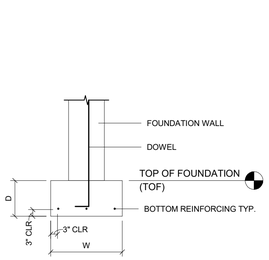
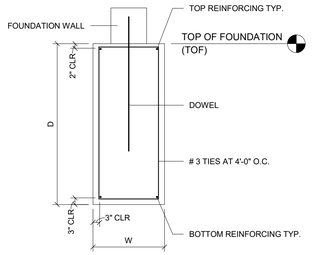
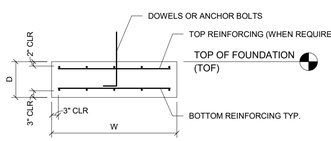
MARK	WIDTH	DEPTH	REINFORCING
CF-1	1' - 0"	3' - 0"	2 - #5 CONTINUOUS AT TOP AND BOTTOM
CF-2	1' - 4"	3' - 0"	2 - #5 CONTINUOUS AT TOP AND BOTTOM
CF-3	2' - 0"	3' - 0"	3 - #5 CONTINUOUS AT TOP AND BOTTOM
CF-4	2' - 4"	3' - 0"	3 - #5 CONTINUOUS AT TOP AND BOTTOM
CF-5	2' - 6"	3' - 0"	4 - #5 CONTINUOUS AT TOP AND BOTTOM



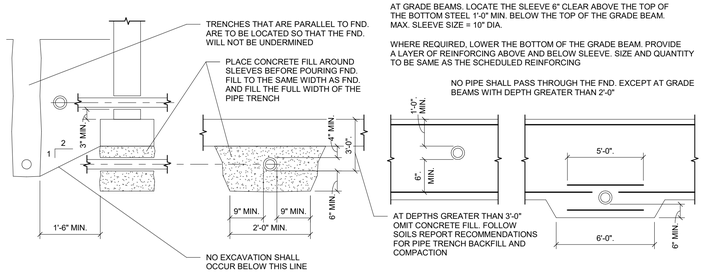


CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING
F-1	4' - 0"	4' - 0"	1' - 0"	4 - #5 EACH WAY AT BOTTOM
F-2	6' - 0"	6' - 0"	1' - 0"	6 - #5 EACH WAY AT BOTTOM
F-3	3' - 0"	3' - 0"	3' - 0"	4 - #5 EACH WAY AT TOP AND BOTTOM
F-4	4' - 0"	4' - 0"	3' - 0"	6 - #5 EACH WAY AT TOP AND BOTTOM
F-5	6' - 0"	6' - 0"	3' - 0"	8 - #5 EACH WAY AT TOP AND BOTTOM

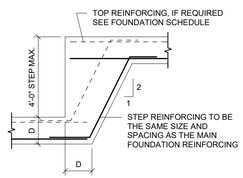


SPREAD FOOTING SCHEDULE

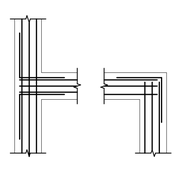


DETAIL FOR PIPES AND TRENCHES LOCATED AT FOOTINGS AND GRADE BEAMS

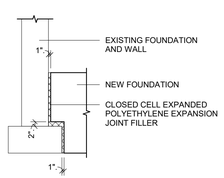
NOTES:
1. SEE GENERAL STRUCTURAL NOTES FOR SPLICE LENGTHS AND CLEAR COVER REQUIREMENTS.
2. CORNER AND INTERSECTION BARS ARE TO BE THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL REINFORCING.
3. CORNER AND INTERSECTION BARS TO HAVE STANDARD 90 DEGREE HOOK.



TYPICAL FOUNDATION STEP



STANDARD FOUNDATION REINFORCING DETAILS



FOUNDATION ADJACENT TO EXISTING STRUCTURES

TYPICAL FOUNDATION DETAILS

GENERAL STRUCTURAL NOTES

1. GENERAL CONTRACTOR'S RESPONSIBILITIES SHALL INCLUDE BUT ARE NOT LIMITED TO:
   a. DETERMINING CONSTRUCTION PROCEDURE AND SEQUENCE.
   b. PROVIDING SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS WHICH MIGHT BE NECESSARY TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING CONSTRUCTION.
   c. COORDINATE THE LOCATION OF LOADS, OPENINGS, AND STRUCTURE RELATED TO MECHANICAL EQUIPMENT.
      * MECHANICAL LOADS, OPENINGS AND STRUCTURE RELATED TO MECHANICAL REQUIREMENTS SHOWN ARE FOR BIDDING PURPOSES ONLY.
      * LOADS OR OPENINGS GREATER THAN THOSE SHOWN ON STRUCTURAL OR MECHANICAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
   d. VERIFYING AND COORDINATING DIMENSIONS AND ELEVATIONS SHOWN ON THE CONTRACT DOCUMENTS. IF DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
   e. TAKE PROPER PRECAUTIONS TO PROTECT SHALLOW FOOTINGS FROM FROST DURING COLD WEATHER CONSTRUCTION. REFER TO GEOTECHNICAL REPORT FOR MINIMUM FOOTING DEPTHS REQUIRED FOR FROST PROTECTION.
2. IF CONFLICTING INFORMATION IS PRESENT IN THE CONSTRUCTION DOCUMENTS, THE STRICTEST PROVISIONS SHALL GOVERN.
3. UNLESS NOTED OTHERWISE, REQUIREMENTS GIVEN FOR ONE OR MORE LOCATIONS SHALL APPLY AT OTHER LOCATIONS AT WHICH CONDITIONS ARE SIMILAR.

REINFORCED CONCRETE

1. REFER TO DESIGN DATA FOR FURTHER INFORMATION.
2. CONFORM TO ACI (AMERICAN CONCRETE INSTITUTE) STANDARDS AND RECOMMENDATIONS AS OUTLINED IN FIELD REFERENCE MANUAL, SP-15 PROVIDE AT LEAST ONE COPY OF THE ACI FIELD REFERENCE MANUAL, SP-15, IN THE FIELD OFFICE AT ALL TIMES.
3. PROVIDE CONTROL JOINTS IN SLAB ON GRADE AS FOLLOWS:
   8" THICK SLABS _____ 24'-0" MAX. SPACING ON ANY SIDE
   6" THICK SLABS _____ 18'-0" MAX. SPACING ON ANY SIDE
   5" THICK SLABS _____ 15'-0" MAX. SPACING ON ANY SIDE
   4" THICK SLABS _____ 12'-0" MAX. SPACING ON ANY SIDE
   THE SECTIONS BOUNDED BY CONTROL OR CONSTRUCTION JOINTS SHALL BE APPROXIMATELY SQUARE, WITH THE LENGTH TO WIDTH RATIO LESS THAN 1 1/2 TO 1.
4. PROVIDE DOWELS IN FOOTINGS TO MATCH SIZE AND SPACING OF VERTICAL WALL AND PIER REINFORCING.
5. PROVIDE REINFORCING AT LOCATIONS AS SHOWN IN CIP CONCRETE STANDARD REINFORCING DETAILS.
6. UNLESS NOTED OTHERWISE, ALL REINFORCING BAR SPLICES SHALL BE IN ACCORDANCE WITH THE TABLE SHOWN BELOW:

