CONCRETE UNIT MASONRY

A. STANDARDS

THE MASONRY SOCIETY (TMS): TMS 602 AMERICAN CONCRETE INSTITUTE (ACI): ACI 560.1 AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE): ASCE 6

B. MASONRY MATERIALS

LOAD BEARING MASONRY, ASTM C90, NORMAL WEIGHT, COMPRESSIVE STRENGTH OF MASONRY (f'm) = 2,000 PSI

MORTAR AND GROUT MATERIALS: PORTLAND CEMENT: ASTM C 150/C 150M. TYPE I OR II; HYDRATED LIME: ASTM C 207, TYPE S; MASONRY CEMENT: ASTM C91/C 91M: MORTAR CEMENT: ASTM C 1329/C 1329M: AGGREGATE FOR MORTAR: ASTM C 144: AGGREGATE FOR GROUT: ASTM C 404: WATER: POTABLE..

GROUT COMPRESSIVE STRENGTH SHALL BE 2,500 PSI AT 28 DAYS. ALL GROUTING SHALL BE LOW LIFT.

STEEL REINFORCEMENT

LADDER TYPE REINFORCING

DEFORMED AND PLAIN BARS ASTM A615 GRADE 60

D. EXECUTION

LAYING MASONRY WALLS: UNLESS OTHERWISE INDICATED, LAY EXPOSED MASONRY IN RUNNING BOND: DO NOT USE UNITS WITH LESS-THAN-NOMINAL 4-INCH (100-MM) HORIZONTAL FACE DIMENSIONS AT CORNERS OR JAMBS.

ASTM A951

ALL CMU WALLS SHALL HAVE GALVANIZED, 9 GAUGE LADDER TYPE REINFORCEMENT SPACED VERTICALLY AT 16" OC MAXIMUM. PROVIDE CORNER AND "TEE" SECTIONS OF REINFORCEMENT AT ALL WALL INTERSECTIONS. LAP ALL JOINT REINFORCEMENT EIGHT (8) INCHES MINIMUM.

ALL CMU WALLS SHALL BE REINFORCED AS SHOWN ON THE DRAWINGS FOR THE FULL HEIGHT OF THE WALL

ALL LAP SPLICES SHALL HAVE A MINIMUM LAP EQUAL TO 48 TIMES THE BAR

POSITION AND HOLD REINFORCING IN PLACE BY THE USE OF PREFABRICATED STEEL WIRE BAR POSITIONERS. CONSOLIDATE GROUT WHEN PLACING BY USING A MECHANICAL VIBRATOR. RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

LINTELS BEARING ON CMU SHALL HAVE A MINIMUM BEARING LENGTH OF EIGHT (8) INCHES.

ALL BOND BEAMS INDICATED ON DRAWINGS SHALL BE GROUTED SOLID.

ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID. LOCATE CONTROL AND EXPANSION JOINTSWHERE INDICATED ON PLANS. IF LOCATIONS ARE NOT INDICATED, LIMIT CONTROL JOINT SPACING TO THE LESSER OF WALL LENGTH TO HEIGHT RATIO OF 1.5 OR 25-FT MAXIMUM

PROVIDE LINTELS WHERE SHOWN AND WHERE OPENINGS OF MORE THAN 24 INCHES ARE SHOWN WITHOUT STRUCTURAL STEEL OR OTHER SUPPORTING LINTELS. PROVIDE MINIMUM BEARING OF 8 INCHES AT EACH JAMB UNLESS

E. MORTAR BEDDING AND JOINTING

OTHERWISE INDICATED.

LAY HOLLOW CMU AS FOLLOWS:

BED FACE SHELLS IN MORTAR AND MAKE HEAD JOINTS OF DEPTH

EQUAL TO BED JOINTS.

BED WEBS IN MORTAR IN ALL COURSES OF PIERS, COLUMNS, AND

BED WEBS IN MORTAR IN GROUTED MASONRY, INCLUDING STARTING

COURSE ON FOOTINGS. FULLY BED ENTIRE UNITS, INCLUDING AREAS UNDER CELLS, AT STARTING COURSE ON FOOTINGS WHERE CELLS ARE NOT GROUTED.

F. TOLERANCES

DIMENSIONS AND LOCATIONS OF ELEMENTS:

FOR DIMENSIONS IN CROSS SECTION OR ELEVATION, DO NOT VARY BY MORE THAN PLUS 1/2 INCH OR MINUS 1/4 INCH.

FOR LOCATION OF ELEMENTS IN PLAN, DO NOT VARY FROM THAT INDICATED BY MORE THAN PLUS OR MINUS 1/2 INCH.

FOR LOCATION OF ELEMENTS IN ELEVATION, DO NOT VARY FROM THAT

INDICATED BY MORE THAN PLUS OR MINUS 1/4 INCH IN A STORY HEIGHT OR 1/2 INCH TOTAL.

LINES AND LEVELS:

FOR BED JOINTS AND TOP SURFACES OF BEARING WALLS, DO NOT VARY FROM LEVEL BY MORE THAN 1/4 INCH IN 10 FEET, OR 1/2-INCH MAXIMUM.

FOR CONSPICUOUS HORIZONTAL LINES, SUCH AS LINTELS, SILLS, PARAPETS, AND REVEALS, DO NOT VARY FROM LEVEL BY MORE THAN 1/8 INCH IN 10 FEET, 1/4 INCH IN 20 FEET, OR 1/2-INCH MAXIMUM.

FOR VERTICAL LINES AND SURFACES DO NOT VARY FROM PLUMB BY MORE THAN 1/4 INCH IN 10 FEET, 3/8 INCH IN 20 FEET, OR 1/2-INCH

FOR CONSPICUOUS VERTICAL LINES, SUCH AS EXTERNAL CORNERS, DOOR JAMBS, REVEALS, AND EXPANSION AND CONTROL JOINTS, DO NOT VARY FROM PLUMB BY MORE THAN 1/8 INCH IN 10, 1/4 INCH IN 20

FEET, OR 1/2-INCH MAXIMUM.

FOR LINES AND SURFACES, DO NOT VARY FROM STRAIGHT BY MORE THAN 1/4 INCH IN 10 FEET, 3/8 INCH IN 20 FEET, OR 1/2-INCH MAXIMUM.

FOR VERTICAL ALIGNMENT OF EXPOSED HEAD JOINTS, DO NOT VARY FROM PLUMB BY MORE THAN 1/4 INCH IN 10 FEET, OR 1/2-INCH MAXIMUM.

FOR FACES OF ADJACENT EXPOSED MASONRY UNITS, DO NOT VARY FROM FLUSH ALIGNMENT BY MORE THAN 1/16 INCH.

PROVIDE CONSTRUCTION, CONTRACTION AND ISOLATION JOINTS AS INDICATED ON DRAWINGS. HORIZONTAL

SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED. IMMEDIATELY

BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER

BEGIN CURING PROCEDURES IMMEDIATELY AFTER COMPLETING PLACEMENT. CONCRETE SHALL BE PROTECTED

FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES AND MECHANICAL INJURY.

MUST BE REVIEWED AND APPROVED BY THE SER.

