

CM CLARIFICATION #004

April 9, 2018

PROJECT: CNE Tahlequah Casino

Foreman Manhattan Team has added and/or revised the following documents for review and inclusion by all contractors within their Scope Package Proposal:

1. **Addendum #1 – Issued by James R. Childers Architect, Inc. Dated 4/9/2018**
 - a. Cover Sheet
 - b. Addendum #1 Summary
 - c. Drawings

2. **Addendum #2 – Issued by James R. Childers Architect, Inc. Dated 4/9/2018**
 - a. Cover Sheet
 - b. Addendum #2 Description of Revisions Narrative (MSA Engineering Consultants)
 - c. Drawings

3. **Preconstruction RFI Responses**
 - a. Pre-con RFI's 001 – 011

4. **Bid Package #2/2a CM Manual 00 60 06 Exhibit D – Documents Listing**
 - a. Revised to include CM Clarification #3 and CM Clarification #4

5. **Bid Package #2/2a CM Manual 00 60 08 Exhibit F - Schedule**
 - a. Bid Schedule

Please Contact **Tina Jones, Buyer IV** with any questions:

Tina Jones

(918) 384-7802

Tina.Jones@cnet.com

- END OF CM CLARIFICATION -



ADDENDUM # 001

Date: 04/09/18

RE: Cherokee Nation Entertainment
Tahlequah Casino

From: James R Childers Architect, Inc.
45 South 4th Street
Fort Smith, Arkansas 72901

This addendum forms part of the Contract Documents, and modifies the documents as noted below. Bidder must acknowledge receipt of this addendum in the FMC Bid Form. Failure to do so may subject the bidder to disqualification.

Item 1 Addendum #001 Summary of Changes

Item 2 Revised Structure Drawing Package

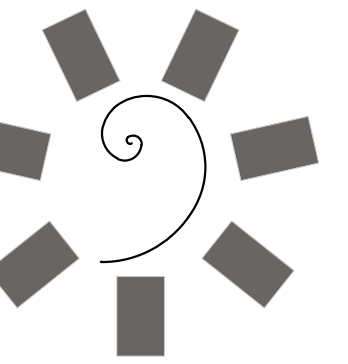


April 05, 2018

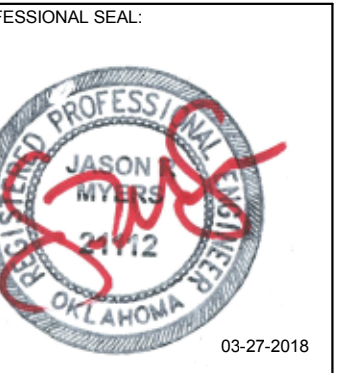
Tahlequah Casino Addendum #01 summary

Sheet No.	Addendum
S1.2	<ul style="list-style-type: none"> • Added Grade beam, pier cap, & column schedules to sheet. • Added Grade beam, pier cap, & column marks to plan. • Added Callouts for safer room foundation plans • Stepped grade beam and added curb to back of house for drainage access. • Added section marks to plan. • Changed all HSS6x6x3/16 columns to HSS6x6x1/4
S1.3	<ul style="list-style-type: none"> • Added Grade beam, pier cap, pedestal, & columns schedules to sheet. • Added Grade beam, pier cap, pedestal, & column marks to plan. • Added callouts for safer room foundation plans. • Stepped grade beam and added curb to front of house at sub floor locations. • Moved details to sheet S1.6 & S1.7 • Added section marks to plan. • Removed pier and column at grid U-19 & U-27 • Moved grid 'DD' 1" East
S1.4	<ul style="list-style-type: none"> • Added Grade beam, pier cap, pedestal, & columns schedules to sheet. • Added Grade beam, pier cap, pedestal, & column marks to plan. • Added callouts for safer room foundation plans. • Stepped grade beam and added curb to front of house at sub floor locations. • Added section marks to plan. • Removed pier and column at grid E-44
S1.5	Added sheet S1.5
S1.6	Added sheet S1.6
S1.7	Added sheet S1.7
S2.1	<ul style="list-style-type: none"> • Added enlarged stage pit plan and sections. • Added pit for dock levelers.
S3.1	<ul style="list-style-type: none"> • Revised roof deck to galvanize. • Revised column sizes.
S3.2	<ul style="list-style-type: none"> • Moved brace elevation from Y/BB-19 to U/BB-21 • Moved frame line 'DD' 1" east • Revised roof deck to galvanize. • Removed column @ U-19 & U-27.

	<ul style="list-style-type: none"> • Removed joist girders on gridline 'U' • Revised joist framing. Revised joist girder loadings
S3.3	<ul style="list-style-type: none"> • Removed brace elevation 42/44-E • Removed column @ E-44 • Revised joist framing. Revised Joist girder loadings
S3.4	Revised detail 7/S3.4
S4.1	Revised section 2/S4.1
S4.2	<ul style="list-style-type: none"> • Revised column size in framing elevation. • Revised brace sizes in framing elevations • Added detail callouts to framing elevations. • Frame elevation moved from grid '19' to '21' • Removed frame elevation @ grid 'E'
S4.3	<ul style="list-style-type: none"> • Revised column size in framing elevation. • Added detail callouts to framing elevations • Added braced frame details
S5.1	Added sheet S5.1



James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CLIENT:
CHEROKEE NATION
Entertainment
Cherokee
CASINO
TAHLEQUAH, OKLAHOMA

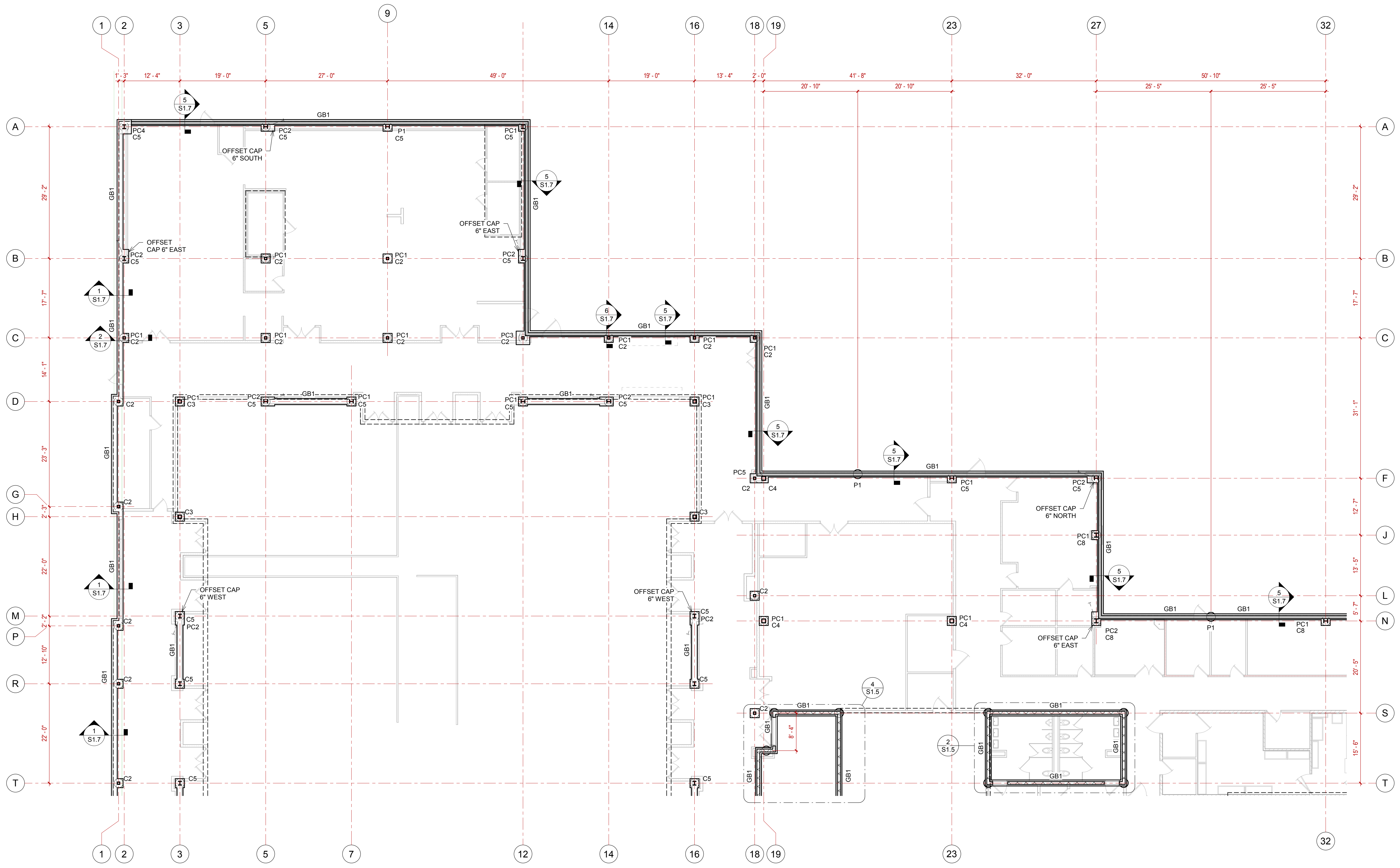
PROJECT PHASE:
BID PACKAGE 02
(100%SET)

REVISIONS	
#	DESCRIPTION
1	04/05/18 ADDENDUM #01

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: **S1.2**

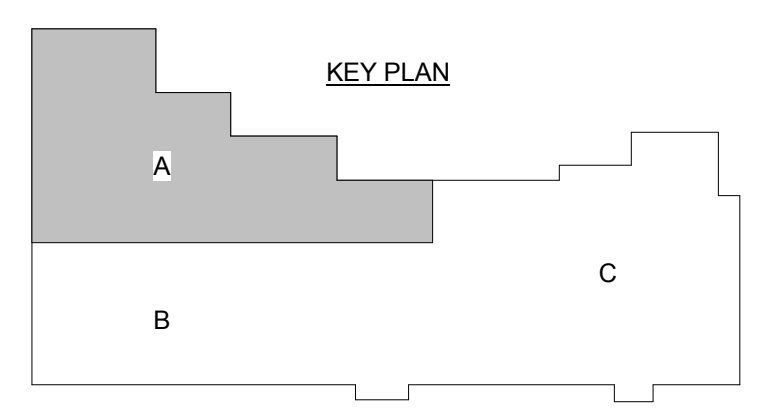
FOUNDATION PLAN
AREA A



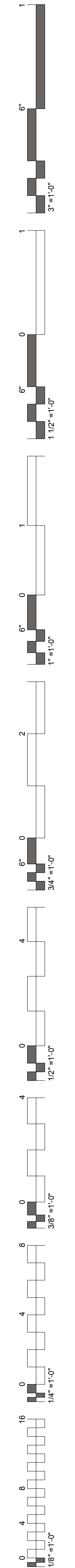
FTG MARK	WIDTH	THICKNESS
GB1	1' - 4"	2' - 0"
GB2	3' - 4"	2' - 0"

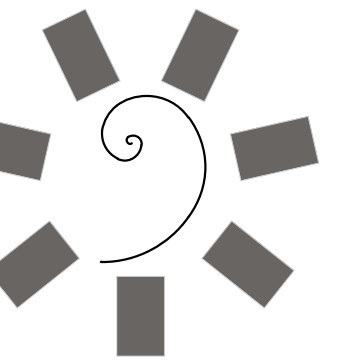
CAP MARK	LENGTH	WIDTH	HEIGHT
PC1	2' - 0"	2' - 0"	2' - 0"
PC2	3' - 0"	2' - 0"	2' - 0"
PC3	3' - 0"	3' - 0"	2' - 0"
PC4	3' - 2"	3' - 2"	4' - 0"
PC5	4' - 0"	2' - 0"	2' - 0"
PC6	4' - 0"	3' - 0"	2' - 0"
PC7	4' - 0"	3' - 3"	2' - 0"
PC8	4' - 5"	4' - 5"	2' - 0"
PC9A	5' - 4"	5' - 4"	2' - 0"
PC9B	5' - 4"	5' - 4"	4' - 0"

COL MARK	SIZE
C2	HSS6X6X1/4
C3	HSS8X8X1/4
C4	HSS10X10X1/4
C5	W10X33
C6	HSS12X12X1/4
C7	HSS12X12X3/8
C8	W10X49



1 FOUNDATION PLAN - AREA A
3/32" = 1'-0"





James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

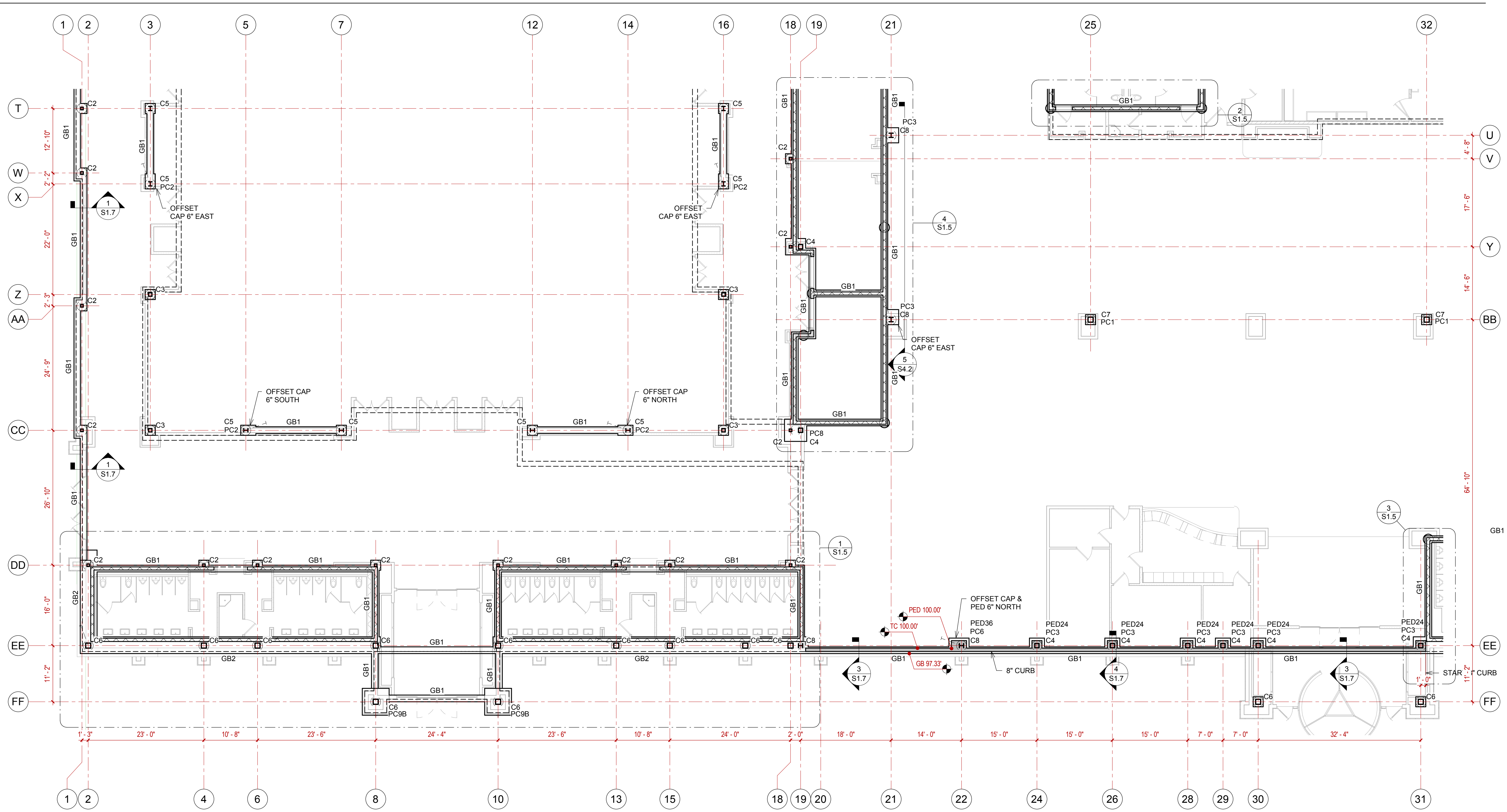
PROJECT PHASE:
BID PACKAGE 02
(100%SET)

#	DATE	DESCRIPTION
1	04/05/18	ADDENDUM #01

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: S1.3

FOUNDATION PLAN
AREA B

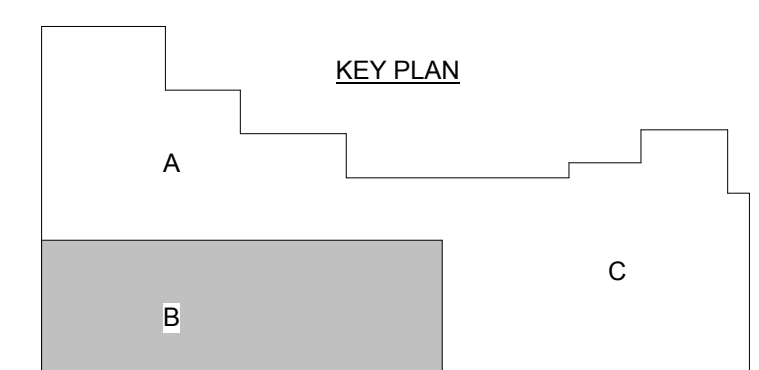


GRADE BEAM SCHEDULE		
FTG MARK	WIDTH	THICKNESS
GB1	1' - 4"	2' - 0"
GB2	3' - 4"	2' - 0"

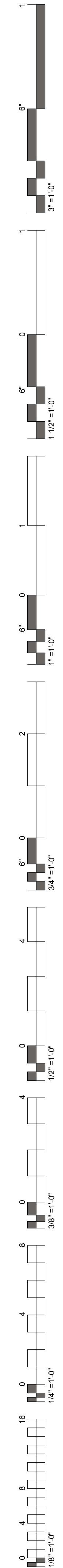
CONCRETE PEDESTAL SCHEDULE		
PED MARK	LENGTH	WIDTH
PED24	2' - 0"	2' - 0"
PED36	3' - 0"	2' - 0"

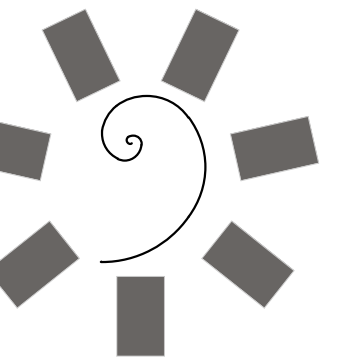
PIER CAP SCHEDULE			
CAP MARK	LENGTH	WIDTH	HEIGHT
PC1	2' - 0"	2' - 0"	2' - 0"
PC2	3' - 0"	2' - 0"	2' - 0"
PC3	3' - 0"	3' - 0"	2' - 0"
PC4	3' - 2"	3' - 2"	4' - 0"
PC5	4' - 0"	2' - 0"	2' - 0"
PC6	4' - 0"	3' - 0"	2' - 0"
PC7	4' - 0"	3' - 3"	2' - 0"
PC8	4' - 5"	4' - 5"	2' - 0"
PC9A	5' - 4"	5' - 4"	2' - 0"
PC9B	5' - 4"	5' - 4"	4' - 0"

STRUCTURAL STEEL COLUMN SCHEDULE	
COL MARK	SIZE
C2	HSS6X6X1/4
C3	HSS8X8X1/4
C4	HSS10X10X1/4
C5	W10X33
C6	HSS12X12X1/4
C7	HSS12X12X3/8
C8	W10X49

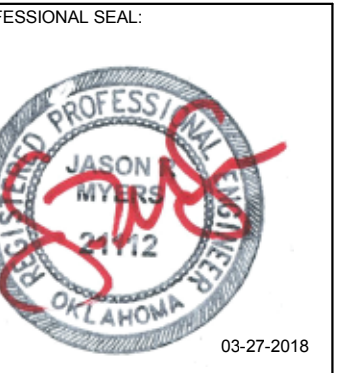


1 FOUNDATION PLAN - AREA B
3/32" = 1'-0"





James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CLIENT:
CHEROKEE NATION
Entertainment
Cherokee
CASINO
TAHLEQUAH, OKLAHOMA

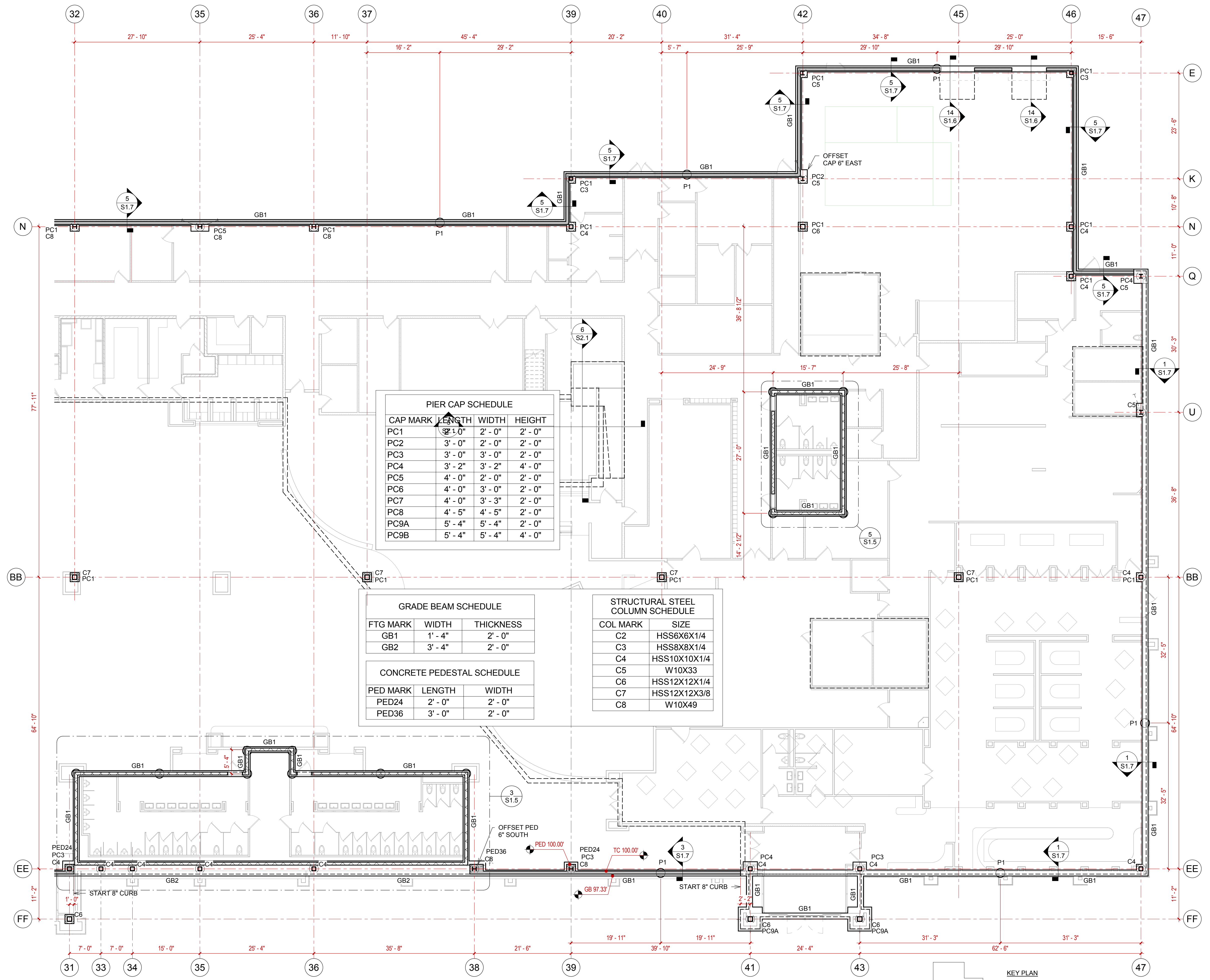
PROJECT PHASE:
BID PACKAGE 02
(100%SET)

#	DATE	REVISIONS	DESCRIPTION
1	04/05/18	ADDENDUM #01	

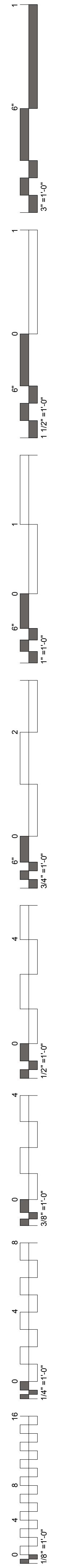
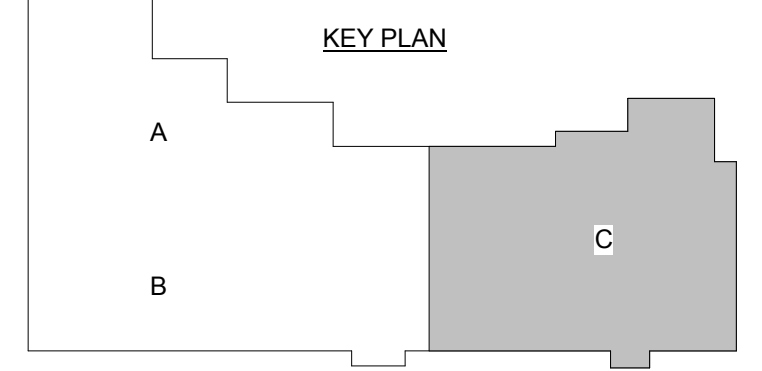
DATE: 03/27/18
JOB NUMBER: 17-06

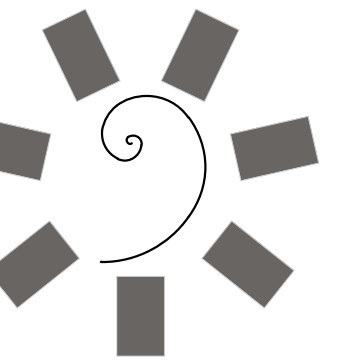
SHEET NUMBER: **S1.4**

FOUNDATION PLAN
AREA C

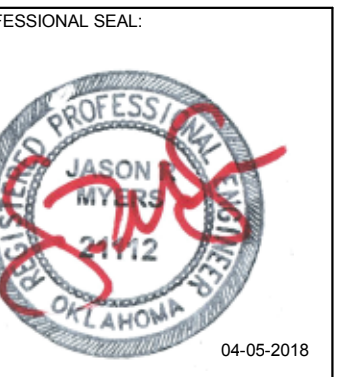


1 FOUNDATION PLAN - AREA C
3/32" = 1'-0"

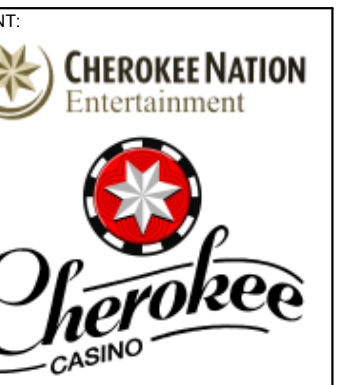




James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



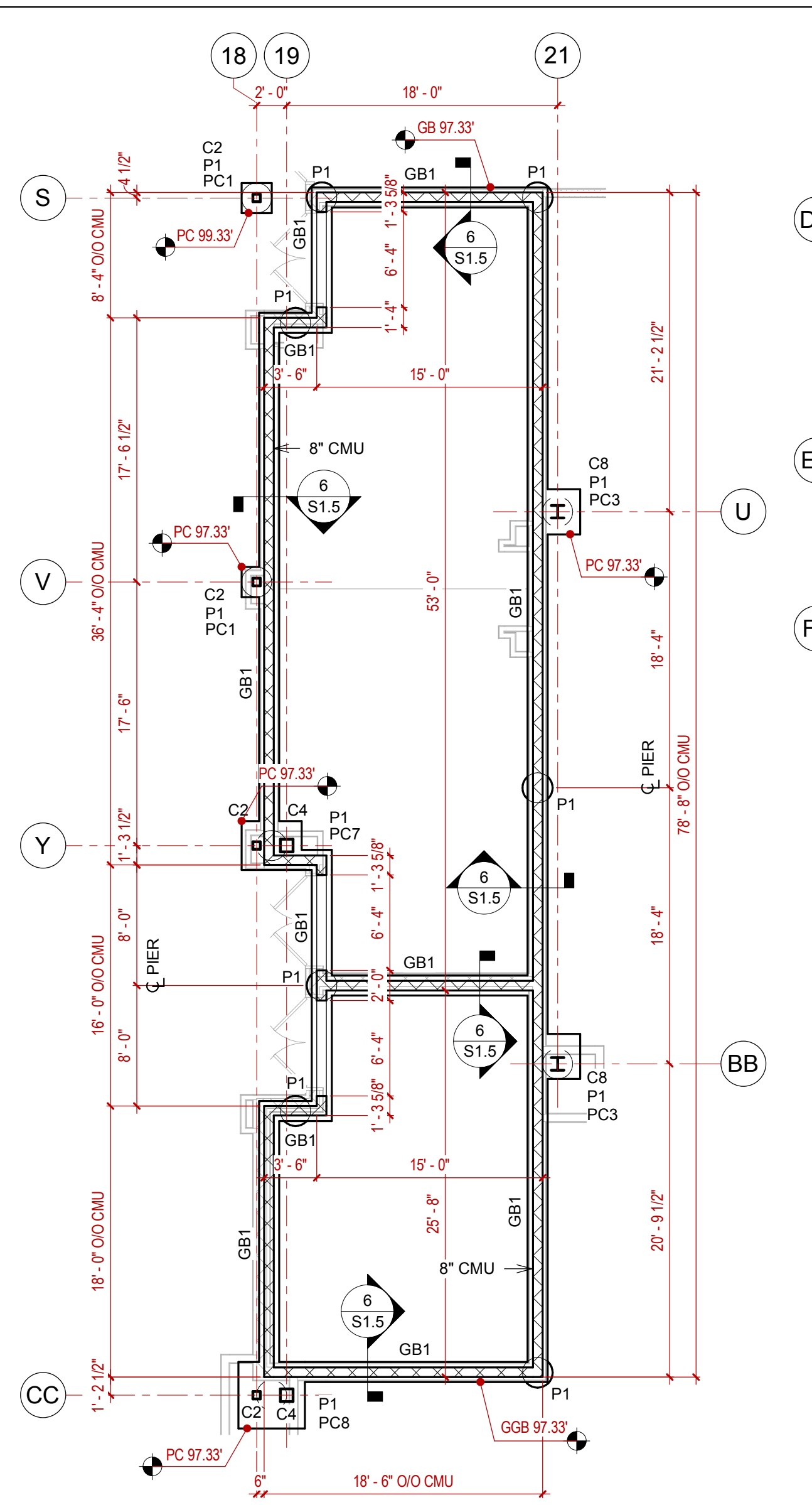
CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100%SET)

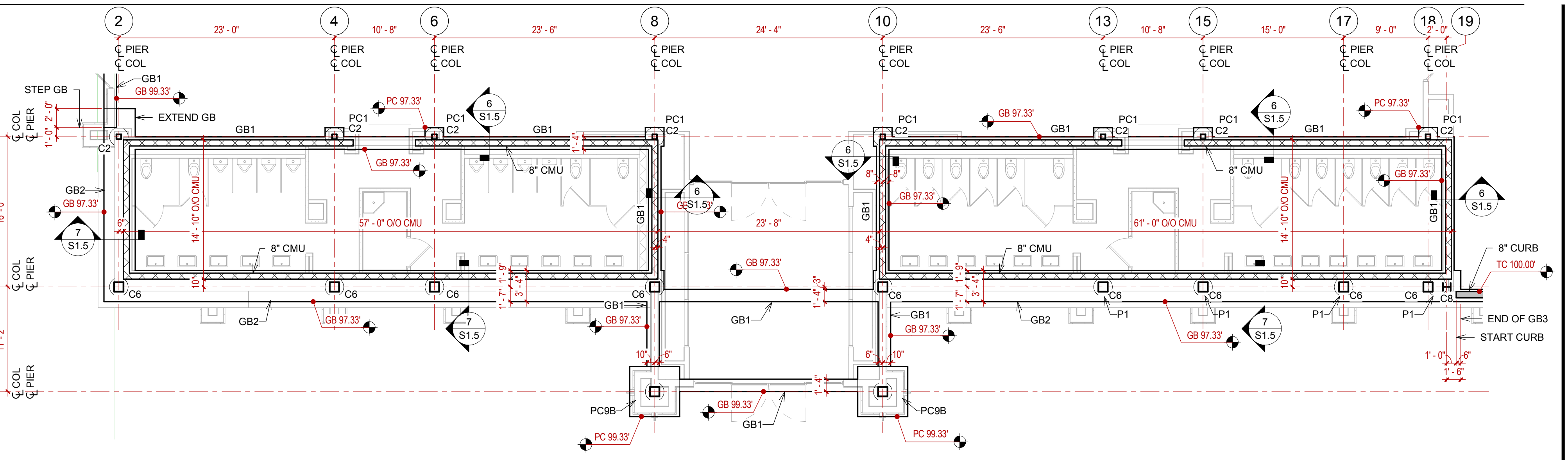
#	DATE	REVISIONS	DESCRIPTION

DATE: 04/05/18 JOB NUMBER: 17-06
SHEET NUMBER:

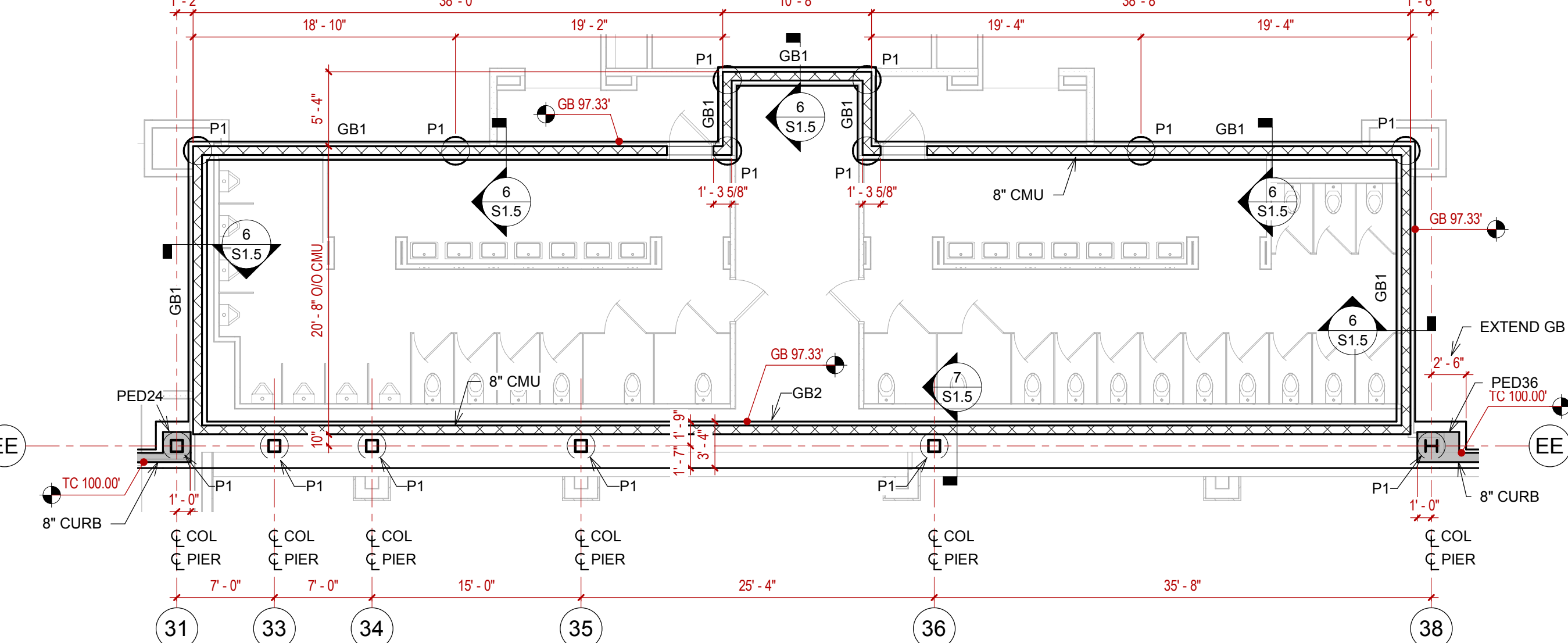
S1.5
SAFER ROOM FOUNDATION PLANS



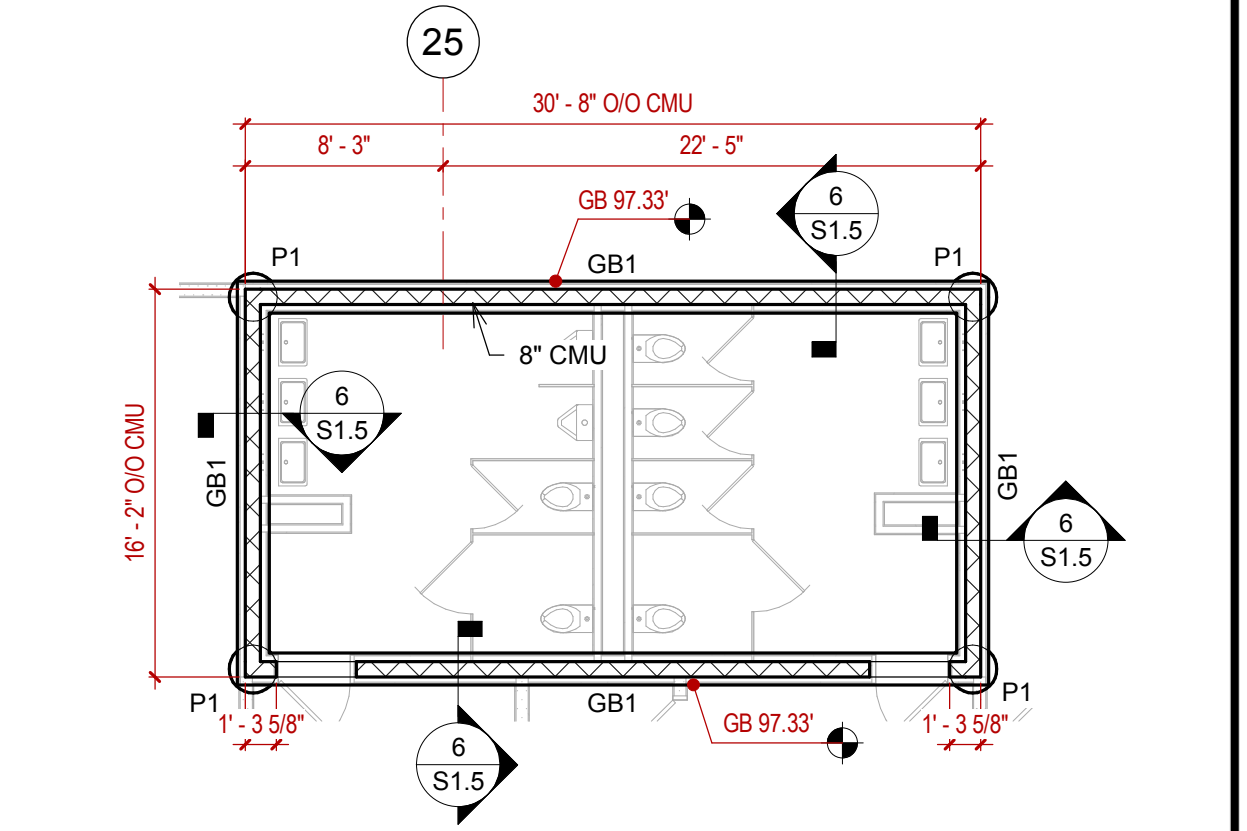
4 FOUNDATION PLAN - SAFER ROOM - BREAKOUT
1/8" = 1'-0"



1 FOUNDATION PLAN - SAFER ROOM MENS 90 & WOMENS 92
1/8" = 1'-0"



3 FOUNDATION PLAN - SAFER ROOM - MENS 11 & WOMENS 13
1/8" = 1'-0"

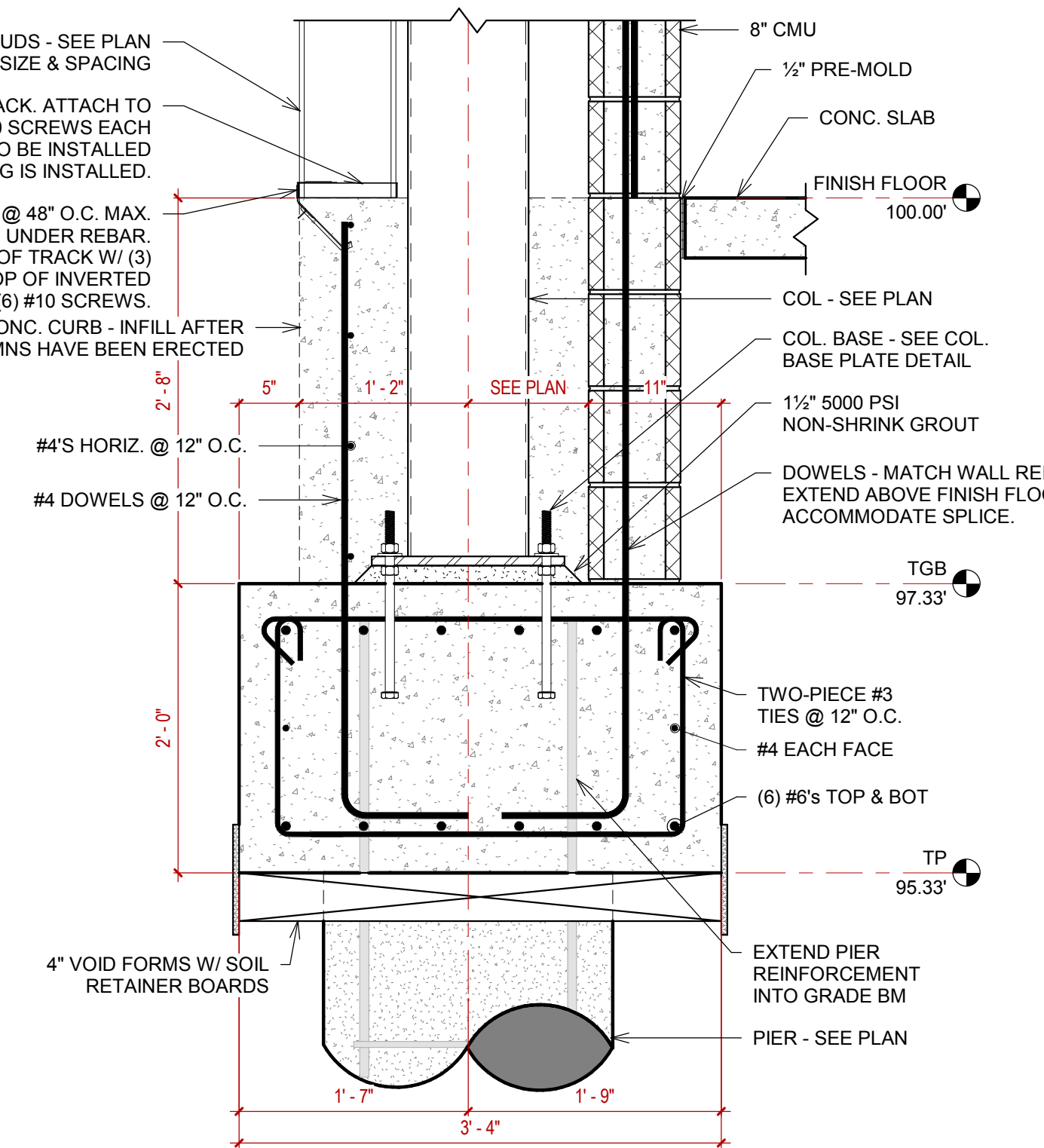


2 FOUNDATION PLAN - SAFER ROOM - M 24 & W 22
1/8" = 1'-0"

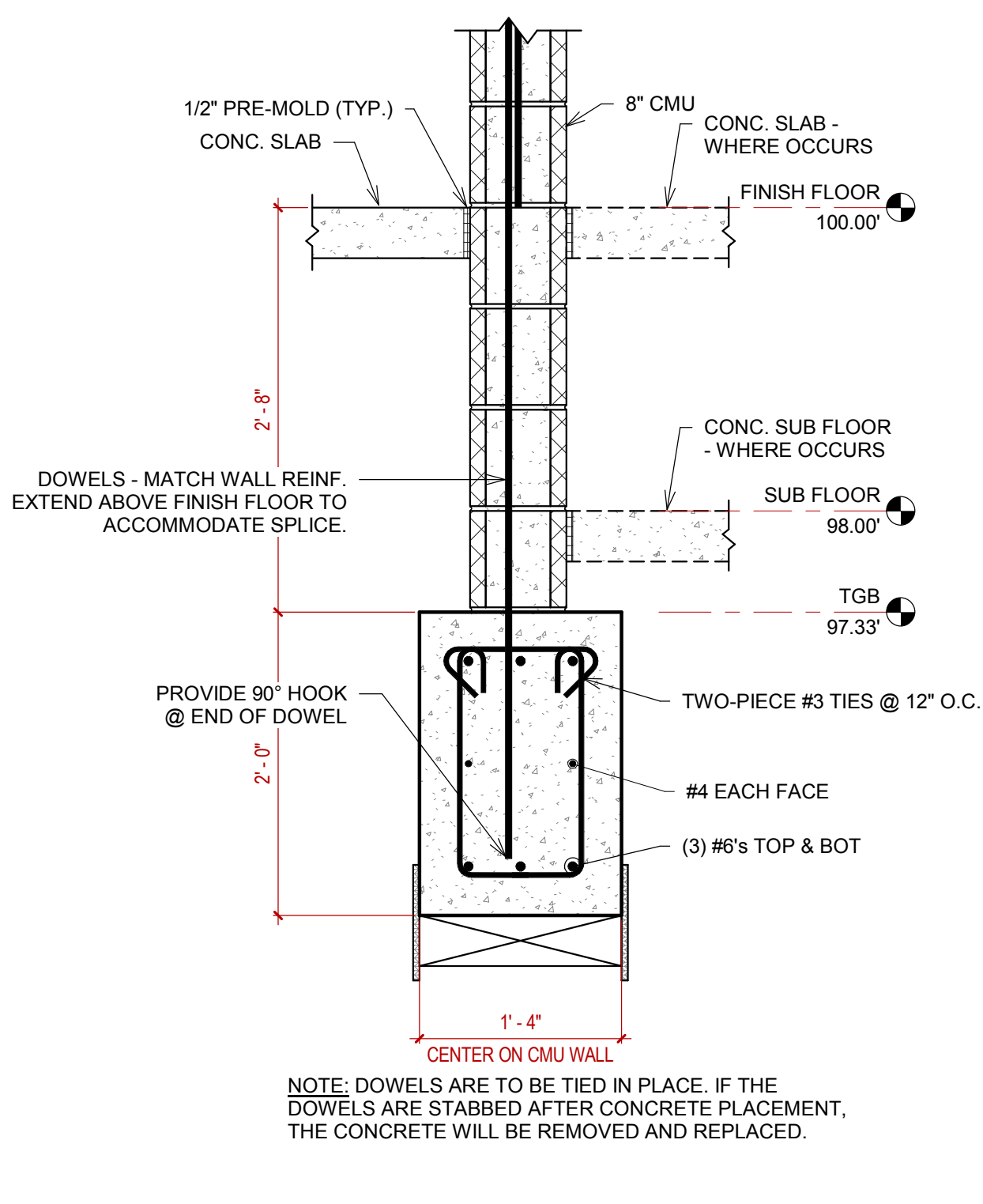
STRUCTURAL STEEL COLUMN SCHEDULE	
COL MARK	SIZE
C2	HSS6X6X1/4
C3	HSS8X8X1/4
C4	HSS10X10X1/4
C5	W10X33
C6	HSS12X12X1/4
C7	HSS12X12X3/8
C8	W10X49

PIER CAP SCHEDULE			
CAP MARK	LENGTH	WIDTH	HEIGHT
PC1	2'-0"	2'-0"	2'-0"
PC2	3'-0"	2'-0"	2'-0"
PC3	3'-0"	3'-0"	2'-0"
PC4	3'-2"	3'-2"	4'-0"
PC5	4'-0"	2'-0"	2'-0"
PC6	4'-0"	3'-0"	2'-0"
PC7	4'-0"	3'-3"	2'-0"
PC8	4'-5"	4'-5"	2'-0"
PC9A	5'-4"	5'-4"	2'-0"
PC9B	5'-4"	5'-4"	4'-0"

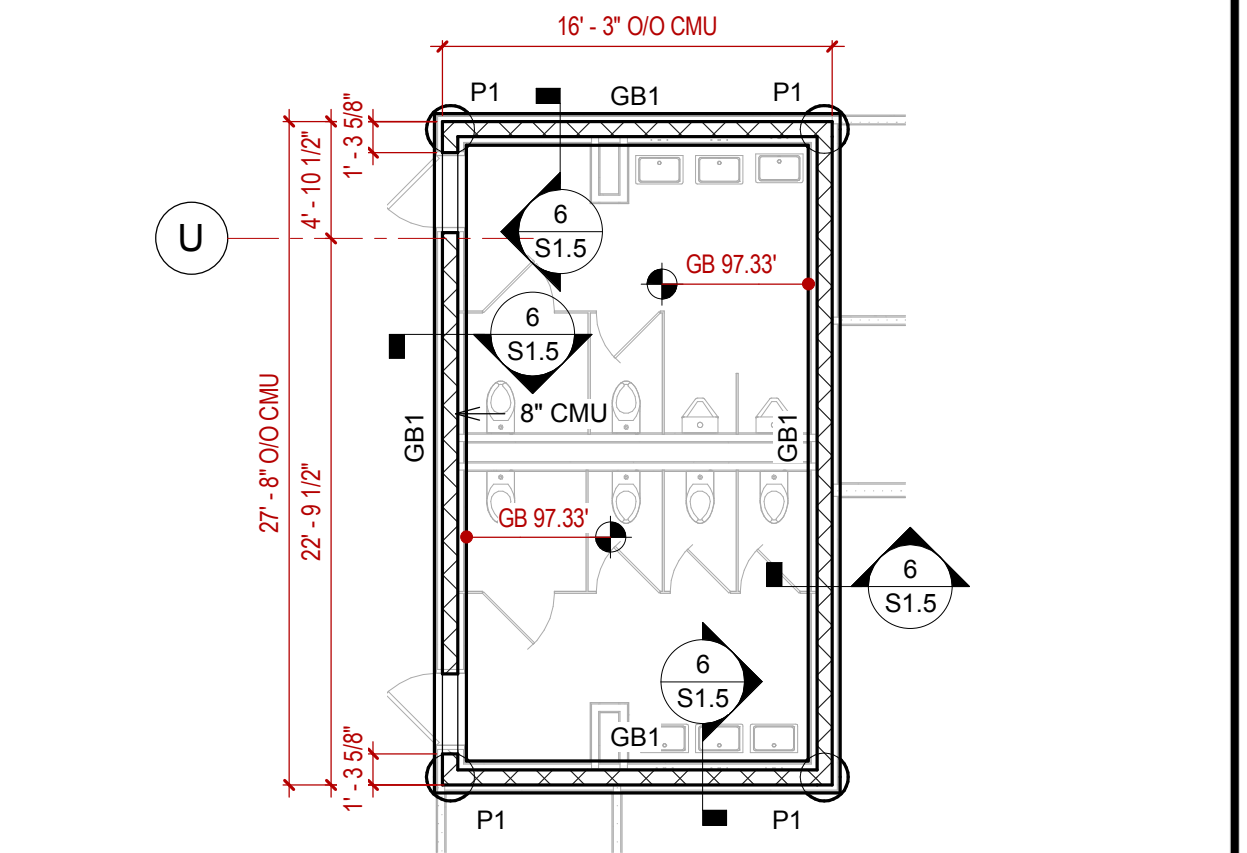
GRADE BEAM SCHEDULE		
FTG MARK	WIDTH	THICKNESS
GB1	1'-4"	2'-0"
GB2	3'-4"	2'-0"