BAR SIZE	SPLICE LENGTH (IN INCHES) NON TOP BAR	TOP BAR
#3	14	18
#4	19	24
#5	23	30
#6	30	40
#7	41	54
#8	55	71
#9	69	90
#10	88	114
#11	108	140

   TOP BARS ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
7. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

	MIN. COVER IN INCHES
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH #18 BARS	2
#5 BAR AND SMALLER	1 1/2
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS AND JOIST:	
#11 BAR AND SMALLER	3/4
WALLS	1 1/2
BEAMS, COLUMN: PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1 1/2

8. IF CAST-IN-PLACE WALLS ARE SHOWN ON THE DRAWINGS BUT THE REINFORCING IS NOT INDICATED, PROVIDE THE FOLLOWING STEEL IN CONCRETE WALLS.

THICKNESS	VERTICAL BARS	HORIZONTAL BARS
6"	#4 AT 18" O.C.	#4 AT 16" O.C.
8"	#4 AT 18" O.C.	#4 AT 12" O.C.
10"	#4 AT 16" O.C.	#4 AT 10" O.C.
12"	#4 AT 18" O.C.	#4 AT 16" O.C.

   CENTER REINFORCING IN WALLS 10" AND SMALLER UNLESS NOTED OTHERWISE.
   PROVIDE REINFORCING IN EACH FACE FOR WALLS GREATER THAN 10".
9. PROVIDE 2 - #5 BARS AROUND ALL RECTANGULAR OPENINGS IN CAST-IN-PLACE WALLS. BARS SHALL EXTEND NO LESS THAN 24" BEYOND THE OPENING.

STRUCTURAL STEEL

1. REFER TO DESIGN DATA FOR FURTHER INFORMATION.
2. FIELD CUTTING OR OTHER FIELD MODIFICATIONS TO STRUCTURAL STEEL SHALL NOT BE MADE WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD.
3. SIZES OF FILLET WELDS NOT SHOWN SHALL CONFORM TO MINIMUM SIZES AS SPECIFIED BY AISC "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS".
4. PROVIDE TWO COATS OF ASPHALTIC PAINT ON ALL STRUCTURAL STEEL SHAPES EXPOSED TO THE SOIL OR BELOW TOP OF SLAB ON GRADE.

STEEL DECK

1. REFER TO DESIGN DATA FOR FURTHER INFORMATION.
2. PROVIDE GALVANIZED DECK UNLESS DIRECTED BY THE ARCHITECT TO SUPPLY MANUFACTURER'S STANDARD BAKED-ON RUST INHIBITIVE PAINT. PAINT ALL OTHER SURFACES AND ALL OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION OF STEEL DECK.
3. ALL OPENINGS IN DECK SHALL BE SUPPORTED AS FOLLOWS UNLESS NOTED OTHERWISE ON DRAWINGS:
   FOR OPENINGS LESS THAN 8" IN EACH DIRECTION: PROVIDE SUPPORT WITH A FLAT SHEET OF 20 GAUGE SHEET METAL PLACED OVER THE OPENING AND WELDED TO THE TOP SURFACE OF THE DECK. SHEET METAL SHALL BE AT LEAST 12" LONGER AND WIDER THAN THE OPENING.
   FOR OPENINGS 8" OR LARGER, REFER TO DETAILS.

ICC 500 STORM SHELTER

TYPE: COMMUNITY TORNADO SHELTER, LOCATED WITH IN AN AREA NOT SUBJECT TO FLOODING.

CODES

1. ICC 500-2014: ICC/NSSA STANDARD FOR DESIGN AND CONSTRUCTION OF STORM SHELTERS.
2. 2018 IBC: INTERNATIONAL BUILDING CODE 2018.
3. ASCE 7-16: MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES

1. STRUCTURAL DESIGN BASED ON STRUCTURAL RECOMMENDATIONS LISTED IN ICC/NSSA 500-2014 "ICC/NSSA STANDARD FOR DESIGN AND CONSTRUCTION OF STORM SHELTERS". NO INTENT TO MEET ALL OF THE ICC 500 GUIDELINES IS IMPLIED OR STATED UNLESS THE STRUCTURAL DRAWINGS SPECIFICALLY STATE THAT AN "ICC 500 STORM SHELTER" HAS BEEN PROVIDED.
2. REFER TO ARCHITECTURAL, CIVIL AND MEP DRAWINGS FOR DOOR AND WINDOW HARDWARE, USABLE STORM SHELTER CAPACITY, VENTED AREAS, ETC. TO COMPLY WITH ICC500 STORM SHELTER REQUIREMENTS.
3. ALL COMPONENTS THAT MAKE UP THE STORM RESISTANT AREA INCLUDING DEFERRED SUBMITTALS SHALL BE DESIGNED IN STRICT ACCORDANCE WITH ICC 500. CALCULATIONS SHALL BE PROVIDED AT EACH CONNECTION FOR VERIFICATION OF LOAD PATH.
4. STORM SHELTER WALL AND SLAB ASSEMBLIES HAVE BEEN SELECTED BASED ON ICC 500, CHAPTER 8 AND FEMA361, APPENDIX E. NO ADDITIONAL TESTING OR ANALYSIS HAS BEEN PERFORMED TO ESTIMATE DYNAMIC IMPACT OF OBJECTS FOUND IN THE ACTUAL ENVIRONMENT AGAINST THE STORM SHELTER STRUCTURE.

