

**1** FOUNDATION AND CONTROL JOINT PLAN WEST  
 S1.0 1/4" = 1'-0"

**GENERAL NOTES:**

- REFER TO GENERAL NOTES SHEETS FOR ALL REQUIREMENTS.
- REFER TO MECH. ELEC. FOR ALL INSERTS AND DRAIN LOCATIONS.
- REFER TO ARCH. FOR LOCATION OF FLOOR RECESSES, VERIFY ALL DIMENSIONS W/ARCH.

**KEYED NOTES:**

- NEW 4" CONCRETE SLAB ON GRADE W/ #4 @ 18" O.C. EW @ 2" FROM TOP OVER PREPARED SUBGRADE REFER TO SOILS NOTE ON FOUNDATION PLANS
- CONTROL JOINT - SEE SO. 3B (1/2 MAX EW)
- SEE PLUMBING FOR LOCATION OF FLOOR DRAINS.

**LEGEND:**

- NEW CONCRETE SLAB ON GRADE
- CMU WALLS - AS NOTED

THE EXISTING CONCRETE SLAB ON GRADE IS TO BE REMOVED AND REPLACED WITH A NEW CONCRETE SLAB ON GRADE ALONG WITH THE NEW BEARING AND SHEARWALL FOOTINGS AS SHOWN ON THE FOUNDATION PLAN. THE ORIGINAL STRUCTURAL PLANS INDICATED AN ASSUMED BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. THIS WAS FOLLOWED THROUGHOUT THE DESIGN OF NEW BEARING AND SHEAR WALL FOOTINGS. HOWEVER, IT IS NOT CLEAR IF AN ORIGINAL GEOTECHNICAL REPORT EXISTS OR IF A NEW GEOTECHNICAL REPORT HAS BEEN CONDUCTED AND THEREFORE THE FOLLOWING IS NOTED:

ASSUME: SOIL PRESSURE = 1500psf (W/COMPETENT MATL)  
 NO SOILS REPORT WAS PROVIDED TO JJK GROUP, INC DURING THE FOUNDATION DESIGN AS A RESULT IT IS NOT KNOWN WHETHER OR NOT THE SUBSURFACE SOIL CONDITIONS ARE STABLE WHICH MAY IMPACT THE PERFORMANCE OF THIS DESIGN. THEREFORE, JJK GROUP, INC CANNOT BE RESPONSIBLE FOR THE PERFORMANCE OF THE FOUNDATION BASED ON HIDDEN SOIL CONDITIONS NOT DISCOVERABLE WITHOUT SOILS INVESTIGATION.

**FOUNDATION AND CONTROL JOINT PLAN WEST**

REV #	DATE	COMMENTS
1	9/3/24	ADDENDUM

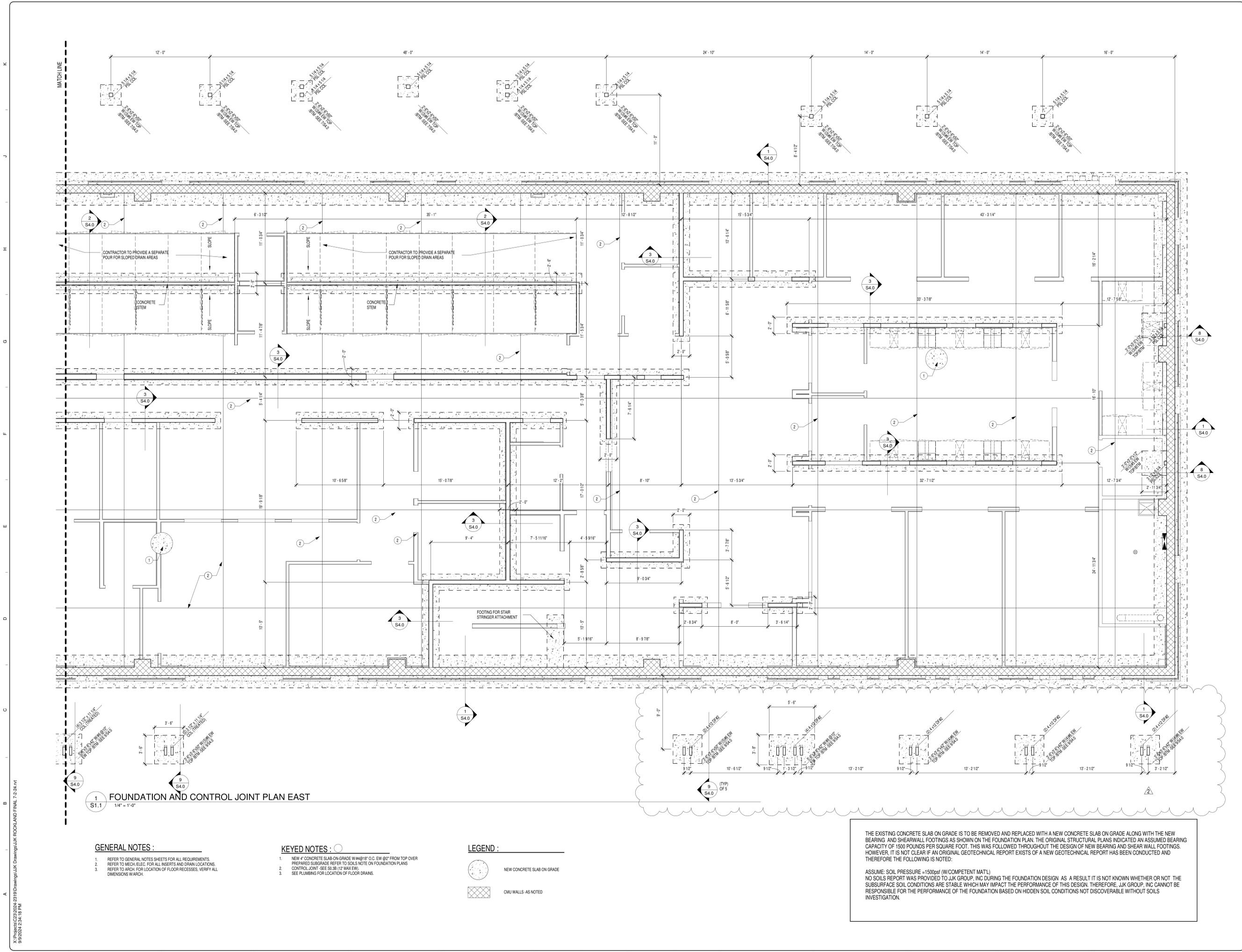
RGAS  
 Project Number **2246**  
 Drawn By **JJR**  
 Date **3/11/2024**

**S1.0**

**ROCKLAND GREEN CENTER FOR ANIMAL RESCUE AND EDUCATIONAL SERVICES, INC**  
 R.G. C.A.R.E.S. ANIMAL SHELTER  
 427 BEACH ROAD  
 W. HAVERSTRAW, NEW YORK 10983



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**1 S1.1 FOUNDATION AND CONTROL JOINT PLAN EAST**  
1/4" = 1'-0"

**GENERAL NOTES :**

1. REFER TO GENERAL NOTES SHEETS FOR ALL REQUIREMENTS.
2. REFER TO MECH. ELEC. FOR ALL INSERTS AND DRAIN LOCATIONS.
3. REFER TO ARCH. FOR LOCATION OF FLOOR RECESSES. VERIFY ALL DIMENSIONS W/ARCH.

**KEYED NOTES :**

1. NEW 4" CONCRETE SLAB ON GRADE WITH #4 @ 18" O.C. EW @ 2" FROM TOP OVER PREPARED SUBGRADE REFER TO SOILS NOTE ON FOUNDATION PLANS
2. CONTROL JOINT - SEE SLAB 1/2" MAX EW.
3. SEE PLUMBING FOR LOCATION OF FLOOR DRAINS.

**LEGEND :**

- NEW CONCRETE SLAB ON GRADE
- CMU WALLS AS NOTED

THE EXISTING CONCRETE SLAB ON GRADE IS TO BE REMOVED AND REPLACED WITH A NEW CONCRETE SLAB ON GRADE ALONG WITH THE NEW BEARING AND SHEARWALL FOOTINGS AS SHOWN ON THE FOUNDATION PLAN. THE ORIGINAL STRUCTURAL PLANS INDICATED AN ASSUMED BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. THIS WAS FOLLOWED THROUGHOUT THE DESIGN OF NEW BEARING AND SHEAR WALL FOOTINGS. HOWEVER, IT IS NOT CLEAR IF AN ORIGINAL GEOTECHNICAL REPORT EXISTS OR IF A NEW GEOTECHNICAL REPORT HAS BEEN CONDUCTED AND THEREFORE THE FOLLOWING IS NOTED:

ASSUME: SOIL PRESSURE = 1500psf (W/COMPENET MAT'L)  
NO SOILS REPORT WAS PROVIDED TO JJK GROUP, INC. DURING THE FOUNDATION DESIGN. AS A RESULT IT IS NOT KNOWN WHETHER OR NOT THE SUBSURFACE SOIL CONDITIONS ARE STABLE WHICH MAY IMPACT THE PERFORMANCE OF THIS DESIGN. THEREFORE, JJK GROUP, INC. CANNOT BE RESPONSIBLE FOR THE PERFORMANCE OF THE FOUNDATION BASED ON HIDDEN SOIL CONDITIONS NOT DISCOVERABLE WITHOUT SOILS INVESTIGATION.

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**FOUNDATION AND CONTROL JOINT PLAN EAST**

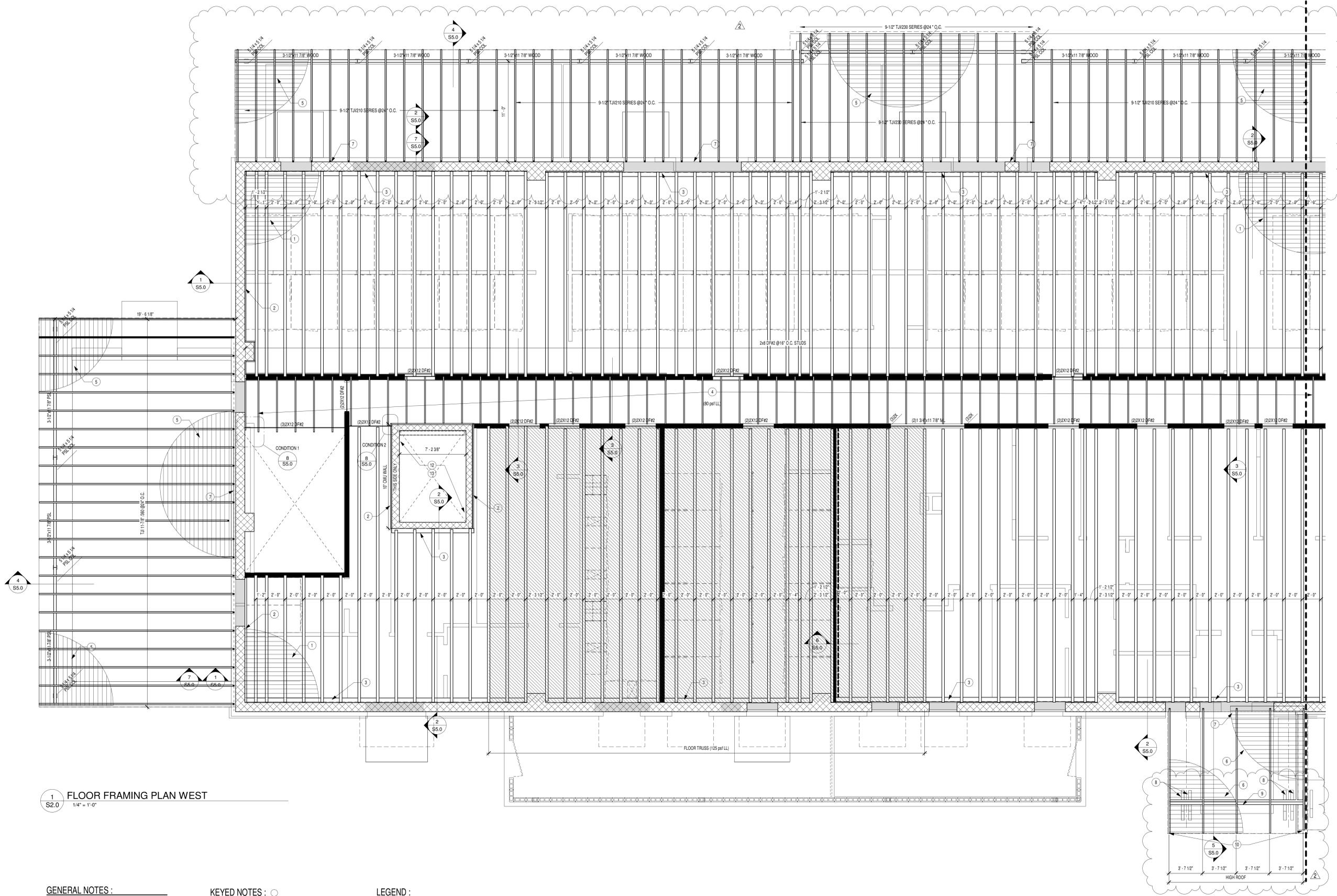
REVISION	REV #	DATE	COMMENTS
REVISION	1	9/9/24	ADDENDUM
REVISION			
REVISION			

INITIALS	REVIEWS

RGAS  
Project Number **2246**  
Drawn By **JJR**  
Date **3/11/2024**

**S1.1**

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**1 FLOOR FRAMING PLAN WEST**  
1/4" = 1'-0"

**GENERAL NOTES :**

1. REFER TO GENERAL NOTES SHEETS FOR ALL REQUIREMENTS.
2. REFER TO ARCH. FOR ALL BEARING HEIGHTS.
3. REFER TO MECH. FOR ALL ROOF OPENINGS.
4. PROVIDE DOUBLE CRIPPLE (1) KING STUD FULL HEIGHT EA. NEW WOOD HEADER U.O.N.

**KEYED NOTES :**

1. 3/4" APA RATED WOOD FLOOR SHEATHING - SEE WS-1 SHEET S06.A
2. 2x6 DF#2 WOOD LEDGER W/4"x4"x1/2" SIMPSON TITEN HD @16" O.C. INTO SOLID FILLED CMU WALL. REQUIRES SPECIAL INSPECTION
3. L4x4x8 CONT. LEDGER - SEE S28.0
4. 2x12 DF#2 CORRIDOR FLOOR JOISTS @24" O.C.
5. 5/8" APA RATED ROOF SHEATHING - SEE TABLE WS-1 SHEET S06.A
6. FLAT 2x6 DF#2 ROOF DECKING
7. 2x6 DF#2 LEDGER W/1/2" DIA. (1/8" EMBED) DRILLED EPOXY ANCHOR INTO FULLY GROUTED CELL @16" O.C.
8. 4x12 DF#2 - SEE ARCH (SKEWED) - SEE ARCH
9. 4x12 DF#2 BEAM
10. 2x12 DF#2 JOISTS @42" O.C.
11. PROVIDE DOUBLE CRIPPLE (1) KING STUD - FULL HEIGHT EA. NEW WOOD HEADER U.O.N.
12. ELEVATOR SHaft PENETRATES THRU EXISTING ROOF TRUSSES - REFER TO 7500.B FOR TYPICAL OPENINGS IN ROOF TRUSSES - FIELD VERIFY EXISTING CONDITION AND LOCATION OF TRUSSES. MANUF. OF PRE-ENGINEERED ROOF TRUSSES MUST PROVIDE STRUCTURAL DETAILS FOR POSSIBLE RE CONFIGURATION OF EXISTING TRUSSES. W/8x1 HOST BEAM MINIMUM. ELEVATOR MANUF TO PROVIDE ENGINEER OF RECORD WITH CONNECTION DETAILS FOR APPROVAL

**LEGEND :**

- EXISTING NEW CMU WALL
- STEEL ANGLE SUPPORT LINTEL CMU LINTEL - SEE 458.A
- 2x6 DF#2 WOOD BEARING STUDS @16" O.C. (U.O.N.)
- SHEARWALL - SEE SHEET S3.0

