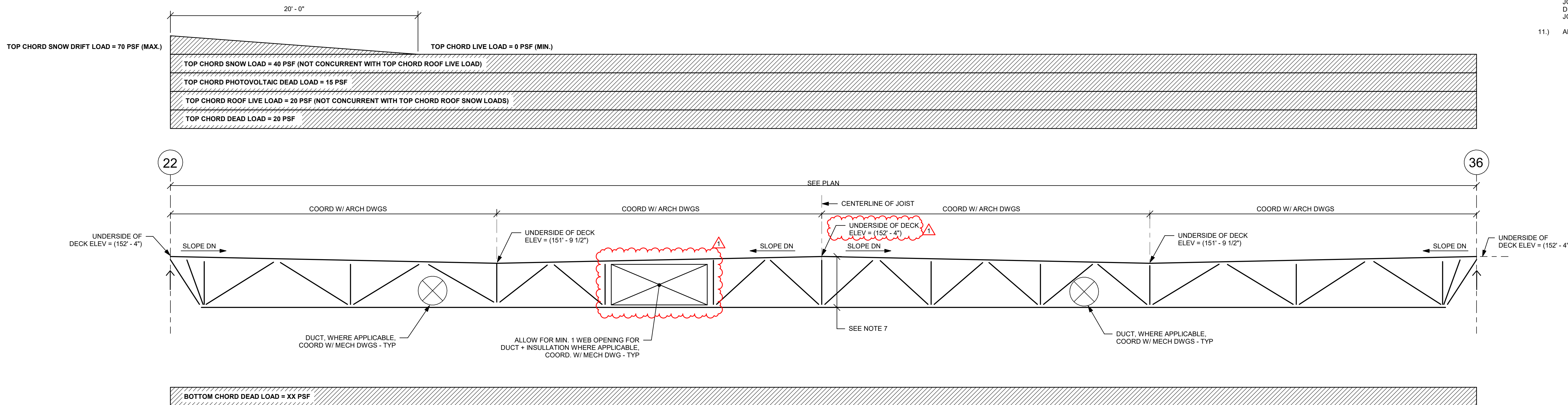
Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S5-0-1

NORTHEAST
METRO TECH100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

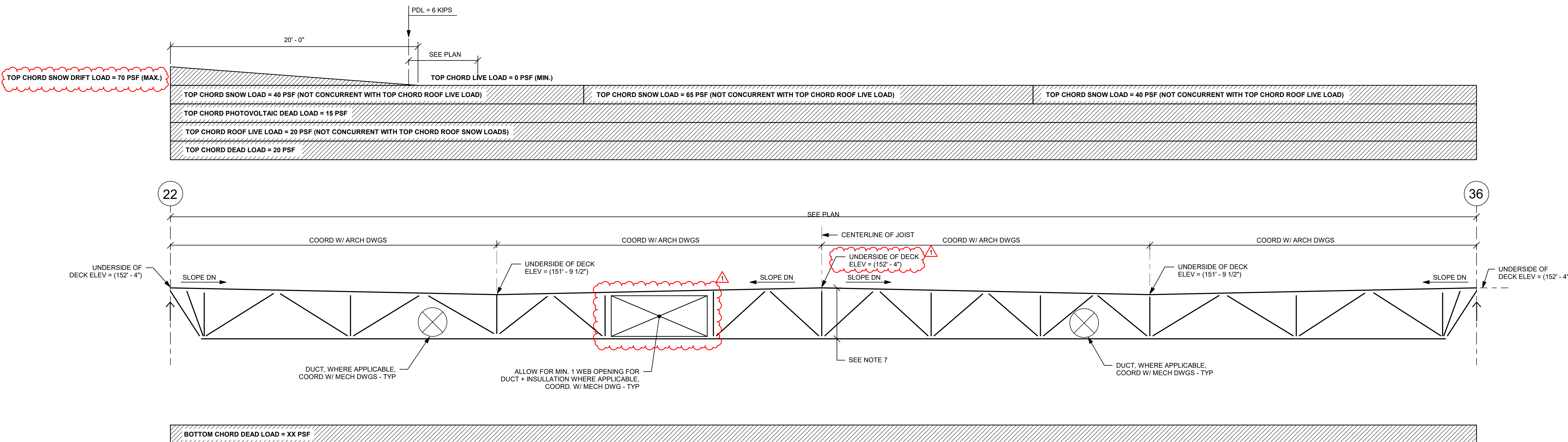
JOIST NOTES:

- JOIST SEAT DEPTH VARIES (8" MIN) AT CENTERLINE OF BEARING. COORDINATE WITH TOP OF STEEL BEAM.
- IN ADDITION TO THE LOADS SHOWN IN THE DIAGRAMS, DESIGN JOISTS AT THE GYMNASIUM FOR CONCENTRATED LOADS FROM MOTORIZED GYMNASIUM CURTAIN BATTING CAGE AND BASKETBALL BACKSTOP SUPPORT POINTS. REFER TO THE ARCHITECTURAL AND CEILING DRAWINGS. REFER TO MANUFACTURERS INFORMATION FOR LOAD MAGNITUDES AND LOCATIONS.
- REFER TO SPECIFICATIONS FOR UPLIFT LOAD ON THE JOISTS. DO NOT USE DESIGN DEAD LOAD TO OFFSET UPLIFT LOADS. ONLY SELF WEIGHT OF THE JOIST AND METAL ROOF DECK CAN BE USED TO OFFSET ANY UPLIFT LOADS.
- DESIGN FOR MAXIMUM LIVE LOADS DEFLECTION OF $L/360$.
- DESIGN ALL JOISTS FOR ADDITIONAL UPWARD LOAD OF 200 POUNDS AT FIRST PANEL POINT AT EACH END OF JOIST.
- IN ADDITION TO THE SLOPE, PROVIDE CAMBER PER S.J.
- JOIST DEPTH DESIGNATION INDICATED AT THE HIGHEST POINT (AT MID-SPAN). JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- JOIST SHALL BE TOP CHORD, QUADRUPLE PITCHED UNDER-SLUNG JOIST. JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- JOIST WEB CONFIGURATION IS BY JOIST SUPPLIER. WEB CONFIGURATION SHALL BE COMPATIBLE WITH MECHANICAL DUCT LAYOUT AND CATWALK SUPPORTS.
- JOIST MANUFACTURER SHALL DESIGN AND ACCOUNT FOR JOIST CAMBER AND JOIST DEFLECTION TO LIMIT DIFFERENTIAL DEFLECTION OF ADJACENT JOISTS TO ALLOW FOR PROPER INSTALLATION OF MULTIPLE SPAN ROOF DECK WITHOUT FIELD CUTTING OF DECK. REDUCE CAMBER BY HALF AT JOIST'S ADJACENT TOP STRUCTURAL STEEL FRAMING.
- ALIGN PANEL POINTS OF ALL JOISTS AS SHOWN IN JOIST PROFILES.



JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP4

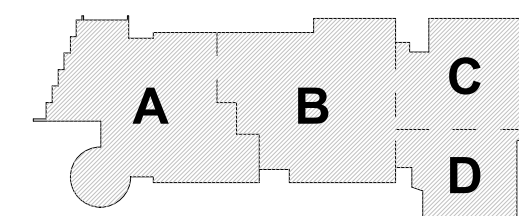
NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS



JOIST PROFILE AND LOAD DIAGRAM FOR 60DLHSP5

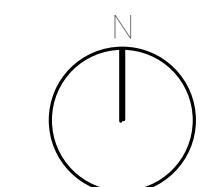
NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

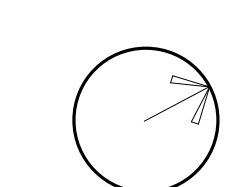
EARLY
STRUCTURAL
BID PACKAGEFEBRUARY 24TH,
2023

KEY PLAN

PROJECT NORTH



MAGNETIC NORTH

JOIST LOADING
DIAGRAMS

Scale: As indicated

Job No.: 20202

Drawn By: EDG

Date: FEBRUARY 24TH,
2023

S5-0-2

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
Planning Architecture Interior
Tel: 877.267.1100
www.dra.com

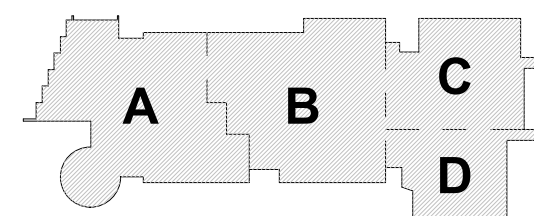
NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

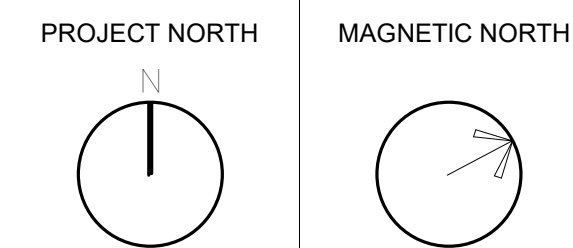
EDG
Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN



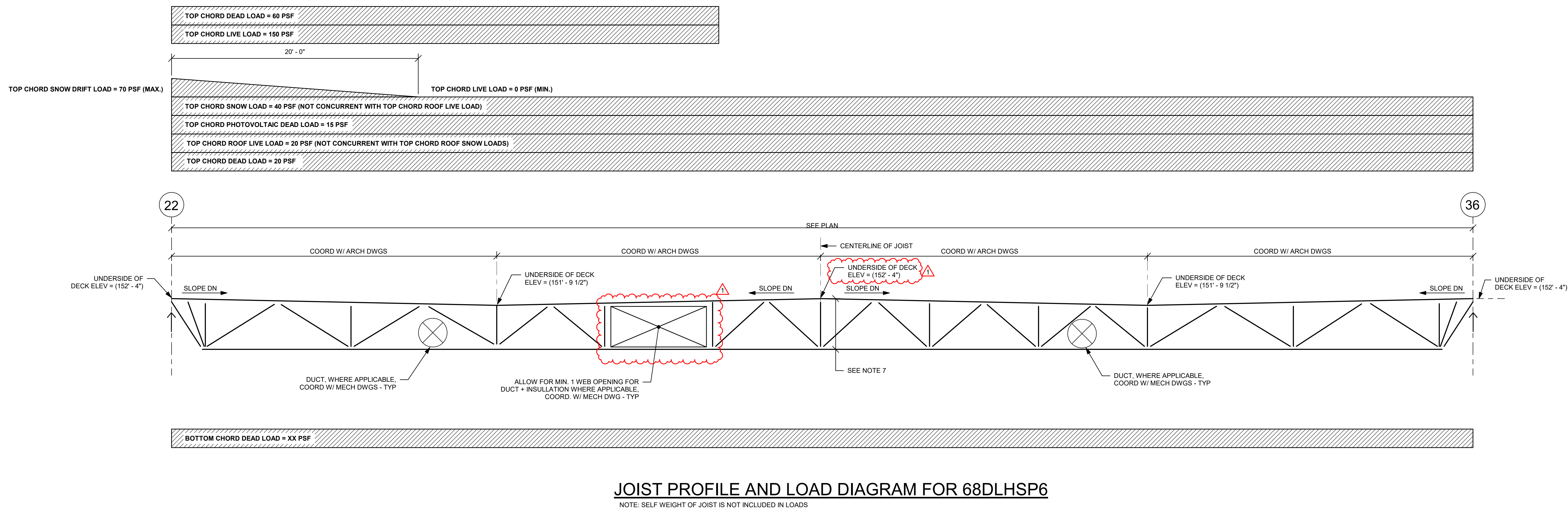
JOIST LOADING
DIAGRAMS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

S5-0-3

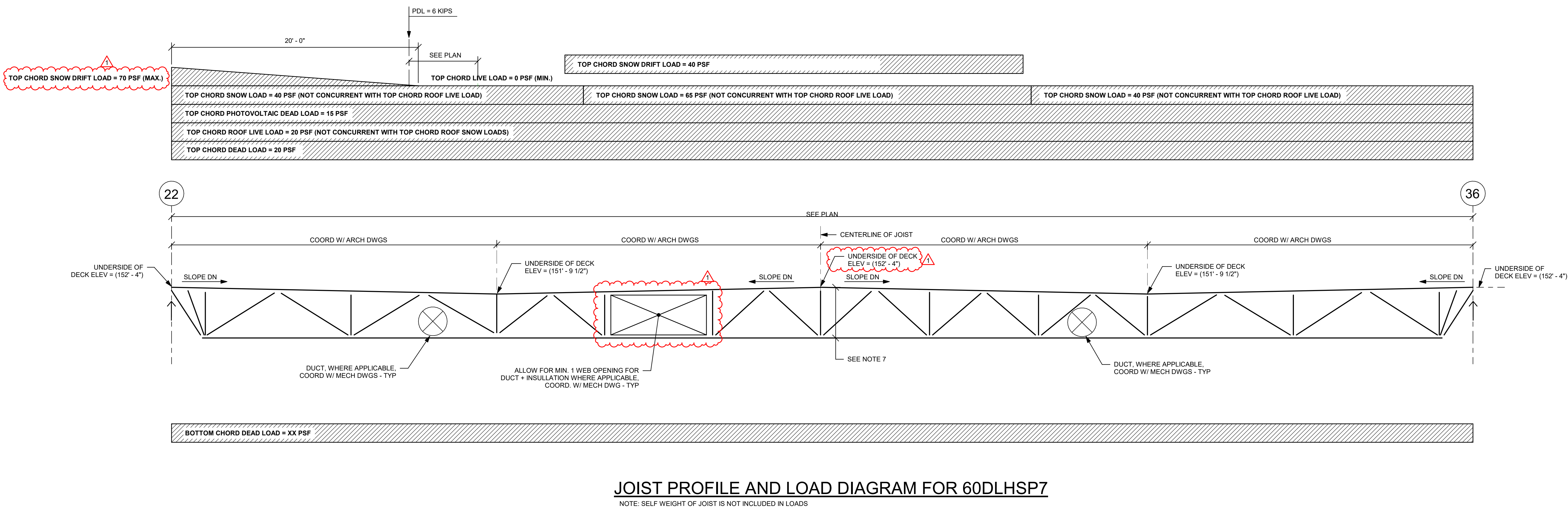
JOIST NOTES:

- 1.) JOIST SEAT DEPTH VARIES (8" MIN) AT CENTERLINE OF BEARING. COORDINATE WITH TOP OF STEEL BEAM.
- 2.) IN ADDITION TO THE LOADS SHOWN IN THE DIAGRAMS, DESIGN JOISTS AT THE GYMNASIUM FOR CONCENTRATED LOADS FROM MOTORIZED GYMNASIUM CURTAIN BATTING CAGE AND BASKETBALL BACKSTOP SUPPORT POINTS. REFER TO THE ARCHITECTURAL AND CEILING DRAWINGS. REFER TO MANUFACTURERS INFORMATION FOR LOAD MAGNITUDES AND LOCATIONS.
- 3.) REFER TO SPECIFICATIONS FOR UPLIFT LOAD ON THE JOISTS. DO NOT USE DESIGN DEAD LOAD TO OFFSET UPLIFT LOADS. ONLY SELF WEIGHT OF THE JOIST AND METAL ROOF DECK CAN BE USED TO OFFSET ANY UPLIFT LOADS.
- 4.) DESIGN FOR MAXIMUM LIVE LOADS DEFLECTION OF L/360.
- 5.) DESIGN ALL JOISTS FOR ADDITIONAL UPWARD LOAD OF 200 POUNDS AT FIRST PANEL POINT AT EACH END OF JOIST.
- 6.) IN ADDITION TO THE SLOPE, PROVIDE CAMBER PER SJI.
- 7.) JOIST DEPTH DESIGNATION INDICATED AT THE HIGHEST POINT (AT MID-SPAN).
- 8.) JOIST SHALL BE TOP CHORD, QUADRUPLE PITCHED UNDER-SLING JOIST. JOISTS ARE SYMMETRICAL ABOUT THE MIDSPAN.
- 9.) JOIST WEB CONFIGURATION IS BY JOIST SUPPLIER. WEB CONFIGURATION SHALL BE COMPATIBLE WITH MECHANICAL DUCT LAYOUT AND CATWALK SUPPORTS.
- 10.) JOIST MANUFACTURER SHALL DESIGN AND ACCOUNT FOR JOIST CAMBER AND JOIST DEFLECTION TO LIMIT DIFFERENTIAL DEFLECTION OF ADJACENT JOISTS TO ALLOW FOR PROPER INSTALLATION OF MULTIPLE SPAN ROOF DECK WITHOUT FIELD CUTTING OF DECK. REDUCE CAMBER BY HALF AT JOISTS ADJACENT TOP STRUCTURAL STEEL FRAMING.
- 11.) ALIGN PANEL POINTS OF ALL JOISTS AS SHOWN IN JOIST PROFILES.



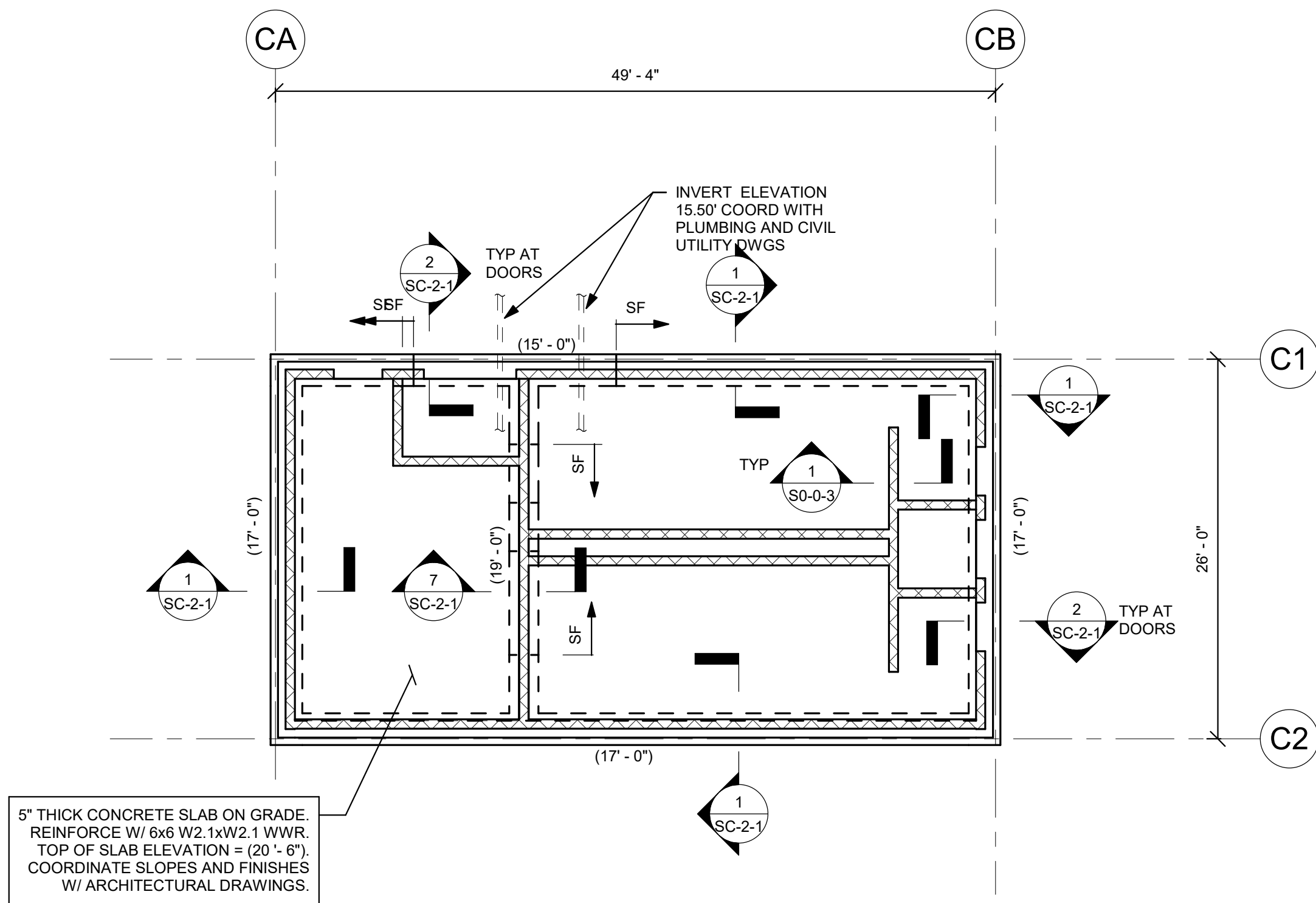
JOIST PROFILE AND LOAD DIAGRAM FOR 68DLHSP6

NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS

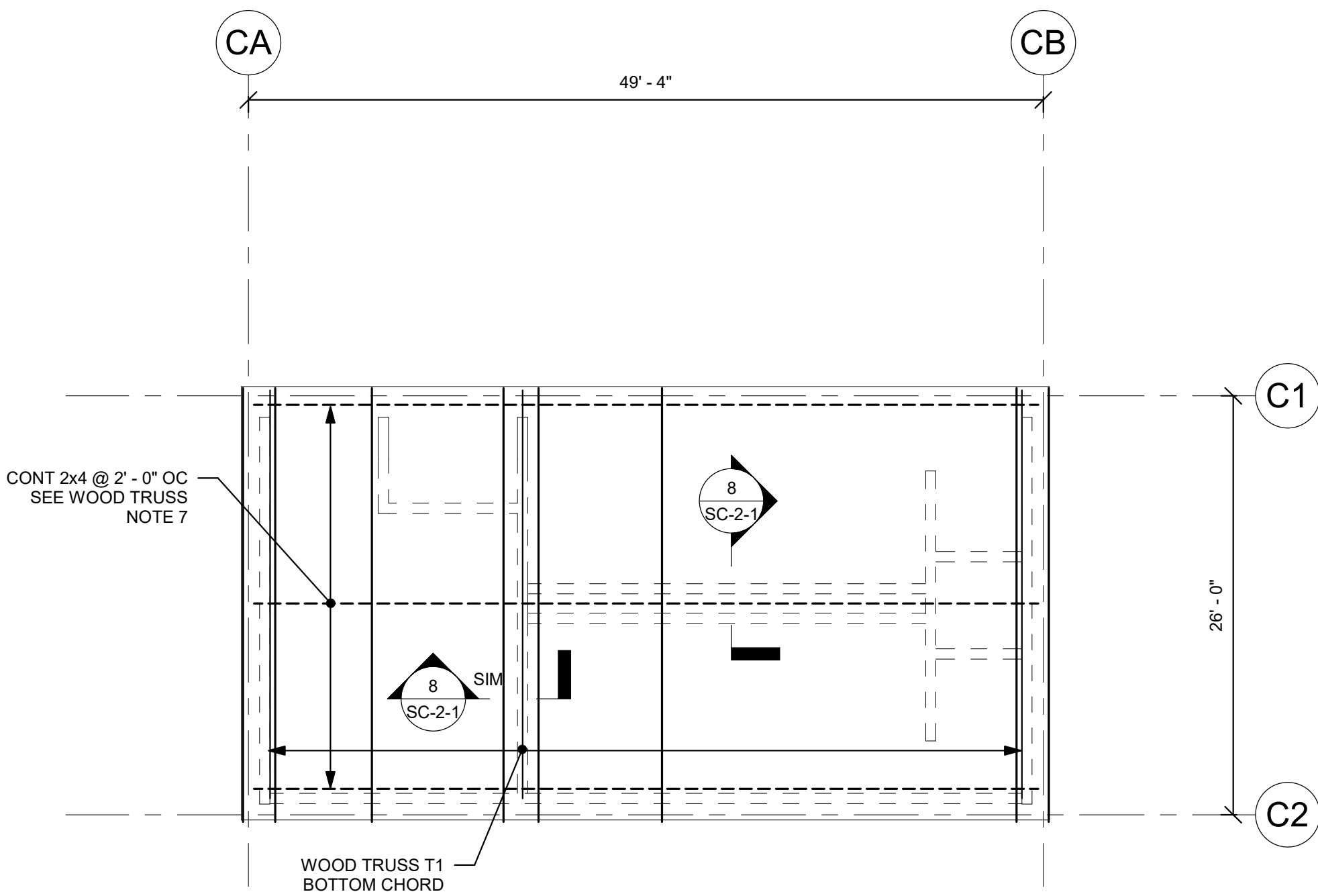


JOIST PROFILE AND LOAD DIAGRAM FOR 60DLHSP7

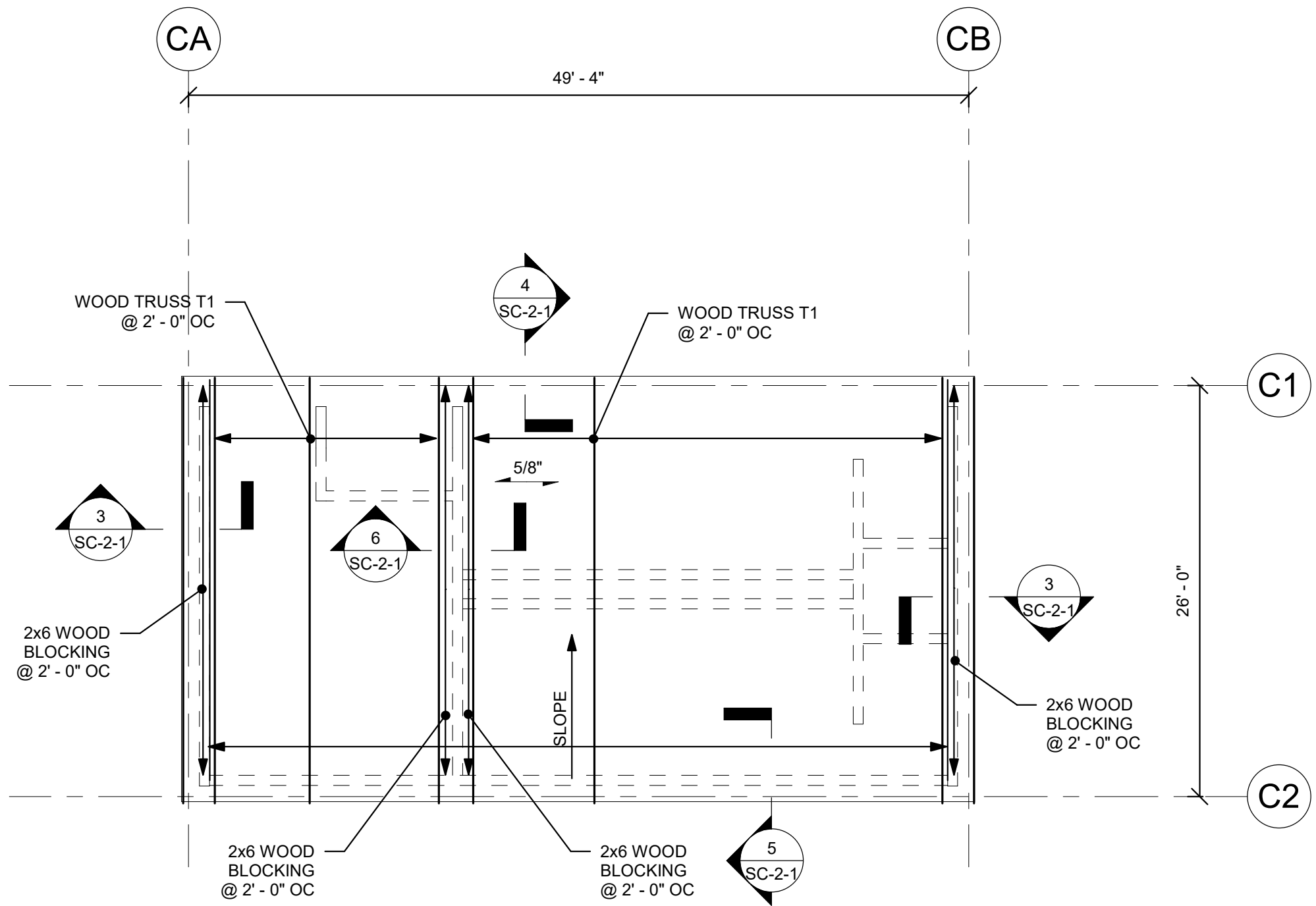
NOTE: SELF WEIGHT OF JOIST IS NOT INCLUDED IN LOADS