DESIGN LOADS:

WIND LOADS
IN ACCORDANCE WITH ASCE 7-16, CHAPTER 27, TABLE 27.2-1.
BASIC WIND SPEED (V) = 250 MPH.
Iw = 1.0
PARTIALLY ENCLOSED, EXPOSED CATEGORY = "C"
kzt = 1.0
Kd = 1.0
GCpi = +0.56

ROOF LIVE LOAD
STORM SHELTER LIVE LOAD (NON-REDUCIBLE) _____ 100 PSF

LOAD COMBINATIONS
ALL LOADS GIVEN ON DRAWINGS ARE STRENGTH LEVEL LOADS AND SHALL BE APPLIED WITH THE FOLLOWING STRENGTH DESIGN LOAD COMBINATIONS, PER ICC 500 SECTION 302.1 IN ADDITION TO

a. 1.4D
b. 1.2 (D+T) +1.6L +0.5S
c. 1.2D + 1.6S + (L or 0.5Wx)
d. 1.2D + 1.0Wx + L + 0.5S
e. 1.2D + 1.0E + L + 0.2S
f. 0.90 + 1.0Wx
g. 0.90 + 1.0E

ALL LOAD CONDITION DESIGNATIONS ARE PER ASCE 7-10 EXCEPT THE FOLLOWING:

Wx = EXTREME WIND EVENT LOAD.

DEAD LOAD USED IN LOAD COMBINATIONS TO RESIST UPLIFT SHALL INCLUDE ONLY THE SHELF WEIGHT OF THE PRECAST UNITS PLUS THE CONCRETE TOPPING.

TORNADO MISSILE IMPACT CRITERIA

1. MANUFACTURES SHALL PROVIDE DATA INDICATING THAT ALL STRUCTURAL PRODUCTS MEET THE IMPACT CRITERIA TEAT REQUIRED BY ICC 500 INCLUDING THE IMPACT OF THE END OF 15 LB. SAWN 2x4 AT THE FOLLOWING VELOCITY:
   VERTICAL SURFACES _____ 100 MPH
   HORIZONTAL SURFACES _____ 67 MPH
2. ALL COMPONENTS OF THE STORM SHELTER ENVELOPE SHALL BE TESTED IN ACCORDANCE WITH ICC 500, SECTION 306.

SPECIAL STRUCTURAL INSPECTIONS AND QUALITY ASSURANCE FOR STORM SHELTER COMPONENTS.

THE FOLLOWING SPECIAL INSPECTION REQUIREMENTS SHALL BE PERFORMED ON ALL STORM SHELTER COMPONENTS IN ADDITION TO SPECIAL INSPECTION REQUIREMENTS AS STATED IN IBC SECTION 1704 AND ON SHEET 7.

1. QUALITY ASSURANCE FOR WIND REQUIREMENTS PLAN SHALL BE PROVIDE IN ACCORDANCE WITH SECTION 1705.
   a. THE MAIN WIND-FORCE-RESISTING SYSTEM THAT IS SUBJECT TO QUALITY ASSURANCE ARE THE PRECAST CONCRETE COMPONENTS AND CONNECTIONS. THE CONCRETE TOPPING DIAPHRAGM INCLUDING ALL INSERTS, REBAR, CONNECTORS AND CONNECTIONS TO THE FOUNDATION.
   b. THE SPECIAL INSPECTIONS REQUIRED ARE INDICATED UNDER SPECIAL INSPECTIONS ABOVE AND THE ADDITIONAL REQUIREMENTS OF SECTION 1705 OF THE IBC. MATERIAL TESTING REQUIRED IS INDICATED UNDER THE SPECIFICATION FOR EACH MATERIAL.
   c. DISTRIBUTION OF TESTING AND SPECIAL INSPECTION REPORTS SHALL BE WITHIN TWENTY-FOUR (24) HOURS AFTER EACH SPECIAL INSPECTION. SUBMIT (2) COPIES OF INSPECTION REPORT TO THE CONTRACTOR, ARCHITECT AND BUILDING OFFICIAL.
   d. THE FOLLOWING STRUCTURAL INSPECTIONS SHALL BE PERFORMED.
      i. LEVEL B SPECIAL INSPECTION, ACCORDING TO TMS 402-11/ACI530.11/ASCE 5-11 TABLE 1.19.2 FOR ALL LOAD BEARING MASONRY WITHIN PERIMETER OF THE DESIGNATED STORM SHELTER.
      ii INSTALLATION OF ALL REINFORCING BARS AND DOWELS EMBEDDED IN CONCRETE TOPPING DIAPHRAGMS, EXCLUDING THE WWF IN FLOORS.
      iii INSTALLATION OF MISSILE PROTECTION IN ALL WALL AND ROOF PENETRATIONS.
   e. REPORTS SHALL BE ISSUED WITHIN TWENTY-FOUR (24) HOURS OF STRUCTURAL INSPECTION.
2. CONTRACTOR RESPONSIBILITY:

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN-FORCE-RESISTING SYSTEM OR WIND-RESISTING COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN SHALL SUBMIT A WRITTEN CONTRACTORS STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENTS. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE THE FOLLOWING:

   a. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
   b. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
   c. PROCEDURE'S FOR EXERCISING CONTROL WITHIN THE CONTRACTORS ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS.
   d. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION IN THE ORGANIZATION.

STRUCTURAL PEER REVIEW

PER ICC 500, CONSTRUCTION DOCUMENTS FOR COMMUNITY SHELTERS DESIGNED FOR GREATER THAN 300 OCCUPANTS SHALL UNDERGO A PEER REVIEW BY AN INDEPENDENT REGISTERED DESIGN PROFESSIONAL FOR COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 3.

DESIGN DATA

GOVERNING CODE: _____ 2018 INTERNATIONAL BUILDING CODE

SOILS REPORT:

A SOILS INVESTIGATION WAS PERFORMED BY:
GSI ENGINEERING - GRAND ISLAND, NE PROJECT NO. 2153016
THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS OF THE REPORT.

THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AFTER EXCAVATION TO DETERMINE IF THE CONDITIONS COMPLY WITH THE SOILS REPORT.

EXCAVATIONS SHALL BE TESTED BY AN APPROVED TESTING LABORATORY PRIOR TO PLACING CONCRETE.

ALLOWABLE NET SOIL BEARING PRESSURE _____ 2,000 PSF

DESIGN LOADS:

BUILDING CATEGORY _____ II

ROOF DEAD LOADS
GENERAL ROOF COLLATERAL _____ 5 PSF

LIVE LOADS
MEZZANINE _____ 125 PSF
STAIRS AND LANDINGS _____ 100 PSF
ROOF
GROUND SNOW (Pg) _____ 25 PSF
FLAT ROOF SNOW (Pf) _____ 20 PSF
SNOW EXPOSURE (Ce) _____ 1.0
THERMAL FACTOR (Ct) _____ 1.0
RAIN ON SNOW _____ ASCE 7 SECTION 7.10
UNBALANCED SNOW LOADS _____ ASCE 7 SECTION 7.6
DRIFTING SNOW _____ ASCE 7 SECTION 7.7
MECHANICAL UNITS _____ SEE FRAMING PLAN