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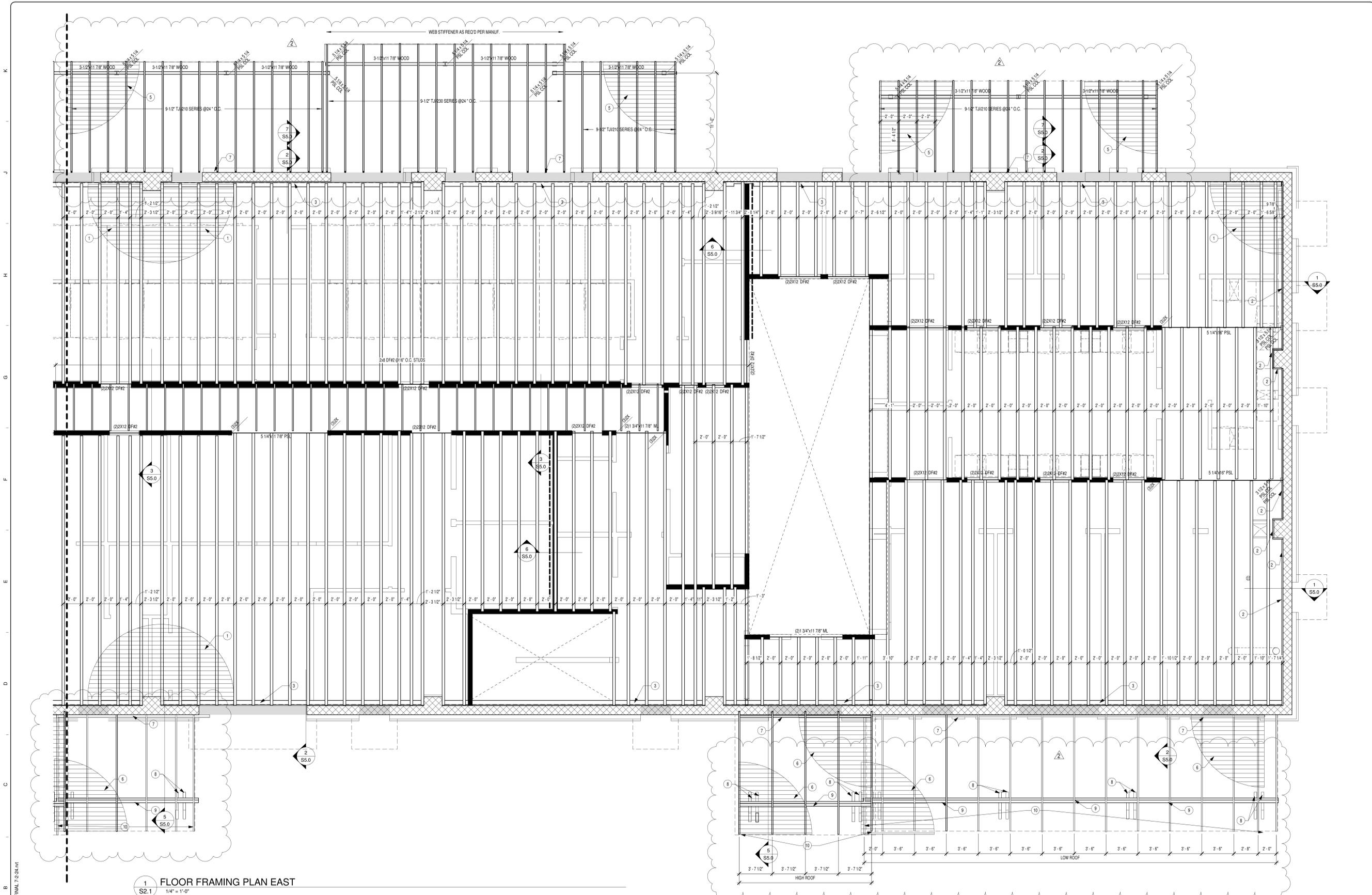
**FLOOR / ROOF FRAMING PLAN WEST**

REV #	DATE	COMMENTS
2	9/3/24	ADDENDUM
1		

INITIALS	REVIEWS

RGAS  
Project Number **2246**  
Drawn By **JJR**  
Date **3/11/2024**

**S2.0**



**1 FLOOR FRAMING PLAN EAST**  
 S2.1  
 1/4" = 1'-0"

**GENERAL NOTES :**

1. REFER TO GENERAL NOTES SHEETS FOR ALL REQUIREMENTS.
2. REFER TO ARCH. FOR ALL BEARING HEIGHTS.
3. REFER TO MECH. FOR ALL ROOF OPENINGS.
4. PROVIDE DOUBLE CHIPPLE (1) KING STUD FULL HEIGHT EA. NEW WOOD HEADER U.O.N.

**KEYED NOTES :**

1. 3/4" APA RATED WOOD FLOOR SHEATHING - SEE WS-1 SHT S06A
2. 3x8 DF#2 WOOD LEDGER W/3/4"x3/4"x1/2" SIMPSON TITEN HD @16" O.C. (INTO SOLID FILLED CMU) - REQUIRES SPECIAL INSPECTION LBS/SI CON. LEDGER - SEE S35.0
3. 2x10 DF#2 CORRIDOR FLOOR JOISTS @24" O.C.
4. S/P APA RATED ROOF SHEATHING - SEE TABLE WS-1 SHEET S06A FLAT 2x8 DF#2 ROOF DECKING
5. 3x8 DF#2 LEDGER W/1" 5/8"x1/8" EMBED DRILLED EPOXY ANCHOR INTO FULLY GROUTED CELL @16" O.C.
6. 4x12 DF#2 - SEE ARCH. (SHOWED) - SEE ARCH
7. 4x16 DF#2 BEAM
8. 2x12 JOISTS @42" O.C.
9. PROVIDE DOUBLE CHIPPLE (1) KING STUD - FULL HEIGHT EA. NEW WOOD HEADER U.O.N.
10. ELEVATOR SHAFT PENETRATES THRU EXISTING ROOF TRUSSES REFER TO TRUSSES FOR TYPICAL OPENINGS IN ROOF TRUSSES. FIELD VERIFY EXISTING CONDITION AND LOCATION OF TRUSSES. MANUF. OF PRG ENGINEERED ROOF TRUSSES MUST PROVIDE STRUCTURAL DETAILS FOR POSSIBLE RE-CONFIGURATION OF EXISTING TRUSSES.
11. WB21 HOIST BEAM MINIMUM. ELEVATOR MANUF. TO PROVIDE ENGINEER OF RECORD WITH CONNECTION DETAILS FOR APPROVAL.

**LEGEND :**

- EXISTING NEW CMU WALL
- STEEL ANGLE SUPPORT LINTEL CMU LINTEL - SEE 4/S04A
- 2x8 DF#2 WOOD BEARING STUDS @16" O.C. (U.O.N.)
- SHEARWALL - SEE SHEET S3.0

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**FLOOR /ROOF FRAMING PLAN EAST**

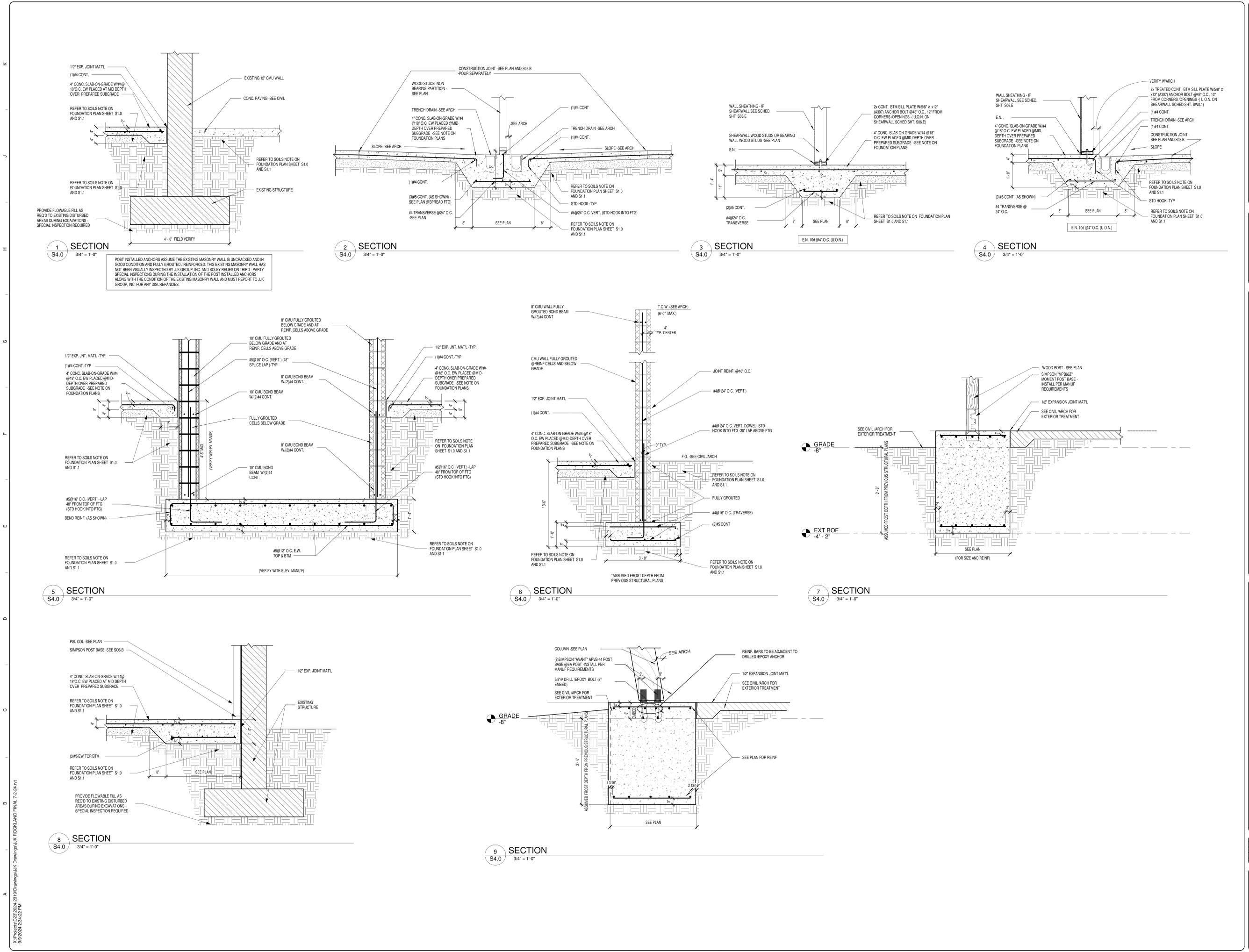
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**S2.1**





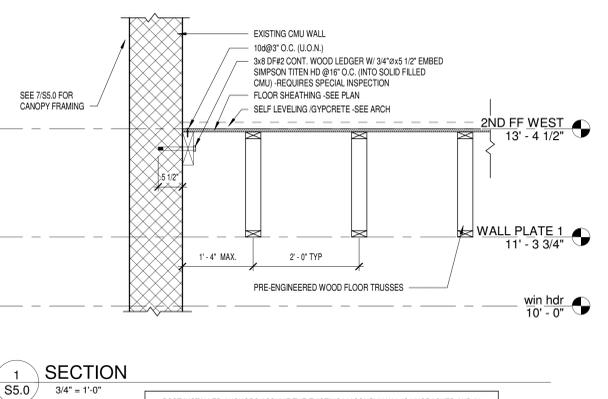
POST INSTALLED ANCHORS ASSUME THE EXISTING MASONRY WALL IS UNCRACKED AND IN GOOD CONDITION AND FULLY GROUTED / REINFORCED. THIS EXISTING MASONRY WALL HAS NOT BEEN VISUALLY INSPECTED BY JJK GROUP, INC. AND SOLEY RELIES ON THIRD-PARTY SPECIAL INSPECTIONS DURING THE INSTALLATION OF THE POST INSTALLED ANCHORS ALONG WITH THE CONDITION OF THE EXISTING MASONRY WALL AND MUST REPORT TO JJK GROUP, INC. FOR ANY DISCREPANCIES.



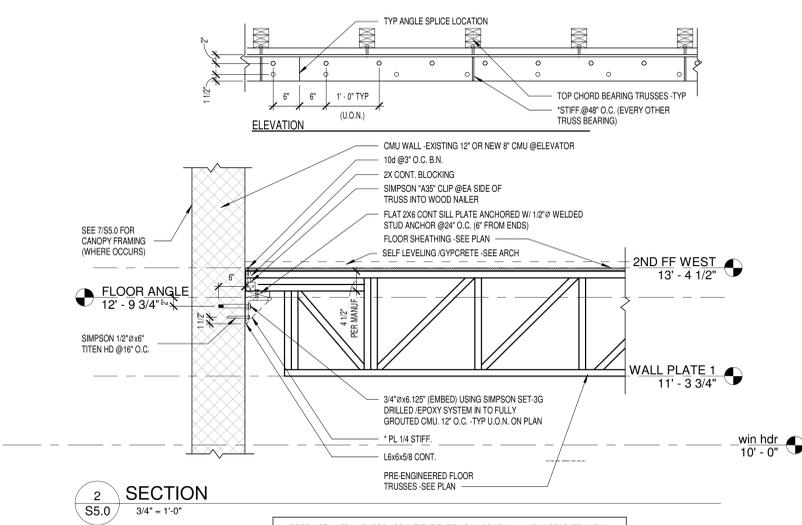
**FOUNDATION SECTIONS**

REV #	DATE	COMMENTS
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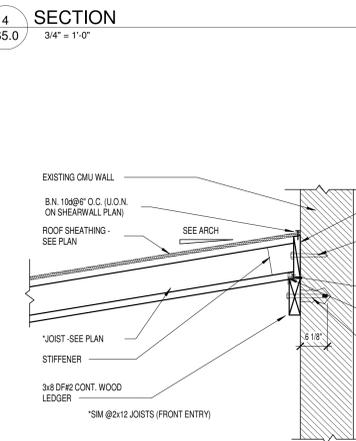
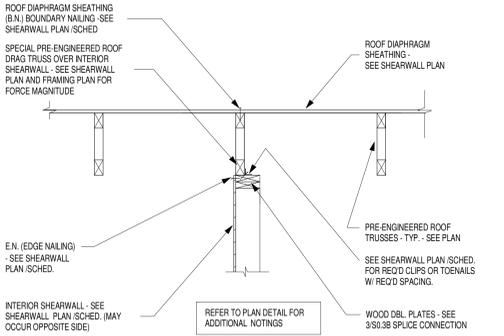
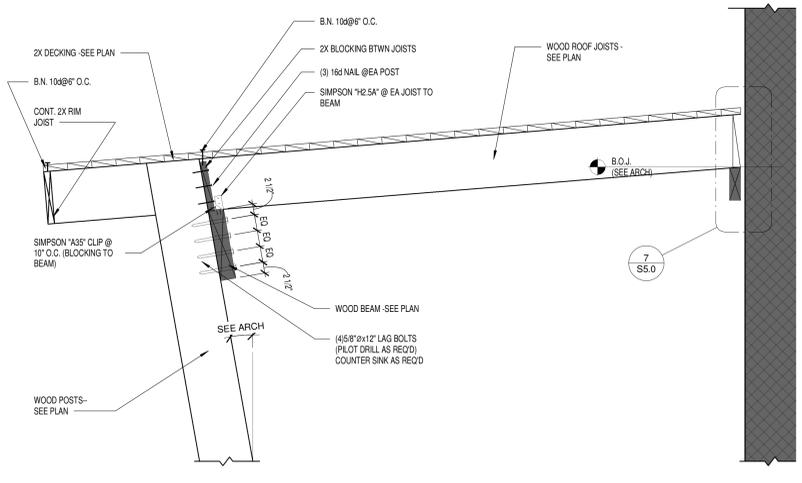
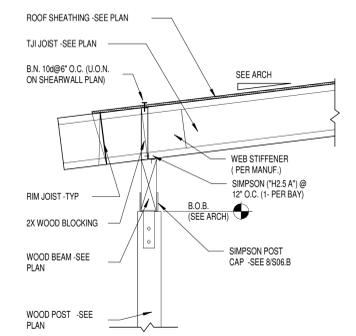
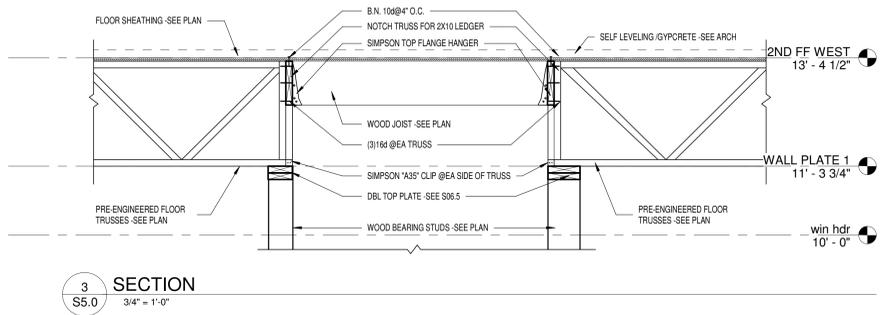
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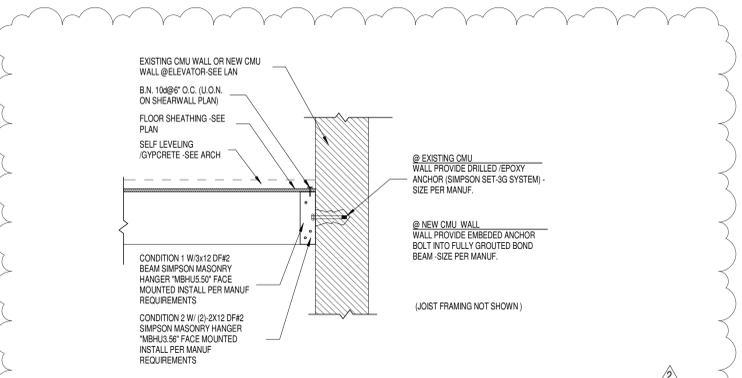
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FLOOR/ROOF FRAMING SECTIONS			
REV #	DATE	COMMENTS	
1	9/24	ADDENDUM	

REVIEWS	
INITIALS	

RGAS  
Project Number: **2246**  
Drawn By: **JJR**  
Date: **3/11/2024**

**S5.0**



**GENERAL NOTES**

- THESE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, MEANS AND METHODS, BRACING, SHORING, FORMS, SCAFFOLDING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING DEMOLITION CONSTRUCTION. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER OR STRUCTURAL OBSERVERS SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- THE USE OF ELECTRONIC FILES OR REPRODUCTION OF THESE CONTRACT DOCUMENTS FOR ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SHALL NOT BE PERMITTED.
- TYPICAL DETAILS AND NOTES ON STANDARD S00 SHEETS SHALL OTHERWISE APPLY UNLESS SPECIFICALLY SHOWN OR NOTED. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS. ALL WORK, MATERIALS AND CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.