12. UNLESS NOTED OTHERWISE, CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4 INCH.

CONSTRUCTION JOINTS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED OR APPROVED BY THE SER. PROPOSED. JOINT LOCATIONS THAT ARE DIFFERENT OR IN ADDITION TO THE JOINT LOCATIONS INDICATED ON THE DRAWINGS

FOR BED JOINTS, DO NOT VARY FROM THICKNESS INDICATED BY MORE THAN PLUS OR MINUS 1/8 INCH, WITH A MAXIMUM THICKNESS LIMITED TO

FOR EXPOSED BED JOINTS, DO NOT VARY FROM BED-JOINT THICKNESS OF ADJACENT COURSES BY MORE THAN 1/8 INCH.

FOR HEAD AND COLLAR JOINTS, DO NOT VARY FROM THICKNESS

INDICATED BY MORE THAN PLUS 3/8 INCH OR MINUS 1/4 INCH. FOR EXPOSED HEAD JOINTS, DO NOT VARY FROM THICKNESS

INDICATED BY MORE THAN PLUS OR MINUS 1/8 INCH.

WELDS AND ABRASIONS WITH SHOP PRIMER FURNISHED BY THE FABRICATOR PROTECTION

ERECTION

STRUCTURAL STEEL

A. STANDARDS

BRIDGES'

STEEL MATERIALS

STRENGTH BOLTS"

WIDE FLANGE AND WT SHAPES

ANGLES, CHANNELS AND PLATES

OVERSIZE AND SHORT-SLOTTED HOLES.

SHALL BE HOT DIP GALVANIZED PER ASTM A123.

PROOFING REQUIRES BARE STEEL.

WHICH IS PLACED.

CERTIFIED ERECTOR.

CODE - STEEL."

EXECUTION

QUALITY ASSURANCE

HOLLOW STRUCTURAL SHAPES

STANDARD (S) SHAPES

SHEAR/ANCHOR STUDS

DEFORMED ANCHORS

BOLTS, HIGH STRENGTH

HARDENED WASHERS

PLATE WASHERS

MATERIALS (CONTINUED)

WELD ELECTRODES

STRUCTURAL PIPE

ANCHOR RODS

AISC 303, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS &

AISC 360, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".

RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-

(MANUAL ARC WELDING OF STUDS IS NOT PERMITTED)

PROVIDE WASHERS FOR ALL CONNECTIONS THAT INCLUDE STANDARD.

ALL STRUCTURAL STEEL ELEMENTS AND CONNECTIONS THAT ARE

WITH THE EXCEPTION OF CONTACT SURFACES FOR "SLIP-CRITICAL"

WITH AN ASPHALTIC BASED CORROSION RESISTANT COATING.

A FABRICATOR QUALIFICATIONS: A QUALIFIED FABRICATOR THAT

PARTICIPATES IN THE AISC QUALITY CERTIFICATION PROGRAM AND IS

WELDING QUALIFICATIONS: QUALIFY PROCEDURES AND PERSONNEL

IN THE SHOP TO THE GREATEST EXTENT POSSIBLE. SHOP WELDING

WELD SHRINKAGE STRESSES AND DISTORTION OF THE MEMBER(S).

ACCORDING TO AWS D1.1/D1.1M/D1.8 (SEISMIC) "STRUCTURAL WELDING

DESIGNATED AN AISC-CERTIFIED PLANT, CATEGORY STD, OR IS ACCREDITED

BY THE IAS FABRICATOR INSPECTION PROGRAM FOR STRUCTURAL STEEL (AC

INSTALLER QUALIFICATIONS: A QUALIFIED INSTALLER WHO PARTICIPATES IN

THE AISC QUALITY CERTIFICATION PROGRAM AND IS DESIGNATED AN AISC-

FABRICATE AND ASSEMBLE STRUCTURAL STEEL MEMBERS AND ASSEMBLIES

PROCEDURES SHALL BE PERFORMED AND SEQUENCED SO AS TO MINIMIZE

THICKNESSES OF PARTIAL PENETRATION GROOVE WELDS AS SPECIFIED BY

PROVIDE MINIMUM SIZE FILLET WELDS AND MINIMUM EFFECTIVE THROAT

TENSILE STRENGTH OF THE MEMBER(S) JOINED ON ALL SHOP AND FIELD

LENGTHS ARE CONTINUOUS FOR THE FULL LENGTH OF THE MEMBER(S)

UNLESS NOTED OTHERWISE ON THE DESIGN DRAWINGS.

TAB CONNECTIONS NOT PERMITTED.

THESE PLATE ELEMENTS IS NOT PERMITTED.

PROVIDED SIMPLE SHEAR CONNECTION FOR STRUCTURAL STEEL

CONNECTION NOT SPECIFIED OTHERWISE, UTILIZING HIGH STRENGTH

FINISH STEEL COLUMN ENDS TO FIT FLUSH WITH BASE AND CAP PLATES.

FINISH BEAM ENDS TO FIT FLUSH WITH END PLATES. FIELD ASSEMBLY OF

BRACE CONNECTIONS SHALL BE PROVIDED PER THE DETAILS SHOWN ON THE

DESIGN DRAWINGS. WHERE FORCES ARE NOT INDICATED ON THE DESIGN

DRAWINGS, DESIGN CONNECTIONS OF BRACING MEMBERS THAT DEVELOP

AND WELD SIZES SHALL BE DESIGNED TO RESIST ALL TENSILE, SHEAR AND

MOMENT FORCES CAUSED BY CONCENTRIC AND ECCENTRIC LOADING

FULLY TENSIONED, UTILIZING HIGH STRENGTH CLASS A "SLIP-CRITICAL"

AT ALL TIMES TO MAINTAIN SAFETY AND STABILITY OF THE STRUCTURE.

TEMPORARY BRACING PROCEDURES IS THE RESPONSIBILITY OF THE

CONTRACTOR AND SHALL REMAIN IN PLACE PRIOR TO THE COMPLETE

INSTALLATION OF ALL PERMANENT BRACING ELEMENTS AND SYSTEMS.

CAN NOT BE PERFORMED WITHOUT PRIOR APPROVAL OF THE SER.