WIND LOADS
SPEED _____ 115 M.P.H. (50 YEAR OCCURRENCE)
EXPOSURE _____ C

SEISMIC LOADS
SITE CLASSIFICATION - D
SEISMIC DESIGN CATEGORY - B
Ss = 0.079
S1 = 0.049

OTHER DESIGN CRITERIA
SEE SPECIFICATIONS FOR DEFLECTION AND DRIFT LIMITS

MATERIALS:

CONCRETE

28 DAY CONCRETE STRENGTHS (MINIMUM):
FOOTINGS _____ 4000 PSI
SLAB ON GRADE _____ 3000 PSI
C.I.P. _____ 4000 PSI
SUPPORTED FLOORS AND STOOPS _____ 4000 PSI
REINFORCING BARS _____ ASTM A615 GRADE 60
WELDED BARS AND ANCHORS _____ ASTM A706 GRADE 60
WELDED WIRE FABRIC (WWF)
SLABS ON GRADE < 6" THICK _____ 6x6-W1.4xW1.4 WWF

STRUCTURAL STEEL

W SHAPES _____ ASTM A992
ROLLED SHAPES AND PLATES _____ ASTM A36
TUBES _____ ASTM A500 GRADE B
PIPES _____ ASTM A53 TYPE E OR S
BOLTS (UNLESS NOTED OTHERWISE) _____ ASTM A325

FASTENERS

ANCHOR RODS _____ ASTM F1554, GRADE 36
EXPANSION BOLTS _____ HILTI KWIK BOLT 3 OR APPROVED EQUIVALENT
ADHESIVE ANCHORS _____ HILTI HIT HY 150 MAX. OR APPROVED EQUIVALENT
SCREW ANCHORS _____ HILTI HUS-H OR SIMPSON TITEN HD
SLEEVE ANCHORS _____ HILTI HLC OR APPROVED EQUIVALENT
FASTENERS IN CONTACT WITH TREATED WOOD _____ 304 OR 316 STAINLESS STEEL OR HOT DIP GALVANIZED OR APPROVED EQUIVALENT

STRUCTURAL LIGHT GAGE METAL FRAMING

STUDS _____ ASTM A653 (Fy = 33 KSI)
JOISTS (UNPUNCHED) _____ ASTM A653 (Fy = 33 KSI)
TRACK _____ ASTM A653 (Fy = 33 KSI)
GALVANIZING _____ G - 60

STRUCTURAL LUMBER

PLYWOOD FLOOR SHEATHING _____ 3/4" T & G C-D INT-APA WITH EXTERIOR GLUE 40/20

SPECIAL INSPECTION

SPECIAL INSPECTION SHALL BE PERFORMED AS REQUIRED BY LOCAL BUILDING OFFICIAL, ACCORDING TO CHAPTER 17 OF IBC, AND AS DIRECTED BELOW:

STEEL CONSTRUCTION
SECTION 1705.2

CONCRETE CONSTRUCTION
TABLE 1705.3

PROFESSIONAL CIVIL ENGINEER
STANLEY W. RUSE
E-12232
02/04/2022
STATE OF NEBRASKA

VOSS & ASSOCIATES Inc.
STRUCTURAL ENGINEERS
201 North 7th Street Suite 200
Lincoln, Nebraska 68508
Phone: 402-476-6365 www.voss-assoc.com

Randolph Public School
Vocational/Art Building Phase II
207 N. PIERCE ST., RANDOLPH, NEBRASKA 68771

STRUCTURAL DESIGN DATA, GENERAL NOTES, SCHEDULES, AND STANDARD DETAILS

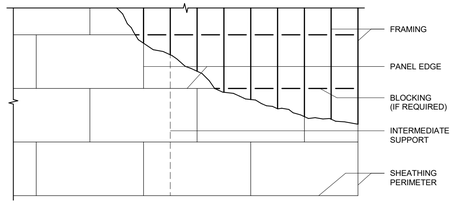
REVISIONS

February 04, 2022

S-1.1

LOCATION	SHEATHING	FASTENER SIZE	FASTENER SPACING AT SHEATHING PERIMETER	FASTENER SPACING AT PANEL EDGES OVER FRAMING	BLOCKING REQUIRED AT PANEL EDGES NOT OVER FRAMING
FLOOR	3/4" PLYWOOD	#8 SCREWS	6" O.C.	6" O.C.	NO

NOTES:
1. SCREW SPACING AT INTERMEDIATE SUPPORTS IS 1'-0" O.C. TYPICAL AT ALL LOCATIONS.



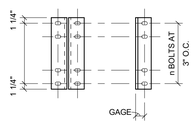
FLOOR SHEATHING SCHEDULE

NUMBER OF 3/4" DIA. A325N BOLT ROWS REQ'D. (n)

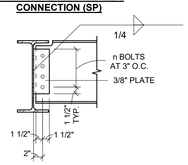
BEAM SIZE	w8	w10	w12	w14	w16	w18	w21	w24
2" MAX. COPE	2	2	3	3	4	5	5	6
4 1/2" MAX. COPE	-	-	2	2	3	4	5	5

NOTES:
1. ALL PRIMARY BEAM TO PRIMARY BEAM CONNECTIONS SHALL BE DOUBLE ANGLE OR DOUBLE PLATE CONNECTIONS.
2. ALL PRIMARY BEAM TO HSS COLUMN CONNECTIONS SHALL BE SINGLE PLATE CONNECTIONS.
3. ALL PRIMARY BEAM TO WIDE FLANGE COLUMN CONNECTIONS SHALL BE DOUBLE ANGLE CONNECTIONS.

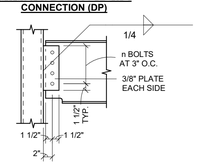
STANDARD DOUBLE ANGLE CONNECTION (DA)

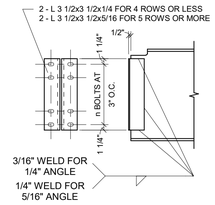


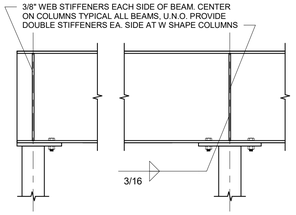
STANDARD SINGLE PLATE CONNECTION (SP)