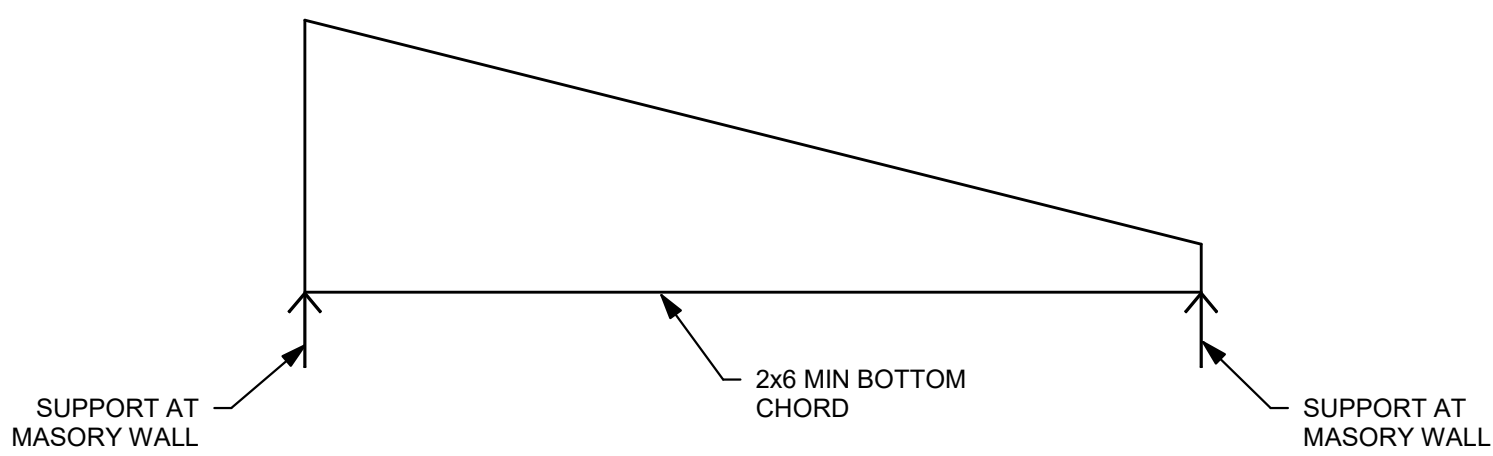
CONCESSION BUILDING GROUND FLOOR PLAN



CONCESSION BUILDING CEILING PLAN



CONCESSION BUILDING ROOF PLAN



WOOD TRUSS TYPE T1

WOOD TRUSS NOTES:

- 1.) TRUSS CONFIGURATIONS ARE DIAGRAMMATIC AND NOT TO SCALE. SEE ARCHITECTURAL DRAWINGS FOR EXACT LENGTHS AND CONDITIONS.
- 2.) REVIEW MECHANICAL ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL EQUIPMENT LOADS.
- 3.) EXCEPT AS SHOWN OTHERWISE, DESIGN TRUSSES FOR THE FOLLOWING MINIMUM UNIFORM DESIGN LOADS:
TRUSS TYPE T1
TOP CHORD DEAD LOAD 15PSF
BOTTOM CHORD DEAD LOAD 5PSF
SNOW LOAD 30PSF
(SEE GENERAL NOTES ON S0-0-1 FOR WIND AND SEISMIC DESIGN CRITERIA)
- 4.) DESIGN AND PROVIDE ALL TEMPORARY ERECTION RESTRAINTS / BRACING.
- 5.) DESIGN AND PROVIDE ALL PERMANENT RESTRAINT / BRACING FOR WEB MEMBERS AS REQUIRED FOR A PERMANENT INSTALLATION.
- 6.) OSB STRUCTURAL USE SHEATHING PROVIDES PERMANENT BRACING FOR THE TOP CHORD WHERE SHOWN.
- 7.) PROVIDE CONTINUOUS 2x4 @ 2'-0" ON CENTER (MAX.) FOR LATERAL BRACING OF TRUSS BOTTOM CHORD
- 8.) IN ADDITION TO WOOD BLOCKING SHOWN ON PLANS, PROVIDE 2x BLOCKING BETWEEN TOP CHORD OF TRUSSES AT EACH PANEL POINT. 2x BLOCKING SIZE TO MATCH TOP CHORD OF TRUSS.
- 9.) WHERE TRUSSES ARE TO BE SUPPLIED IN MORE THAN ONE PIECE, OR HINGED, DESIGN AND PROVIDE ALL NECESSARY BRACING CONNECTIONS AND ACCESSORIES.
- 10.) REFER TO GENERAL NOTES ON DRAWING S0-0-1 FOR ADDITIONAL REQUIREMENTS.
- 11.) DESIGN AND PROVIDE UPLIFT CONNECTORS. CONNECTORS SHOWN ARE MINIMUM REQUIREMENTS.

OSB STUCTURAL PANEL NAILING SCHEDULE
(EXCEPT AS NOTED OTHERWISE)

AT PANEL EDGE BOUNDARIES	10d COMMON NAILS AT 6" OC
AT OTHER PANEL EDGES	10d COMMON NAILS AT 6" OC
AT INTERMEDIATE PANEL SUPPORTS	10d COMMON NAILS AT 10" OC

FRAMING NOTES:

- 1.) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 2.) 5/8" INDICATES SPAN DIRECTION OF 5/8" ROOF SHEATHING. PROVIDE APA RATED STRUCTURAL SHEATHING EXPOSURE 1 PLYWOOD OR OSB.
- 3.) T1 ETC. INDICATES A PRE-FABRICATED WOOD TRUSS. SEE THIS DRAWING FOR TRUSS CONFIGURATION AND LOADING INFORMATION. MAXIMUM TRUSS SPACING EQUALS 2'-0" ON CENTER.
- 4.) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.

FOUNDATION NOTES:

- 1.) REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE MAIN FLOOR WHICH CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON THE SITE AND CIVIL DRAWINGS.
- 2.) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 3.) F3 ETC. INDICATES A FOOTING TYPE. FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- 4.) TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (XX'-XX") ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTOR'S FIELD LAYOUT.
- 5.) ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- 6.) SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- 7.) FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- 8.) INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 6 AND 7 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- 9.) FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0-3 AND RELEVANT SECTIONS.
- 10.) INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-4 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 11.) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 12.) INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.



Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

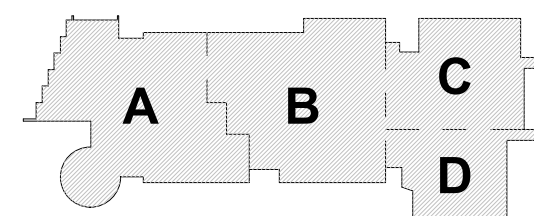


Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

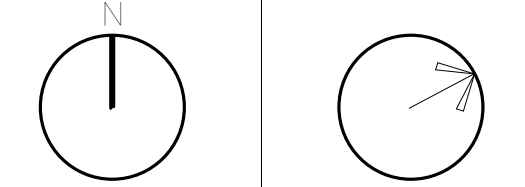
EARLY
STRUCTURAL
BID PACKAGE

FEBRUARY 24TH,
2023



KEY PLAN

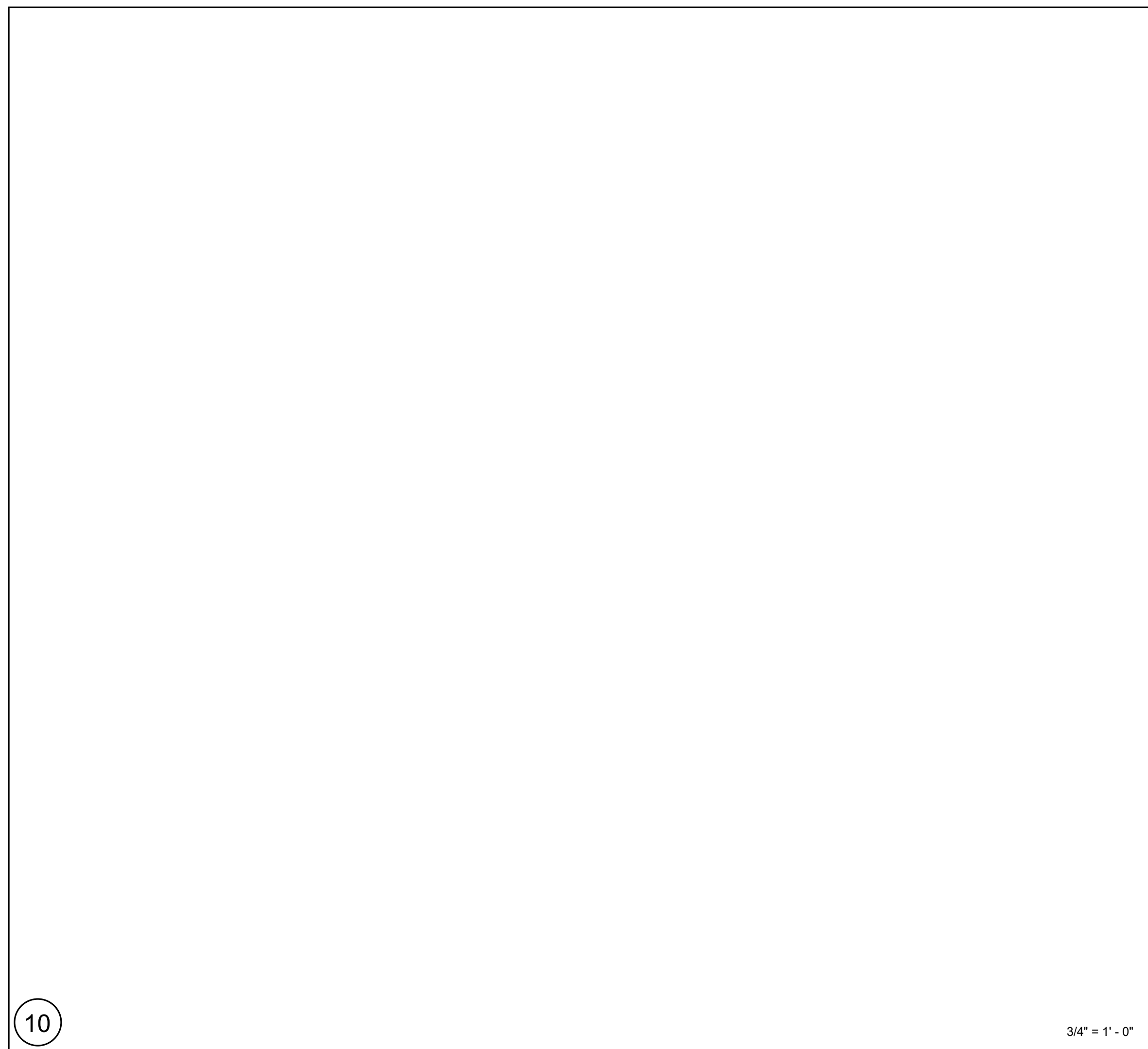
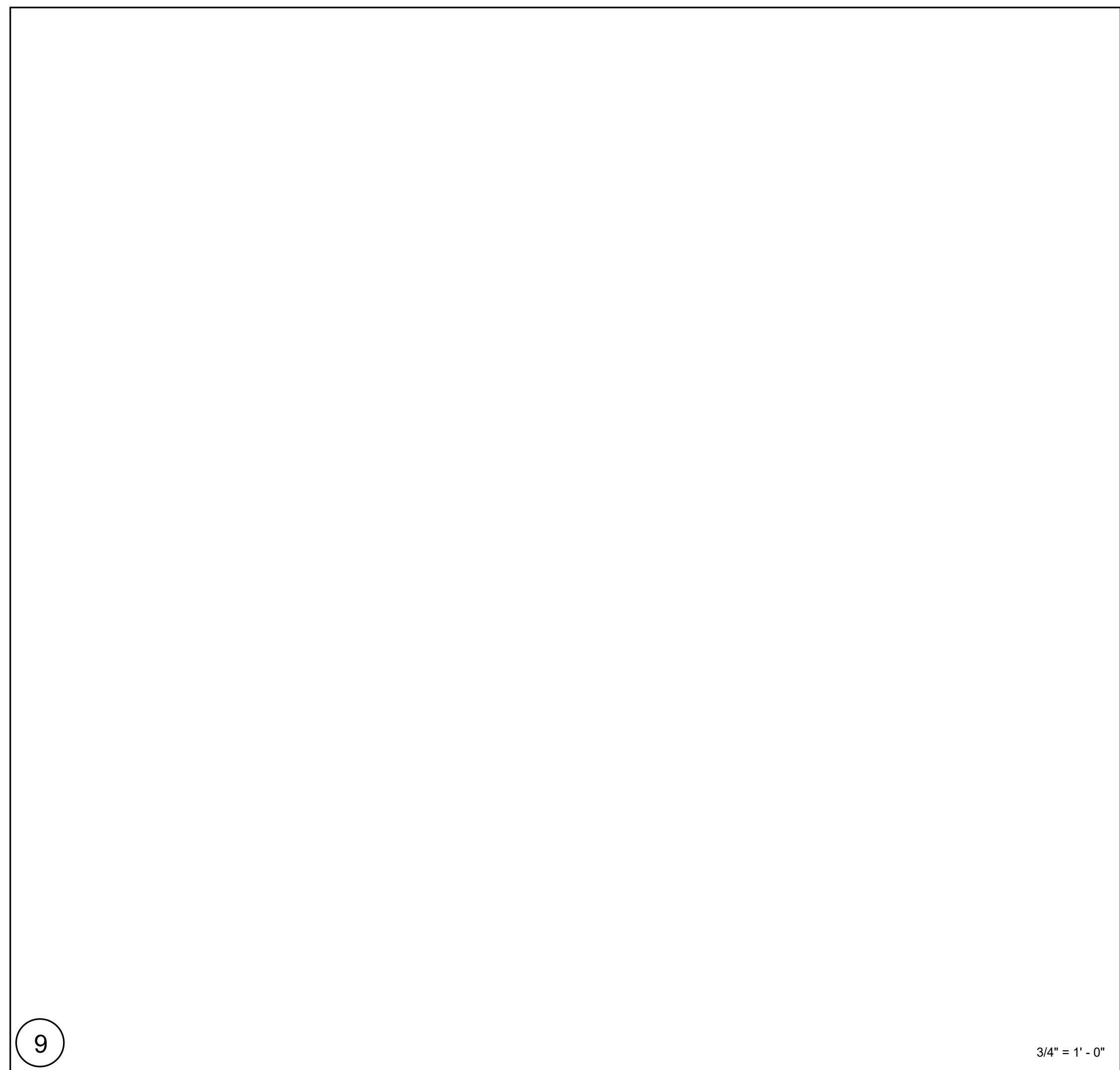
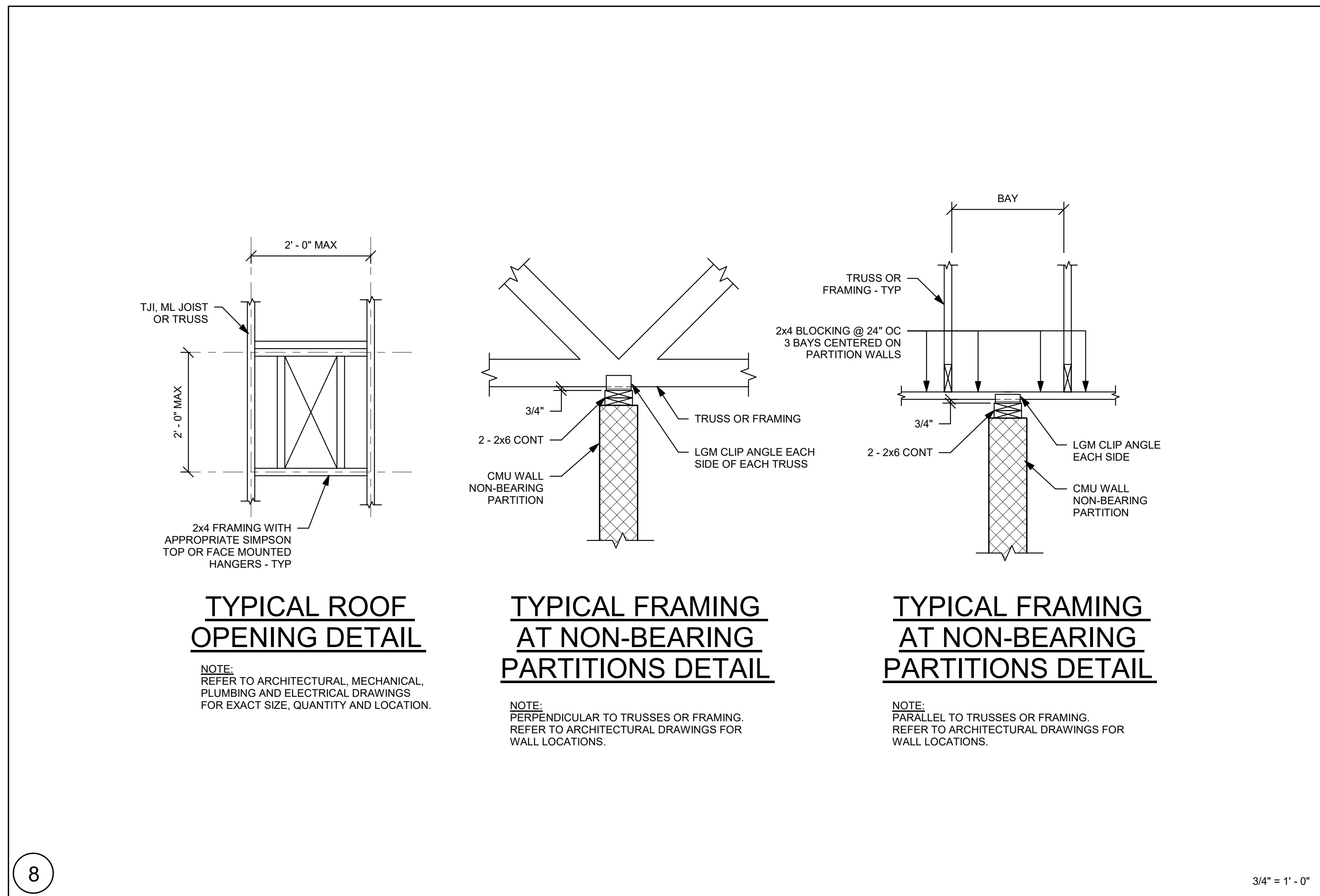
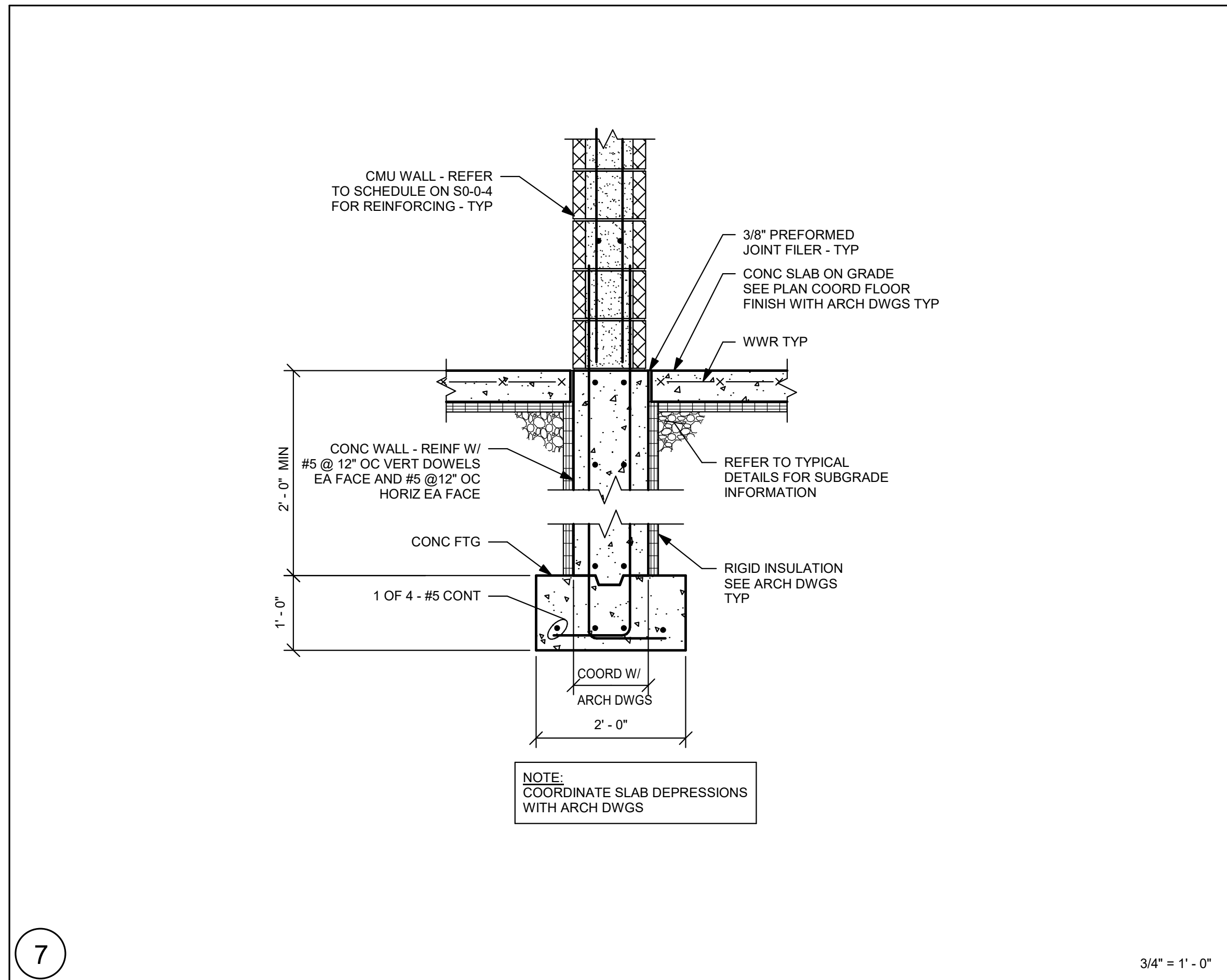
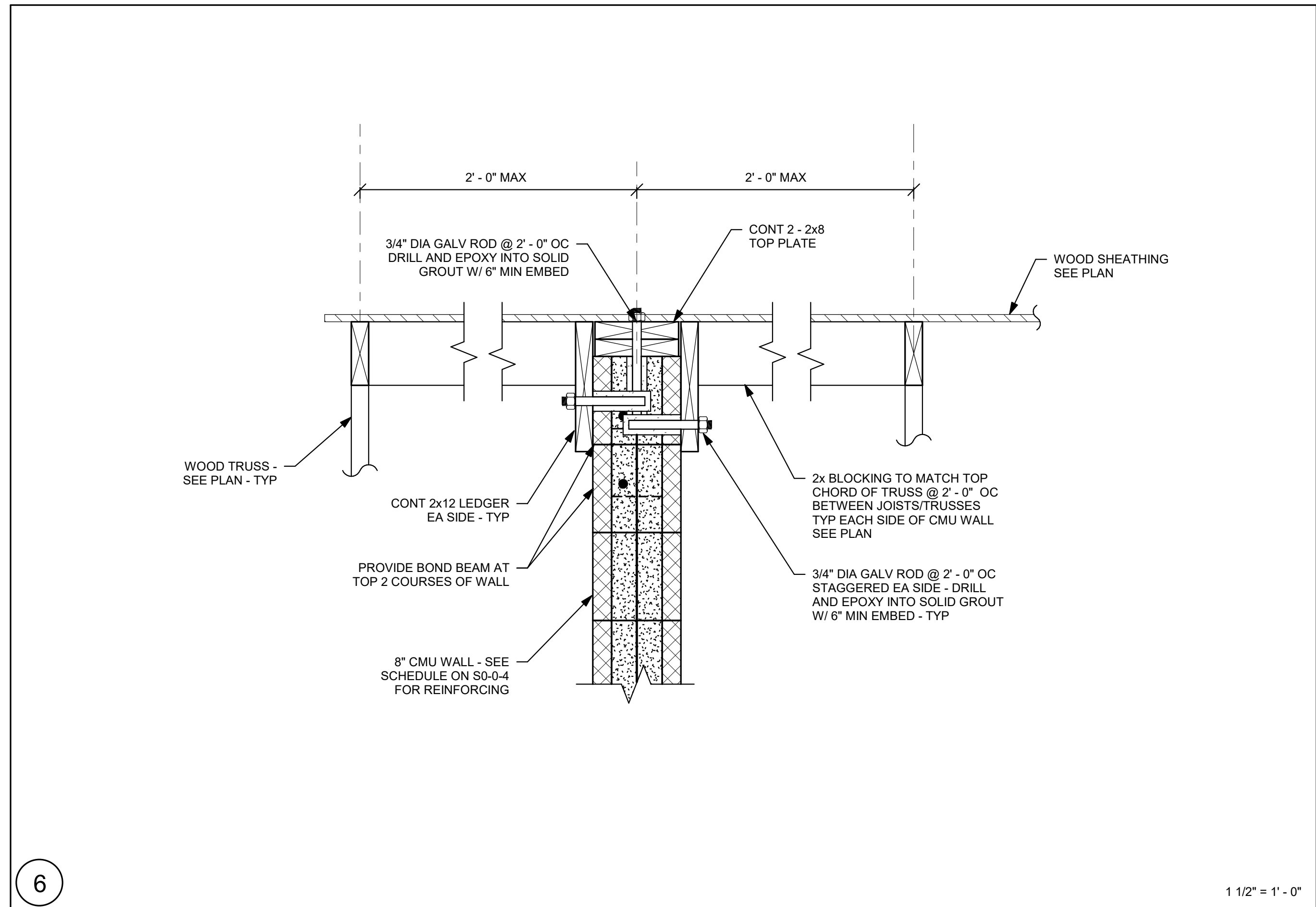
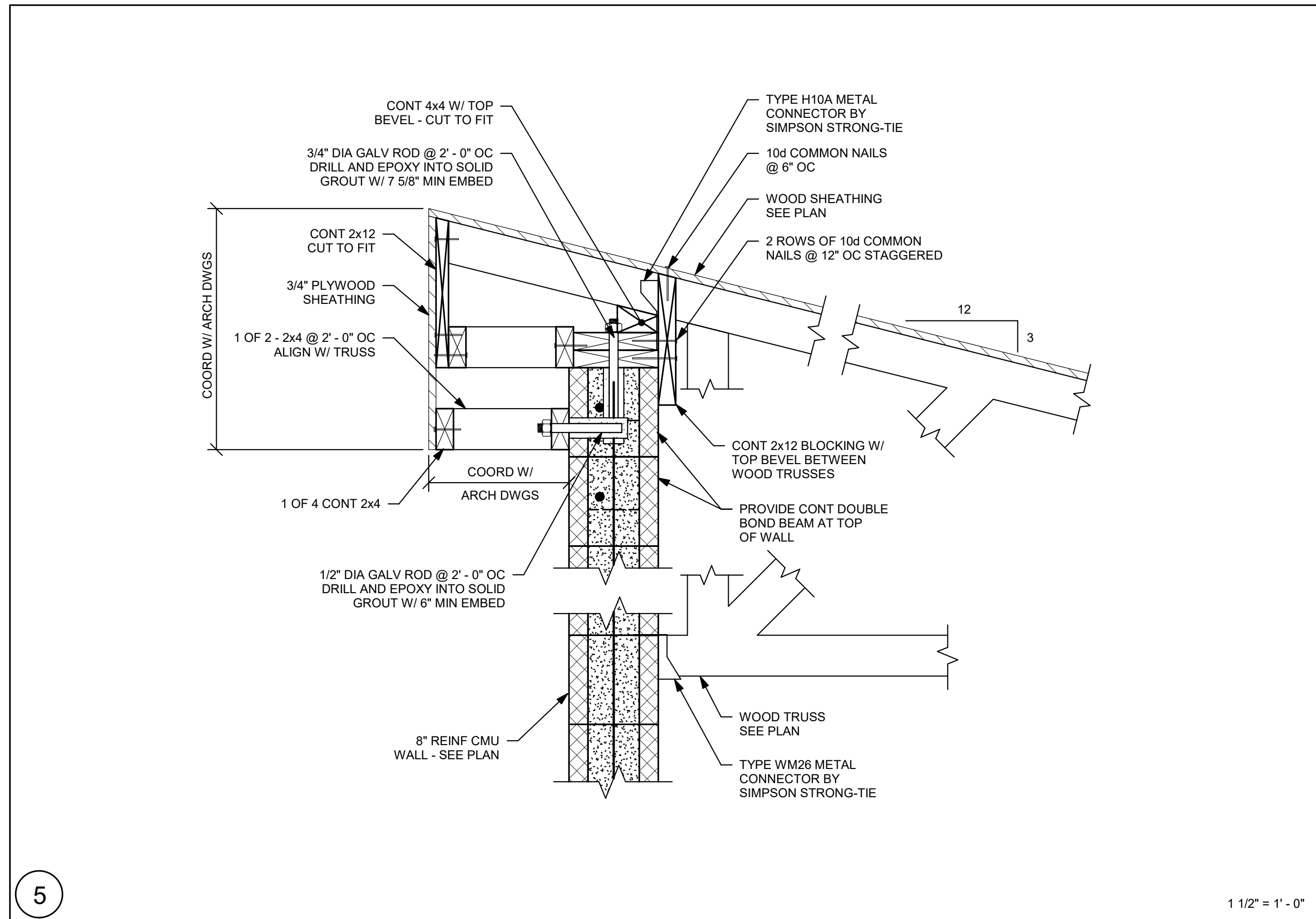
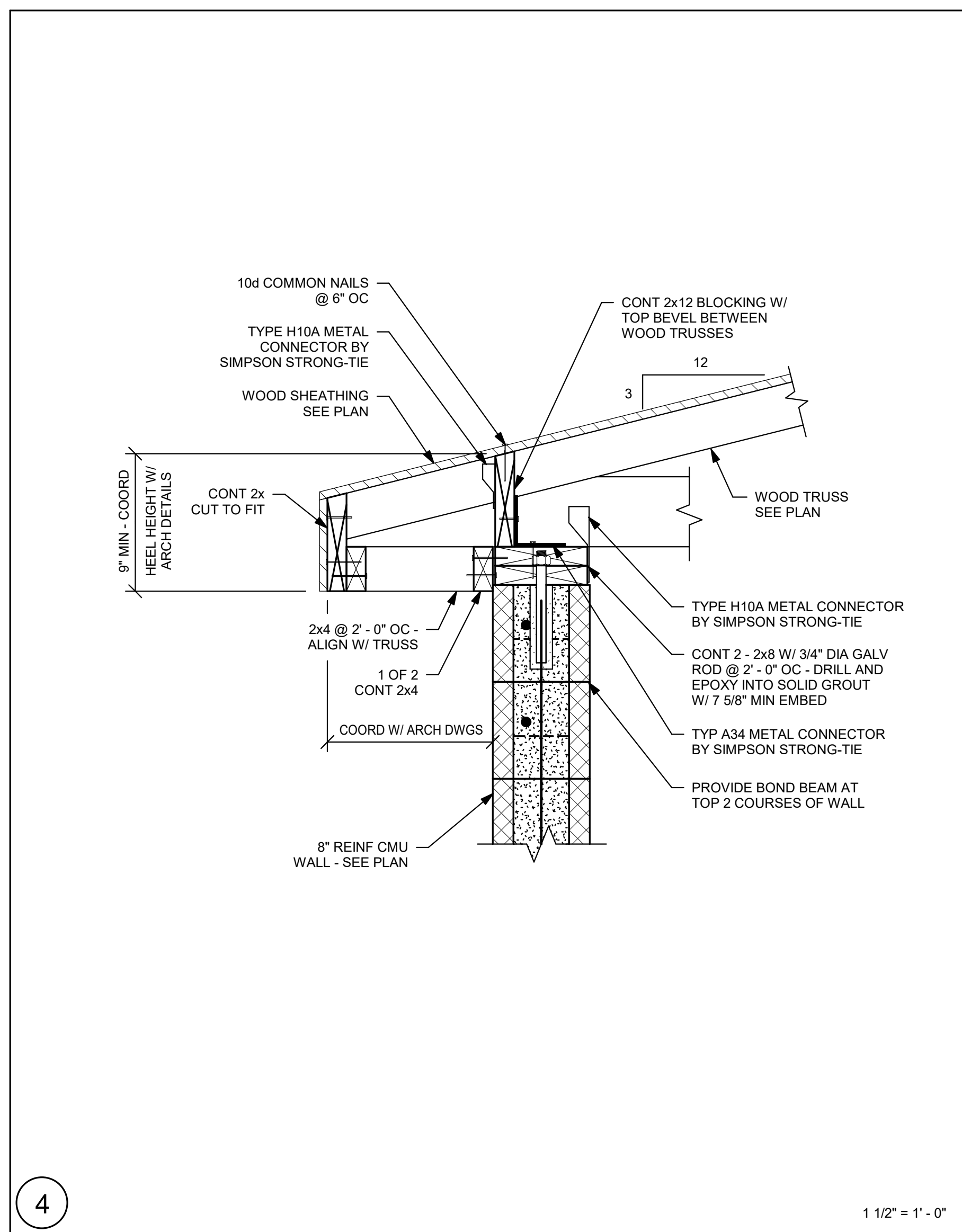
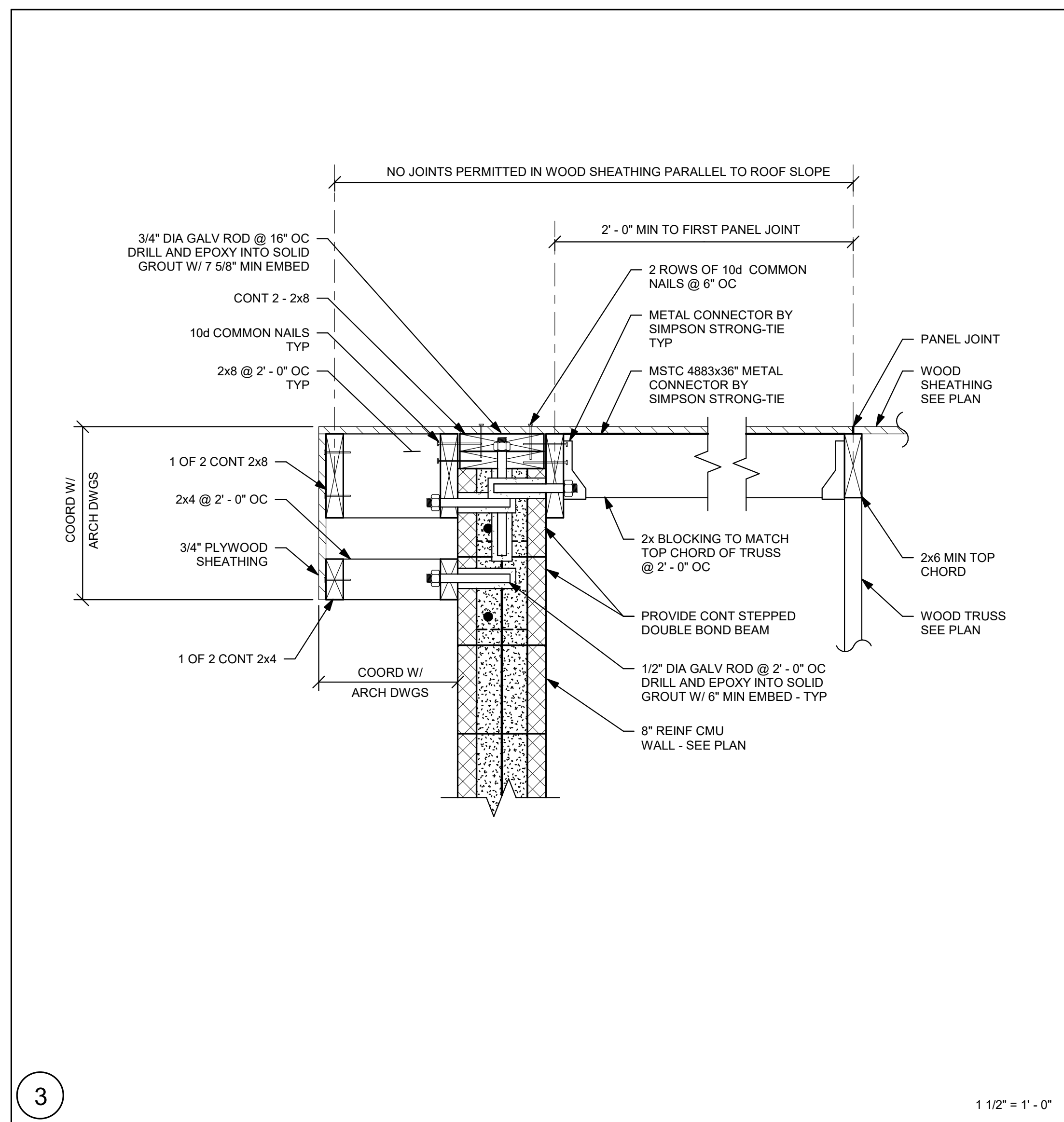
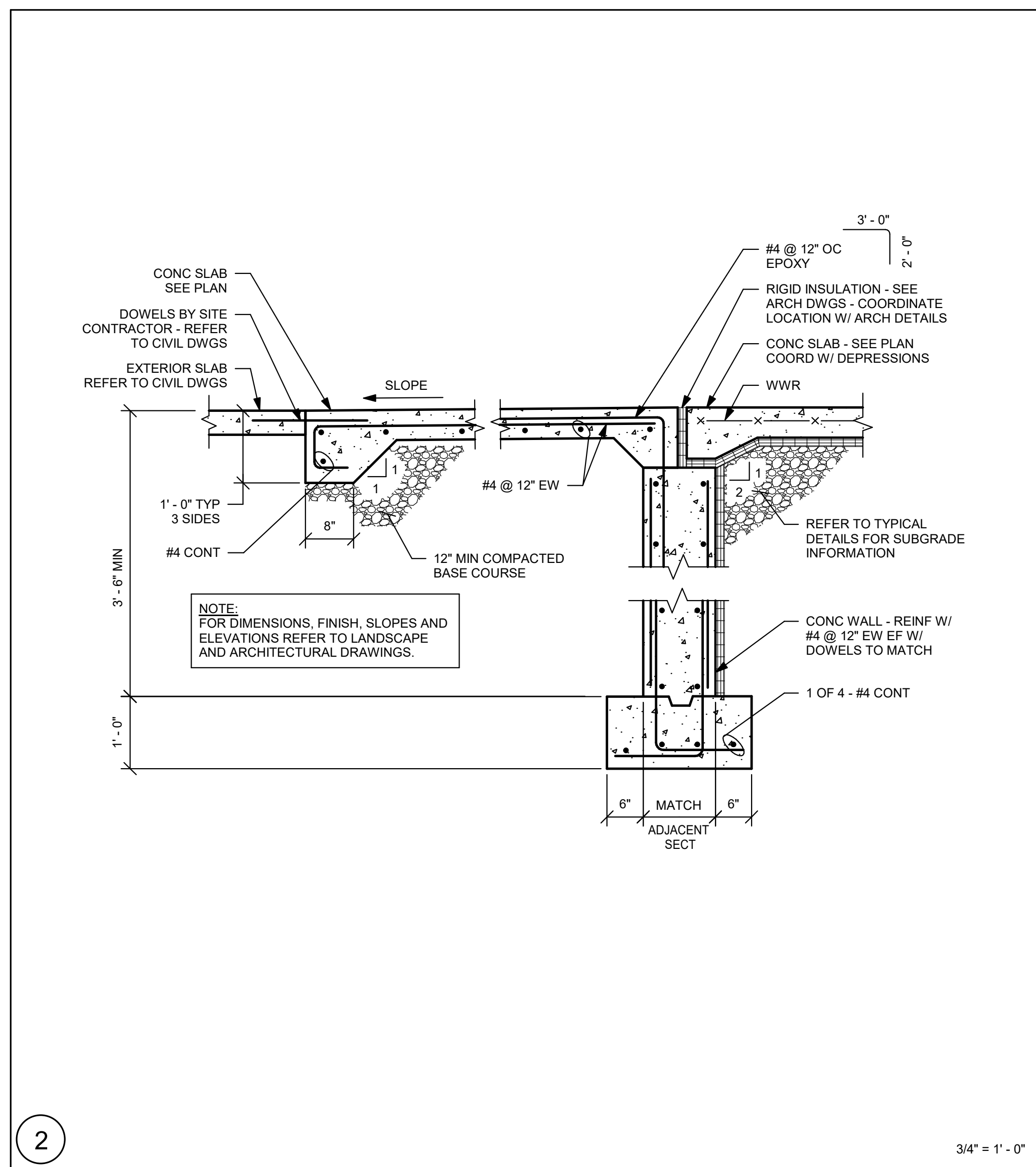
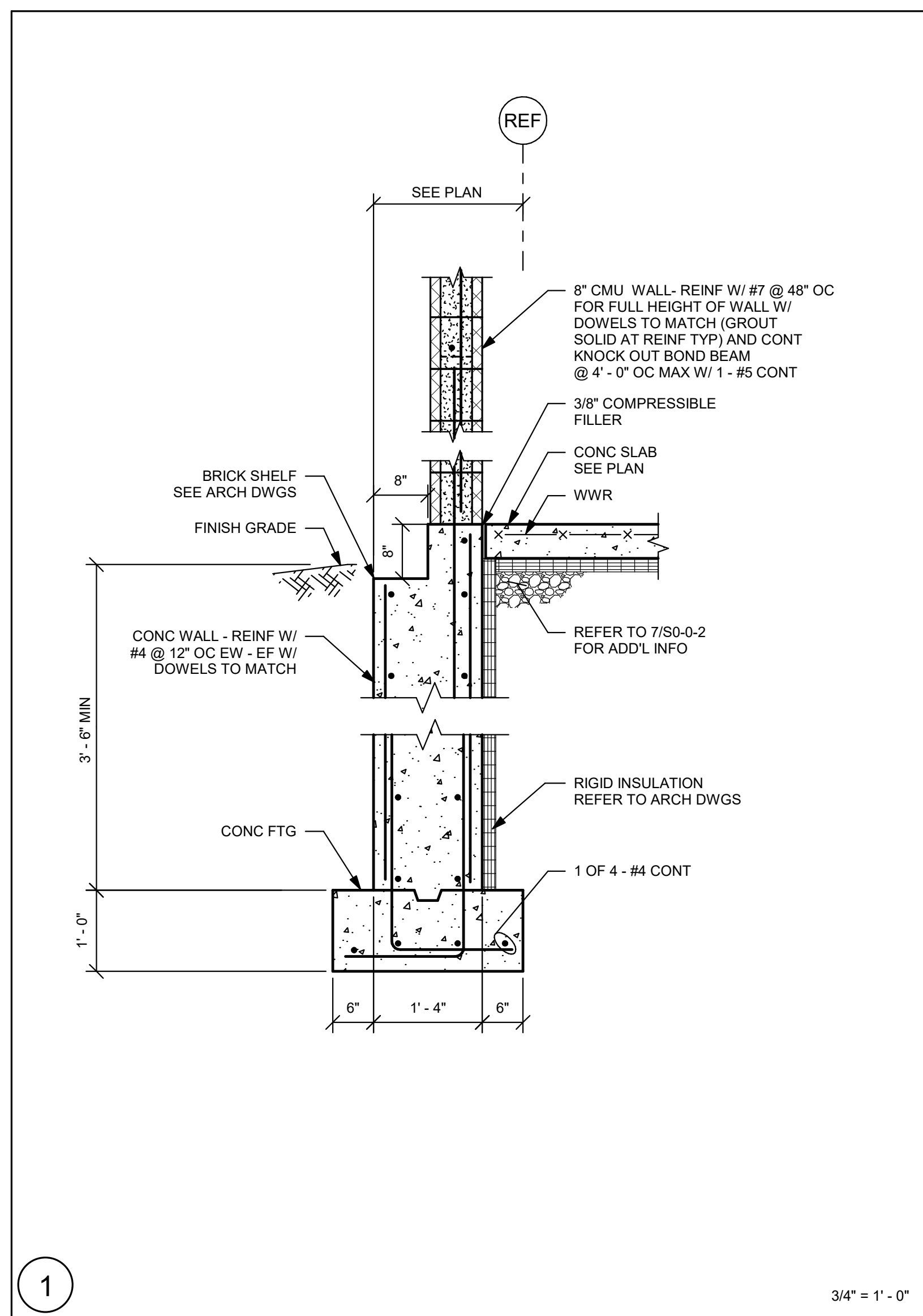
PROJECT NORTH
MAGNETIC NORTH



CONCESSION
BUILDING PLANS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

SC-1-1



Drumme Rosane Anderson, Inc.

225 Oakland Road
Studio 205
South Windsor, CT 06074

260 Charles Street
Studio 300
Waltham, MA 02453

Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

Engineers Design Group Inc.

Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021 DRUMME ROSANE ANDERSON, INC.