ALL STRUCTURAL STEEL SURFACES TO BE FIELD WELDED SHALL BE

THE FULL TENSILE STRENGTH OF THE MEMBERS. ALL GUSSET PLATE, ANGLE

CONDITIONS. ALL BOLTED CONNECTIONS FOR BRACING MEMBERS SHALL BE

USE PROCEDURES, INCLUDING TEMPORARY BRACES OR GUYS, AS REQUIRED

FIELD CORRECTIONS AND GAS CUTTING OF FABRICATED STRUCTURAL STEEL

MEMBERS IS NOT PERMITTED. SPLICING OF STRUCTURAL STEEL MEMBERS

INSTALL GROUT UNDER COLUMN BASE PLATES AND BEARING PLATES IN

STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FILL ENTIRE

PREPARED AND CLEANED SO AS TO BE FREE OF ALL FOREIGN MATTER WITHIN

ONE INCH MINIMUM OF THE WELD LINE. ERECTOR SHALL TOUCH UP ALL FIELD

WELDS UNLESS NOTED OTHERWISE ON THE DESIGN DRAWINGS. ALL WELD

BEARING BOLTS IN SINGLE OR DOUBLE SHEAR. PROVIDE DOUBLE ANGLE OR

SINGLE PLATE SHEAR TAB BOLTED CONNECTIONS. AT HSS COLUMNS PROVIDE

SINGLE PLATE SHEAR TAB CONNECTIONS. EXTENDED SINGLE PLATE SHEAR

SPECIFICATION SECTION "J" OF THE AISC MANUAL. DEVELOP THE FULL

5/16" THICK MINIMUM STEEL PLATE WASHERS SHALL BE PROVIDED FOR ALL

PERMANENTLY EXPOSED TO THE WEATHER OR EMBEDDED IN CONCRETE

LONG-SLOTTED HOLES. PLATE WASHERS SHALL COMPLETELY COVER LONG-

CONNECTIONS AND STRUCTURAL STEEL TO BE EMBEDDED IN CONCRETE, ALL

STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF RUST-INHIBITIVE PRIMER

AS SELECTED AND APPROVED BY THE OWNER WITH A MINIMUM 1.5 MILS DRY

FILM THICKNESS. OMIT PRIMER ON STEEL SURFACES WHERE SPRAY-ON FIRE-

UNLESS OTHERWISE NOTED, ALL STEEL EXPOSED TO SOIL SHALL BE COATED

GROUT UNDER BEARING PLATES SHALL SHALL COMPLY WITH ASTM C1107 AND

HAVE A COMPRESSIVE STRENGTH AT EXCEEDING THAT OF THE CONCRETE ON

(PROVIDE (2) 3/4" DIA MINIMUM PER CONNECTION)

ASTM A992, GRADE 50

ASTOM A1085 (50 KSI)

ASTM F1554, GRADE 36

ASTM A53. GRADE B

ASTM A325. TYPE 1

ASTM A563, GRADE C

E70XX (LOW HYDROGEN)

ASTM F436, TYPE 1

ASTM A36

ASTM A36

ASTM A108

ASTM A496

ASTM A36

AISC 341, "SEISMIC PROVISIONS FOR STRUCTURAL STEEL

GALVANIZED SURFACES: CLEAN AREAS WHERE GALVANIZING IS DAMAGED OR MISSING AND REPAIR GALVANIZING TO COMPLY WITH ASTM A 780/A 780.

GROUT SPACE SO AS TO PROVIDE FULL PLATE BEARING.

TOUCH UP PAINTING: IMMEDIATELY AFTER ERECTION, CLEAN EXPOSED AREAS WHERE PRIMER IS DAMAGED OR MISSING AND PAINT WITH THE SAM MATERIAL AS USED FOR SHOP PAINTING TO COMPLY WITH SSPC-PA 1 FOR TOUCHING UP SHOP-PAINTED SURFACES.

STEEL JOISTS

A. STANDARDS

STEEL JOIST INSTITUTE (SJI) - STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOIST, K-SERIES, AMERICAN NATIONAL STANDARD (SJI-K

LH SERIES AND DEEP LONGSPAN STEEL JOISTS, DLH-SERIES (SJI-LH/DLH) SJI - STANDARD SPECIFICATIONS FOR JOIST GIRDERS (SJI-JG)

MATERIALS

STRUCTURAL STEEL SHAPES MEETING THE ASTM SPECIFICATIONS PRESCRIBED IN SJI STANDARD SPECIFICATIONS.

C. JOIST ACCESSORIES

BRIDGING: SCHEMATICALLY INDICATED. DETAIL AND FABRICATE ACCORDING TO SJI'S "SPECIFICATIONS". FURNISH ADDITIONAL ERECTION BRIDGING IF REQUIRED FOR STABILITY.

SJI - STANDARD SPECIFICATIONS FOR LONGSPAN STEEL JOISTS,

FABRICATE STEEL BEARING PLATES FROM ASTM A 36/A 36M STEEL WITH INTEGRAL ANCHORAGES OF SIZES AND THICKNESSES INDICATED. SHOP PRIME PAINT

HIGH-STRENGTH BOLTS, NUTS, AND WASHERS: ASTM A 325, TYPE 1, HEAVY HEX STEEL STRUCTURAL BOLTS; ASTM A 563 HEAVY HEX CARBON-STEEL NUTS; AND ASTM F 436 HARDENED CARBON-STEEL WASHERS.

WELDING ELECTRODES: COMPLY WITH AWS STANDARDS.

FURNISH MISCELLANEOUS ACCESSORIES INCLUDING SPLICE PLATES AND BOLTS REQUIRED BY JOIST MANUFACTURER TO COMPLETE JOIST ASSEMBLY.

QUALITY ASSURANCE

MANUFACTURER QUALIFICATIONS: A MANUFACTURER CERTIFIED BY SJI TO MANUFACTURE JOISTS COMPLYING WITH APPLICABLE STANDARD SPECIFICATIONS AND LOAD TABLES IN SJI'S "SPECIFICATIONS". MANUFACTURER'S RESPONSIBILITIES INCLUDE PROVIDING PROFESSIONAL ENGINEERING SERVICES FOR DESIGNING SPECIAL JOISTS TO COMPLY WITH PERFORMANCE REQUIREMENTS.

WELDING QUALIFICATIONS: QUALIFY FIELD-WELDING PROCEDURES AND PERSONNEL ACCORDING TO AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE -

EXECUTION

EXAMINATION: EXAMINE SUPPORTING SUBSTRATES, EMBEDDED BEARING PLATES, AND ABUTTING STRUCTURAL FRAMING FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

DO NOT INSTALL JOISTS UNTIL SUPPORTING CONSTRUCTION IS IN PLACE AND

INSTALL JOISTS AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE; SECURELY FASTEN TO SUPPORTING CONSTRUCTION ACCORDING TO SJI'S "SPECIFICATIONS".

BOLT JOISTS TO SUPPORTING STEEL FRAMEWORK USING HIGH-STRENGTH STRUCTURAL BOLTS. COMPLY WITH RESEARCH COUNCIL ON STRUCTURAL CONNECTION'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR ASTM A 490 BOLTS" FOR HIGH-STRENGTH STRUCTURAL BOLT INSTALLATION AND TIGHTENING REQUIREMENTS.

INSTALL AND CONNECT BRIDGING CONCURRENTLY WITH JOIST ERECTION, BEFORE CONSTRUCTION LOADS ARE APPLIED, ANCHOR ENDS OF BRIDGING LINES AT TOP AND BOTTOM CHORDS IF TERMINATING AT WALLS OR BEAMS.

PROTECTION

TOUCHUP PAINTING: AFTER INSTALLATION, PROMPTLY CLEAN, PREPARE, AND PRIME OR REPRIME FIELD CONNECTIONS, RUST SPOTS, AND ABRADED SURFACES OF PRIME-PAINTED JOISTS, BEARING PLATES, AND ACCESSORIES.

PROVIDE FINAL PROTECTION AND MAINTAIN CONDITIONS, IN A MANNER ACCEPTABLE TO MANUFACTURER AND INSTALLER, THAT ENSURE THAT JOISTS AND ACCESSORIES ARE WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

STEEL DECKING

A. STANDARDS

STEEL DECK INSTITUTE (SDI) - DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL

DISTRIBUTION, SDI PUB NO. 29. AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL

STRUCTURAL MEMBERS."