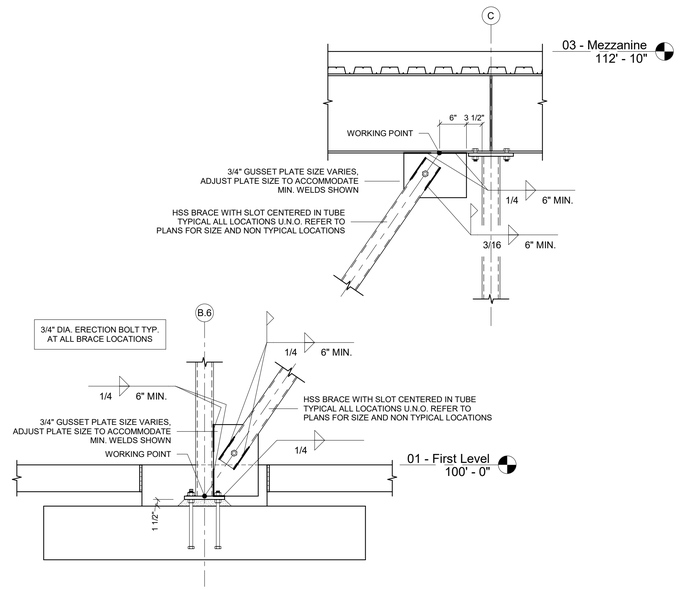
STANDARD DOUBLE PLATE CONNECTION (DP)



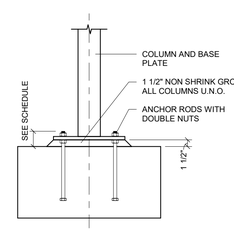




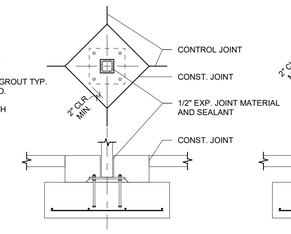
STANDARD STEEL CONNECTION SCHEDULE



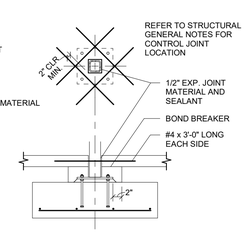
TYPICAL BRACE FRAME DETAILS



TYPICAL ANCHOR BOLT DETAIL



TYPICAL COLUMN ISOLATION JOINT

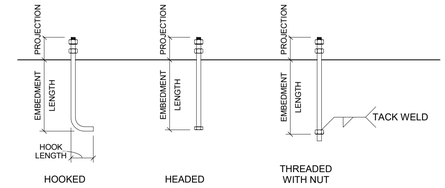


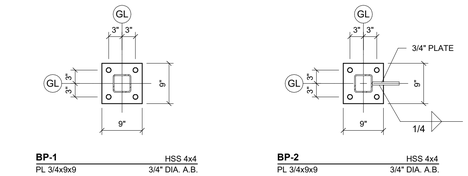
ALTERNATE ISOLATION JOINT

ANCHOR ROD EMBEDMENT SCHEDULE

DIA.	HOOKED ROD		HEADED ROD	
	HOOKED LENGTH (MIN.)	EMBEDMENT LENGTH (MIN.)	EMBEDMENT LENGTH (MIN.)	PROJECTION (MIN.)
1/2"	2"	6"	6"	4"
3/4"	DO NOT USE HOOKED RODS		9"	4"
1"	DO NOT USE HOOKED RODS		12"	6"
1 1/4"	DO NOT USE HOOKED RODS		15"	6"
1 1/2"	DO NOT USE HOOKED RODS		22"	6"

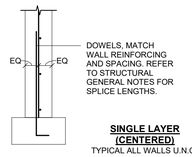
ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36
INCREASE LENGTHS 4" FOR ANCHOR RODS IN PIERS AND WALLS.



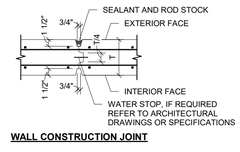


COLUMN SCHEDULE AND DETAILS

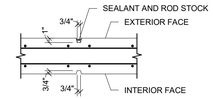
MARK	WALL DIM.	REINFORCING	
		SINGLE LAYER	CENTERED IN WALL
1	6"	VERTICAL	#5 AT 12" O.C.
		HORIZONTAL	#5 AT 12" O.C.
2	8"	VERTICAL	#5 AT 12" O.C.
		HORIZONTAL	#5 AT 12" O.C.



SINGLE LAYER (CENTERED)
TYPICAL ALL WALLS U.N.O.

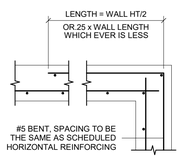


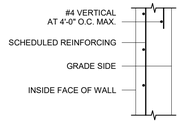
WALL CONSTRUCTION JOINT



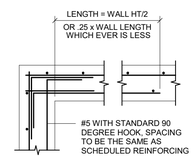
NOTES:
1. CUT ALTERNATE HORIZONTAL REINFORCING BARS IN EACH LAYER AT THE CONTROL JOINT.
2. MAXIMUM SPACING OF CONTROL JOINTS IS 25'-0".

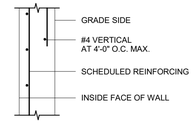
WALL CONTROL JOINT



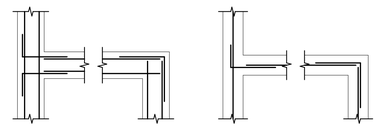


OUTSIDE CORNER BELOW GRADE WALL





INSIDE CORNER BELOW GRADE WALL



STANDARD WALL REINFORCING

NOTES:
1. CORNER AND INTERSECTION BARS ARE TO BE THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL REINFORCING.
2. CORNER AND INTERSECTION BARS TO HAVE STANDARD 90 DEGREE HOOK.
3. REFER TO STRUCTURAL GENERAL NOTES FOR LAP SPLICE LENGTHS.