EARLY STRUCTURAL BID PACKAGE
FEBRUARY 24TH, 2023

KEY PLAN

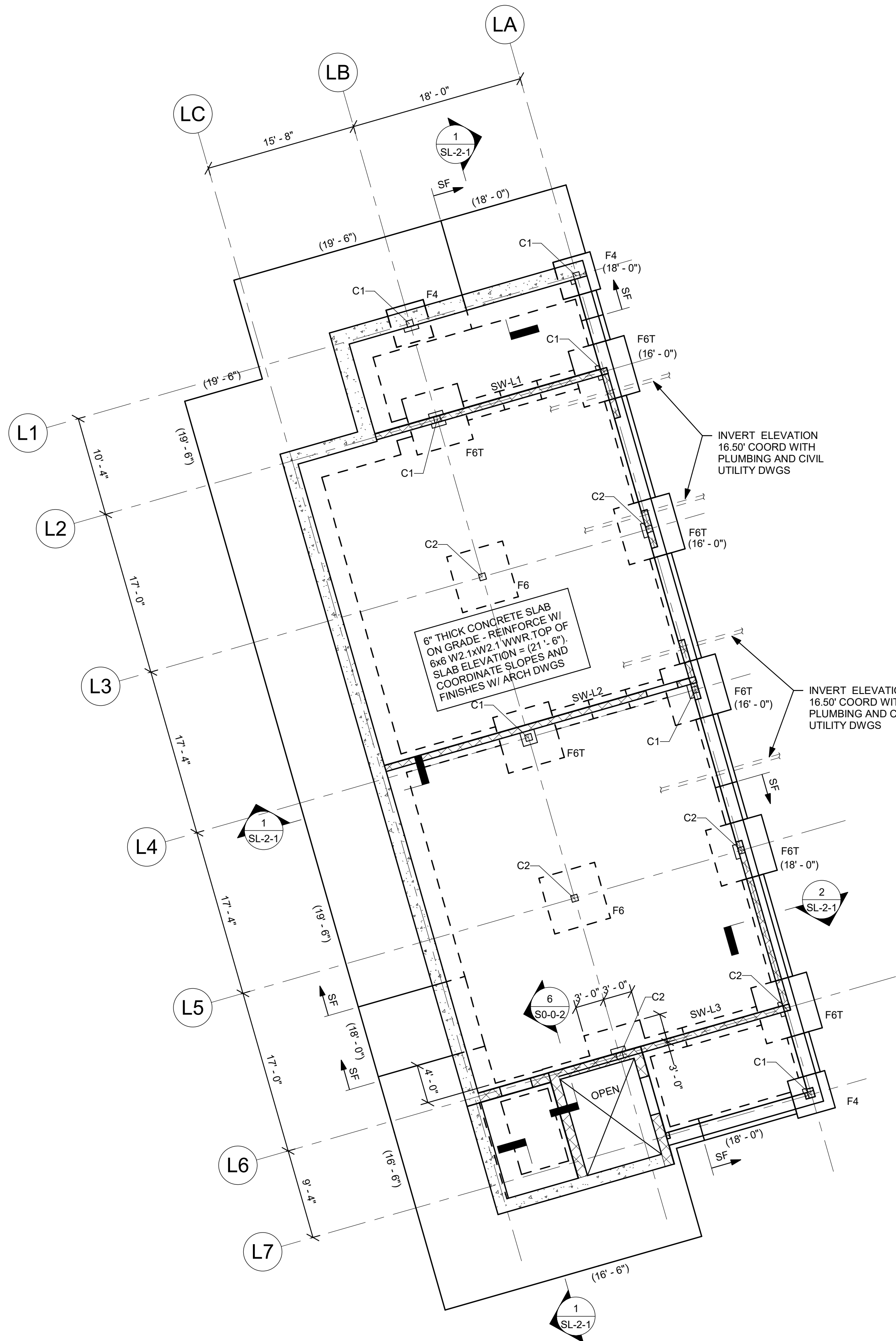
PROJECT NORTH

MAGNETIC NORTH

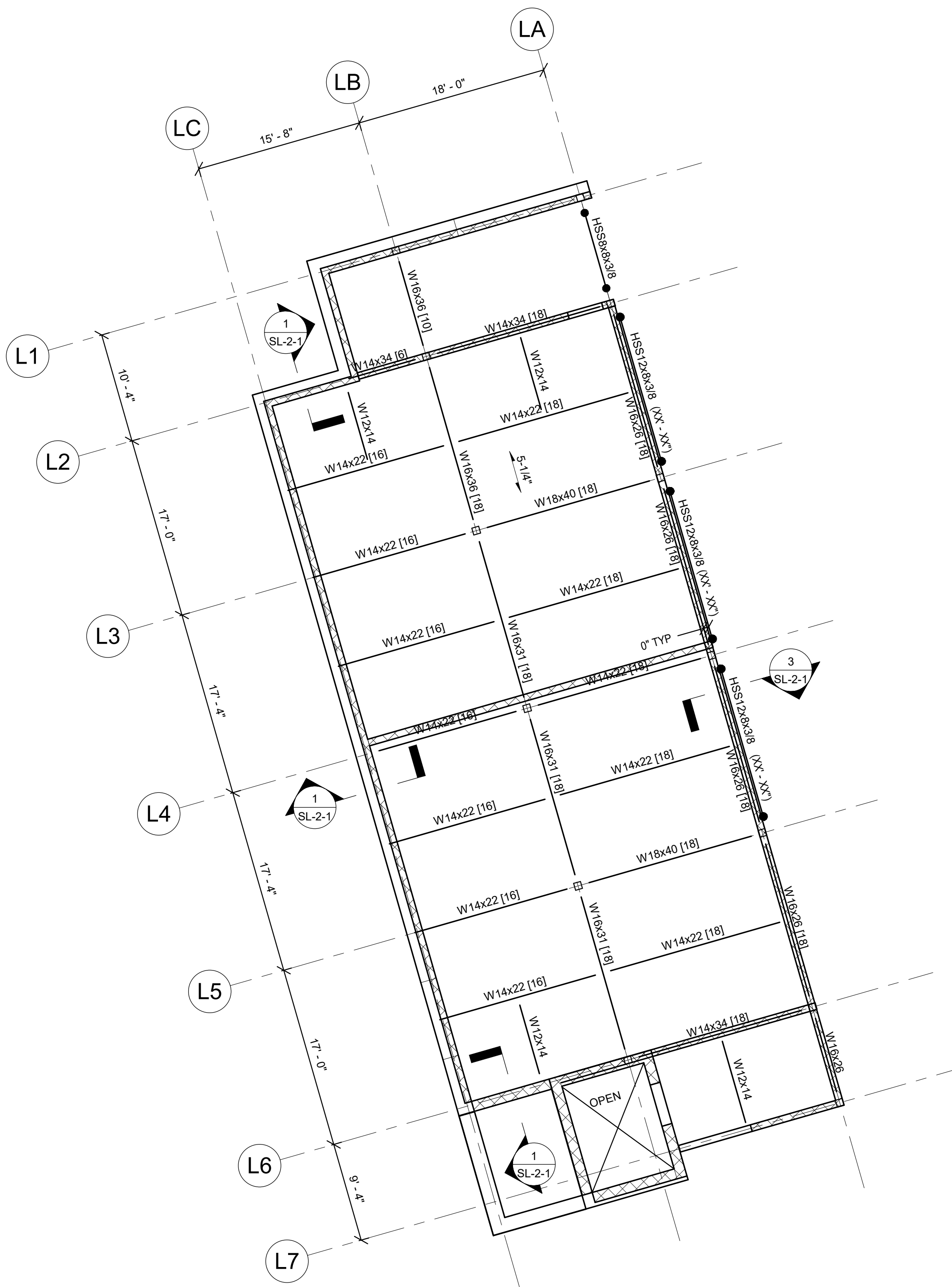
CONCESSION BUILDING SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH, 2023

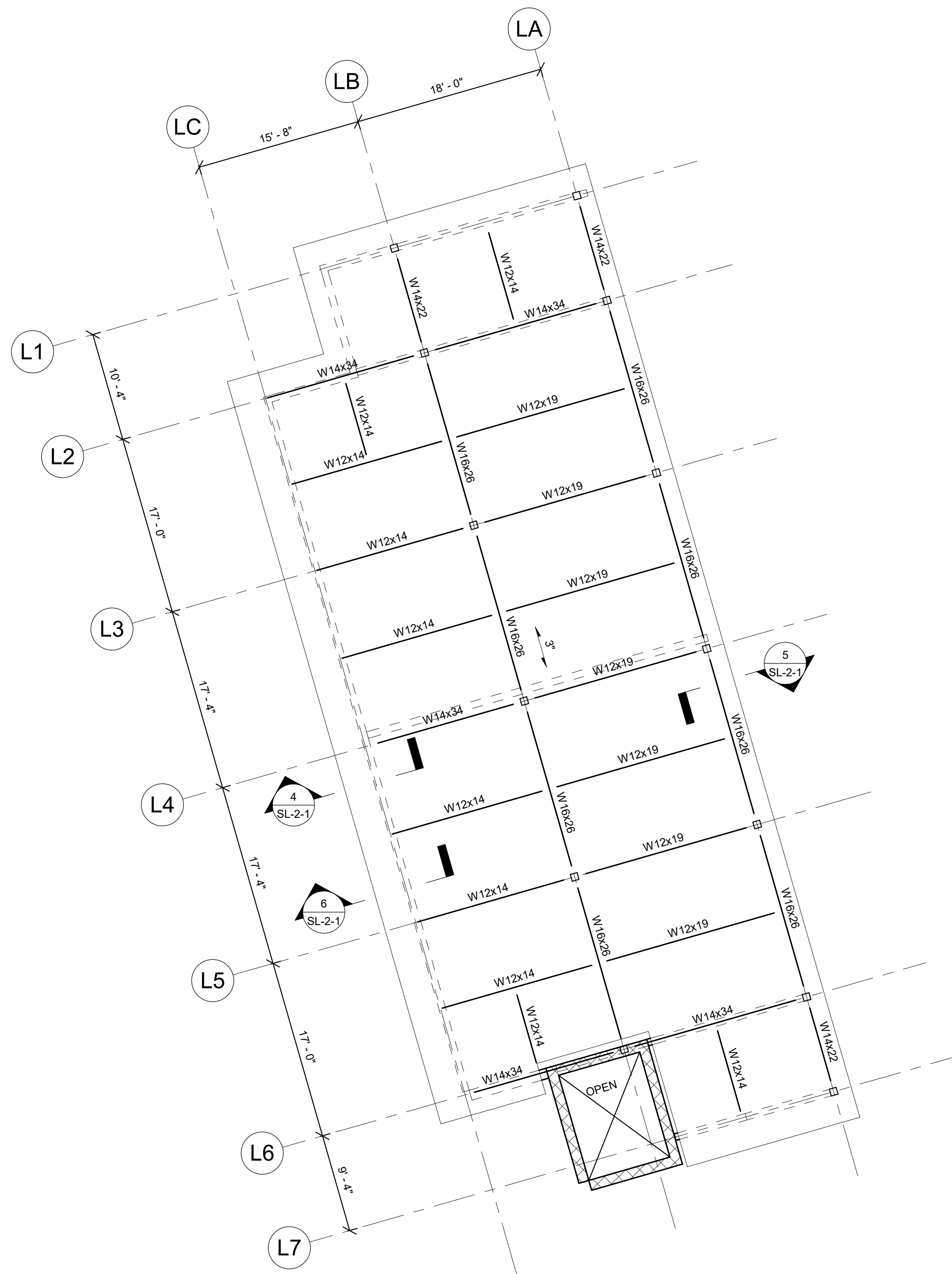
SC-2-1



LOCKER BUILDING GROUND FLOOR PLAN



LOCKER BUILDING FIRST FLOOR PLAN



LOCKER BUILDING ROOF PLAN

FOUNDATION NOTES:

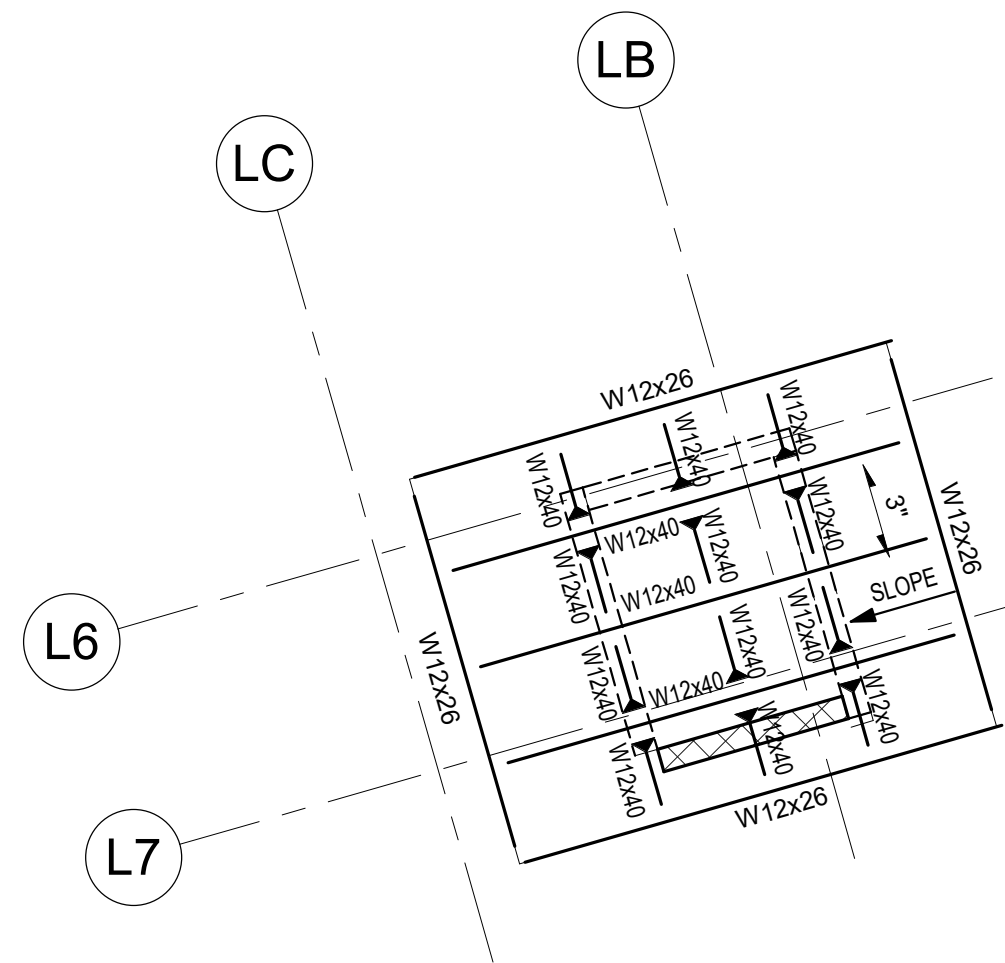
- REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE MAIN FLOOR, WHICH CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON THE SITE AND CIVIL DRAWINGS.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- F3 ETC... INDICATES A FOOTING TYPE, FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (XX'-XX") ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTOR'S FIELD LAYOUT.
- ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- SE INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- BOTTOM OF BASE PLATE ELEVATION TO BE 1'-5" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (XX'-XX") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 6 AND 7 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- FOR TYPICAL EXTERIOR DOOR DETAIL, REFER TO DETAIL 6 ON DRAWING S0-0-3 AND RELEVANT SECTIONS.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-6 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-2.
- INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.
- CONCRETE PIER REINFORCING PER DETAIL 5 ON DRAWING S0-0-2 IS TO BE PROVIDED FOR ALL CONCRETE WALLS SUPPORTING COLUMNS. HORIZONTAL WALL REINFORCING MUST REMAIN CONTIGUOUS.

FRAMING NOTES:

- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND VERTICAL DIMENSIONS. FITCH ALL STEEL UNIFORMITY TO LOW POINTS AT THE COLUMNS AND BENT BEAMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- [XX] INDICATES THE NUMBER OF 3/4" DIAMETER X 3 1/2" LONG HEADED STUDS WELDED TO THE TOP FLANGE OF THE BEAM. SPACE STUDS EVENLY ALONG THE BEAM UNLESS NOTED OTHERWISE.
- INDICATES A MOMENT CONNECTION TO DEVELOP THE FULL CAPACITY OF THE MEMBER. REFER TO TYPICAL DETAILS 7, 8 AND 9 ON DRAWING S0-0-6.
- INDICATES A 5/16" FILLET WELD ALL AROUND, (HSS BEAM TO HSS COLUMN) WHERE BEAM DIMENSIONS EXCEED COLUMN DIMENSIONS PROVIDE 1/2" THICK STEEL CAP PLATE TO ACHIEVE ALL AROUND WELD. REFER TO TYPICAL DETAIL 2 ON DRAWING S0-0-7.
- < X' > INDICATES UPWARD CAMBER AT THE MID-SPAN OF THE MEMBER.
- 1 1/2" INDICATES SPAN DIRECTION OF 2" DEEP, 20 GAGE GALVANIZED COMPOSITE STEEL DECK WITH 2 1/2" NORMAL WEIGHT CONCRETE TOPPING. TOTAL THICKNESS = 4 1/2". REINFORCE WITH 6x6 - W21x122.1 WWR.
- 1 1/2" INDICATES SPAN DIRECTION OF 1 1/2" DEEP, 20 GAGE TYPE B, GALVANIZED STEEL ROOF DECK.
- 3" INDICATES SPAN DIRECTION OF 3" DEEP, 20 GAGE TYPE N, GALVANIZED STEEL ROOF DECK.
- FOR EXACT NUMBER, SIZE, AND LOCATION OF OPENING IN STEEL DECKING REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. FOR FRAMING INFORMATION, REFER TO DETAIL 1 AND 2 ON DRAWING S0-0-8.
- INDICATES A ROOF DRAIN. REFER TO TYPICAL STRUCTURAL DETAILS 1 AND 8 ON DRAWING S0-0-4 AND DETAIL 11 ON DRAWING S0-0-8 FOR DECKING SUPPORT. REFER TO DETAIL 4 ON DRAWING S0-0-5. REFER TO PLUMBING AND ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- CT INDICATES A COLUMN TERMINATES AT THIS LEVEL.
- WB INDICATES A BEND IN THE STEEL BEAM. REFER TO TYPICAL DETAIL 9 ON DRAWING S0-0-8.
- INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-6 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.

FOOTING SCHEDULE		
DESIGN SOIL BEARING CAPACITY = 2 TSF		
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 1'-0"	6 - #5 BOT EA WAY
F6T	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING



LOCKER BUILDING ELEVATOR ROOF PART PLAN

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning Architecture Interior
Tel: 817.261.1100
www.draa.com

NORTHEAST METRO TECH

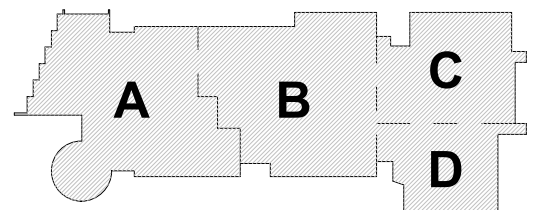
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

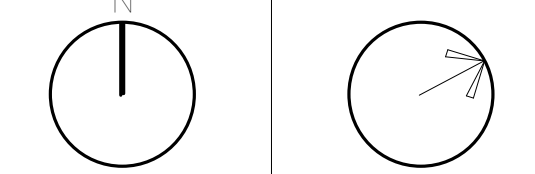
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023