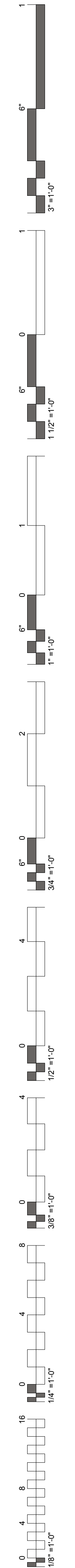
7 40X24 GRADE BM W/ CMU
1" = 1'-0"

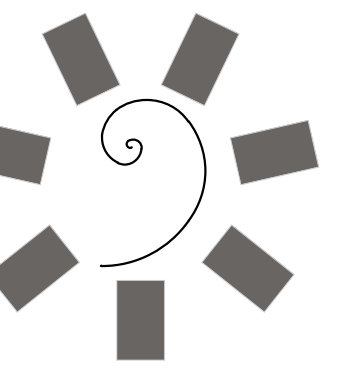


6 INTERIOR CMU WALL FTG.
1" = 1'-0"

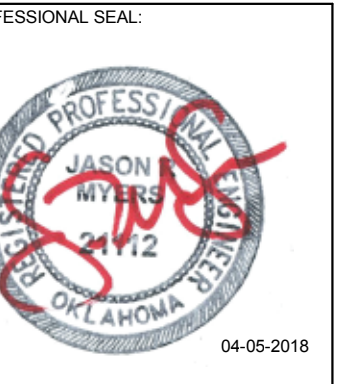


5 FOUNDATION PLAN - SAFER ROOM - M 73 & W 74
1/8" = 1'-0"





James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

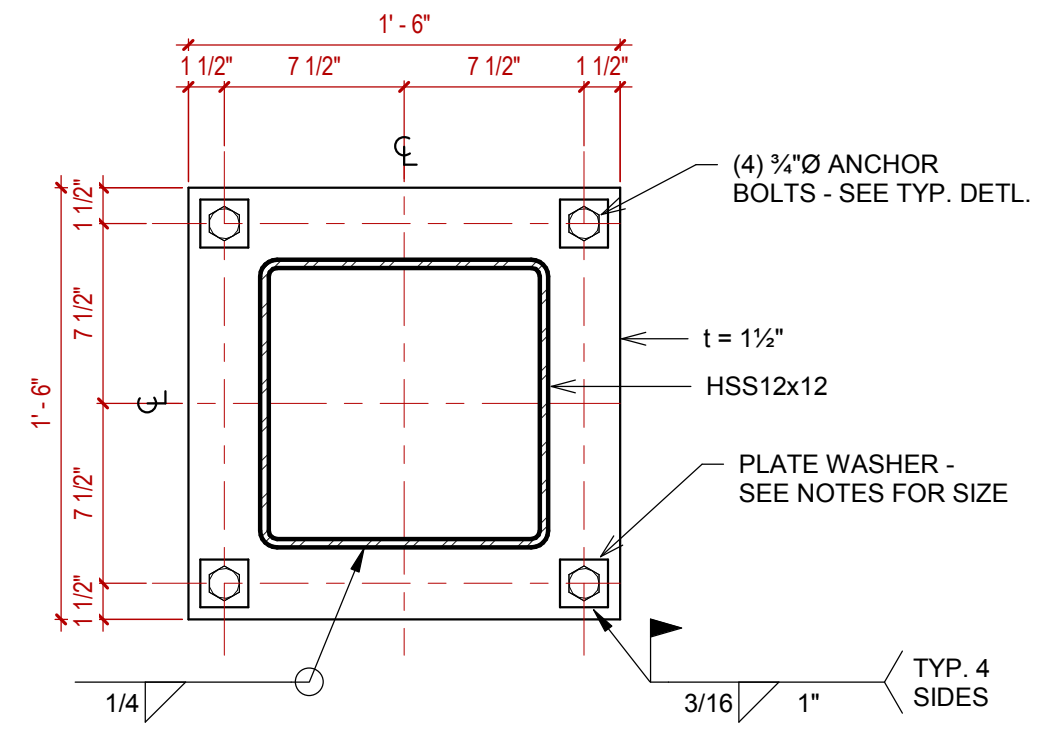
PROJECT PHASE:
BID PACKAGE 02
(100%SET)

#	DATE	REVISIONS DESCRIPTION

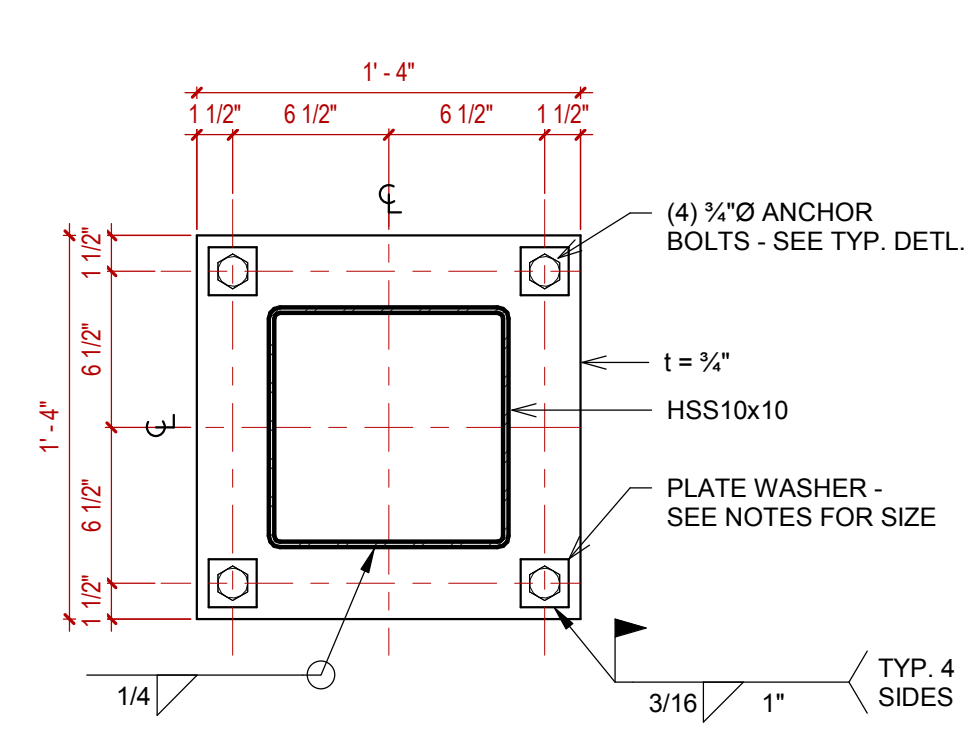
DATE: 04/05/18
JOB NUMBER: 17-06
SHEET NUMBER:

S1.6

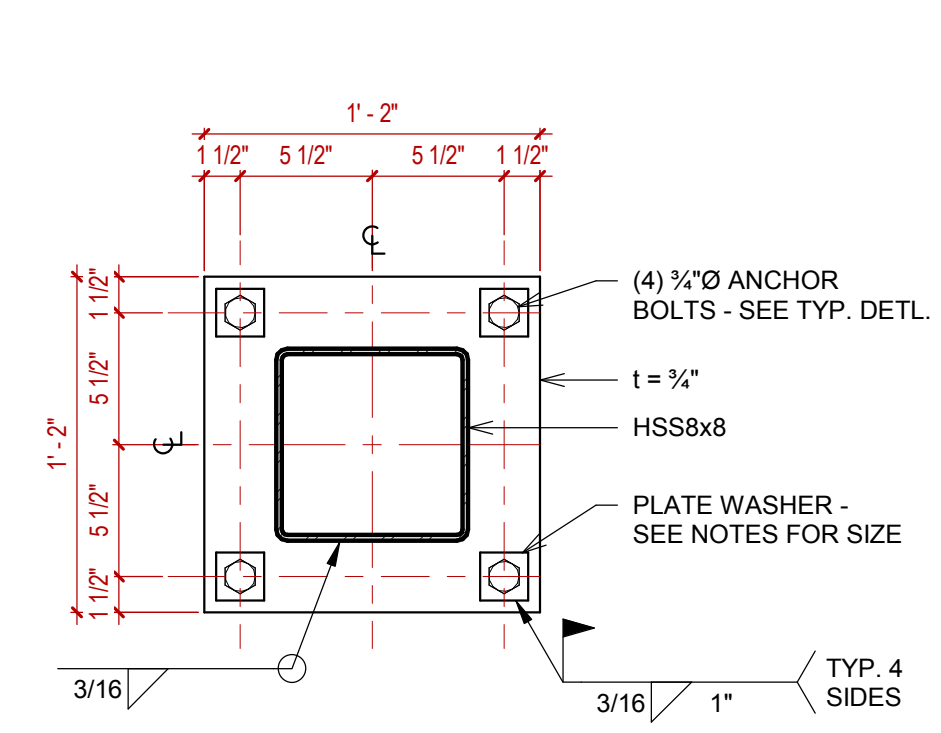
FOUNDATION
DETAILS



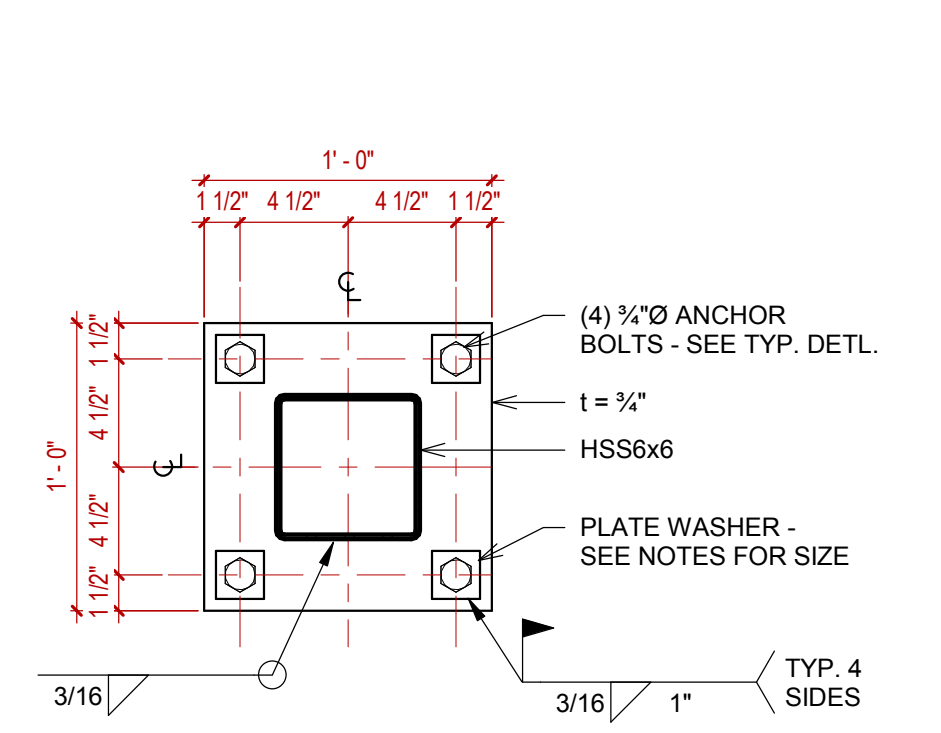
4 BASE PLATE - HSS12x12
1 1/2" = 1'-0"



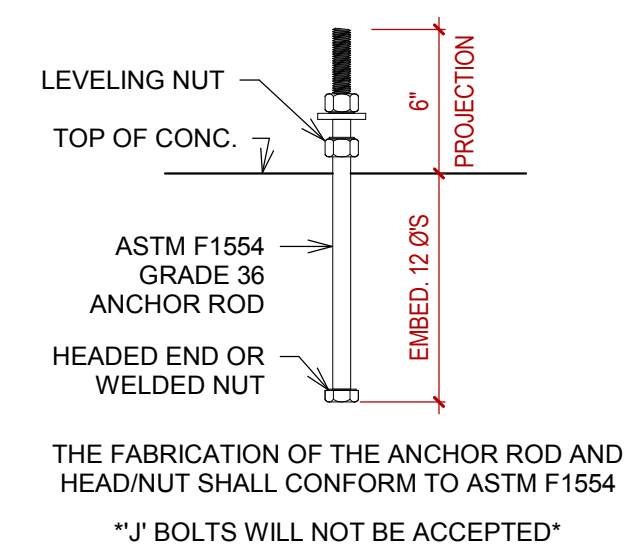
3 BASE PLATE - HSS10x10
1 1/2" = 1'-0"



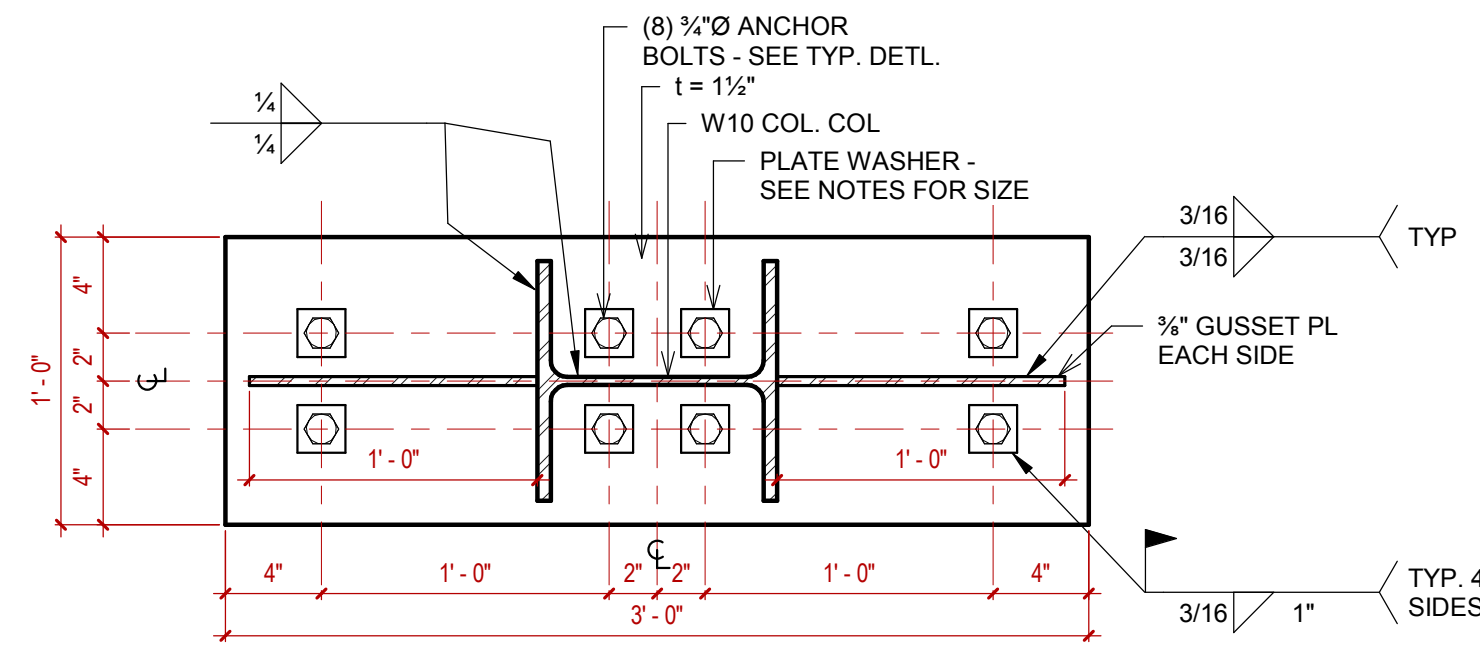
2 BASE PLATE - HSS8x8
1 1/2" = 1'-0"



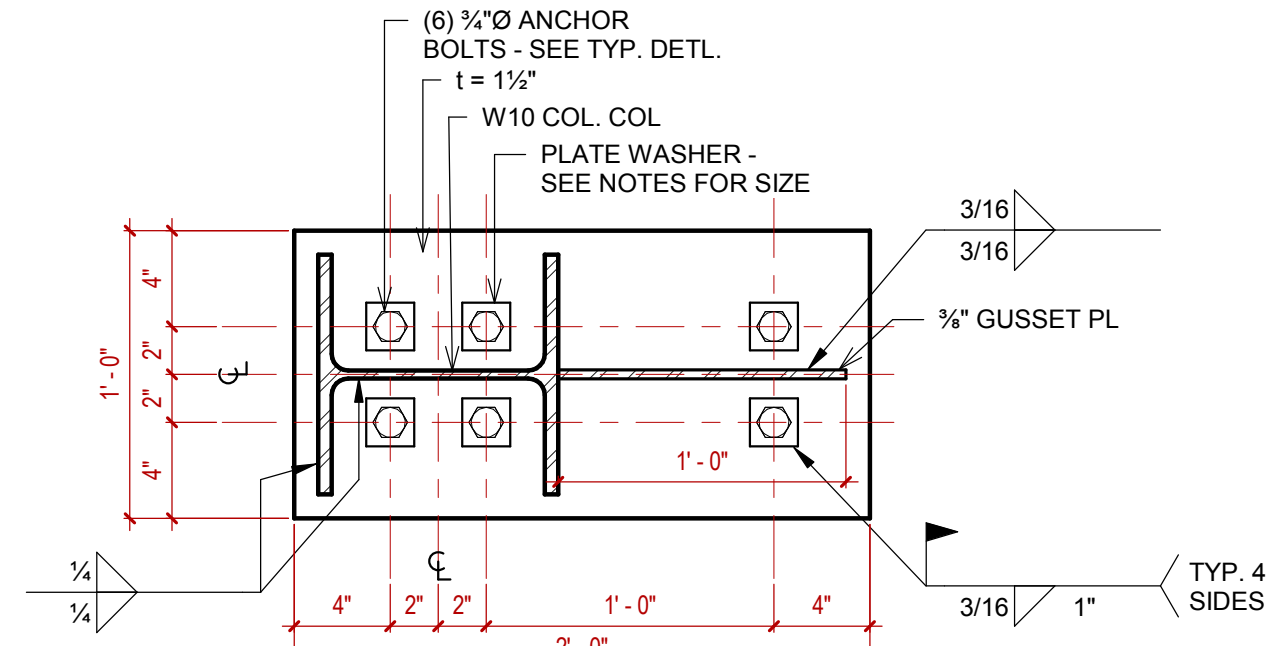
1 BASE PLATE - HSS6x6
1 1/2" = 1'-0"



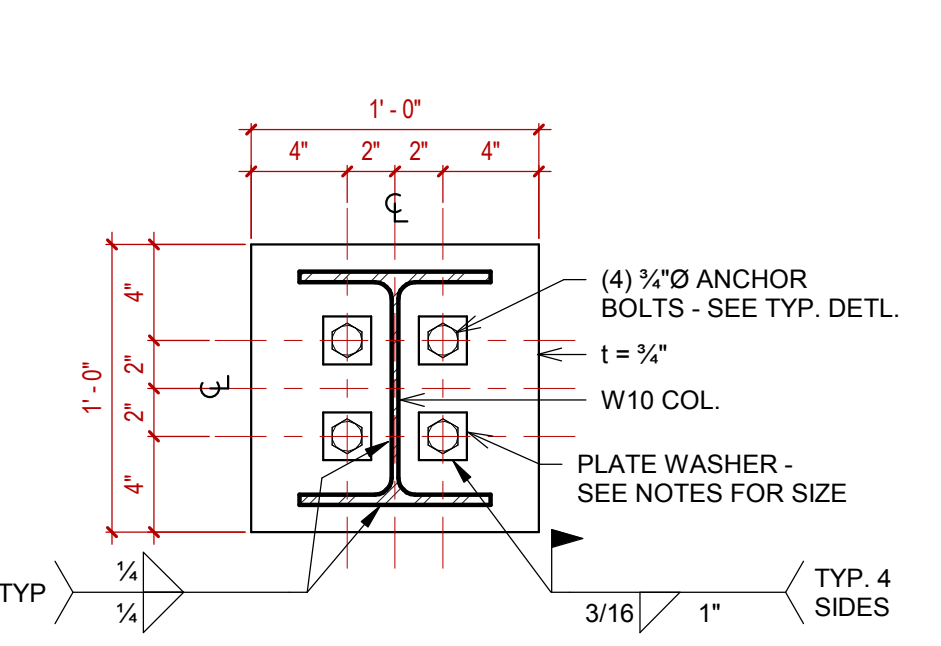
8 TYP. ANCHOR BOLT
1 1/2" = 1'-0"



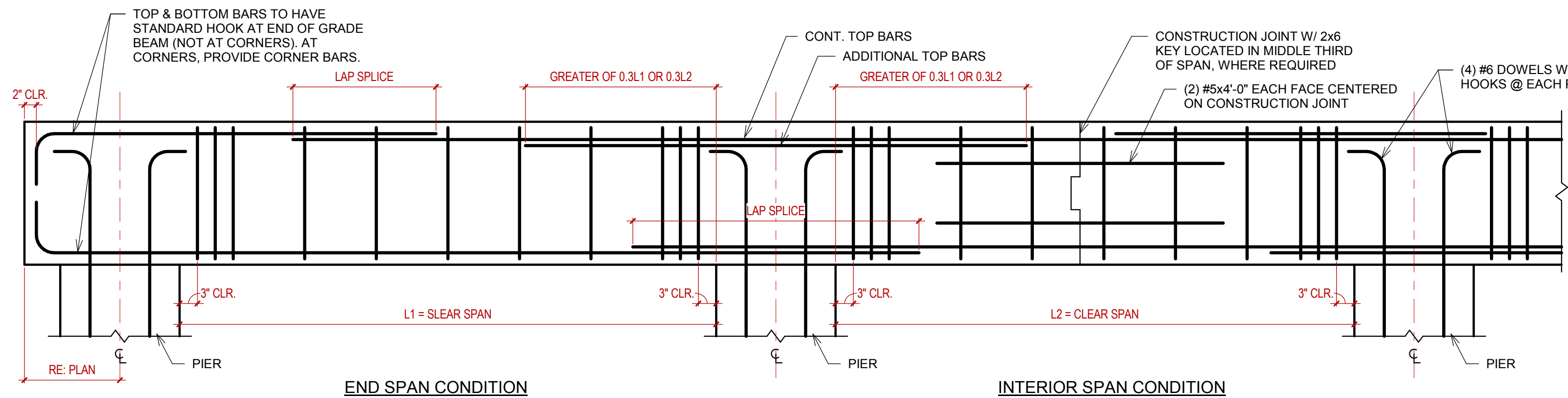
7 BASE PLATE - W10 w/ 2 BRACES
1 1/2" = 1'-0"



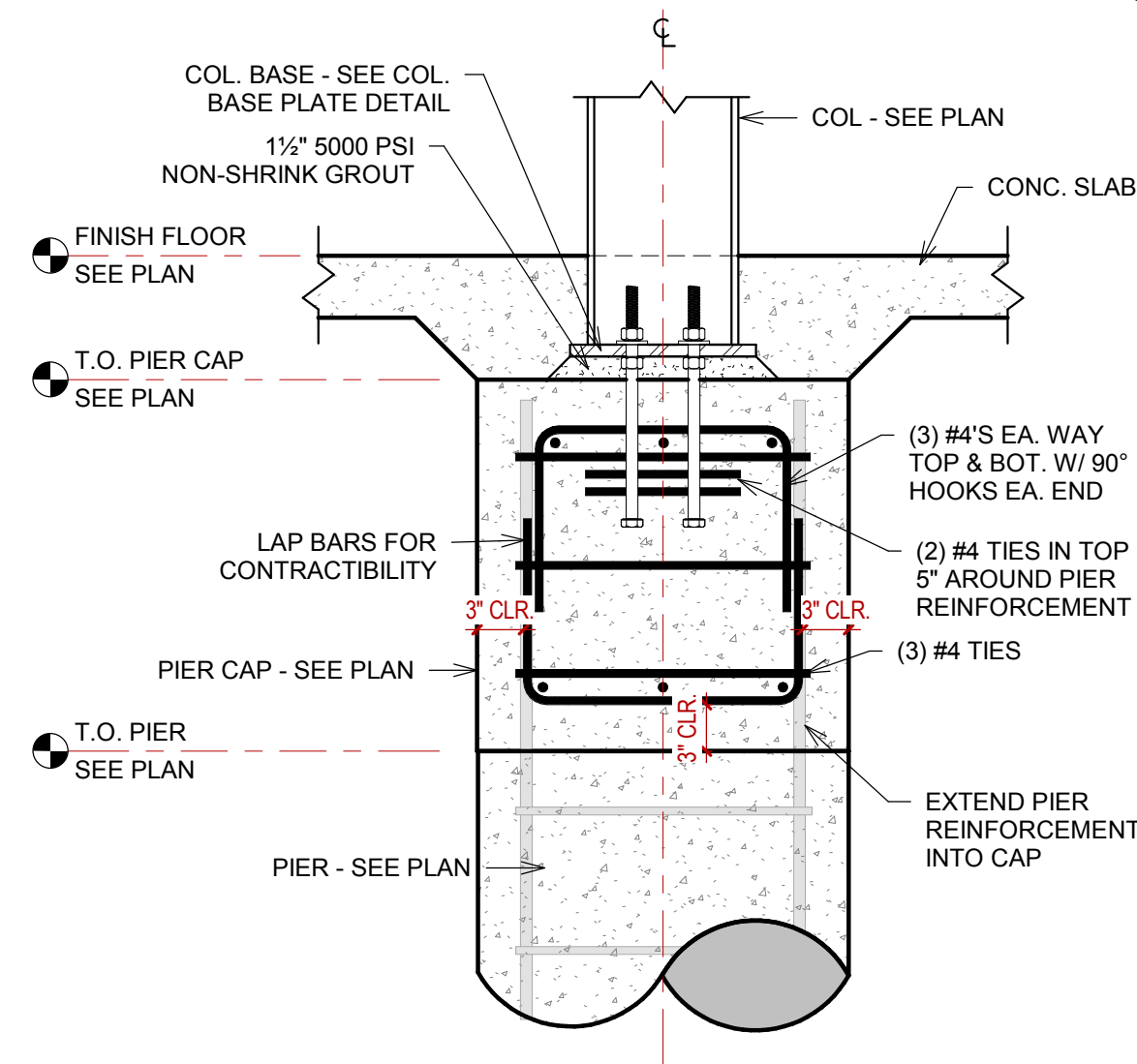
6 BASE PLATE - W10 w/ BRACE
1 1/2" = 1'-0"



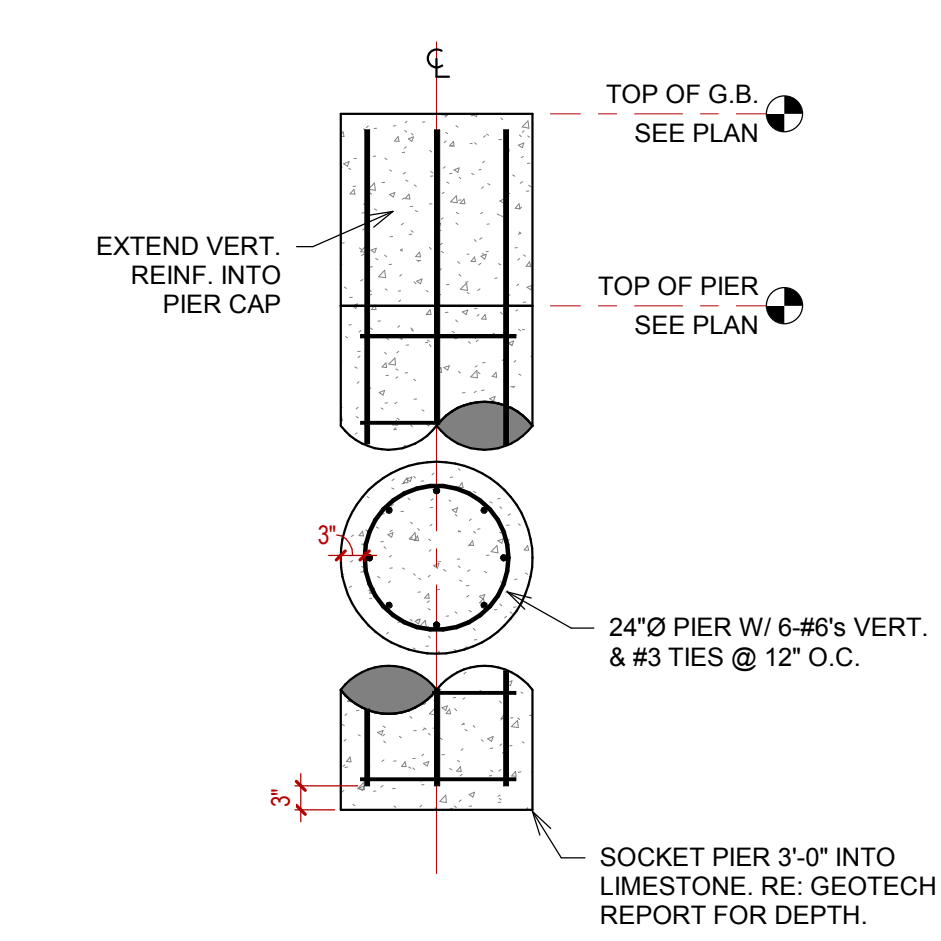
5 BASE PLATE - W10
1 1/2" = 1'-0"



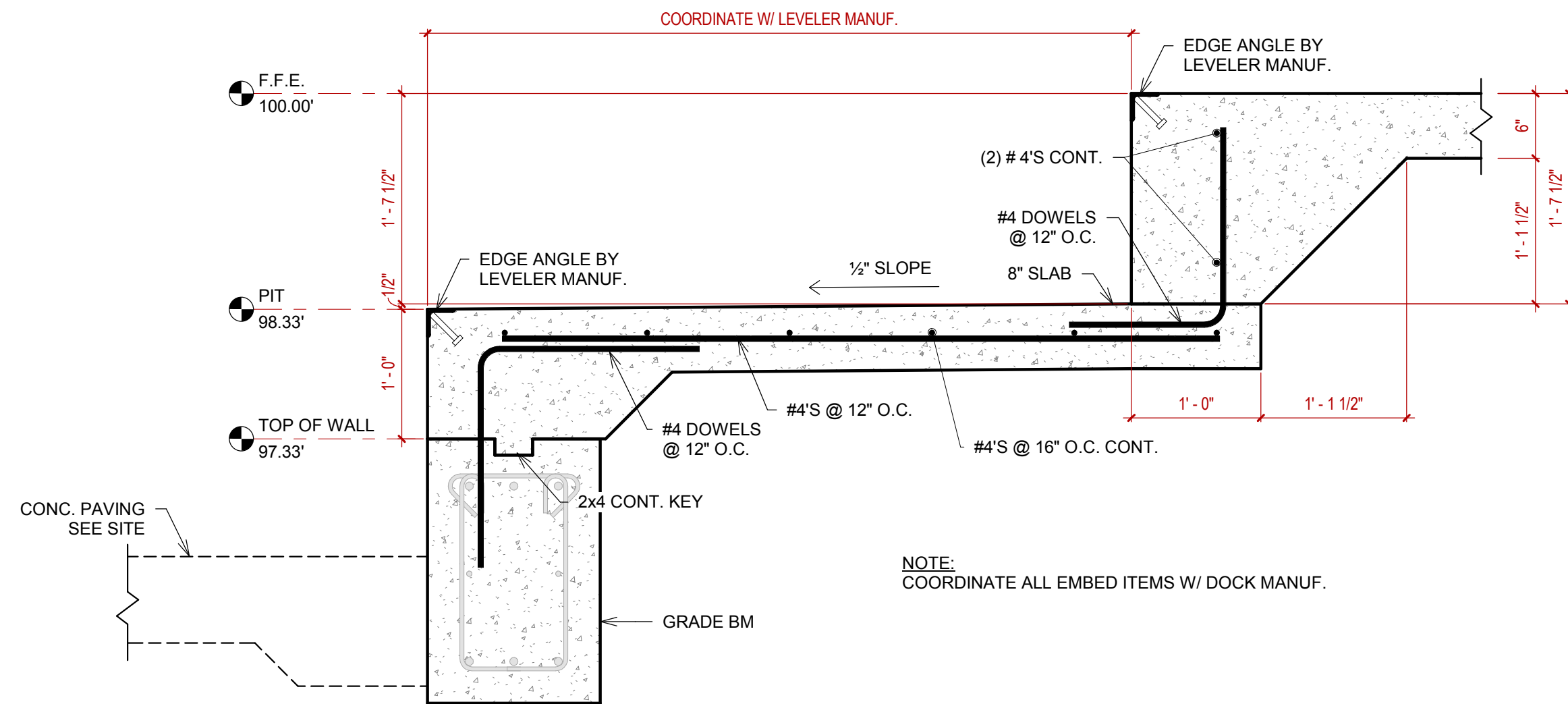
11 GRADE BEAM DIAGRAM
3/4" = 1'-0"



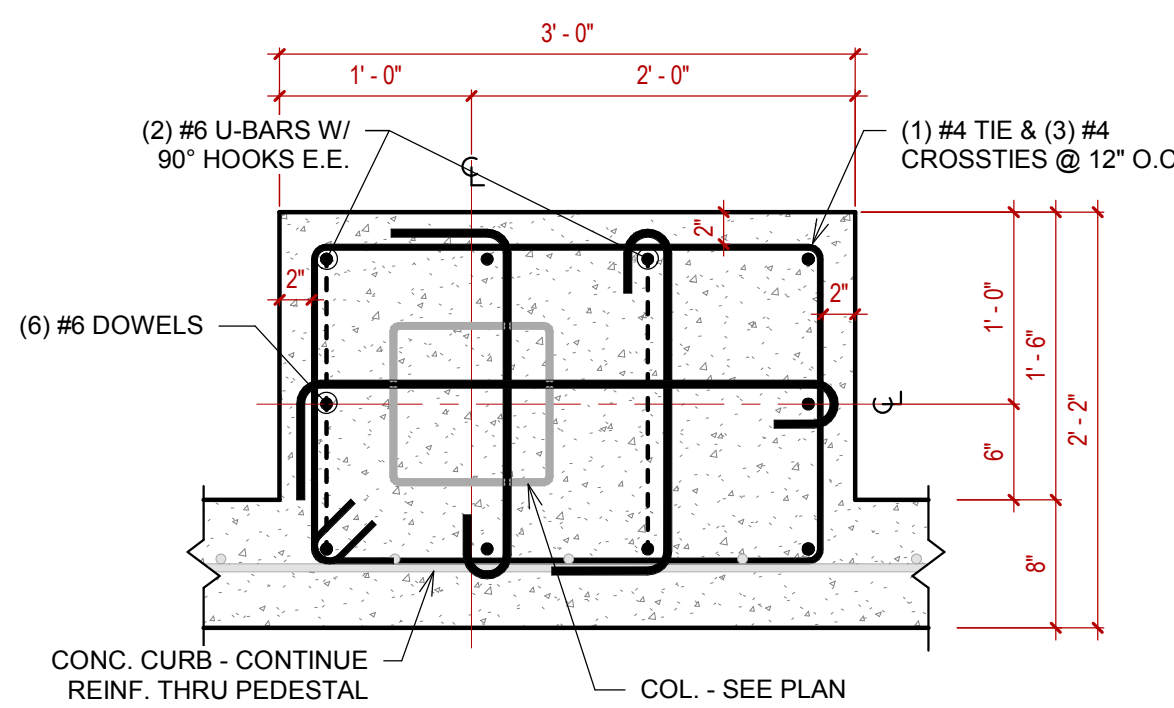
10 TYP. INTERIOR PIER CAP
1" = 1'-0"



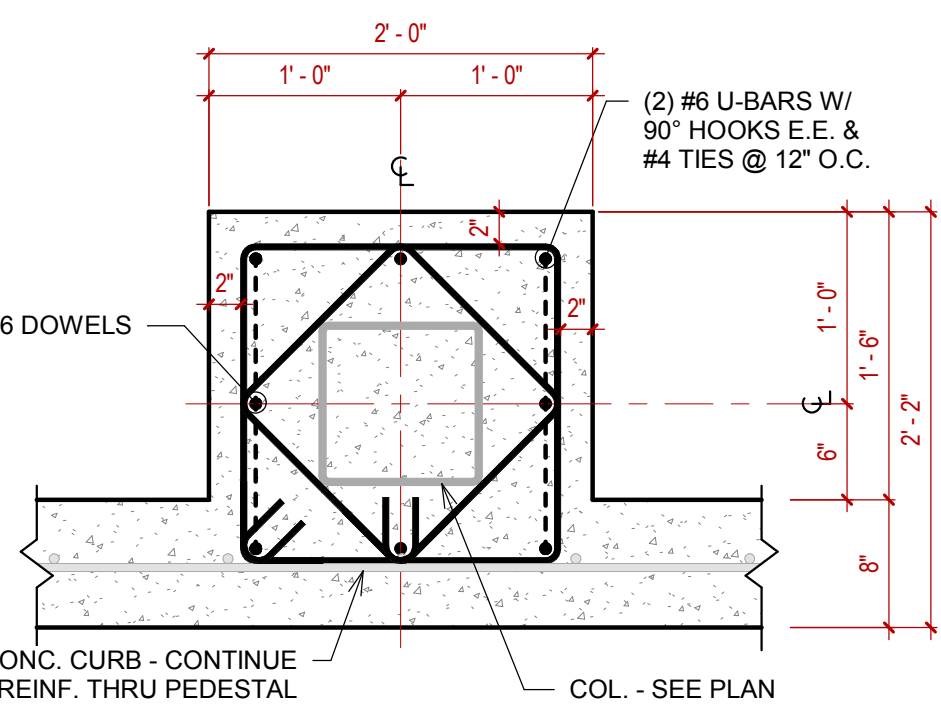
9 TYP. DRILLED PIER
1/2" = 1'-0"



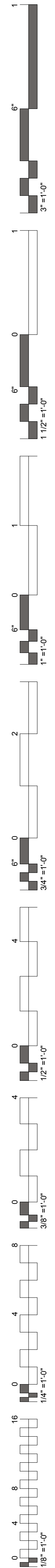
14 TYP. LEVELER PIT
1" = 1'-0"

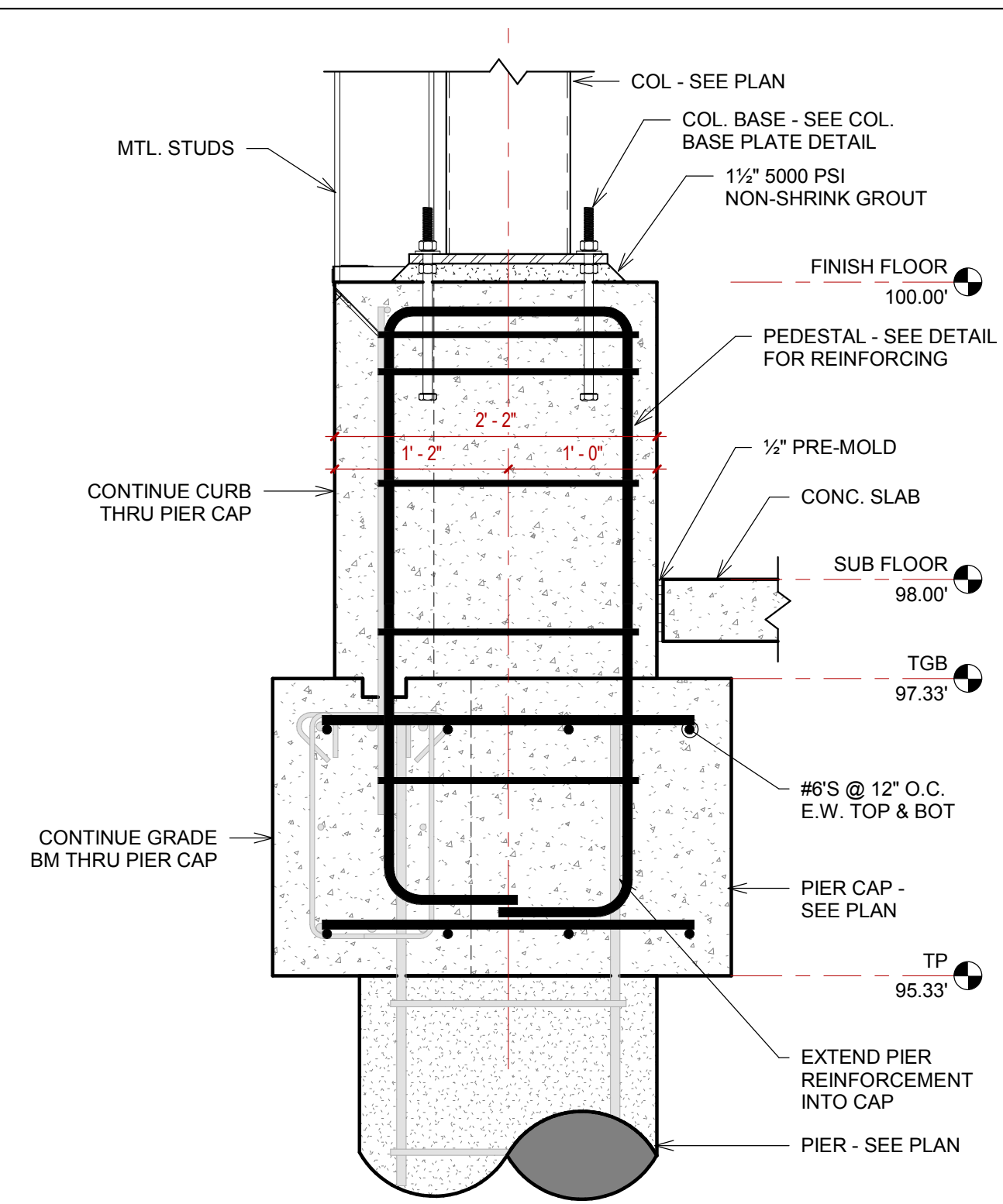
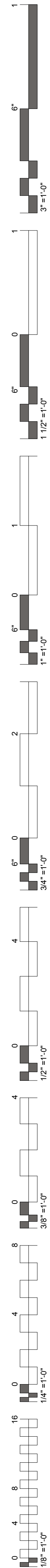


13 24"x36" CONC. PEDESTAL
1" = 1'-0"

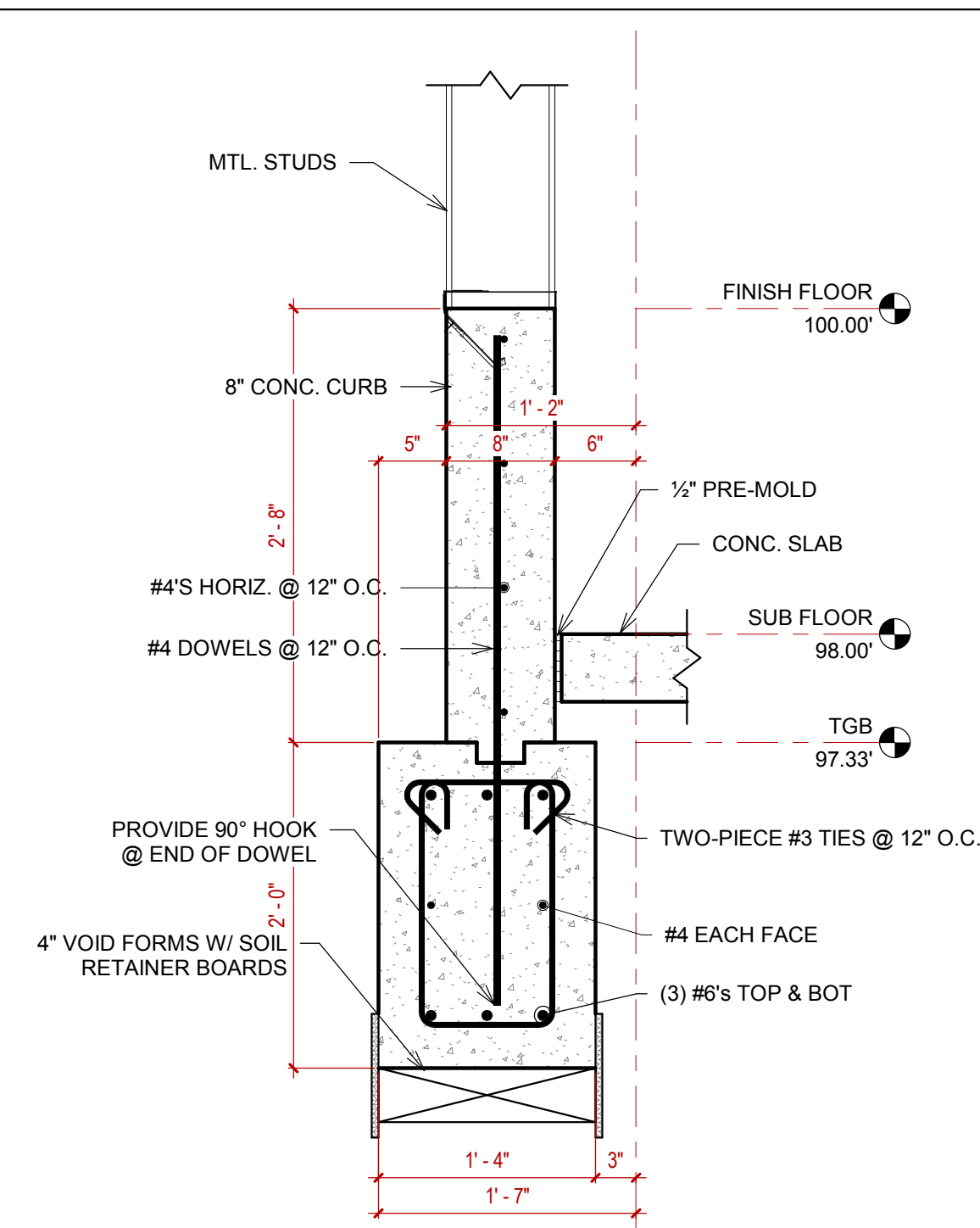


12 24"x24" CONC. PEDESTAL
1" = 1'-0"

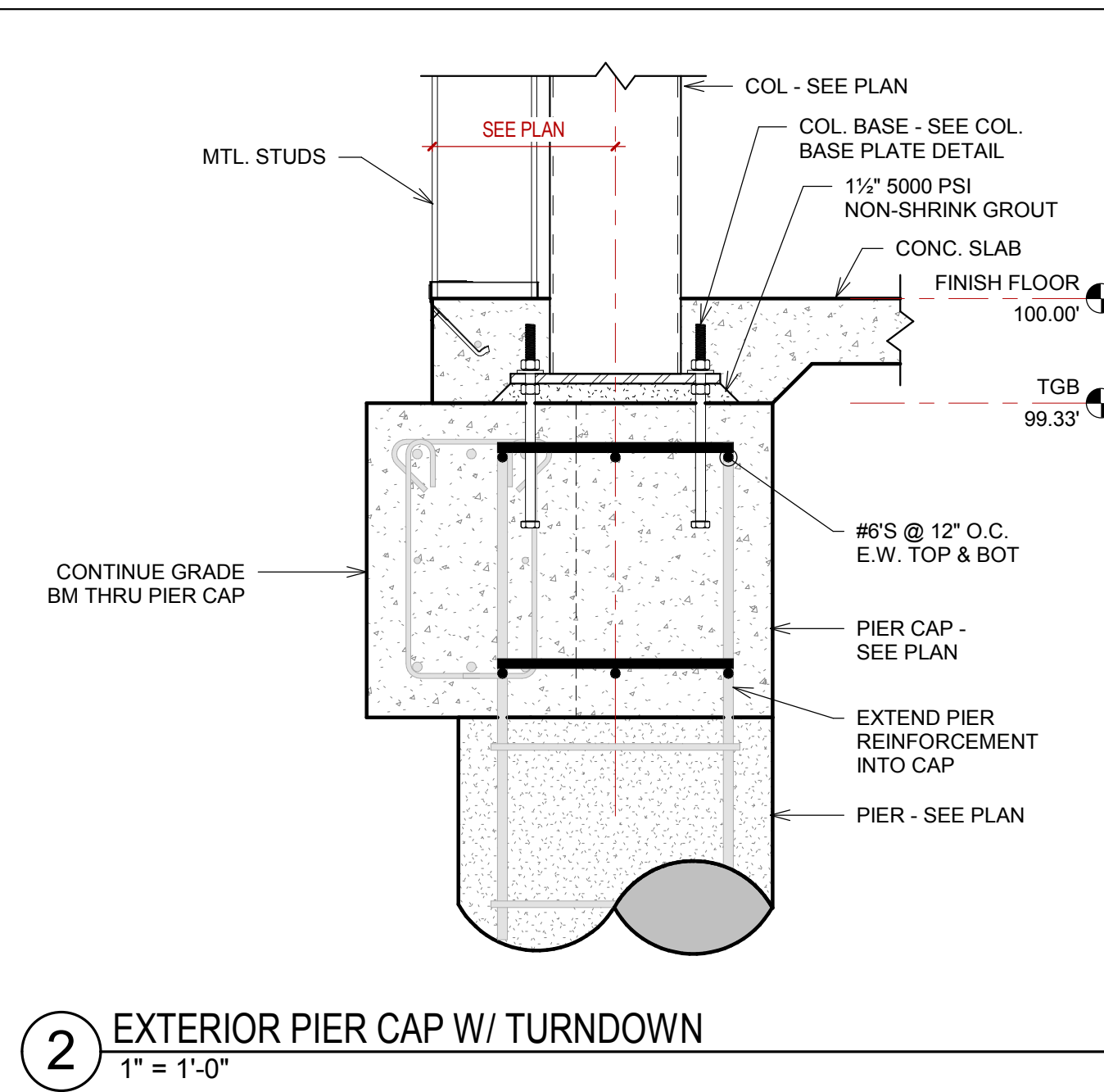




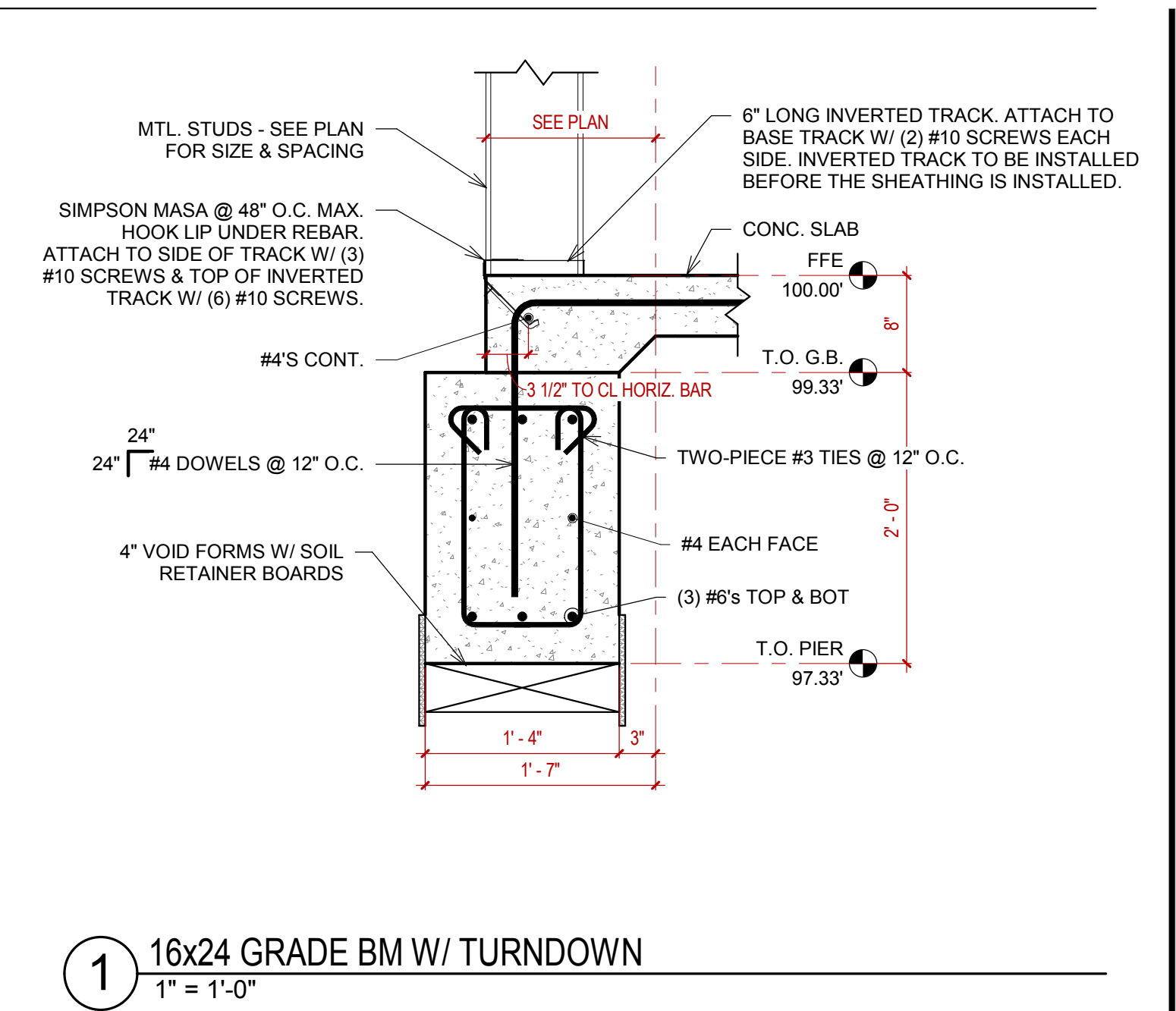
4 EXTERIOR PIER CAP W/ CURB
1" = 1'-0"