CIP CONCRETE WALL REINFORCING SCHEDULE AND DETAILS

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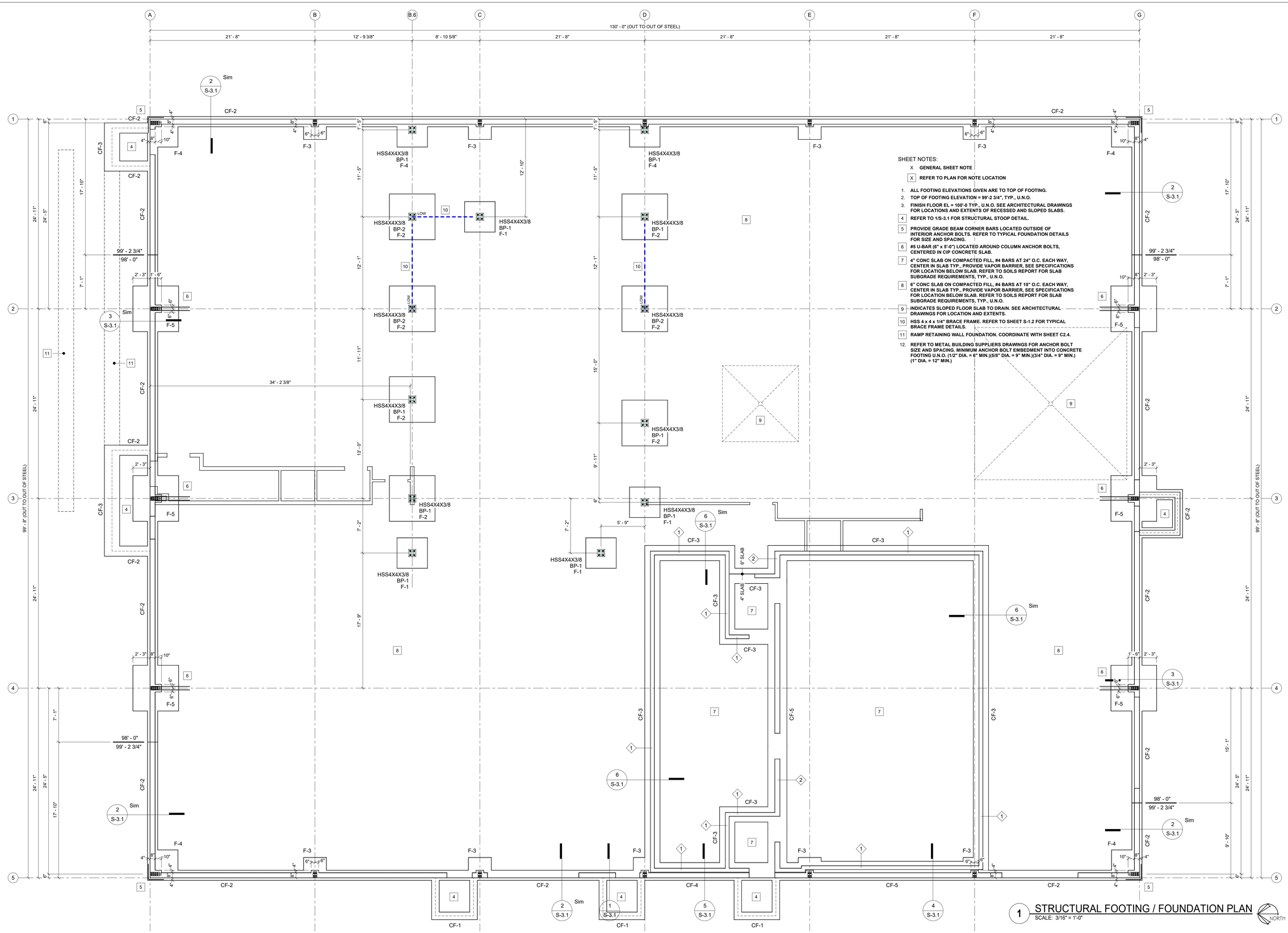
REVISIONS

February 04, 2022

STRUCTURAL SCHEDULES AND DETAILS

S-1.2



SHEET NOTES:

X **GENERAL SHEET NOTE**

[X] **REFER TO PLAN FOR NOTE LOCATION**

1. **ALL FOOTING ELEVATIONS GIVEN ARE TO TOP OF FOOTING.**
2. **TOP OF FOOTING ELEVATION = 99'-2 3/4", TYP., U.N.O.**
3. **FINISH FLOOR EL = 100'-0 TYP., U.N.O. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND EXTENTS OF RECESSED AND SLOPED SLABS.**

[4] **REFER TO 1/S-3.1 FOR STRUCTURAL STOOP DETAIL.**

[5] **PROVIDE GRADE BEAM CORNER BARS LOCATED OUTSIDE OF INTERIOR ANCHOR BOLTS. REFER TO TYPICAL FOUNDATION DETAILS FOR SIZE AND SPACING.**

[6] **#5 U-BAR (6" x 5'-0") LOCATED AROUND COLUMN ANCHOR BOLTS, CENTERED IN CIP CONCRETE SLAB.**

[7] **4" CONC SLAB ON COMPACTED FILL, #4 BARS AT 24" O.C. EACH WAY, CENTER IN SLAB TYP., PROVIDE VAPOR BARRIER, SEE SPECIFICATIONS FOR LOCATION BELOW SLAB. REFER TO SOILS REPORT FOR SLAB SUBGRADE REQUIREMENTS, TYP., U.N.O.**

[8] **6" CONC SLAB ON COMPACTED FILL, #4 BARS AT 18" O.C. EACH WAY, CENTER IN SLAB TYP., PROVIDE VAPOR BARRIER, SEE SPECIFICATIONS FOR LOCATION BELOW SLAB. REFER TO SOILS REPORT FOR SLAB SUBGRADE REQUIREMENTS, TYP., U.N.O.**

[9] **INDICATES SLOPED FLOOR SLAB TO DRAIN. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENTS.**

[10] **HSS 4 x 4 x 1/4" BRACE FRAME. REFER TO SHEET S-1.2 FOR TYPICAL BRACE FRAME DETAILS.**

[11] **RAMP RETAINING WALL FOUNDATION. COORDINATE WITH SHEET C2.4.**

12. **REFER TO METAL BUILDING SUPPLIERS DRAWINGS FOR ANCHOR BOLT SIZE AND SPACING. MINIMUM ANCHOR BOLT EMBEDMENT INTO CONCRETE FOOTING U.N.O. (1/2" DIA. = 6" MIN.)(5/8" DIA. = 9" MIN.)(3/4" DIA. = 9" MIN.) (1" DIA. = 12" MIN.)**

1 **STRUCTURAL FOOTING / FOUNDATION PLAN**
SCALE: 3/16" = 1'-0"

NORTH

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STRUCTURAL FOOTING / FOUNDATION PLAN