ROOF, NON-COMPOSITE AND COMPOSITE FLOOR DECK: ASTM A611, GRADE

C, D, OR E OR ASTM A653-94, GRADE 33 DECK GALVANIZED FINISH (UNLESS NOTED OTHERWISE) GALVANIZED G60

TYPICAL DECK PROPERTIES ARE AS NOTED ON THE DRAWINGS.

C. EXECUTION

EXAMINE SUPPORTING FRAME AND FIELD CONDITIONS FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

INSTALL DECK PANELS AND ACCESSORIES ACCORDING TO APPLICABLE SPECIFICATIONS AND COMMENTARY IN SDI PUBLICATION NO. 31, MANUFACTURER'S WRITTEN INSTRUCTIONS.

INSTALL ALL DECK AS 3 SPAN CONDITIONS UNLESS NOTED OTHERWISE.

FASTEN DECK PANELS TO STEEL SUPPORTING MEMBERS AS INDICATED ON FRAMING PLANS. WHERE WELDS ARE INDICATED USE ARC SPOT (PUDDLE) WELDS OF THE SURFACE DIAMETER INDICATED OR ARC SEAM WELDS WITH AN EQUAL PERIMETER THAT IS NOT LESS THAN 1-1/2 INCHES LONG. USE WELD WASHERS AS REQUIRED TO PREVENT BURN THROUGH.

SIDE-LAP AND PERIMETER EDGE FASTENING: AS INDICATED ON FRAMING

ROOF DECK END BEARING: INSTALL DECK ENDS OVER SUPPORTING FRAME WITH A MINIMUM END BEARING OF 1-1/2 INCHES.

PROTECTION

GALVANIZING REPAIRS: PREPARE AND REPAIR DAMAGED GALVANIZED COATINGS ON BOTH SURFACES OF DECK WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A 780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE FINAL PROTECTION AND MAINTAIN CONDITIONS TO ENSURE THAT

STEEL DECK IS WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

Larson Design Group

3000 WESTINGHOUSE DRIVE. SUITF 400 RANBERRY TOWNSHIP, PA 160

SUBCONSULTANT . MCENSE. No. 56088

STATE OF FLORIDA. SIONAL signed and sealed by Brett C Rylands on t6/26/2025.

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sealed and the signature must

April 25, 202

13427-001

Sheet No.:

Larson Design Group

3000 WESTINGHOUSE DRIVE,
SUITE 400

CRANBERRY TOWNSHIP, PA 1606

SUBCONSULTANT

STOPHER

No. 56088

STATE OF

ALORIDA

Children

No. 56088

This item has been digitally signed and sealed by Brett C

Rylands on t6/26/2025.

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POINCIANA MULTI-TENANT 23-4443 S POINCIANA BOULEVARD KISSIMEE, FLORIDA 34758

te: April 25, 2025

Project No.: 13427-0

S-002

7/8" Ø EDGE NA NA" 63"

NOTES:

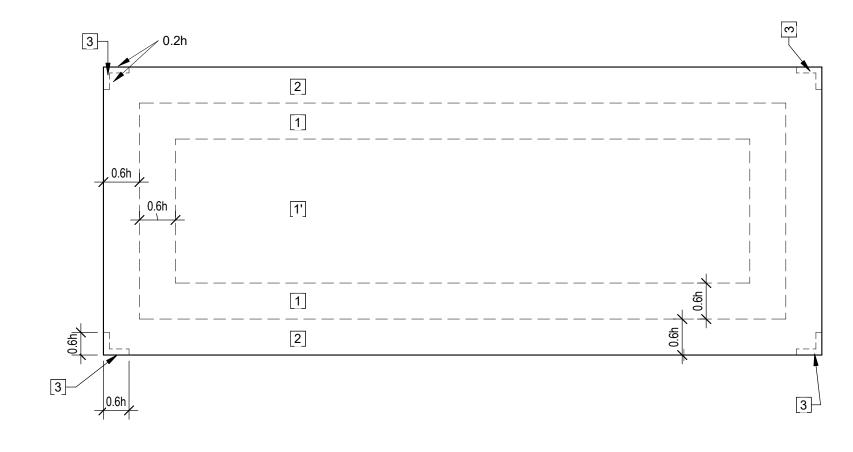
1. MASONRY fm = 2000 PSI
2. STEEL REINFORCING fy = 60000 PSI
3. APPLIES TO BOTH VERITCAL AND HORIZONTAL REINFORCING
4. WHERE HORIZONTAL REINFORCING REQUIRED 1 BAR, USE CENTER SPACING
5. WHERE HORIZONTAL REINFORCING REQUIRES 2 BARS, USE EDGE SPACING

	TENSION E	BAR LAP	SPLICE	LENGT	H FOR C	LASS B	SPLICE	S	
	GRADE 60 BAR	3000) PSI	400	00 PSI	450	0 PSI	50	00 PSI
BAR SIZE	BAR SPACING	(3) Bar Dia or More	Less Than (3) Bar Dia						
#3	TOP BARS:	28	42	25	37	23	35	22	33
3/8" Ø	OTHER BARS:	22	33	19	28	18	27	17	25
#4	TOP BARS:	38	56	33	49	31	46	29	44
1/2" Ø	OTHER BARS:	29	43	25	37	24	35	23	34
#5	TOP BARS:	47	70	41	61	38	57	36	54
5/8" Ø	OTHER BARS:	36	54	31	47	30	44	28	42
#6	TOP BARS:	56	84	49	73	46	69	44	65
3/4" Ø	OTHER BARS:	43	65	37	56	35	53	34	50
#7	TOP BARS:	81	122	71	106	67	100	63	95
7/8" Ø	OTHER BARS:	63	94	54	81	51	77	49	73
#8	TOP BARS:	93	139	81	121	76	114	72	108
1" Ø	OTHER BARS:	72	107	62	93	59	88	56	83
#9	TOP BARS:	105	157	91	136	86	128	81	122
1.128" Ø	OTHER BARS:	81	121	70	105	66	99	63	94
#10	TOP BARS:	118	177	102	153	96	144	92	137
1.270" Ø	OTHER BARS:	91	136	79	118	74	111	71	106
#11	TOP BARS:	131	196	114	170	107	160	102	152
1.410" Ø	OTHER BARS:	101	151	87	131	82	123	78	117

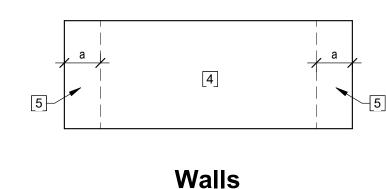
TABLE NOTES:

1. LENGTHS APPLY TO UNCOATED REINFORCEMENT IN NORMAL WEIGHT CONCRETE ONLY.

2. TOP BARS REFERS TO HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONRETE IS CAST IN THE MEMBER BELOW THE DEVELOPEMENT LENGTH OR SPLICE.