- FOR CLARITY, ALL OPENINGS MAY NOT BE SHOWN ON DRAWINGS. SEE ALSO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING PLANS. ALL OPENINGS AND PENETRATIONS SHALL BE LOCATED AND VERIFIED BY ALL TRADES FROM DRAWINGS MADE BY THEM. CONTRACTOR SHALL NOT PROCEED WITH ANY WORK SHOWN ON DRAWINGS IF IN CONFLICT UNTIL RECEIVING CLARIFICATION FROM ARCHITECT. FOR FRAMING AT OPENINGS, SEE TYPICAL STRUCTURAL DETAILS, IF APPLICABLE.

- ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS. RESOLVE ALL DISCREPANCIES WITH ARCHITECT PRIOR TO START OF CONSTRUCTION.

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS AT THE JOB SITE DURING CONSTRUCTION AND BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED.

**DO NOT SCALE DRAWINGS**

- NO STRUCTURAL CHANGE FROM THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE IN THE FIELD UNLESS WRITTEN APPROVAL IS OBTAINED PRIOR TO MAKING SUCH CHANGE. CHANGES WITHOUT THE WRITTEN APPROVAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONDITION SHALL BE REPAIRED OR REPLACED AS DIRECTED.

- THE MECHANICAL, ELECTRICAL, PLUMBING AND CONCRETE CONTRACTORS SHALL COORDINATE INSTALLATION OF THE REQUIRED INSERTS WITH THE GENERAL CONTRACTOR. REFER TO APPLICABLE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR SUPPORT STRUCTURES AND INSERTS.

- THE MECHANICAL, ELECTRICAL AND PLUMBING CONTRACTORS SHALL FURNISH ALL NECESSARY STRUCTURES FOR MECHANICAL EQUIPMENT, HANGING DEVICES AND INSERTS FOR INSTALLATION OF EQUIPMENT, DUCTS, PIPING, SEISMIC RESTRAINTS, CONDUIT ETC..

**SUPPLEMENTARY NOTES**

- CERTIFICATIONS:  
REINFORCING OR THREADED RODS DRILLED AND EPOXIED INTO CONCRETE AS DETAILED OR NOTED ON THE CONSTRUCTION DOCUMENTS SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUIVALENT:

REPORT#	PRODUCT
ESR #187	HILTI HY-200
ER #204	DEWALT POWER DRIVEN FASTENERS
ESR #4057	DEWALT POWER DRIVEN FASTENERS CEILING CLIP AND SILL PLATE ANCHORAGES

INSTALLATION OF EPOXIED DOWELS SHALL FOLLOW THE STRICT RECOMMENDATIONS OF THE MANUFACTURER AND THE APPLICABLE ESR REPORT. WHERE SPALLING IS ANTICIPATED DUE TO INSUFFICIENT EDGE DISTANCE, USE THREADED ANCHOR ROD EPOXIED INTO DRILLED HOLE. CONTRACTOR SHALL HAVE ER REPORT ON-SITE DURING ALL INSTALLATIONS. THE CONTRACTOR SHALL USE THE LATEST REPORT FOR THE TIME OF INSTALLATION (FIRST OCCURRENCE) BUT SHALL UTILIZE THE SAME PARTICULAR REPORT FOR THE DURATION OF THE PROJECT.

EXPANSION BOLTS DRILLED AND INSTALLED INTO CONCRETE AS DETAILED OR NOTED ON THE CONSTRUCTION DOCUMENTS SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUIVALENT:

REPORT#	PRODUCT
ESR #1917	HILTI KWIK-BOLT TZ
ESR #5772	ITW REDHEAD TRUBOLT
ESR #5260	DEWALT POWERS POWER-BOLT
ESR #1396	SIMPSON STRONG TIE WEDGE-ALL
ESR #2024	DEWALT POWER DRIVEN FASTENERS CEILING CLIP AND SILL PLATE ANCHORAGES

INSTALLATION OF EXPANSION BOLTS SHALL FOLLOW THE STRICT RECOMMENDATION OF THE MANUFACTURER AND THE APPLICABLE ICBO-ESR REPORT. CONTRACTOR SHALL HAVE ER REPORT ON-SITE DURING ALL INSTALLATIONS. THE CONTRACTOR SHALL USE THE LATEST REPORT FOR THE TIME OF INSTALLATION (FIRST OCCURRENCE) BUT SHALL UTILIZE THE SAME PARTICULAR REPORT FOR THE DURATION OF THE PROJECT.

- MISCELLANEOUS:  
THE USE OF ELECTRONIC FILES OR REPRODUCTION OF THESE CONTRACT DOCUMENTS FOR ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SHALL NOT BE PERMITTED

@----- AT	EW----- EACH WAY	P.C.----- PRECAST
A.B.----- ANCHOR BOLT	EXST----- EXISTING	PLF----- POUND PER LINEAR FOOT
APA----- AMERICAN PLYWOOD ASSOCIATION	EXP----- EXPANSION	PLWD----- PLYWOOD
A.S.T.M.----- AMERICAN SOCIETY OF TESTING MATERIALS	F.D.----- FLOOR DRAIN	PSF----- POUNDS PER SQUARE FOOT
ARCH.----- ARCHITECTURAL	FDN----- FOUNDATION	PSI----- POUNDS PER SQUARE INCH
ASD----- ALLOWABLE STRESS DESIGN	FTG----- FOOTING	R. OR RAD.----- RADIUS
BLDG----- BUILDING	FT----- FEET	REIN----- REINFORCING
BLK----- BLOCK	GALV----- GALVANIZE	REQD----- REQUIRED
BM----- BM	GA----- GAUGE	S.A.----- STUD ANCHOR
BN----- BOUNDARY NAILING	HK----- HOOK	SCHED----- SCHEDULE
B.O.----- BOTTOM OF	HORIZ----- HORIZONTAL	SHT----- SHEET
BTM----- BOTTOM	HSS----- HOLLOW STRUCTURAL SECTION	SIM----- SIMILAR
BRG----- BEARINGS	INT----- INTERIOR	SJ----- STEEL JOIST
BRK----- BRICK	JST----- JOIST	SL----- SNOW LOAD
C----- CHANNEL	KLF----- KIPS PER LINEAR FOOT	SPA----- SPACING SPACES
CJ----- CONTROL JOINT	KS----- KIPS PER SQUARE INCH	SPEC----- SPECIFICATIONS
CCJ----- CONSTRUCTION CONTROL JOINT	LL----- LIVE LOAD	S.S.----- STAINLESS STEEL
CLR----- CLEAR	LLH----- LONG LEG HORIZONTAL	STD----- STANDARD
CMU----- CONCRETE MASONRY UNIT	LLV----- LONG LEG VERTICAL	STL----- STEEL
COL----- COLUMN	LONG----- LONGITUDINAL	TEMP----- TEMPORARY
CONC----- CONCRETE	LWC----- LIGHT WEIGHT CONCRETE	T & B----- TOP & BOTTOM
CONN----- CONNECTION	MANUF----- MANUFACTURER	T & G----- TROUGH
CONT----- CONTINUOUS	MAS----- MASONRY	THK----- THICK/THICKENED
CORR----- CORROSION	MAX----- MAXIMUM	T.O.----- TOP OF
DBL----- DOUBLE	MIN----- MINIMUM	TRANS----- TRANSVERSE
DTL----- DETAIL	MISC----- MISCELLANEOUS	TS----- TUBE STEEL
DIA----- DIAMETER	MTL----- METAL	TYP----- TYPICAL
DM----- DIMENSION	M.O.----- MECHANICAL OPENING	U.O.N.----- UNLESS OTHERWISE NOTED
DL----- DEAD LOAD	N----- NORTH	VERT----- VERTICAL
D.T.----- DOUBLE TEE / DRAIN TILE	NTS----- NOT TO SCALE	WD----- WOOD
DWL----- DOWEL	O.C.----- ON CENTER	WL----- WIND LOAD
EA----- EACH	O.D.----- OUTSIDE DIAMETER	WI----- WITH
EF----- EACH FACE	O.F.----- OUTSIDE FACE	W/O----- WITH OUT
EJ----- EXPANSION JOINT	O.H.----- OVERHEAD	WT----- WEIGHT
EL----- ELEVATION	OPNG----- OPENING	WWF----- WELDED WIRE FABRIC
ELEV----- ELEVATOR	ORIG----- ORIGINAL	
E.N.----- EDGE NAILING		
E.S.----- EDGE SCREW		
EQ----- EQUAL		

**SYMBOLS**

	SECTION / ELEVATION	§	STEPPED FOOTING
	REFER TO STRUCTURAL STEEL GENERAL NOTES FOR WRLD DETAILS	⊕	CENTERLINE
		⊖	PLATE
		L	ANGLE
	ELEVATION / TOP OF BRG.	∅	DIAMETER

**DESIGN CRITERIA**

**GOVERNING CODES AND MANUALS:**

- INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION
- AMERICAN CONCRETE INSTITUTE (ACI)
  - ACI 318 LATEST EDITION, BUILDING CODE REQUIREMENTS
  - ACI 308 LATEST EDITION, SPECIFICATIONS FOR STRUCTURAL CONCRETE
- AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
  - ASCE 7-16 MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES
- TMS 402.60 BUILDING CODE NOTES AND SPECIFICATIONS FOR MASONRY STRUCTURES
- NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS), LATEST EDITION
- SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC (SDPWS)

**DESIGN LOADS**

DEAD LOADS: DEAD LOADS HAVE CALCULATED TO INCLUDE THE ACTUAL WEIGHT OF ALL WORK SHOWN ON THE STRUCTURAL, MECHANICAL, ELECTRICAL AND ARCHITECTURAL PLANS ALONG WITH A MISCELLANEOUS LOADING OF 5 PSF.

LIVE LOADS:	ROOF LIVE LOADS		
	PITCHED, FLAT OR CURVED	=	20 PSF
	FLOOR LIVE LOADS		
	CORRIDORS ABOVE FIRST FLOOR	=	80 PSF
	LIGHT STORAGE	=	125 PSF
	TYPICAL MEZZANINE	=	60 PSF

SNOW LOADS:	GROUND SNOW LOAD	=	25 PSF
	EXPOSURE CONDITION	=	FULLY EXPOSED
	SNOW EXPOSURE FACTOR (Ce)	=	0.9
	THERMAL FACTOR (Ct)	=	1.1
	SNOW LOAD IMPORTANCE FACTOR (I)	=	1.0
	SLOPED ROOF FACTOR (Cs)	=	1.0
	MIN. SNOW LOAD (P1_min)	=	17.33 PSF
	FLAT ROOF SNOW LOAD (P1)	=	17.33 PSF
	DESIGN SNOW LOAD (UNIFORM)	=	17.33 PSF MAX (p1_min, P1)

WIND:	DRIFT NA		
	ULTIMATE WIND SPEED	=	114 MPH
	RISK CATEGORY	=	II
	EXPOSURE CATEGORY	=	C
	ENCLOSURE CLASSIFICATION	=	ENCLOSED BLDG
	INTERNAL PRESSURE COEF.	=	0.18
	DIRECTIONALITY (Kd)	=	0.85

MAIN (LFERS)	ROOF DOWN PRESSURE	=	0 PSF (UNFACTORED)
	ROOF UP LIFT PRESSURE	=	16.85 PSF (UNFACTORED)
	WALL INWARD PRESSURE	=	13.254 PSF (UNFACTORED)
	WALL OUTWARD PRESSURE	=	30.054 PSF (COMBINED WALL PRESSURES)

COMPONENTS AND CLADDING:  
WORST CASE WIND ZONE PRESSURES (PSF) BASED ON THE FOLLOWING:  
ZONE 1 (WALLS) @ CORNERS EFFECTIVE AREA OF 10 SQ.FT  
ZONE 3 (ROOFS) @ CORNERS EFFECTIVE AREA OF 100 SQ.FT  
ZONE WIDTH USED FOR WORST CASE CORNERS OF 6 FT (ROOFS)

ROOF UPLIFT PRESSURE	=	-44.8 PSF (UNFACTORED)
ROOF DOWN PRESSURE	=	16.7 PSF (UNFACTORED)
WALL INWARD PRESSURE	=	29.3 PSF (UNFACTORED)
WALL OUTWARD PRESSURE	=	-37 PSF (UNFACTORED)

OPEN STRUCTURES	ROOF UPLIFT PRESSURE	=	-23.3 PSF (UNFACTORED)
	ROOF DOWN PRESSURE	=	25.6 PSF (UNFACTORED)

FREE STANDING WALLS/ SIGNS	HORIZONTAL PRESSURE	=	24.8 PSF (UNFACTORED)
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SEISMIC:	SEISMIC DATA		
	RISK CATEGORY	=	II
	SEISMIC IMPORTANCE FACTOR (Ia)	=	1.00
	MAPPED SPECTRAL RESPONSE ACCELERATIONS		
	Ss	=	0.29
	S1	=	0.81

SPECTRAL RESPONSE COEFFICIENTS	Sds	=	0.303
	Sd1	=	0.998

SITE CLASS	=	D
SEISMIC DESIGN CATEGORY	=	B
SEISMIC RESPONSE COEFFICIENT (Ca)	=	0.15
ANALYSIS PROCEDURE	=	EQUIVALENT LATERAL FORCE

MAIN (LFERS)	NORTH - SOUTH DIRECTION		
	(R)	(OMEGA)	(C0)
	6.5	2.5	4
	2	2	1.75
	EAST - WEST DIRECTION		
	(R)	(OMEGA)	(C0)
	2	2	1.75

IRREGULARITIES	VERTICAL
HORIZONTAL	NONE
NONE	NONE

NO SOILS REPORT  
NO SOILS REPORT WAS PROVIDED TO JJK GROUP, INC THEREFORE, JJK GROUP, INC CANNOT BE RESPONSIBLE FOR THE PERFORMANCE OF THE FOUNDATION DESIGN DUE TO HIDDEN SOIL CONDITIONS NOT DISCOVERABLE WITHOUT A SOILS INVESTIGATION.

REFER TO NOTE ON S1.0 AND S1.1

**GENERAL SHOP DRAWING NOTES:**

THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY HIS DESIGN CONCEPT. THE REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE DESIGN DRAWINGS AND SPECIFICATIONS, WHICH HAVE PRIORITY OVER SHOP DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMED AND CORRELATED DIMENSIONS, FABRICATION PROCESSES, MEANS, METHODS, TECHNIQUES, SAFETY AND COORDINATION OF THE WORK WITH OTHER TRADES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK HIS OWN SHOP DRAWINGS AND THOSE OF HIS SUBCONTRACTORS.

THE STRUCTURAL SHOP DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO SUBMITTAL. THE SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN FOUND BY THE CONTRACTOR'S REVIEW. ALL SHOP DRAWINGS SHALL INCLUDE PLAN LAYOUTS SHOWING LOCATIONS OF ITEMS DETAILED ON THE SHOP DRAWINGS. ANY CHANGES, SUBSTITUTIONS OR DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE CLOUDED ON SHOP DRAWINGS. ANY OF THE CHANGES WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED REVERSED AFTER ENGINEER'S REVIEW UNLESS NOTED ACCORDINGLY. THE SUBMITTED SHOP DRAWINGS WILL BE REVIEWED BY THE ENGINEER OF RECORD IN A TIMELY MANNER, TYPICALLY TWO WEEKS IS STANDARD, ASSUMING ALL NECESSARY SHOP DRAWING SUBMITTAL CRITERIA HAVE BEEN MET AND ALL PERTINENT SHOP DRAWING DOCUMENTS REFLECT THE MOST CURRENT CONSTRUCTION DOCUMENTS IN SOME CASES THE SCALE WILL BE STIPULATED UPON RECEIPT OF A PARTICULAR SUBMITTAL PACKAGE. IN ALL CASES THIS REVIEW PERIOD IS EXCLUSIVE OF ARCHITECTURAL REVIEW AND SUBMITTAL PROCESSING.