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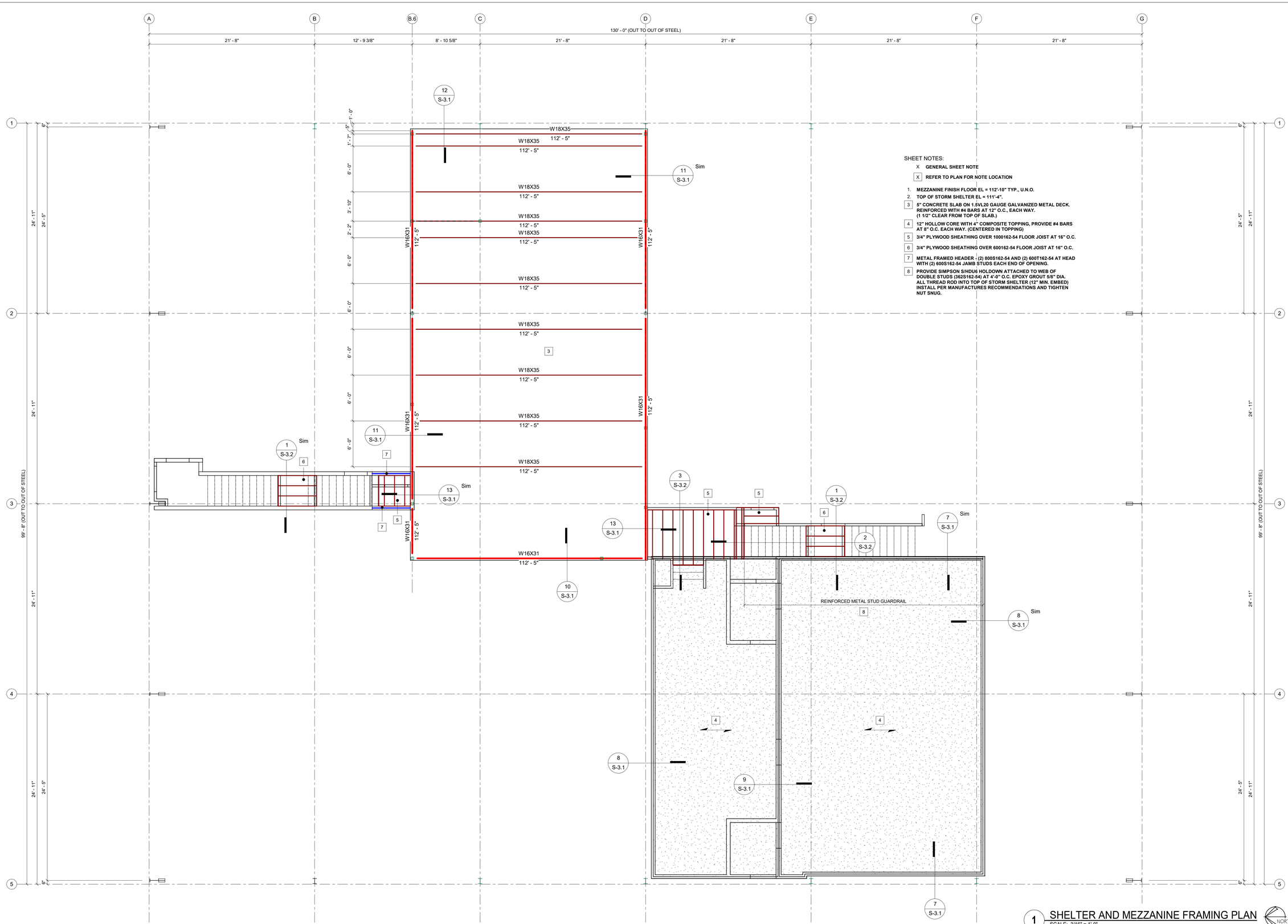
S-2.1



SHEET NOTES:

X GENERAL SHEET NOTE

[X] REFER TO PLAN FOR NOTE LOCATION

1. MEZZANINE FINISH FLOOR EL = 112'-10" TYP., U.N.O.
2. TOP OF STORM SHELTER EL = 111'-4".

[3] 5" CONCRETE SLAB ON 1.5VL20 GAUGE GALVANIZED METAL DECK. REINFORCED WITH #4 BARS AT 12" O.C., EACH WAY. (1 1/2" CLEAR FROM TOP OF SLAB.)

[4] 12" HOLLOW CORE WITH 4" COMPOSITE TOPPING, PROVIDE #4 BARS AT 8" O.C. EACH WAY. (CENTERED IN TOPPING)

[5] 3/4" PLYWOOD SHEATHING OVER 1000162-54 FLOOR JOIST AT 16" O.C.

[6] 3/4" PLYWOOD SHEATHING OVER 600162-54 FLOOR JOIST AT 16" O.C.

[7] METAL FRAMED HEADER - (2) 800S162-54 AND (2) 600T162-54 AT HEAD WITH (2) 600S162-54 JAMB STUDS EACH END OF OPENING.

[8] PROVIDE SIMPSON S/HDU6 HOLDOWN ATTACHED TO WEB OF DOUBLE STUDS (3625162-54) AT 4'-0" O.C. EPOXY GROUT 5/8" DIA. ALL THREAD ROD INTO TOP OF STORM SHELTER (12" MIN. EMBED) INSTALL PER MANUFACTURES RECOMMENDATIONS AND TIGHTEN NUT SNUG.

1 SHELTER AND MEZZANINE FRAMING PLAN
SCALE: 3/16" = 1'-0"

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STRUCTURAL SHELTER AND MEZZANINE FRAMING PLANS

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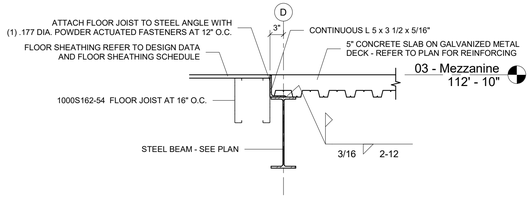
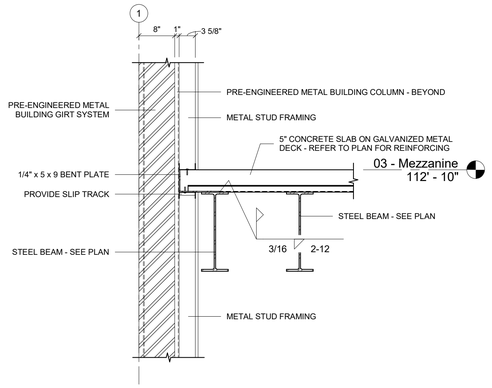
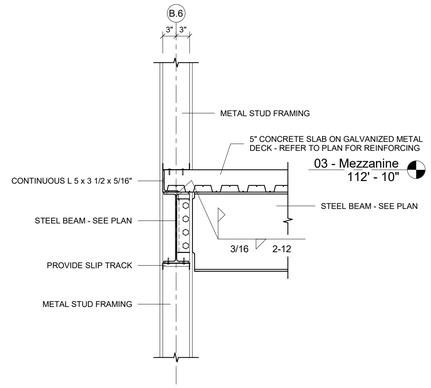
S-2.2



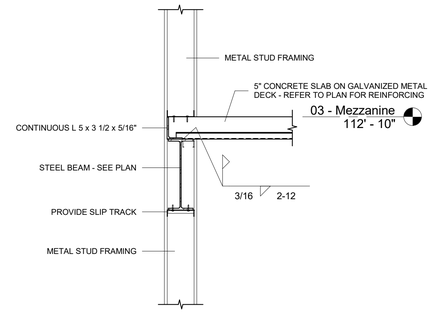
13 MEZZANINE FRAMING DETAIL
SCALE: 3/4" = 1'-0"