Monoslope Roof



	COMPONENTS	& CLADDII	NG WIND	PRESSURE	5		
MIN PARAPET HEIGHT		1.0 ft					
ROOF ANGLE		1.2 deg				h =	18.3 ft
TYPE OF ROOF			a = 6.1 ft				
ULTIMATE LOADS							
		BASIC WIND		140.0 mph			
		BASE PRES		37.8 psf	Qh		
ROOF				RESSURE (PS	-		
	AREA		100 sf	500 sf	1000 sf		
ı	NEGATIVE ZONE 1	-71.0	-55.5	-44.6	-44.6		
	NEGATIVE ZONE 1*	-40.8	-40.8	-27.6	-21.9		
	NEGATIVE ZONE 2	-93.7	-73.7	-59.7	-59.7		
	NEGATIVE ZONE 3	-127.7	-87.7	-59.7	-59.7		
	POSITIVE ALL ZONES	18.1	16.0	16.0	16.0		
	OVERHANG ZONE 1&1*	-64.2	-60.5	-37.8	-37.8		
	OVERHANG ZONE 2	-86.9	-60.2	-41.6	-41.6		
	OVERHANG ZONE 3	-120.9	-74.2	-41.6	-41.6		
WALLS		3	SURFACE PI	RESSURE (PS	F)		
	AREA	10 sf	100 sf	200 sf	500 sf		
	NEGATIVE ZONE 4	-44.2	-38.2	-36.4	-34.0		
	NEGATIVE ZONE 5	-54.4	-42.4	-38.8	-34.0		
	POSITIVE ZONE 4 AND 5	40.8	34.8	33.0	30.6		
PARAPETS		5	SURFACE PI	RESSURE (PS	F)		
	Area	10 sf	20 sf	50 sf	100 sf	200 sf	500 sf
	CASE A: ZONE 2:	122.2	114.3	103.8	95.9	88.0	77.5
	ZONE 3 :		142.6	124.1	110.1	96.1	77.5
	CASE B: INTERIOR ZONE:	-72.2	-68.5	-63.7	-60.1	-56.4	-51.6
	CORNER ZONE :	-82.5	-77.0	-69.8	-64.3	-58.8	-51.6

DEAD LOAD TO BE USED WITH JOIST UPLIFT (PSF) = 4

ROOF	SURFACE PRESSURE (PSF)								
	AREA	10 sf	100 sf	500 sf	1000 sf				
	NEGATIVE ZONE 1	-40.2	-30.9	-24.4	-24.4				
	NEGATIVE ZONE 1'	-22.1	-22.1	-14.2	-10.7				
	NEGATIVE ZONE 2	-53.8	-41.8	-33.4	-33.4				
	NEGATIVE ZONE 3	-74.2	-50.2	-33.4	-33.4				
	POSITIVE ALL ZONES	13.3	12.0	12.0	12.0				
	OVERHANG ZONE 1&1'	-36.1	-33.9	-20.3	-20.3				
	OVERHANG ZONE 2	-49.7	-33.7	-22.5	-22.5				
	OVERHANG ZONE 3	-70.1	-42.1	-22.5	-22.5				

DEAD LOAD TO BE USED WITH GIRDER UPLIFT (PSF) = 5

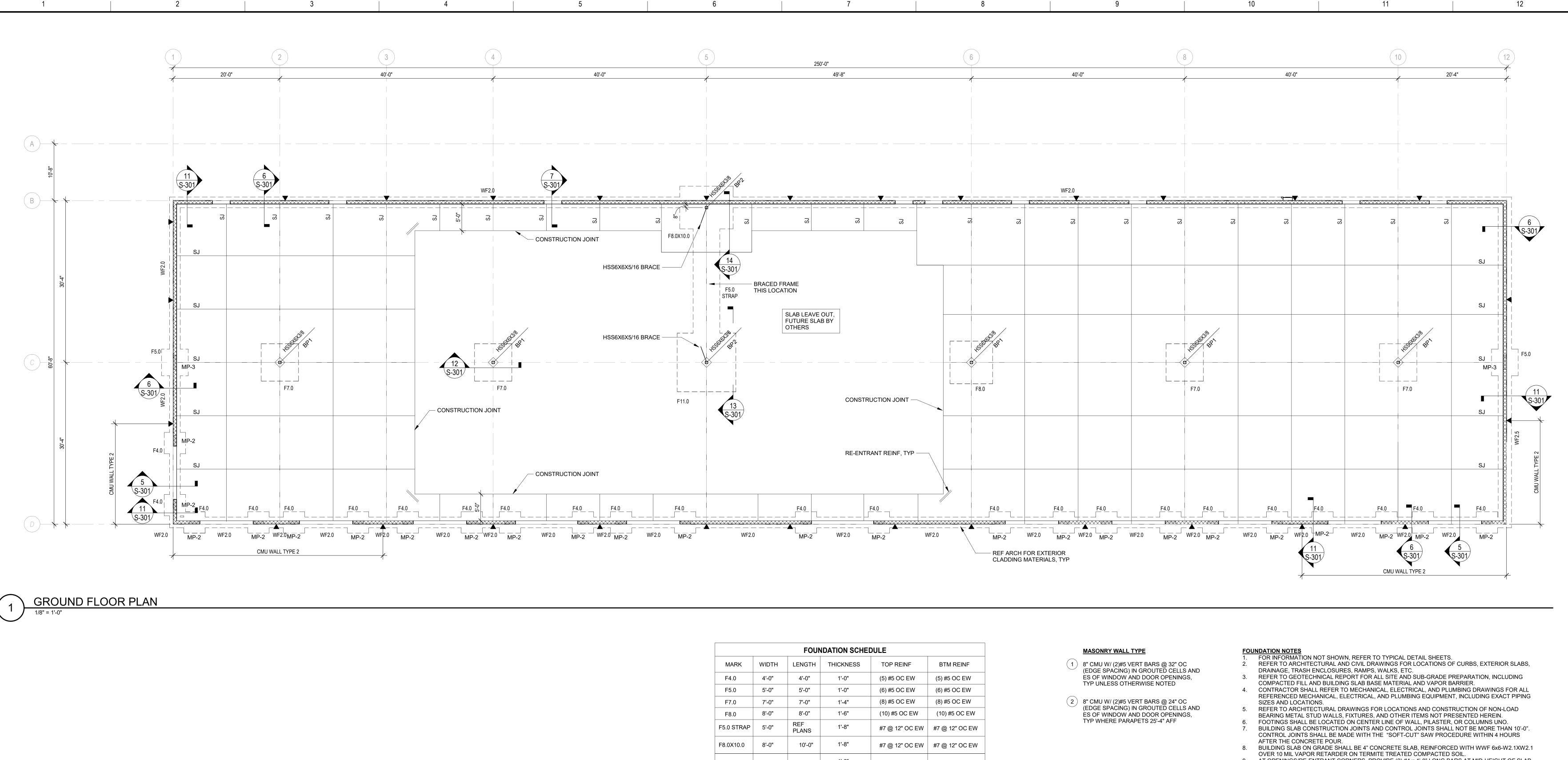
ROOF			SURFACE PRE	ESSURE (PSF	*)
	AREA	10 sf	100 sf	500 sf	1000 sf
	NEGATIVE ZONE 1	-39.6	-30.3	-23.8	-23.8
	NEGATIVE ZONE 1'	-21.5	-21.5	-13.6	-10.1
	NEGATIVE ZONE 2	-53.2	-41.2	-32.8	-32.8
	NEGATIVE ZONE 3	-73.6	-49.6	-32.8	-32.8
	POSITIVE ALL ZONES	13.9	12.6	12.6	12.6
	OVERHANG ZONE 1&1'	-35.5	-33.3	-19.7	-19.7
	OVERHANG ZONE 2	-49.1	-33.1	-21.9	-21.9
	OVERHANG ZONE 3	-69.5	-41.5	-21.9	-21.9