SHOP DRAWINGS SHALL BE CONSIDERED RECEIVED ON THE SAME DAY IF RECEIVED BY 2:00PM (ENGINEER'S LOCAL TIME) ON THE DAY TRANSMITTED ELSE THEY SHALL BE CONSIDERED RECEIVED ON THE FIRST BUSINESS DAY FOLLOWING THE DAY TRANSMITTED (INCLUDING HOLIDAYS).

**REQUIRED SHOP DRAWING SUBMITTALS**

THE CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE SUBMITTALS FOR EACH OF THE HIGHLIGHTED (CHECK BOX FILLED IN) TO BE INCORPORATED INTO WORK:

**DIVISION 03 - CONCRETE:**

- CONCRETE MIX DESIGN
- CONCRETE REINFORCING LAYOUT

**DIVISION 04 - MASONRY:**

- MASONRY PRODUCT DATA
- MASONRY MORTAR MIX DESIGN
- MASONRY GROUT MIX DESIGN
- MASONRY LAYOUT WITH REINFORCING

**DIVISION 05 - METALS:**

- STRUCTURAL STEEL LAYOUT
- ENGINEERED METAL TRUSS LAYOUT
- PRE-ENGINEERED OPEN WEB JOIST LAYOUT
- LIGHT GAGE METAL LAYOUT

**DIVISION 06 - WOOD AND COMPOSITE:**

- LUMBER PRODUCT DATA
- ENGINEERED LUMBER/TIMBER PRODUCT DATA
- ENGINEERED WOOD JOIST LAYOUT
- PRE-ENGINEERED WOOD TRUSS DESIGN LAYOUT

**GENERAL STRUCTURAL SHEET INDEX (S00 SERIES)**

THE FOLLOWING SHEET INDEX INDICATES GENERAL STRUCTURAL SHEETS (S00 SERIES SHEETS). THESE SHEETS ARE STANDARDIZED TO CORRESPOND TO ASSOCIATED CSI MASTER SPECIFICATION DIVISIONS AND WILL BE HIGHLIGHTED (CHECK BOX FILLED IN) IF INCLUDED IN THIS PROJECT SET.

**DIVISION 01 - GENERAL:**

- S01.A GENERAL PROJECT NOTES, DRAWING CONVENTIONS, DESIGN CRITERIA AND SHEET INDEX
- S01.B SPECIAL INSPECTION NOTES AND TABLES
- S01.C SPECIAL INSPECTION NOTES AND TABLES

**DIVISION 03 - CONCRETE:**

- S03.A CONCRETE GENERAL NOTES AND DETAILS
- S03.B CONCRETE SLAB-ON-GRADE REQUIREMENTS
- S03.C MISCELLANEOUS CONCRETE DETAILS
- S03.D CONCRETE SHEARWALL DETAILS AND SECTIONS

**DIVISION 04 - MASONRY:**

- S04.A MASONRY GENERAL NOTES, REINFORCING REQUIREMENTS AND LINTEL DIAGRAM
- S04.B MASONRY DETAILS AND MASONRY VENEER REQUIREMENTS
- S04.C MASONRY SHEARWALL DETAILS AND SECTIONS

**DIVISION 05 - METALS:**

- S05.A STRUCTURAL STEEL GENERAL NOTES AND DETAILS
- S05.B METAL DECK GENERAL NOTES AND DETAILS
- S05.C MOMENT RESISTING FRAMES BRACED FRAMES
- S05.D STEEL BRACED FRAME DETAILS AND SECTIONS
- S05.E LIGHT GAGE METAL FRAMING GENERAL NOTES AND DETAILS
- S05.F METAL SHEARWALL SCHEDULES DETAILS AND SECTIONS

**DIVISION 06 - WOOD AND COMPOSITES:**

- S06.A CARPENTRY GENERAL NOTES
- S06.B CARPENTRY GENERAL DETAILS
- S06.C CARPENTRY GENERAL DETAILS (2)
- S06.D WOOD STAIR AND SHAFT ENCLOSURE DETAILS
- S06.E SHEARWALL SCHEDULES AND ELEVATIONS

**DIVISION 13 - SPECIAL CONSTRUCTION:**

- S13.A SPECIAL DETAILS

**DIVISION 31 - EARTHWORK:**

- S31.A EARTHWORK GENERAL NOTES AND DETAILS

**DIVISION 32 - EXTERIOR IMPROVEMENTS:**

- S32.A EXTERIOR DETAILS: RETAINING WALLS / FENCE WALLS

**STRUCTURAL SHEET INDEX**

THE FOLLOWING SHEET INDEX INDICATES THE PROJECT SPECIFIC STRUCTURAL SHEETS.

- S1.0 FOUNDATION AND CONTROL JOINT PLAN WEST
- S1.1 FOUNDATION AND CONTROL JOINT PLAN EAST
- S2.0 FLOOR ROOF FRAMING PLAN WEST
- S2.1 FLOOR ROOF FRAMING PLAN EAST
- S3.0 SHEARWALL PLAN
- S4.0 FOUNDATION SECTIONS
- S5.0 FLOOR ROOF FRAMING SECTIONS

**ROCKLAND GREEN CENTER FOR ANIMAL RESCUE AND EDUCATIONAL SERVICES, INC**  
R.G. C.A.R.E.S. ANIMAL SHELTER  
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**GENERAL PROJECT NOTES, DRAWING CONVENTIONS, DESIGN CRITERIA AND SHEET INDEX**

INITIALS	DATE	COMMENTS

REVISION	REV #	DATE	COMMENTS

RGAS  
Project Number **2246**  
Drawn By **JJR**  
Date **3/11/2024**  
**S01.A**



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3402 Sun. Blvd., Albany, New York 12211 - Tel: 518.262.5700 - Fax: 518.262.1572 - www.jjkgroup.com  
The above professional opinions are based on the existing information provided to us by the client. We do not warrant the accuracy of the information provided to us by the client. We do not warrant the accuracy of the information provided to us by the client. We do not warrant the accuracy of the information provided to us by the client. We do not warrant the accuracy of the information provided to us by the client.

SPECIAL INSPECTIONS AND TESTS OF SOILS				
TABLE ITEM	VERIFICATION AND INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA
		CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	
1	VERIFY MATERIAL BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	---	X	1705.6
2	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	---	X	1705.6
3	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	---	X	1705.6
4	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	---	1705.6
5	PRIOR TO PLACEMENT OF COMPACTED FILL, VERIFY SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.	X	---	1705.6

SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION					
TABLE ITEM	VERIFICATION AND INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCE STANDARD	IBC REFERENCE
2	REINFORCING BAR WELDING:				
2a	VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	---	X	PER AWS D1.4 ACI 318: 25.5.4	---
2b	INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	---	X	---	---
2c	INSPECT ALL OTHER WELDS	---	X	---	---
3	INSPECT ANCHORS CAST IN CONCRETE	---	X	ACI 318: 17.8.2	---
4	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
4a	ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	---	ACI 318: 17.8.2.4	---
4b	MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	---	X	ACI 318: 17.8.2.4	---
5	VERIFY USE OF REQUIRED DESIGN MIX.	---	X	ASCS 318 CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1905.2, 1908.3
6	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	---	ASTM C 172, ASTM C 311, ACI 318: 26.4.5, 26.12	1908.10
7	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	---	ASCS 318: 26.4.5	1908.6, 1908.7, 1908.8
8	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	---	X	ASCS 318: 26.4.7, 26.4.9	1908.9
9	INSPECT PRESTRESSED CONCRETE FOR:				
9a	APPLICATION OF PRESTRESSING FORCES.	X	---	ACI 318: 26.9.2.1	---
9b	GROUTING OF BONDED PRESTRESSING TENDONS.	X	---	ACI 318: 26.9.2.3	---
10	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	---	X	ACI 318: CH 26.9.2.1	---
11	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	---	X	ASCS 318: 26.10.2	1908.9
12	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X	ACI 318: CH 26.10.1 (b)	---

LEVEL B QUALITY ASSURANCE OF MASONRY (TMS 402-13 / ACI 530-13 / ASCE 5-13 TABLE 3.1.2)					
MINIMUM TESTS					
VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF-CONSOLIDATING GROUT.					
ACCORDANCE WITH SPECIFICATION ARTICLE 1.4B PRIOR TO CONSTRUCTION, AND 1 <sub>h</sub> VERIFICATION OF 1 <sub>h</sub> AAC EXCEPT WHERE SPECIFICALLY EXEMPTED BY TMS 402-13/ACI 530-13/ASCE 5-13.					
TABLE ITEM	VERIFICATION AND INSPECTION TASK	FREQUENCY (h)		REFERENCE FOR CRITERIA	
		CONTINUOUS	PERIODICALLY	TMS 402 / ACI 530 / ASCE 5	TMS 602 / ACI 530.1 / ASCE 6
1	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS.	---	X	---	ART. 1.5
2	AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
2a	PROPORTIONS OF SITE-PREPARED MORTAR.	---	X	---	ART. 2.1, 2.6A
2b	CONSTRUCTION OF MORTAR JOINTS.	---	X	---	ART. 3.3B
2c	GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	---	X	---	ART. 2.4B, 2.4H
2d	LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS, AND ANCHORAGES	---	X	---	ART. 3.4, 3.6A
2e	PRESTRESSING TECHNIQUE.	---	X	---	ART. 3.6B
2f	PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY.	X (b)	X (c)	---	ART. 2.1C
3	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
3a	GROUT SPACE.	---	X	---	ART. 3.2D, 3.2F
3b	GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.	---	X	SEC. 6.1	ART. 2.4, 3.4
3c	PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	---	X	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	ART. 3.2E, 3.4, 3.6A
3d	PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	---	X	---	ART. 2.6B, 2.4C.1.b
3e	CONSTRUCTION OF MORTAR JOINTS.	---	X	---	ART. 3.3B
4	VERIFY DURING CONSTRUCTION:				
4a	SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	---	X	---	ART. 3.3F
4b	TYPE, SIZE, LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	---	X	SEC. 1.2.1(h), 6.1.4.3, 6.2.1	---
4c	WELDING OF REINFORCEMENT.	X	---	SEC. 8.1.6.7.2, 9.3.3.4(c), 11.3.3.4(b)	---
4d	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	---	X	---	ART. 1.8C, 1.8D
4e	APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	---	---	ART. 3.6B
4f	PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE.	X	---	---	ART. 3.3, 3.6C
4g	PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS.	X (b)	X (c)	---	ART. 3.3B.9, 3.3F.1.b
4h	INSTALLATION OF POST-INSTALLED ANCHORS ACCORDING TO MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. VERIFY ANCHOR DIMENSIONS, ADHESIVE IDENTIFICATION AND EXPIRATION DATE, HOLE DIMENSION, EDGE DISTANCES, EMBEDMENT DEPTH, TIGHTENING TORQUE, BASE- MATERIAL TEMPERATURE.	X (d)	X (e)	---	SEAMM
5	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	---	X	---	ART. 4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4

FOOTNOTES:  
(a) FREQUENCY REFERS TO THE FREQUENCY OF SPECIAL INSPECTIONS, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODIC DURING THE LISTED TASK, AS DEFINED IN THE TABLE.  
(b) REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.  
(c) REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.  
(d) REQUIRED FOR THE FIRST 10% OF EACH DIFFERENT TYPE OF ANCHOR AND/OR INSTALLER  
(e) REQUIRED FOR THE REMAINING 90% OF EACH DIFFERENT TYPE OF ANCHOR AND/OR INSTALLER

STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS PER IBC 2015

- SPECIAL INSPECTIONS / TESTING -  
SPECIAL STRUCTURAL INSPECTIONS ARE NOT TO BE CONFUSED WITH, NOR RELIEVE THE OWNER OF OWNERS AGENT FROM THE JURISDICTION BUILDING DEPARTMENT INSPECTIONS REQUIRED BY IBC SECTION 110. SPECIAL INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS, MEANS AND METHODS AND JOBSITE SAFETY ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS.
- REPORTING FOR SPECIAL INSPECTION -  
SPECIAL INSPECTION AND TESTING REPORTS SHALL BE COMPLETED AND DISTRIBUTED ON A WEEKLY BASIS. REPORT DEFICIENCIES THAT HAVE NOT BEEN RESOLVED IMMEDIATELY. PROVIDE COPIES OF REPORTS TO: CONTRACTOR, OWNER, ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. SPECIAL INSPECTOR TO KEEP A NON-COMPLIANT LIST DOCUMENTING ITEMS INSPECTED NOT MEETING APPROVED CONSTRUCTION DOCUMENTS AND WHEN HOW RESOLVED.
- REFER TO IBC SECTION 1105 AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONSTRUCTION DOCUMENTS FOR ADDITIONAL NON-STRUCTURAL SPECIAL INSPECTION ITEMS.
- ANY FABRICATOR NEEDS TO BE APPROVED BY THE JURISDICTION BUILDING DEPARTMENT OR BE CERTIFIED BY AN INDUSTRY RECOGNIZED AGENCY QUALIFIED FOR SUCH CERTIFICATION. CERTIFICATION OF FABRICATORS ARE TO BE PROVIDED TO THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTION ITEMS CONTAINED HEREIN ARE REQUIRED FOR ALL NON-CERTIFIED FABRICATORS.
- DEFINITION OF "PERIODIC" AND "CONTINUOUS" SPECIAL INSPECTIONS:  
- CONTINUOUS: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.  
- PERIODIC: THE PART-TIME OF INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.  
- WHERE "PERIODIC" SPECIAL INSPECTION IS REQUIRED, "PART-TIME" OR "INTERMITTENT" MEANS THAT INSPECTION OF THE TASK NEED TO BE PERFORMED FROM TIME TO TIME DURING THE PROGRESS OF THE TASK. THE PERIOD OF TIME BETWEEN INSPECTIONS VARIES GREATLY FOR DIFFERENT TYPES OF WORK, DEPENDING ON THE TYPE OF INSPECTION DONE.  
- THE PERIOD OF TIME BETWEEN INSPECTION ALSO DEPENDS ON THE PACE OF CONSTRUCTION, THE NUMBER OF WORKERS, AND THE QUALITY OF WORKMANSHIP, AND OTHER FACTORS.  
- IT IS THE RESPONSIBILITY OF THE SPECIAL INSPECTOR TO PROVIDE INSPECTIONS AT AN APPROPRIATE FREQUENCY AND AT APPROPRIATE TIMES DURING CONSTRUCTION. THE INSPECTOR MUST HAVE ADEQUATE EXPERIENCE AND EXHIBIT GOOD JUDGMENT IN DETERMINING THE FREQUENCY AND TIMING OF INSPECTIONS.

GRAPHIC CONVENTIONS	
TABLE ITEM	VERIFICATION AND INSPECTION TASK
1	THIS CELL WITHOUT SHADE - ITEM IS NOT SCHEDULED FOR INCORPORATION INTO THE WORK.
2	THIS CELL WITH SHADE - ITEM IS TO BE INCORPORATED INTO THE WORK.