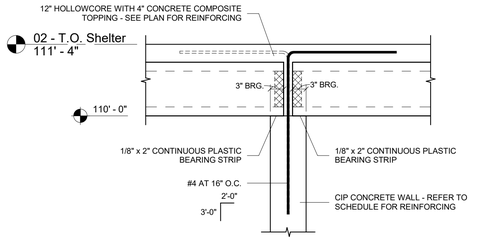
12 MEZZANINE FRAMING DETAIL
SCALE: 3/4" = 1'-0"



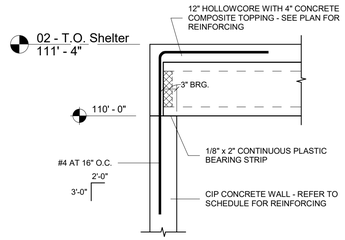
11 MEZZANINE FRAMING DETAIL
SCALE: 3/4" = 1'-0"



10 MEZZANINE FRAMING DETAIL
SCALE: 3/4" = 1'-0"



9 CIP CONCRETE WALL DETAIL
SCALE: 3/4" = 1'-0"



8 CIP CONCRETE WALL DETAIL
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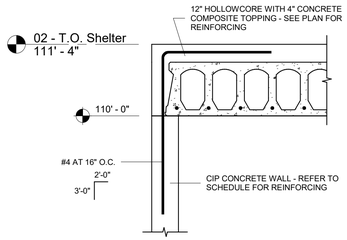
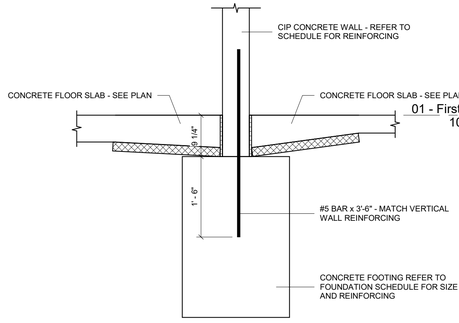
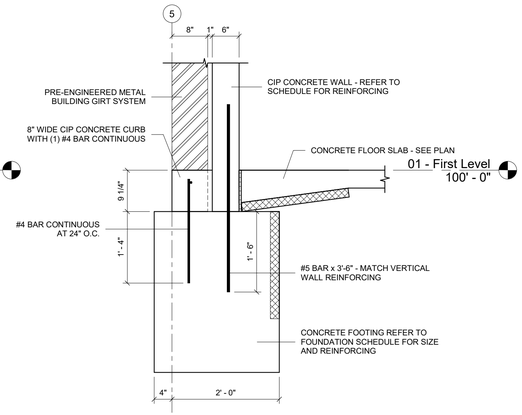


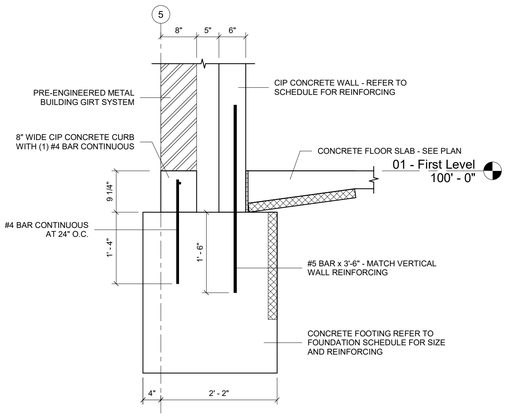
7 CIP CONCRETE WALL DETAIL
SCALE: 3/4" = 1'-0"



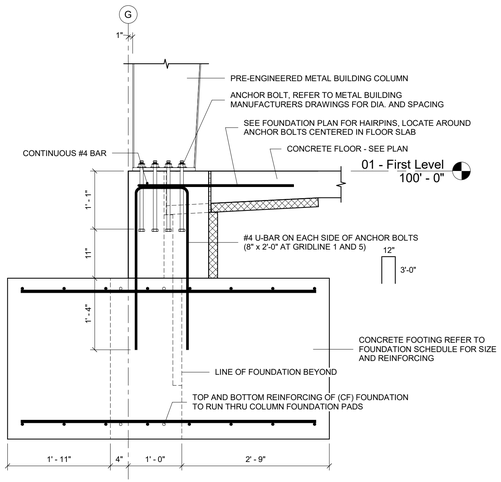
6 CONCRETE FOOTING DETAIL
SCALE: 3/4" = 1'-0"



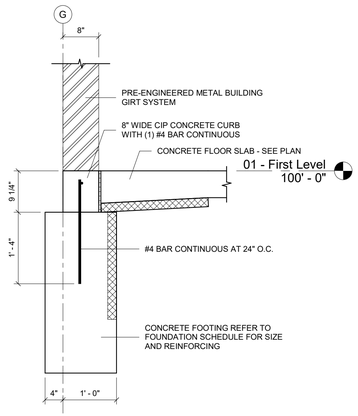
5 CONCRETE FOOTING DETAIL
SCALE: 3/4" = 1'-0"



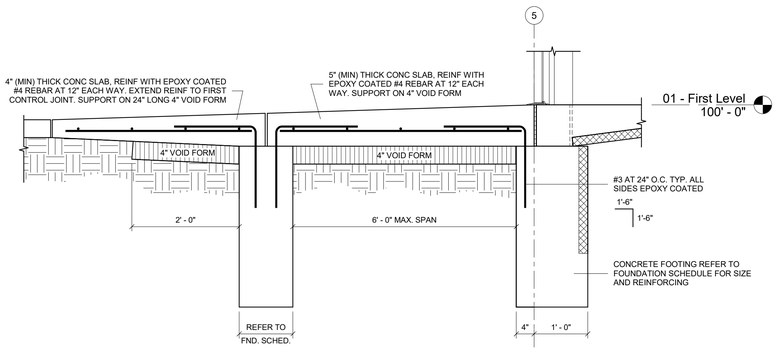
4 CONCRETE FOOTING DETAIL
SCALE: 3/4" = 1'-0"



3 CONCRETE FOOTING DETAIL
SCALE: 3/4" = 1'-0"



2 CONCRETE FOOTING DETAIL
SCALE: 3/4" = 1'-0"



1 TYPICAL STRUCTURAL STOOP DETAIL
SCALE: 3/4" = 1'-0"

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S-3.1

3 MEZZANINE FRAMING DETAIL
SCALE: 3/4" = 1'-0"

2 MEZZANINE / STAIR LANDING FRAMING DETAIL
SCALE: 3/4" = 1'-0"

1 STAIR LANDING FRAMING DETAIL
SCALE: 3/4" = 1'-0"

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