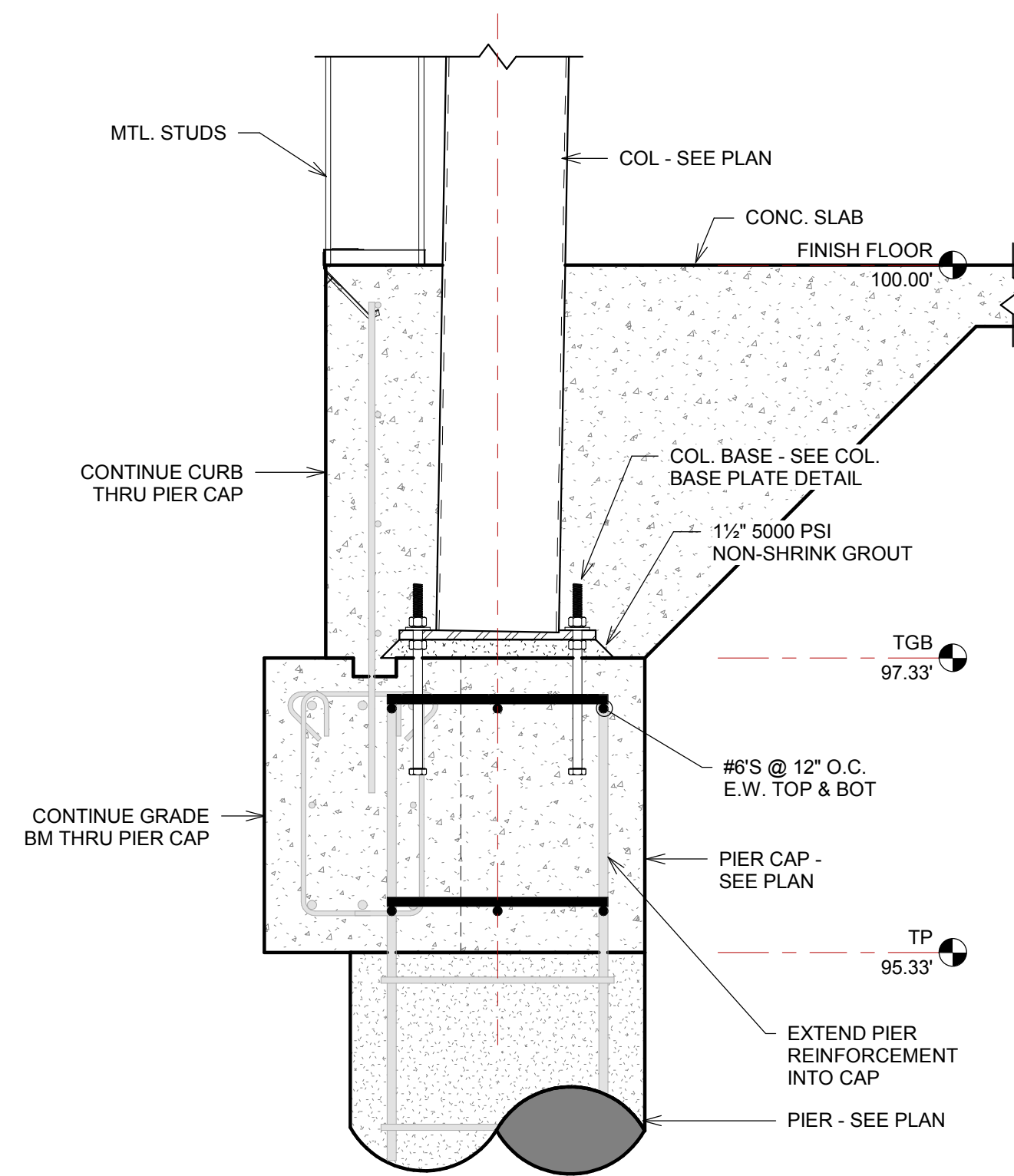
3 16x24 GRADE BM W/ CURB
1" = 1'-0"



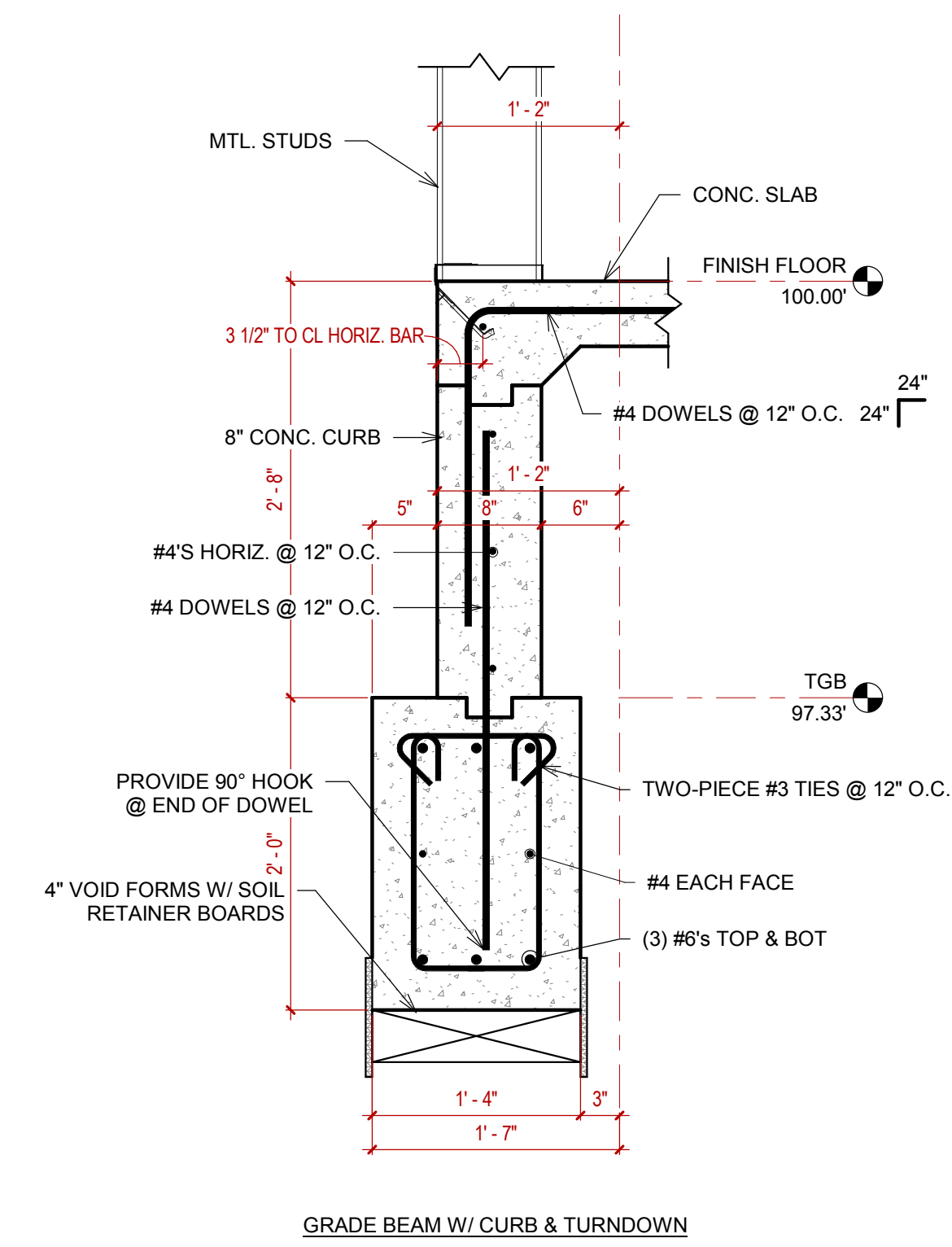
2 EXTERIOR PIER CAP W/ TURNDOWN
1" = 1'-0"



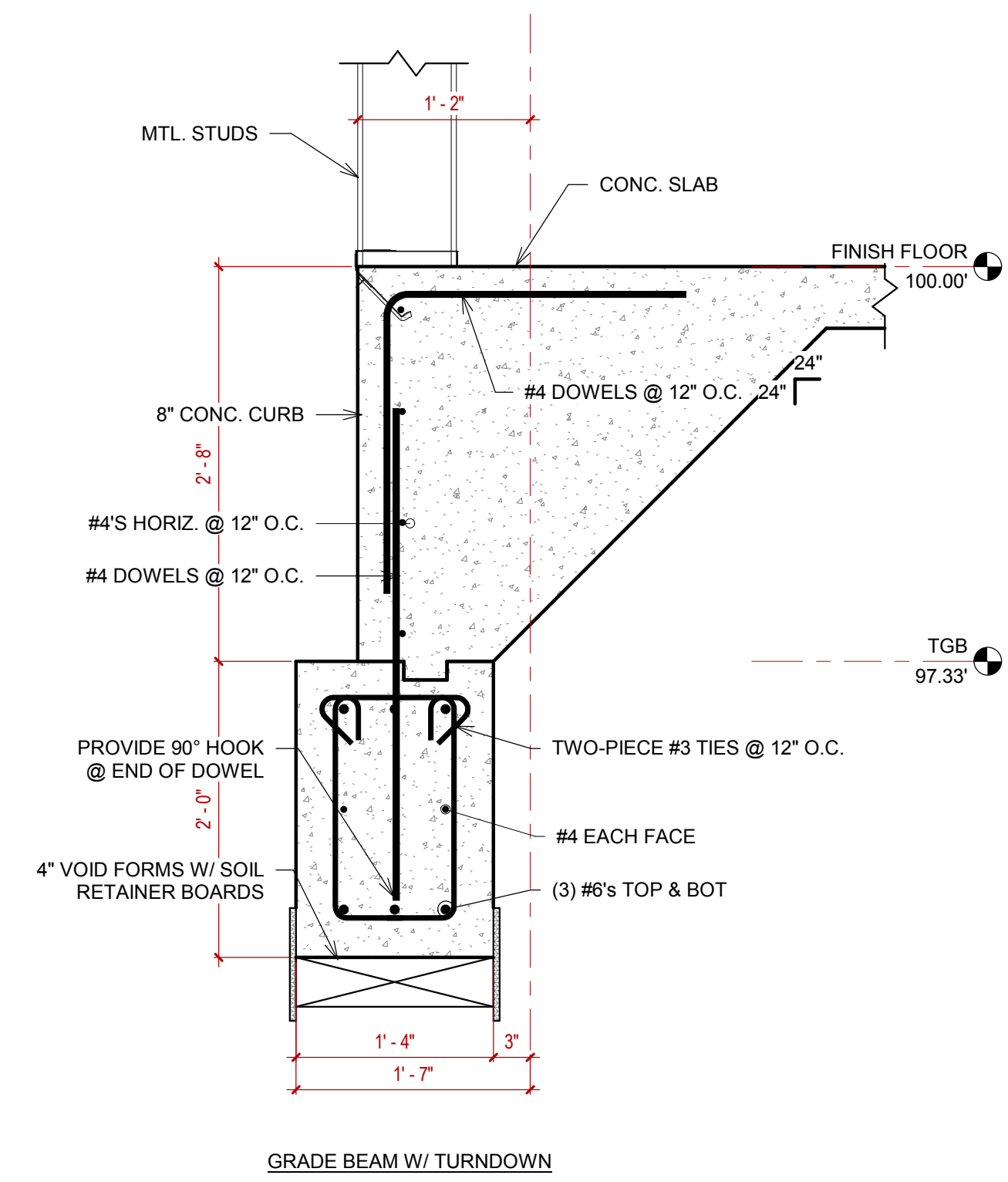
1 16x24 GRADE BM W/ TURNDOWN
1" = 1'-0"



6 EXTERIOR PIER CAP W/ CURB & TURNDOWN
1" = 1'-0"

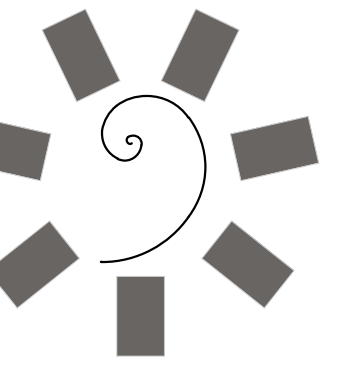


5 16x24 GRADE BM W/ CURB & TURNDOWN
1" = 1'-0"

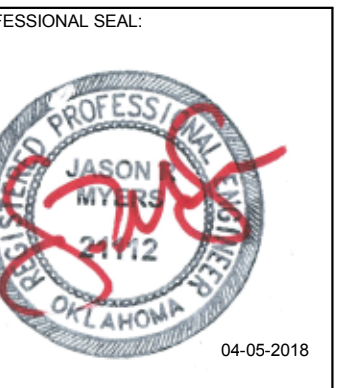


GRADE BEAM W/ TURNDOWN

FOUNDATION TYPE UTILIZED IS CONTRACTORS OPTION



James R. Childers Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



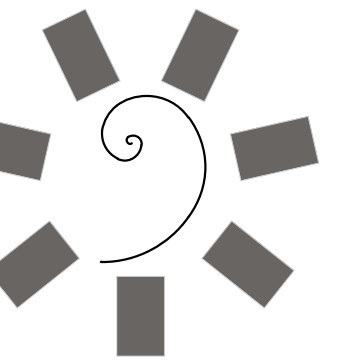
CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100%SET)

REVISIONS	
#	DESCRIPTION

DATE: 04/05/18
JOB NUMBER: 17-06

SHEET NUMBER:
S1.7
FOUNDATION DETAILS



James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
**Myers-Beatty
Engineering, PLLC**
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

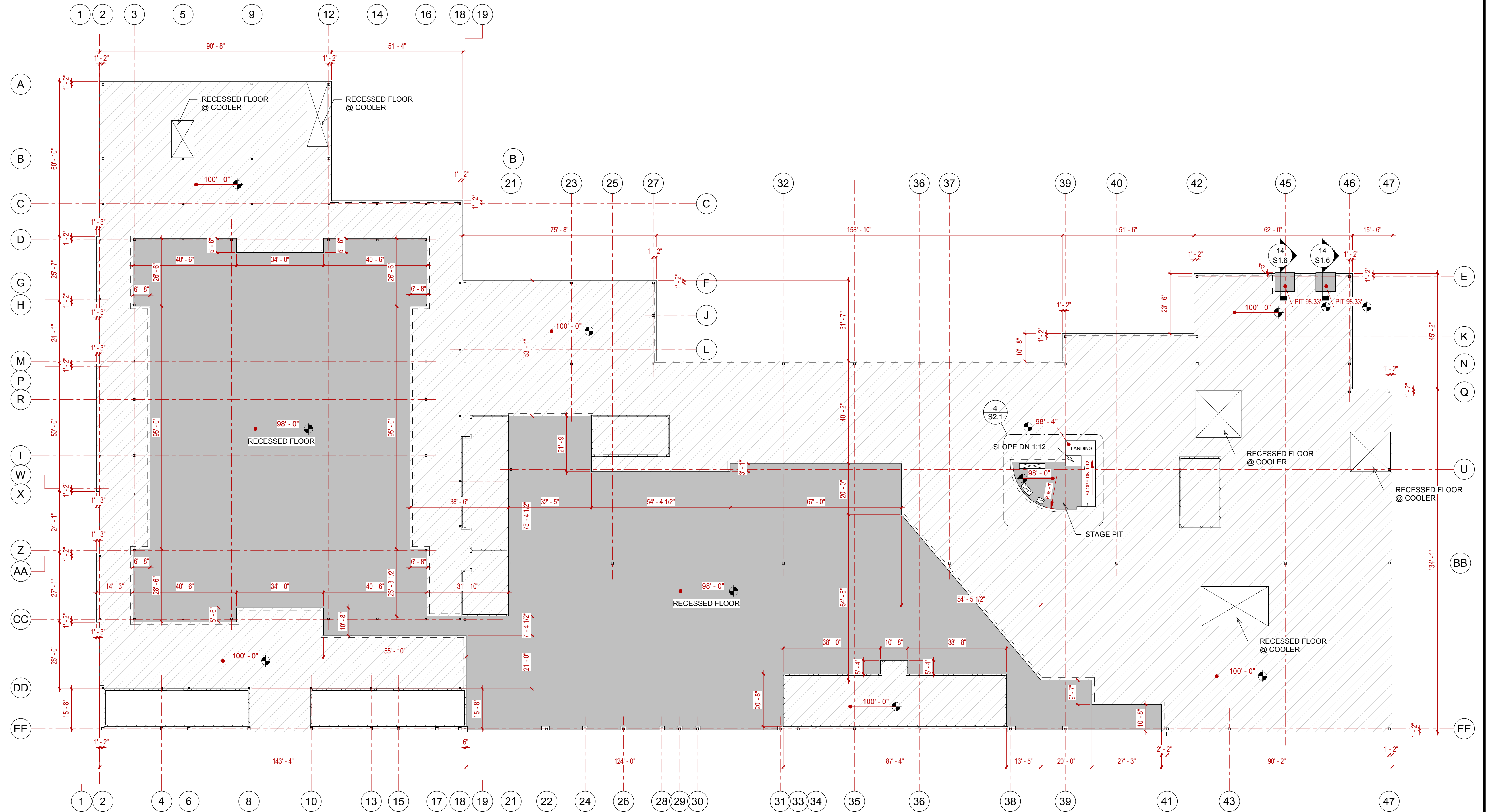
PROJECT PHASE:
**BID PACKAGE 02
(100%SET)**

REVISIONS		
#	DATE	DESCRIPTION
1	04/05/18	ADDENDUM #01

DATE: 03/27/18
JOB NUMBER: 17-06
SHEET NUMBER:

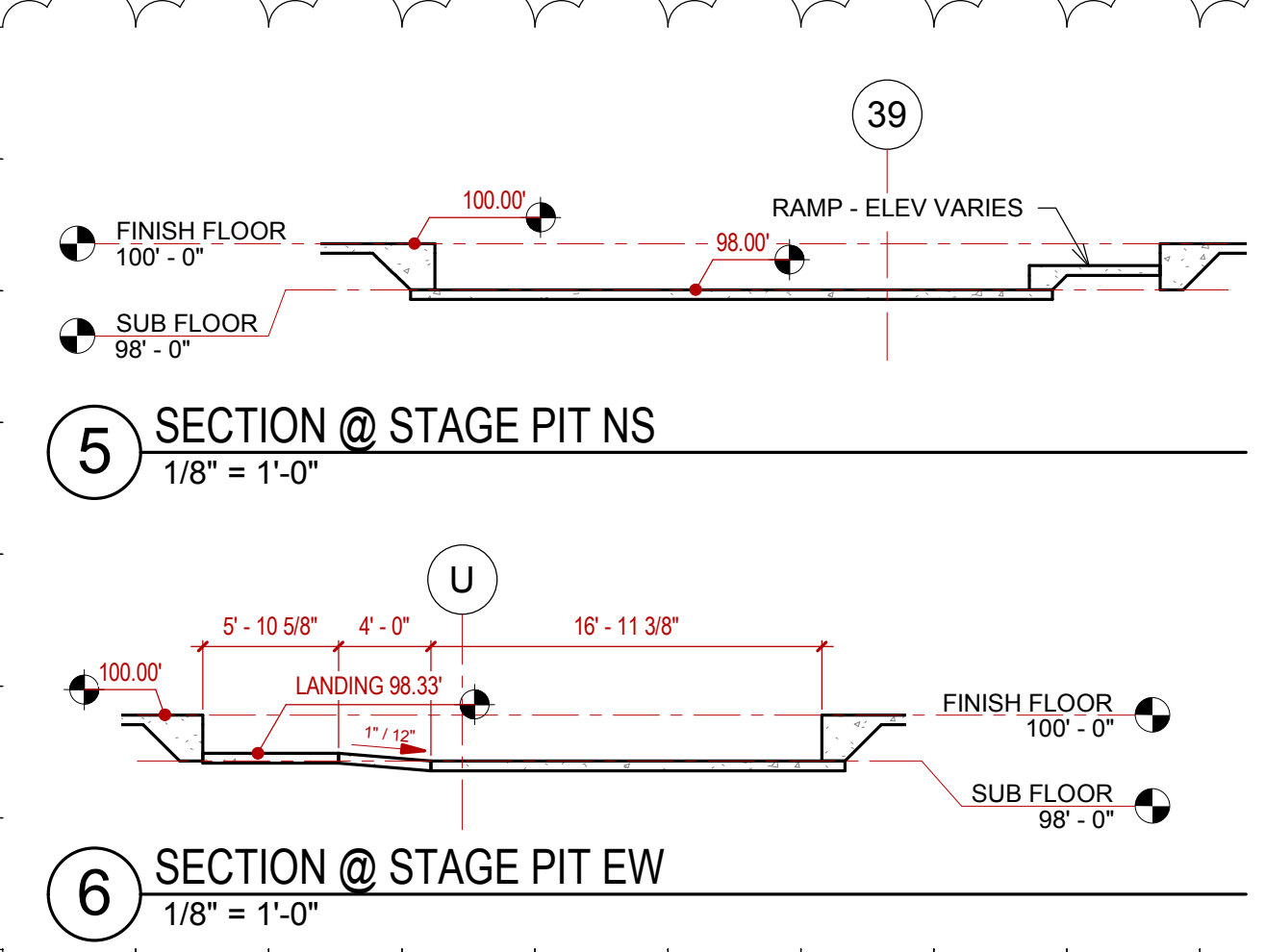
S2.1

SLAB PLAN



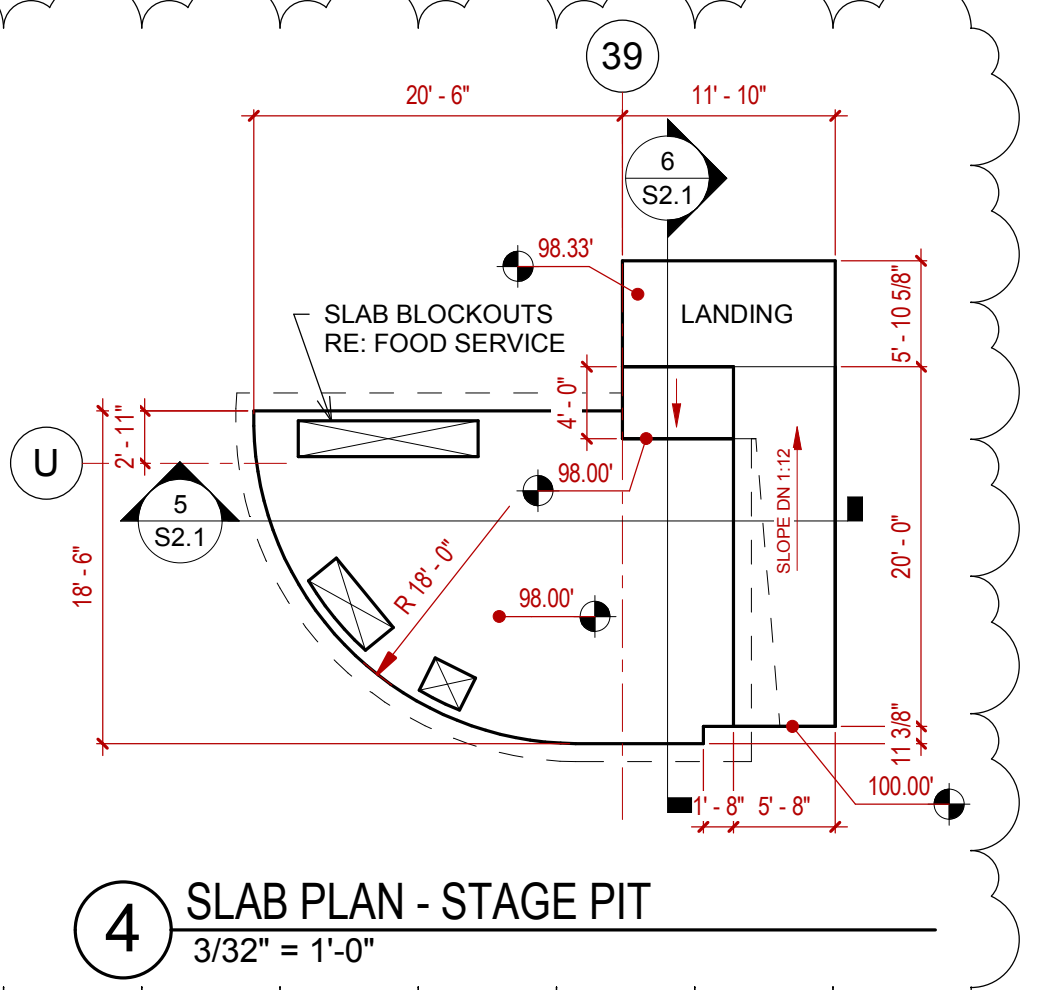
- PLAN NOTES:**
1. SLAB TO BE 5" CONCRETE W/ #3'S @ 18" O.C. E.W. ON 15 MIL VAPOR BARRIER ON 4" DRAINAGE FILL.
 2. ALL COLUMNS THAT EXTEND THROUGH THE SLAB TO HAVE A DIAMOND BLOCKOUT W/ 1/2" PRE-MOLD.
 3. SAW CUTS, W/ SEALANT, TO BE LOCATED AT ALL RE-ENTRANT CORNERS, TO BE 90° ANGLES, AND TO BE SPACED NO MORE THAN 12 FEET ON CENTER.
 4. COORDINATE WITH MEP PLAN FOR FLOOR DRAIN LOCATIONS.
 5. COORDINATE WITH FOOD SERVICE PLAN FOR LOCATIONS OF FLOOR DRAINS, TRENCH DRAINS, RECESSED COOLERS, ETC.
 6. ALL DIMENSIONS ARE TO EDGE OF SLAB, U.N.O.

1 SLAB PLAN - OVERALL
3/64" = 1'-0"

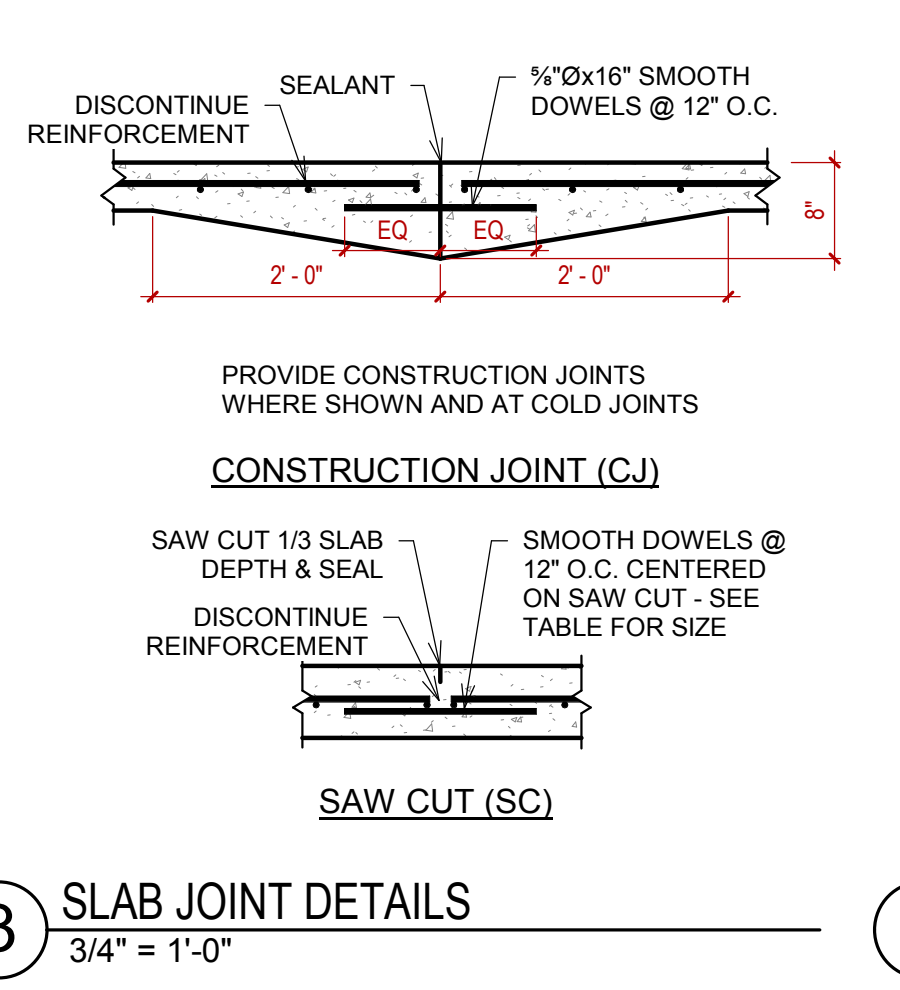


5 SECTION @ STAGE PIT NS
1/8" = 1'-0"

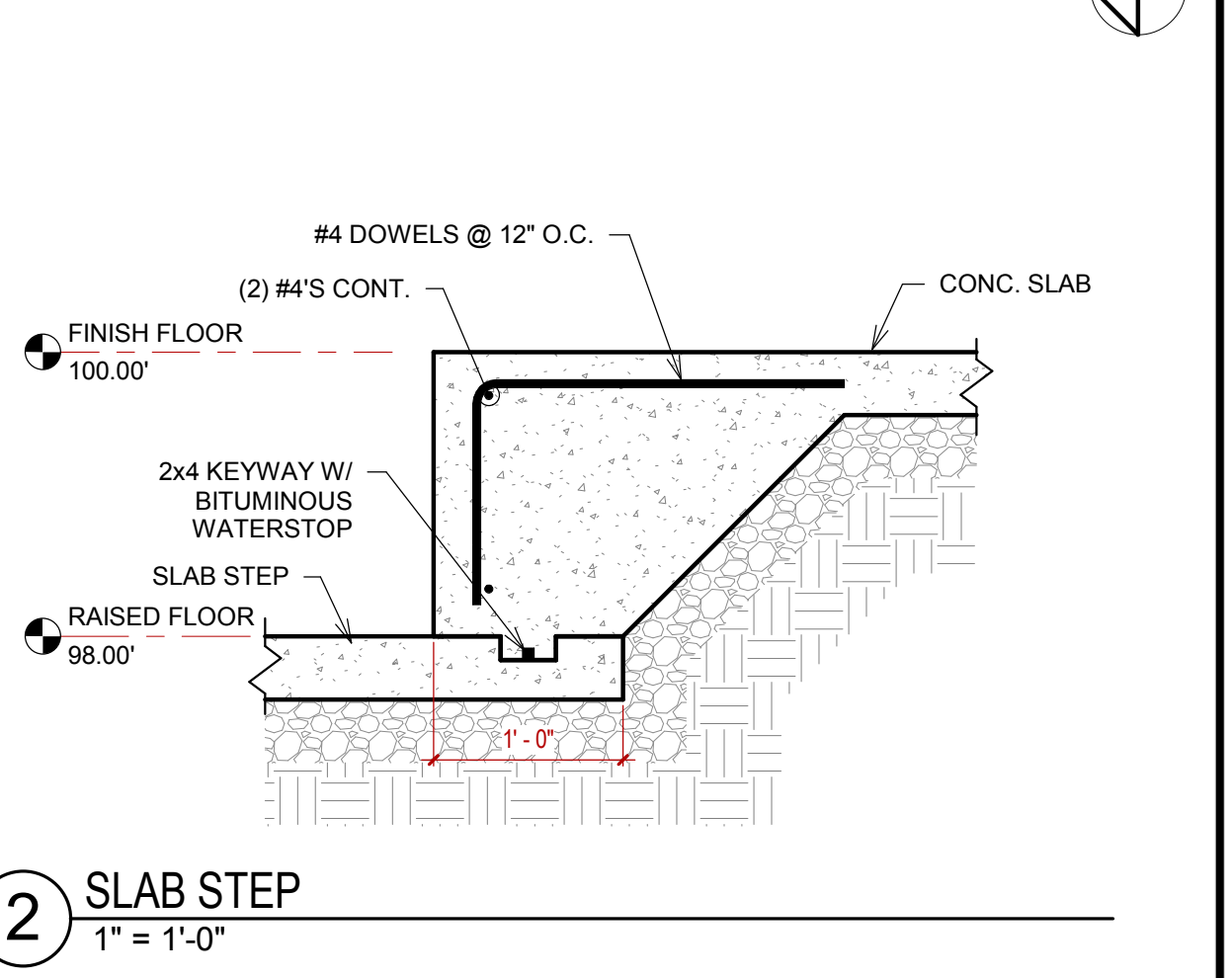
6 SECTION @ STAGE PIT EW
1/8" = 1'-0"



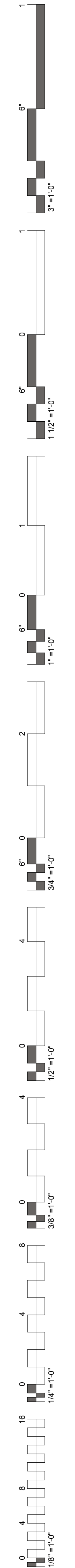
4 SLAB PLAN - STAGE PIT
3/32" = 1'-0"

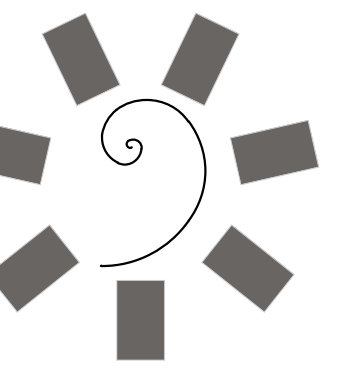


3 SLAB JOINT DETAILS
3/4" = 1'-0"



2 SLAB STEP
1" = 1'-0"





James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:

Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100%SET)

#	DATE	REVISIONS	DESCRIPTION
1	04/05/18	ADDENDUM #01	

DATE: 03/27/18
JOB NUMBER: 17-06

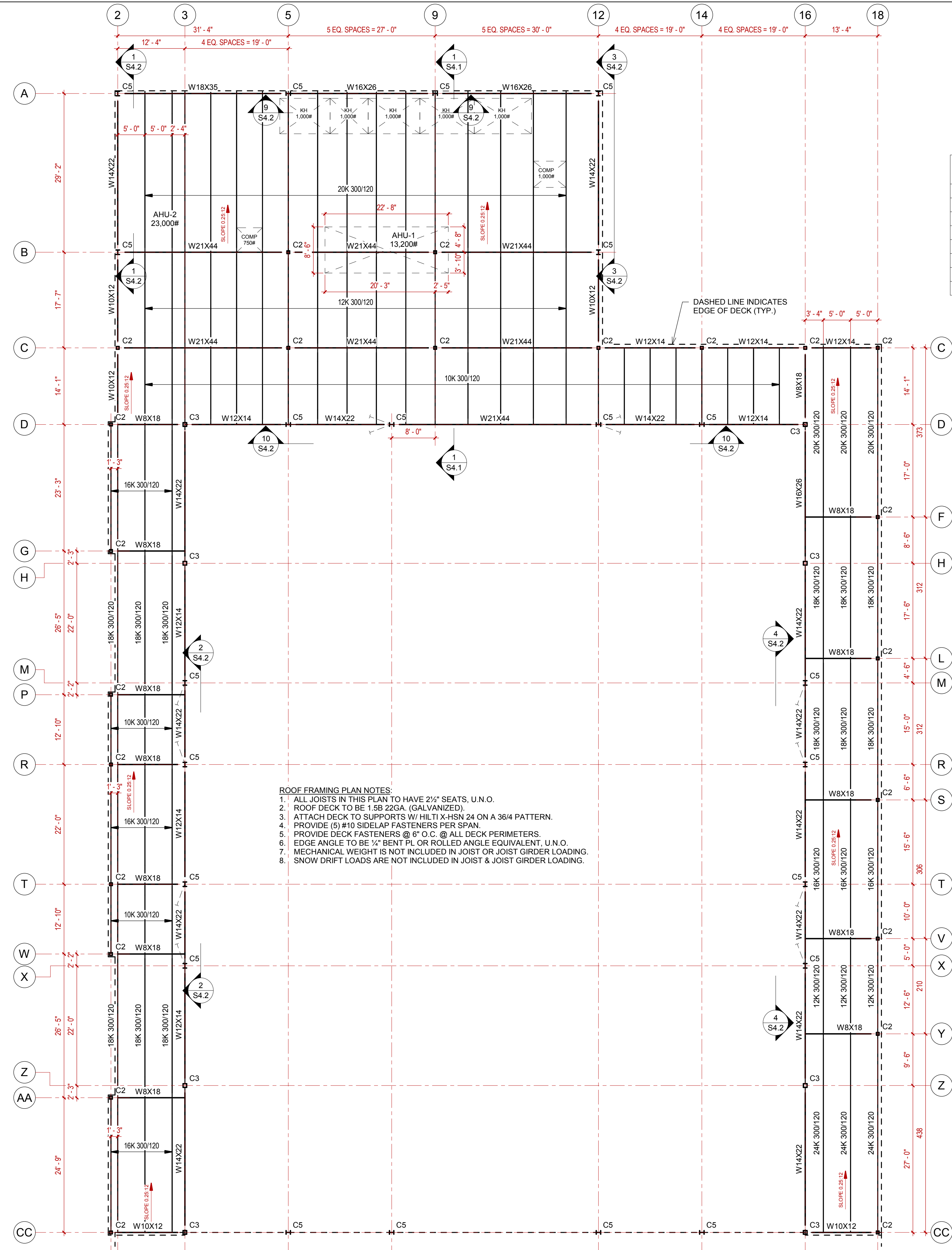
SHEET NUMBER: S3.1

ROOF FRAMING PLANS

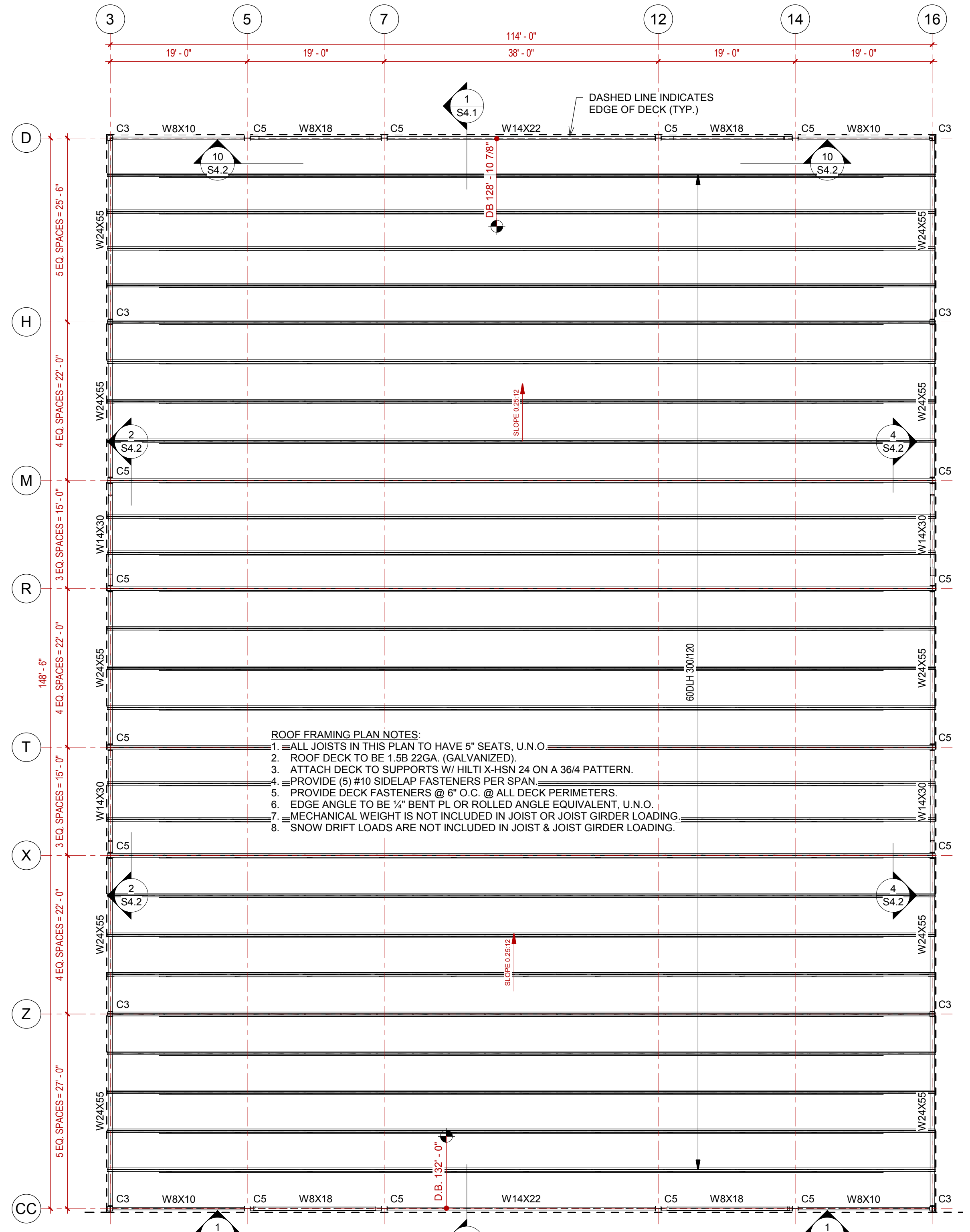
STRUCTURAL STEEL COLUMN SCHEDULE	
COL MARK	SIZE
C2	HSS6X6X1/4
C3	HSS8X8X1/4
C4	HSS10X10X1/4
C5	W10X33
C6	HSS12X12X1/4
C7	HSS12X12X3/8
C8	W10X49

ROOF FRAMING PLAN NOTES:
 1. ALL JOISTS IN THIS PLAN TO HAVE 2 1/2" SEATS, U.N.O.
 2. ROOF DECK TO BE 1.5B 22GA. (GALVANIZED).
 3. ATTACH DECK TO SUPPORTS W/ HILTI X-HSN 24 ON A 36/4 PATTERN.
 4. PROVIDE (5) #10 SIDELAP FASTENERS PER SPAN.
 5. PROVIDE DECK FASTENERS @ 6" O.C. @ ALL DECK PERIMETERS.
 6. EDGE ANGLE TO BE 1/2" BENT PL OR ROLLED ANGLE EQUIVALENT, U.N.O.
 7. MECHANICAL WEIGHT IS NOT INCLUDED IN JOIST OR JOIST GIRDER LOADING.
 8. SNOW DRIFT LOADS ARE NOT INCLUDED IN JOIST & JOIST GIRDER LOADING.

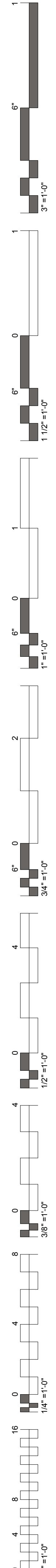
ROOF FRAMING PLAN NOTES:
 1. ALL JOISTS IN THIS PLAN TO HAVE 5" SEATS, U.N.O.
 2. ROOF DECK TO BE 1.5B 22GA. (GALVANIZED).
 3. ATTACH DECK TO SUPPORTS W/ HILTI X-HSN 24 ON A 36/4 PATTERN.
 4. PROVIDE (5) #10 SIDELAP FASTENERS PER SPAN.
 5. PROVIDE DECK FASTENERS @ 6" O.C. @ ALL DECK PERIMETERS.
 6. EDGE ANGLE TO BE 1/2" BENT PL OR ROLLED ANGLE EQUIVALENT, U.N.O.
 7. MECHANICAL WEIGHT IS NOT INCLUDED IN JOIST OR JOIST GIRDER LOADING.
 8. SNOW DRIFT LOADS ARE NOT INCLUDED IN JOIST & JOIST GIRDER LOADING.