ROCKLAND GREEN CENTER FOR ANIMAL RESCUE AND EDUCATIONAL SERVICES, INC  
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SPECIAL INSPECTIONS AND TABLES (2)

REV #	DATE	COMMENTS
REVISION		
REVISION		
REVISION		

REVIEWS

INITIALS	

RGAS  
Project Number **2246**  
Drawn By **JJR**  
Date **3/11/2024**

**S01.B**

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**CONCRETE:**

**PRODUCT REQUIREMENTS:**

- ALL HARDROCK CONCRETE SHALL BE OF REGULAR WEIGHT OF 145 POUNDS PER CUBIC FOOT.
- AGGREGATE SIZE SHALL CONFORM TO ASTM C33.
- CONCRETE GROUT SHALL BE NON-SHRINKING WITH SUFFICIENT WATER TO ALLOW POURING. ULTIMATE COMPRESSIVE STRENGTH (F<sub>c</sub>) AT (28) DAYS SHALL BE EQUAL TO 4000 PSI (MIN).
- ADMIXTURES TO BE INCORPORATED IN CASE-BY CASE-BASIS, REFER TO TABLE C-1

**EXECUTION REQUIREMENTS:**

- CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL OPENINGS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND EMBEDS REQUIRED WITH MECH., E.L.C., AND EQUIPMENT MANUFACTURER'S PRIOR TO PLACEMENT.
- REFER TO SHEET S03B FOR CONTROL CONSTRUCTION AND ISOLATION JOINT DETAILS.
- NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INHURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN CONCRETE.
- ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES ETC. SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.
- REMOVE ALL DEBRIS FROM FORMS BEFORE POURING.
- NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY TESTING AGENCY. CONCRETE SHALL BE PLACED WITHIN 15 MINUTES AFTER DISCHARGE.
- ALL CONCRETE TESTS INCLUDING AIR CONTENT, SLUMP, AND TEST CYLINDERS SHALL BE TAKEN AT THE POINT OF DISCHARGE AND FROM THE DISCHARGE END OF PUMP HOSE WHEN CONCRETE IS PUMPED.
- ONE GRADE OF CONCRETE SHALL BE POURED AT THE JOB SITE AT ANY ONE TIME.
- CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES OR TRUNKS OF VARIOUS LENGTHS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED (5) FEET, AND A SUFFICIENT NUMBER SHALL BE USED TO ENSURE THE CONCRETE IS KEPT LEVEL AT ALL TIMES.
- PROTECT FRESHLY POURED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD AND HOT TEMPERATURES. START CURING AS SOON AS FREE WATER HAS DISAPPEARED FROM THE CONCRETE SURFACE AFTER PLACING AND FINISHING. ALL CURING PROCEDURES TO FOLLOW ACI 308R-16.
- PROTECT CONCRETE FROM DAMAGE AND REDUCED STRENGTH CAUSED BY FROST, FREEZING ACTIONS AND LOW TEMPERATURES IN COMPLIANCE WITH ACI 308R-16.
- PROTECT CONCRETE FROM DAMAGE AND REDUCED STRENGTH CAUSED BY HIGH TEMPERATURES IN COMPLIANCE WITH ACI 308R-10. UNIFORMLY COOL WATER AND AGGREGATES BEFORE MIXING TO OBTAIN A CONCRETE MIXTURE TEMPERATURE OF NOT GREATER THAN 90 DEGREES FAHRENHEIT AT POINT OF PLACEMENT.
- CURING: PROVIDE 7-DAY MINIMUM CONTINUOUS CURE ON ALL CONCRETE SURFACES AS SPECIFIED.

**CONCRETE REINFORCING:**

**PRODUCT REQUIREMENTS:**

- ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615 AS FOLLOWS:
  - #3 BARS.....GRADE 40
  - #4 & LARGER BARS.....GRADE 60
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

**EXECUTION REQUIREMENTS:**

- FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE."
- ALL BENDS SHALL BE MADE COLD.
- ALL WALLS AND COLUMNS SHALL BE DOWELED INTO FOOTING WITH BARS OF THE SAME SIZE AND SPACING AS THE BARS ABOVE (U.O.N. ON PLANS).
- ALL REINFORCING STEEL SHALL BE SECURELY WIRED AND PROPERLY SUPPORTED ABOVE THE GROUND AND AWAY FROM FORMS.
- PROVIDE CORNER BARS THE SAME SIZE AND SPACING AS THE HORIZ. REINF. AT THE CORNERS AND INTERSECTION OF ALL WALLS, BEAMS AND FOOTINGS (U.O.N. ON PLANS).
- CONTINUOUS FOOTING REINFORCEMENT SHALL HAVE A MINIMUM LAP PER SCHEDULE AND THE SPLICES IN ADJACENT BARS SHALL NOT BE LESS THAN (2) FEET APART.
- ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" ARE TO CENTER OF STEEL. MINIMUM REBAR COVER FOR CONCRETE SHALL BE AS OUTLINED IN TABLE CR-1
- TOLERANCES FOR LONGITUDINAL LOCATION OF BENDS AND ENDS OF REINFORCEMENT SHALL BE PLUS OR MINUS (2) INCHES EXCEPT AT DISCONTINUOUS ENDS OF MEMBERS WHERE TOLERANCES SHALL BE PLUS OR MINUS 1/2 INCH.
- REINFORCING FOR CONCRETE POURED ON GRADE SHALL BE SUPPORTED BY STEEL CHAIRS.

**TABLE CR-1  
REINFORCING STEEL CLEARANCES**

CLEARANCE FROM FINISHED FACE	MINIMUM COVER	TOLERANCES + OR -
CAST AGAINST PERM. EXPOSED TO EARTH	3"	3/8"
EXPOSED TO EARTH OR WEATHER		
NO. 5 AND SMALLER BARS	1-1/2"	3/8"
NO. 6 AND LARGER BARS		3/8"
NOT EXPOSED TO EARTH OR WEATHER SLABS, WALLS, JOISTS:		
NO. 11 AND SMALLER BARS	3/4"	3/8"
NO. 14 AND NO. 18 BARS	1-1/2"	3/8"

**TABLE CQ-1  
(CONCRETE QUALITY (ACI 318-08))  
CEMENT TYPE (ASTM C150)**

USE	TYPE OF PORTLAND CEMENT	DESCRIPTION
<input type="checkbox"/>	TYPE I	GENERAL PURPOSE FOR PAVEMENTS, FLOORS, REINF. CONC. BUILDINGS, BRIDGES, TANKS, RESERVOIRS, PIPE, MASONRY UNITS AND PRE-CAST CONC. PRODUCTS.
<input type="checkbox"/>	TYPE IA (EXTERIOR)	TYPE I CEMENT W/ AIR ENTRAINING.
<input type="checkbox"/>	TYPE II	USED FOR MODERATE SULFATE ATTACK.
<input type="checkbox"/>	TYPE IIA	TYPE I CEMENT W/ AIR ENTRAINING.
<input type="checkbox"/>	TYPE III	HIGH EARLY STRENGTH (ONE WEEK OR LESS).
<input type="checkbox"/>	TYPE IIIA	TYPE III W/ AIR ENTRAINING.
<input type="checkbox"/>	TYPE IV	USED WHERE RATE AMOUNT OF HEAT GENERATED FROM HYDRATION MUST BE MINIMIZED.
<input type="checkbox"/>	TYPE V	USED FOR SEVERE SULFATE ATTACK.

**TABLE CQ-2  
COMPRESSIVE STRENGTH AND WATER-CEMENT RATIO (BY MASS) (ACI 211.1 & 211.2)**

USE	COMPRESSIVE STRENGTH @ 28 DAYS (PSI)	EXPOSURE CLASS CATEGORY	WATER-CEMENT RATIOS	
			NON-AIR ENTRAINED	AIR ENTRAINING
<input type="checkbox"/>	7000	F0, S0, P0, C0	0.33	-
<input type="checkbox"/>	6000		0.41	0.32
<input type="checkbox"/>	5000		0.46	0.40
<input type="checkbox"/>	4000		0.57	0.46
<input type="checkbox"/>	3000	P1, F1, F3, S2	0.60	0.59
<input type="checkbox"/>	2000		0.82	0.74
<input type="checkbox"/>	4000	F1, F2, F3, S2	0.50	-
<input type="checkbox"/>	4500		0.45	-
<input type="checkbox"/>	5000	C2, S3	0.40	-

**FOOTNOTES:**

(a) EXPOSURE CATEGORY

EXPOSURE CATEGORY	DESCRIPTION
F0, S0, P0, C0	CONCRETE PROTECTED FROM EXPOSURE TO FREEZING AND THAWING, APPLICATION OF DEICING CHEMICALS, OR AGGRESSIVE SUBSTANCES.
P1	CONCRETE INTENDED TO HAVE LOW PERMEABILITY WHEN EXPOSED TO WATER.
F1, F2, F3	CONCRETE EXPOSED TO FREEZING AND THAWING IN A MOST CONDITION OR DEICERS.
C2	FOR CORROSION PROTECTION FOR REINFORCED CONCRETE EXPOSED TO CHLORIDES FROM DEICING SALTS, SALT WATER, BRACKISH WATER, SEAWATER, OR SPRAY FROM THESE SOURCES.

(b) \* SULFATE EXPOSURE CLASS

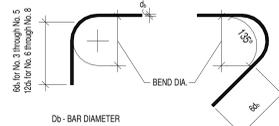
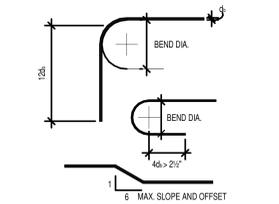
EXPOSURE CLASS	SULFATE (SO <sub>4</sub> ) IN SOIL, % BY MASS	SULFATE (SO <sub>4</sub> ) IN WATER, PPM
S0	NEGLECTIBLE	LESS THAN 0.10
S1	MODERATE	0.10 TO 0.20
S2	SEVERE	0.20 TO 2.00
S3	VERY SEVERE	OVER 2.00

**TABLE CQ-3  
AIR CONTENT (ACI 211.1) (%)**

USE	EXPOSURE (a)	AGGREGATE SIZE (IN)							
		3/8	1/2	3/4	1	1 1/2	2	3	6
<input type="checkbox"/>	MILD	4.5	4.0	3.5	3.0	2.5	2.0	1.5	1.0
<input type="checkbox"/>	MODERATE (F1)	6.0	5.5	5.0	4.5	4.5	3.5	3.5	3.0
<input type="checkbox"/>	SEVERE (F2 & F3)	7.5	7.0	6.0	6.0	5.5	5.0	4.5	4.0

**TABLE CQ-4  
SLUMP (ACI 211.1)**

USE	TYPE OF CONSTRUCTION	SLUMP (IN)	
		MAXIMUM	MINIMUM
<input type="checkbox"/>	REINFORCED FOUNDATION WALLS AND FOOTINGS	6	3
<input type="checkbox"/>	UNREINFORCED FOOTINGS, CAISSONS, AND SUB-STRUCTURE WALLS	4	3
<input type="checkbox"/>	REINFORCED SLABS, BEAMS, AND WALLS	6	4.5
<input type="checkbox"/>	BUILDING COLUMNS	6	4
<input type="checkbox"/>	PAVEMENTS	3	1
<input type="checkbox"/>	HEAVY MASS CONSTRUCTION	3	1
<input type="checkbox"/>	BRIDGE DECKS	4	3
<input type="checkbox"/>	SIDEWALK, DRIVEWAY, AND SLABS ON GROUND	5	3



**TABLE CR-2  
STANDARD HOOKS FOR PRIMARY REINFORCEMENT**

BAR SIZE NUMBER	MINIMUM FINISHED BEND DIAMETER (a)
3 THROUGH 8	4d
9, 10, 11	6d
14 AND 18	10d

(a) MEASURED ON INSIDE OF BAR

**TABLE CR-3  
STANDARD HOOKS FOR STIRRUPS & TIE REINFORCEMENT**

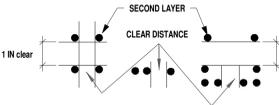
BAR SIZE NUMBER	MINIMUM FINISHED BEND DIAMETER (a)
3 THROUGH 5	4d
6 THROUGH 8	6d

(a) MEASURED ON INSIDE OF BAR

**TABLE CR-4  
STIRRUP SIZE - TYPICAL (U.O.N.)**

LATERAL TIES	STIRRUP SIZE	SPACING
MAIN REINFORCEMENT (d <sub>b</sub> )	#3	LESSER OF: a. 16d <sub>b</sub> b. 48 x STIRRUP DIA. c. LEAST COL.-B.M. DIM
SPIRAL TIES	#3	MAXIMUM SPACING = 3"
< #10	#3	
> #10	#4	

**STANDARD HOOK, STIRRUPS AND TIE REINFORCING DETAILS**



**TABLE CR-5  
CLEAR DISTANCES FOR REINF.**

CONCRETE COVER TABLE (U.O.N.)	
CONDITION	COVER
SURFACE CAST AGAINST EARTH	3 INCHES
FORMED SURFACES EXPOSED TO EARTH OR WEATHER:	#6 BARS AND LARGER 2 INCHES #5 BARS AND SMALLER 1 1/2 INCHES
EXTERIOR POST-TENSION SLABS (INCLUDING PARKING)	TOP AND BOTTOM 1 INCHES
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER SLABS, WALLS, JOISTS:	#11 BARS AND SMALLER 3/4 INCHES #14-#18 1 1/2 INCHES BEAMS, COLUMNS 1 1/2 INCHES
SLABS ON GRADE (FROM TOP OF SLAB)	1 1/2 INCHES
SLABS ON METAL DECK	TOP 3/4 INCHES BOTTOM 3/4 INCHES

**REINFORCING CLEARANCE DETAILS**

3 S03.A NTS

**TABLE CR-6  
LAP SPLICE SCHEDULE (L<sub>s</sub> VALUES (IN)) - TENSION SPLICES (CLASS B NON STAGGERED)**

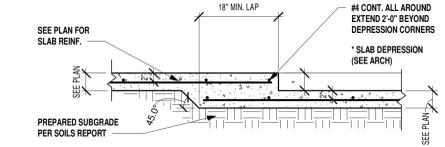
BAR SIZE	f <sub>c</sub> (psi)											
	2000	3000	4000	5000	6000	7000	8000	9000	10000	10000	10000	10000
#3	35	29	27	27	27	27	27	27	27	27	27	27
#4	47	38	33	30	27	27	27	27	27	27	27	27
#5	59	48	42	37	34	31	29	28	27			
#6	70	58	50	45	41	38	35	33	32			
#7	82	67	58	52	47	44	41	39	37			
#8	94	77	66	59	54	50	47	44	42			
#9	106	86	75	67	61	57	53	50	47			
#10	119	97	84	75	69	64	60	56	53			

**TABLE CR-7  
DEVELOPMENT LENGTHS SCHEDULE (L<sub>d</sub> VALUES (IN)) - TENSION DEVELOPMENTS**

BAR SIZE	f <sub>c</sub> (psi)											
	2000	3000	4000	5000	6000	7000	8000	9000	10000	10000	10000	10000
#3	27	22	21	21	21	21	21	21	21	21	21	21
#4	36	29	26	23	21	21	21	21	21	21	21	21
#5	45	37	32	29	26	24	23	21	21			
#6	54	44	38	34	31	29	27	26	24			
#7	63	52	45	40	36	34	32	30	29			
#8	72	59	51	46	42	39	36	34	32			
#9	81	67	58	52	47	44	41	38	36			
#10	92	75	65	58	53	49	46	43	41			

**REINFORCING DEVELOPMENT LENGTHS AND SPLICES**

2 S03.A NTS



**TYP. SLAB DEPRESSION**

(SEE FOUNDATION PLAN FOR LOCATIONS (WHERE APPLICABLE))

4 S03.A NTS



**CONCRETE GENERAL NOTES AND DETAILS**

REV #	DATE	COMMENTS
REVISION		
REVISION		
REVISION		

**REVIEWS**

INITIALS	DATE

**CONCRETE SLAB-ON-GRADE REQUIREMENTS**

**GENERAL**

1. SAW-CUT JOINTS AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH.
2. THE DEPTH OF THE SAW-CUT WHEN USING A WET CUT SAW SHALL BE 1/4 THE SLAB THICKNESS.
3. PROVIDE CONSTRUCTION JOINT AT THE END OF CONCRETE PLACEMENT FOR THE DAY. SEE DETAIL A (THIS SHEET).
4. SEE FOUNDATION AND/OR CONTROL JOINT PLAN FOR ADDITIONAL INFORMATION.
5. SEE GENERAL NOTE SHEET S02 FOR ADDITIONAL CONCRETE REQUIREMENTS.
6. CONTRACTOR TO FAMILIARIZE HIMSELF WITH SOILS REPORT FOR SUBGRADE PREPARATION.

**DESIGN**

THE FOLLOWING MINIMUM ALLOWABLE REINFORCING RATIO USED IN THE DESIGN IS AS FOLLOWS:

1. % FOR WELDED WIRE FABRIC
  2. % FOR REINFORCING BARS
- THIS MINIMUM REINFORCING RATIO IS FOR SHRINKAGE AND KEEPING RANDOM CRACKING TIGHT. IT ALSO ALLOWS FOR LONGER JOINT SPANS.

ALSO ALLOWS FOR LONGER JOINT SPANS.

CONTROL/CONTRACTION JOINT SPACING WITH MINIMUM REINFORCING IS BASED OF THE FOLLOWING SUBGRADE DRAG FORMULA:

$A_s = FLW/2f_s$  WHERE:

- A<sub>s</sub> CROSS-SECTION AREA OF STEEL, IN SQUARE INCHES PER LINEAL FOOT OF SLAB WIDTH
- F COEFFICIENT OF SUBGRADE FRICTION. (DESIGNERS USE 1.5 OR 2.0 FOR PAVEMENTS; 1.5 IS RECOMMENDED FOR CONCRETE FLOORS ON GROUND.)
- L SLAB LENGTH (OR WIDTH IF APPROPRIATE) BETWEEN FREE ENDS, IN FEET. (A FREE END IS ANY JOINT FREE TO MOVE IN A HORIZONTAL PLANE.)
- W WEIGHT OF SLAB, IN POUNDS PER SQUARE FOOT. (FOR NORMAL-WEIGHT CONCRETE, DESIGNERS USE 12.5 POUNDS PER INCH OF FLOOR THICKNESS.)
- f<sub>s</sub> ALLOWABLE WORKING STRESS OF REINFORCEMENT, IN POUNDS PER SQUARE INCH. (THE WORKING STRESS OF STEEL IS USUALLY 0.67 TO 0.75 THE YIELD STRENGTH OF THE STEEL IN POUNDS PER SQUARE INCH.)