Larson Design Group 3000 WESTINGHOUSE DRIVE, SUITE 400 CRANBERRY TOWNSHIP, PA 16066

SUBCONSULTANT No. 56088

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April 25, 2025



	FOUNDATION SCHEDULE											
MARK	WIDTH	LENGTH	THICKNESS	TOP REINF	BTM REINF							
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 OC EW	(5) #5 OC EW							
F5.0	5'-0"	5'-0"	1'-0"	(6) #5 OC EW	(6) #5 OC EW							
F7.0	7'-0"	7'-0"	1'-4"	(8) #5 OC EW	(8) #5 OC EW							
F8.0	8'-0"	8'-0"	1'-6"	(10) #5 OC EW	(10) #5 OC EW							
F5.0 STRAP	5'-0"	REF PLANS	1'-8"	#7 @ 12" OC EW	#7 @ 12" OC EW							
F8.0X10.0	8'-0"	10'-0"	1'-8"	#7 @ 12" OC EW	#7 @ 12" OC EW							
F11.0	11'-0"	11'-0"	1'-8"	#7 @ 12" OC EW	#7 @ 12" OC EW							

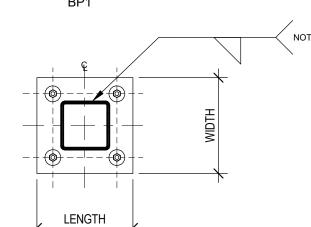
BRACED FRAME FOUNDATION FOOTINGS TO BE REINFORCED AS A SINGLE COMBINED FOUNDATION. REINFORCING CONTINUOUS IN LONG DIRECTION.

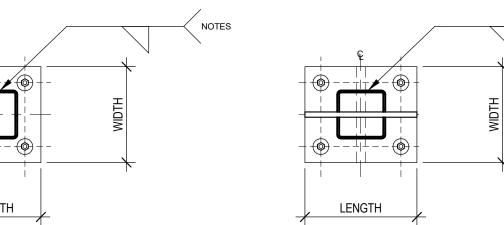
	WALL FOUNDATION SCHEDULE								
MARK	WIDTH	THICKNESS	TOP REINF	BOT REINF					
WF2.0	2'-0"	1'-0"	NA	(3) #5 CONT, #5 @ 48" TRANS					
WF2.5	2'-6"	1'-0"	NA	(3) #5 CONT, #5 @ 12" TRANS					

	STRUCTURAL COLUMN BASE PLATE SCHEDULE									
MARK	WIDTH	LENGTH	PLATE THICKNESS	ANCHORAGE						
BP1	1'-2"	1'-2"	3/4"	(4) 3/4" THREADED HEADED STUDS (ASTM F1554 GR 36), E=FTG DEPTH-4", P=5" MIN						
BP2	1'-2"	1'-4"	1 1/4"	(4) 1 1/2" THREADED HEADED STUDS (ASTM F1554 GR 36), E=FTG DEPTH-4", P=6" MIN						

	MASONRY PILASTER SCHEDULE									
MARK	THICKNESS	WIDTH	VERT REINF	COMMENTS						
MP1	7 5/8"	1'-4"	(2) #5 EA CELL	EDGE SPACING, NO HORIZ TIES						
MP2	7 5/8"	2'-0"	(2) #5 EA CELL	EDGE SPACING, NO HORIZ TIES						
MP3	7 5/8"	2'-8"	(2) #5 EA CELL	EDGE SPACING, NO HORIZ TIES						

- 9. AT OPENINGS/RE-ENTRANT CORNERS, PROVIDE (2) #4 x 4'-0" LONG BARS AT MID-HEIGHT OF SLAB.
- THE TOP OF ALL INTERIOR FOOTINGS SHALL BE THUS: -2'-0", TYP. UNO. 11. EXTERIOR FOOTINGS HEREIN ARE RELATIVE TO FINISHED FLOOR ELEVATION OF 0'-0".
- = MASONRY CONTROL JOINT
- SJ = SAW JOINT





- 1. SEE SCHEDULE FOR PLATE DIMENSIONS AND ANCHOR ROD SIZES 2. PROVIDE MINIMUM FILLET WELD SIZE PER AISC
- ANCHOR ROD SIZES 2. REFER TO DETAIL FOR BRACE CONNECTION, SHEAR KEY, AND WELDING REQUIREMENTS SPECIFICATION

HEAVY HEX NUT W/ SQ PLATE WASHER (PROVIDE (2) NUTS WHERE INDICATED
TOC
HEAVY HEX NUT (TACK WELD TO ROD)

PLA	TE WASH	ER SCHEI	DULE
ANCHOR BOLT DIAMETER (IN)	BASE PLATE HOLE DIA (IN)	MIN WASHER SIZE (IN)	MIN WASHER THICKNESS (IN)
3/4	1 5/16	2	1/4
1	1 7/8	3	3/8
1 1/4	2 1/8	3 1/2	1/2
1 1/2	2 3/8	4	1/2
1 3/4	2 7/8	4 1/2	5/8
2	3 1/4	5	3/4
2 1/2	3 3/4	5 1/2	7/8

10. INTERIOR FOOTINGS HEREIN ARE RELATIVE TO FINISHED FLOOR ELEVATION OF 0'-0". THE TOP OF ALL EXTERIOR FOOTINGS SHALL BE THUS: -2'-0", TYP. UNO. - COL. BASE PLATE GROUT MAY BE BEVELED OR FORMED
 EXTEND MINIMUM T BEYOND EDGE OF 1. SEE SCHEDULE FOR PLATE DIMENSIONS AND BASE PLATE. 3. T = 1 1/2" MAX. FOR ANCHOR BOLTS UP TO 1" DIA. AND 2" MAX FOR ANCHOR BOLS UP TO 1 1/2" DIA. **S-101**