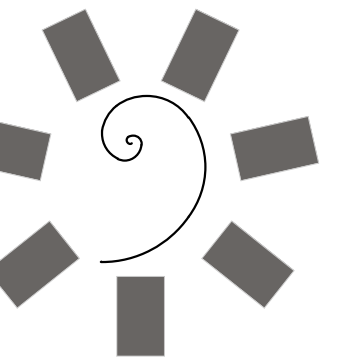


2 ROOF FRAMING PLAN - CONVENTION - DB LO
3/32" = 1'-0"

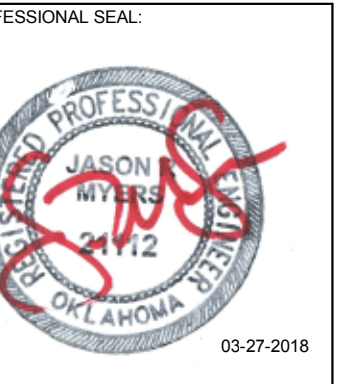


1 ROOF FRAMING PLAN - CONVENTION - DB HI
3/32" = 1'-0"





James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:
Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 75056
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CLIENT:
CHEROKEE NATION
Entertainment
Cherokee
CASINO
TAHLEQUAH, OKLAHOMA

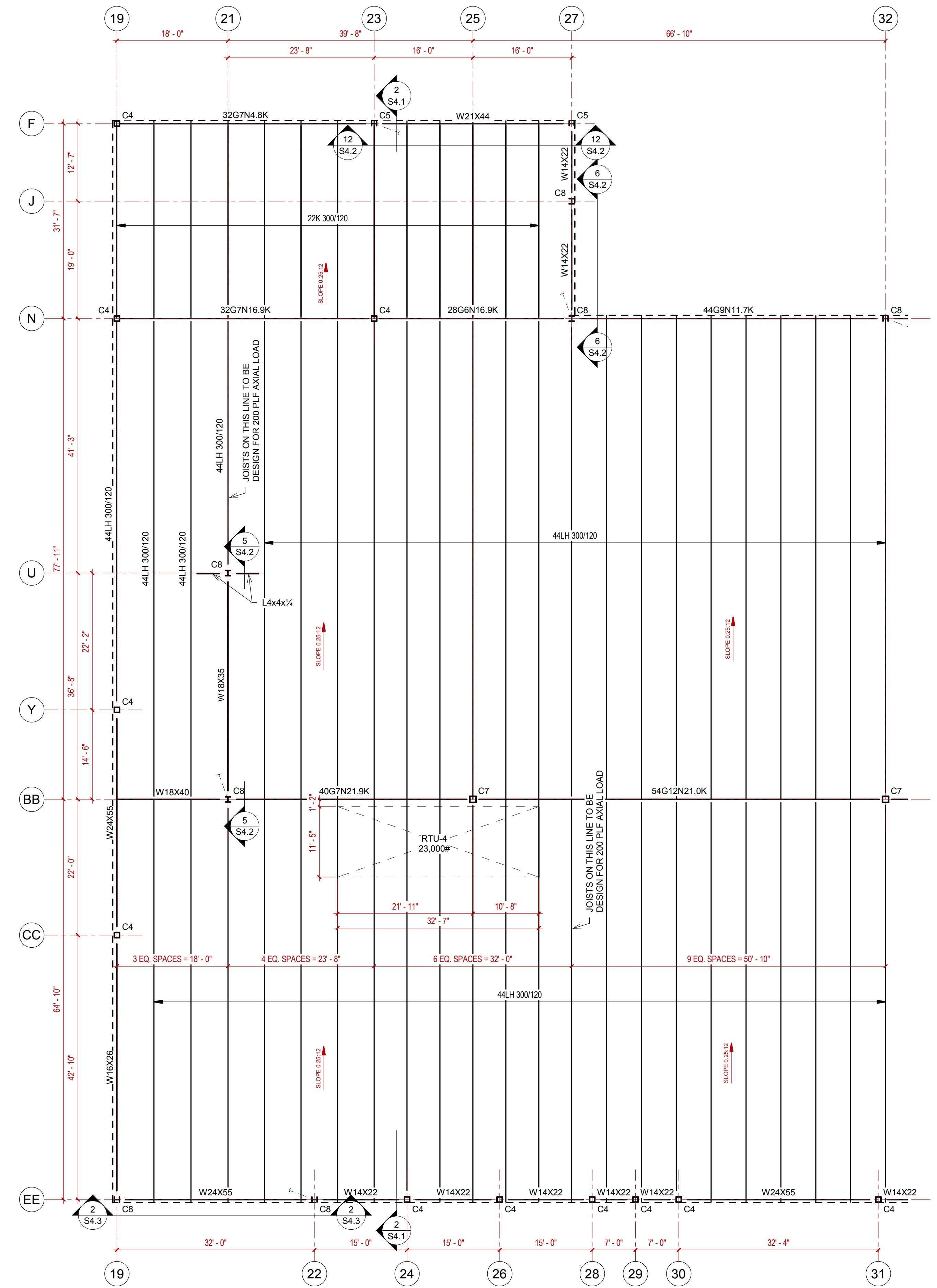
PROJECT PHASE:
BID PACKAGE 02
(100%SET)

#	DATE	REVISIONS DESCRIPTION
1	04/05/18	ADDENDUM #01

DATE: 03/27/18
JOB NUMBER: 17-06

SHEET NUMBER: S3.2

ROOF FRAMING PLANS

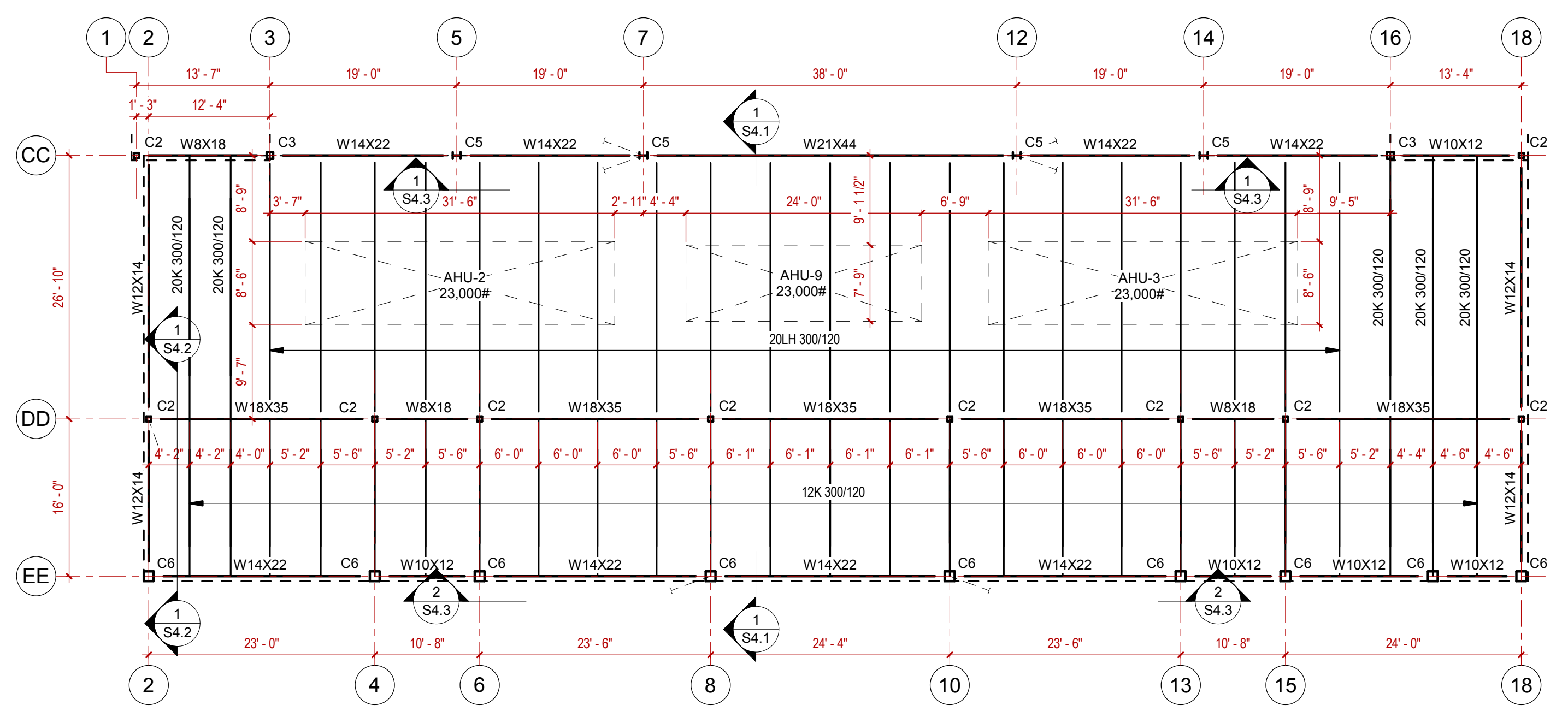


2 ROOF FRAMING PLAN - CASINO - NORTH
3/32" = 1'-0"

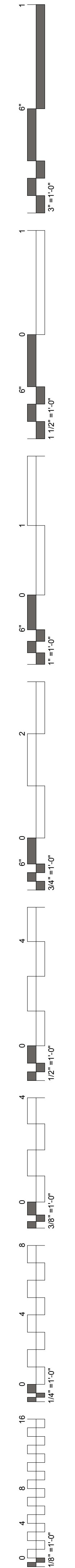
- ROOF FRAMING PLAN NOTES:**
1. ALL JOISTS IN THIS PLAN TO HAVE 5" SEATS, U.N.O.
 2. ROOF DECK TO BE 1.5B 22GA. (GALVANIZED).
 3. ATTACH DECK TO SUPPORTS W/ HILTI X-HSN 24 ON A 36/4 PATTERN.
 4. PROVIDE (5) #10 SIDELAP FASTENERS PER SPAN.
 5. PROVIDE DECK FASTENERS @ 6" O.C. @ ALL DECK PERIMETERS.
 6. EDGE ANGLE TO BE 1/2" BENT PL OR ROLLED ANGLE EQUIVALENT, U.N.O.
 7. MECHANICAL WEIGHT IS NOT INCLUDED IN JOIST OR JOIST GIRDER LOADING.
 8. SNOW DRIFT LOADS ARE NOT INCLUDED IN JOIST & JOIST GIRDER LOADING.

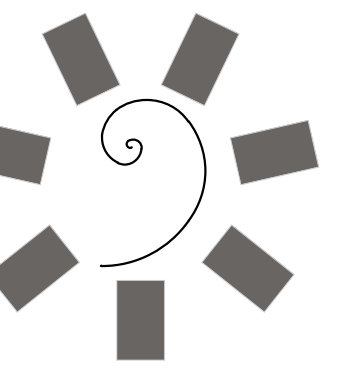
STRUCTURAL STEEL COLUMN SCHEDULE

COL MARK	SIZE
C2	HSS6X6X1/4
C3	HSS8X8X1/4
C4	HSS10X10X1/4
C5	W10X33
C6	HSS12X12X3/8
C7	HSS12X12X3/8
C8	W10X49



1 ROOF FRAMING PLAN - CONVENTION - FOH
3/32" = 1'-0"





James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO

Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com

CLIENT:
CHEROKEE NATION
Entertainment



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

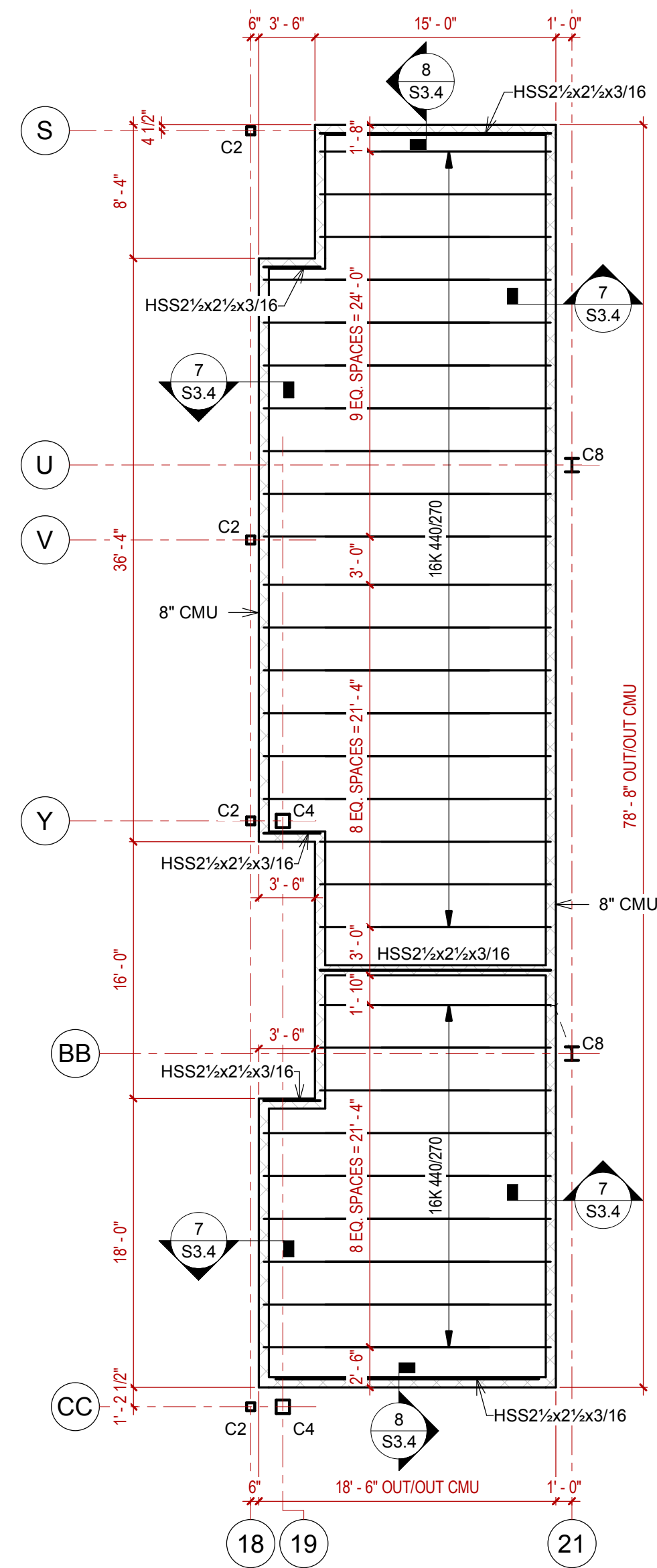
PROJECT PHASE:
BID PACKAGE 02
(100%SET)

REVISIONS		
#	DATE	DESCRIPTION
1	04/05/18	ADDENDUM #01

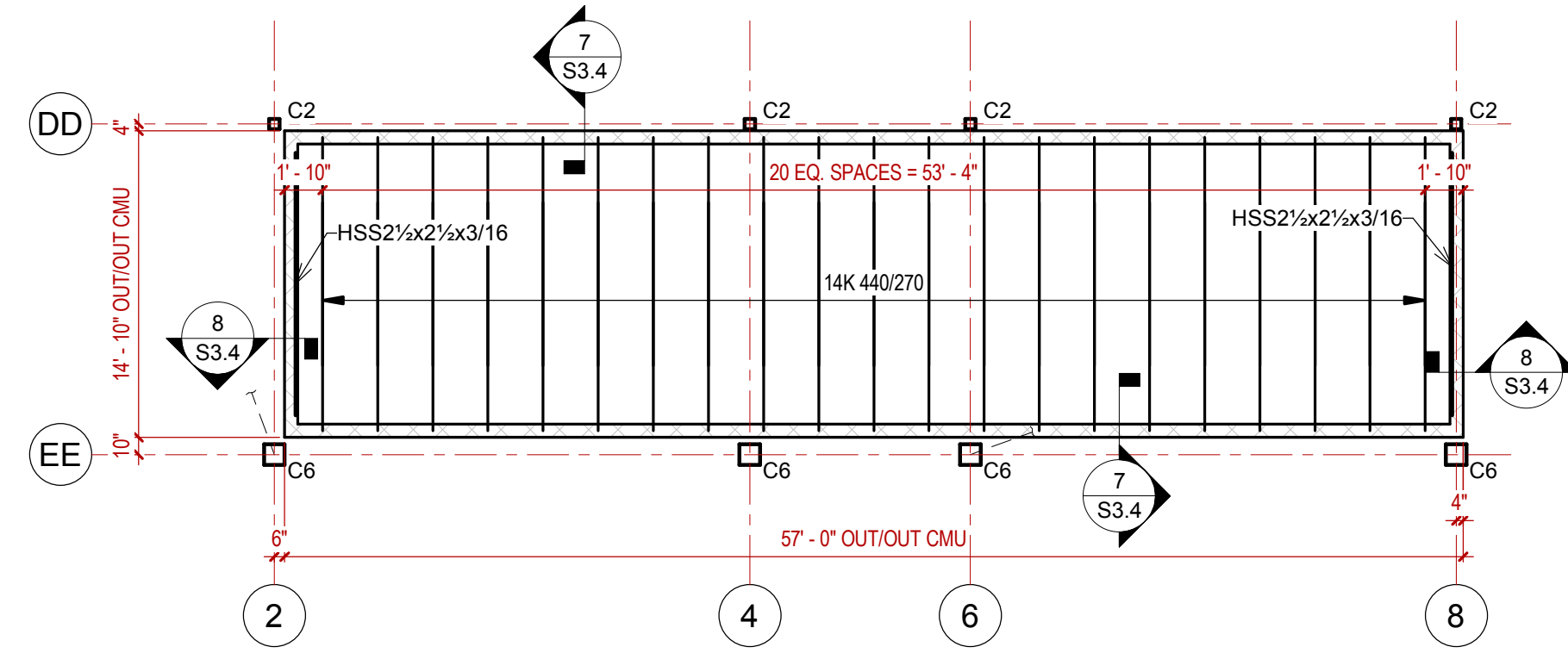
DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: S3.4

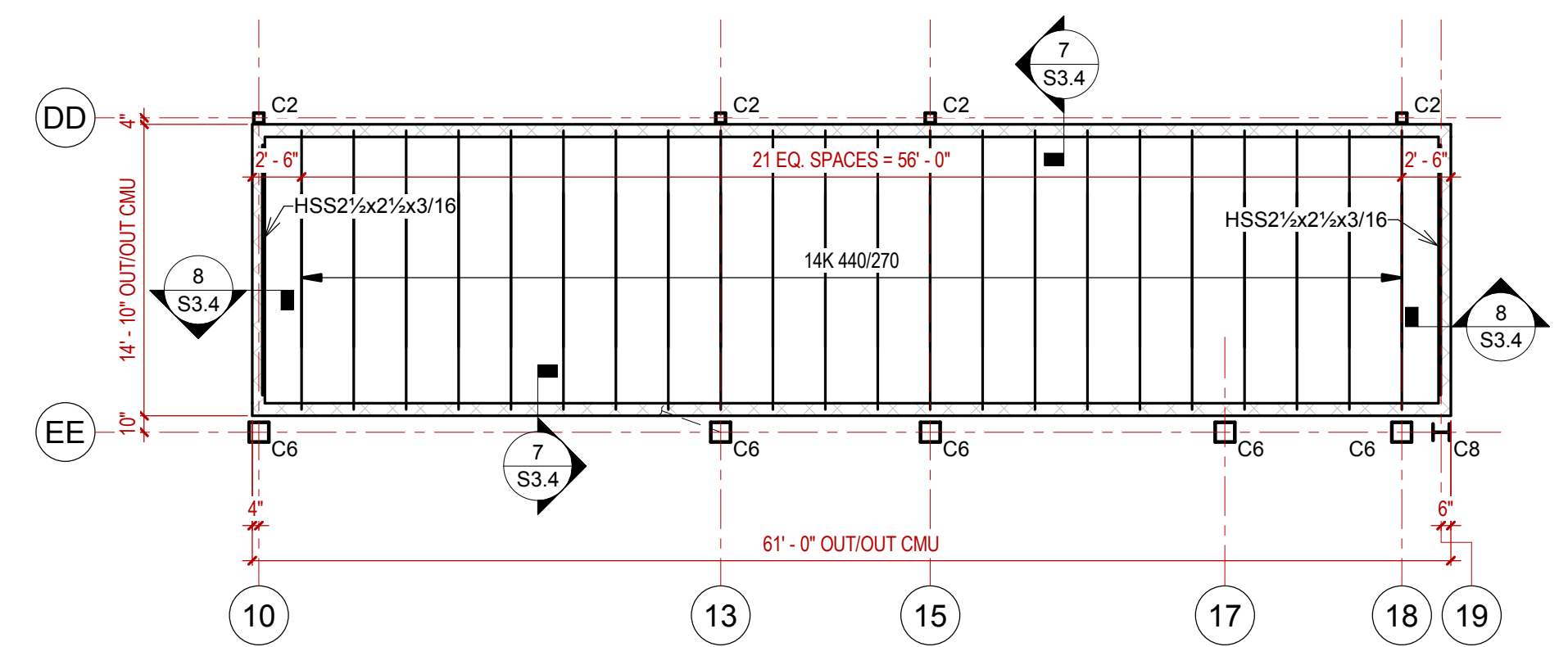
SAFER ROOMS
FRAMING PLANS



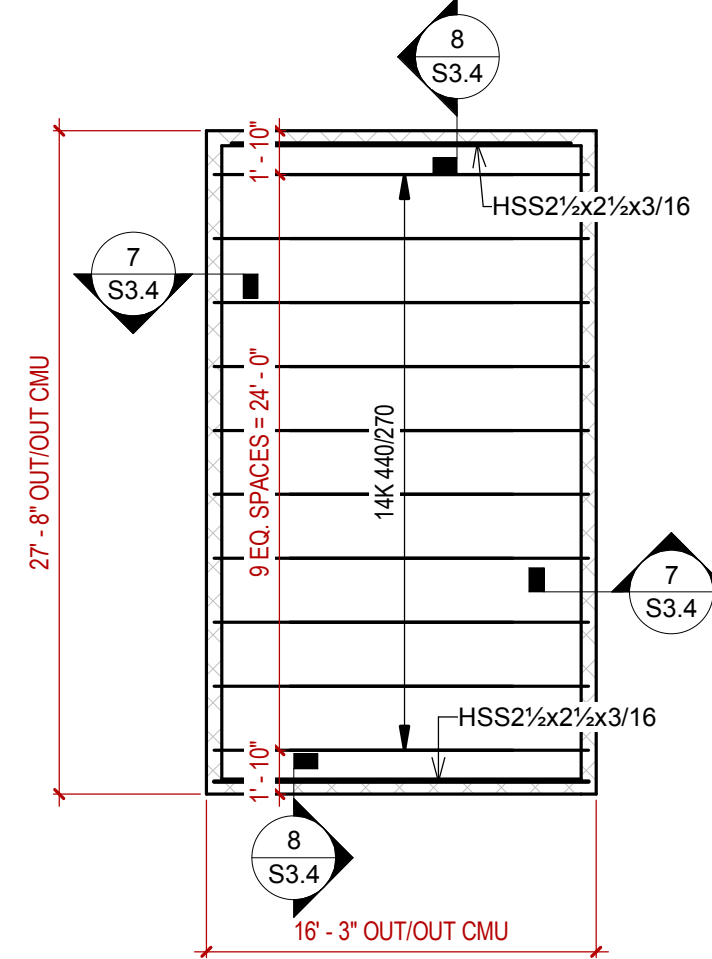
5 ROOF FRAMING PLAN - SAFER ROOM - BREAKOUT 93,94 & 95
1/8" = 1'-0"



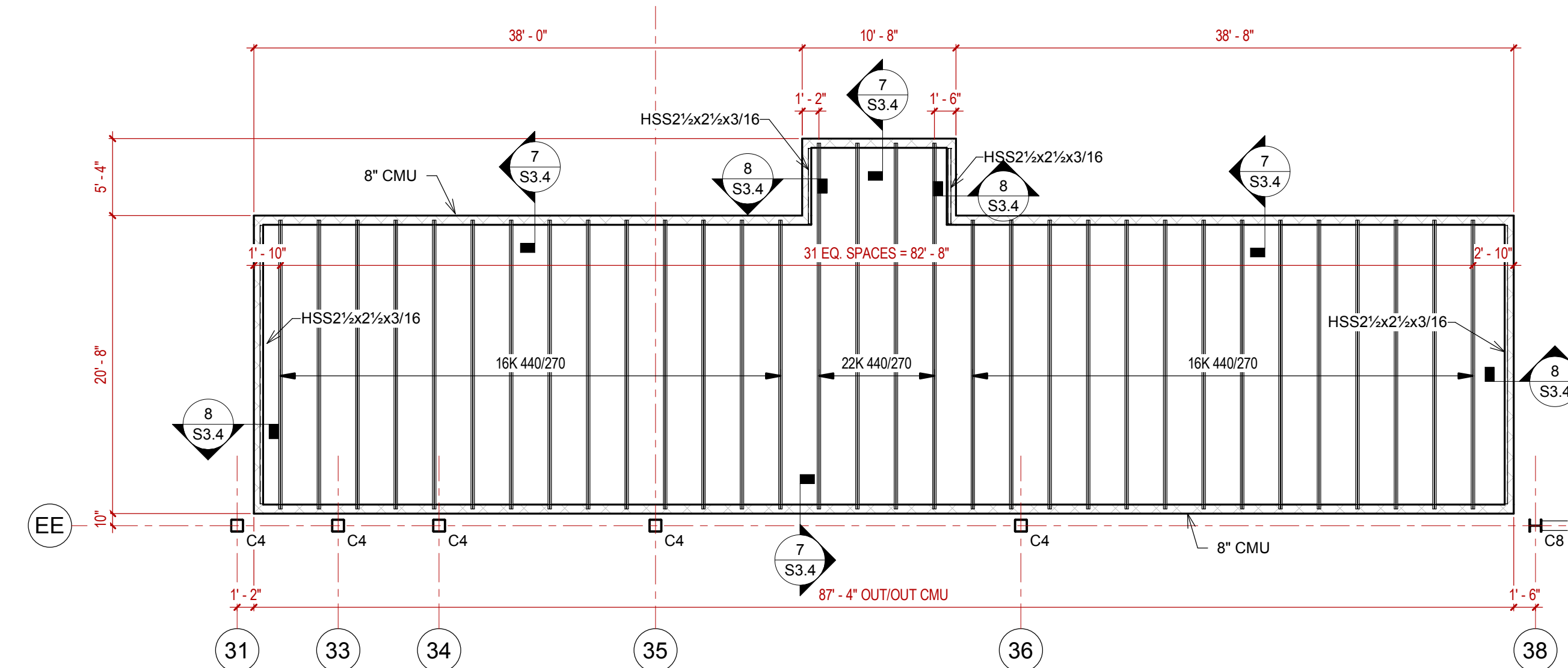
2 ROOF FRAMING PLAN - SAFER ROOM - MENS 90
1/8" = 1'-0"



1 ROOF FRAMING PLAN - SAFER ROOM - WOMENS 92
1/8" = 1'-0"



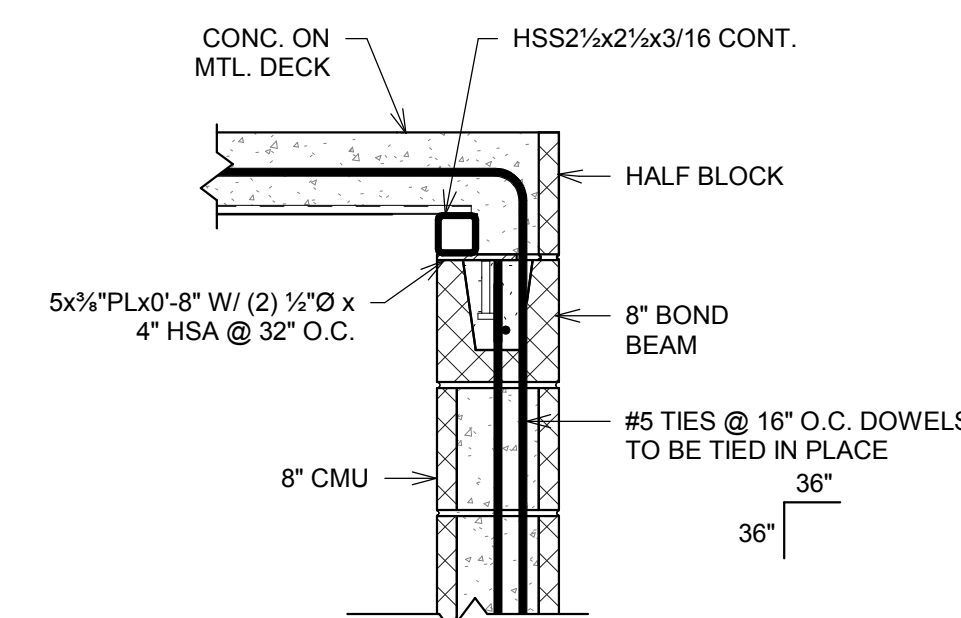
4 ROOF FRAMING PLAN - SAFER ROOM - MENS 73 & WOMENS 74
1/8" = 1'-0"



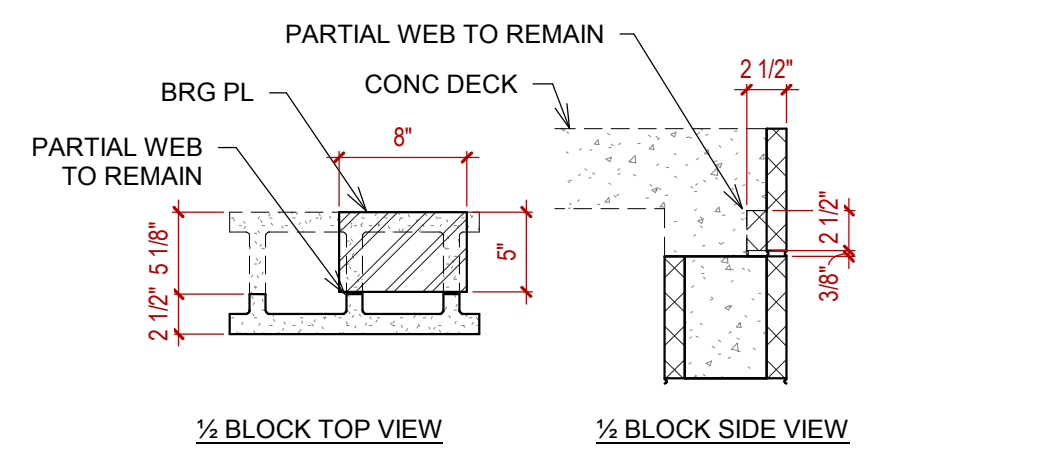
3 ROOF FRAMING PLAN - SAFER ROOM - MENS 11 & WOMENS 13
1/8" = 1'-0"

STRUCTURAL STEEL COLUMN SCHEDULE	
COL MARK	SIZE
C2	HSS6X6X1/4
C3	HSS8X8X1/4
C4	HSS10X10X1/4
C5	W10X33
C6	HSS12X12X1/4
C7	HSS12X12X3/8
C8	W10X49

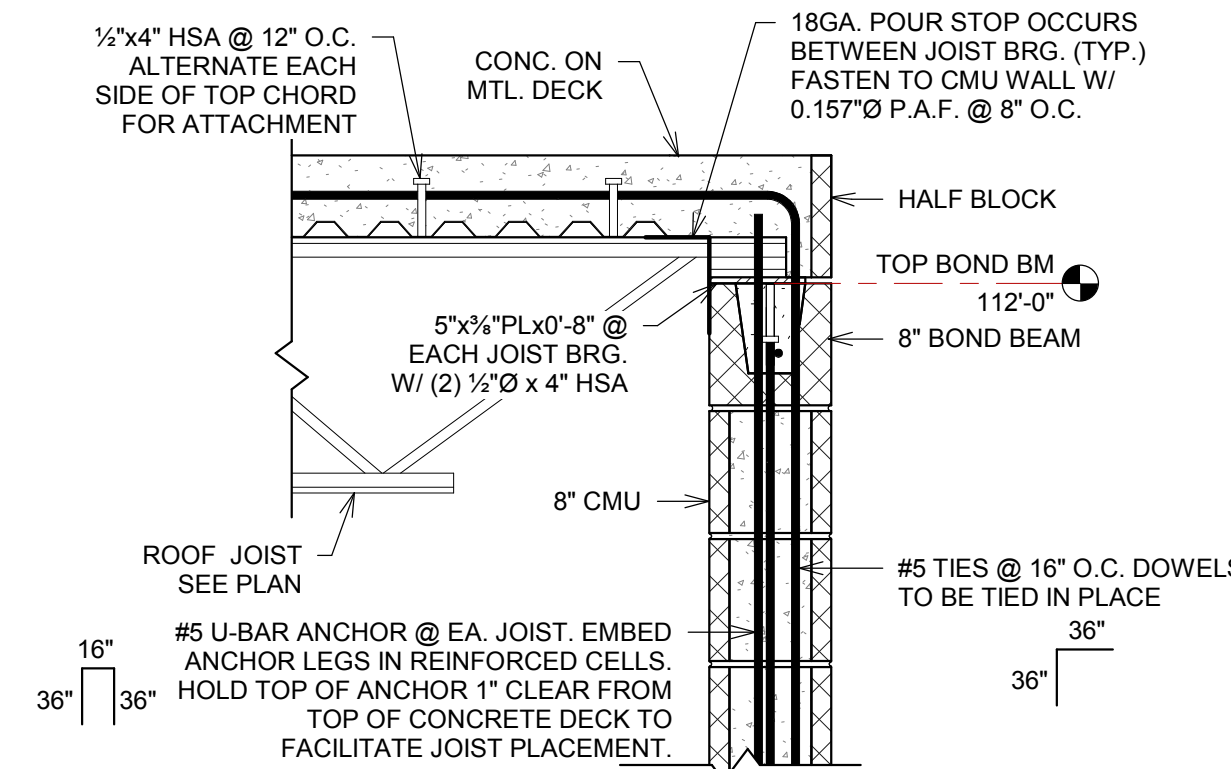
- SAFER ROOM FRAMING NOTES:
- SAFER ROOM WALLS TO BE 8" CMU W/ #5'S @ 16" O.C. GROUT FILL ALL CELLS.
 - ROOF DECK TO BE 5" TOTAL THICKNESS NW CONCRETE ON 1.0C 24GA (GALV.)
 - REINFORCE SLAB W/ 6x6-W2.1xW2.1 W.W.F.
 - ATTACH DECK TO SUPPORTS W/ HILTI X-HSN 24 PAF @ 8" O.C. @ DECK PERIMETERS. ATTACH TO BAR JOISTS W/ FIELD WELDED HSA'S. SIDE LAP FASTENERS ARE NOT REQUIRED.
 - PROVIDE 1/2"x4" HSA @ 12" O.C. ALONG ALL BAR JOIST. ALTERNATE TOP CHORD ANGLES FOR ATTACHMENT.
 - ALL JOIST TOP CHORD THICKNESSES TO BE SUFFICIENT TO ACCOMMODATE HSA ATTACHMENT.
 - JOISTS TO BE DESIGNED FOR A NET UPLIFT OF 100PSF. JOIST SEATS TO BE DESIGNED TO ACCOMMODATE 3/16" FILLET WELDS.
 - COORD. W/ ARCH FOR DOOR OPENINGS.
 - COORD. W/ MEP FOR DECK PENETRATIONS AND PROTECTION OF DUCT OPENINGS.



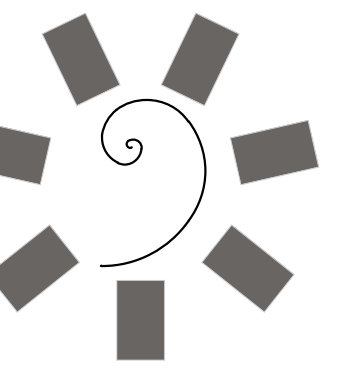
8 SAFER ROOM - DECK TO CMU
1" = 1'-0"



7 SAFER ROOM - JOIST TO CMU
1" = 1'-0"



6 ROOF FRAMING PLAN - SAFER ROOM - WOMENS 22 & MENS 24
1/8" = 1'-0"



James R. Childers
Architect, Inc.
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO:

Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100%SET)

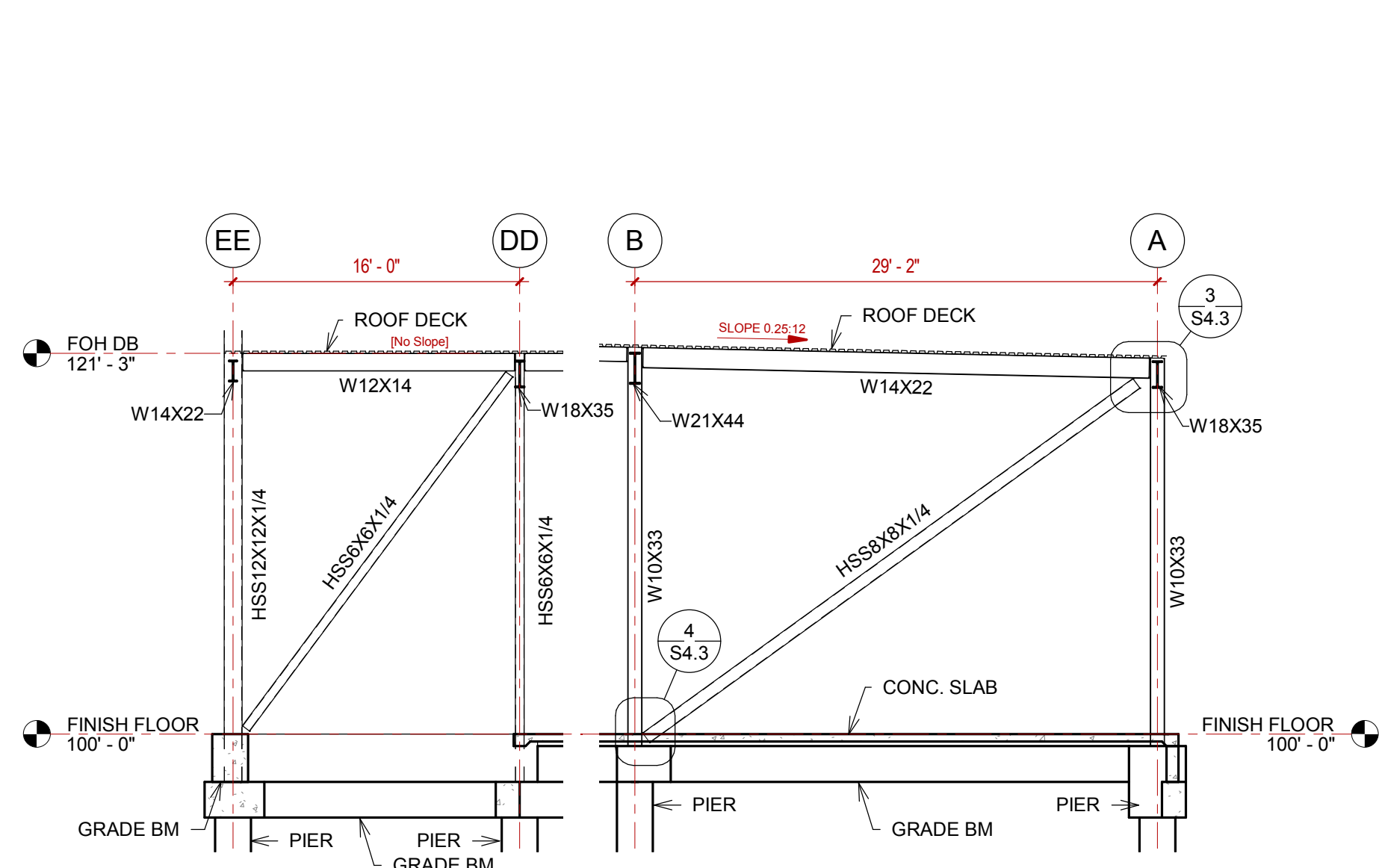
#	DATE	DESCRIPTION
1	04/05/18	ADDENDUM #01

DATE: 03/27/18 JOB NUMBER: 17-06

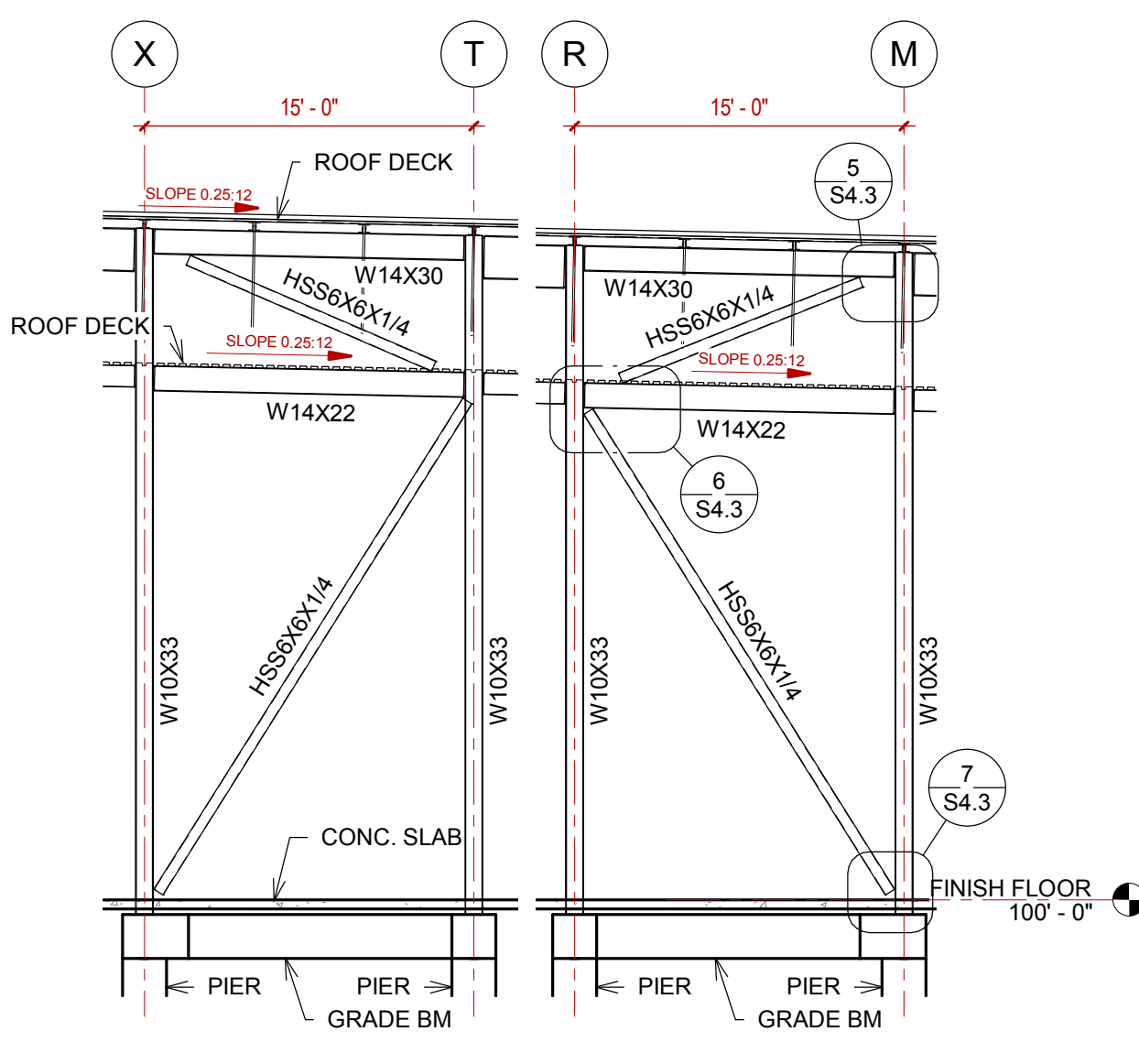
SHEET NUMBER: 4

S4.2

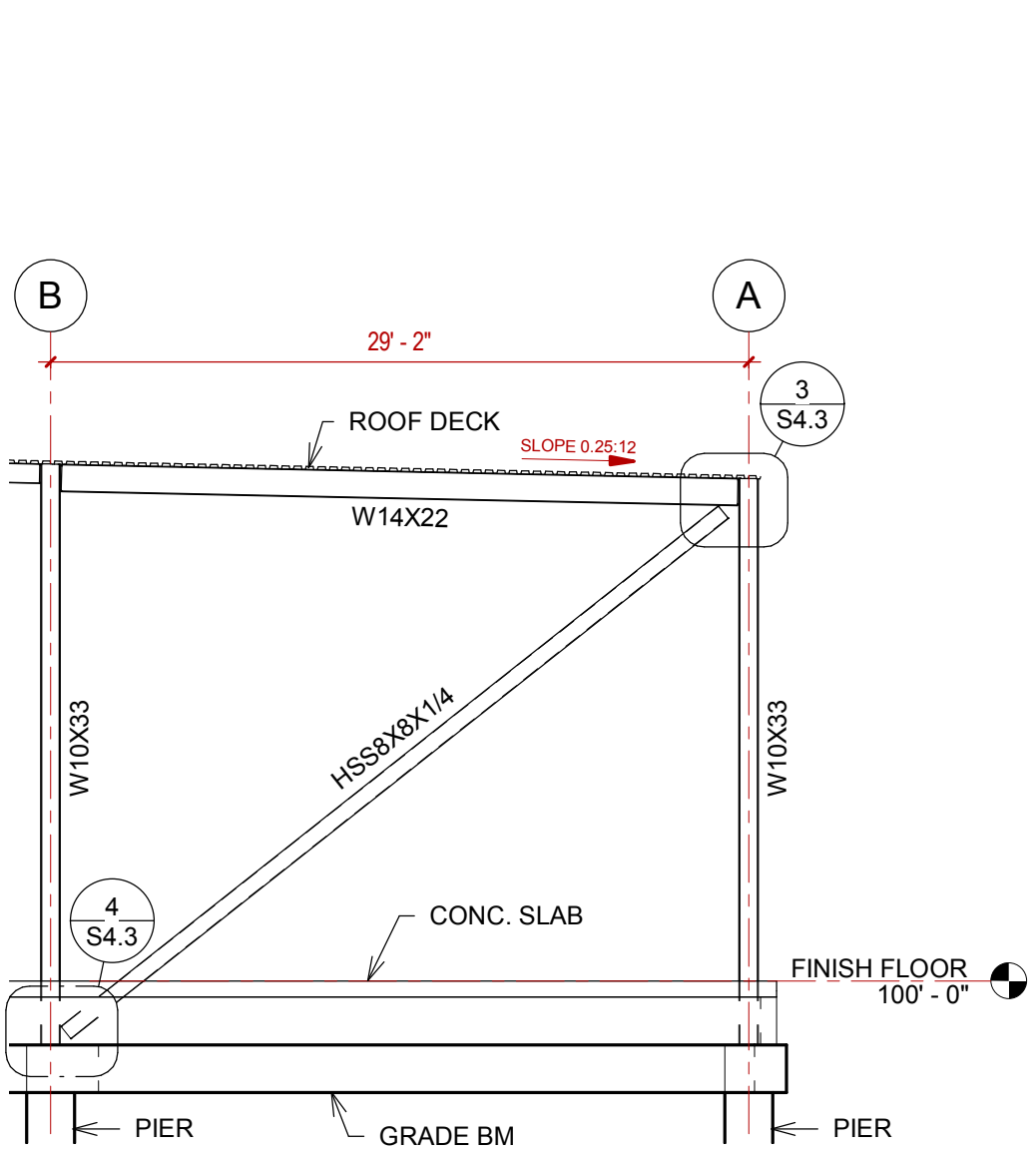
FRAME ELEVATIONS



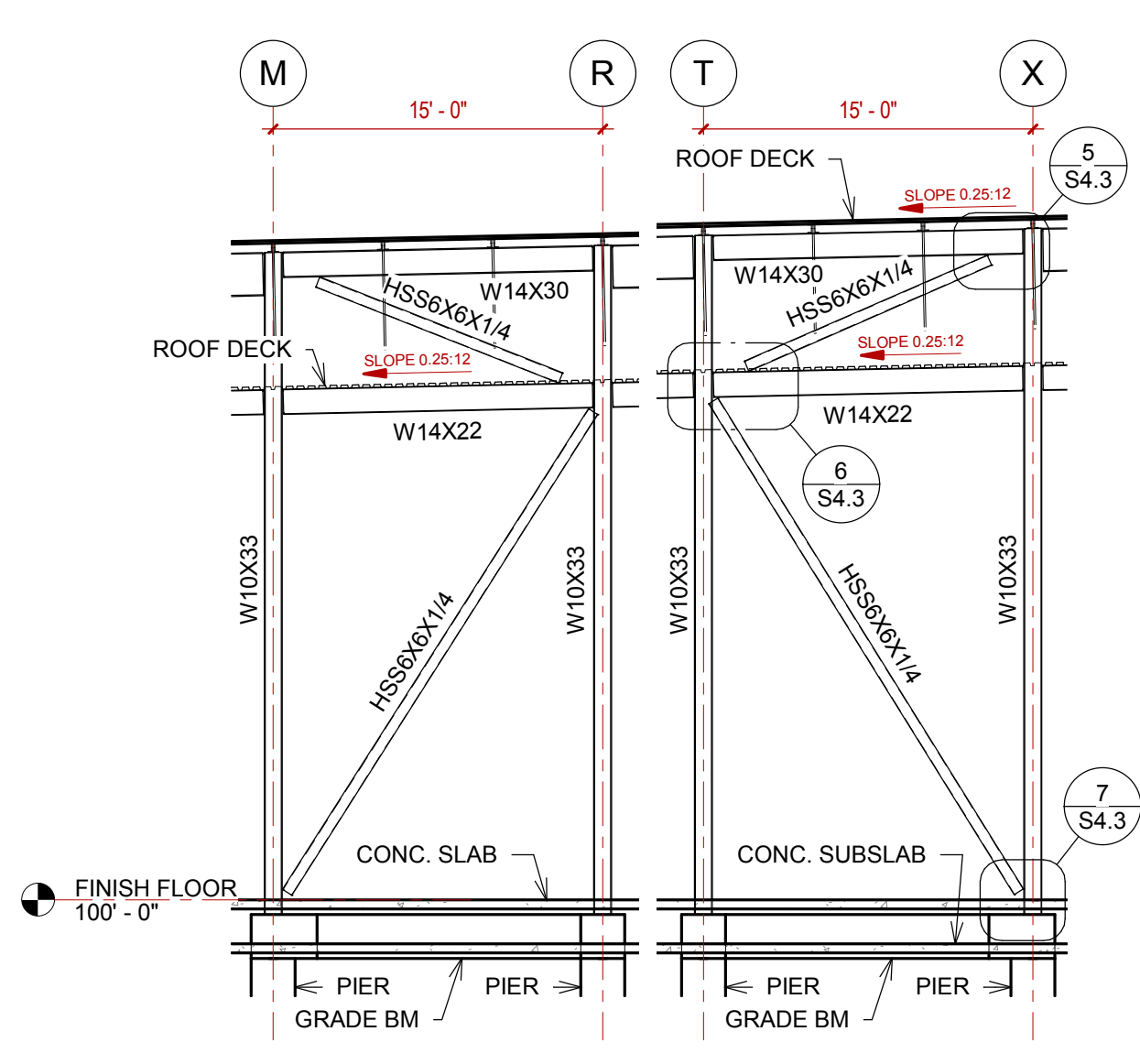
1 FRAME ELEVATION @ GRID '2'
1/8" = 1'-0"



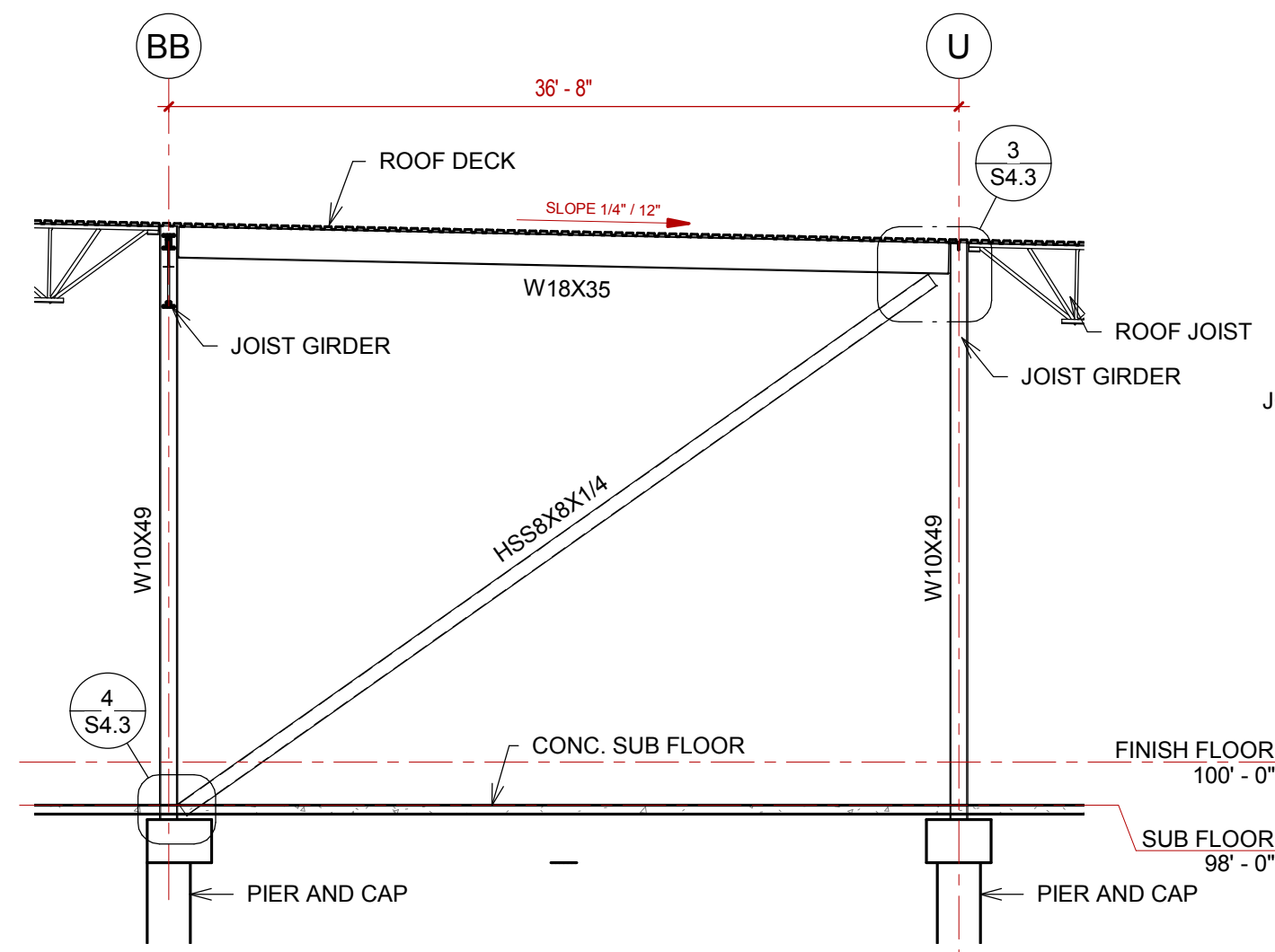
2 FRAME ELEVATION @ GRID '3'
1/8" = 1'-0"