**DEFINITIONS**

**ISOLATION JOINTS**

ISOLATION JOINTS ARE PLACED WHEREVER COMPLETE SEPARATION BETWEEN THE FLOOR AND ADJOINING CONCRETE IS NEEDED TO ALLOW THEM TO MOVE INDEPENDENTLY WITHOUT DAMAGE. ISOLATION JOINTS PERMIT HORIZONTAL AND VERTICAL MOVEMENT BETWEEN THE ABUTTING FACES OF THE FLOOR SLAB AND OTHER PARTS OF THE BUILDING BECAUSE THERE IS NO KEYWAY, BOND OR MECHANICAL CONNECTION ACROSS THE JOINT.

**CONTROL/CONTRACTION JOINTS**

CONTROL JOINTS (ALSO CALLED CONTRACTION JOINTS) ACT TO RELIEVE STRESS AND WITH PROPER SPACING (SEE CONTROL JOINT PLAN) THEY ELIMINATE THE CAUSE OF UNCONTROLLED RANDOM CRACKING. THEY ALLOW HORIZONTAL MOVEMENT OF THE SLAB. THE OBJECTIVE IS TO FORM A PLANE OF WEAKNESS IN THE SLAB SO THAT THE CRACK WILL OCCUR ALONG THAT LINE AND NOWHERE ELSE. AS SHOWN ON SECTIONS ON THIS SHEET ALL SLAB REINFORCING MUST BE DISCONTINUOUS THROUGH JOINT. LOAD TRANSFER ACROSS THE CONSTRUCTION JOINT IS PROVIDED BY USE OF DOWELS (A BOND BREAKER IS USED ON ONE END TO ALLOW HORIZONTAL MOVEMENT).

**CONSTRUCTION JOINT**

CONSTRUCTION JOINTS ARE STOPPING PLACES AND FORM THE EDGE OF EACH DAY'S WORK. THEY FREQUENTLY ALIGN WITH CONTROL/CONTRACTION JOINTS OR ISOLATION JOINTS. WHENEVER CONTINUOUS CONCRETE PLACEMENT WILL BE INTERRUPTED FOR 30 MINUTES OR MORE, A BONDED OR TIED CONSTRUCTION JOINT SHOULD BE FORMED AND DEFORMED REINFORCING BARS ADDED. IF THE CONSTRUCTION JOINT OCCURS WITHIN THE PANEL (I.E. BETWEEN SPECIFIED CONTROL/CONTRACTION JOINTS) ALL REINFORCING MUST CONTINUE THROUGH THE CONSTRUCTION JOINT.

**VISIBLE CONDITIONS THAT MAY OCCUR DURING CONSTRUCTION RANDOM CRACKING**

WHEN RANDOM CRACKING OCCURS ON A NEWLY PLACED SLAB, IT IS USUALLY RELATED TO IMPROPER TIMING OF JOINT SAWING. THE PURPOSE OF CUTTING THE SLAB IS TO INDUCE A CRACK BENEATH THE CUT.

**RANDOM CRACKING**

CONCRETE NEEDS TO GAIN ADEQUATE STRENGTH BEFORE HAVING JOINTS CUT INTO IT. IDEALLY, THE TENSILE STRENGTH HOLDS THE SLAB TOGETHER. THE SAWCUT NOTCH CREATES A REDUCED SLAB SECTION WHICH INCREASES THE TENSILE STRESSING IN THE CONCRETE BELOW THE NOTCH. IN THE REDUCED SECTION, THE TENSILE STRESS IS OF THE GREATER THAN THE CONCRETE TENSILE STRENGTH. THIS A CRACK OCCURS BELOW THE NOTCH. THE CRACK AND SAWCUT COMBINE TO RELIEVE THE STRESSES AND THUS PREVENT UNWANTED RANDOM CRACKING. BUT NEW CONCRETE IS ALWAYS TRYING TO SHRINK. AS THE SAWBLADE CUTS A JOINT IN THE CONCRETE, THE SAWCUT WEAKENS THE CONCRETE SLAB. IF SAWCUTTING IS STARTED WHEN CONTRACTION STRESS (AS A RESULT OF CONCRETE SHRINKAGE) IS GREAT AND TENSILE STRENGTH IS NOT YET ADEQUATE TO RESIST IT, CRACKS CAN JUMP AHEAD OF THE BLADE DURING JOINT CUTTING.

IF COOLING WATER (USED WITH WET SAWING) HITS THE WARM SLAB, IT CAN BE A THERMAL SHOCK THAT ADDS TO THE POTENTIAL FOR RANDOM CRACKING AHEAD OF THE SAW BLADE.

TO AVERT RANDOM CRACKING, SAWCUT JOINTING MUST BE DONE BEFORE CONCRETE COOLING AND DRYING STARTS. BUT AFTER SOME (TENSILE) STRENGTH HAS DEVELOPED (7 HOURS MAXIMUM AFTER CONCRETE IS POURED), THE NOTCH INSTALLED BY SAWCUTTING SHOULD BE DEEP ENOUGH THAT THE CRACK OCCURS BELOW THE SAWCUT (1/4 OF THE SLAB THICKNESS IS SUFFICIENT).

**BLEEDING AND SET RETARDING**

EXCESSIVE BLEEDING THAT OCCURS AFTER CONCRETE PLACING, STRIKEOFF, AND BULLFLOATING CAN DELAY SUBSEQUENT FINISHING STEPS. IN MOST INSTANCES, THE CAUSE OF EXCESSIVE BLEEDING IS DUE TO ONE OF THE FOLLOWING:

- A WATER-CEMENT RATIO THAT IS TOO HIGH
- POOR AGGREGATE GRADATION
- SLOW SET TIMES
- AMBIENT CONDITIONS THAT HINDER SURFACE WATER EVAPORATION: LOW TEMPERATURES, HIGH HUMIDITY, OR LACK OF AIR MOVEMENT

**BLISTERING AND DELAMINATIONS**

BLISTERING IS THE CONVEX RAISING OF THE SURFACE MORTAR LAYER WHILE THE CONCRETE IS STILL PLASTIC. THE BLISTERS ARE ATTRIBUTED TO SEALING THE FLOOR SURFACE BEFORE ALL THE BLEEDWATER AND AIR HAVE ESCAPED.

SIMILAR TO BLISTERING, DELAMINATION OF SURFACE MORTAR CAN OCCUR DUE TO ENTRAPMENT OF BLEEDWATER AND AIR BELOW THE PREMATURELY SEALED MORTAR SURFACE. DELAMINATIONS AFFECT LARGER SURFACE AREAS THAN BLISTERS, AND ARE VERY DIFFICULT TO DETECT DURING FINISHING. THEY BECOME APPARENT AFTER CONCRETE SURFACE DRYING WHEN THE DELAMINATED AREA IS CRUSHED UNDER TRAFFIC. THE THICKNESS OF DELAMINATED MORTAR RANGES FROM ABOUT 3 MM TO 9MM (1/8 IN TO 3/8 IN). THE AFFECTED AREA CAN BE ANYWHERE FROM A FEW SQUARE CENTIMETERS (INCHES) TO A FEW SQUARE METERS (YARDS).

IF THE CONCRETE HAS STIFFENED FROM THE TOP DOWN, AS IT OFTEN DOES WHEN WIND SPEEDS ARE HIGHER, THERE IS A TENDENCY TO FINISH THE SLAB TOO SOON. BEFORE BLEEDING IS COMPLETE, FINISHING OPERATIONS PERFORMED WHILE THE UNDERLYING CONCRETE IS STILL SOFT (AND BLEEDING) WILL SEAL THE SLAB SURFACE, POTENTIALLY TRAPPING BLEEDWATER AND LEADING TO DELAMINATIONS.

**PLASTIC SHRINKAGE CRACKING**

PLASTIC SHRINKAGE CRACKING IS DUE TO CONCRETE AT THE SURFACE DRYING (AND SHRINKING) BEFORE INITIAL SET OF THE CONCRETE OCCURS. PLASTIC SHRINKAGE OCCURS DURING AND AFTER FINISHING. USUALLY WHEN THERE IS RAPID EVAPORATION OF BLEEDWATER. THE CONDITIONS THAT LEAD TO RAPID WATER EVAPORATION ARE LOW RELATIVE HUMIDITY, HIGH AIR TEMPERATURES, RAPID AIR MOVEMENT (WIND) ACROSS THE CONCRETE SURFACE, AND ELEVATED CONCRETE TEMPERATURES. UNDER THESE CONDITIONS THE CONCRETE SURFACE CAN CRUST OVER WHILE THE UNDERLYING CONCRETE IS STILL PLASTIC. AS PLASTIC SHRINKAGE CRACKS FORM, THEY START AT THE SURFACE AND EXTEND SOME DEPTH INTO THE UNHARDENED CONCRETE. FLOATING THE CONCRETE SLAB CAN REPAIR PLASTIC SHRINKAGE CRACKS, BUT ONLY IF DONE IMMEDIATELY AS THE CRACKS OCCUR.

**CRAZING**

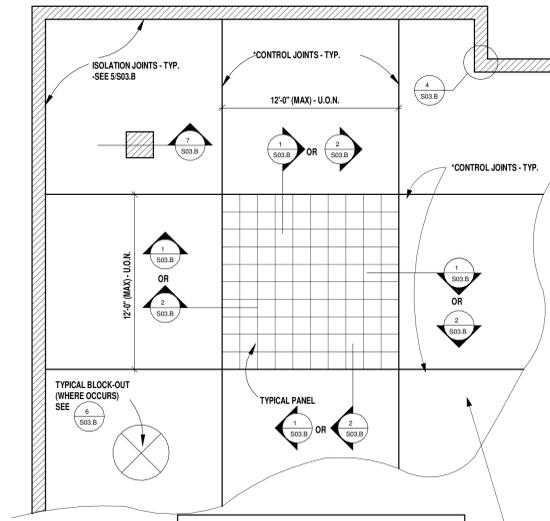
CRAZE CRACKS ARE FINE RANDOM CRACKS OF FISSURES IN A CONCRETE SURFACE. ON CONCRETE FLATWORK, THEY USUALLY EXTEND LESS AN 3 MM (1/4 IN) BELOW THE SURFACE. THE CRACKS OCCUR WITHIN THE PASTE-RICH SURFACE MORTAR AND GENERALLY PASS THROUGH THE PASTE AND NOT THROUGH AGGREGATE PARTICLES. IT IS TYPICAL FOR THE CRACKS TO FORM A MAP PATTERN. THE NARROW CRACKS ARE SO FINE THAT THEY ARE DIFFICULT TO SEE. IN MANY INSTANCES, THEY ARE ONLY VISIBLE DURING THE DRYING PHASE OF A WETTED SURFACE OR WHEN A TRANSLUCENT COATING IS INSTALLED. CRAZE CRACKS ARE ATTRIBUTED TO INADEQUATE CURING THAT LEADS TO CONCRETE SURFACE DRYING AND COOLING BEFORE THE MORTAR HAS GAINED SUFFICIENT STRENGTH. THESE ARE COSMETIC BLEMISHES THAT GENERALLY HAVE NO EFFECT ON THE SERVICEABILITY OR DURABILITY OF THE FLOOR.

**CURLING**

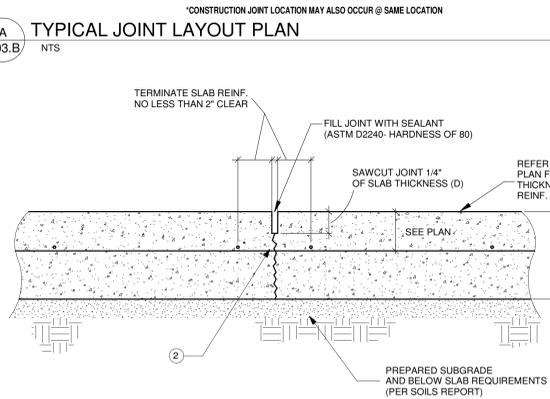
WHEN THE EDGES AND CORNERS OF A FLOOR SLAB ON GROUND DISH UPWARD IN THE ABSENCE OF ANY LOADS OTHER THAN GRAVITY, THE SLAB IS SAID TO BE CURLING. IT IS USUALLY ATTRIBUTED TO DIFFERENCES IN MOISTURE CONTENT OR TEMPERATURE FROM TOP TO BOTTOM WITHIN THE SLAB. THESE TEMPERATURE AND MOISTURE GRADIENTS DEVELOP BETWEEN THE TOP AND BOTTOM SURFACE AS THE CONCRETE IN A FLOOR SLAB HARDENS. THE SLAB WILL CURL UP IF THE TOP IS TRYING AND COOLING (SHORTENING) WHILE THE BOTTOM REMAINS MOIST AND WARM UNDER OPPOSITE CONDITIONS. THE SLAB SHOULD THEORETICALLY CURL DOWNWARD CURL AS SUCH, HOWEVER, DOES NOT OCCUR DUE TO SUBBASE RESTRAINT.

**POPOUTS**

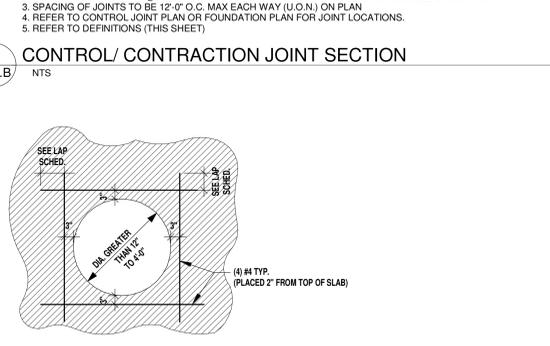
A POPOUT IS A CONICAL GRADIENT THAT BREAKS OUT OF A CONCRETE SURFACE, LEAVING A HOLE. THE HOLE VARIES IN SIZE FROM 5MM (1/4 IN TO 2 IN), THOUGH LARGER POPOUTS ARE POSSIBLE. USUALLY, A FRACTURED AGGREGATE PARTICLE IS LOCATED AT THE BOTTOM OF THE HOLE. THE MATCHING PIECE OF THE FRACTURED PARTICLE ADHERES TO THE POINT OF THE POPOUT CONE. POPOUTS ARE CONSIDERED A COSMETIC DEFECT AND GENERALLY DO NOT AFFECT THE SERVICE OF THE CONCRETE.