KEY PLAN

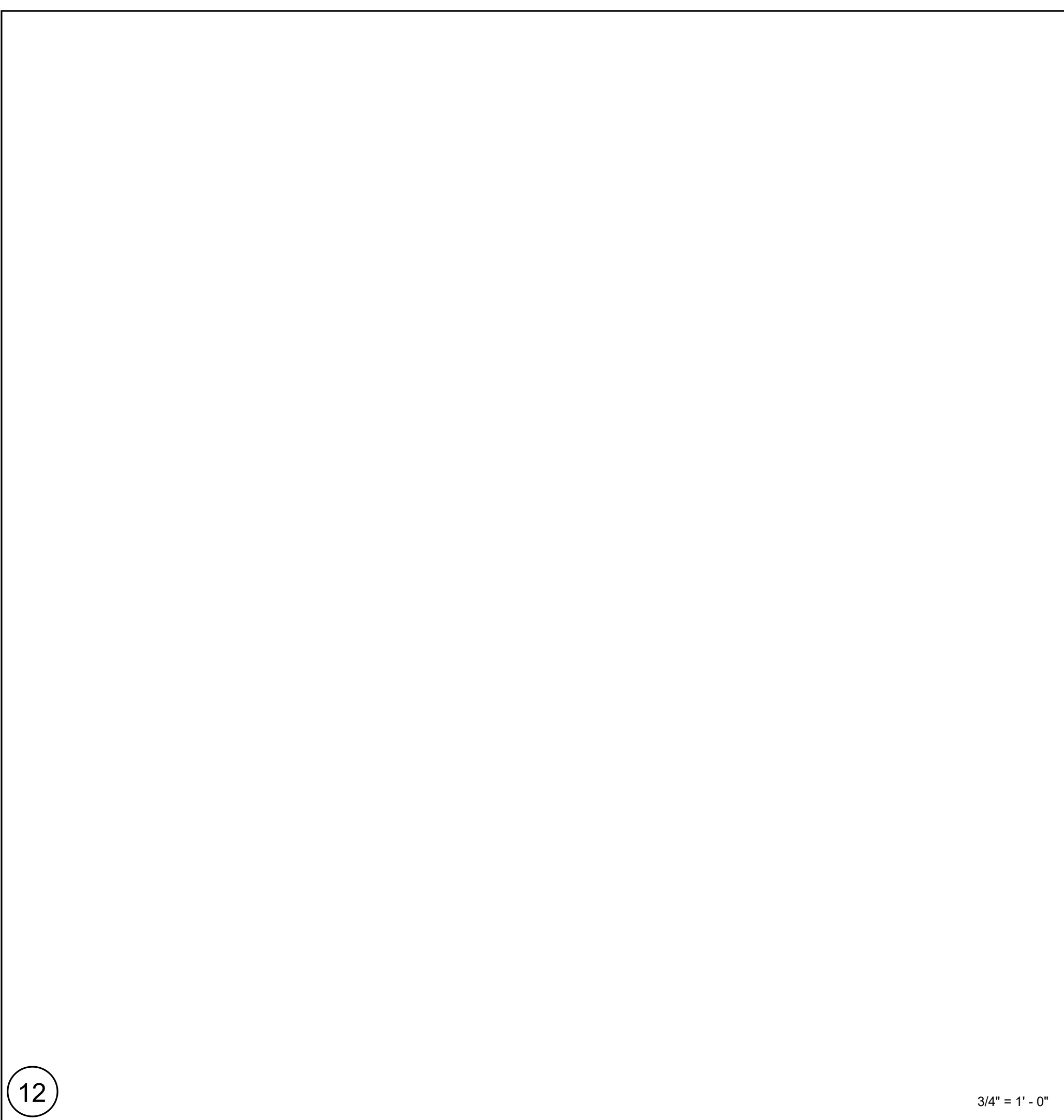
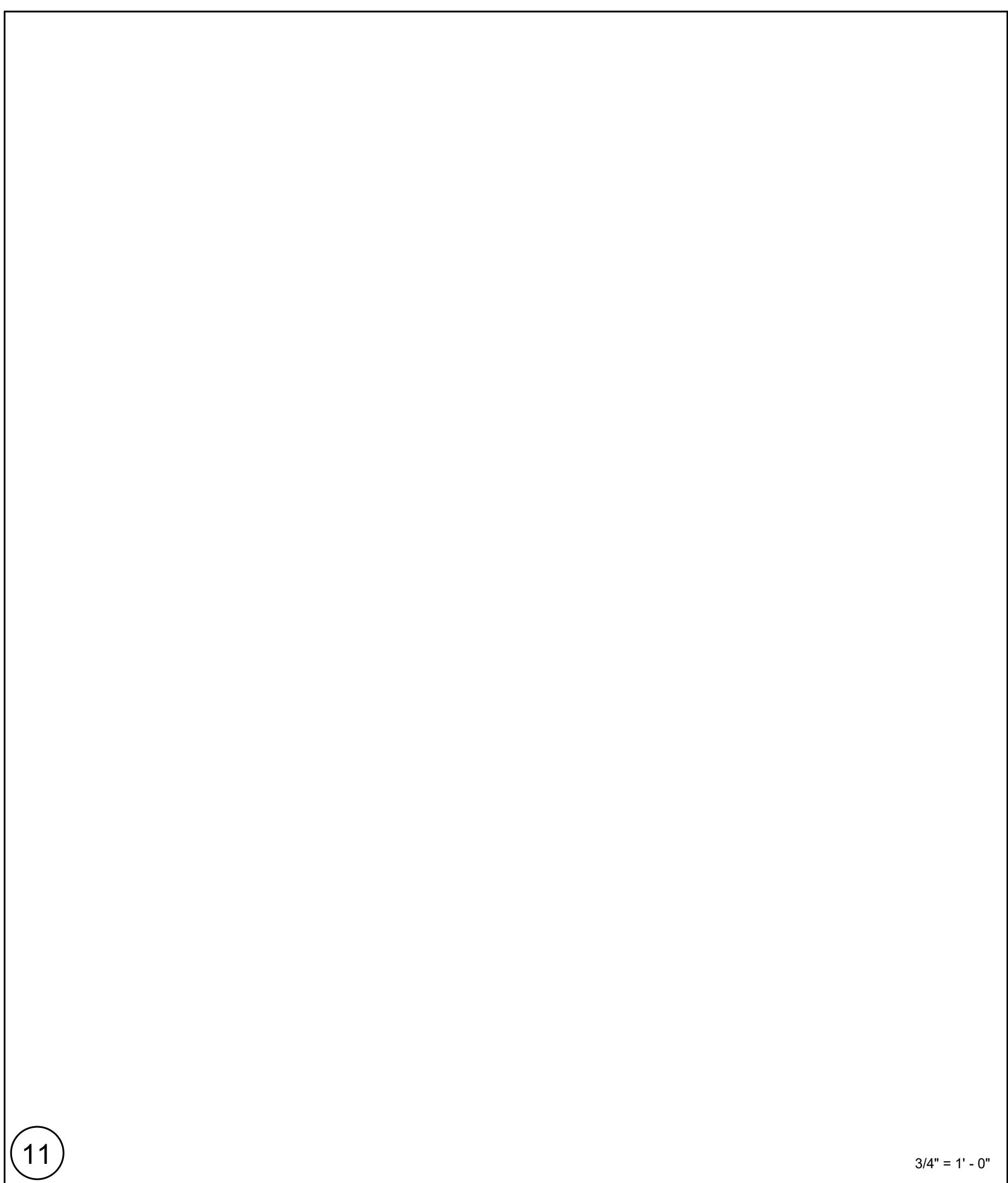
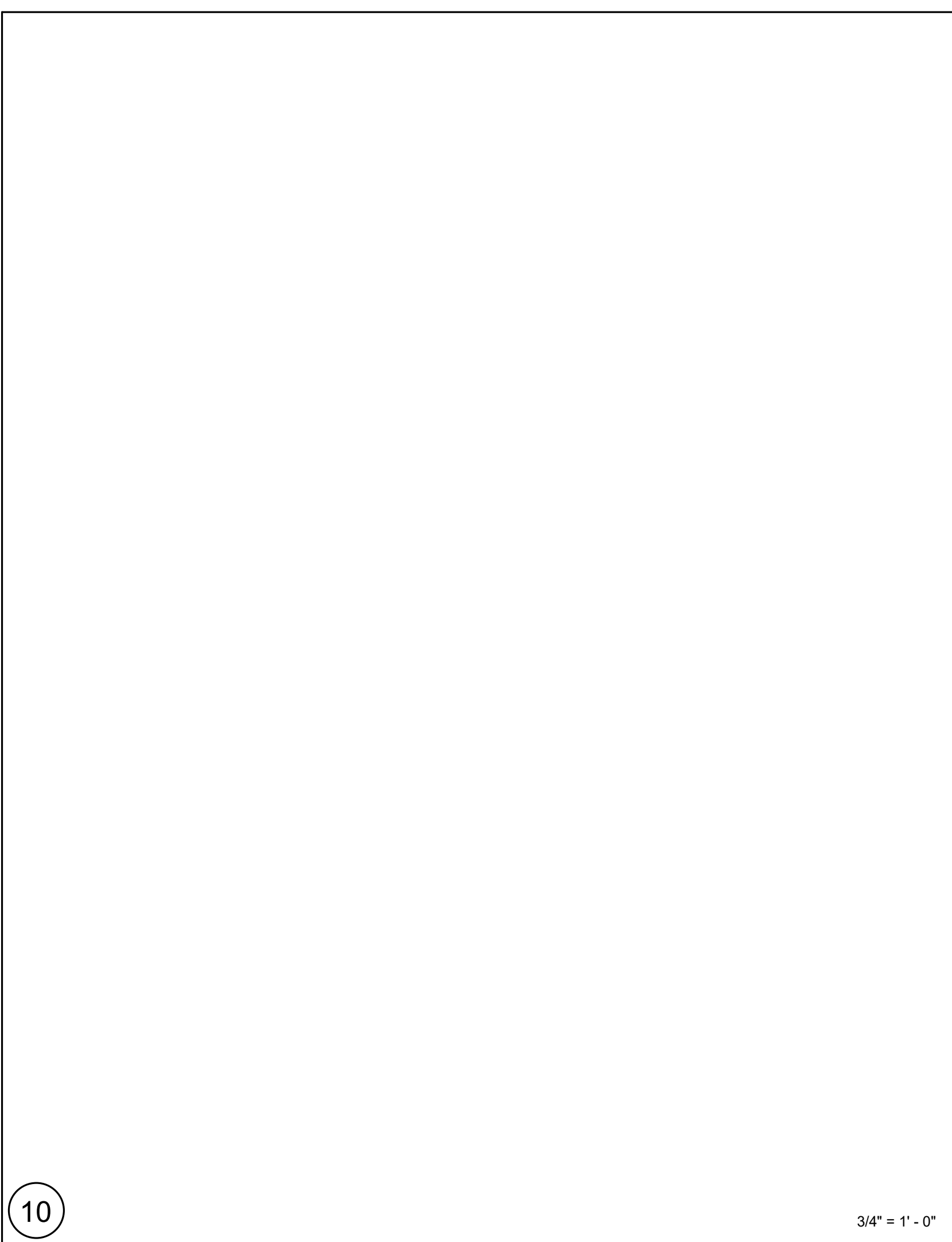
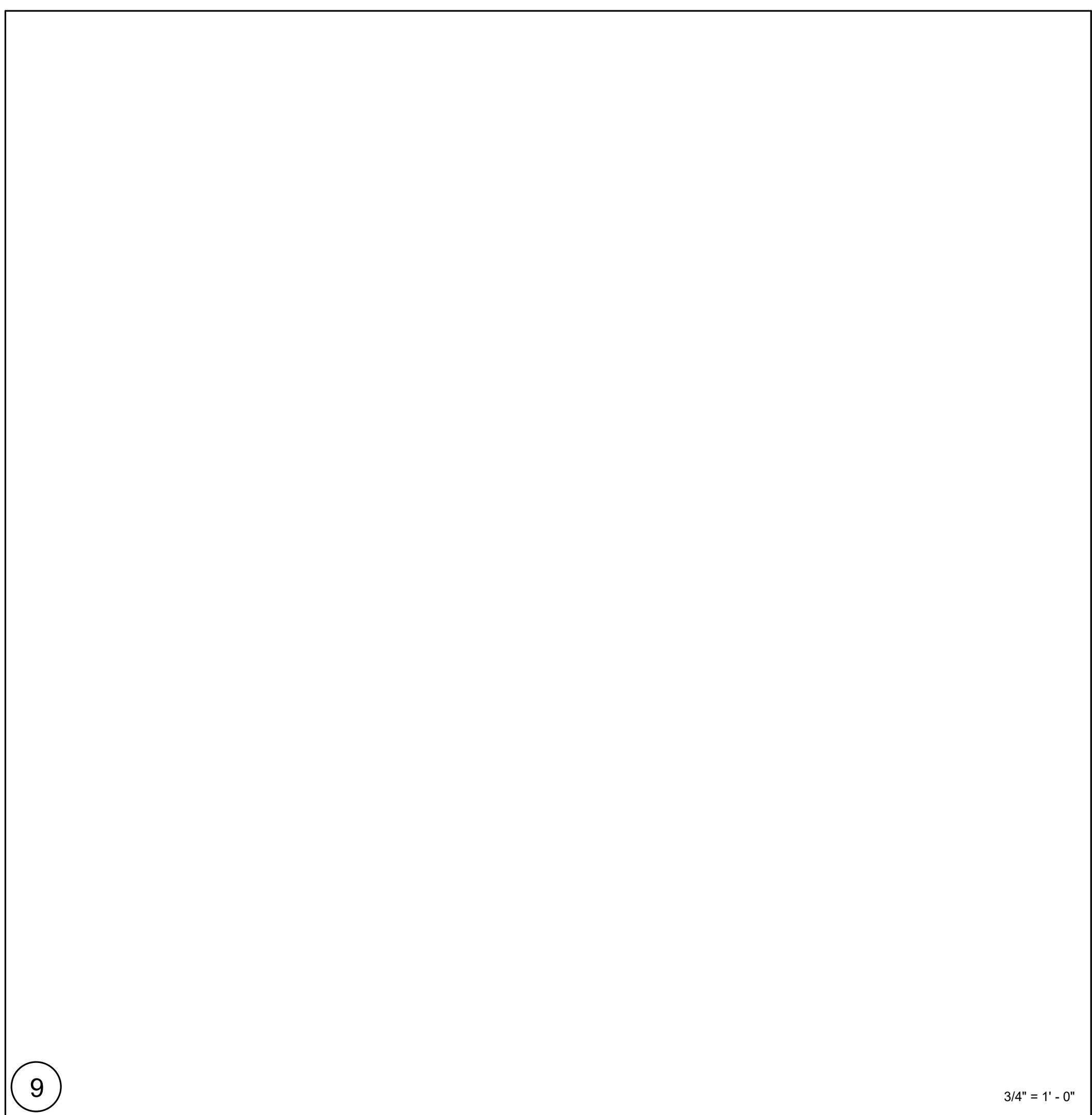
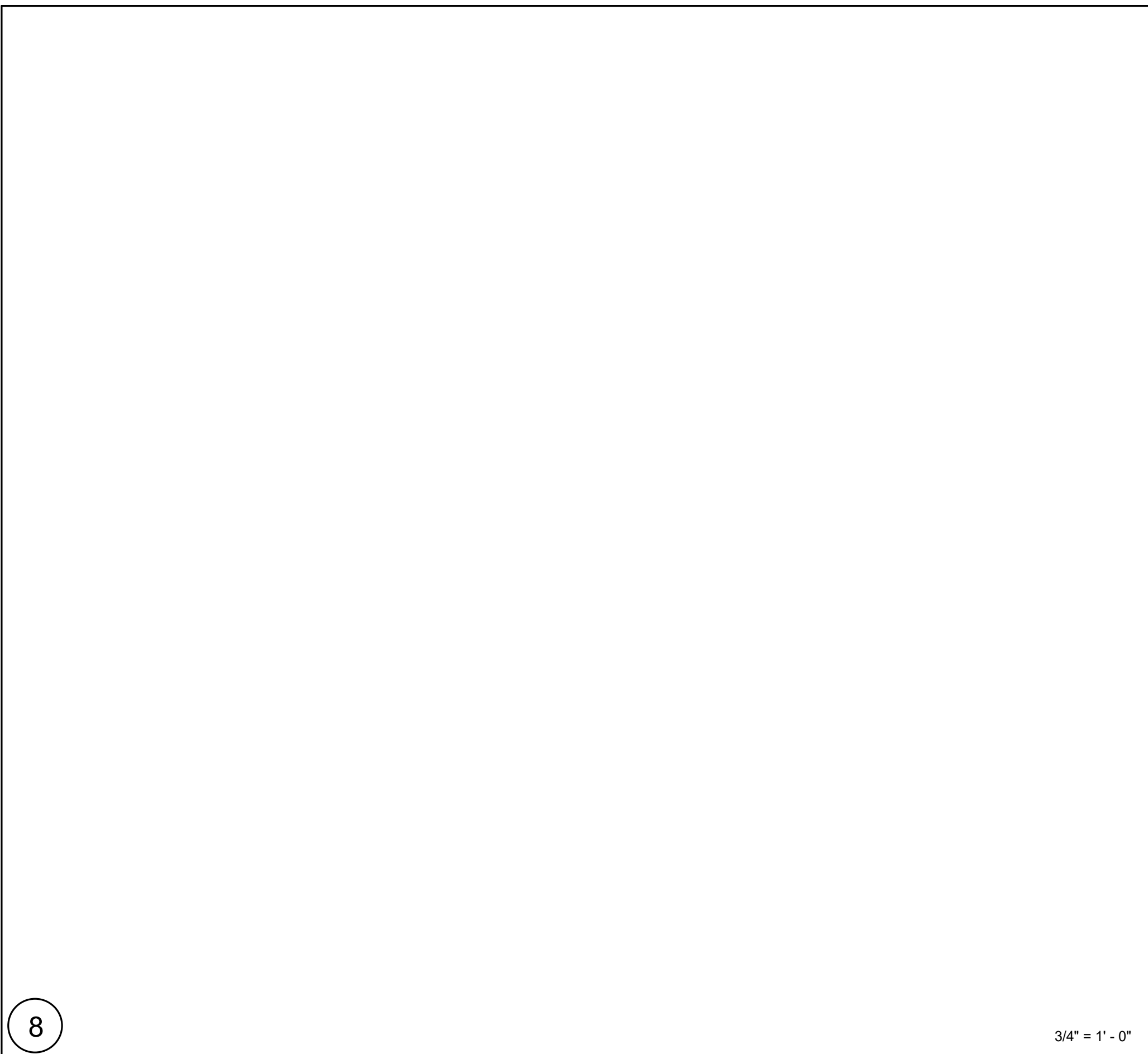
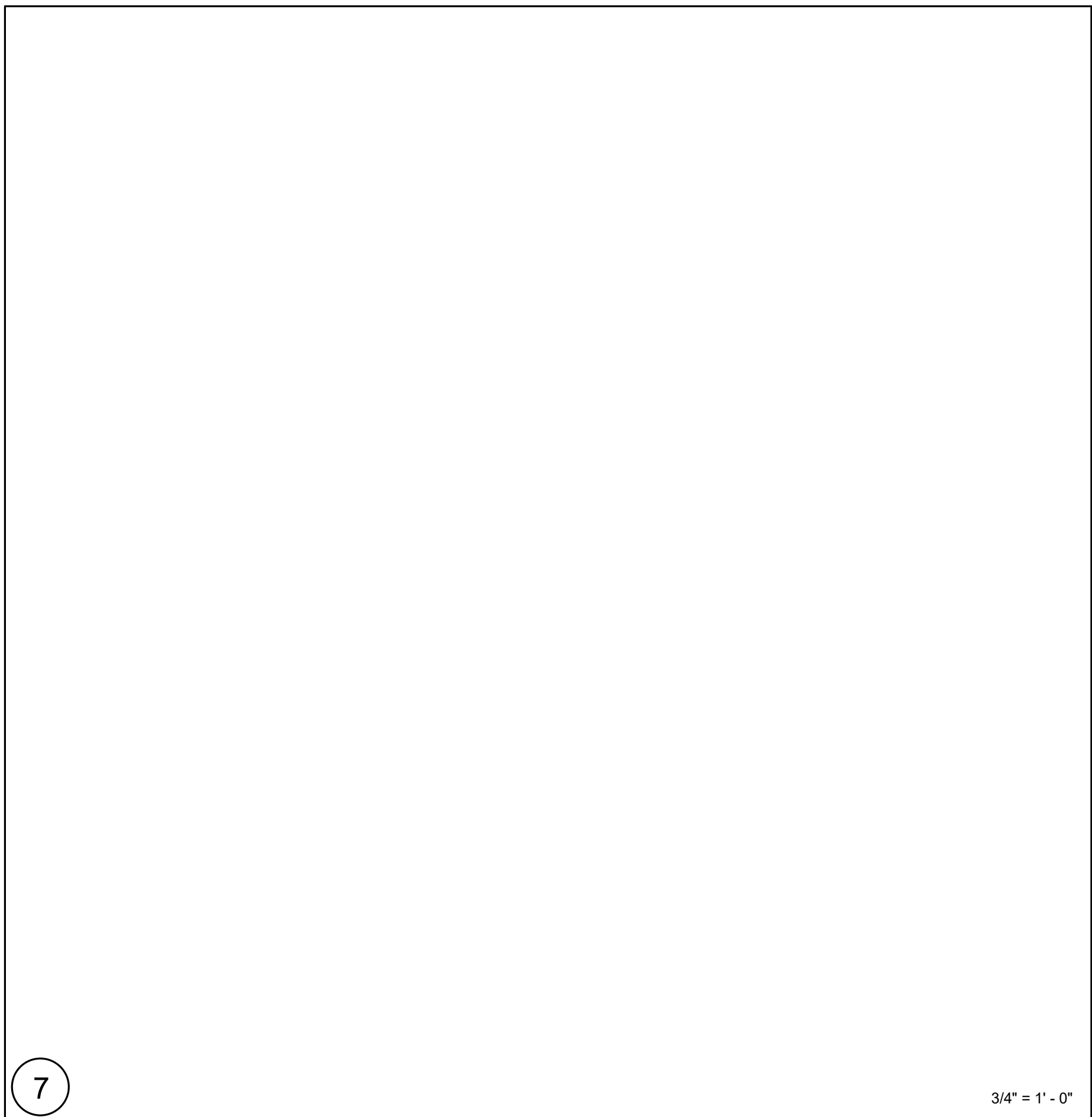
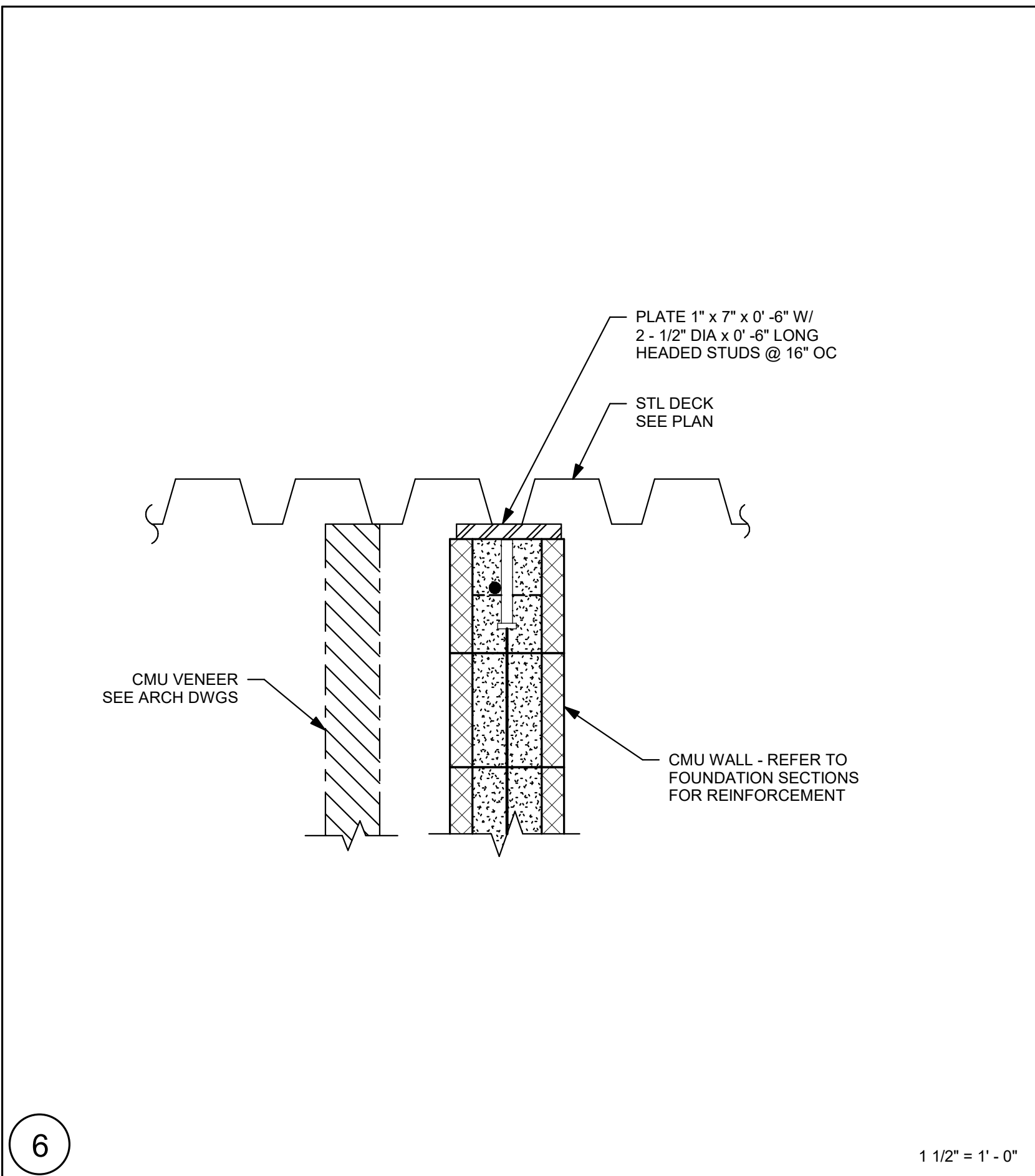
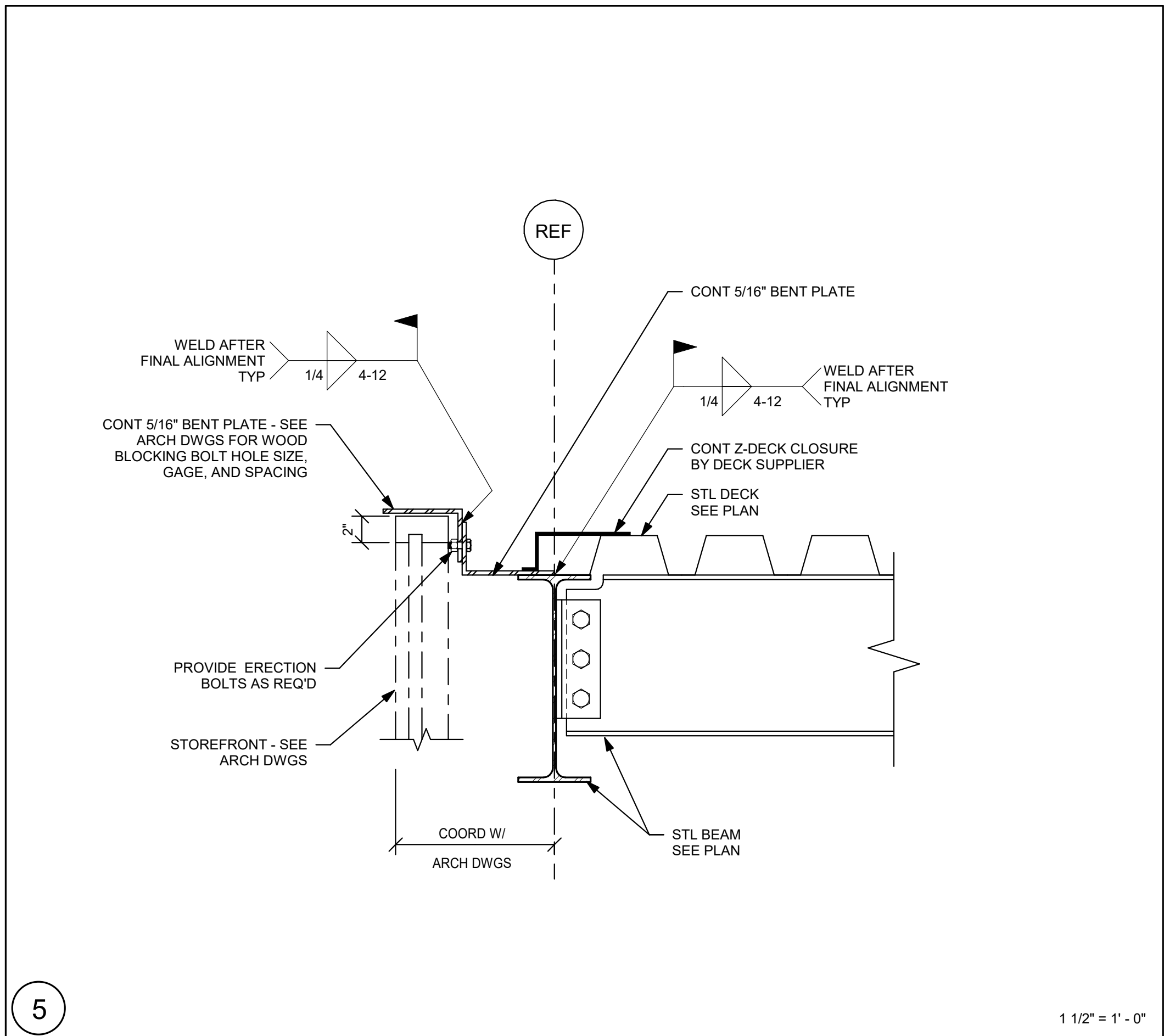
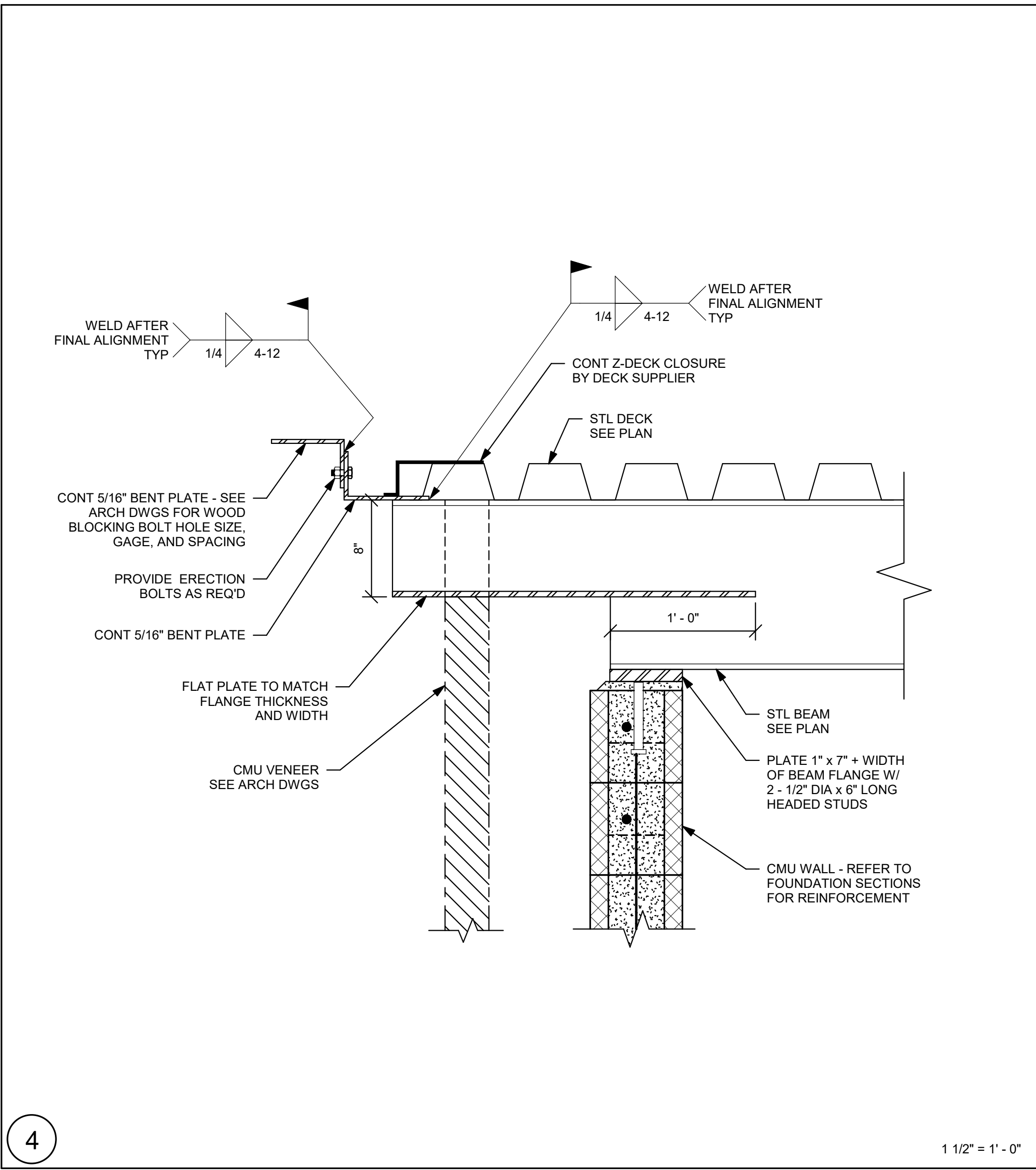
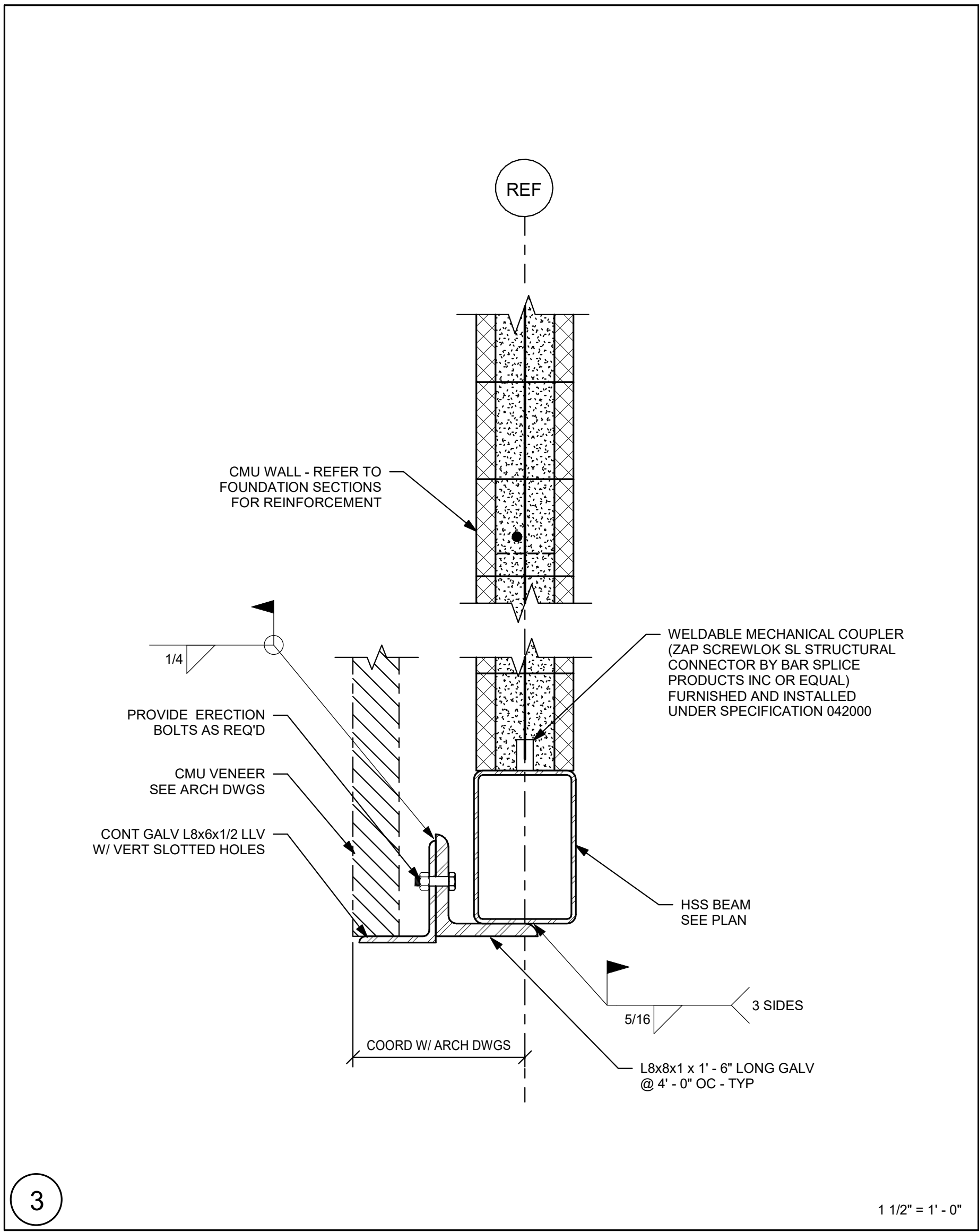
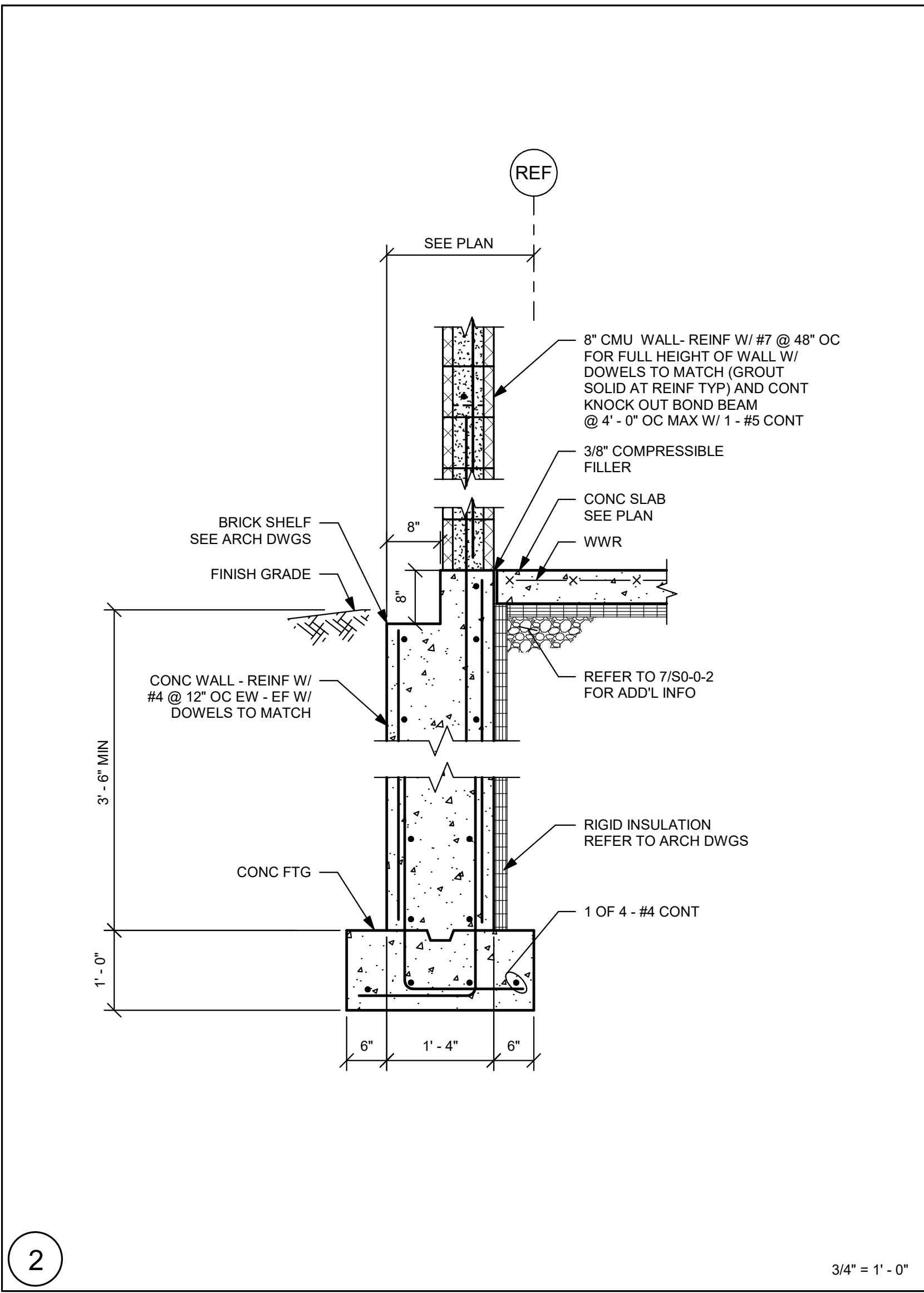
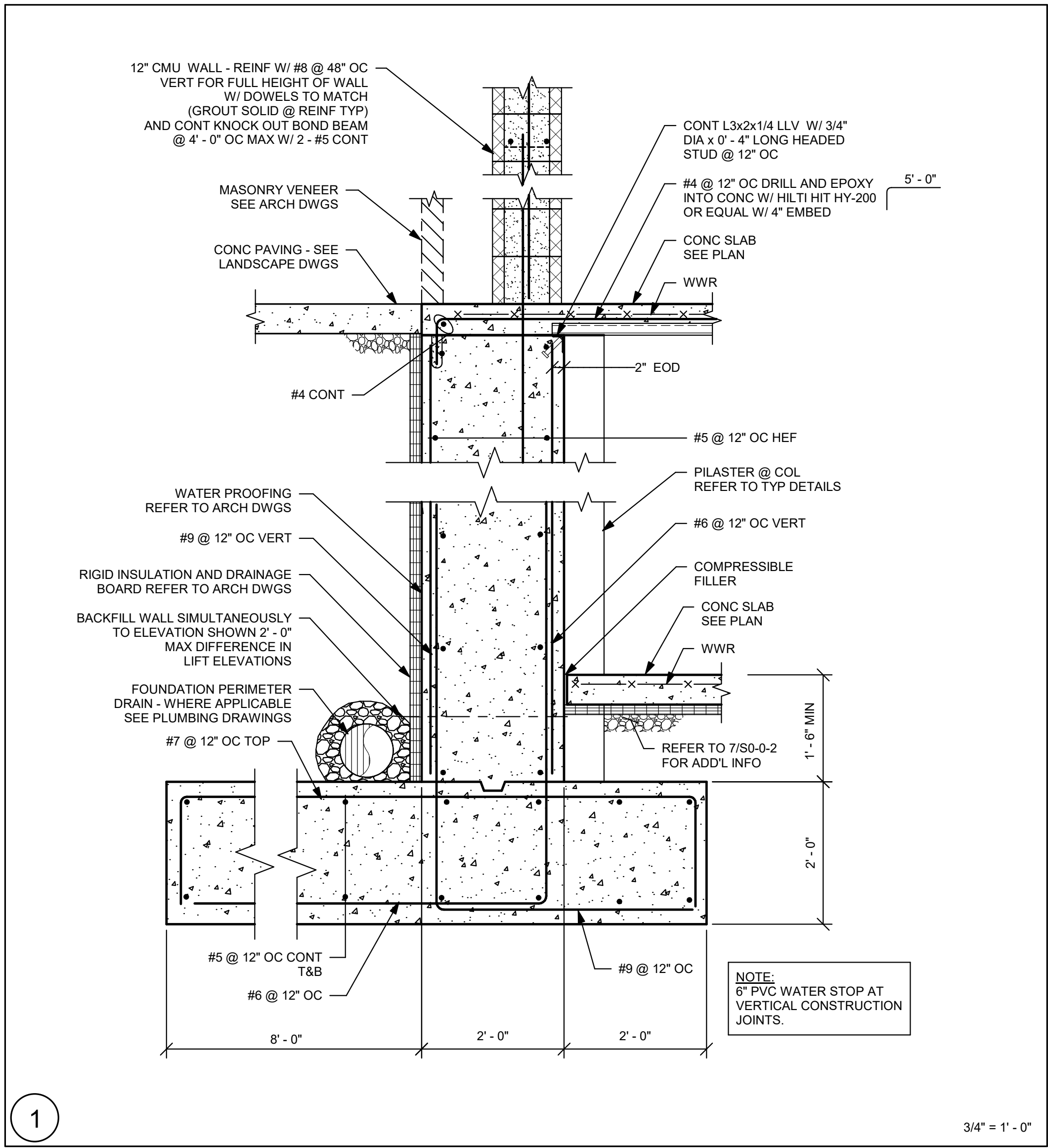
PROJECT NORTH MAGNETIC NORTH