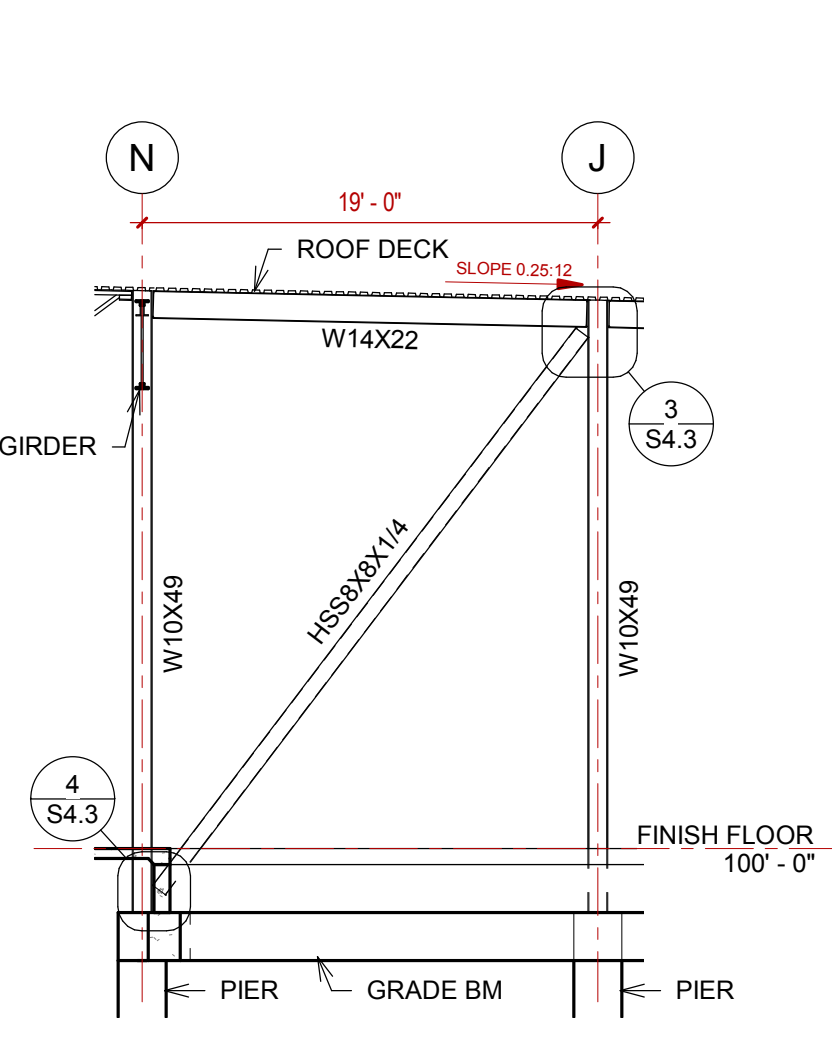
3 FRAME ELEVATION @ GRID '12'
1/8" = 1'-0"



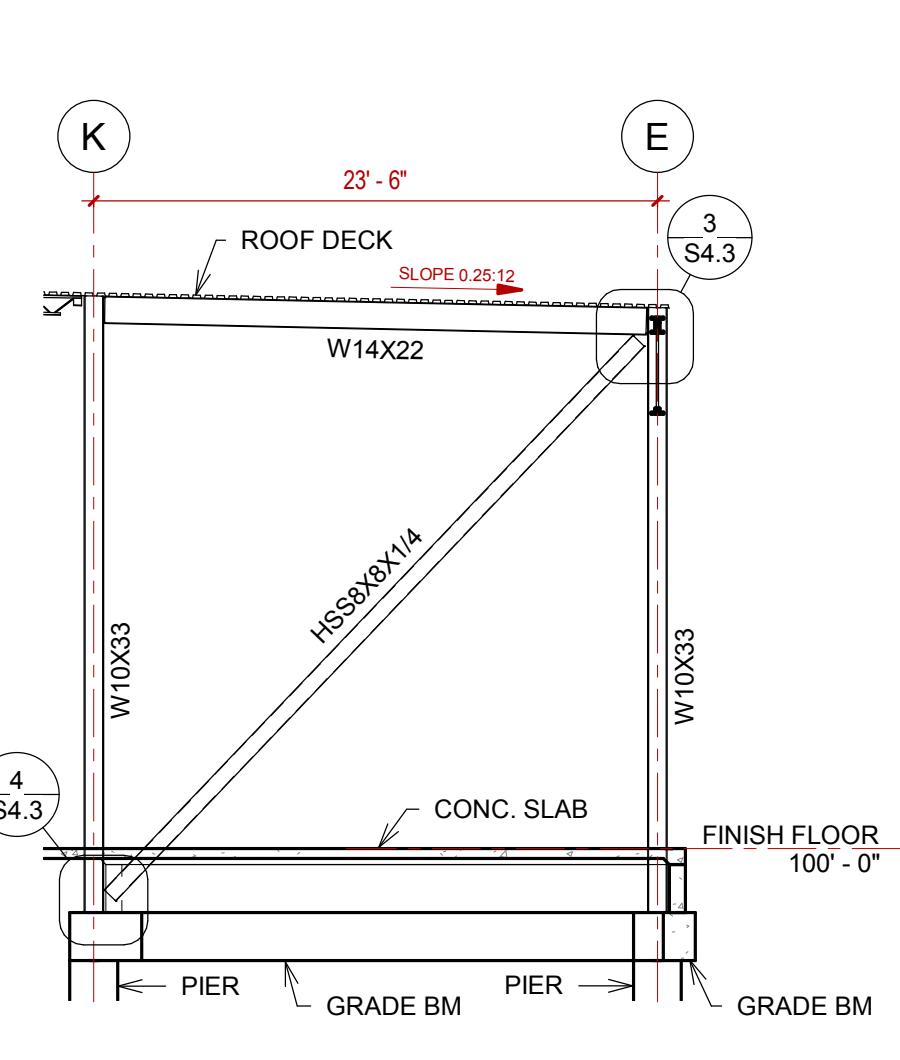
4 FRAME ELEVATION @ GRID '16'
1/8" = 1'-0"



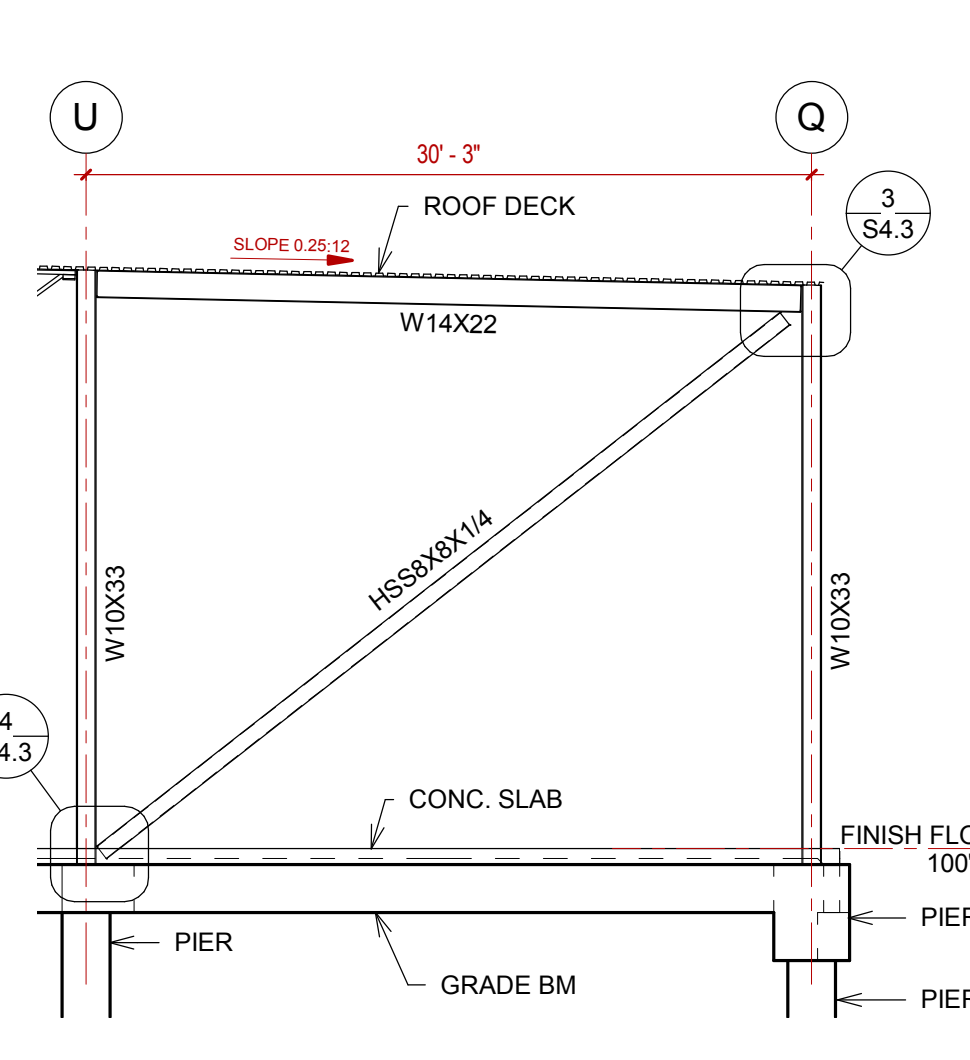
5 FRAME ELEVATION @ GRID '21'
1/8" = 1'-0"



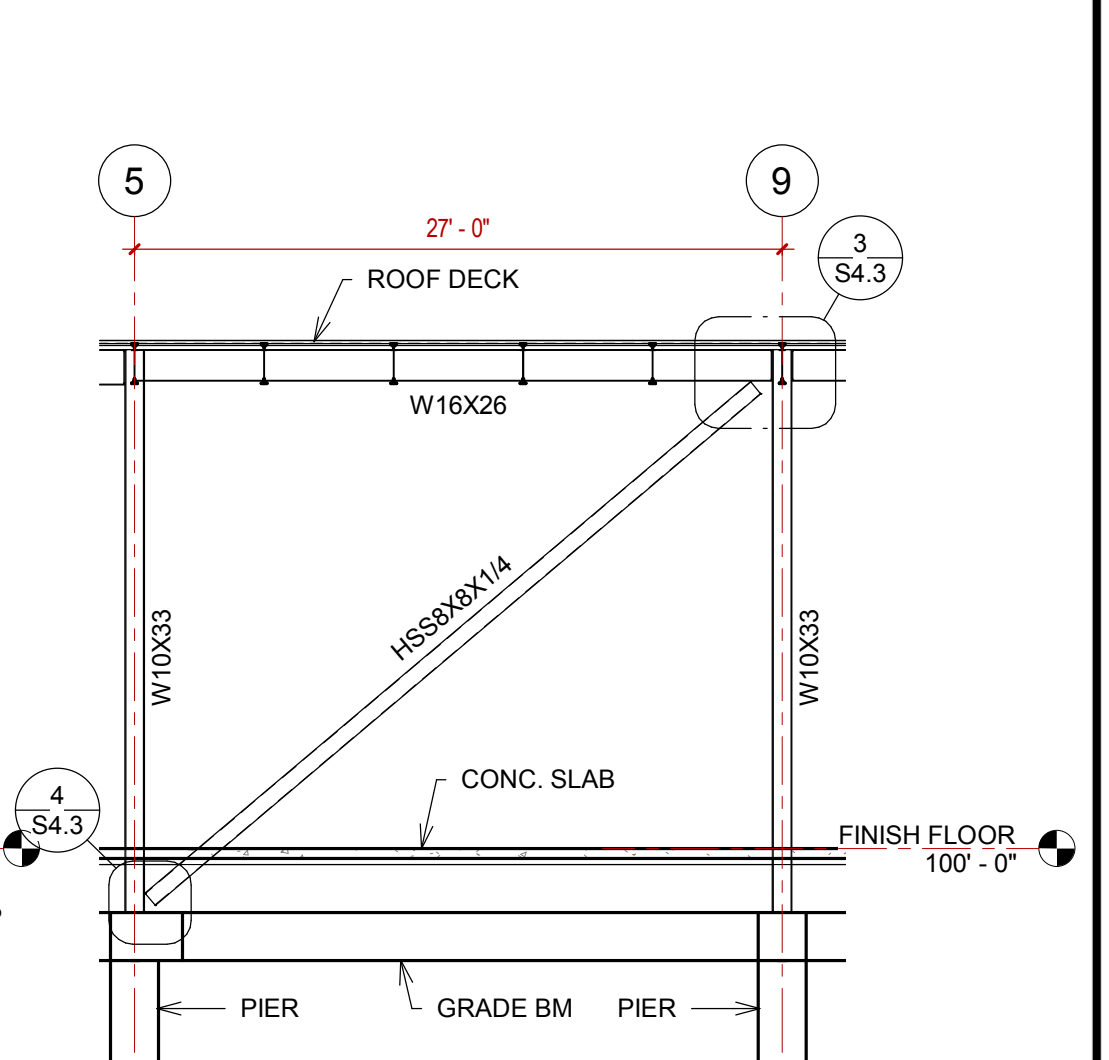
6 FRAME ELEVATION @ GRID '27'
1/8" = 1'-0"



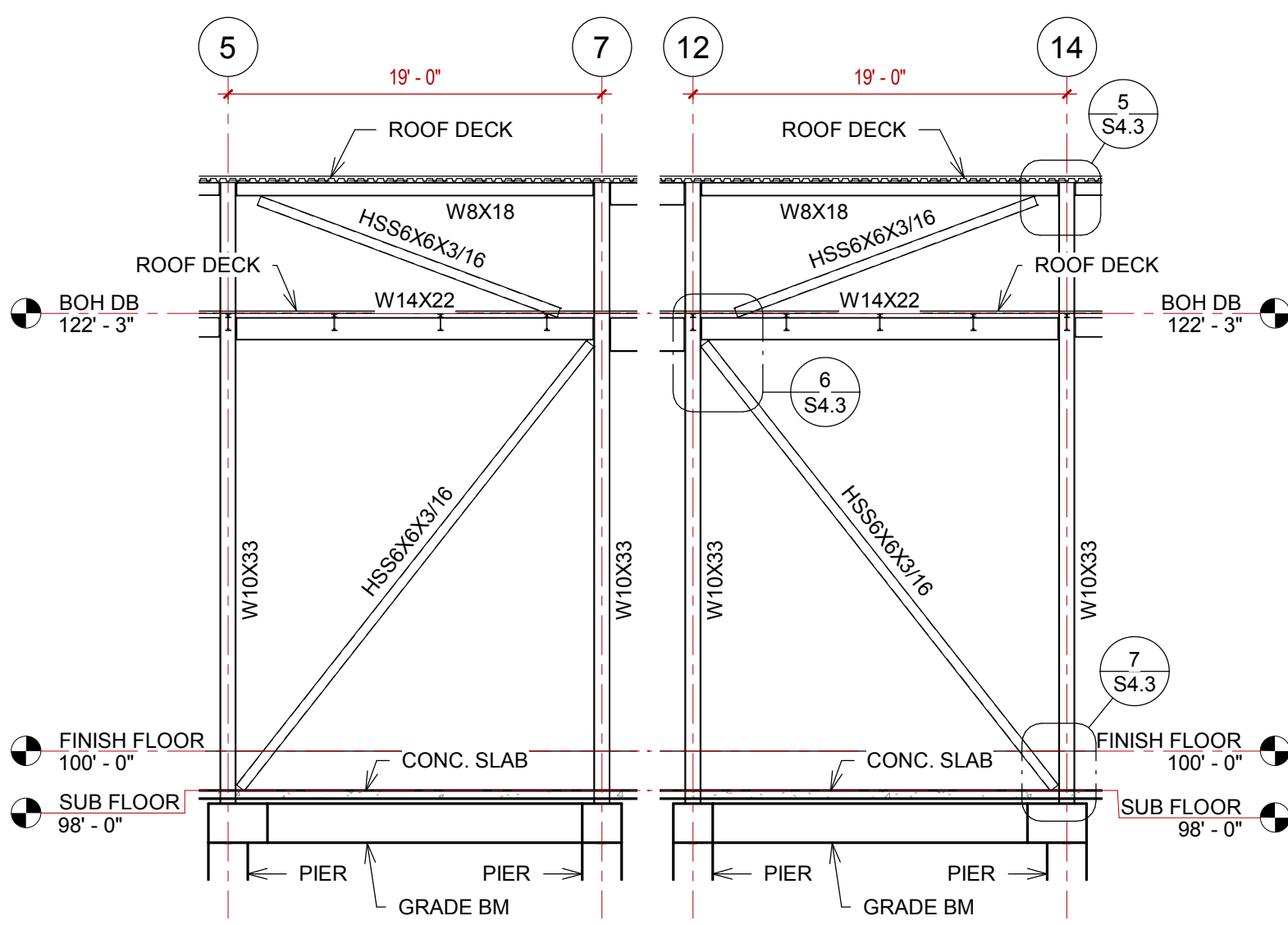
7 FRAME ELEVATION @ GRID '42'
1/8" = 1'-0"



8 FRAME ELEVATION @ GRID '47'
1/8" = 1'-0"



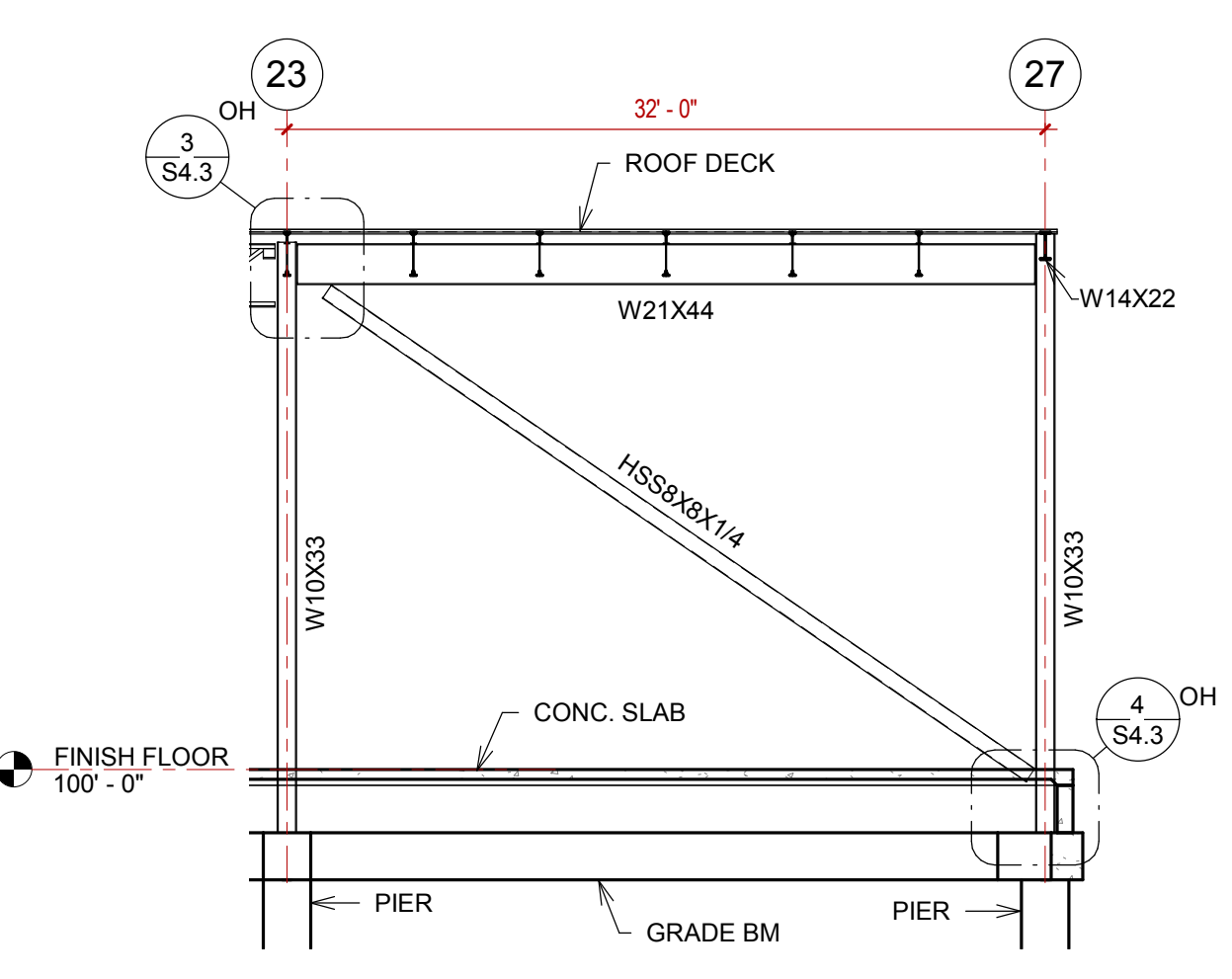
9 FRAME ELEVATION @ GRID 'A'
1/8" = 1'-0"



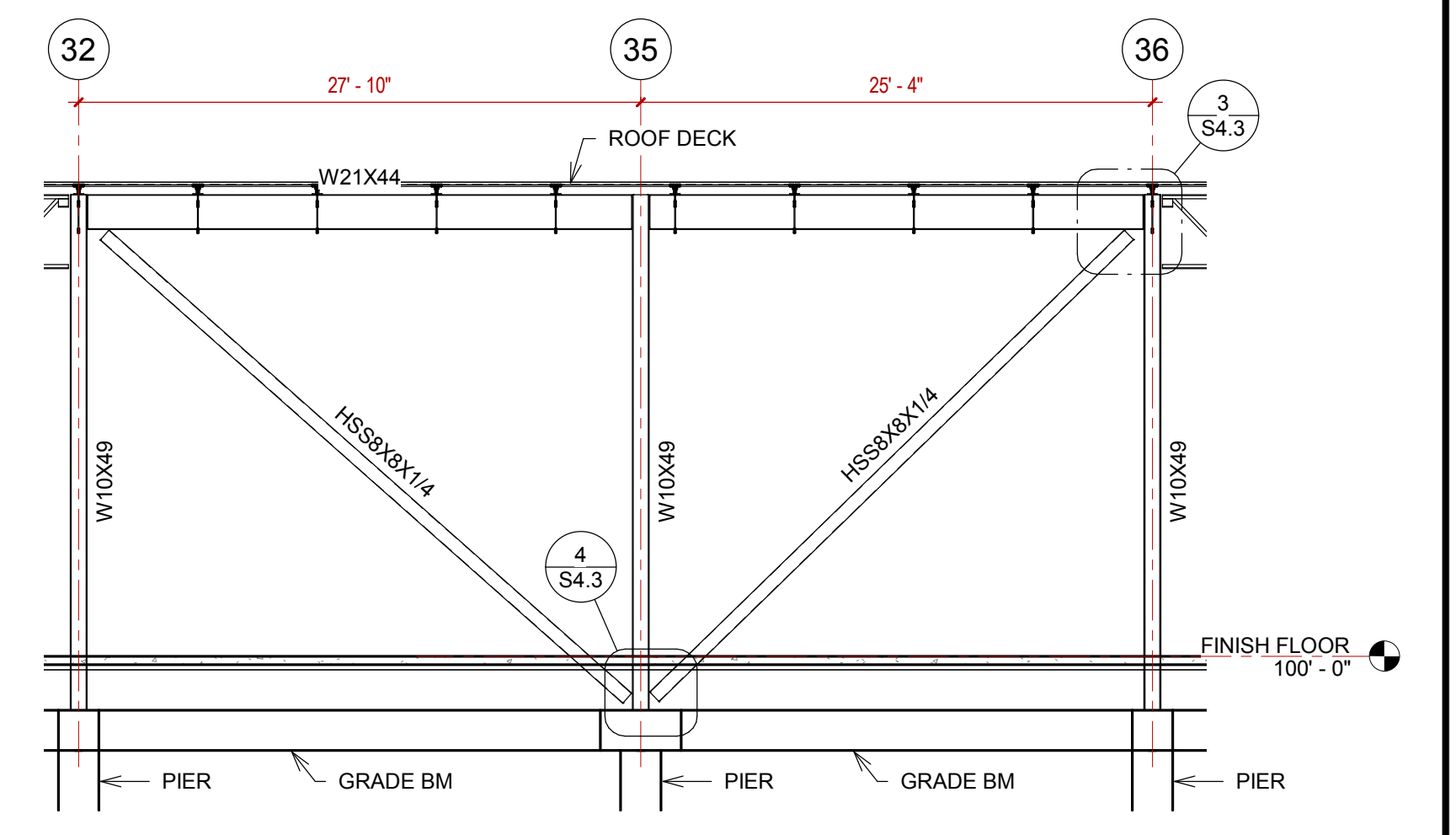
10 FRAME ELEVATION @ GRID 'D'
1/8" = 1'-0"

NOT USED

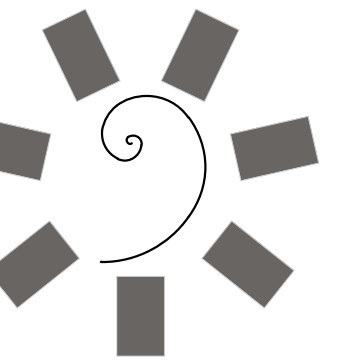
11 NOT USED
1/8" = 1'-0"



12 FRAME ELEVATION @ GRID 'F'
1/8" = 1'-0"



13 FRAME ELEVATION @ GRID 'N'
1/8" = 1'-0"



**James R. Childers
Architect, Inc.**
45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO

**Myers-Beatty
Engineering, PLLC**
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



**CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO**
TAHLEQUAH, OKLAHOMA

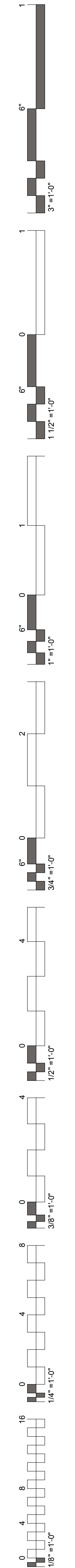
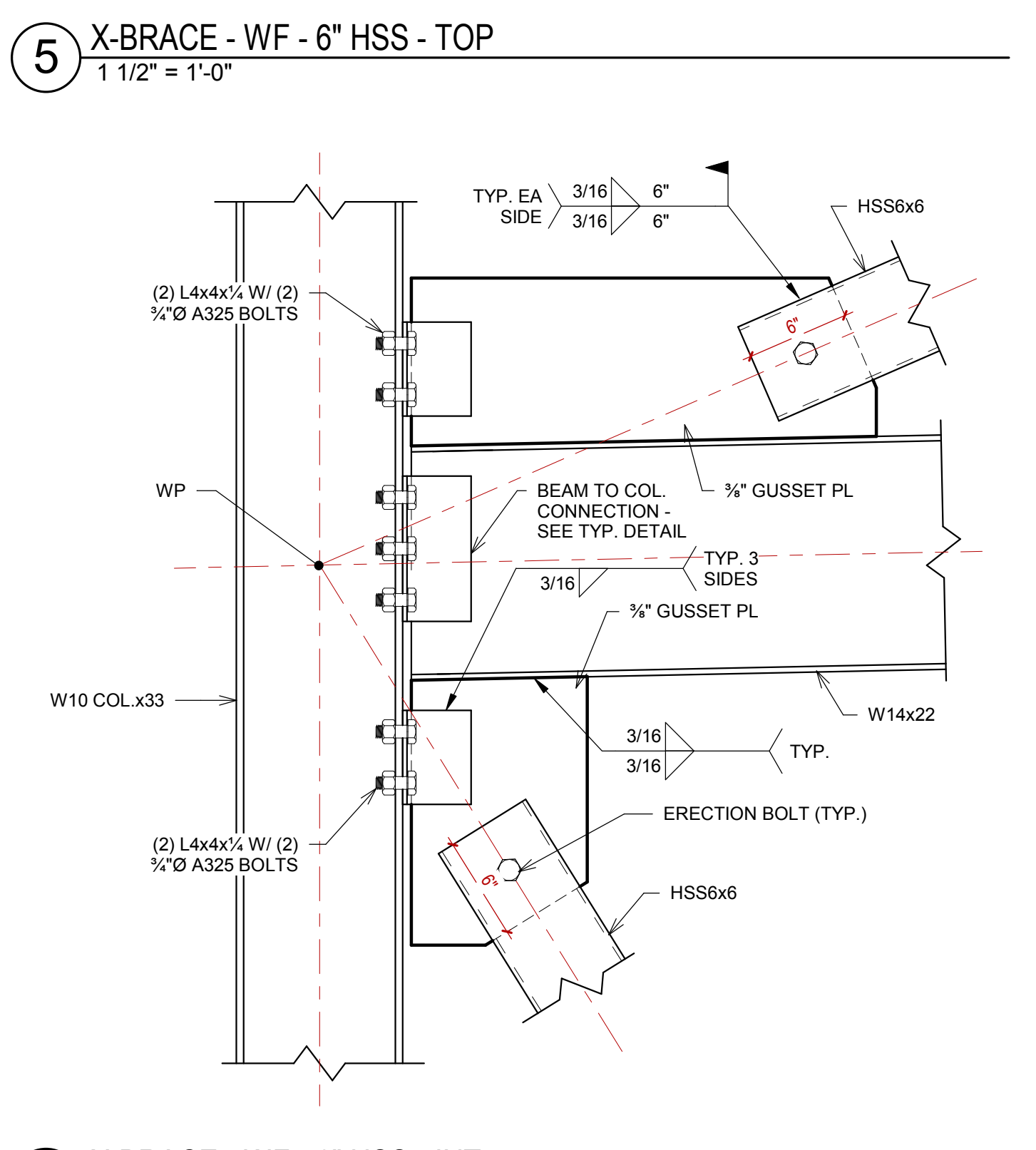
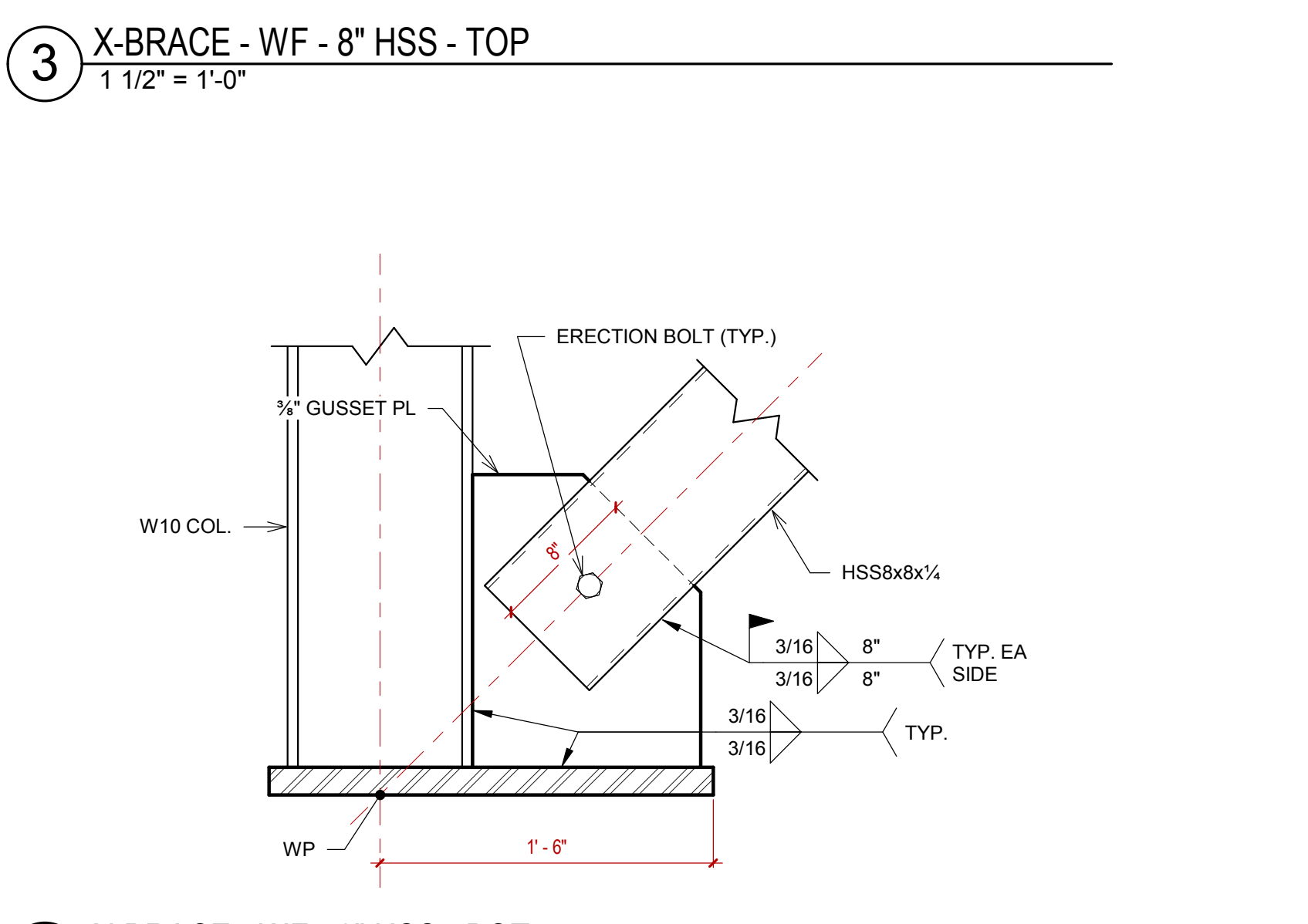
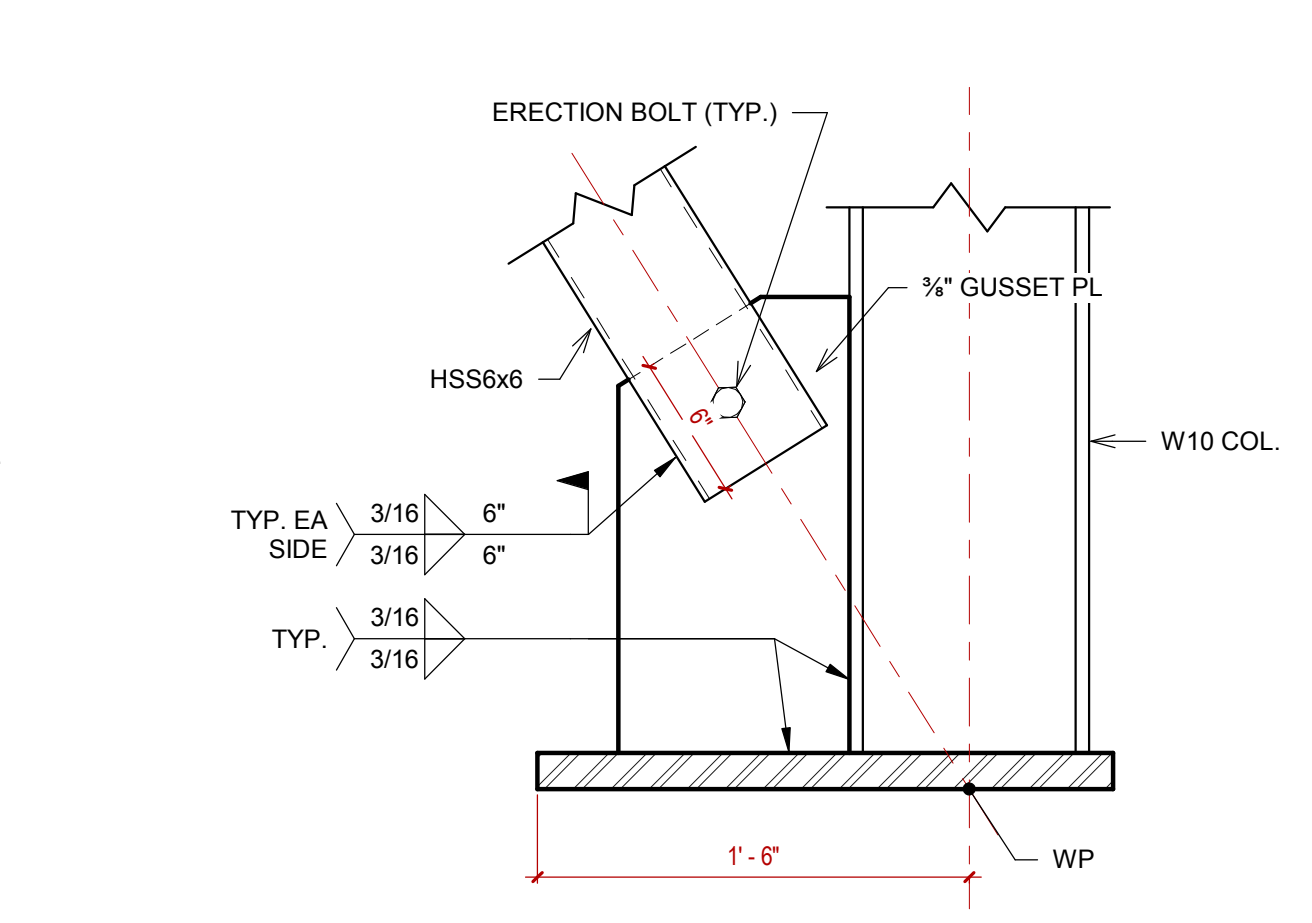
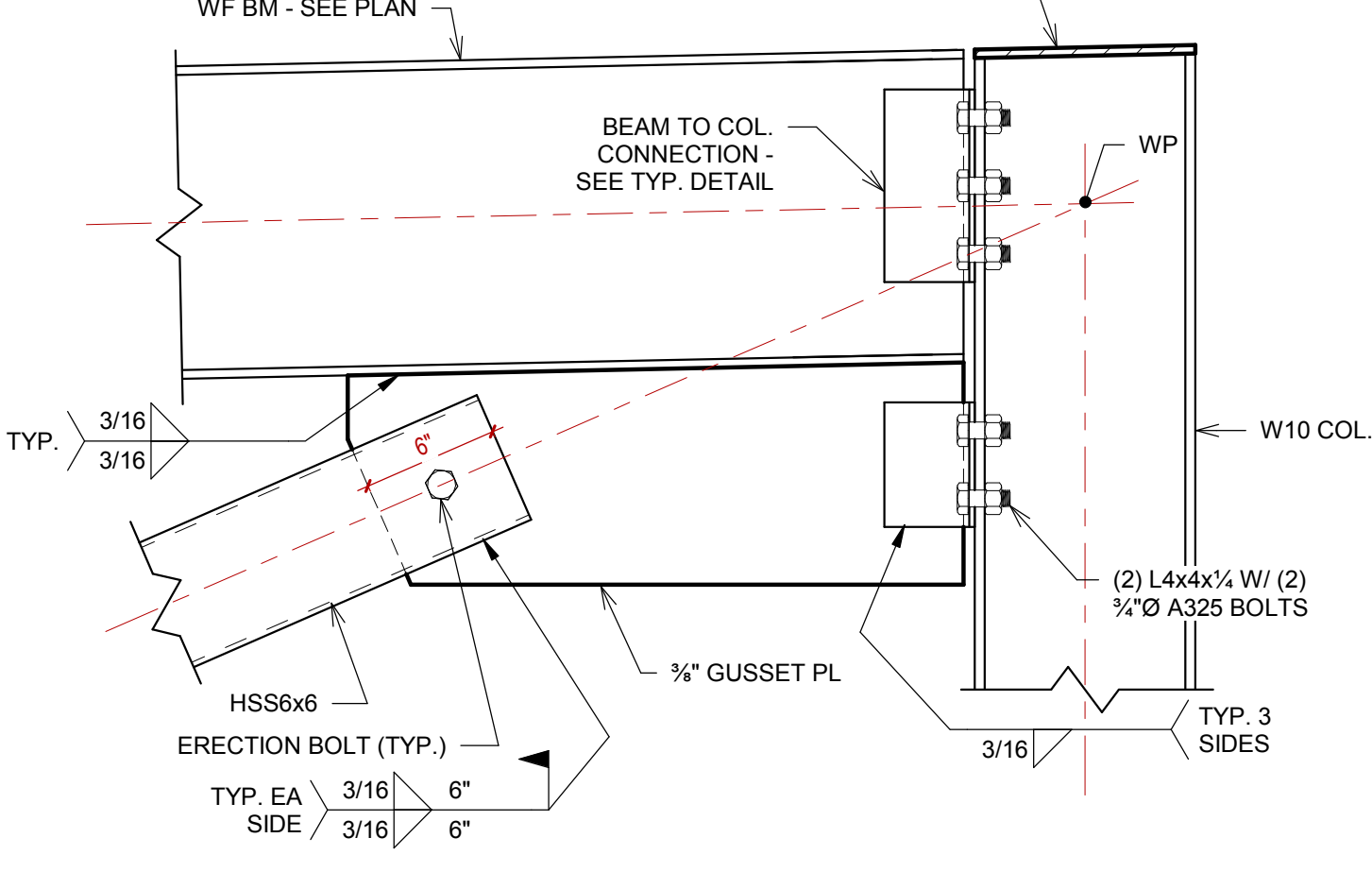
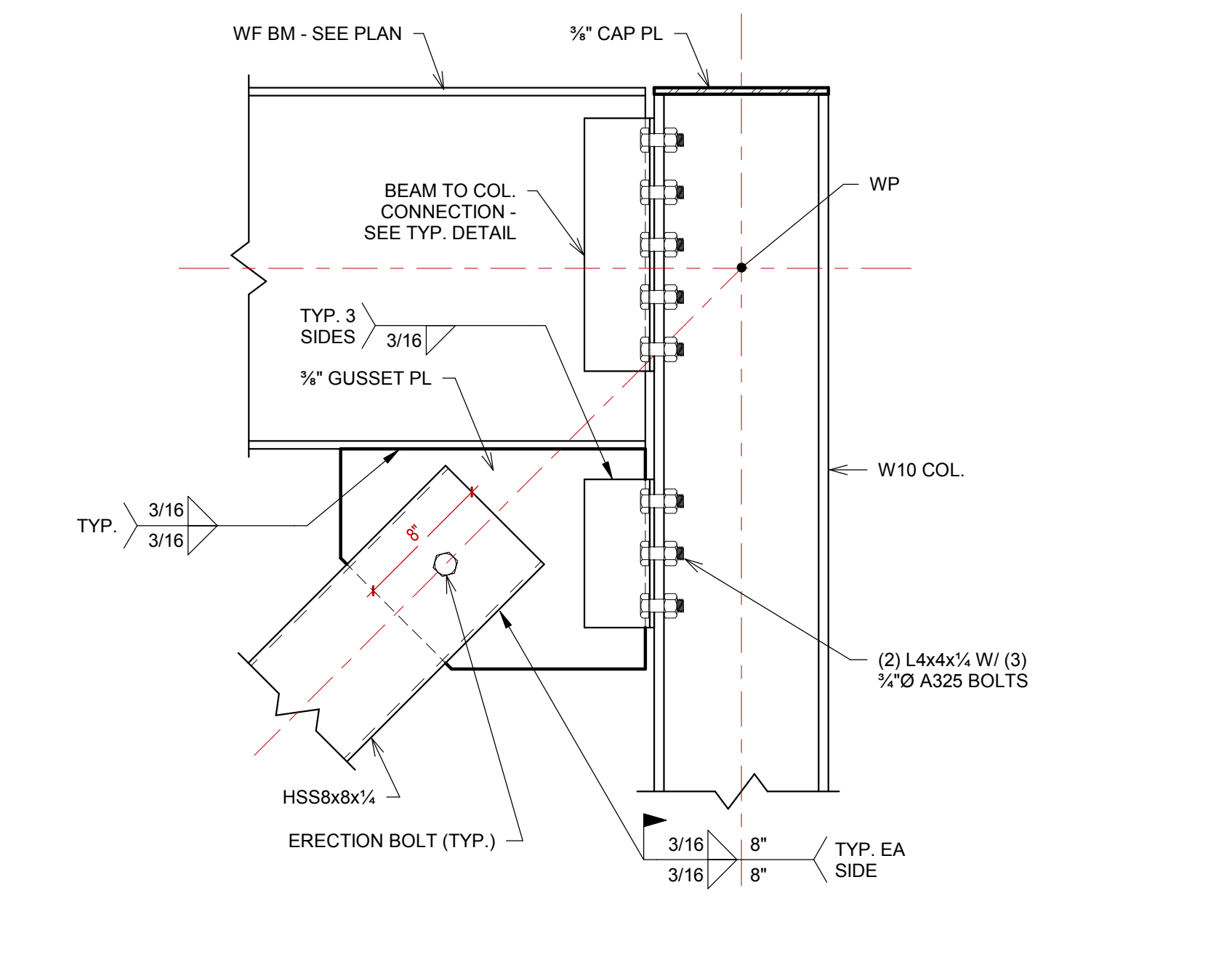
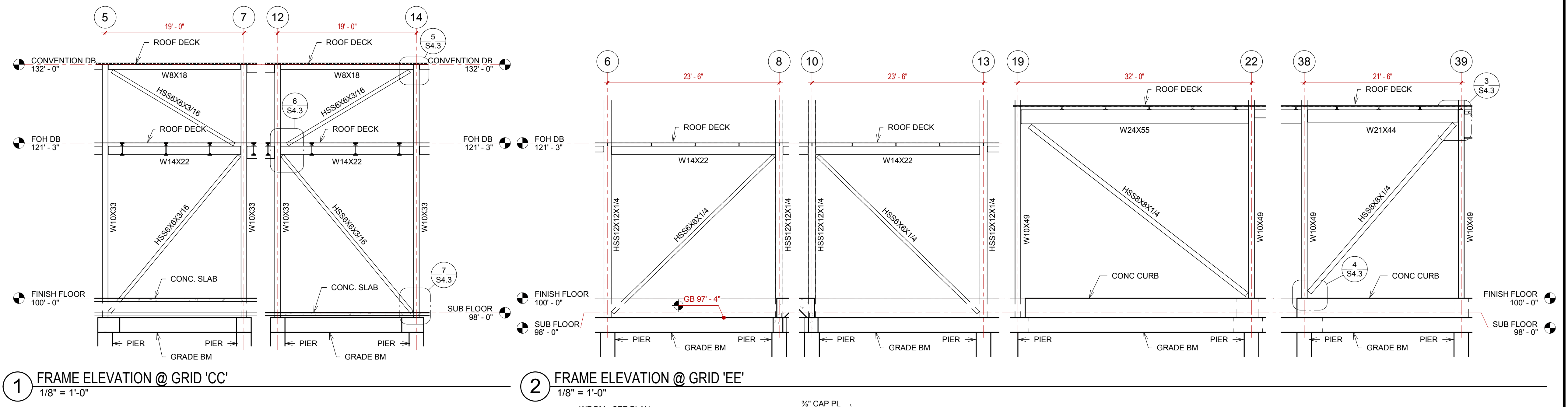
PROJECT PHASE
**BID PACKAGE 02
(100%SET)**

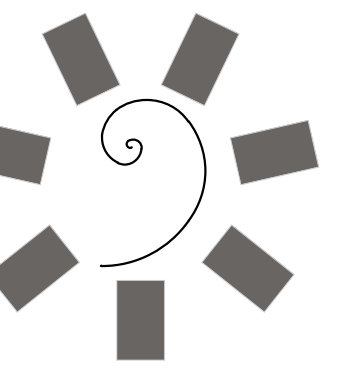
#	DATE	DESCRIPTION
1	04/05/18	ADDENDUM #01

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: **S4.3**

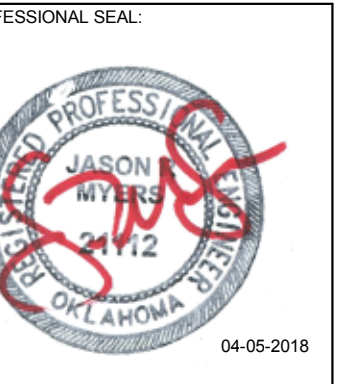
FRAME ELEVATIONS





James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



CONSULTANT LOGO

Myers-Beatty
Engineering, PLLC
OK CA 4899
2411 Fayetteville Road, Suite B
Van Buren, Arkansas 72956
Ph (479) 474-4412 Fax (479) 474-4413
www.myers-engr.com



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE
BID PACKAGE 02
(100%SET)

#	DATE	REVISIONS	DESCRIPTION

DATE: 04/05/18 JOB NUMBER: 17-06
SHEET NUMBER:

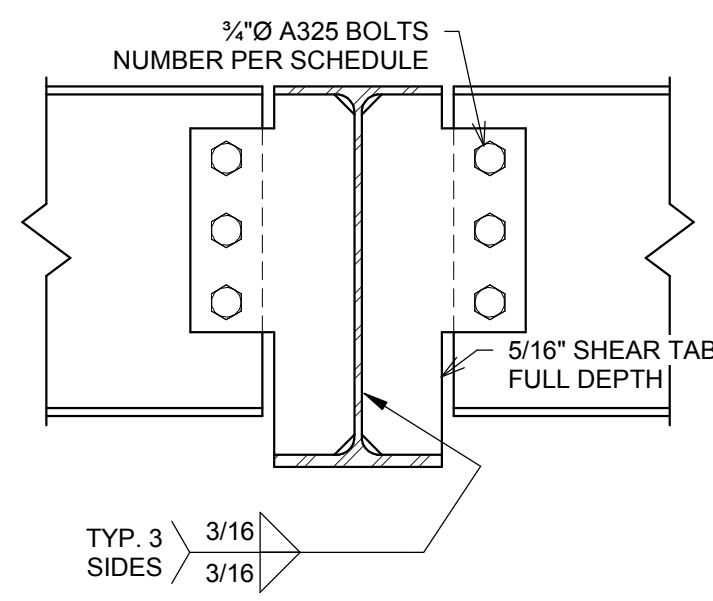
S5.1

STRUCTURAL
DETAILS

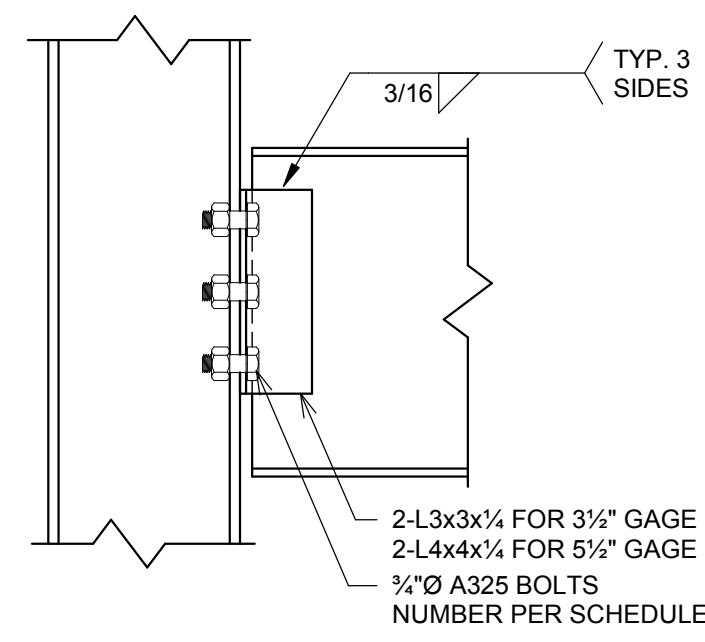
BOLT SCHEDULE

BEAM DEPTH	ROWS OF BOLTS
8" & 10" BEAMS	2 ROWS
12" & 14" BEAMS	3 ROWS
16" BEAMS	4 ROWS
18" & 21" BEAMS	5 ROWS
24" BEAMS	6 ROWS
27" BEAMS	7 ROWS
30" BEAMS	8 ROWS
36" BEAMS	9 ROWS

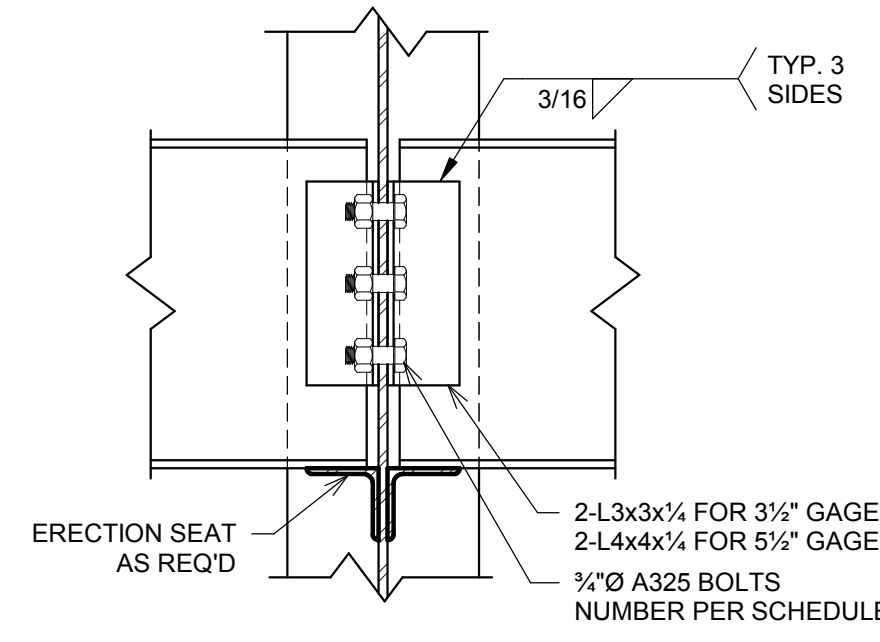
BOLTS TO BE 3/8" A325 U.N.O.