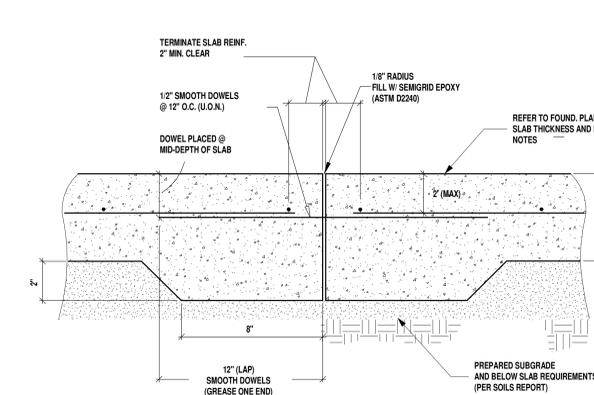
**TYPICAL JOINT LAYOUT PLAN**  
NTS  
S03.B



**CONTROL/ CONTRACTION JOINT SECTION**  
NTS  
S03.B



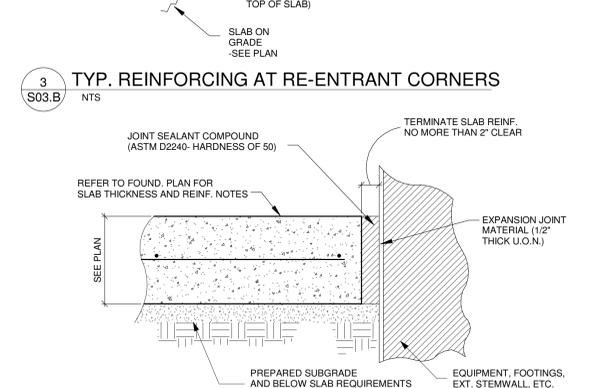
**TYP REINFORCING AT ROUND OPENINGS AT CONC. SLAB-ON-GRADE**  
NTS  
S03.B



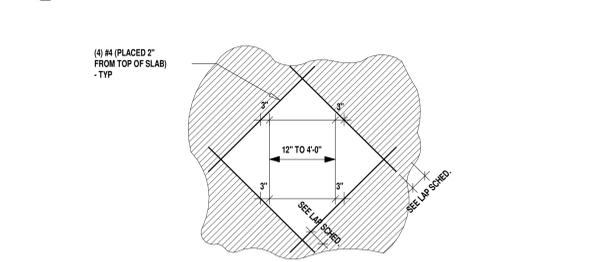
**CONSTRUCTION JOINT CONNECTION (TO OCCUR @ CONTROL JOINT LOCATION)**  
NTS  
S03.B



**TYP. REINFORCING AT RE-ENTRANT CORNERS**  
NTS  
S03.B



**ISOLATION/ EXPANSION JOINT SECTION**  
NTS  
S03.B



**TYP. REINFORCING @ SQUARE /RECTANGULAR OPENINGS AT CONC. SLAB-ON-GRADE**  
NTS  
S03.B

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**CONCRETE SLAB-ON-GRADE REQUIREMENTS**

REVISION	REV #	DATE	COMMENTS

**REVIEWS**

INITIALS	DATE

RGAS  
Project Number **2246**  
Drawn By **Author**  
Date **3/11/2024**

**S03.B**

**MASONRY - GENERAL:**

**MIX MATERIALS:**

- SPECIAL INSPECTION SHALL NOT BE REQUIRED UNLESS SPECIFICALLY NOTED ON SPECIAL INSPECTION NOTES AND TABLES ON THIS PLAN SET.
- FOR PROPER MIXING PLACE IN ORDER: SAND, CEMENT AND WATER INTO THE MIXER. FOR EACH BATCH OF MORTAR OR GROUT AND MIX FOR A PERIOD OF AT LEAST 20 MINUTES. ADD THE LIME AND CONTINUE MIXING FOR AS LONG AS NEEDED TO SECURE A UNIFORM MASS BUT NOT IN NO CASE LESS THAN 100 MINUTES. USE MIXERS TO CREATE A UNIFORM CONSISTENCY. FRACTIONAL SACKS BATCHES WILL NOT BE PERMITTED UNLESS CEMENT IS WEIGHED FOR EACH SUCH BATCH. RETEMPER MORTAR ONLY BY ADDING WATER INTO A BATCH MADE WITH THE MORTAR AND THEN CAREFULLY WORKING THE WATER INTO THE MORTAR. RETEMPERING THE MORTAR BY DASHING WATER OVER THE MORTAR SHALL NOT BE PERMITTED. ANY MORTAR OR GROUT WHICH IS UNUSED WITHIN (1) HOUR OF THE INITIAL MIXING SHALL BE REMOVED FROM THE WORK. MORTAR SHALL BE MIXED AND MAINTAINED ON THE BOARDS TO A SLUMP OF (2-5/4") TO PLUS OR MINUS (1/4").
- CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150, TYPE I OR TYPE II AND SHALL BE SINGLE SOURCED (SAME MANUFACTURER) FOR THE ENTIRE PROJECT.
- AGGREGATES AND SANDS FOR MORTAR SHALL CONFORM TO ASTM C144 EXCEPT THAT NOT LESS THAN 3% OF THE SAND SHALL PASS THE NUMBER 100 SIEVE. SAND AND PEA GRAVEL FOR GROUT SHALL CONFORM TO ASTM C404, TABLE 1. COURSE AGGREGATE, EXCEPT WHEN OTHER GRADINGS ARE SPECIFICALLY APPROVED BY THE ENGINEER.
- QUICK-LIME SHALL CONFORM TO ASTM C6.
- WATER USED FOR MORTAR AND GROUT SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACID, SALTS, ALKALI AND ORGANIC MATERIALS.

**ADD MIXTURES:**

- THE USE OF ADMIXTURES SHALL NOT BE PERMITTED IN MORTAR OR GROUT UNLESS SUBSTANTIATING DATA HAS BEEN SUBMITTED TO AND REVIEWED BY THE ENGINEER. THE USE OF ADMIXTURES IN MORTAR SHALL NOT BE PERMITTED WITHOUT REDUCING THE LIME CONTENT. THE USE OF UNCONTROLLED FINE CLAY, DIRT AND OTHER DELETERIOUS MATERIALS IS PROHIBITED.

**MASONRY MATERIALS:**

- CONCRETE MASONRY UNITS SHALL BE HOLLOW AND SUITABLE FOR BEARING WALL CONSTRUCTION. ALL BLOCKS SHALL CONFORM TO GRADE "M" UNITS AS LISTED IN ASTM C90 LATEST EDITION. IN ADDITION, UNITS SHALL HAVE A LINEAR SHRINKAGE OF .065% MAXIMUM FROM SATURATED TO THE OVEN DRY CONDITION. MASONRY UNITS SHALL BE CURED FOR NOT LESS THAN (28) DAYS PRIOR TO PLACEMENT IN THE STRUCTURE. PROVIDE ALL BOND BEAM UNITS, LINTELS, ETC., AS NOTED ON PLANS.
- ASSUMED COMPRESSIVE STRENGTH  $F_m$  SHALL BE 1500 PSI UNLESS OTHERWISE NOTED ON THESE PLANS. ULTIMATE COMPRESSIVE STRENGTH BASED ON THE AVERAGE OF (3) UNITS SHALL BE NOT LESS THAN 2000 PSI.

**EXECUTION REQUIREMENTS:**

- MASONRY REBAR LAP LENGTHS SHALL BE PER LAP SCHEDULE UNLESS NOTED OTHERWISE ON THESE PLANS.
- ALL VERTICAL WALL REINFORCEMENT SHALL HAVE DOWELS EQUAL IN SIZE EMBEDDED INTO FOOTING UNLESS NOTED OTHERWISE IN THESE PLANS.
- REINFORCING COVER SHALL BE (2") MINIMUM THROUGHOUT. POSITIONING DEVICES SHALL BE USED TO INSURE THE CORRECT PLACEMENT OF THE REINFORCEMENT.
- ALL MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. THE VERTICAL ALIGNMENT SHALL BE SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED VERTICAL FLUE MEASURING NOT LESS THAN (3) INCHES, EXCEPT WHERE OPEN END UNITS ARE USED.
- DO NOT USE CHIPPED OR CRACKED BLOCKS. IF ANY SUCH BLOCKS ARE DISCOVERED IN ANY FINISHING WALL, THEY SHALL BE PROMPTLY REMOVED AND REPLACED WITH NEW BLOCKS TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

**MASONRY - MORTAR:**

**PRODUCT REQUIREMENTS:**

- MORTAR SHALL CONFORM TO ASTM C1329, TYPE S WITH A COMPRESSIVE STRENGTH OF 1800 (MIN SLUMP OF 9") PSI AT 28 DAYS UNLESS NOTED OTHERWISE. TYPE M WITH MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS SHALL BE USED WHERE MASONRY IS BELOW GRADE OR IN CONTACT WITH EARTH. THE MIX SHALL BE REVIEWED BY THE ENGINEER WHEN SPECIAL INSPECTION IS REQUIRED.

**EXECUTION REQUIREMENTS:**

- PLACE MORTAR IN HORIZONTAL JOINTS, COMPLETELY COVER THE FACE SHELLS OF THE UNITS WITH MORTAR. SOLID FILL ALL HEAD JOINTS. LAY ALL MASONRY WITH COMMON OR RUNNING BOND. HOLD RAKING TO A MINIMUM.
- REMOVE CONCRETE SCUM AND GROUT STAINS ON THE WALL IMMEDIATELY. AFTER THE WALL IS CONSTRUCTED, DO NOT SATURATE WITH WATER FOR CURING OR ANY OTHER PURPOSE. CHECK ALL JOINTS FOR TIGHTNESS AND, WHERE CRACKS ARE VISIBLE, CHIP OUT THE MORTAR, TUCK POINT AND TOOL TO MATCH ADJACENT JOINTING.

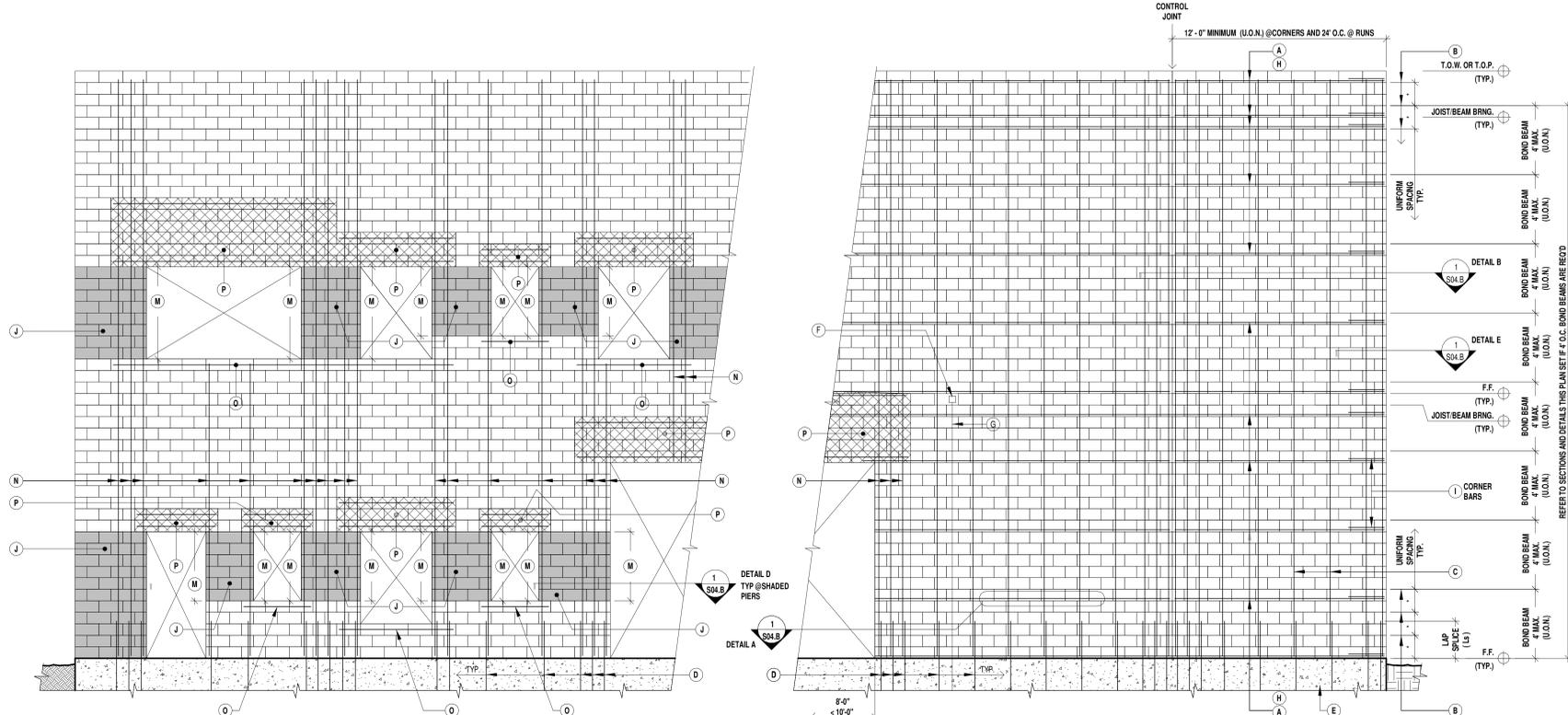
**MASONRY - GROUT:**

**PRODUCT REQUIREMENTS:**

- GROUT FILL FOR CELLS SHALL CONSIST OF ONE PART PORTLAND CEMENT TO NOT MORE THAN (3) PARTS SAND, TO (2) PARTS PEA GRAVEL, (3/8") MAX. SIZE COURSE AGGREGATE. GROUT FILL USING COURSER AGGREGATE MAY BE USED IF THE MIX IS PROPERLY DESIGNED AND APPROVED BY THE ENGINEER. THE MAXIMUM SIZE OF AGGREGATE USED SHALL NOT EXCEED (1/3) THE LEAST LATERAL DIMENSION OF THE CELL TO BE FILLED. GROUT SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT (28) DAYS.

**EXECUTION REQUIREMENTS:**

- GROUT ALL CELLS CONTAINING VERTICAL REINFORCEMENT, ANCHOR BOLTS OR EMBEDDED ITEMS. PROVIDE (2") MINIMUM COVER TO EMBEDDED ITEMS.
- MAXIMUM HEIGHT OF ANY GROUT POUR SHALL NOT BE GREATER THAN (4') UNLESS PROPER HIGH-LIFT METHODS ARE USED.
- MASONRY LINTELS SHALL BE SOLID GROUTED FOR THE REQUIRED DEPTH. HORIZONTAL REINFORCING SHALL EXTEND BEYOND THE OPENING ON EACH SIDE PER TABLE CMU-1 OF CMU-2.
- BOND BEAM HORIZONTAL REINFORCEMENT SHALL BE SOLIDLY ENCASED IN GROUT. WIRE MESH SHALL BE USED IN EACH CELL BELOW EACH BOND BEAM TO PREVENT THE FLOW OF GROUT INTO UNGROUTED CELLS.
- WHEN GROUTING IS STOPPED FOR A PERIOD OF (1) HOUR OR LONGER, FORM HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT POUR (1-1/2") MINIMUM BELOW THE UPPER MOST UNIT.



- NOTES:
- A. CONT. BOND BEAM @ TOP OF WALL, PARAPET AND BEARING LOCATIONS W/ (2) HORIZ. REINF. (U.O.N.) - SEE PLAN DETAILS FOR SIZE AND QUANTITY.
  - B. JOINT REINF. (LAGGER) (U.O.N.) - SEE PLAN DETAILS, REFER TO DETAIL (C) 1/504.B
  - C. VERT. REINF. - SEE PLAN DETAILS FOR SIZE AND SPACING.
  - D. PROVIDE DOWEL BARS IN FOUNDATION TO MATCH ALL VERTICAL WALL REINFORCING (U.O.N.); LAP VERTICAL REINFORCING WITH WALL DOWELS AND ALL OTHER VERTICAL BARS PER TABLE M-1, (U.O.N.)
  - E. FOUNDATION - SEE PLAN.
  - F. ELECTRICAL DEVICE (JUNCTION BOX, OUTLET, ETC.)
  - G. DO NOT PLACE VERT. CONDUIT IN SAME CELL AS VERTICAL REINFORCING; WHERE UNAVOIDABLE, NOTIFY ENGINEER.
  - H. STAGGER SPLICES IN ADJACENT HORIZONTAL BARS IN THE SAME COURSE BY 24"; REFER TO DETAIL (A) 1/504.B
  - I. WALL INTERSECTIONS AND CORNERS, SEE DETAIL (E) 1/504.B
  - J. MASONRY PIER, REFER TO DETAIL (D) 1/504.B
  - K. NOT USED.
  - L. NOT USED.
  - M. AT ADJACENT OPENINGS, THE PIER HEIGHT SHALL BE THE LESSER HEIGHT OF THE ADJACENT OPENING.
  - N. "C" VERTICAL BARS, REFER TO 4/504.A (MAY REQUIRE 1, 2 OR 3 VERTICALS).
  - O. "B" HORIZONTAL BAR, REFER TO ON DETAIL 3/504.A
  - P. MASONRY LINTEL, REFER TO 3/504.A

**REQUIRED MASONRY WALL REINFORCEMENT AT OPENINGS, CONTROL JOINTS AND CORNERS**

**TABLE CMU-1: 8" OR 10" WALL**

CMU OPENING REINFORCING SCHEDULE					
W	LINTEL DEPTH	"A" BARS	"B" BARS	"C" BARS	JAMB WIDTH
< 2'-8"	8"	(1) #5	(1)	(1)	8"
2'-8" < 4'-0"	16"	(2) #5	(1)	(1)	8"
4'-0" < 6'-0"	24"	(2) #6	(1)	(2)	16"
6'-0" < 8'-0"	32"	(2) #6	(2)	(3)	24"
8'-0" < 10'-0"	48"	(2) #6	(2)	(3)	24"
10'-0" < 12'-4"	48"	(2) #6	(2)	(3)	24"
12'-4" < 24'-0"	48"	(2) #7	(2)	(3)	24"

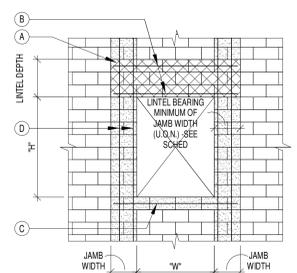
\*SPECIAL LINTEL - SEE PLAN

**TABLE M-1**

LAP SPLICE LENGTH (U.O.N. ON PLAN SECTION / DETAILS)		
BAR NO.	SIZE DIAMETER $d_b$ (IN)	$L_s$ (IN)
#3	.375	18
#4	.500	24
#5	.625	30
#6	.750	36
#7	.895	42
#8	1.000	48

**2 REINF LAP SPLICE LENGTHS (SAME FOR DEVELOPMENT LENGTH)**

**3 CMU OPENING REINFORCING**

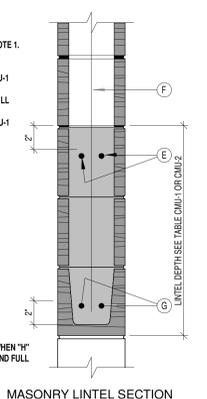


**MASONRY LINTEL SECTION**

- GENERAL NOTES:
- USE BAR QUANTITIES AND SIZES GIVEN IN TABLE CMU-1 OR CMU-2 UNLESS OTHERWISE NOTED ON PLANS.
  - EXTEND "C" BARS FROM TABLE 1 OR CMU-2 48 BAR DIAMETERS OR 24" MINIMUM BEYOND TOP AND BOTTOM OF OPENING EXCEPT WHEN "H" OR "W" EXCEEDS 24". "C" BARS SHALL EXTEND FULL HEIGHT, WHERE THERE IS LESS THAN 8" BETWEEN ADJACENT OPENINGS, EXTEND FULL HEIGHT REINFORCING 32" BEYOND FURTHEST OPENING.
  - "B" BARS IN TABLE CMU-1 OR CMU-2 SHALL EXTEND 48 BAR DIAMETERS OR 24" MINIMUM EACH SIDE OF THE OPENINGS.
  - FOR BAR SIZES, MATCH TYPICAL WALL REINFORCING AS SHOWN ON THE BUILDING WALL SECTIONS, U.O.N.