LOCKER BUILDING PLANS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

SL-1-1



DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning Architecture Interior
Tel: 877.261.1100
www.dra.com

NORTHEAST
METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

EDG

Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

© COPYRIGHT 2021
DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

A

B

C

D

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

LOCKER ROOM
BUILDING
SECTIONS

Scale: As indicated
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

SL-2-1

DRA

Drumme Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074
260 Charles Street
Studio 300
Waltham, MA
02453
Planning Architecture Interior
Tel: 877.267.1100
www.draa.com

NORTHEAST
METRO TECH

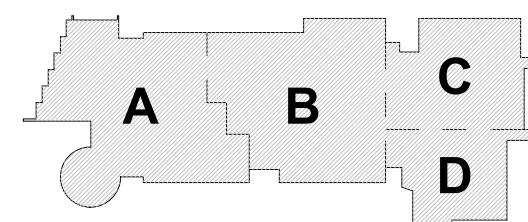
100 Hemlock Rd.
Wakefield, MA 01880



Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

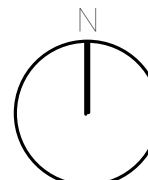
© COPYRIGHT 2021 DRUMMEY ROSANE ANDERSON, INC.

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

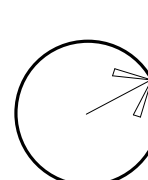


KEY PLAN

PROJECT NORTH



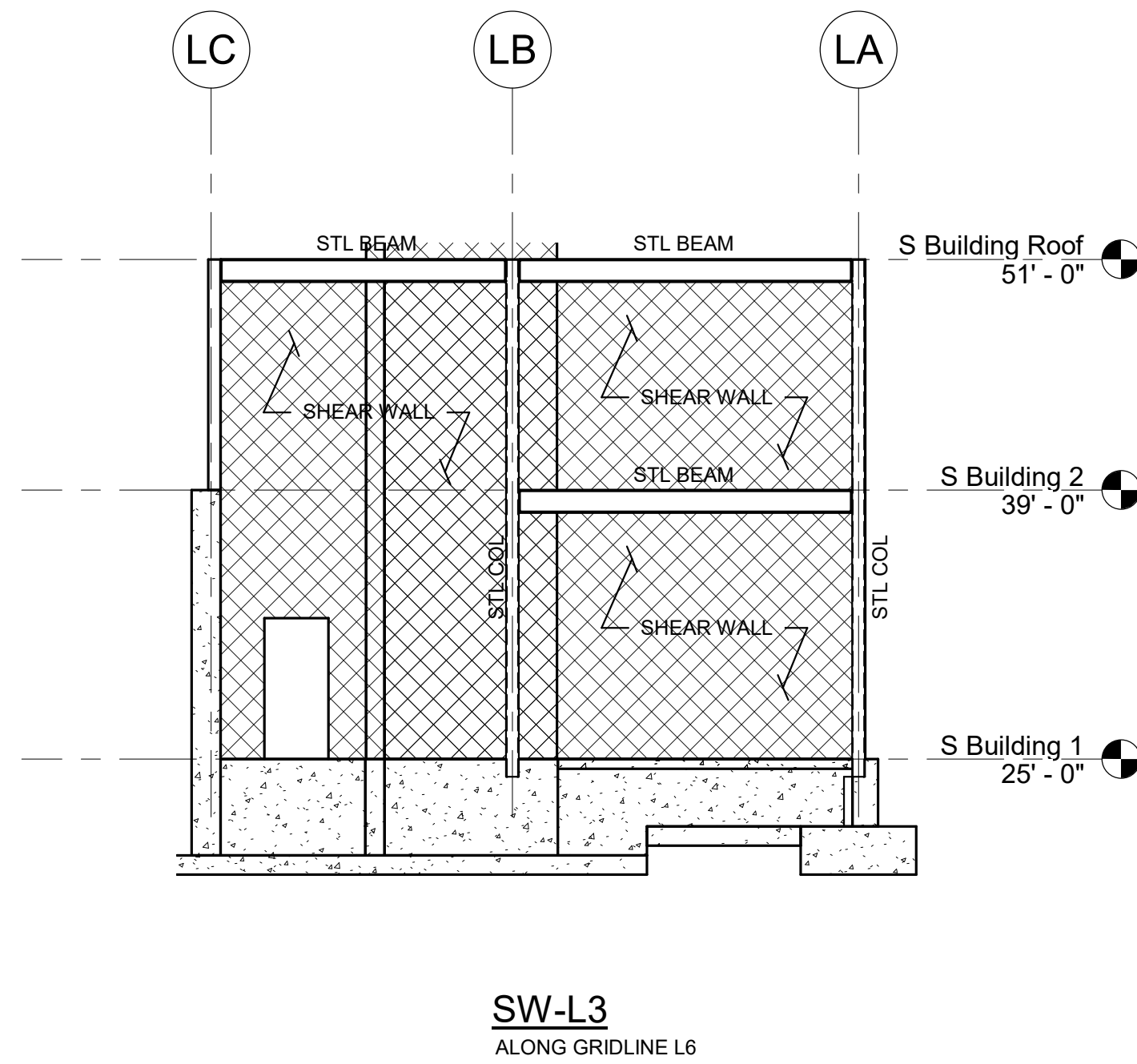
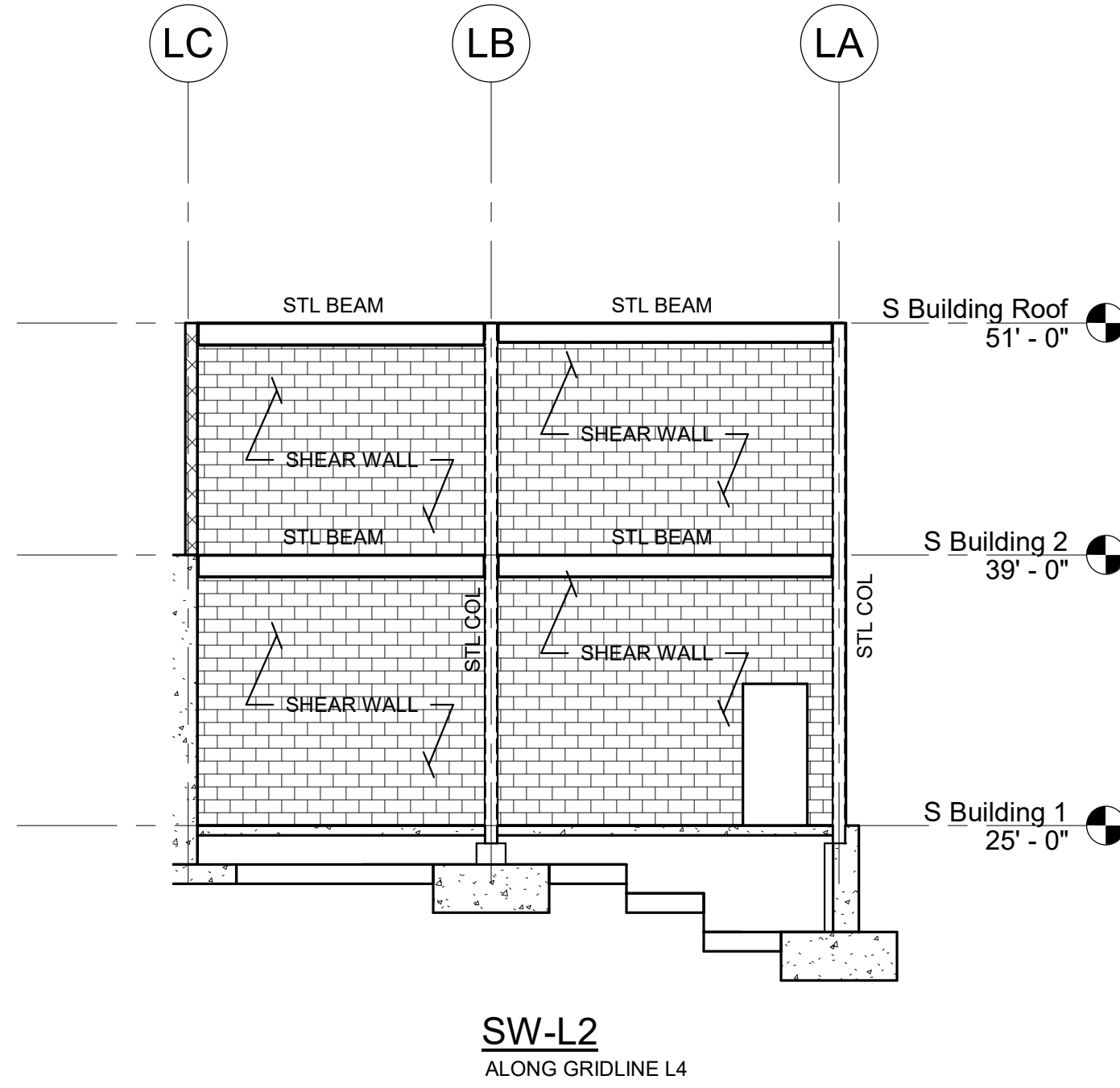
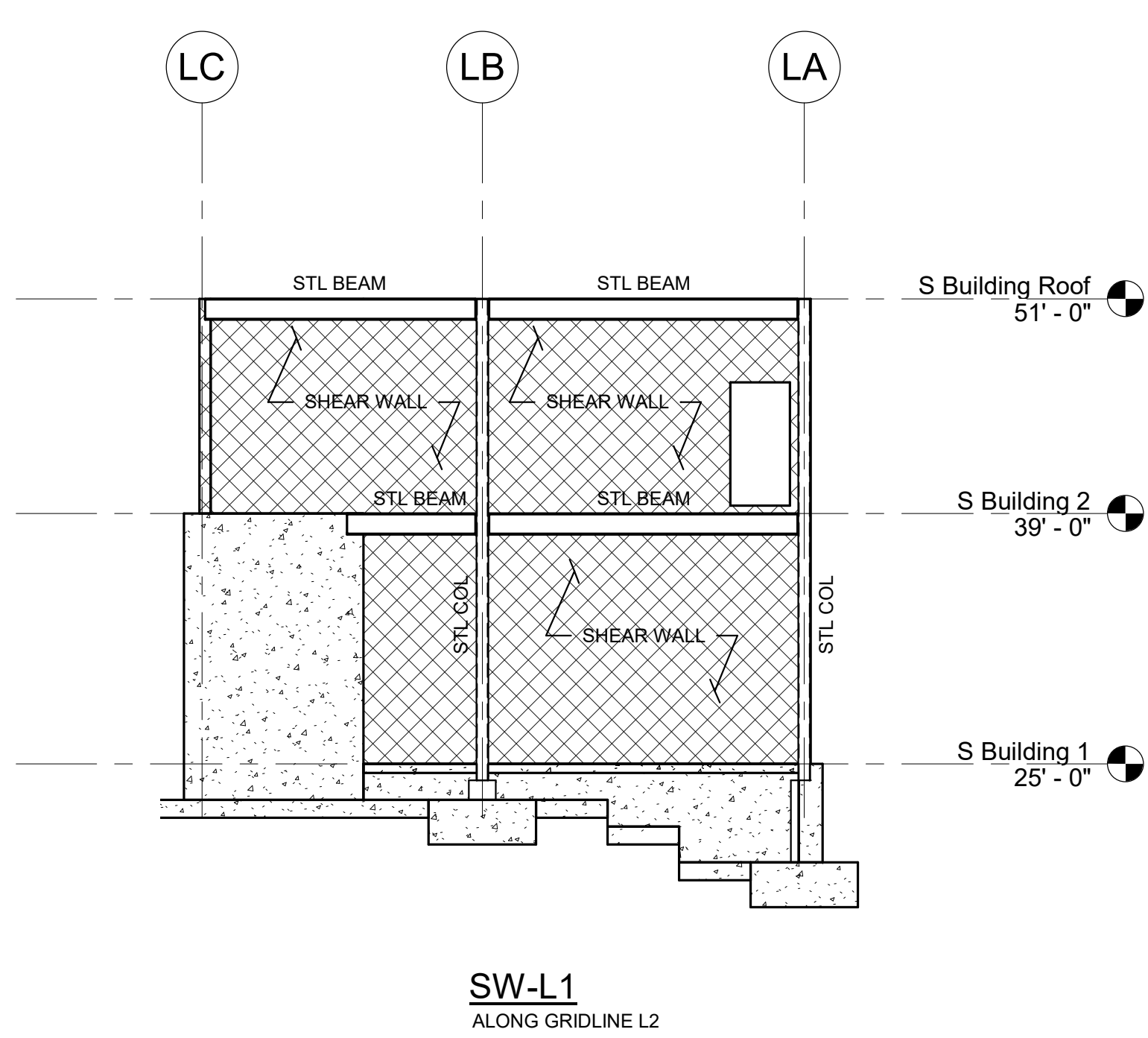
MAGNETIC NORTH