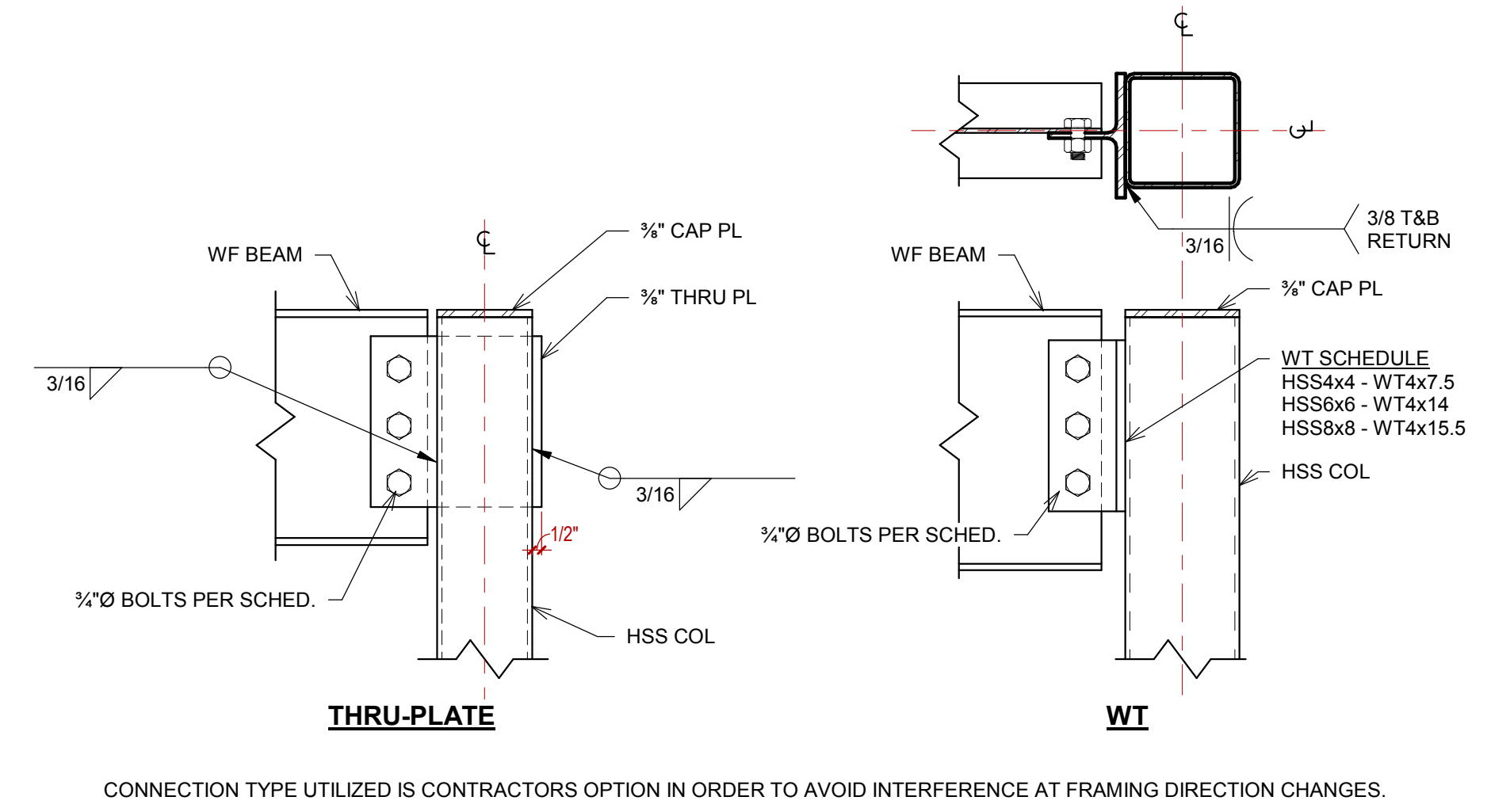
4 BEAM TO BEAM CONNECTION
1 1/2" = 1'-0"



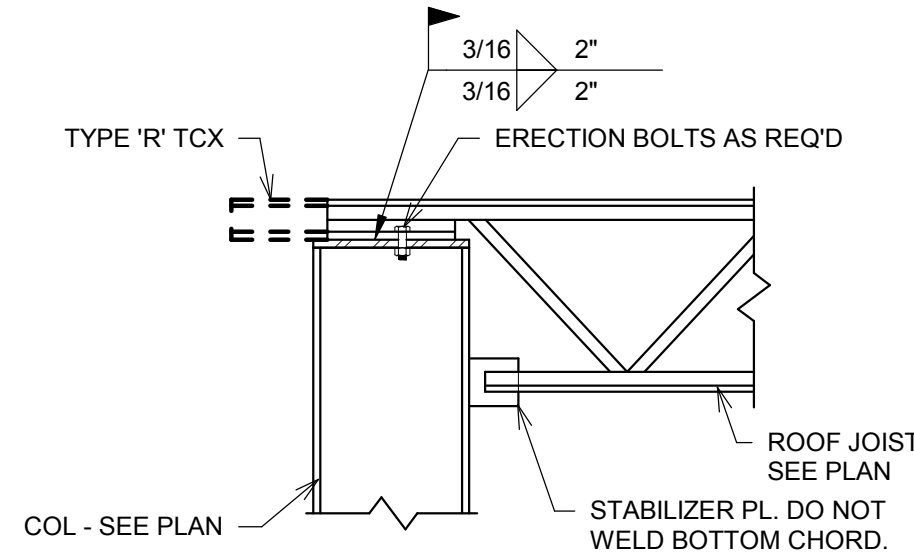
3 BEAM TO COLUMN FLANGE CONNECTION
1 1/2" = 1'-0"



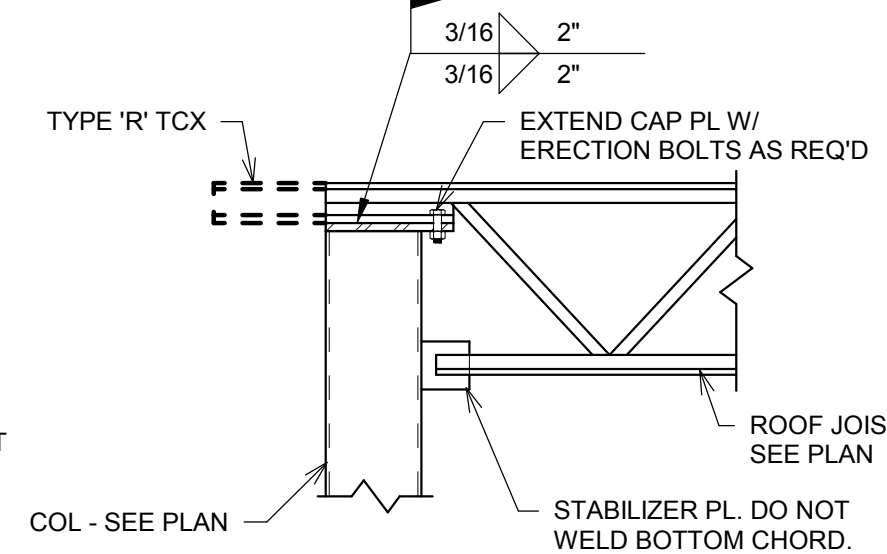
2 BEAM TO COLUMN WEB CONNECTION
1 1/2" = 1'-0"



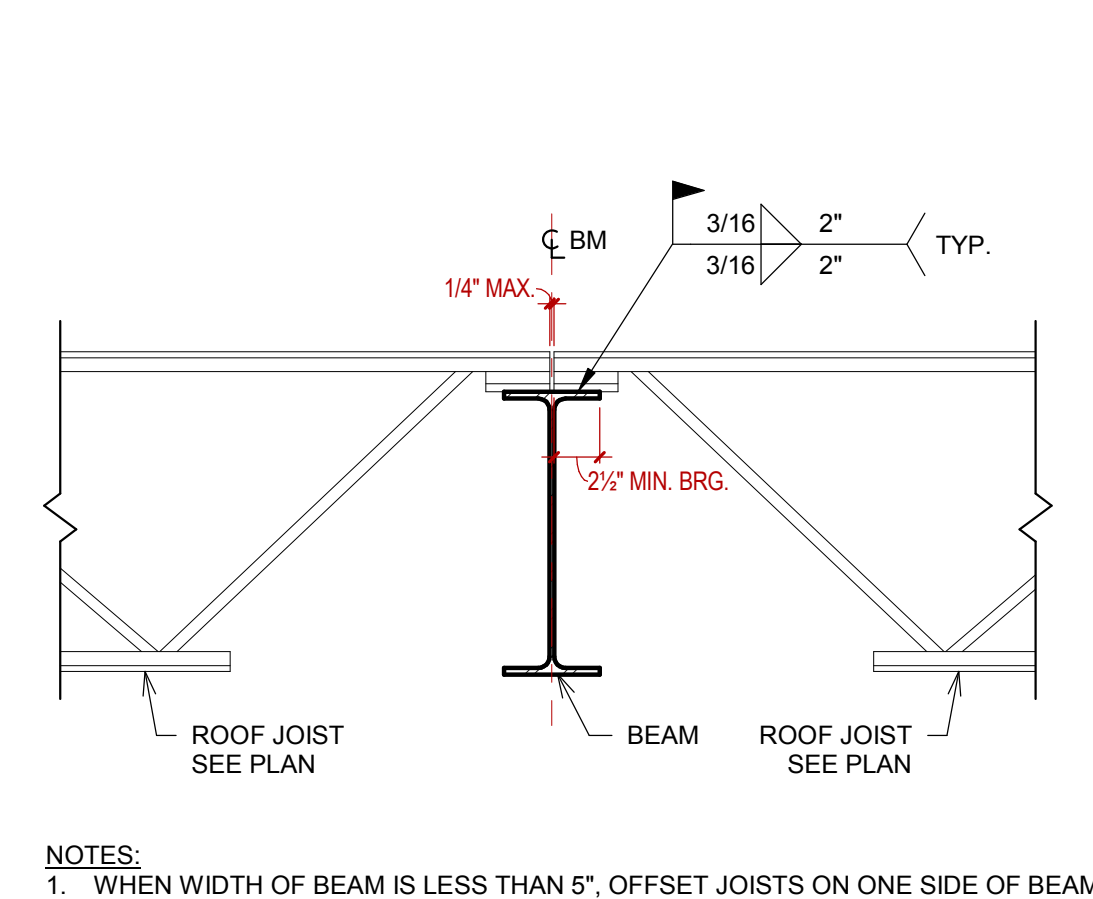
1 BEAM TO HSS COLUMN CONX
1 1/2" = 1'-0"



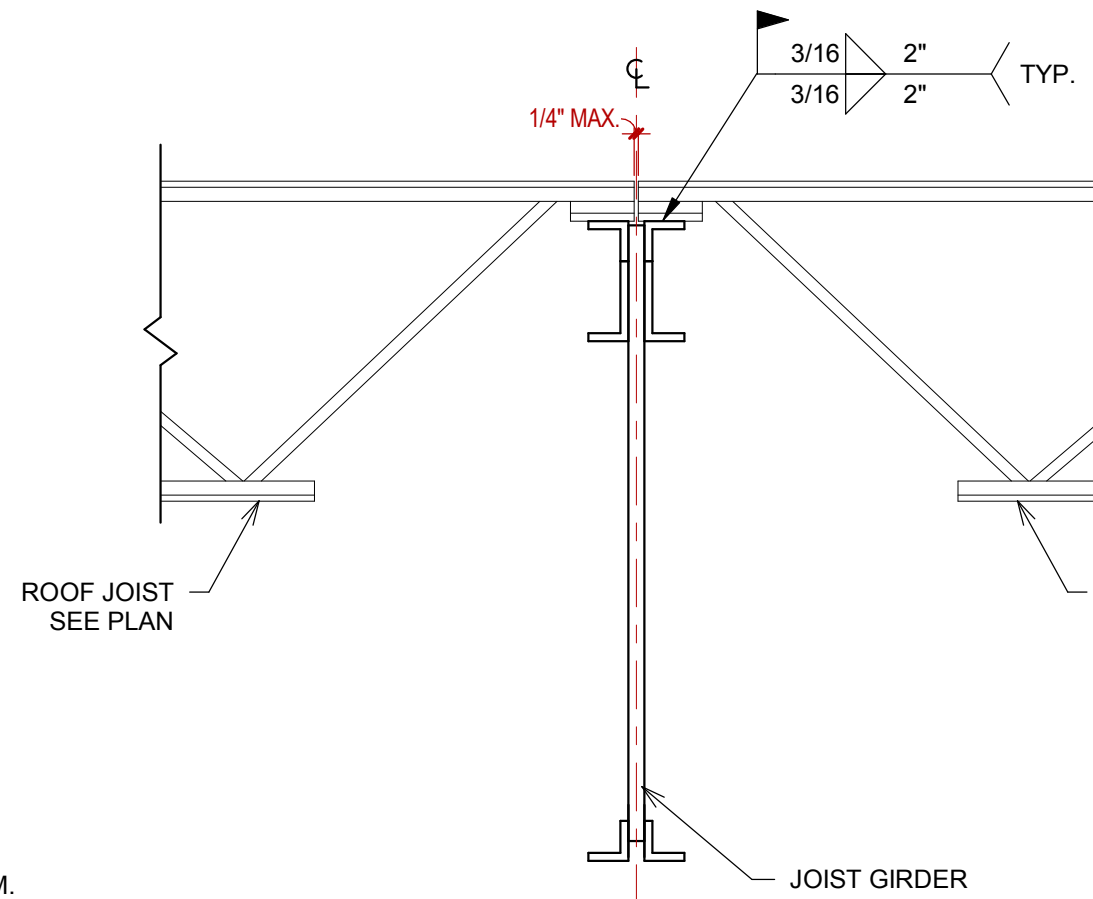
9 JOIST CONNECTION @ WF COL
1" = 1'-0"



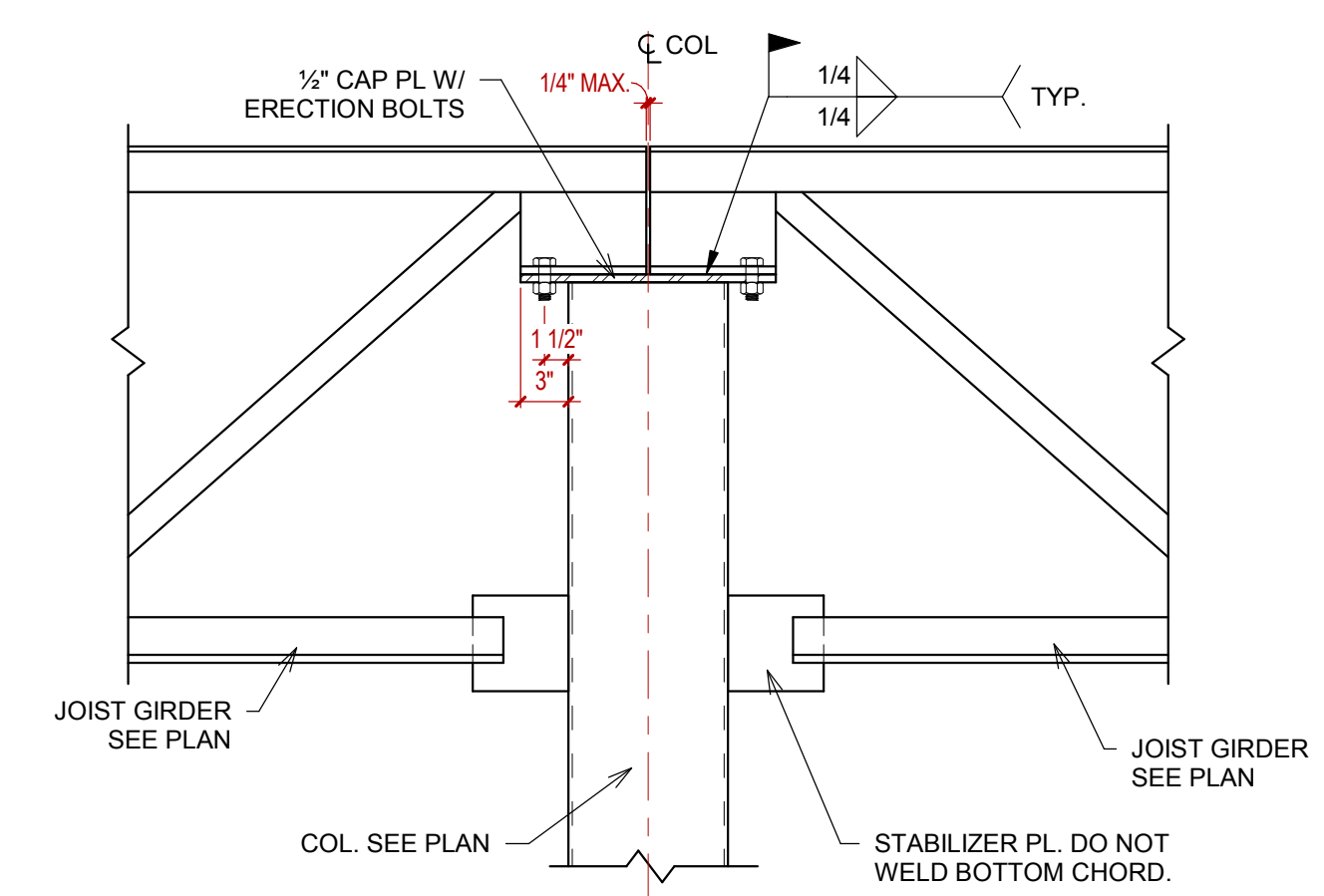
8 JOIST CONNECTION @ HSS COL
1" = 1'-0"



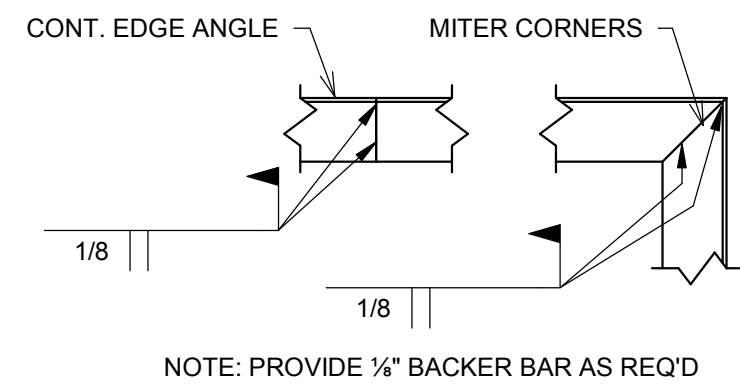
7 TYP. JOIST CONNECTION @ WF BEAM
1" = 1'-0"



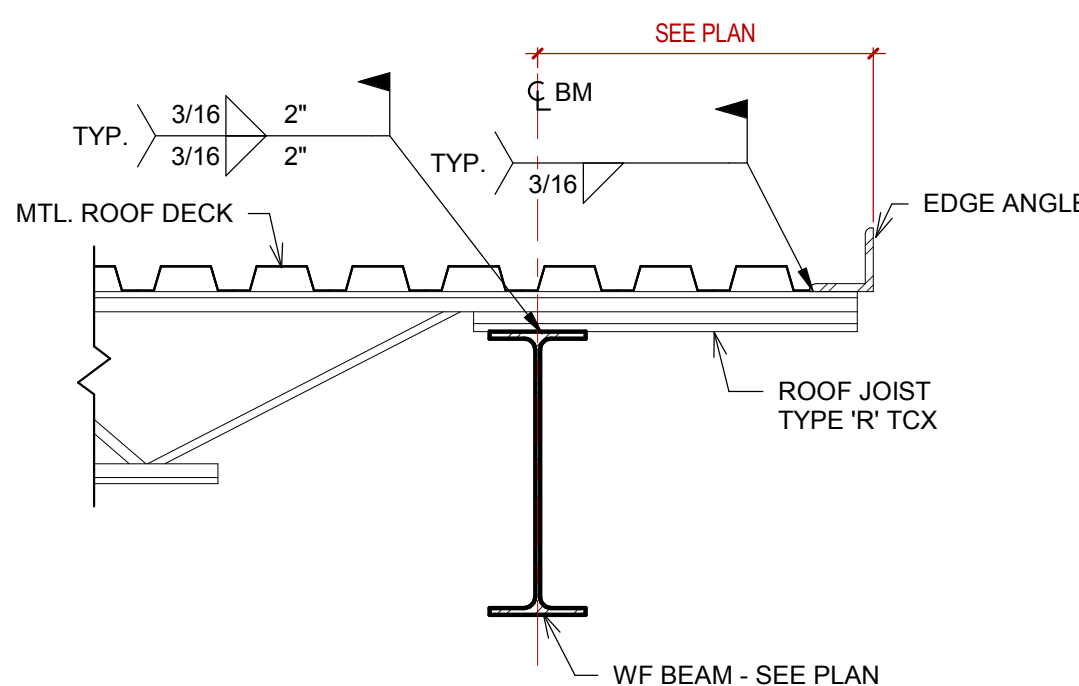
6 TYP. JOIST CONNECTION @ GIRDER
1" = 1'-0"



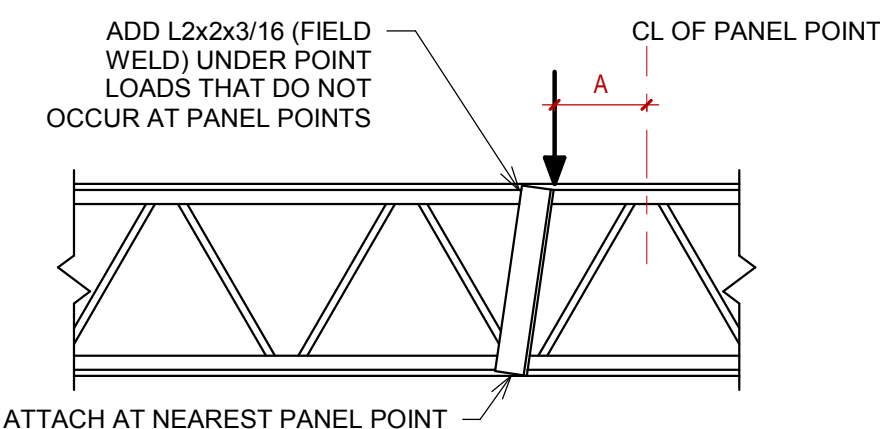
5 TYP. JOIST GIRDER CONNECTION @ HSS COLUMN
1" = 1'-0"



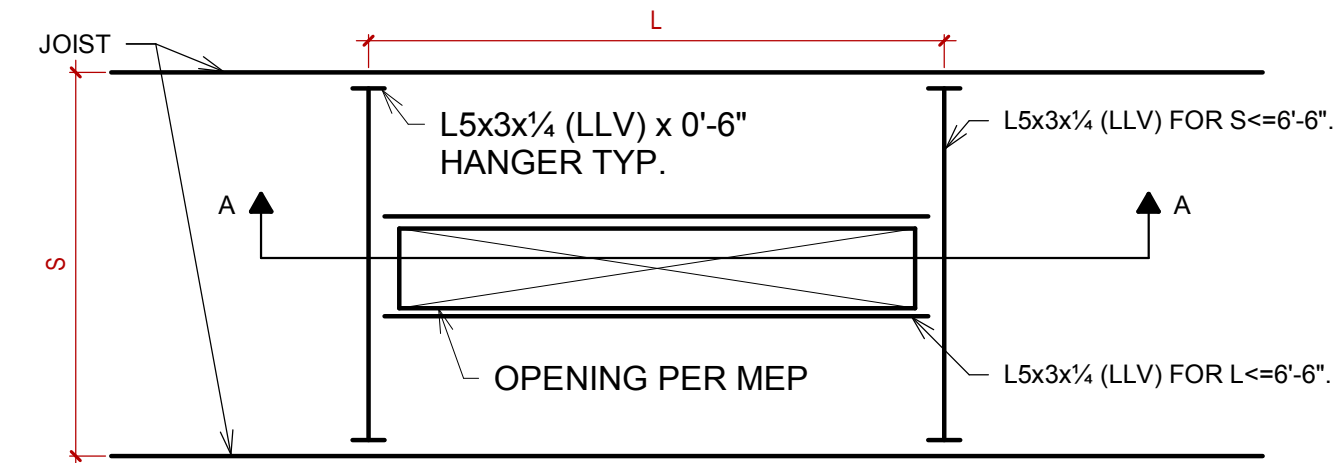
13 PERIMETER ANGLE SPLICE
1" = 1'-0"



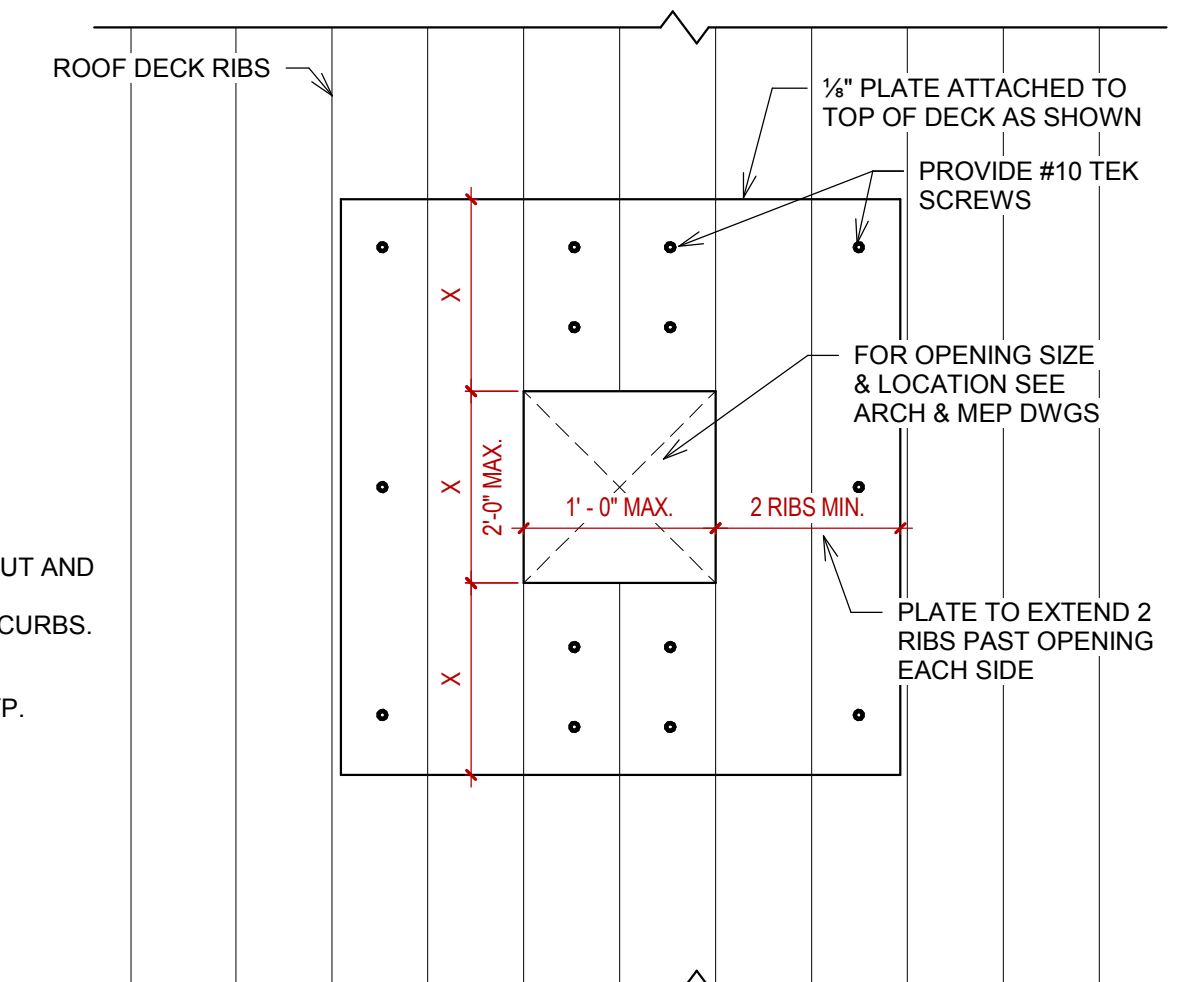
12 JOIST EXTENSION @ WF BEAM
1" = 1'-0"



11 TYP. PANEL POINT REINFORCEMENT
1" = 1'-0"

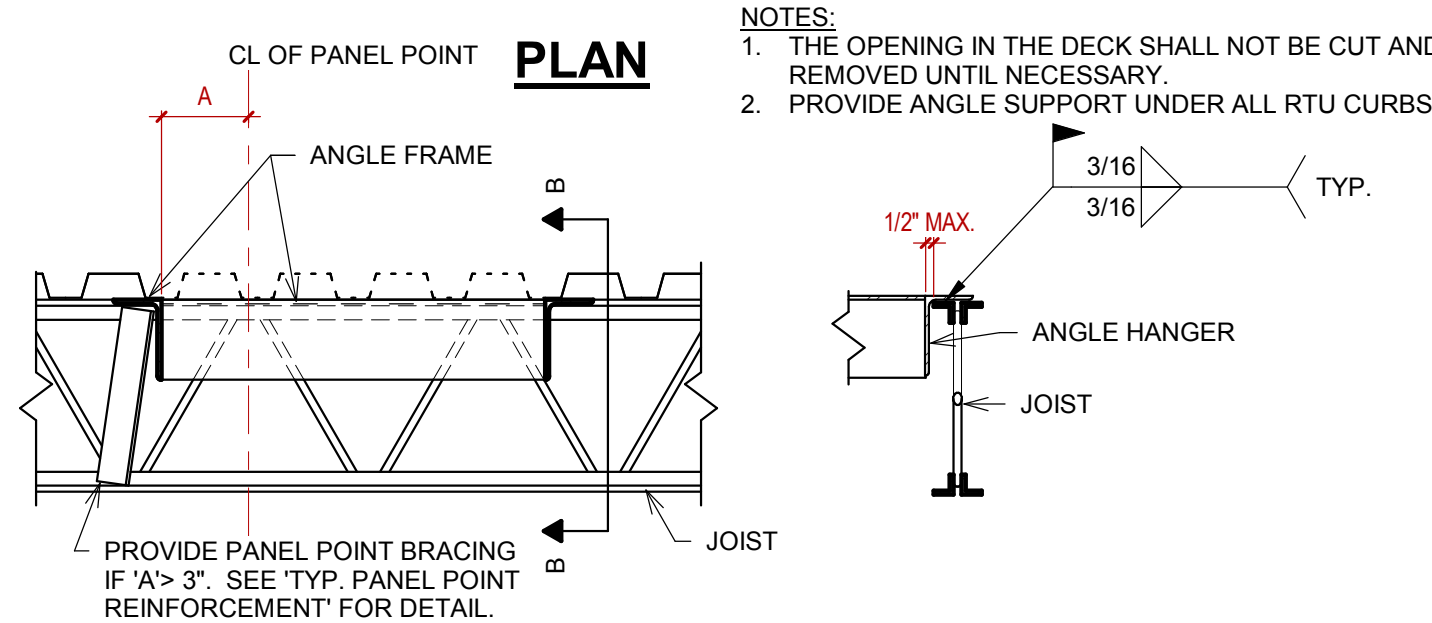


10 TYP. ROOF DECK AT OPENINGS
1" = 1'-0"



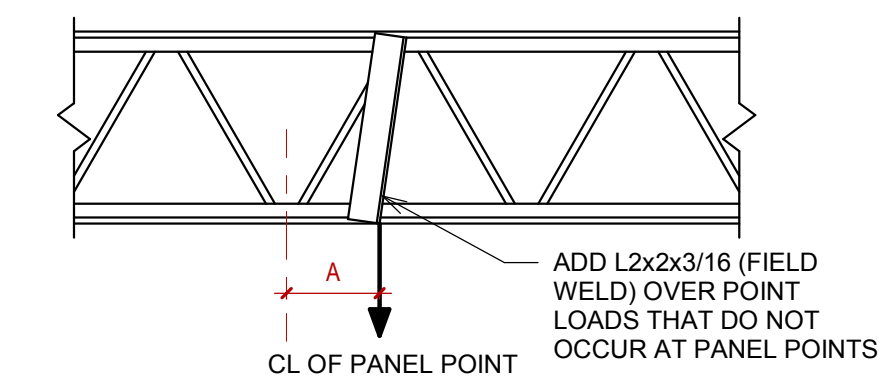
- NOTES:
- NO REINFORCEMENT IS REQUIRED IF OPENING IS 6"x6" OR SMALLER PROVIDED ONLY ONE RIB IS INTERRUPTED.
 - CLUSTERED OPENINGS WITH CLEAR SPACE LESS THAN 1'-0" SHALL BE TREATED AS ONE LARGE OPENING AND PROVIDE THE REINFORCEMENT AS PER DETAIL ABOVE.
 - THIS DETAIL SHALL NOT BE USED TO SUPPORT MECHANICAL EQUIPMENT.

SMALL OPENINGS

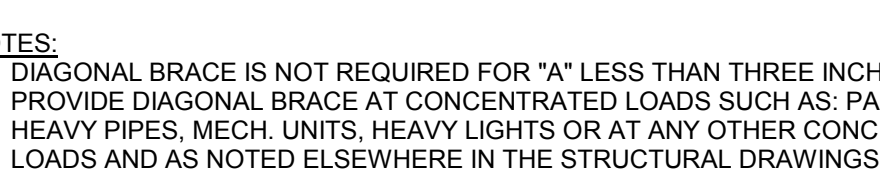


MECHANICAL SUPPORT AND LARGE OPENINGS

LOAD ON TOP CHORD



LOAD ON BOTTOM CHORD



- NOTES:
- DIAGONAL BRACE IS NOT REQUIRED FOR "A" LESS THAN THREE INCHES.
 - PROVIDE DIAGONAL BRACE AT CONCENTRATED LOADS SUCH AS: PARTITIONS, HEAVY PIPES, MECH. UNITS, HEAVY LIGHTS OR AT ANY OTHER CONCENTRATED LOADS AND AS NOTED ELSEWHERE IN THE STRUCTURAL DRAWINGS.



ADDENDUM # 002

Date: 04/09/18

RE: Cherokee Nation Entertainment
Tahlequah Casino

From: James R Childers Architect, Inc.
45 South 4th Street
Fort Smith, Arkansas 72901

This addendum forms part of the Contract Documents, and modifies the documents as noted below. Bidder must acknowledge receipt of this addendum in the FMC Bid Form. Failure to do so may subject the bidder to disqualification.

- Item 1** Addendum #002 Summary of Changes
- Item 2** Revised Plumbing Drawings
- Item 3** Revised ITS101 and ITS102



**Tahleaquah Casino
Addendum 2
April 09, 2018**

Description of Revisions Narrative

<u>Sheets</u>	<u>Description</u>
PU1.1	Added (1) 8" Storm drain penetration / floor drain / mop sink to EVS Storage 33. Added floor drain / mop sink EVS 21. Moved waste and vent lines into architectural wall shift in Mens 11 & Womens 13. Added floor drain / sink to Fire Riser 34.
PU1.2	Added carbonated beverage/liquor lines in Bar 17. Extend waste/vent lines to hand sinks in Kitchen 75 & 79. Added mop sink & floor drain to EVS 79B and mop sink to 79A. Relocated vent lines to consolidated column in Bar 85. Added carbonated beverage lines to Bar 85.
PU1.3	Added (2) 8" storm drain penetrations.
PU1.4	Extend waste/vent lines to hand sinks in Banquet Food Preparation 98. Added (3) 8" storm drain penetrations.
PU1.5	Added (2) 4" storm drain penetrations. Added mop sink and floor drain to EVS 91 & 93.

FIRE SPRINKLER NOTES

1. SPRINKLER CONTRACTOR SHALL PROVIDE SYSTEM DESIGN, LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR THE COMPLETE DESIGN BUILD FIRE SPRINKLER SYSTEM.
2. THE DESIGN AND INSTALLATION SHALL CONFORM TO ALL REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 13) AND THE GENERAL REQUIREMENTS OF APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE, THE SPECIFIC REQUIREMENTS OF THE LOCAL FIRE PREVENTION BUREAU, AND THE OWNER'S INSURANCE UNDERWRITER.
3. THE SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, SPRINKLER HEADS, VALVES, ESCUTCHEONS, PIPING, FITTINGS, HANGERS, DRAINS, WET TEST CONNECTIONS, SIGNS AND OTHER IDENTIFICATION MARKINGS AS REQUIRED.
4. ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF FIRE PROTECTION SYSTEMS SHALL BE LISTED AS APPROVED BY UNDERWRITERS LABORATORIES, INC., "LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS," OR APPROVED BY OTHER APPROPRIATE, NATIONALLY RECOGNIZED TESTING LABORATORIES FOR USE IN SPRINKLER SYSTEMS, AND SHALL BE THE LATEST DESIGN OF THE MANUFACTURER. SPRINKLER HEADS SHALL BE PROVIDED AS REQUIRED AND CONFORM TO THE LATEST EDITION OF NFPA 13.
6. PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.
7. INSTALL HEADS AT FINISHED HEIGHT WITH ESCUTCHEON, OR DIRECTLY IN REDUCER OF EXTRA LENGTH DROPS RATHER THAN PLUGGING. IF EXTRA LENGTH DROPS ARE INSTALLED, CUT BACK HEADS AFTER CEILING INSTALLATION IN THE CUSTOMARY MANNER.
8. SPRINKLER DROPS ARE TO BE INSTALLED PRIOR TO INSTALLATION OF CEILING SYSTEM THEN REMOVED AND REINSTALLED AFTER INSTALLATION OF CEILING SYSTEM, WITH DROPS MODIFIED, AS REQUIRED, PROVIDE ESCUTCHEONS AT EACH SPRINKLER HEAD. COORDINATE WITH OTHER WORK, INCLUDING DUCTWORK, DIFFUSERS, GRILLES, ELECTRICAL AND PLUMBING PIPING, AS NECESSARY TO INTERFACE COMPONENTS OF FIRE SPRINKLER PIPING PROPERLY WITH OTHER WORK.
10. AFTER SYSTEM IS COMPLETELY INSTALLED, IT SHALL BE FILLED AND TESTED IN ACCORDANCE WITH LOCAL REQUIREMENTS, AND THE REQUIREMENTS OF THE APPLICABLE NFPA BULLETINS.
11. FINAL SHOP DRAWINGS SHALL FIRST BE SUBMITTED TO THE STATE FIRE MARSHAL. FOLLOWING THEIR REVIEW AND APPROVAL, SUBMIT TO THE OWNER'S INSURANCE COMPANY. FOLLOWING THEIR SIGNED APPROVAL, THE SHOP DRAWINGS SHALL BE SENT TO THE ARCHITECT FOR CEILING DESIGN COORDINATION ONLY. IF REQUIRED BY ANY REVIEWING AGENT, OR IF REVIEW COMMENTS REQUIRE EXTENSIVE REVISIONS, THE SUBMITTAL SHALL BE REVISED AS REQUIRED AND RESUBMITTED FOR APPROVAL BEFORE SUBMISSION TO THE ARCHITECT'S OFFICE.
12. THE CONTRACTOR GUARANTEES THAT ALL WORK INSTALLED SHALL BE FREE OF ALL DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE CERTIFICATION OF COMPLETION AND ACCEPTANCE OF THE WORK.
13. ADDITIONAL SPRINKLER HEADS SHALL BE PROVIDED AS REQUIRED AND CONFORM TO THE LATEST EDITION OF NFPA 13.
14. ADDITIONAL PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13. ADDITIONAL PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.
15. ACTIVATE THE SPRINKLER SYSTEM FOR PROTECTION PURPOSES AS SOON AS DROPS HAVE BEEN COMPLETE IN ANY ONE SECTION OF THE SPRINKLER.
16. ALL SPRINKLER HEADS AND ESCUTCHEONS SHALL HAVE MOUNTING TYPE (FLUSH OR SEMI-RECESSED), FINISH AND COLOR AS SELECTED BY ARCHITECT.
17. ALL SPRINKLERS SHALL BE CENTERED WITHIN THE CEILING GRID, COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO SUBMITTAL OF DRAWINGS TO FIRE DEPARTMENT.

PLUMBING SPECIFICATIONS

PART ONE - GENERAL

1. THE CONTRACTOR SHALL PROVIDE THE WORK SHOWN ON THE DRAWINGS AND SPECIFIED FOR THEIR INDIVIDUAL SECTIONS OF WORK. THE WORD "WORK" SHALL MEAN ALL LABOR, TRANSPORTATION, MATERIAL, EQUIPMENT, TOOLS, INSTALLATION, SUPERVISION AND ANY OTHER INCIDENTAL ITEMS OR SERVICES NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS, WHICH SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY INDICATED OR NOTED.
2. ALL GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS ARE MADE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF COMPLETELY REPRODUCED.
3. THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL, MAKE ALL FINAL CONNECTIONS AND LEAVE IN AN APPROVED COMPLETE OPERATING CONDITION.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE APPLICABLE INTERNATIONAL BUILDING CODE (IBC), UNIFORM MECHANICAL CODE (UMC), UNIFORM PLUMBING CODE (UPC), NATIONAL ELECTRIC CODES (NEC) AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES AND OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK.
6. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COORDINATE THE WORK WITH ALL OTHER TRADES INCLUDING, BUT NOT LIMITED TO, THE CONTRACT DOCUMENTS, SHOP DRAWINGS, ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, ELECTRICAL AND SPECIALTY CONTRACTOR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS PLANNED, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUTS NEEDED TO PREVENT CONFLICT WITH OTHER TRADES, TO PROVIDE ACCESS AND FOR THE PROPER EXECUTION OF THE WORK.
7. DRAWINGS ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE, AND INDICATE THE TYPE, SIZE, ARRANGEMENT AND LOCATION OF MATERIALS AND EQUIPMENT. WORK INCLUDES CERTAIN COMPONENTS, APPURTENANCES AND RELATED SPECIALTIES THAT MAY NOT BE SHOWN. CONTRACTOR SHALL PROVIDE ALL NECESSARY ITEMS TO COMPLETE THE WORK ACCORDING TO INDUSTRY STANDARDS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL OUT FOR FINISHED WORK, TESTED AND READY FOR OPERATION DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF PIPES AND DUCTWORK, ETC. INDICATED ON DRAWINGS SHALL BE ROUTED PLUMB AND AT RIGHT ANGLES TO BUILDING CONSTRUCTION AND MAY REQUIRE MODIFICATION DUE TO UNFORSEEN CONDITIONS AND REQUIRE ON SITE REVISIONS DURING CONSTRUCTION. (SEE ALSO "BIDDING").
8. ALL WORK REQUIRED FOR IDENTICAL ITEMS SHOWN ON THE DRAWINGS SHALL BE PROVIDED, ALTHOUGH EACH SPECIFIC IDENTICAL ITEM MAY NOT BE SHOWN IN DETAIL.
9. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR ALL EQUIPMENT AND MATERIALS SPECIFIED HEREIN TO THE ENGINEER. THE ENGINEER SHALL REVIEW SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ISSUE A WRITTEN ASSESSMENT TO THE OWNER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING FEES NECESSARY TO CHANGE PERMIT DOCUMENTS BASED ON ALTERNATE SUBMITTAL PACKAGES/EQUIPMENT SUBSTITUTIONS.
10. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR CONSIDERATION PRIOR TO BIDDING. THE OWNER'S REPRESENTATIVE SHALL PREAPPROVE ANY PROPOSED SUBSTITUTION IN WRITING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIREMENTS ASSOCIATED WITH SUBSTITUTED EQUIPMENT OR MATERIALS WITH OTHER BUILDING TRADES, INCLUDING ALL ELECTRICAL, STRUCTURAL, OR ARCHITECTURAL ELEMENTS. THE CONTRACTOR SHALL IDENTIFY AND ANNOTATE ALL REVISED REQUIREMENTS PER BUILDING TRADE ON THE SHOP DRAWINGS. THE CONTRACTOR SHALL ALSO IDENTIFY ALL COST DEBITS OR CREDITS IN WRITING FOR THE PROPOSED CHANGES PER BUILDING TRADE.
11. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH FIVE (5) COMPLETE SETS OF AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED.
12. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. REFRIGERATION COMPRESSORS SHALL BE GUARANTEED FOR A MINIMUM OF FIVE (5) YEARS FROM DATE OF OWNERS ACCEPTANCE. IN ADDITION, THE CONTRACTOR SHALL GUARANTEE THAT THE INSTALLATION WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS WILL DEVELOP CAPACITY AND CHARACTERISTICS AS SPECIFIED AND WILL FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS. SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY OR WITHOUT COST TO THE OWNER, PROVIDE WHATEVER ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR REQUIRED TO CORRECT THE DEFICIENCY AND COMPLY WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
13. CONTRACTOR SHALL CHECK AND VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATIONS OR PROBLEMS SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.
14. PROVIDE BASE AND COUNTER FLASHING FOR ITEMS PENETRATING THE ROOF OR EXTERIOR WALLS.
15. STARTERS AND CONTROLS FOR MOTORS, ETC. TO BE FURNISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO INSTALL THE AFOREMENTIONED ITEMS, AND FURNISH ALL POWER WIRING. ALL CONTROL AND INTERLOCKING WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
16. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.
17. MAINTAIN OCCUPANCY AND FIRE WALL SEPARATION INTEGRITY AS REQUIRED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL OCCUPANCY/FIREWALL SEPARATIONS AND SPECIFIC DETAILS FOR CONSTRUCTION. PROVIDE ALL NECESSARY FIRE AND SMOKE FIRE DAMPERS, ACCESS DOORS, CAULKING, ETC. FOR APPROVED INSTALLATION.

BIDDING

1. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. THE CONTRACTOR SHALL COMPARE THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS WITH THE EXISTING CONDITIONS. THE CONTRACTOR SHALL IDENTIFY AND NOTATE ALL WORK OR CONDITIONS THAT ARE DIFFERENT FROM THE CONTRACT DOCUMENTS OR THEIR INTENT. THE CONTRACTOR SHALL, UPON DISCOVERY, IMMEDIATELY NOTIFY AND REPORT IN WRITING ANY DISCREPANCIES TO THE ENGINEER. NO EXTRAS OR CHANGE ORDERS WILL BE ALLOWED FOR FAILURE TO PERFORM THE PRE-BID SITE VISIT.
2. BASE PROPOSAL ON MANUFACTURER NAMES LISTED UNLESS "OR EQUAL" IS INDICATED. PROVIDE SUBSTITUTION REQUESTS A MINIMUM OF FIVE (5) BUSINESS DAYS PRIOR TO BID DATE CLOSING TO ALLOW TIME FOR DUE CONSIDERATION OF PROPOSED ALTERNATE DETERMINATION OF SUBSTITUTION OF EQUALITY RESTS SOLELY WITH THE ENGINEER.

PART TWO - PRODUCTS PLUMBING EQUIPMENT

1. PROVIDE PLUMBING EQUIPMENT AS SPECIFIED AND/OR SCHEDULED HEREIN AND IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. EQUIPMENT SHALL OPERATE ACCORDING TO THE MANUFACTURER'S "OWNER'S OPERATING AND MAINTENANCE MANUAL" TROUBLE FREE AND CONFORMING TO THE ONE-YEAR WARRANTY.

PLUMBING PRODUCTS

1. DOMESTIC WATER PIPING: (ABOVE GROUND) TYPE "L" COPPER ABOVE GRADE (ASTM B-88), WROUGHT FITTINGS (ASME B16.22), JOINTS: ANSIASTM B32, SOLDER, GRADE 95 TA, 0.2% MAX LEAD. (UNDER GROUND) PROTECTED FROM SOIL) TYPE "K" COPPER BELOW GRADE (ASTM B-88), HARD DRAWN, WROUGHT FITTINGS (ASME B16.22), JOINTS: AWS A5.8, BCUF SILVER BRAZE.
2. DOMESTIC WASTE & VENT PIPING MATERIALS: ABOVE GROUND SHALL BE NO-HUB CAST IRON (ASTM-A-888, CISPI 301). BELOW GROUND SHALL BE NO-HUB CAST IRON (ASTM-A-888, CISPI 301). PVC/ABS DWV PIPING MAY BE USED UNDERGROUND BASED ON SOIL CONDITIONS.
3. GAS PIPING: ABOVE GRADE SCHEDULE 40 BLACK IRON (ASME A-53), THREADED MALLEABLE FITTINGS INSIDE AND GALVANIZED FITTINGS AND PIPE WHERE EXPOSED, JOINT COMPOUND. PROVIDE ISOLATION VALVES AT ALL EQUIPMENT. BELOW GRADE GAS PIPING SHALL BE POLYETHYLENE (PE) GAS PIPING WITH BUTT FUSION JOINTS. PIPING SHALL BE LABELED GAS. GAS VALVE SHALL BE BRONZE BODY, BRONZE TAPERED PLUG, NON-LUBRICATED, TEFLON PACKING, THREADED ENDS.
4. PIPE INSULATION: ALL DOMESTIC COLD WATER PIPING (IN UNCONDITIONED SPACES ONLY) AND ALL DOMESTIC HOT WATER PIPING ABOVE GROUND SHALL BE INSULATED WITH 1" THICK FIBERGLASS PIPE INSULATION WITH ALL-SERVICE JACKET AND MAXIMUM K VALUE OF 0.27 AT 75°F. WHERE CLEARANCE LIMITATIONS PREVENT THE USE OF FIBERGLASS INSULATION, A MINIMUM 3/4" THICK CLOSED CELL NEOPRENE PIPE INSULATION MAY BE USED.
5. PIPE HANGERS: PIPE SIZES 1/2" TO 1 1/2": MALLEABLE IRON, CARBON STEEL, ADJUSTABLE SWIVEL SPLIT RING. PIPE SIZES 2" TO 4": CARBON STEEL, ADJUSTABLE CLEVIS. PIPE SIZES 6" AND OVER: ADJUSTABLE STEEL YOKE, CAST IRON ROLL, DOUBLE HANGER.
6. RAIN WATER DRAIN PIPING SHALL BE CAST IRON, UNLESS OTHERWISE APPROVED.
7. CONDENSATE DRAIN PIPING: TYPE "M" COPPER (ASTM B-88), WROUGHT FITTINGS (ASME B16.22), JOINTS: ANSIASTM B32, SOLDER, GRADE 95 TA, 0.2% MAX LEAD.
8. HEAT TRACE: RAY CHEM, XL-TRACE SYSTEM, INSTALLED PER MANUFACTURERS RECOMMENDATION.