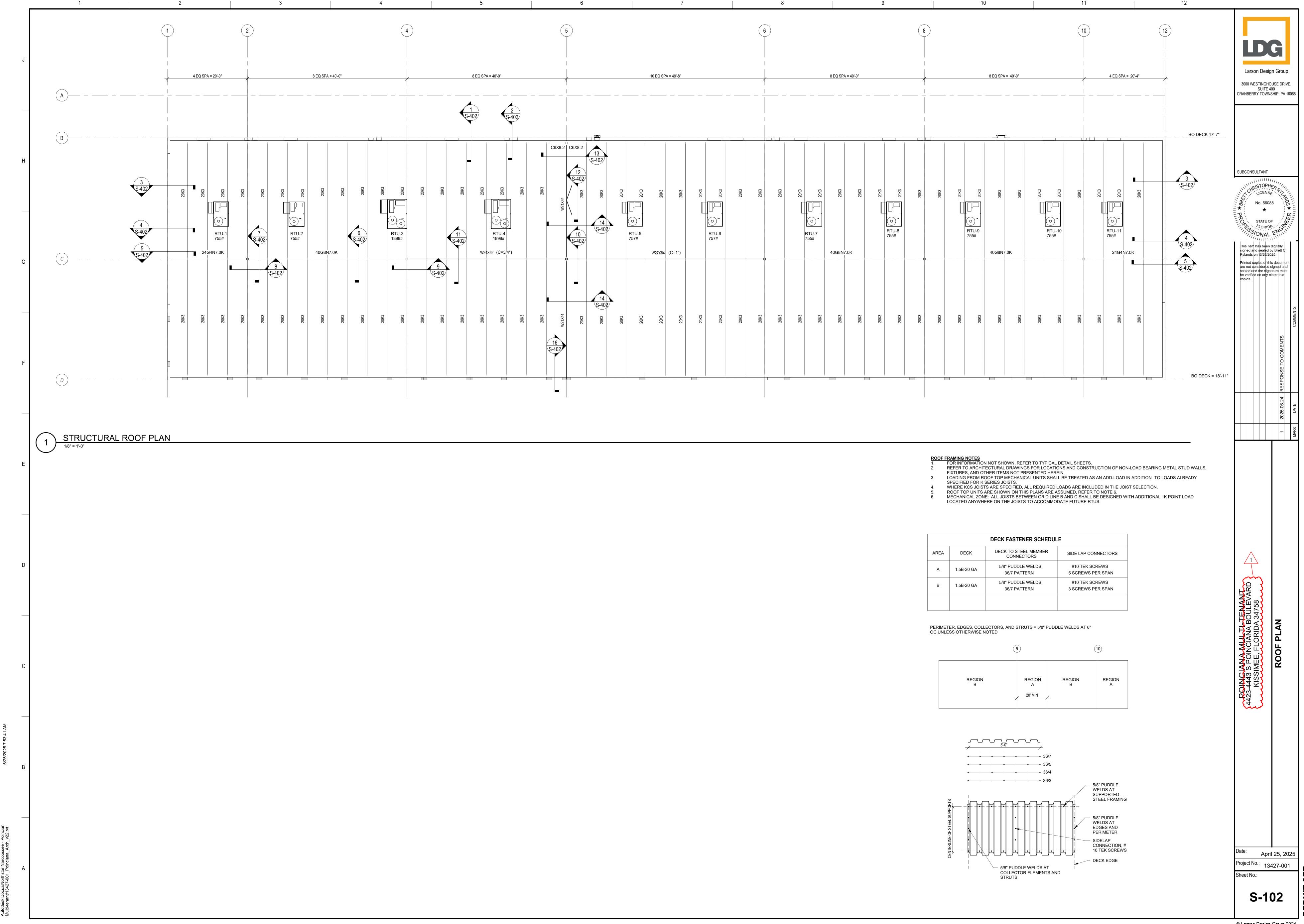
April 25, 2025

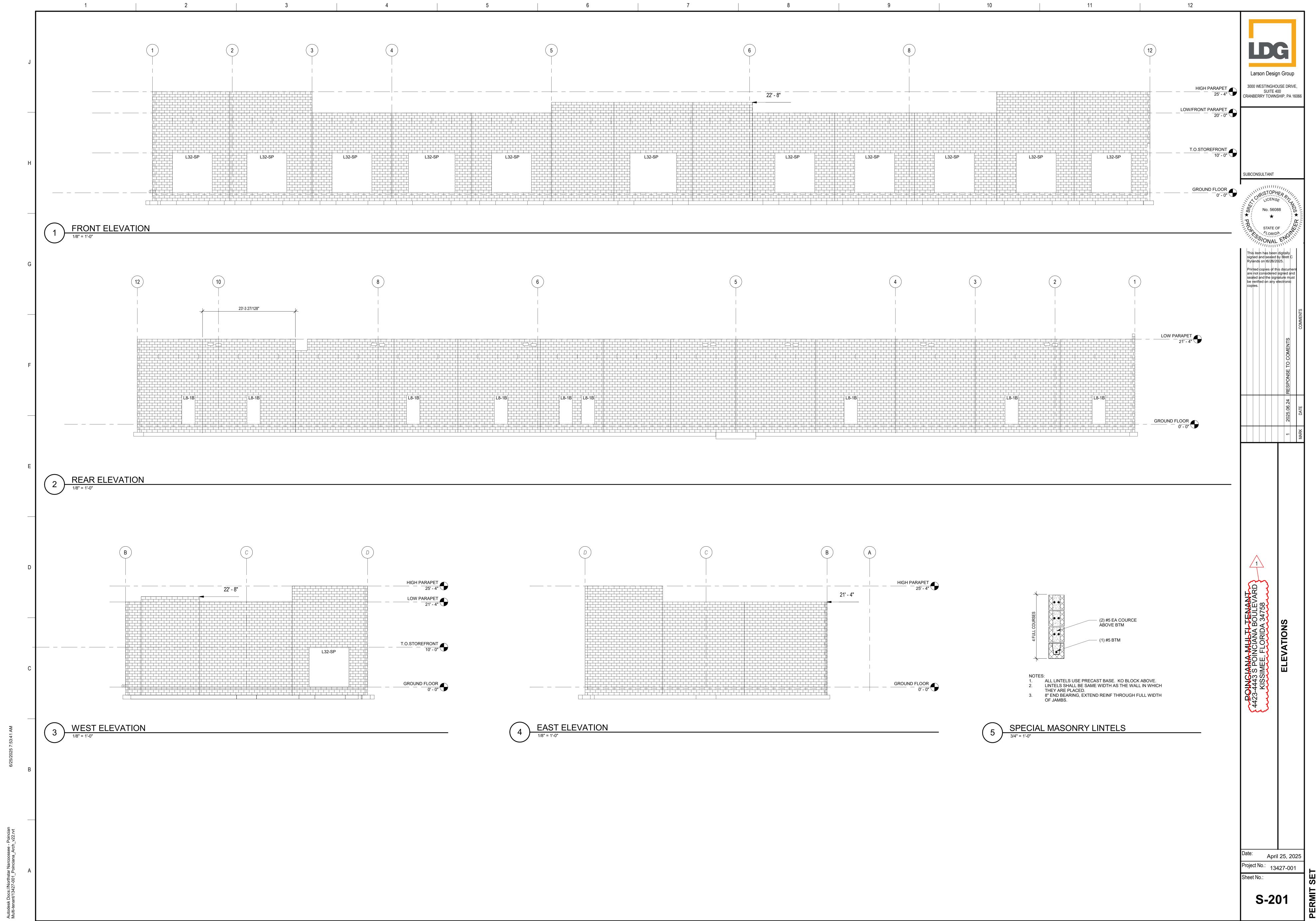
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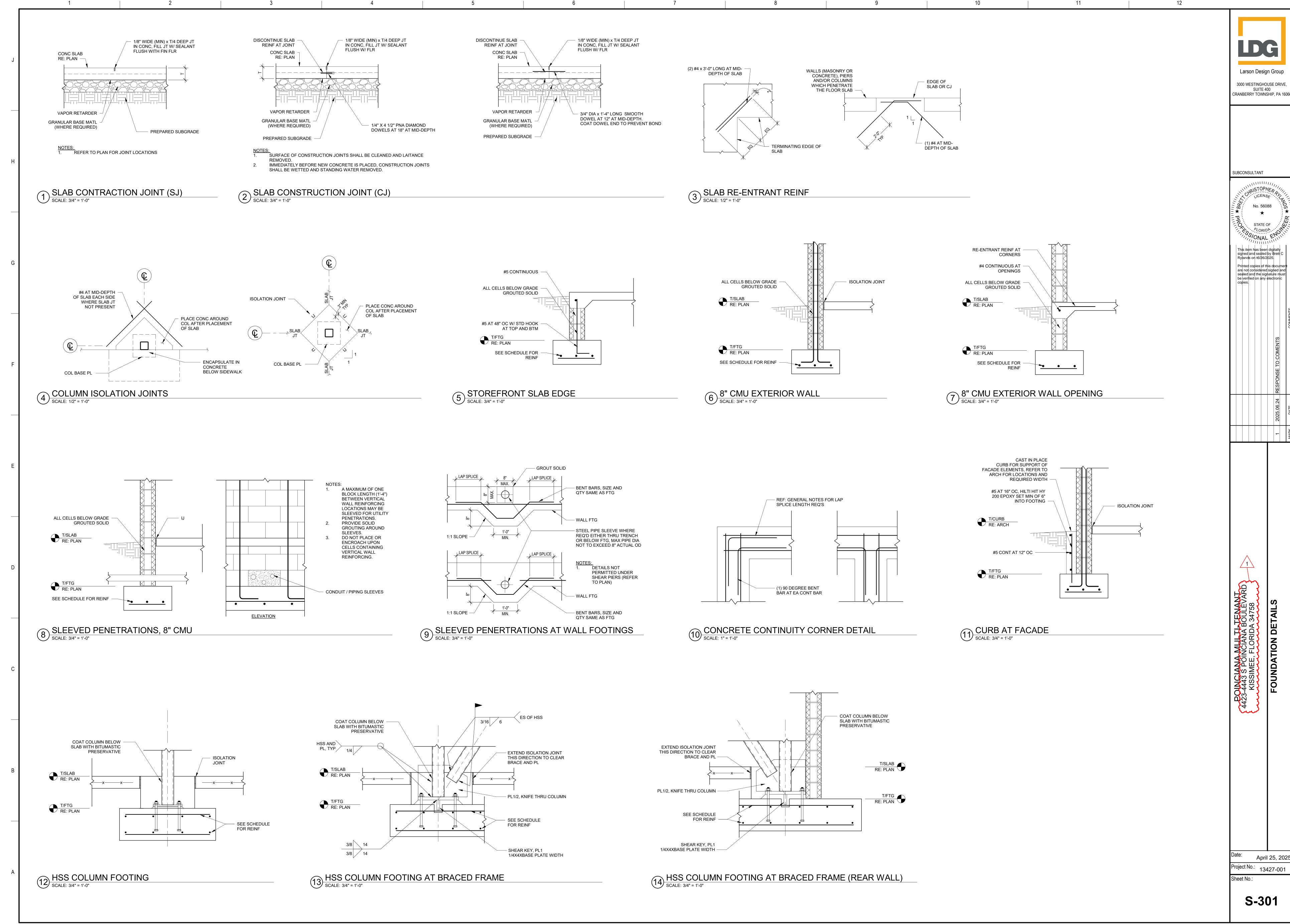
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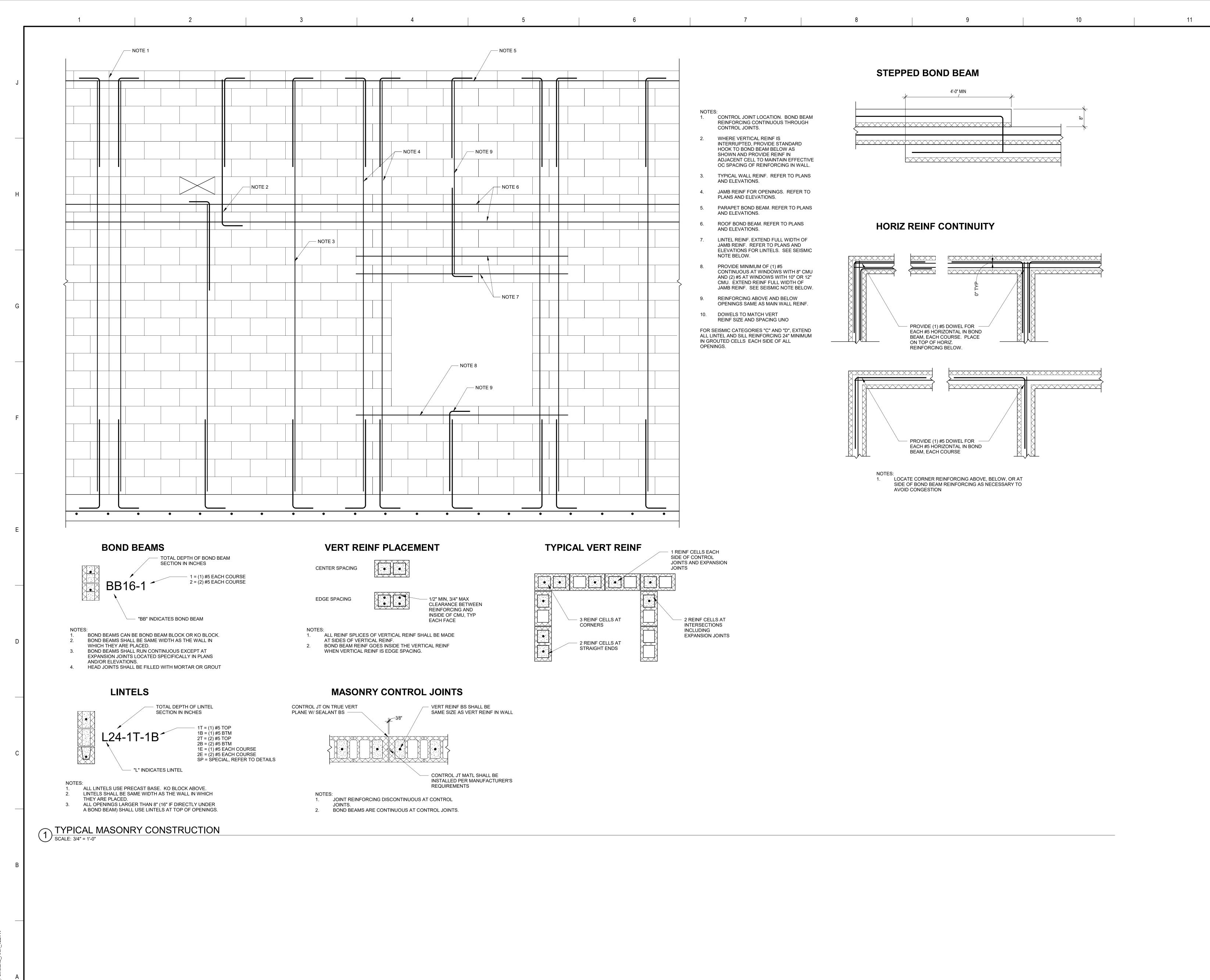
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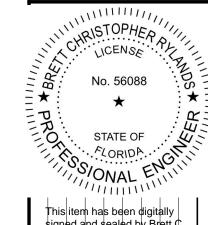




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SUITE 400
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POINGIANA MULTI-TENANT 23-4443 S POINCIANA BOULEVARD KISSIMEE, FLORIDA 34758

April 25, 2025

S-401

April 25, 2025 Project No.: 13427-001 Sheet No.: **S-402** © Larson Design Group 2024

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