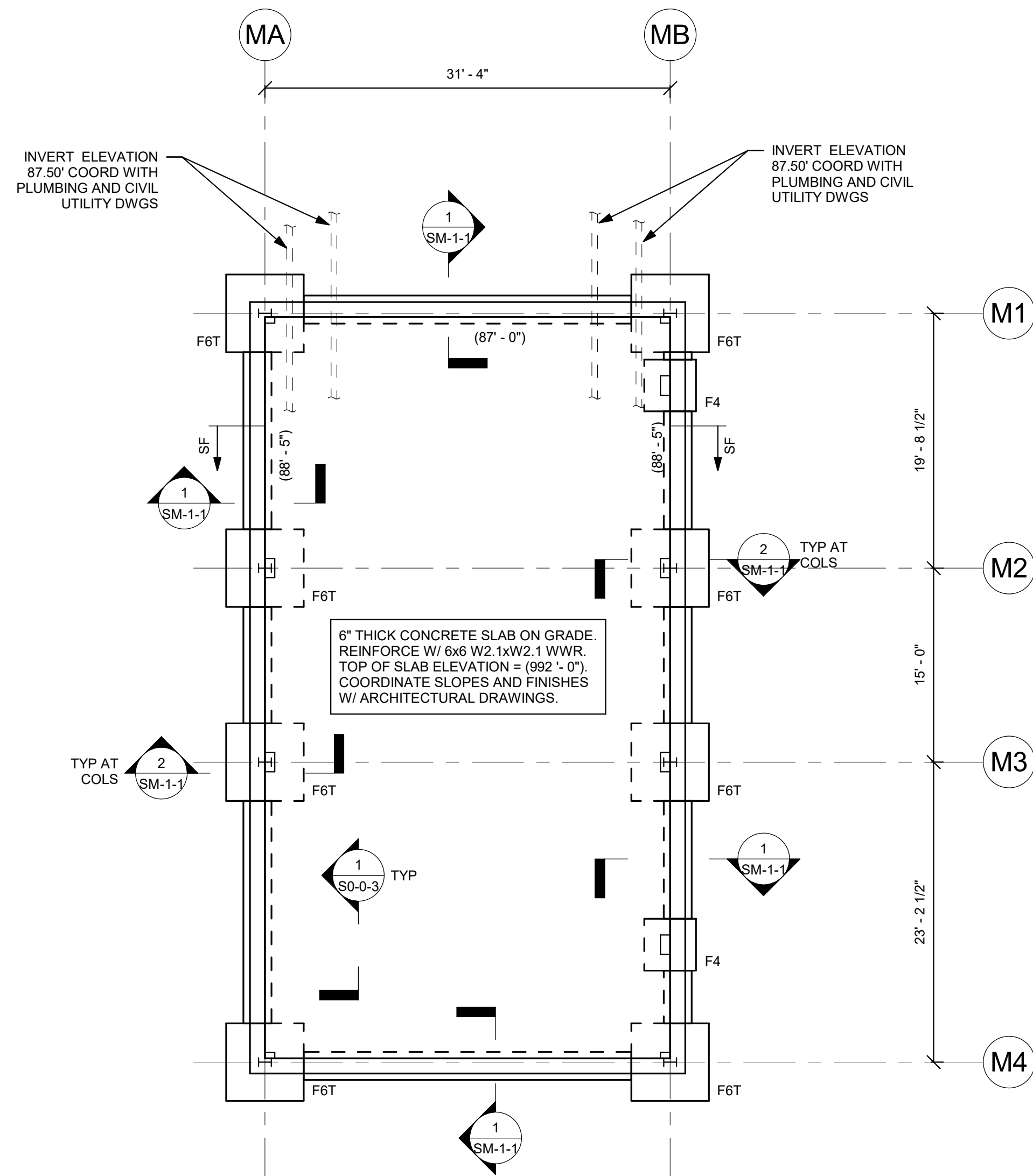


LOCKER ROOM
BUILDING
SHEAR WALLS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: EDG
Date: FEBRUARY 24TH,
2023

SL-3-1



NORTHEAST
METRO TECH100 Hemlock Rd.
Wakefield, MA 01880Engineers Design Group Inc.
Structural Engineers
389 Main Street, Suite 401
Malden, MA 02148
(781)396-9007
EDG@EDGINC.COM

MAINTENANCE BUILDING GROUND FLOOR PLAN

FOUNDATION NOTES:

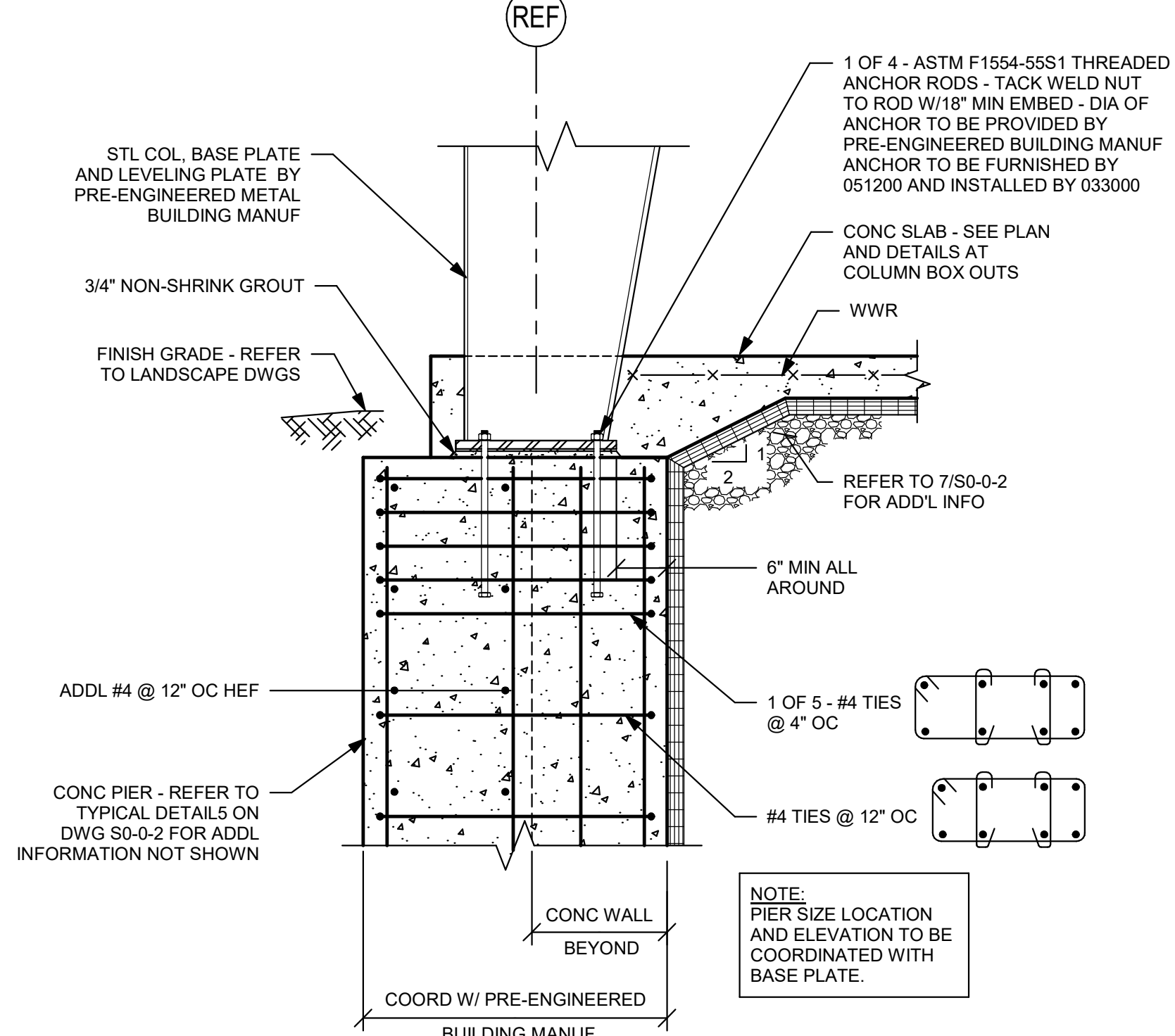
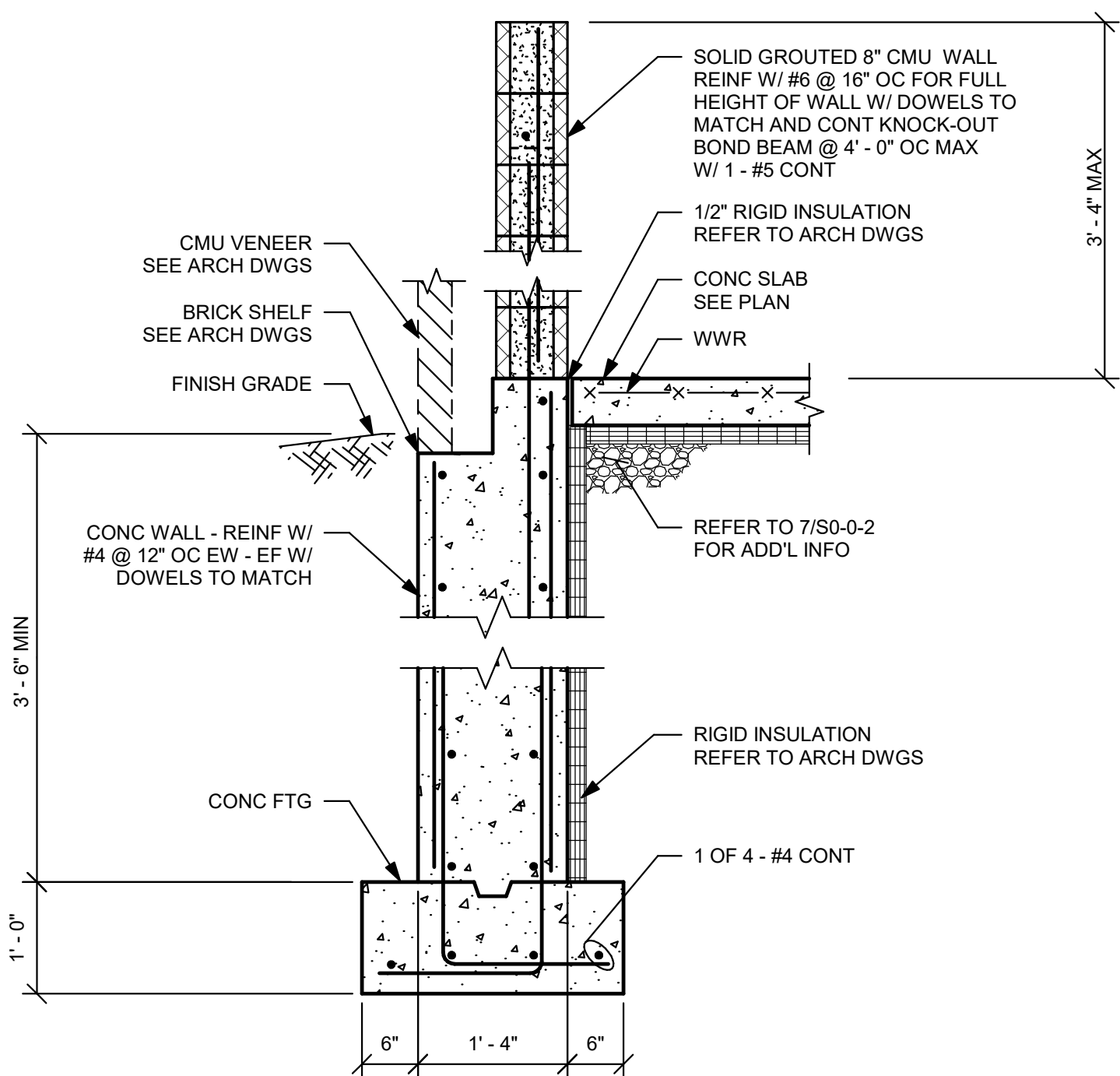
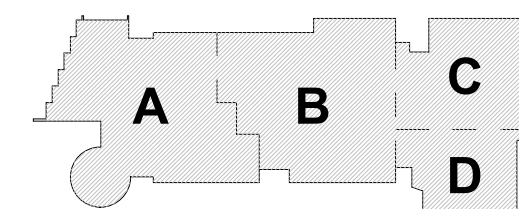
- 1) REFER TO GRADING DRAWINGS FOR PLAN AND GRADE ELEVATIONS. THE STRUCTURAL DRAWINGS USES A DATUM OF 100'-0" AT THE MAIN FLOOR, WHICH CORRESPONDS TO 163.80' MEAN SEA LEVEL, AS SHOWN ON THE SITE AND CIVIL DRAWINGS.
- 2) FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWINGS S0-0-1, S0-0-2, S0-0-3, S0-0-4, S0-0-5, S0-0-6, S0-0-7 AND S0-0-8.
- 3) F3 ETC., INDICATES A FOOTING TYPE. FOR SIZE OF FOOTING AND REINFORCEMENT SEE SCHEDULE ON THIS DRAWING.
- 4) TOP OF FOOTING ELEVATION TO BE 3'-6" MINIMUM BELOW LOWEST ADJACENT FINISHED GRADE AT EXTERIOR CONDITIONS AND 2'-0" BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS. ALL OTHER TOP OF FOOTING ELEVATIONS ARE DENOTED AS THUS (XX'-XX") ON PLANS. CONTRACTOR TO COORDINATE AND VERIFY ALL TOP OF FOOTING ELEVATIONS WITH UNDERGROUND PLUMBING SUB-CONTRACTOR'S FIELD LAYOUT.
- 5) ALL FOOTING ELEVATIONS NOTED ON PLAN ARE SHOWN ONLY TO ASSIST IN COORDINATION. ALL FOOTING ELEVATIONS MUST BE COORDINATED WITH STRUCTURAL REQUIREMENTS, TYPICAL DETAILS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- 6) ALL FOOTINGS TO BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.
- 7) SF INDICATES A STEPPED FOOTING REFER TO DETAIL 1 ON DRAWING S0-0-2.
- 8) BOTTOM OF BASE PLATE ELEVATION TO BE 1'-5" MINIMUM BELOW TOP OF CONCRETE SLAB AT INTERIOR CONDITIONS, AND 0'-11" BELOW TOP OF CONCRETE SLAB AT EXTERIOR CONDITIONS. UNLESS NOTED OTHERWISE AS (XX'-XX") REFER TO ARCHITECTURAL DRAWINGS FOR BRICK SHELF ELEVATIONS.
- 10) FOR UNDER SLAB DRAINAGE AND WALL DRAINS, COORDINATE WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND PLUMBING DRAWINGS.
- 11) INDICATES A DEPRESSED SLAB ON GRADE. REFER TO DETAILS 6 AND 7 ON DRAWING S0-0-2 COORDINATE ALL SLAB DEPRESSIONS WITH REQUIREMENTS ON ARCHITECTURAL DRAWINGS.
- 12) FOR TYPICAL EXTERIOR DOOR DETAIL REFER TO DETAIL 6 ON DRAWING S0-0-3 AND RELEVANT SECTIONS.
- 13) INDICATES A CMU WALL. REFER TO TYPICAL DETAIL 3 ON DRAWING S0-0-4 FOR REINFORCEMENT AND DETAIL 4 ON DRAWING S0-0-6 FOR CONNECTIONS TO STEEL BEAMS AND CONCRETE SLABS AT THE TOP OF WALL FOR NON-STRUCTURAL WALLS. REFER TO RELEVANT SECTIONS FOR CONNECTIONS OF SHEAR WALLS TO THE STRUCTURE.
- 14) FOR DIMENSIONS AND ELEVATIONS NOT GIVEN REFER TO ARCHITECTURAL DRAWINGS.
- 15) INDICATES CONCRETE PIER REFER TO TYPICAL DETAIL 5 ON DRAWING S0-0-2.
- 16) INDICATES UNDERGROUND UTILITY LINES PLUMBING THROUGH CONCRETE FOUNDATION WALL TYPICAL. COORDINATE FOOTING ELEVATION WITH PIPE INVERTS AND TYPICAL STRUCTURAL DETAILS.

FOOTING SCHEDULE

DESIGN SOIL BEARING CAPACITY = 2 TSF

MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 1'-6"	6 - #5 BOT EA WAY
F6T	6'-0" x 6'-0" x 2'-0"	7 - #6 BOT EA WAY

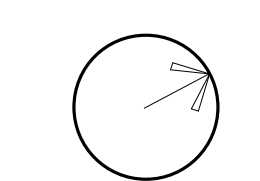
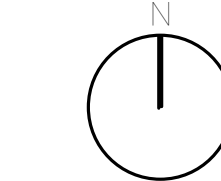
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

EARLY
STRUCTURAL
BID PACKAGE
FEBRUARY 24TH,
2023

KEY PLAN

PROJECT NORTH

MAGNETIC NORTH

MAINTENANCE
BUILDING PLANS

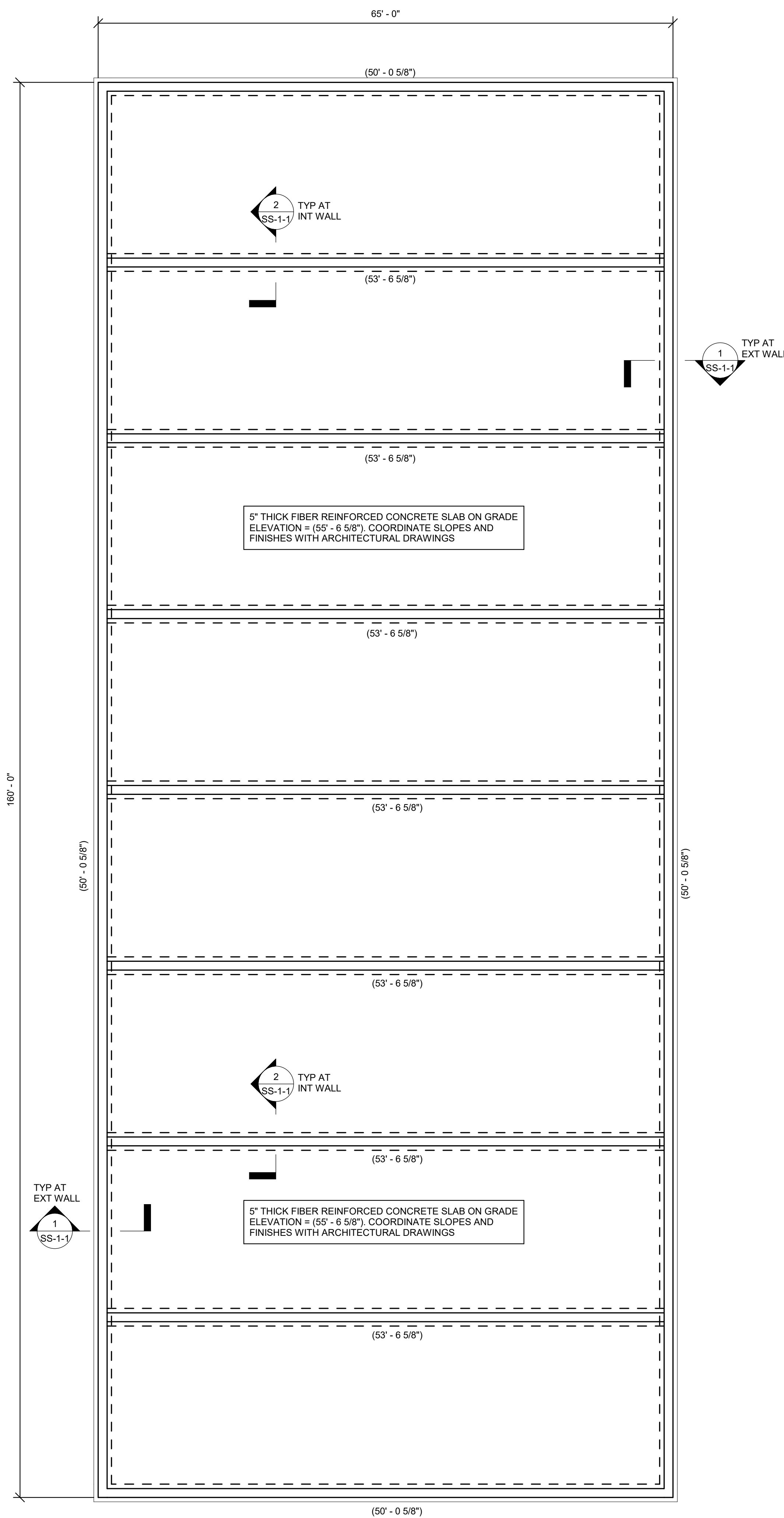
Scale: As indicated

Job No.: 20202

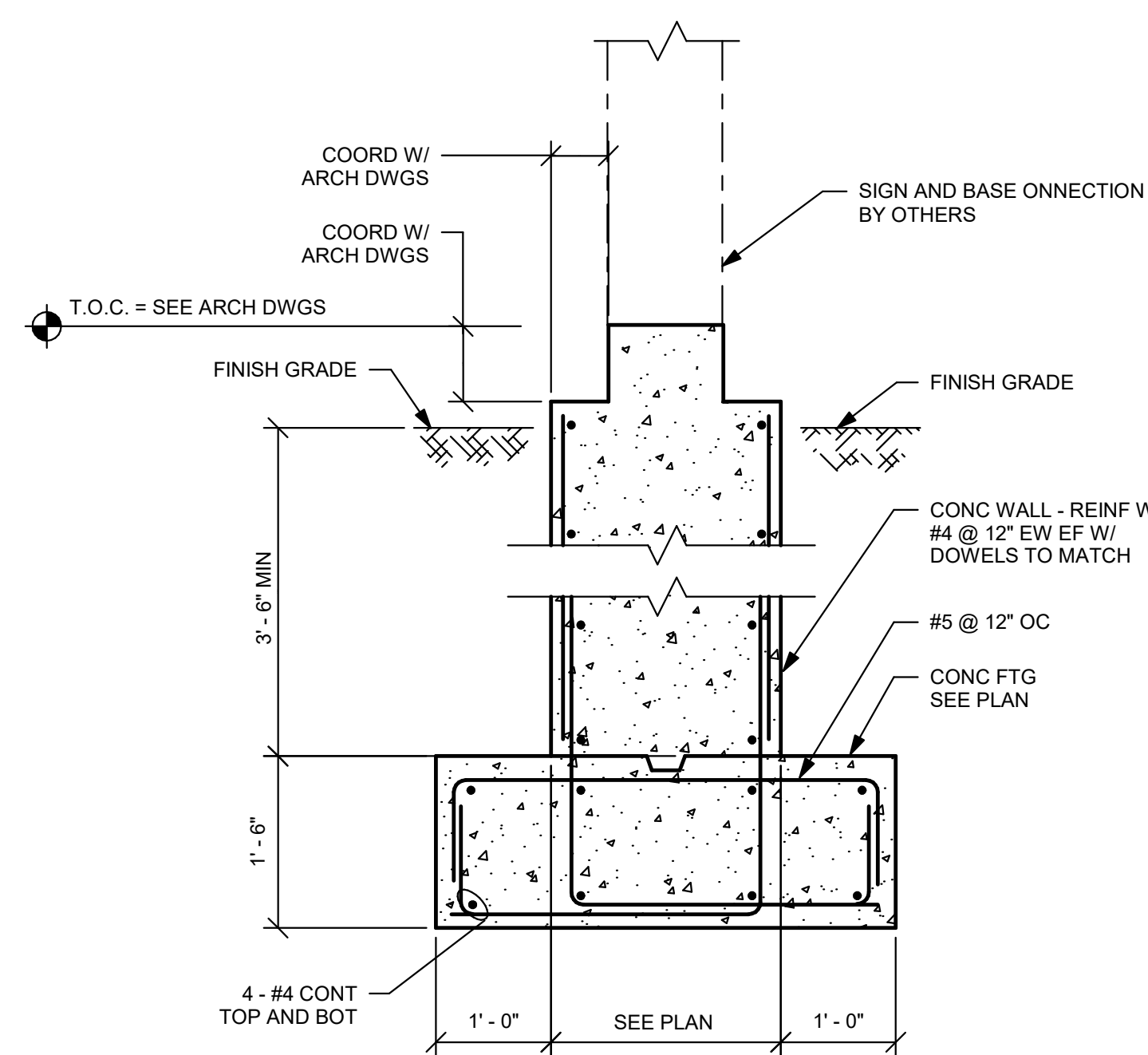
Drawn By: EDG

Date: FEBRUARY 24TH,
2023

SM-1-1



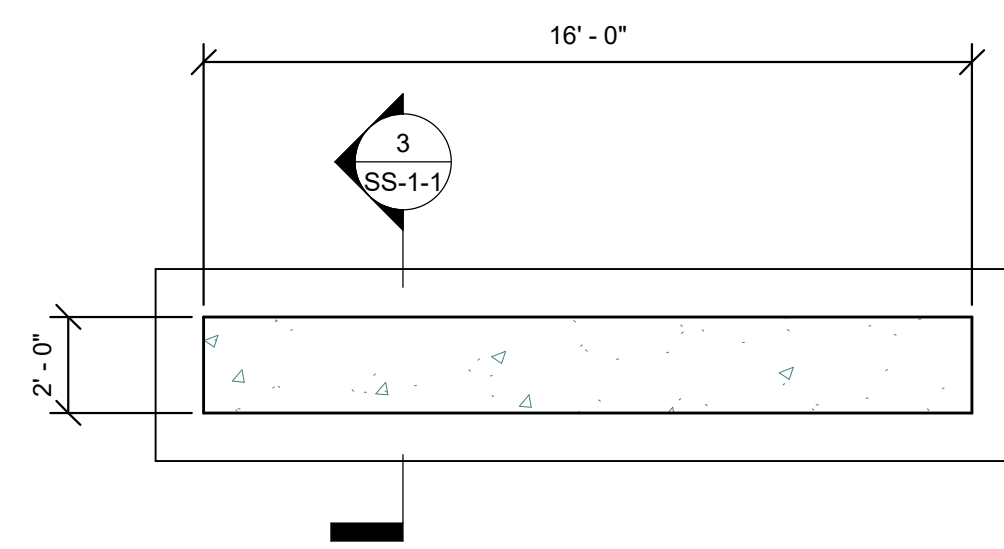
STORAGE BUILDING FOUNDATION PLAN



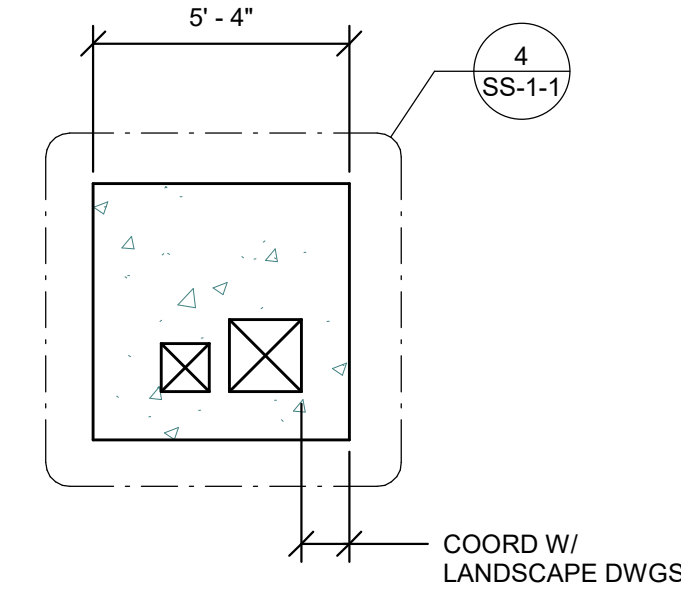
SITE SIGNAGE BASE

NOTE:
LOCATION AND DIMENSIONS OF SIGN TO BE
COORDINATED WITH ARCHITECTURAL AND
LANDSCAPE DRAWINGS

3/4" = 1'-0"