NOTES

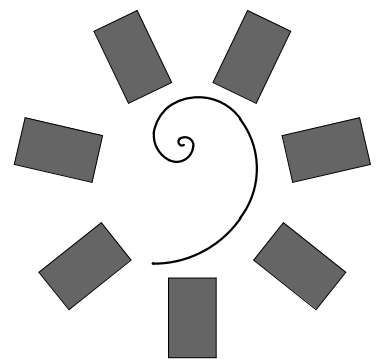
1. DIELECTRIC FITTINGS SHALL BE USED WHEREVER DISSIMILAR METALS ARE JOINED.
2. ALL UNDERGROUND WATER PIPING SHALL BE WRAPPED WITH TAPE, ENCASED WITH A FOAM, COATED WITH A PROTECTIVE COATING, OR ROUTED THROUGH CONDUIT FOR PASSIVE CATHODIC PROTECTION. NO PIN HOLE LEAKS IN PROTECTIVE COATING OR TAPE ARE ALLOWED.
3. PROVIDE ACCESS PANELS IN CEILING TO ACCESS VALVES WHERE REQUIRED.
4. PLUMBING FIXTURES: PROVIDE CHROME PLATED ANGLE STOPS WITH ESCUTCHEON PLATES AT PLUMBING FIXTURES. ALL PLUMBING FIXTURES SHALL COMPLY WITH LOCAL REGULATIONS AND ADOPTED WATER CONSERVATION CODES.
5. DISINFECT ALL POTABLE WATER SYSTEMS IN ACCORDANCE WITH PLUMBING CODE AND/OR AWWA STANDARD. PROVIDE WRITTEN CONFIRMATION TO OWNERS REPRESENTATIVE THAT THIS WORK HAS BEEN COMPLETED.

PART THREE - EXECUTION

1. THE CONTRACTOR SHALL PROVIDE ALL SLEEVES, OPENINGS, CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADES REQUIRED AND PAID BY THE CONTRACTOR REQUIRING THE WORK COMPLETED.
2. THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HANDLING OF MATERIALS AND EQUIPMENT, AND THE NECESSARY PROTECTION FOR MATERIALS AND EQUIPMENT.
3. THE CONTRACTOR WILL PROTECT THE WORK AND MATERIAL AGAINST DIRT, THEFT, INJURY OR DAMAGE UNTIL ACCEPTED BY OWNER. ALL WORK SHALL BE TURNED OVER TO OWNER CLEAN AND IN NEW CONDITION.
4. PIPES AND/OR CONDUITS PASSING THROUGH WALL, FLOORS AND PARTITIONS SHALL BE PROVIDED WITH SLEEVES. SLEEVES PASSING THROUGH WATER PROOFING OR DAMP PROOFING SHALL BE WATER TIGHT. SLEEVES PASSING THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE PROOFED WITH MATERIAL APPROVED FOR THE FIRE RATING OF THE SEPARATION AREA AND U.L. LISTED.
5. EACH CONTRACTOR SHALL PROVIDE ALL FOUNDATIONS, HANGERS, AND SUPPORTS FOR ALL EQUIPMENT SUPPLIED AND/OR INSTALLED UNDER THEIR WORK. ANY EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH VIBRATION ISOLATION AND FLEXIBLE CONNECTIONS TO PIPING IF APPLICABLE.
6. WHERE PIPES OR CONDUITS PASS THROUGH WALLS, FLOORS, OR CEILINGS IN FINISHED AREAS, THEY SHALL BE FURNISHED WITH ESCUTCHEON PLATES (COLOR PER ARCHITECT AND/OR INTERIOR DESIGNER). ELECTRICAL AND PLUMBING EQUIPMENT SHALL BE CONCEALED, COVERED OR UNCOVERED, IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH "BRANDY-PERMA" CODE PIPE TAPE" OR T. & B. WESTLINE "TEL-A-PIPE" INDICATING DIRECTION OF FLOW, SERVICE, ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE, CONDUIT, OR COVERING. VALVES AND CONTROLS SHALL BE IDENTIFIED BY 2-INCH LAQUERED BRASS TAGS WITH STAMPED LETTERS FASTENED WITH "S" HOOKS OR CHAINS. EQUIPMENT IS TO BE IDENTIFIED AS TO FUNCTION AND PURPOSE BY MEANS OF PERMANENTLY ATTACHED LAMINATED ENGRAVED PHENOLIC NAMEPLATES WITH BEVELED EDGES, AND WHITE LETTERS ON BLACK BACKGROUND. (NO ADHESIVE LABELS ALLOWED).
7. AT THE CONCLUSION OF THE JOB, EACH PIECE OF EQUIPMENT, VALVE, SWITCH, STARTER, PANEL, PIPE LINE, CONDUIT, ETC., SHALL BE CLEARLY IDENTIFIED WHETHER EXPOSED OR CONCEALED, COVERED OR UNCOVERED, IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH "BRANDY-PERMA" CODE PIPE TAPE" OR T. & B. WESTLINE "TEL-A-PIPE" INDICATING DIRECTION OF FLOW, SERVICE, ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE, CONDUIT, OR COVERING. VALVES AND CONTROLS SHALL BE IDENTIFIED BY 2-INCH LAQUERED BRASS TAGS WITH STAMPED LETTERS FASTENED WITH "S" HOOKS OR CHAINS. EQUIPMENT IS TO BE IDENTIFIED AS TO FUNCTION AND PURPOSE BY MEANS OF PERMANENTLY ATTACHED LAMINATED ENGRAVED PHENOLIC NAMEPLATES WITH BEVELED EDGES, AND WHITE LETTERS ON BLACK BACKGROUND. (NO ADHESIVE LABELS ALLOWED).
8. AT THE CONCLUSION OF THE WORK, ALL EQUIPMENT AND SYSTEMS SHALL BE BALANCED, ADJUSTED, AND TESTED TO PROVIDE A QUIET-OPERATING, STABLE, AND SAFELY OPERATING SYSTEM(S). DEMONSTRATE OPERATION OF ALL SYSTEMS TO THE OWNER'S DESIGNATED REPRESENTATIVE. THE TEST AND BALANCE WORK SHALL BE PERFORMED IN ACCORDANCE WITH NEBB OR ABC STANDARDS, BY INDEPENDENT, APPROVED, AND CERTIFIED TEST AND BALANCE PERSONNEL.
9. THE MECHANICAL/PLUMBING CONTRACTOR IS RESPONSIBLE FOR RETAINING AND PAYING FOR THE DESIGN SERVICES OF A STRUCTURAL ENGINEER TO CREATE THE DESIGN AND INSTALLATION DRAWINGS FOR MECHANICAL/PLUMBING SYSTEMS SEISMIC RESTRAINT SUPPORT, PER THE PROJECT BUILDING CODE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT MECHANICAL SYSTEMS SHOP DRAWINGS BASED UPON MULTI DISCIPLINE COORDINATION. INCLUDED WITH THE SHOP DRAWING SUBMISSION SHALL BE SEISMIC RESTRAINT DRAWINGS NOTING WHERE SEISMIC SUPPORT IS REQUIRED. FOR EACH AREA NOTED NEEDING SEISMIC SUPPORT FOR THE MECHANICAL SYSTEMS, THERE SHALL BE A SEISMIC DRAWING DETAILING THE REQUIRED SUPPORT. THE SEISMIC SUPPORT DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE SAME STATE AS THE PROJECT. IN ADDITION TO THE PROJECT DESIGN TEAM REVIEW, THE SEISMIC SUPPORT DRAWINGS WILL BE ISSUED TO THE LOCAL BUILDING DEPARTMENT FOR REVIEW AS PART OF A DEFERRED SUBMITTAL FOR THE BUILDING DEPARTMENT. COMMENCEMENT OF CONSTRUCTION PRIOR TO BUILDING DEPARTMENT REVIEW IS AT THE CONTRACTOR'S RISK.
10. PIPE HANGERS: PIPE SIZES 1/2" TO 1 1/2" - 6'-0" MAX SPACING, 3/8" ROD DIAMETER; PIPE SIZES 2" TO 3" - 10'-0" MAX SPACING, 1/2" ROD DIAMETER; PIPE SIZES 4 TO 6"-10'-0" MAX SPACING, 5/8" ROD DIAMETER.
11. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK CLOSING WATER VALVES. PROVIDE TYPE AS PER SCHEDULE.
12. WATER PROOFING AND FLASHING OF PIPE PENETRATIONS THROUGH EXTERIOR WALL AND ROOF SHALL BE BY THIS CONTRACTOR. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS AND METHODS WITH GENERAL CONTRACTOR PRIOR TO CONSTRUCTION OF ROOF DECK.
13. CONTRACTOR SHALL OBTAIN FROM THE ARCHITECT THE EXACT LOCATION OF EQUIPMENT, PLUMBING FIXTURES, FLOOR DRAINS AND ANY OTHER APPARATUS SPECIFIED IN THESE DRAWINGS.
14. PROVIDE CLEAN OUTS IN SANITARY, WASTE AND DRAIN LINES AS SHOWN AND AS REQUIRED BY LOCAL CODE. ALL CLEANOUTS SHALL BE READILY ACCESSIBLE.
15. PROVIDE BALANCE VALVE FOR HOT WATER RETURN SYSTEM AS REQUIRED.
16. PROVIDE PRESSURE REDUCING VALVE IN SYSTEM AS REQUIRED.
17. PROVIDE A NON-VENTED TRAP ON ALL INDIRECT WASTE PIPING FIVE (5) TO FIFTEEN (15) FEET IN DEVELOPED LENGTH. INDIRECT WASTE PIPING WITH ANGLES AND CHANGES OF DIRECTION SHALL BE PROVIDED WITH CLEANOUTS.
18. WHERE A SINK IN A BAR, SODA FOUNTAIN, OR COUNTER HAS AN INDIRECT WASTE, THE DEVELOPED LENGTH FROM THE SINK OUTLET SHALL NOT EXCEED FIVE (5) FEET.

PLUMBING - DRAWING INDEX UNDERSLAB

SHEET NUMBER	SHEET NAME	03.27.2018 - BID PACKAGE 02				Content Series
		04.09.2018 Addendum 2	MM.DD.YYYY	MM.DD.YYYY	MM.DD.YYYY	
PU0.0	PLUMBING COVERSHEET AND SHEET INDEX	X	X			UNDERSLAB PACKAGE
PU1.1	PLUMBING ENLARGED UNDERSLAB PLAN - GAMING	X	X			UNDERSLAB PACKAGE
PU1.2	PLUMBING ENLARGED UNDERSLAB PLAN - SOUTH	X	X			UNDERSLAB PACKAGE
PU1.3	PLUMBING ENLARGED UNDERSLAB PLAN - BOH	X	X			UNDERSLAB PACKAGE
PU1.4	PLUMBING ENLARGED UNDERSLAB PLAN - BANQUET BOH	X	X			UNDERSLAB PACKAGE
PU1.5	PLUMBING ENLARGED UNDERSLAB PLAN - NORTH	X	X			UNDERSLAB PACKAGE
Grand total: 6						



**James R. Childers
Architect, Inc.**

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



APR 09 2018

CONSULTANT LOGO:



CLIENT:



CHEROKEE NATION ENTERTAINMENT
 TAHLEQUAH CASINO
 TAHLEQUAH, OKLAHOMA

PROJECT PHASE:

**BID PACKAGE 02
(100% SET)**

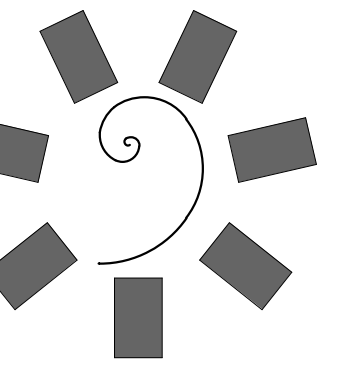
#	REVISIONS	
	DATE	DESCRIPTION

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER:

PU0.0

**PLUMBING
COVERSHEET AND
SHEET INDEX**



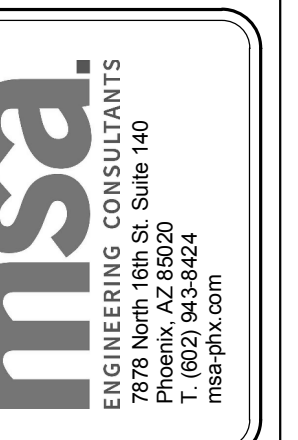
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



APR 09 2018

CONSULTANT LOGO:



CLIENT:



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION
1	04/09/18	ADDENDUM 2
2		

DATE: 03/27/18
JOB NUMBER: 17-06

SHEET NUMBER:
PU1.1
PLUMBING ENLARGED
UNDERSLAB PLAN -
GAMING

SHEET NOTES:

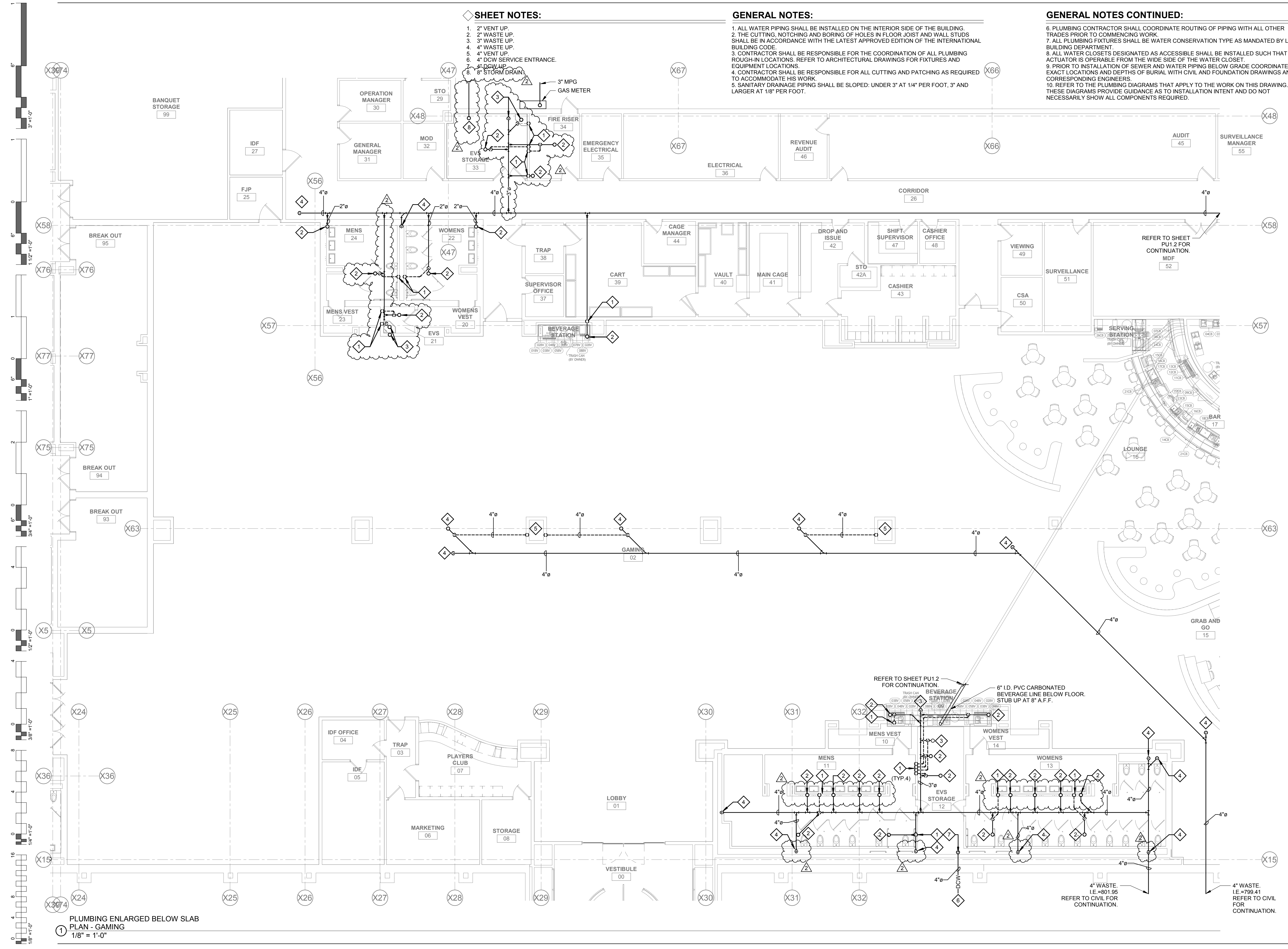
- 2" VENT UP.
- 2" WASTE UP.
- 3" WASTE UP.
- 4" WASTE UP.
- 4" VENT UP.
- 4" DCW SERVICE ENTRANCE.
- 4" DCW UP.
- 8" STORM DRAIN.

GENERAL NOTES:

- ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
- THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
- SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.

GENERAL NOTES CONTINUED:

- PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
- ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
- ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
- PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
- REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.



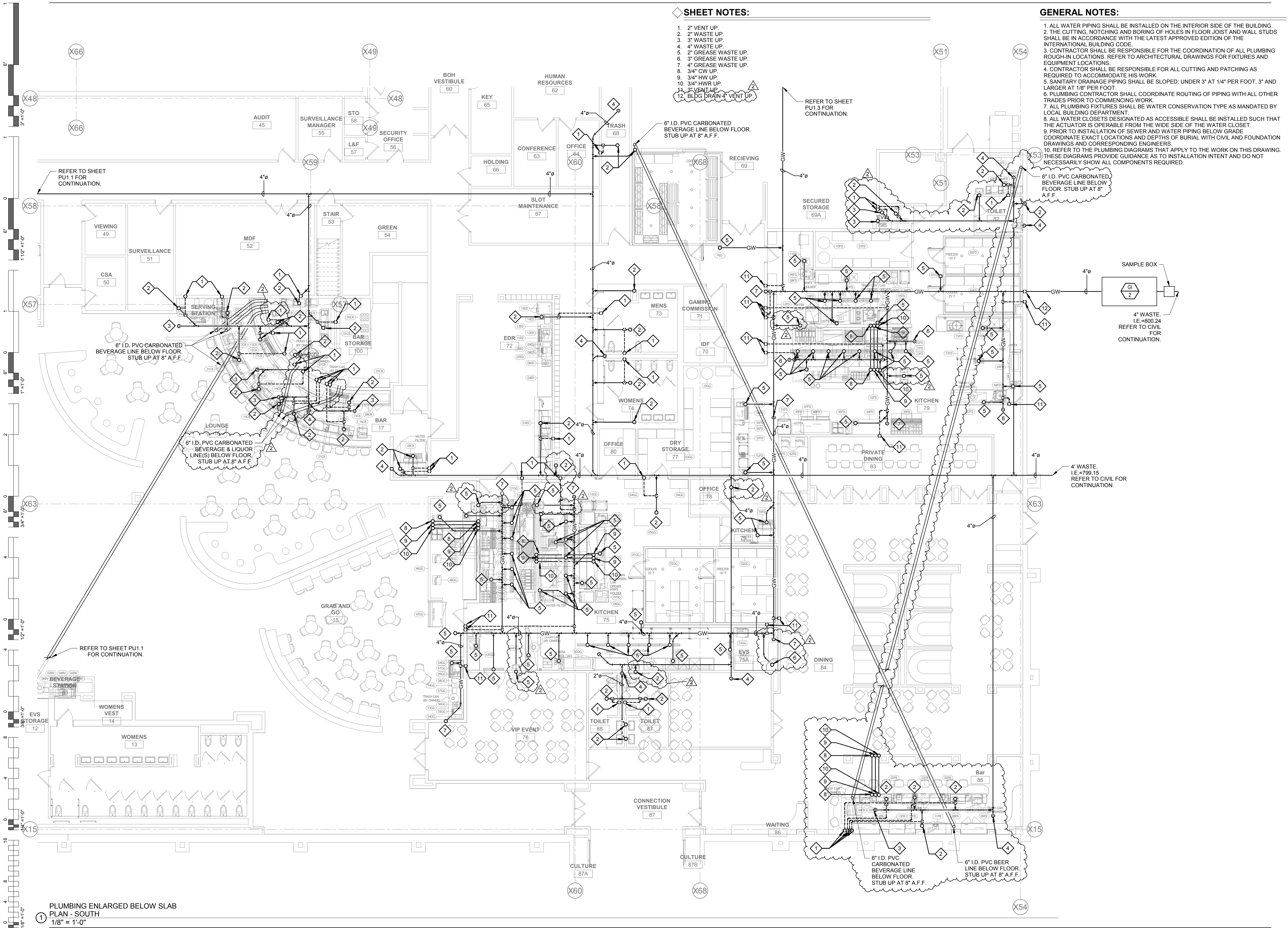
PLUMBING ENLARGED BELOW SLAB
PLAN - GAMING
1/8" = 1'-0"

SHEET NOTES:

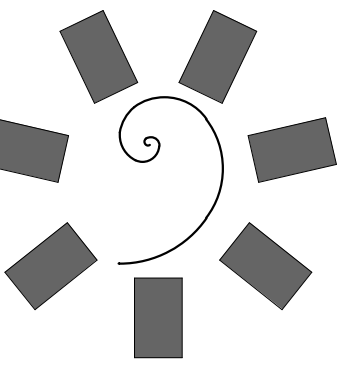
1. 2" VENT UP.
2. 2" WASTE UP.
3. 3" WASTE UP.
4. 4" WASTE UP.
5. 2" GREASE WASTE UP.
6. 3" GREASE WASTE UP.
7. 4" GREASE WASTE UP.
8. 3/4" CW UP.
9. 3/4" HW UP.
10. 3/4" HWR UP.
11. 3" VENT UP.
12. BLDG DRAIN 4" VENT UP.

GENERAL NOTES:

1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

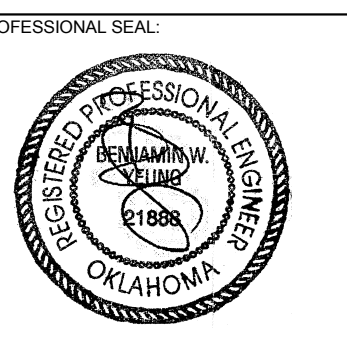


1 PLUMBING ENLARGED BELOW SLAB
PLAN - SOUTH
1/8" = 1'-0"



**James R. Childers
Architect, Inc.**

45 South 4th Street
Fort Smith, AR 72901
479-783-2400
www.childersarchitect.com



APR 09 2018

CONSULTANT LOGO:



CLIENT:
CHEROKEE NATION
Entertainment



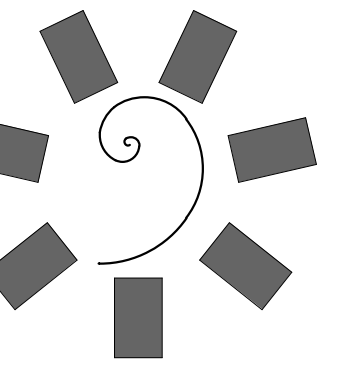
CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION
1	04/09/18	ADDENDUM 2
2		

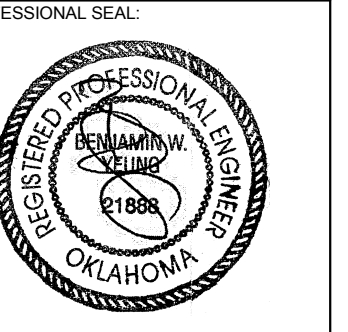
DATE: 03/27/18
JOB NUMBER: 17-06

SHEET NUMBER:
PU1.2
PLUMBING ENLARGED
UNDERSLAB PLAN - SOUTH



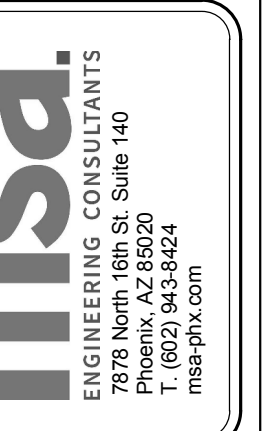
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



APR 09 2018

CONSULTANT LOGO:



CLIENT:
CHEROKEE NATION
Entertainment



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION
1	04/09/18	ADDENDUM 2

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: PU1.3

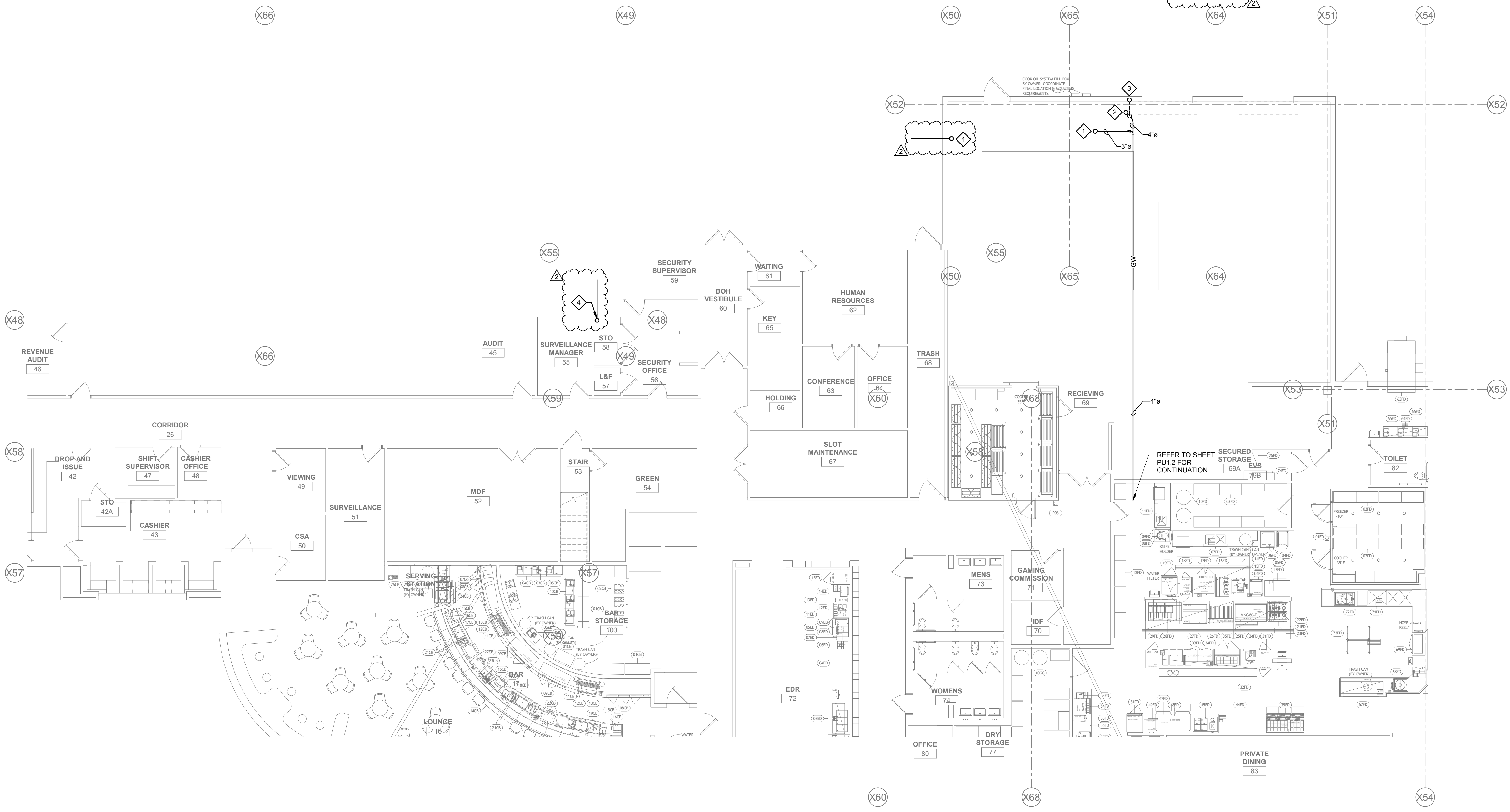
PLUMBING ENLARGED UNDERSLAB PLAN - BOH

GENERAL NOTES:

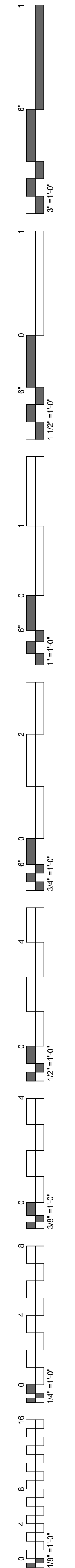
1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

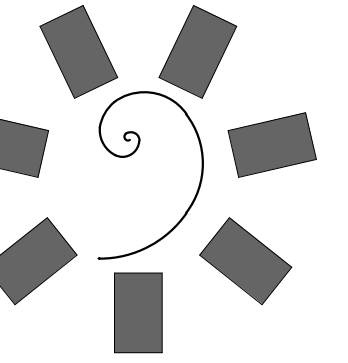
◇ SHEET NOTES:

1. 3" GREASE WASTE UP.
2. 4" GREASE WASTE UP.
3. 3" VENT UP.
4. 8" STORM DRAIN.



PLUMBING ENLARGED BELOW SLAB
PLAN - BOH
1/8" = 1'-0"





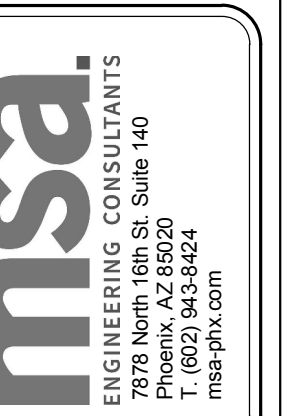
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



APR 09 2018

CONSULTANT LOGO:



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION
2	04/09/18	ADDENDUM 2

DATE: 03/27/18
JOB NUMBER: 17-06

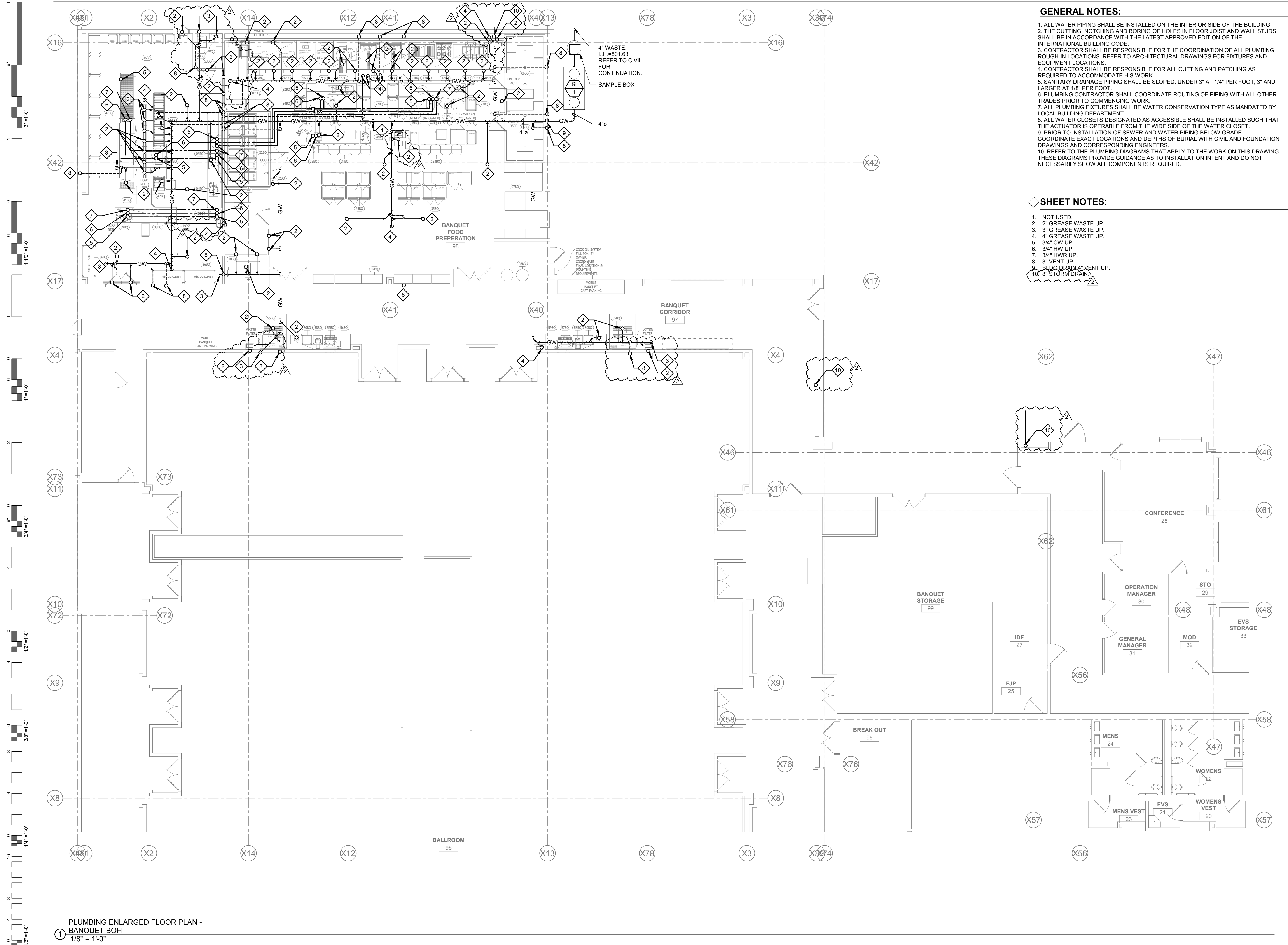
SHEET NUMBER:
PU1.4
PLUMBING ENLARGED UNDERSLAB PLAN - BANQUET BOH

GENERAL NOTES:

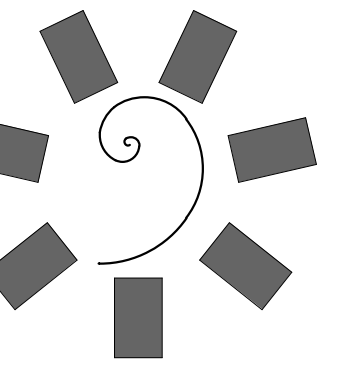
1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

SHEET NOTES:

1. NOT USED.
2. 2" GREASE WASTE UP.
3. 3" GREASE WASTE UP.
4. 4" GREASE WASTE UP.
5. 3/4" CW UP.
6. 3/4" HW UP.
7. 3/4" HWR UP.
8. 3" VENT UP.
9. BUILD DRAIN 4" VENT UP.
10. 8" STORM DRAIN.



PLUMBING ENLARGED FLOOR PLAN - BANQUET BOH
1/8" = 1'-0"



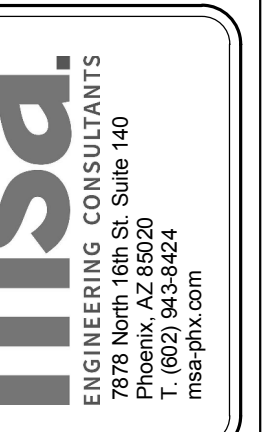
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



APR 09 2018

CONSULTANT LOGO:



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

REVISIONS	
#	DESCRIPTION
1	DATE
2	04/09/18 ADDENDUM 2

DATE: 03/27/18
JOB NUMBER: 17-06

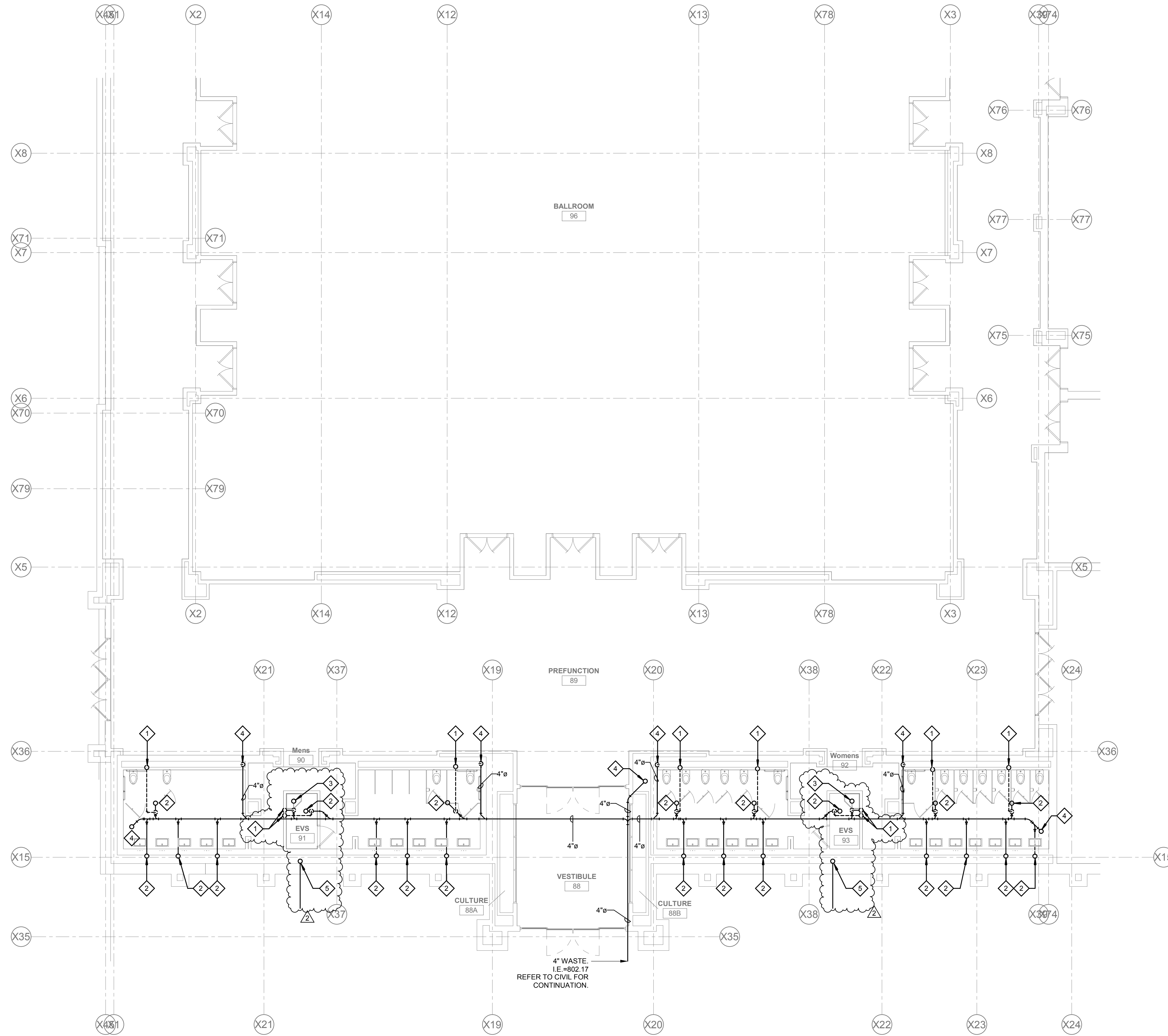
SHEET NUMBER:
PU1.5
PLUMBING
ENLARGED
UNDERSLAB PLAN -
NORTH

GENERAL NOTES:

1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS, REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

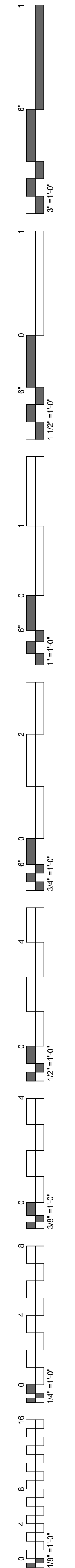
SHEET NOTES:

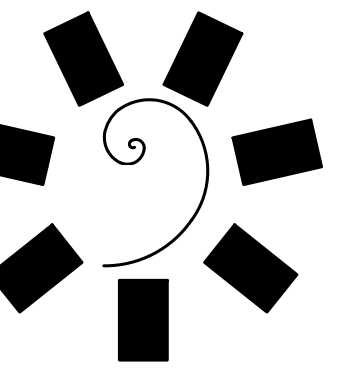
1. 2" VENT UP.
2. 2" WASTE UP.
3. 3" WASTE UP.
4. 4" WASTE UP.
5. 4" STORM DRAIN.



4" WASTE.
IE=802.17
REFER TO CIVIL FOR
CONTINUATION.

PLUMBING ENLARGED FLOOR PLAN -
NORTH
1/8" = 1'-0"

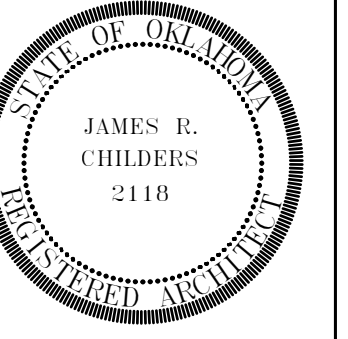




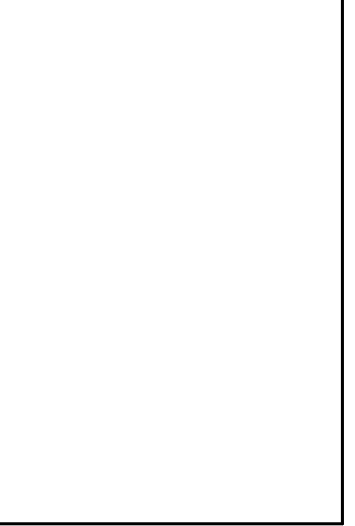
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com

PROFESSIONAL SEAL



CONSULTANT LOGO:



CLIENT:



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:

BID PACKAGE 02
(100% SET)

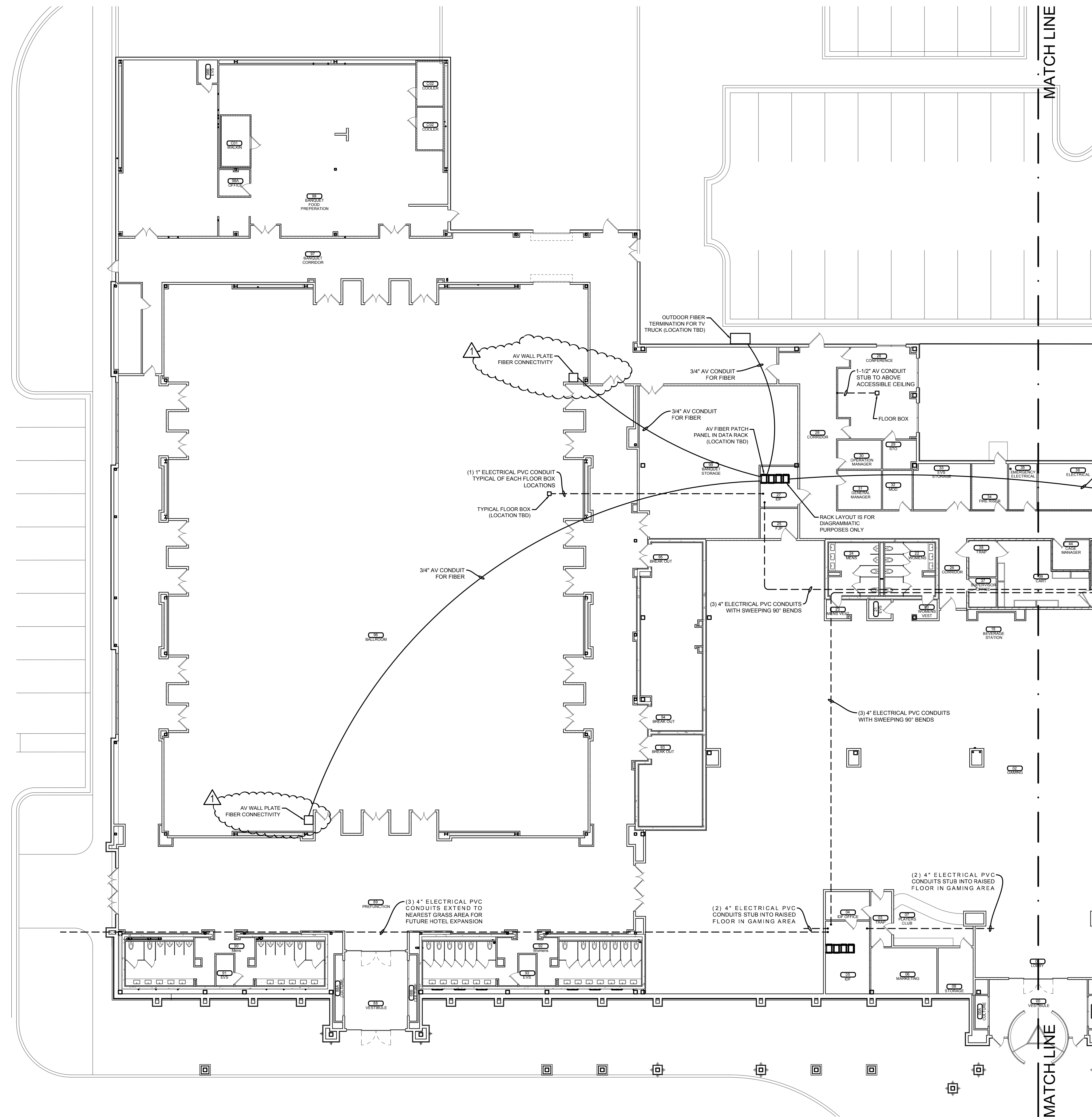
REVISIONS	
#	DATE DESCRIPTION
1	4/15/2018 UNDER SLAB CONDUIT

DATE: 03/27/18 JOB NUMBER: 17-06

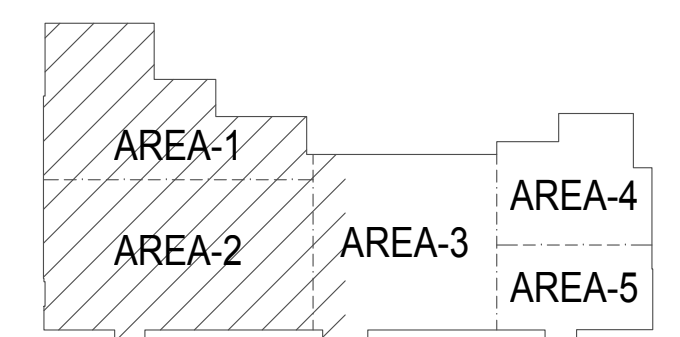
SHEET NUMBER:

ITS101

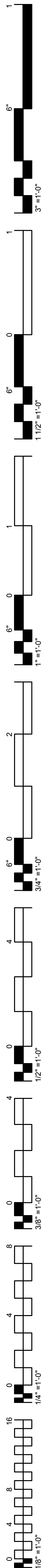
LOW VOLTAGE
CONDUIT PLAN

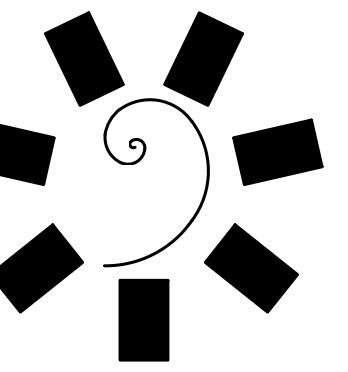


--- CONDUIT IN FLOOR OR BELOW GRADE
— CONDUIT IN WALL OR ABOVE CEILING



LOW VOLTAGE CONDUIT PLAN
1/16" = 1'-0"

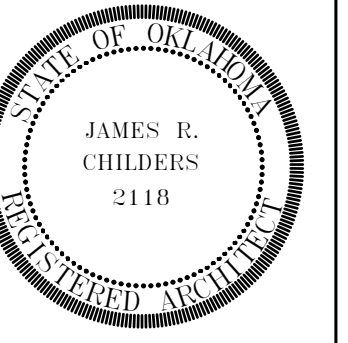




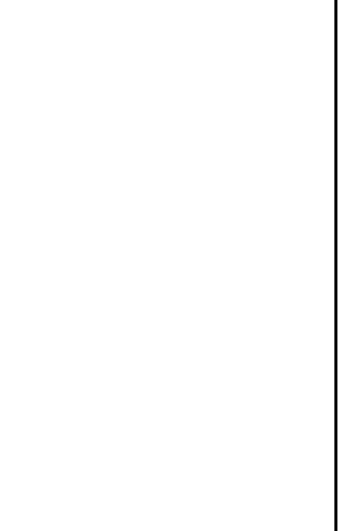
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2460
www.childersarchitect.com

PROFESSIONAL SEAL:



CONSULTANT LOGO:



CLIENT:



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:

BID PACKAGE 02
(100% SET)

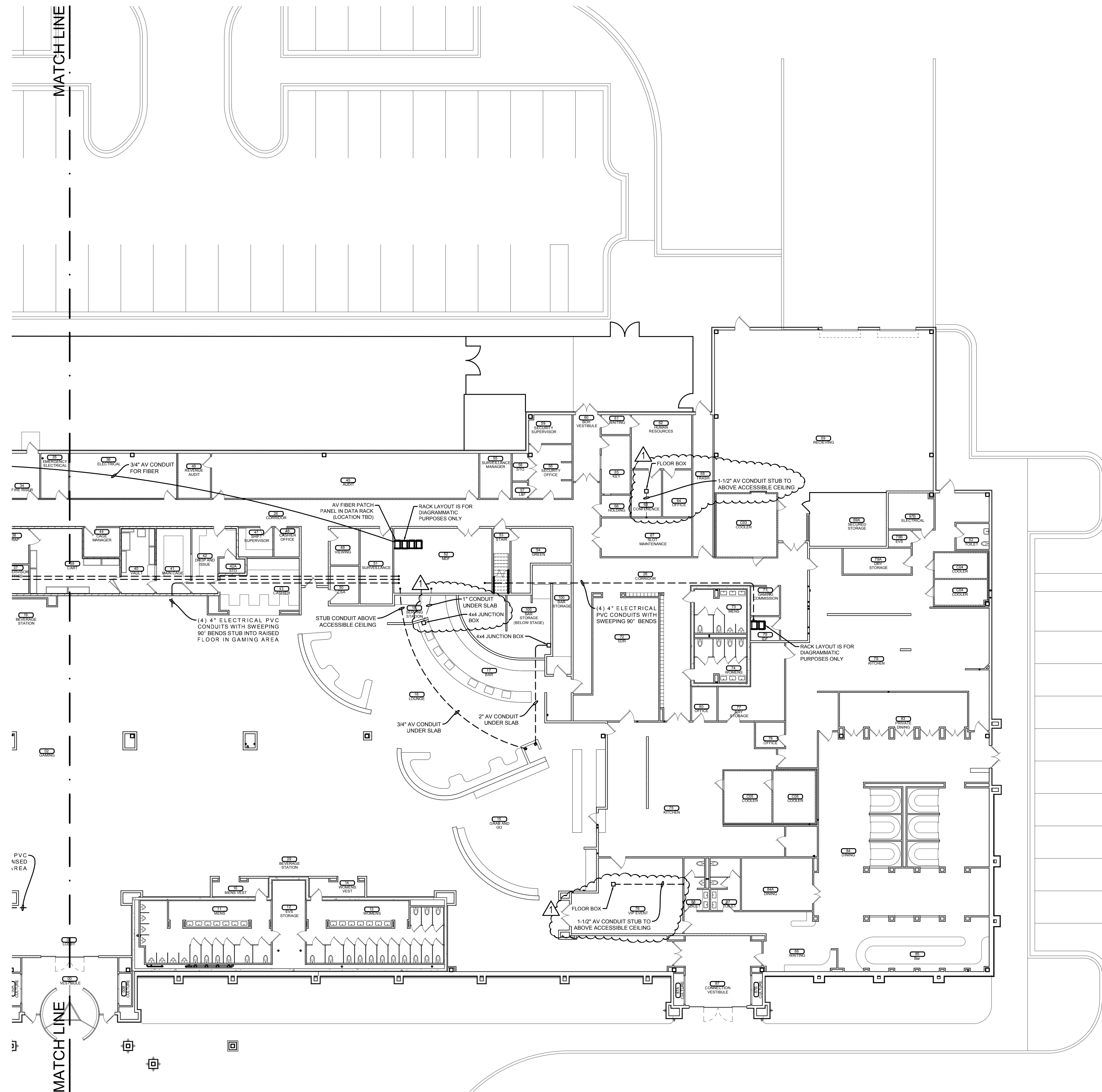
REVISIONS		
#	DATE	DESCRIPTION
1	4/5/2018	UNDER SLAB CONDUIT