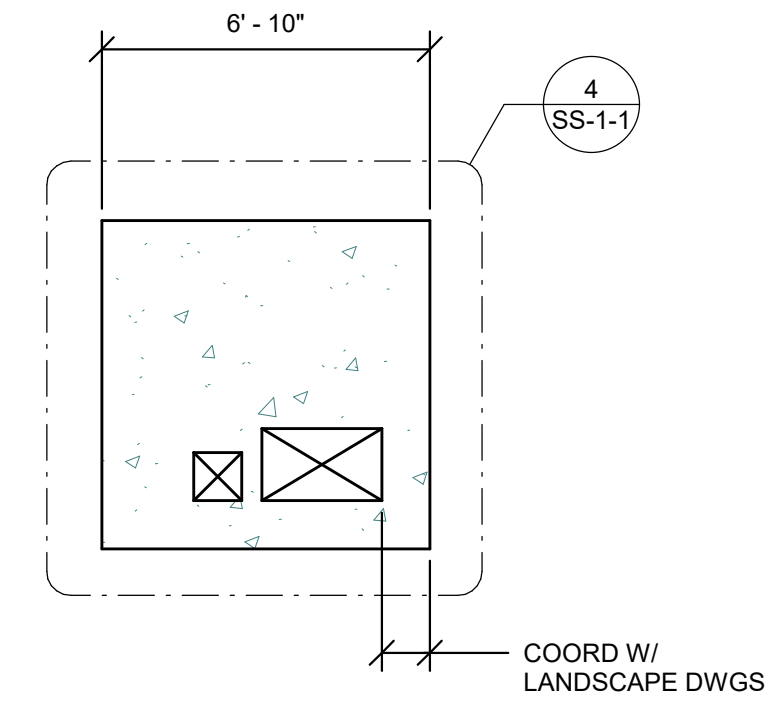


SIGNAGE FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



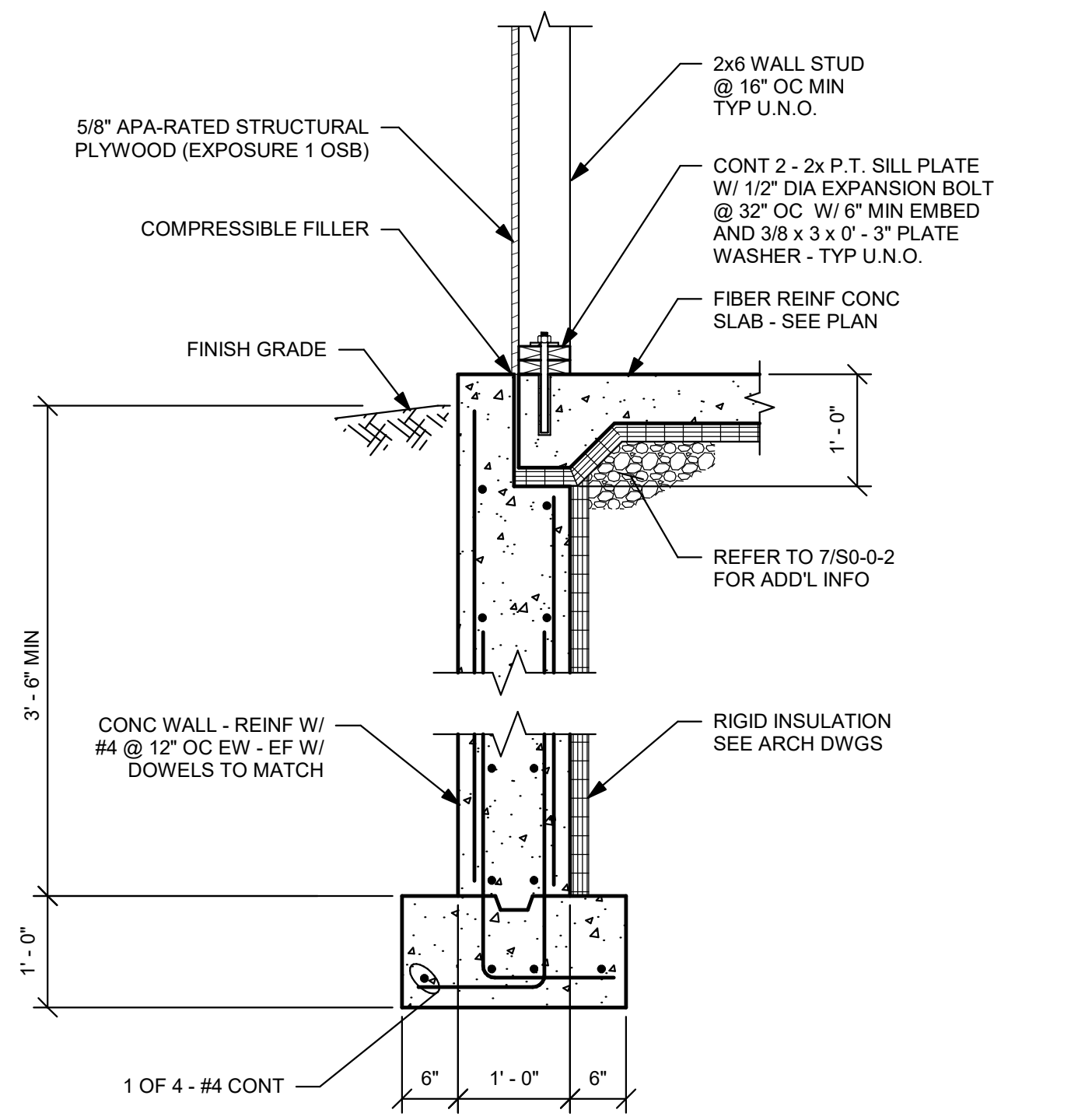
TRANSFORMER PAD 1 PLAN
SCALE: 1/4" = 1'-0"

NOTE:
3 REQUIRED, COORDINATE LOCATIONS
WITH ARCHITECTURAL AND LANDSCAPE
DRAWINGS.



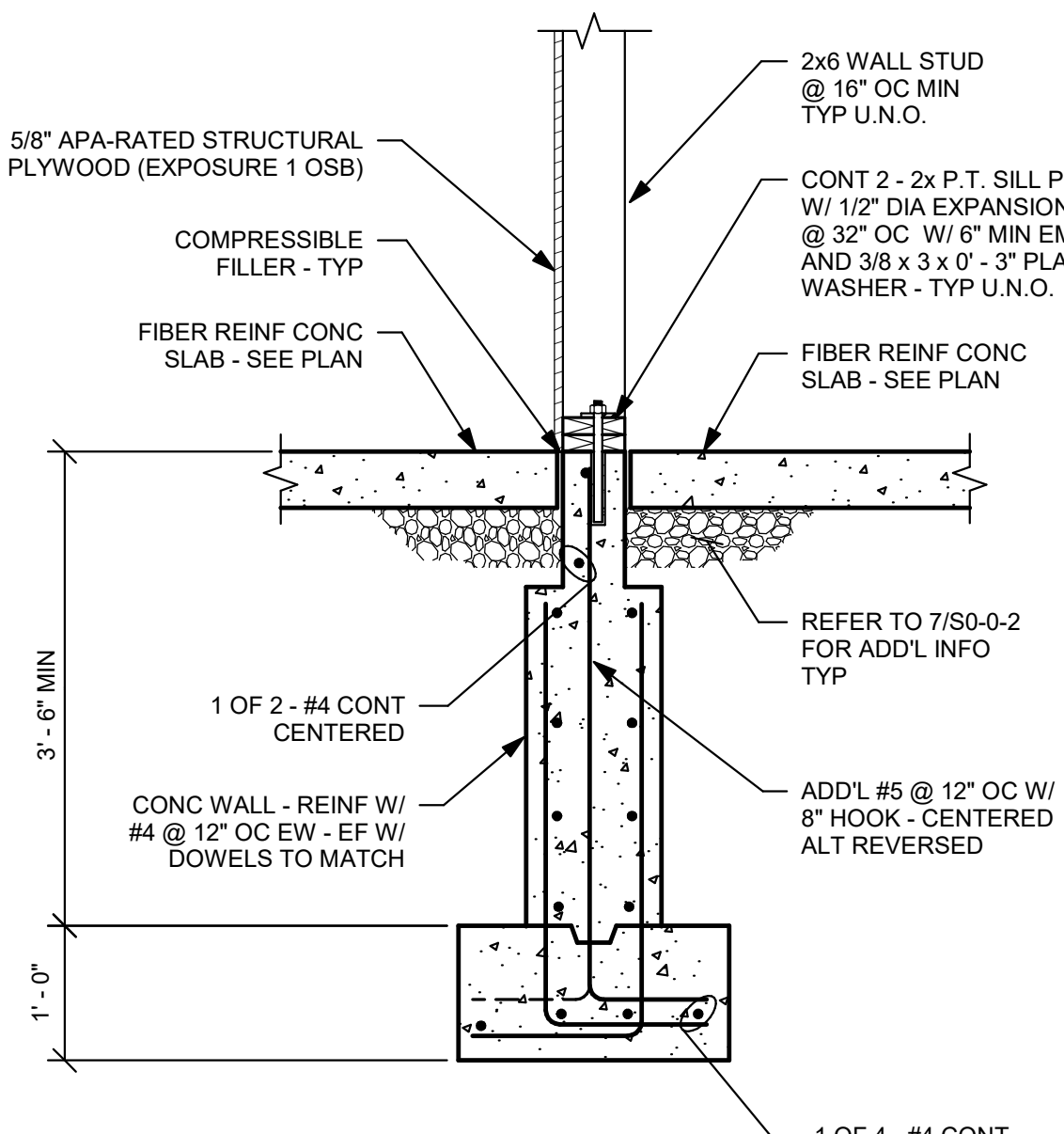
TRANSFORMER PAD 2 PLAN
SCALE: 1/4" = 1'-0"

NOTE:
2 REQUIRED, COORDINATE LOCATIONS
WITH ARCHITECTURAL AND LANDSCAPE
DRAWINGS.



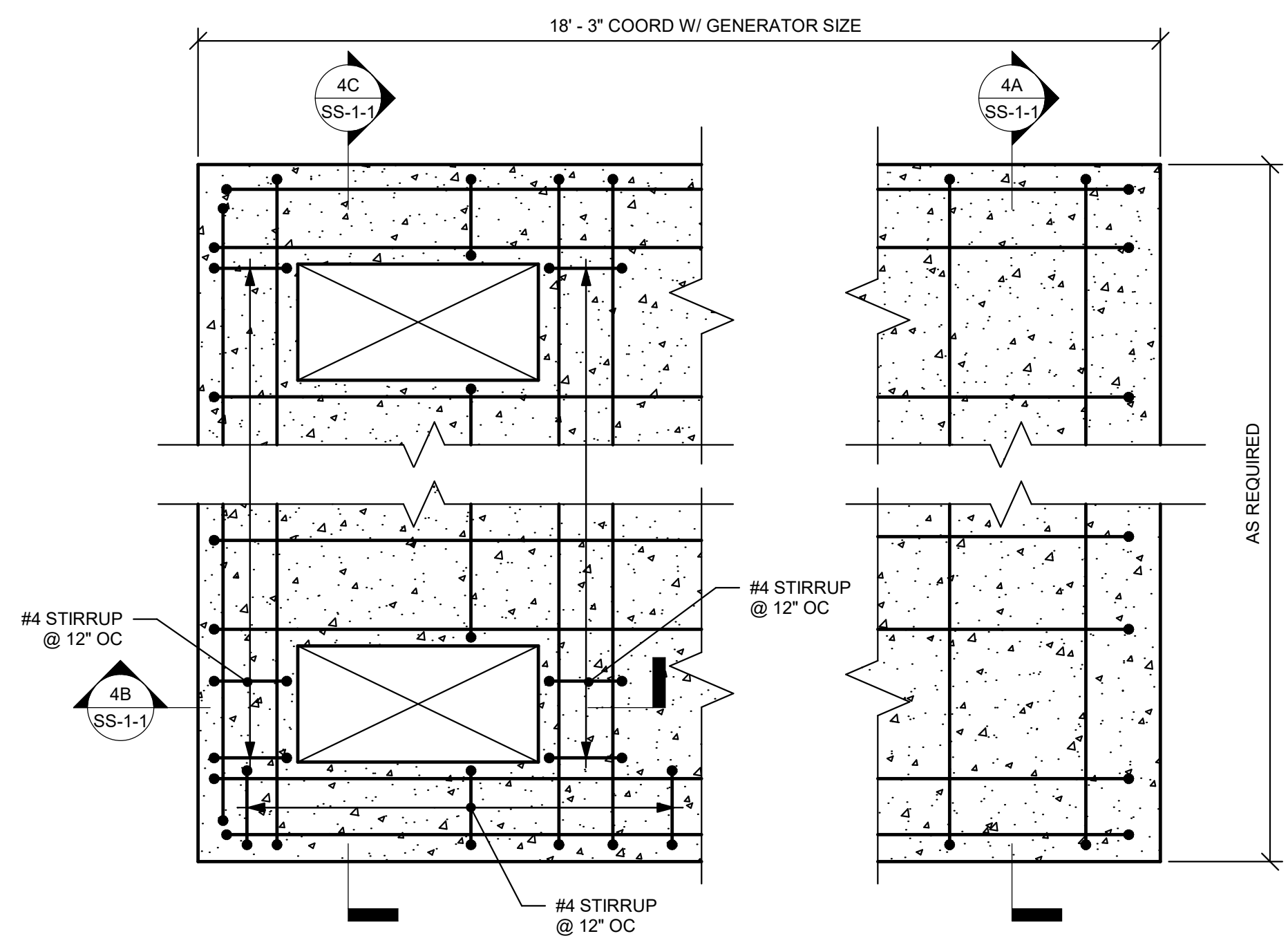
1

3/4" = 1'-0"



2

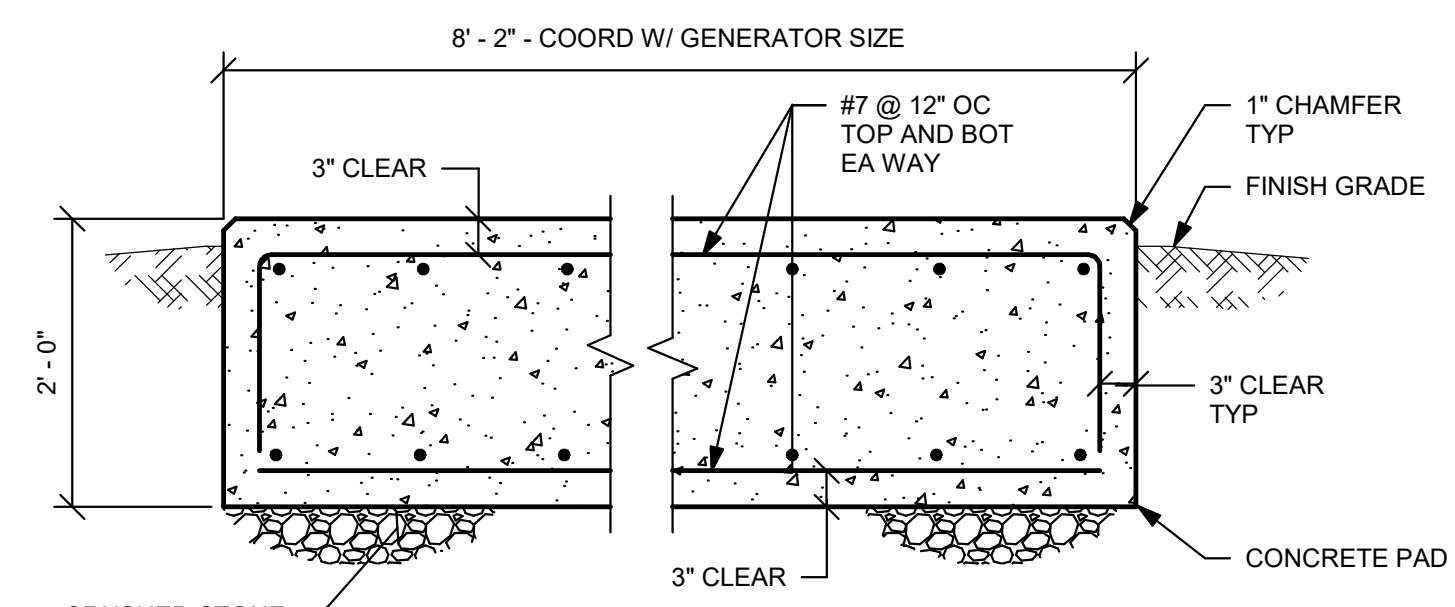
3/4" = 1'-0"



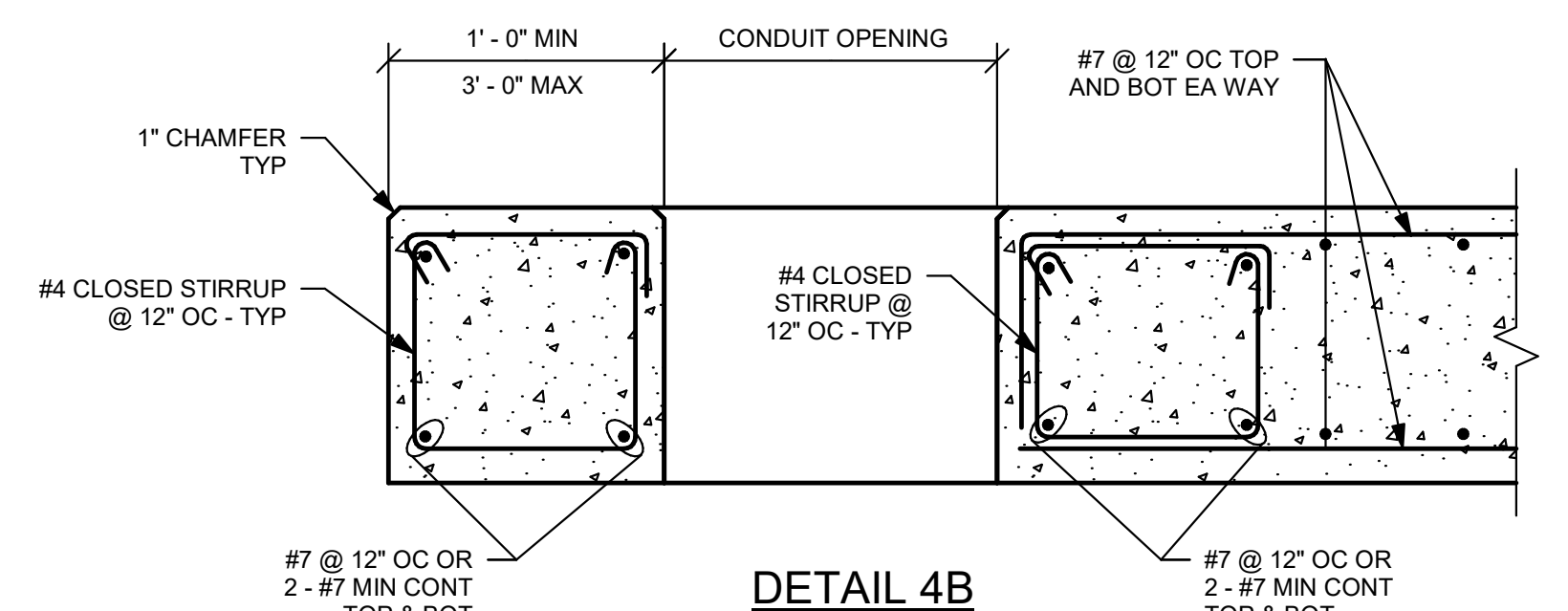
EXTERIOR PAD PLAN AND DETAILS

- NOTES:
- 1) REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - 2) PAD DIMENSIONS ARE APPROXIMATE. COORDINATE WITH MECHANICAL, ELECTRICAL, AND LANDSCAPE DRAWINGS.
 - 3) REFER TO SITE, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION AND ADDITIONAL INFORMATION.
 - 4) TOP AND BOTTOM BARS SHALL BE CONTINUOUS LAP SPLICE LENGTH = 58".
 - 5) 28 DAY CONCRETE COMPRESSIVE STRENGTH SHALL BE 5,000 PSI.

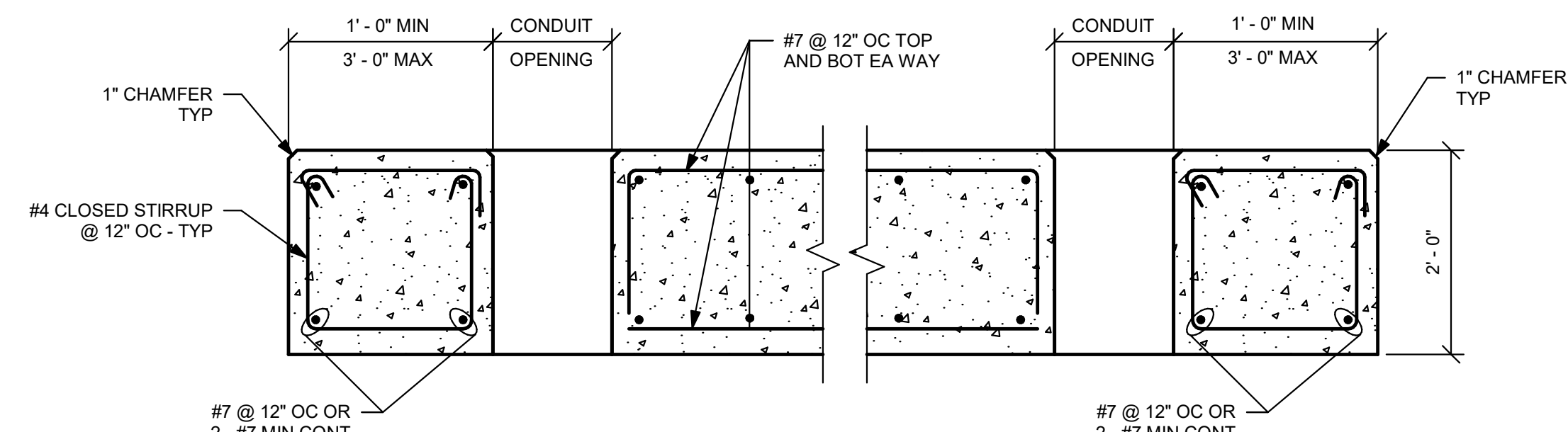
4



DETAIL 4A



DETAIL 4B



DETAIL 4C

3/4" = 1'-0"