DATE: 03/27/18 JOB NUMBER: 17-06

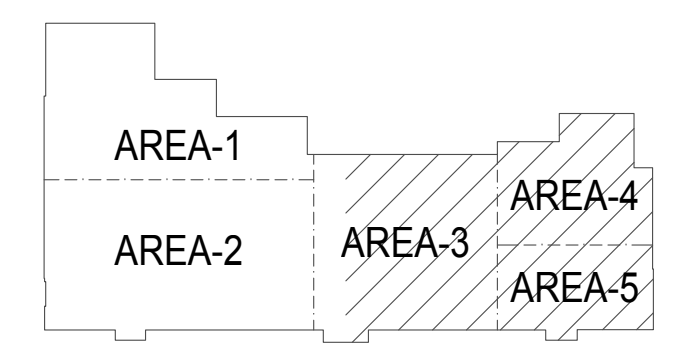
SHEET NUMBER:

ITS102

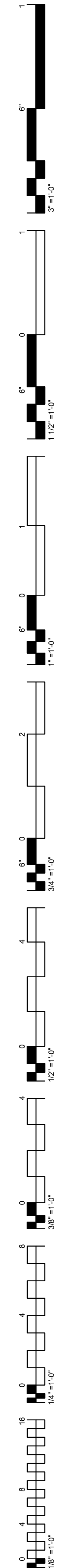
LOW VOLTAGE
CONDUIT PLAN



--- CONDUIT IN FLOOR OR BELOW GRADE
 — CONDUIT IN WALL OR ABOVE CEILING



LOW VOLTAGE CONDUIT PLAN
 1/16" = 1'-0"



Foreman | Manhattan, A Joint Venture

RFI LOG

#	Subject	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
PC-011	Stage Pit Details	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Chris Griffin	04/09/2018	04/09/18			TBD		Yes (Unknown)
	<p>Chris Griffin Sent Wed Apr 4, 2018 at 06:14 pm CDT See S2.1, please see attached and provide the following details for the stage pit.</p> <p>Q:</p> <ol style="list-style-type: none"> sheet waterproofing around the pit and ramp ramp and landing details / sections as indicated on the attachment <p>PC-011 Attachment.pdf</p> <hr/> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:29 pm UTC</p> <p>A:</p> <ol style="list-style-type: none"> Install per manufactures recommendation at all vertical surfaces in the pit. See addendum 001. <p>Gary Moore</p>													
PC-010	Slab On Grade Edge Details	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Chris Griffin	04/09/2018	04/09/18			TBD		Yes (Unknown)
	<p>Q: Chris Griffin Sent Wed Apr 4, 2018 at 03:13 pm CDT Per email correspondence, please provide slab on grade edge details.</p> <hr/> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:27 pm UTC</p> <p>A: See addendum 001. Gary Moore</p>													
PC-009	Grade Beam Step Details	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Chris Griffin	04/09/2018	04/09/18			TBD		Yes (Unknown)
	<p>Q: Chris Griffin Sent Wed Apr 4, 2018 at 02:14 pm CDT Per email correspondence, please provide a grade beam step detail at the recesses slab transitions along the building perimeter.</p> <hr/> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:26 pm UTC</p> <p>A: See addendum 001. Gary Moore</p>													
PC-008	Bathroom Grade Beam Detail	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Patrick Fogarty	04/09/2018	04/09/18			Yes (Unknown)		Yes (Unknown)
	<p>Patrick Fogarty Sent Wed Apr 4, 2018 at 01:53 pm CDT Per email dated 4/2/18 from Gary Moore, grade beams at the safer rooms are intended to be held 2'8" below finish floor to accommodate under slab utilities.</p> <p>Q:</p> <ol style="list-style-type: none"> Is it the intent to have CMU sit on the grade beam or a stem wall? If CMU is intended to sit at grade beam, what will be the slab edge detail? Large thickened edge or tie into wall? Note 10/S0.1 states penetrations in foundations are not to be done unless shown, does this note also apply to CMU walls? <p>Please provide details to be issued in bid clarification.</p> <hr/> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:25 pm UTC</p> <p>A: See addendum 001. Gary Moore</p>													



Foreman | Manhattan, A Joint Venture

#	Subject	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
PC-007	Concrete Pedestal Details	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Chris Griffin	04/09/2018	04/09/18			TBD		Yes (Unknown)
<p>Q: Chris Griffin Sent Wed Apr 4, 2018 at 01:52 pm CDT Per email correspondence, please provide concrete pedestal details for the structural steel columns along the building perimeter.</p> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:25 pm UTC</p> <p>A: See addendum 001. Gary Moore</p>														
PC-006	Slab on Grade Curing	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Patrick Fogarty	04/09/2018	04/09/18			TBD		TBD
<p>Q: Patrick Fogarty Sent Wed Apr 4, 2018 at 01:22 pm CDT Per S2.1 note 7 states all concrete slabs to be water cures. Do not use any curing compounds. Per spec section 03 30 00, 2.07 Curing materials are listed. Additionally, section 3.11 of 03 30 00 several methods are provided for curing. In field conversations with Kevin Ogle and James Carter, water curing is not solely required. FMC would like to confirm waterborne dissipating cures can be used on the project. This will be more conducive to the fast paced nature of the project.</p> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:35 pm UTC After talking to the owner and engineer the note was removed. See addendum 001. Gary Moore</p>														
PC-005	Sheet Waterproofing Location/ Details	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Patrick Fogarty	04/09/2018	04/09/18					
<p>Q: Patrick Fogarty Sent Wed Apr 4, 2018 at 01:05 pm CDT Bid Package 2 specifications include spec section 07 1300 sheet waterproofing, however FMC cannot locate details or locations of where the product is intended to be used. Please clarify scope of use and details for application.</p> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 09:11 pm UTC The sheet waterproofing is to be installed on all vertical surfaces in the slab at the following locations:</p> <p>A: 1. The pit below the Stage. 2. The recessed areas with raised flooring. Gary Moore</p>														
PC-004	Generator Specification	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Patrick Fogarty	04/09/2018	04/05/18			TBD		No
<p>Q: Patrick Fogarty Sent Wed Apr 4, 2018 at 01:01 pm CDT Per note 1 of the generator details, contractor is to provide a 480V, 3PH, 4W generator and to refer to specifications for additional information. Per bid package 1 or 2, specifications relating to the generators have not been issued. Please provide in order for Foreman Manhattan to evaluate lead times and budget.</p> <p>Gary Moore (Childers) Responded Thu Apr 5, 2018 at 06:27 pm UTC See attached specification 26 3213.13 Diesel Emergency Engine Generators. 263213.13.pdf</p>														
PC-003	Pit for Underfloor Air Distribution	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Patrick Fogarty	04/09/2018	04/06/18					
<p>Q: Patrick Fogarty Sent Wed Apr 4, 2018 at 12:57 pm CDT From previous projects with under access floor air distribution, it has been seen to have a pit at the supply duct to underfloor transition. Will that be the design intent for the Tahlequah Casino? If so, please provide design details including size, shape, rebar requirements, embeds, etc. in order to bid completely on April 11th.</p> <p>Gary Moore (Childers) Responded Fri Apr 6, 2018 at 06:08 pm UTC The ducts are currently shown in the model for the raised floor. they will terminate at 12" above finish floor. Robbie Jones</p>														



Foreman | Manhattan, A Joint Venture

#	Subject	Status	Responsible Contractor	Received From	Assignee	Date Initiated	RFI Manager	Due Date	Closed Date	Ball In Court	Location	Schedule Impact	Cost Code	Cost Impact
	MSA Engineering 4-6-2018													
PC-002	Routing of Mechanical Piping	Closed	Manhattan - Tulsa	None	Moore, Gary (Chil...)	04/04/2018	Patrick Fogarty	04/09/2018	04/06/18					
	<p>Q: Patrick Fogarty Sent Wed Apr 4, 2018 at 12:52 pm CDT Per S0.1 note 10 under Foundations, Slab-on-grade - General; foundations are not to be penetrated by conduits, pipes, etc. What is the design intent for routing of mechanical piping from the central plant skid to the RTU's? If underground from the skid to the building, penetrations may be needed. If overhead, will glycol or other anti-freeze measures be needed?</p> <p>A: Gary Moore (Childers) Responded Fri Apr 6, 2018 at 06:06 pm UTC The hydronic piping shall be routed above grade, The plant is less that 5 feet from the building. NO glycol is required. We will need a 4" waste from civil, We have sent a revision to civil engineer. Robbie Jones MSA Engineer 4-6-2018</p>													
PC-001	Slab on Grade Thickness	Closed	Manhattan - Tulsa	None	Hargrave, Casey (...)	03/21/2018	Patrick Fogarty	03/22/2018	03/23/18			No		TBD
	<p>Q: Patrick Fogarty Sent Wed Mar 21, 2018 at 11:32 am CDT Per detail 3/S1.3, typical pier cap is shown with a slab transition. However, no clarification to slab thickness is provided at the detail or the other sheets associated with bid package 01. Slab thickness scales to 4" per the scale provided, please confirm slab on grade will be designed at 4". If not, please clarify dimension for slab on grade in order to coordinate building pad elevation in rough grading bid manual.</p> <p>A: Casey Hargrave (Childers) Responded Wed Mar 21, 2018 at 07:26 pm UTC Slab shall be 5 inches. Casey A Hargrave, Architect</p>													

SECTION 263213.13

DEISEL EMERGENCY ENGINE GENERATORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes packaged engine-generator sets for emergency and standby power supply with the following features:
 - 1. Diesel engine.
 - 2. Unit-mounted cooling system.
 - 3. Unit-mounted control and monitoring.
 - 4. Performance requirements for sensitive loads.
 - 5. Outdoor enclosure.

1.3 DEFINITIONS

- A. Operational Bandwidth: The total variation from the lowest to highest value of a parameter over the range of conditions indicated, expressed as a percentage of the nominal value of the parameter.
- B. LP: Liquid petroleum.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of packaged engine generator indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. In addition, include the following:
 - 1. Thermal damage curve for generator.
 - 2. Time-current characteristic curves for generator protective device.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 1. Dimensioned outline plan and elevation drawings of engine-generator set and other components specified.
 - 2. Design Calculations: Signed and sealed by a qualified professional engineer. Calculate requirements for selecting vibration isolators and seismic restraints and for designing vibration isolation bases.
 - 3. Vibration Isolation Base Details: Signed and sealed by a qualified professional engineer. Detail fabrication, including anchorages and attachments to structure and to supported equipment. Include base weights.
 - 4. Wiring Diagrams: Power, signal, and control wiring.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For installer manufacturer and testing agency.
- B. Source quality-control test reports.
 - 1. Certified summary of prototype-unit test report.
 - 2. Certified Test Reports: For components and accessories that are equivalent, but not identical, to those tested on prototype unit.
 - 3. Certified Summary of Performance Tests: Certify compliance with specified requirement to meet performance criteria for sensitive loads.
 - 4. Report of factory test on units to be shipped for this Project, showing evidence of compliance with specified requirements.
 - 5. Report of sound generation.
 - 6. Report of exhaust emissions showing compliance with applicable regulations.
 - 7. Certified Torsional Vibration Compatibility: Comply with NFPA 110.
- C. Field quality-control test reports.
- D. Warranty: Special warranty specified in this Section.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For packaged engine generators to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
 - 1. List of tools and replacement items recommended to be stored at Project for ready access. Include part and drawing numbers, current unit prices, and source of supply.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
 - 1. Maintenance Proximity: Not more than four hours' normal travel time from Installer's place of business to Project site.
 - 2. Engineering Responsibility: Preparation of data for vibration isolators and seismic restraints of engine skid mounts, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Manufacturer Qualifications: A qualified manufacturer. Maintain, within 200 miles of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.
- C. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association or is a nationally recognized testing laboratory (NRTL), and that is acceptable to authorities having jurisdiction.
 - 1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.
- D. Source Limitations: Obtain packaged generator sets and auxiliary components through one source from a single manufacturer.

- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- F. Comply with ASME B15.1.
- G. Comply with NFPA 37.
- H. Comply with NFPA 70.
- I. Comply with NFPA 99.
- J. Comply with NFPA 110 requirements for Level 1 emergency power supply system.
- K. Comply with UL 2200.
- L. Engine Exhaust Emissions: Comply with applicable state and local government requirements.
- M. Noise Emission: Comply with applicable state and local government requirements for maximum noise level at adjacent property boundaries due to sound emitted by generator set including engine, engine exhaust, engine cooling-air intake and discharge, and other components of installation.

1.8 PROJECT CONDITIONS

- A. Environmental Conditions: Engine-generator system shall withstand the following environmental conditions without mechanical or electrical damage or degradation of performance capability:
 - 1. Ambient Temperature: 5 to 40 deg C.
 - 2. Relative Humidity: 0 to 95 percent.
 - 3. Altitude: Sea level to 1000 feet.

1.9 COORDINATION

- A. Coordinate size and location of concrete bases for package engine generators. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Caterpillar; Engine Div.
 - 2. Generac Power Systems, Inc.
 - 3. Kohler Co.
 - 4. Magnetek, Inc.
 - 5. Onan/Cummins Power Generation; Industrial Business Group.
 - 6. Spectrum Detroit Diesel.

2.2 ENGINE-GENERATOR SET

- A. Factory-assembled and -tested, engine-generator set.
- B. Mounting Frame: Maintain alignment of mounted components without depending on concrete foundation; and have lifting attachments.
 - 1. Rigging Diagram: Inscribed on metal plate permanently attached to mounting frame to indicate location and lifting capacity of each lifting attachment and generator-set center of gravity.
- C. Capacities and Characteristics:
 - 1. Power Output Ratings: Nominal ratings as indicated.
 - 2. Output Connections: Three-phase, four wire.
 - 3. Nameplates: For each major system component to identify manufacturer's name and address, and model and serial number of component.
- D. Generator-Set Performance:
 - 1. Steady-State Voltage Operational Bandwidth: 3 percent of rated output voltage from no load to full load.
 - 2. Transient Voltage Performance: Not more than 20 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within three seconds.
 - 3. Steady-State Frequency Operational Bandwidth: 0.5 percent of rated frequency from no load to full load.
 - 4. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
 - 5. Transient Frequency Performance: Less than 5 percent variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within five seconds.
 - 6. Output Waveform: At no load, harmonic content measured line to line or line to neutral shall not exceed 5 percent total and 3 percent for single harmonics. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50 percent.
 - 7. Sustained Short-Circuit Current: For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 250 percent of rated full-load current for not less than 10 seconds and then clear the fault automatically, without damage to generator system components.
 - 8. Start Time: Comply with NFPA 110, Type 10, system requirements.
- E. Generator-Set Performance for Sensitive Loads:
 - 1. Oversizing generator compared with the rated power output of the engine is permissible to meet specified performance.
 - a. Nameplate Data for Oversized Generator: Show ratings required by the Contract Documents rather than ratings that would normally be applied to generator size installed.
 - 2. Steady-State Voltage Operational Bandwidth: 1 percent of rated output voltage from no load to full load.
 - 3. Transient Voltage Performance: Not more than 10 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within 0.5 second.

4. Steady-State Frequency Operational Bandwidth: Plus or minus 0.25 percent of rated frequency from no load to full load.
5. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
6. Transient Frequency Performance: Less than 2-Hz variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within three seconds.
7. Output Waveform: At no load, harmonic content measured line to neutral shall not exceed 2 percent total with no slot ripple. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50 percent.
8. Sustained Short-Circuit Current: For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 300 percent of rated full-load current for not less than 10 seconds and then clear the fault automatically, without damage to winding insulation or other generator system components.
9. Excitation System: Performance shall be unaffected by voltage distortion caused by nonlinear load.
 - a. Provide permanent magnet excitation for power source to voltage regulator.
10. Start Time: Comply with NFPA 110, Type 10, system requirements.

2.3 ENGINE

- A. Fuel: Fuel oil, Grade DF-2.
- B. Rated Engine Speed: 1800 rpm.
- C. Maximum Piston Speed for Four-Cycle Engines: 2250 fpm.
- D. Lubrication System: The following items are mounted on engine or skid:
 1. Filter and Strainer: Rated to remove 90 percent of particles 5 micrometers and smaller while passing full flow.
 2. Thermostatic Control Valve: Control flow in system to maintain optimum oil temperature. Unit shall be capable of full flow and is designed to be fail-safe.
 3. Crankcase Drain: Arranged for complete gravity drainage to an easily removable container with no disassembly and without use of pumps, siphons, special tools, or appliances.
- E. Engine Fuel System:
 1. Main Fuel Pump: Mounted on engine. Pump ensures adequate primary fuel flow under starting and load conditions.
 2. Relief-Bypass Valve: Automatically regulates pressure in fuel line and returns excess fuel to source.
 3. Dual Natural Gas with LP-Gas Backup (Vapor-Withdrawal) System:
 - a. Carburetor.
 - b. Secondary Gas Regulators: One for each fuel type.
 - c. Fuel-Shutoff Solenoid Valves: One for each fuel source.
 - d. Flexible Fuel Connectors: One for each fuel source.
- F. Coolant Jacket Heater: Electric-immersion type, factory installed in coolant jacket system. Comply with NFPA 110 requirements for Level 1 equipment for heater capacity.
- G. Governor: Adjustable isochronous, with speed sensing.

- H. Cooling System: Closed loop, liquid cooled, with radiator factory mounted on engine-generator-set mounting frame and integral engine-driven coolant pump.
1. Coolant: Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.
 2. Size of Radiator: Adequate to contain expansion of total system coolant from cold start to 110 percent load condition.
 3. Expansion Tank: Constructed of welded steel plate and rated to withstand maximum closed-loop coolant system pressure for engine used. Equip with gage glass and petcock.
 4. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.
 5. Coolant Hose: Flexible assembly with inside surface of nonporous rubber and outer covering of aging-, ultraviolet-, and abrasion-resistant fabric.
 - a. Rating: 50-psig maximum working pressure with coolant at 180 deg F and noncollapsible under vacuum.
 - b. End Fittings: Flanges or steel pipe nipples with clamps to suit piping and equipment connections.
- I. Muffler/Silencer: Critical type, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine manufacturer's engine backpressure requirements.
1. Minimum sound attenuation of 25 dB at 500 Hz.
 2. Sound level measured at a distance of 10 feet from exhaust discharge after installation is complete shall be 85 dBA or less.
- J. Air-Intake Filter: Standard-duty, engine-mounted air cleaner with replaceable dry-filter element and "blocked filter" indicator.
- K. Starting System: 24-V electric, with negative ground.
1. Components: Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 "Project Conditions" Article.
 2. Cranking Motor: Heavy-duty unit that automatically engages and releases from engine flywheel without binding.
 3. Cranking Cycle: As required by NFPA 110 for system level specified.
 4. Battery: Adequate capacity within ambient temperature range specified in Part 1 "Project Conditions" Article to provide specified cranking cycle at least twice without recharging.
 5. Battery Cable: Size as recommended by engine manufacturer for cable length indicated. Include required interconnecting conductors and connection accessories.
 6. Battery Compartment: Factory fabricated of metal with acid-resistant finish and thermal insulation. Thermostatically controlled heater shall be arranged to maintain battery above 10 deg C regardless of external ambient temperature within range specified in Part 1 "Project Conditions" Article. Include accessories required to support and fasten batteries in place.
 7. Battery-Charging Alternator: Factory mounted on engine with solid-state voltage regulation and 35-A minimum continuous rating.
 8. Battery Charger: Current-limiting, automatic-equalizing and float-charging type. Unit shall comply with UL 1236 and include the following features:
 - a. Operation: Equalizing-charging rate of 10 A shall be initiated automatically after battery has lost charge until an adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.
 - b. Automatic Temperature Compensation: Adjust float and equalize voltages for variations in ambient temperature from minus 40 deg C to plus 60 deg C to prevent overcharging at high temperatures and undercharging at low temperatures.

- c. Automatic Voltage Regulation: Maintain constant output voltage regardless of input voltage variations up to plus or minus 10 percent.
- d. Ammeter and Voltmeter: Flush mounted in door. Meters shall indicate charging rates.
- e. Safety Functions: Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of ac input or dc output of battery charger. Either condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.
- f. Enclosure and Mounting: NEMA 250, Type 1, wall-mounted cabinet.

2.4 FUEL OIL STORAGE

- A. Comply with NFPA 30.
- B. Base-Mounted Fuel Oil Tank: Factory installed and piped, complying with UL 142 fuel oil tank. Features include the following:
 - 1. Tank level indicator.
 - 2. Capacity: Fuel for forty eight (48) hours' continuous operation at 100 percent rated power output.
 - 3. Vandal-resistant fill cap.
 - 4. Containment Provisions: Comply with requirements of authorities having jurisdiction.

2.5 CONTROL AND MONITORING

- A. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in one or more separate automatic transfer switches initiate starting and stopping of generator set. When mode-selector switch is switched to the on position, generator set starts. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.
- B. Manual Starting System Sequence of Operation: Switching on-off switch on the generator control panel to the on position starts generator set. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.
- C. Configuration: Operating and safety indications, protective devices, basic system controls, and engine gages shall be grouped in a common control and monitoring panel mounted on the generator set. Mounting method shall isolate the control panel from generator-set vibration.
- D. Configuration: Operating and safety indications, protective devices, basic system controls, and engine gages shall be grouped in a common wall-mounted control and monitoring panel.
- E. Configuration: Operating and safety indications, protective devices, basic system controls, engine gages, instrument transformers, generator disconnect switch or circuit breaker, and other indicated components shall be grouped in a combination control and power panel. Control and monitoring section of panel shall be isolated from power sections by steel barriers. Panel features shall include the following:
 - 1. Wall-Mounting Cabinet Construction: Rigid, self-supporting steel unit complying with NEMA ICS 6. Power bus shall be copper. Bus, bus supports, control wiring, and temperature rise shall comply with UL 891.
 - 2. Current and Potential Transformers: Instrument accuracy class.

- F. Indicating and Protective Devices and Controls: As required by NFPA 110 for Level 1 system, and the following:
1. AC voltmeter.
 2. AC ammeter.
 3. AC frequency meter.
 4. DC voltmeter (alternator battery charging).
 5. Engine-coolant temperature gage.
 6. Engine lubricating-oil pressure gage.
 7. Running-time meter.
 8. Ammeter-voltmeter, phase-selector switch(es).
 9. Generator-voltage adjusting rheostat.
 10. Fuel tank derangement alarm.
 11. Fuel tank high-level shutdown of fuel supply alarm.
 12. Generator overload.
- G. Indicating and Protective Devices and Controls:
1. AC voltmeter.
 2. AC ammeter.
 3. AC frequency meter.
 4. DC voltmeter (alternator battery charging).
 5. Engine-coolant temperature gage.
 6. Engine lubricating-oil pressure gage.
 7. Running-time meter.
 8. Ammeter-voltmeter, phase-selector switch(es).
 9. Generator-voltage adjusting rheostat.
 10. Start-stop switch.
 11. Overspeed shutdown device.
 12. Coolant high-temperature shutdown device.
 13. Coolant low-level shutdown device.
 14. Oil low-pressure shutdown device.
 15. Fuel tank derangement alarm.
 16. Fuel tank high-level shutdown of fuel supply alarm.
 17. Generator overload.
- H. Supporting Items: Include sensors, transducers, terminals, relays, and other devices and include wiring required to support specified items. Locate sensors and other supporting items on engine or generator, unless otherwise indicated.
- I. Connection to Data Link: A separate terminal block, factory wired to Form C dry contacts, for each alarm and status indication is reserved for connections for data-link transmission of indications to remote data terminals. Data system connections to terminals are covered in Section 260913 "Electrical Power Monitoring and Control."
- J. Common Remote Audible Alarm: Comply with NFPA 110 requirements for Level 1 systems. Include necessary contacts and terminals in control and monitoring panel.
1. Overcrank shutdown.
 2. Coolant low-temperature alarm.
 3. Control switch not in auto position.
 4. Battery-charger malfunction alarm.
 5. Battery low-voltage alarm.

- K. Common Remote Audible Alarm: Signal the occurrence of any events listed below without differentiating between event types. Connect so that after an alarm is silenced, clearing of initiating condition will reactivate alarm until silencing switch is reset.
 - 1. Engine high-temperature shutdown.
 - 2. Lube-oil, low-pressure shutdown.
 - 3. Overspeed shutdown.
 - 4. Remote emergency-stop shutdown.
 - 5. Engine high-temperature prealarm.
 - 6. Lube-oil, low-pressure prealarm.
 - 7. Fuel tank, low-fuel level.
 - 8. Low coolant level.
- L. Remote Alarm Annunciator: Comply with NFPA 99. An LED labeled with proper alarm conditions shall identify each alarm event and a common audible signal shall sound for each alarm condition. Silencing switch in face of panel shall silence signal without altering visual indication. Connect so that after an alarm is silenced, clearing of initiating condition will reactivate alarm until silencing switch is reset. Cabinet and faceplate are surface- or flush-mounting type to suit mounting conditions indicated.
- M. Remote Emergency-Stop Switch: Flush; wall mounted, unless otherwise indicated; and labeled. Push button shall be protected from accidental operation.

2.6 GENERATOR OVERCURRENT AND FAULT PROTECTION

- A. Generator Circuit Breaker: Molded-case, electronic-trip type; 100 percent rated; complying with UL 489.
 - 1. Tripping Characteristics: Adjustable long-time and short-time delay and instantaneous.
 - 2. Trip Settings: Selected to coordinate with generator thermal damage curve.
 - 3. Shunt Trip: Connected to trip breaker when generator set is shut down by other protective devices.
 - 4. Mounting: Adjacent to or integrated with control and monitoring panel.
- B. Ground-Fault Indication: Comply with NFPA 70, "Emergency System" signals for ground-fault. Integrate ground-fault alarm indication with other generator-set alarm indications.

2.7 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

- A. Comply with NEMA MG 1.
- B. Drive: Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.
- C. Electrical Insulation: Class H or Class F.
- D. Stator-Winding Leads: Brought out to terminal box to permit future reconnection for other voltages if required.
- E. Construction shall prevent mechanical, electrical, and thermal damage due to vibration, overspeed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.
- F. Enclosure: Dripproof.
- G. Instrument Transformers: Mounted within generator enclosure.

- H. Voltage Regulator: Solid-state type, separate from exciter, providing performance as specified.
 - 1. Adjusting rheostat on control and monitoring panel shall provide plus or minus 5 percent adjustment of output-voltage operating band.
- I. Strip Heater: Thermostatically controlled unit arranged to maintain stator windings above dew point.
- J. Windings: Two-thirds pitch stator winding and fully linked amortisseur winding.
- K. Subtransient Reactance: 12 percent, maximum.

2.8 OUTDOOR GENERATOR-SET ENCLOSURE

- A. Description: Vandal-resistant, weatherproof steel housing, wind resistant up to 100 mph. Multiple panels shall be lockable and provide adequate access to components requiring maintenance. Panels shall be removable by one person without tools. Instruments and control shall be mounted within enclosure.
- B. Description: Prefabricated or preengineered walk-in enclosure with the following features:
 - 1. Construction: Galvanized-steel, metal-clad, integral structural-steel-framed building erected on concrete foundation.
 - 2. Structural Design and Anchorage: Comply with ASCE 7 for wind loads.
 - 3. Space Heater: Thermostatically controlled and sized to prevent condensation.
 - 4. Louvers: Equipped with bird screen and filter arranged to permit air circulation when engine is not running while excluding exterior dust, birds, and rodents.
 - 5. Hinged Doors: With padlocking provisions.
 - 6. Ventilation: Louvers equipped with bird screen and filter arranged to permit air circulation while excluding exterior dust, birds, and rodents.
 - 7. Thermal Insulation: Manufacturer's standard materials and thickness selected in coordination with space heater to maintain winter interior temperature within operating limits required by engine-generator-set components.
 - 8. Muffler Location: External to enclosure.
- C. Engine Cooling Airflow through Enclosure: Maintain temperature rise of system components within required limits when unit operates at 110 percent of rated load for 2 hours with ambient temperature at top of range specified in system service conditions.
 - 1. Louvers: Fixed-engine, cooling-air inlet and discharge. Storm-proof and drainable louvers prevent entry of rain and snow.
 - 2. Automatic Dampers: At engine cooling-air inlet and discharge. Dampers shall be closed to reduce enclosure heat loss in cold weather when unit is not operating.

2.9 MOTORS

- A. General requirements for motors are specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
 - 1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
 - 2. Controllers, Electrical Devices, and Wiring: Electrical devices and connections are specified in electrical Sections.

2.10 VIBRATION ISOLATION DEVICES

- A. Restrained Spring Isolators: Freestanding, Steel, Open-Spring Isolators with Vertical-Limit Stop Restraint in Two-Part Telescoping Housing:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Ace Mountings Co., Inc.
 - b. California Dynamics Corporation.
 - c. Isolation Technology, Inc.
 - d. Kinetics Noise Control, Inc.
 - e. Mason Industries, Inc.
 - f. Vibration Eliminator Co., Inc.
 - g. Vibration Isolation.
 - h. Vibration Mountings & Controls, Inc.
 2. Two-Part Telescoping Housing: A steel top and bottom frame separated by an elastomeric material and enclosing the spring isolators. Housings are equipped with adjustable snubbers to limit vertical movement.
 - a. Drilled base housing for bolting to structure with an elastomeric isolator pad attached to the underside. Bases shall limit floor load to 500 psig.
 - b. Threaded top housing with adjustment bolt and cap screw to fasten and level equipment.
 3. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
 4. Minimum Additional Travel: 50 percent of the required deflection at rated load.
 5. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
 6. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.

2.11 FINISHES

- A. Indoor and Outdoor Enclosures and Components: Manufacturer's standard finish over corrosion-resistant pretreatment and compatible primer.

2.12 SOURCE QUALITY CONTROL

- A. Prototype Testing: Factory test engine-generator set using same engine model, constructed of identical or equivalent components and equipped with identical or equivalent accessories.
1. Tests: Comply with NFPA 110, Level 1 Energy Converters and with IEEE 115.
- B. Project-Specific Equipment Tests: Before shipment, factory test engine-generator set and other system components and accessories manufactured specifically for this Project. Perform tests at rated load and power factor. Include the following tests:
1. Test components and accessories furnished with installed unit that are not identical to those on tested prototype to demonstrate compatibility and reliability.
 2. Full load run.
 3. Maximum power.
 4. Voltage regulation.
 5. Transient and steady-state governing.
 6. Single-step load pickup.

7. Safety shutdown.
8. Provide 14 days' advance notice of tests and opportunity for observation of tests by Owner's representative.
9. Report factory test results within 10 days of completion of test.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine-generator performance.
- B. Examine roughing-in of piping systems and electrical connections. Verify actual locations of connections before packaged engine-generator installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with packaged engine-generator manufacturers' written installation and alignment instructions and with NFPA 110.
- B. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.
- C. Install packaged engine generator on cast-in-place concrete equipment bases. Comply with requirements for equipment bases and foundations specified in Division 03 Section "Cast-in-Place Concrete."
 1. Comply with requirements for vibration isolation devices specified in this section.
- D. Install Schedule 40, black steel piping with welded joints and connect to engine muffler. Install thimble at wall. Piping shall be same diameter as muffler outlet. Flexible connectors and steel piping materials and installation requirements are specified in Division 23 Section "Hydronic Piping Specialties."
 1. Install condensate drain piping to muffler drain outlet full size of drain connection with a shutoff valve, stainless-steel flexible connector, and Schedule 40, black steel pipe with welded joints. Flexible connectors and piping materials and installation requirements are specified in Division 23 Section "Hydronic Piping Specialties."
- E. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Sections. Drawings indicate general arrangement of piping and specialties.
- B. Connect fuel, cooling-system, and exhaust-system piping adjacent to packaged engine generator to allow service and maintenance.
- C. Connect engine exhaust pipe to engine with flexible connector.

- D. Connect fuel piping to engines with a gate valve and union and flexible connector.
 - 1. Diesel storage tanks, tank accessories, piping, valves, and specialties for fuel systems are specified in Division 23 Section "Facility Fuel-Oil Piping."
- E. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- F. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

3.4 IDENTIFICATION

- A. Identify system components according to Division 23 Section "Identification for HVAC Piping and Equipment" and Division 26 Section "Identification for Electrical Systems."

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections and prepare test reports.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- C. Perform tests and inspections and prepare test reports.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- D. Tests and Inspections:
 - 1. Perform tests recommended by manufacturer and each electrical test and visual and mechanical inspection for "AC Generators and for Emergency Systems" specified in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. NFPA 110 Acceptance Tests: Perform tests required by NFPA 110 that are additional to those specified here including, but not limited to, single-step full-load pickup test.
 - 3. Battery Tests: Equalize charging of battery cells according to manufacturer's written instructions. Record individual cell voltages.
 - a. Measure charging voltage and voltages between available battery terminals for full-charging and float-charging conditions. Check electrolyte level and specific gravity under both conditions.
 - b. Test for contact integrity of all connectors. Perform an integrity load test and a capacity load test for the battery.
 - c. Verify acceptance of charge for each element of the battery after discharge.
 - d. Verify that measurements are within manufacturer's specifications.
 - 4. Battery-Charger Tests: Verify specified rates of charge for both equalizing and float-charging conditions.
 - 5. System Integrity Tests: Methodically verify proper installation, connection, and integrity of each element of engine-generator system before and during system operation. Check for air, exhaust, and fluid leaks.
 - 6. Exhaust-System Back-Pressure Test: Use a manometer with a scale exceeding 40-inch wg. Connect to exhaust line close to engine exhaust manifold. Verify that back pressure at full-rated load is within manufacturer's written allowable limits for the engine.
 - 7. Exhaust Emissions Test: Comply with applicable government test criteria.

8. Voltage and Frequency Transient Stability Tests: Use recording oscilloscope to measure voltage and frequency transients for 50 and 100 percent step-load increases and decreases, and verify that performance is as specified.
 9. Harmonic-Content Tests: Measure harmonic content of output voltage under 25 percent and at 100 percent of rated linear load. Verify that harmonic content is within specified limits.
- E. Coordinate tests with tests for transfer switches and run them concurrently.
 - F. Test instruments shall have been calibrated within the last 12 months, traceable to standards of NIST, and adequate for making positive observation of test results. Make calibration records available for examination on request.
 - G. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - H. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 - I. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - J. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.
 - K. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component indicating satisfactory completion of tests.
 - L. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each power wiring termination and each bus connection. Remove all access panels so terminations and connections are accessible to portable scanner.
 1. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan 11 months after date of Substantial Completion.
 2. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
 3. Record of Infrared Scanning: Prepare a certified report that identifies terminations and connections checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain packaged engine generators. Refer to Division 01 Section "Demonstration and Training."

1. The Subcontract Agreement (including all attached and referenced Exhibits).
2. Manhattan General Provisions.
3. The Agreement between Manhattan and the Owner ("Agreement").
4. General Conditions of the Contract.
5. Supplementary and other Conditions.
6. Exhibits and Riders enumerated and attached to the Agreement.
7. All Addenda issued prior to and all modifications issued after execution of the Agreement.
8. Alternates as selected and incorporated herein.
9. Unit Prices.
10. Plans and Specifications as follows:

BIDDING & CONTRACTING REQUIREMENTS: Bid and Contracting Manual, as prepared by Manhattan Construction, dated March 29, 2018

GEOTECH REPORT: CNE Tahlequah Casino as prepared by Building & Earth (*Project No. OK170293*) dated January 17th, 2018

SPECIFICATIONS:

CNE Tahlequah Casino Bid Package 01: As prepared by James R. Childers dated March 6th, 2018

CNE Tahlequah Casino Bid Package 02: As prepared by James R. Childers dated March 27th, 2018

DRAWINGS:

CNE Tahlequah Casino Bid Package 01: As prepared by James R. Childers dated March 6th, 2018

CNE Tahlequah Casino Bid Package 02: As prepared by James R. Childers dated March 27th, 2018

SWPPP: CNE Tahlequah Casino as prepared by ADG dated March 6th, 2018

ADDENDA/AMENDMENTS: (none to date)

MCC CLARIFICATIONS:

MCC Clarification #001: 3/27/18

MCC Clarification #002: 3/28/18

MCC Clarification #003: 4/6/18

MCC Clarification #004: 4/9/18

BID PACKAGE 01 (March 6, 2018)

SPECIFICATIONS

DIVISION 00 – Procurement Requirements and Contracting Requirements

00 0102 – Project Information

00 0105 – Geotechnical Data

DIVISION 01 – General Requirements

DIVISION 03 – Concrete

03 3000 – Cast in Place Concrete

DIVISION 31 – EARTHWORK

31 2000 – Earthwork

31 2319 – Dewatering

31 2500 – Erosion and Sedimentation Control

31 5000 – Excavation Support and Protection

31 6329 – Drilled Concrete Piers and Shafts

DIVISION 32 – SITE IMPROVEMENTS

Section 32 9200 – Turf and Grasses

32 9200 – Turf and Grasses

DIVISION 33 – UTILITIES

Section 33 5100 – Private Storm Sewer

Geotechnical Engineering Report by Building & Earth Sciences, Inc. dated January 17, 2018

DRAWINGS

COVER

ABBREVIATIONS, SYMBOLS, & INDEX

SURVEY

CIVIL

C0.01a INDEX AND GENERAL CONSTRUCTION NOTES

C0.02a PLAT OF TOPOGRAPHIC MAPPING (1 OF 2)

C0.03a PLAT OF TOPOGRAPHIC MAPPING (2 OF 2)

C1.00a CIVIL SITE PLAN – OVERVIEW

C1.02a CIVIL SITE PLAN

C2.02a UTILITY PLAN INDEX

C3.02a EROSION CONTROL PLAN

C5.05a STORM SEWER LINE A - PLAN AND PROFILE

C5.10a STORM SEWER LINE A - PLAN AND PROFILE (CONT)

C8.02a ROUGH GRADING PLAN

C9.00a CIVIL CONSTRUCTION DETAILS

C9.05a CIVIL CONSTRUCTION DETAIL

STRUCTURE

S1.1 FOUNDATION PLAN OVERALL

S1.2 FOUNDATION PLAN AREA A

S1.3 FOUNDATION PLAN AREA B

S1.4 FOUNDATION PLAN AREA C

MECHANICAL

MSK-001 MECHANICAL SCHEDULES

MSK-002 MECHANICAL ROOF PLAN

ELECTRICAL

ESK-002 ELECTRICAL EXHIBITS

FOOD SERVICE

FS101 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS102 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS103 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS104 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS105 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS106 FOODSERVICE EQUIPMENT SLAB RECESS PLAN
FS107 FOODSERVICE EQUIPMENT SLAB RECESS PLAN
FS108 FOODSERVICE EQUIPMENT SLAB RECESS PLAN
FS109 FOODSERVICE EQUIPMENT SLAB RECESS PLAN
FS110 FOODSERVICE EQUIPMENT SLAB RECESS PLAN

BID PACKAGE 02 (March 27, 2018)

SPECIFICATIONS

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 1300 – Sheet Waterproofing
07 2100 – Thermal Insulation

DIVISION 22 – PLUMBING

22 1113 – Water Distribution
22 1313 – Private Sanitary Sewerage
22 1316 – Sanitary Waste and Vent Piping

DIVISION 23 – HEATING, VENTING, AND AIR CONDITIONING

23 6500 – Closed Circuit Cooling Tower
23 7313 – Central Station Air Handling Units
23 7313.1 – Central Station Air Handling Units

DIVISION 26 – ELECTRICAL

26 0519 – Low Voltage Electrical Power Conductors and Cables
26 0526 – Grounding and Bonding for Electrical Systems
26 0529 – Hangers and Supports for Electrical Systems
26 0533 – Raceways and Boxes for Electrical Systems
26 0543 – Underground Ducts and Raceways for Electrical Systems
26 0544 – Sleeves and Sleeve Seals for Electrical Raceways and Cabling
26 4113 – Lighting Protection for Structures

DIVISION 31 – EARTHWORK

31 3116 – Termite Control

DRAWINGS

COVER

ABBREVIATIONS, SYMBOLS, & INDEX

CIVIL

C0.01b INDEX AND GENERAL CONSTRUCTION NOTES
C0.02b PLAT OF TOPOGRAPHIC MAPPING (1 OF 2)
C0.03b PLAT OF TOPOGRAPHIC MAPPING (2 OF 2)
C2.02b UTILITY PLAN INDEX
C6.02b SANITARY SEWER INDEX
C6.05b SANITARY SEWER PLAN AND PROFILE - LINE A

C6.10b SANITARY SEWER PLAN AND PROFILE - LINE A (CONT)
C6.15b SANITARY SEWER PLAN AND PROFILE - LINE A (CONT)
C6.20b SANITARY SEWER PLAN AND PROFILE - LINE A (CONT)
C6.25b SANITARY SEWER PLAN AND PROFILE - LINE B
C6.30b SANITARY SEWER PLAN AND PROFILE - LINE B (CONT)
C7.02b WATER INDEX
C7.05b WATER LINE PLAN AND PROFILE - LINE A
C7.10b WATER LINE PLAN AND PROFILE - LINE A (CONT)
C7.15b WATER LINE PLAN AND PROFILE - LINE B
C7.20b WATER LINE PLAN AND PROFILE - LINE B (CONT)
C7.25b WATER LINE PLAN AND PROFILE - LINE C
C7.30b WATER LINE PLAN AND PROFILE - LINE D
C7.35b WATER LINE PLAN AND PROFILE - LINE D (CONT)
C9.10b CIVIL CONSTRUCTION DETAILS
C9.15b CIVIL CONSTRUCTION DETAILS
C9.20b CIVIL CONSTRUCTION DETAILS

STRUCTURE

S0.1 STRUCTURAL NOTES
S1.1 FOUNDATION PLAN OVERALL
S1.2 FOUNDATION PLAN AREA A
S1.3 FOUNDATION PLAN AREA B
S1.4 FOUNDATION PLAN AREA C
S2.1 SLAB PLAN
S3.1 ROOF FRAMING PLANS
S3.2 ROOF FRAMING PLANS
S3.3 ROOF FRAMING PLANS
S3.4 SAFER ROOMS FRAMING PLANS
S3.5 SNOW DRIFT PLANS
S4.1 BUILDING SECTIONS
S4.2 FRAME ELEVATIONS
S4.3 FRAME ELEVATIONS

PLUMBING

PU0.0 PLUMBING COVERSHEET AND INDEX
PU1.1 PLUMBING ENLARGED UNDERSLAB PLAN – GAMING
PU1.2 PLUMBING ENLARGED UNDERSLAB PLAN – SOUTH
PU1.3 PLUMBING ENLARGED UNDERSLAB PLAN – BOH
PU1.4 PLUMBING ENLARGED UNDERSLAB PLAN - BANQUET BOH
PU1.5 PLUMBING ENLARGED UNDERSLAB PLAN – NORTH

ELECTRICAL

E0.0 SYMBOL LIST
E0.1 GENERAL NOTES
E0.2 SINGLE LINE AND FOOD SERVICE SYSTEM NOTES
E0.3 SCHEDULES
E0.4 ELECTRICAL DIAGRAM
E0.10 SINGLE LINE DIAGRAM - MAIN SERVICE SWITCHBOARD 'TCMSA'
E0.11 PARTIAL SINGLE LINE DIAGRAM
E0.12 SINGLE LINE DIAGRAM - MAIN SERVICE SWITCHBOARD 'TCMSB'
E0.13 PARTIAL SINGLE LINE DIAGRAM
E0.14 PARTIAL SINGLE LINE DIAGRAM
E0.40 LIGHTING FIXTURE SCHEDULE
E1.0 ELECTRICAL OVERVIEW PLAN
E1.1 ENLARGED POWER PLAN – GAMING
E3.1 ENLARGED ELECTRICAL ROOM PLAN
E3.2 ENLARGED ELECTRICAL ROOM PLANS
EFS112 FOODSERVICE ELECTRICAL CONNECTION PLAN
EFS113 FOODSERVICE ELECTRICAL CONNECTION PLAN

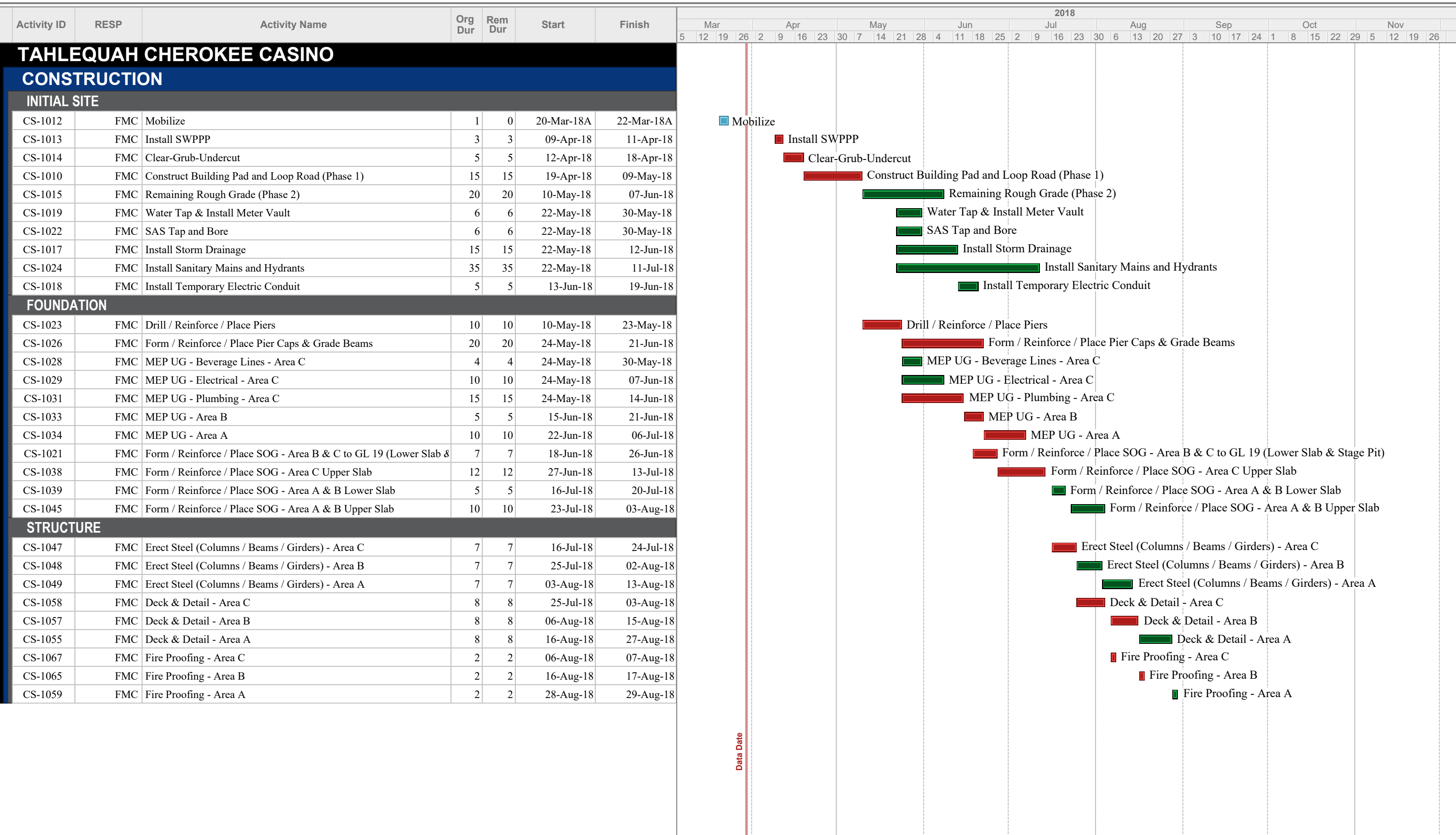
EFS115 FOODSERVICE ELECTRICAL CONNECTION PLAN
ES1.0 ELECTRICAL SITE PLAN
ES1.0A ELECTRICAL SITE PLAN - CCTV INFRASTRUCTURE

FOOD SERVICE

FS100 FOODSERVICE EQUIPMENT OVERVIEW
FS101 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS102 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS103 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS104 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS105 FOODSERVICE EQUIPMENT ARRANGMENT PLAN
FS106 FOODSERVICE EQUIPMENT SPECIAL COND. PLAN
FS107 FOODSERVICE EQUIPMENT SPECIAL COND. PLAN
FS108 FOODSERVICE EQUIPMENT SPECIAL COND. PLAN
FS109 FOODSERVICE EQUIPMENT SPECIAL COND. PLAN
FS110 FOODSERVICE EQUIPMENT SLAB RECESS PLAN
FS111 FOODSERVICE EQUIPMENT PRELIM. MEP CONNECTION PLAN
FS112 FOODSERVICE EQUIPMENT PRELIM. MEP CONNECTION PLAN
FS113 FOODSERVICE EQUIPMENT PRELIM. MEP CONNECTION PLAN
FS114 FOODSERVICE EQUIPMENT PRELIM. MEP CONNECTION PLAN
FS115 FOODSERVICE EQUIPMENT PRELIM. MEP CONNECTION PLAN
FS116 FOODSERVICE EQUIPMENT PRELIM. MEP CONNECTION PLAN

LOW VOLTAGE

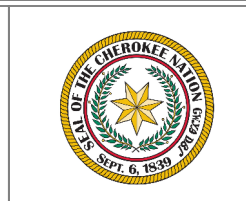
ITS101 LOW VOLTAGE CONDUIT PLAN
ITS102 LOW VOLTAGE CONDUIT PLAN



Start Date: 20-Nov-17
 Finish Date: 13-Mar-19
 Data Date: 30-Mar-18
 Run Date: 09-Apr-18

3882-TC01.ppx Page 1A

Tahlequah Cherokee Casino
Tahlequah, OK
FMC Project # 3882



FOREMAN | MANHATTAN
 Construction Team