**KEYED NOTES:**

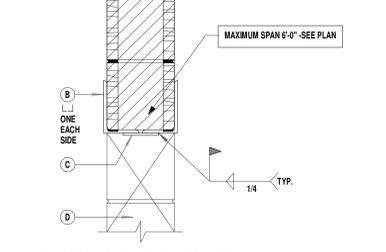
- A. FULLY GROUTED CMU LINTEL.
- B. "A" BARS IN CMU LINTEL BLOCK - SEE GENERAL NOTE 1.
- C. "B" BARS IN BOND BEAM - SEE GENERAL NOTE 3.
- D. "C" BARS EACH SIDE - SEE GENERAL NOTE 2.
- E. CMU LINTEL TOP REINF. "A" BARS - SEE TABLE CMU-1 OR CMU-2.
- F. CONT. TYP. CMU WALL VERTICAL REINFORCING FULL LENGTH OF CMU LINTEL (SEE GENERAL NOTE 4).
- G. CMU LINTEL BTM REINF. "A" BARS - SEE TABLE CMU-1 OR CMU-2.



**TYPICAL AT EXISTING MASONRY DETAIL FOR NEW OPENING IN EXISTING MASONRY WALL**

**KEYED NOTES:**

- A. EXISTING 12" THICK CONCRETE MASONRY WALL.
- B. NEW 16x8x24" (WIDTH OF OPENING + 8" EA. END) L.L.V.
- C. PLATE 16x8x24" PLATE PLACED 2" FROM ENDS AND 16" O.C. ALONG SPAN.
- D. REMOVE EXISTING CMU FOR NEW OPENING - SEE ARCH.



**TYPICAL AT EXISTING MASONRY DETAIL FOR NEW OPENING IN EXISTING MASONRY WALL**

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**MASONRY GENERAL NOTES REINFORCEMENT AND LINTEL DIAGRAMS**

REV #	DATE	COMMENTS

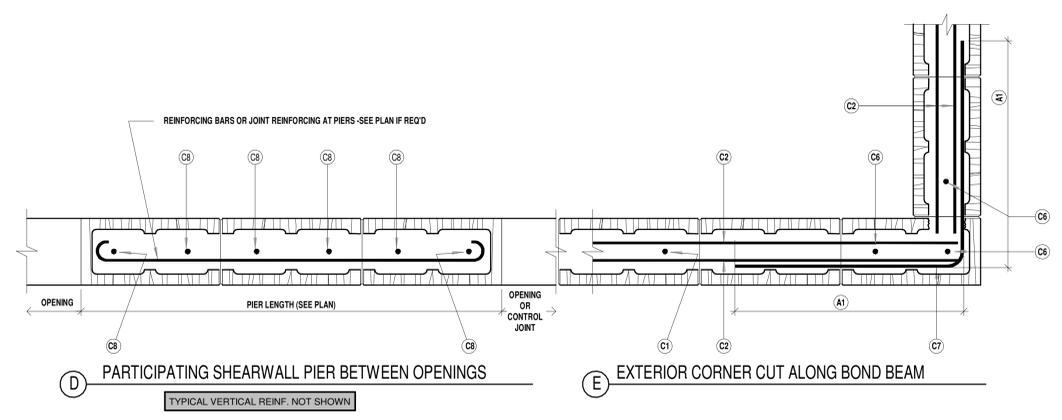
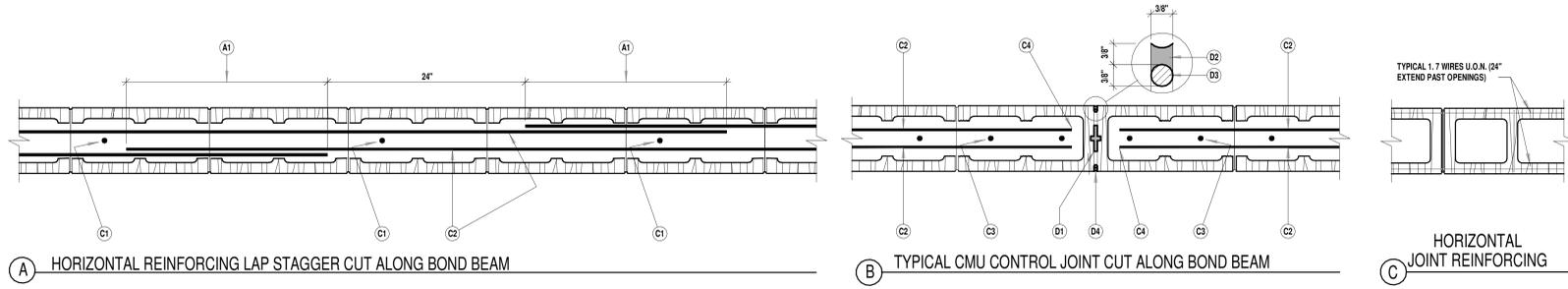
**REVIEWS**

INITIALS	DATE

RGAS  
Project Number **2246**  
Drawn By **JJR**  
Date **3/11/2024**

**S04.A**

K  
J  
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E  
D  
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A



- KEYED NOTES:**
- A1. SPLICE LENGTH (L<sub>s</sub>) REFER TO TABLE M-1, (2)S04A.
  - B1. CONT. CMU BOND BEAM.
  - C1. VERTICAL REINFORCEMENT SEE PLAN AND DETAILS FOR SIZE AND SPACING.
  - C2. (2) CONT. HORIZ. BOND BEAM REINFORCING - SEE PLAN.
  - C3. PROVIDE VERTICAL REINFORCING IN THREE (3) CELLS AT EACH SIDE OF JOINT, TYPICAL; MATCH WALL REINF.
  - C4. TERMINATE ALL NON-STRUCTURAL REINF. 2" FROM CONTROL JOINT. WHERE STRUCTURAL REINF. MUST CONTINUE THROUGH JOINT, MORTAR MAY BE BACKER BACK TO PROVIDE JOINT TO ACCOMMODATE SHRINKAGE CRACKING.
  - C5. NOT USED.
  - C6. INSTALL (3) VERTICAL BARS AS SHOWN, TYPICAL; MATCH WALL VERTICAL REINF.
  - C7. CORNER BAR MATCH HORIZONTAL BAR REINF.
  - C8. "C" PIER VERTICAL BARS AT OPENING, REFER TO 3)S04A (MAY REQUIRE 1, 2 OR 3 VERTICALS).
  - D1. PREFABRICATED CONTROL JOINT.
  - D2. SEALANT, INSTALL BOND BREAKER TAPE AT BACKER ROD AS NECESSARY.
  - D3. BACKER ROD.
  - D4. SEE ARCHITECTURAL ELEVATIONS FOR CONTROL JOINT LAYOUT (MAXIMUM 24'-0" O.C. AND 12'-0" FROM CORNERS).

1  
S04.B  
NTS  
TYP GENERAL MASONRY WALL DETAILS FOR VARYING CONDITIONS

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**MASONRY DETAILS AND VENEER REQUIREMENTS**

REV #	DATE	COMMENTS
REVISION		
REVISION		
REVISION		

REVIEWS

INITIALS	

RGAS  
Project Number **2246**  
Drawn By **Author**  
Date **3/11/2024**

**S04.B**

**ROUGH CARPENTRY:**

**PRODUCT REQUIREMENTS:**

- EACH PIECE OF STRUCTURAL LUMBER, SHEATHING AND TIMBER SHALL BE MARKED WITH GRADE BY SUCH COMPETENT AND RELIABLE ORGANIZATION WHOSE REGULAR BUSINESS IS TO ESTABLISH LUMBER GRADES.
- ALL LUMBER, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE, SHALL BE MILL SIZED AND SURFACED ON (4) SIDES. ALL SHALL BE STRAIGHT STOCK, FREE FROM WARP OR CUP, AND SINGLE LENGTH PIECES. SPLICES WILL NOT BE PERMITTED EXCEPT WHERE SPECIFICALLY SO DETAILED OR AS DIRECTED BY THE ENGINEER.
- ROUGH HARDWARE, JOIST HANGERS, STRAPS, HOLD-DOWNS, ETC. SHALL BE MANUFACTURED BY "SIMPSON" COMPANY OR APPROVED EQUAL. THE MAXIMUM SIZE AND NUMBER OF FASTENERS SPECIFIED BY THE MANUFACTURER SHALL BE USED UNLESS NOTED OTHERWISE.
- BLOCKING AND FIRESTOPPING TO BE INSTALLED AS REQUIRED TO SUPPORT ALL ITEMS OF FINISH SUCH AS BULKHEADS AND BUCKS. PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED DRAFT OPENINGS, BOTH VERTICAL AND HORIZONTAL, BETWEEN CEILING AND FLOOR AREAS AS REQUIRED BY BUILDING OFFICIAL AND ARCHITECT.
- COMMON NAILS SHOULD BE USED WHEN NAILING IS SPECIFIED ON THESE PLANS (U.O.N.), SUCH AS AT SHEARWALLS AND DIAPHRAGMS. ALL OTHER NAILING MAY BE OF THE "BOX OR SINKER" TYPE.
- SHEATHING GRADE SHALL BE CD-X WITH EXTERIOR GLUE P.S. 1-43, U.O.N. ON PLANS. PRODUCTS SHALL BE THOSE LISTED IN TABLE WS-1 (THIS SHEET).
- UNLESS OTHERWISE NOTED ON PLANS, LUMBER SHALL BE AT LEAST OF THE GRADES SHOWN IN THE TABLE BELOW. ALL LUMBER SHALL BE SURFACED AND FREE OF HEART CENTER. LUMBER SHALL MEET SPECIES AND COMMERCIAL GRADE AS INDICATED ON THE PLANS AND THE DESIGN VALUES FOR VISUALLY GRADED LUMBER IN ACCORDANCE WITH THE PLANS AND THE DESIGN VALUES FOR VISUALLY GRADED LUMBER IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION, WHICHEVER IS GREATER. BASED VALUES SHOWN MAY BE ADJUSTED IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION. "DF" INDICATES DOUGLAS-FIR-LARCH, "HP" INDICATES HEM-FIR, "SPF" INDICATES SPRUCE-PINE-FIR.

**EXECUTION REQUIREMENTS:**

- BOLTS (IF APPLICABLE) SHALL BE INSTALLED IN HOLES BORED WITH A BIT 1/16" LARGER THAN THE DIAMETER OF THE BOLT. BOLTS AND NUTS SEATING ON WOOD SHALL HAVE CUT STEEL WASHERS UNDER HEADS AND NUTS. NUTS SHALL BE PULLED TIGHT AND AGAIN CHECKED AND TIGHTENED JUST PRIOR TO ENCLOSING BOLTED MEMBERS. COUNTER BORE FOR BOLTED HEADS OR NUTS ONLY WHERE SO INDICATED ON THE DRAWINGS AND THEN SUFFICIENT DEPTH TO HOUSE THE BOLT HEAD OR NOT AND WASHER. CUT OFF EXCESSIVE BOLT PROJECTION WHERE NECESSARY. NICK THREADS TO PREVENT LOOSENING.
- LAG SCREWS (IF APPLICABLE) SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. LAG SCREWS FASTENING ONE WOOD MEMBER TO ANOTHER SHALL HAVE PENETRATION INTO FAR MEMBER OF NOT LESS THAN (2) OF THE LENGTH OF THE LAG SCREW MEASURED UNDER THE HEAD U.O.N. IN PLACING LAG SCREWS IN WOOD, A HOLE SHALL FIRST BE BORED OF THE SAME DIAMETER AND DEPTH OF THE SHANK OF THE SCREW. AFTER WHICH THE HOLE SHALL BE CONTINUED TO A DEPTH EQUAL TO THE LENGTH OF THE LAG SCREW WITH THE DIAMETER EQUAL TO THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD.
- ALL ROUGH CARPENTRY WILL PRODUCE JOINTS TRUE AND TIGHT AND WELL NAILED WITH MEMBERS ASSEMBLED IN ACCORDANCE WITH THE DRAWINGS AND ALL PERTINENT BUILDING CODES. THE SHIMMING OF SKILLS, JOISTS SHORT STUDS, TRIMMERS, HEADERS OR OTHER FRAMING MEMBERS SHALL NOT BE PERMITTED. ALL WALLS AND PARTITIONS SHALL BE STRAIGHT, PLUMB AND ACCURATELY LOCATED. CAREFULLY SELECT ALL STRUCTURAL MEMBERS. INDIVIDUAL PIECES SHALL BE SELECTED SO THAT KNOTS AND OBVIOUS MINOR DEFECTS WILL NOT INTERFERE WITH THE PLACING OF BOLTS, OR PROPER NAILING OR THE MAKING OF SOUND CONNECTIONS. LUMBER MAY BE REJECTED BY THE ENGINEER FOR EXCESSIVE WARP, TWIST, BOW OR CROOK, MILDEW, FUNGUS OR MOLD AS WELL AS FOR IMPROPER GRADE MARKING. DEFECTS WHICH WILL RENDER A PIECE UNABLE TO SERVE ITS INTENDED FUNCTION SHALL BE DISCARDED.

**PRE-ENGINEERED TRUSSES**

**PRODUCT REQUIREMENTS:**

- "GANG-NAI" PRE-ENGINEERED TRUSSES ARE TO BE CONSTRUCTED WITH METAL PLATE CONNECTORS AND DESIGNED AND MANUFACTURED BY OTHERS. DESIGN, CONSTRUCTION, AND INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION AND OF THE TRUSS PLATE INSTITUTE. PROVIDE ALL REQUIRED BLOCKING AND BRACING REQUIRED BY THE MANUFACTURER FOR CONSTRUCTION AND ERECTION IN ADDITION TO BLOCKING SHOWN ON THE STRUCTURAL DETAILS. MEMBERS OF A COMPLETED TRUSS ARE NEVER TO BE NOTCHED OR CUT. THE TRUSS MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY A STRUCTURAL ENGINEER (CONTRACTED BY TRUSS MANUFACTURER) FOR REVIEW PRIOR TO FABRICATION. THE DESIGN SHALL ACCOUNT FOR ALL UNIFORM LOADS AND EQUIPMENT LOADS. CONTACT THE STRUCTURAL ENGINEER FOR UNIFORM LOADING AN REQUIREMENTS IF REQUIRED.

**EXECUTION REQUIREMENTS:**

- TRUSS SHOP DRAWINGS SHALL SHOW THE TRUSS DESIGN LOADS, SIZES AND GRADES OF THE CHORDS AND WEBS, LOCATIONS OF THE JOINTS AND CONNECTIONS, SIZE AND TYPE OF METAL PLATES AND ALL BRACING AND BLOCKING REQUIREMENTS.
- ROOF AND FLOOR TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING CRITERIA:
  - SEE DESIGN LOADS SHEET S01 FOR VERTICAL LOADS
  - STRESS INCREASE FOR DURATION OF LOAD - ROOF (15%)
- LOCATION OF TRUSS BRACING REQUIRED BY THE PLANS OR TRUSS MANUFACTURER'S DESIGN SHALL BE INDICATED ON EACH TRUSS BY PAINT MARKING.

**PARALLAM MEMBERS:**

- WHERE PARALLAM "PSL" MEMBERS ARE INDICATED ON THE PLANS AND SCHEDULES THEY SHALL BE MANUFACTURED BY TRUSS-ONST MACMILLAN (NEV-482 & ICBO ER-4979). OR BE AN APPROVED EQUAL PRODUCT. MEMBERS SHOWN ON THE PLANS AND SCHEDULES ARE DETERMINED FROM MANUFACTURER SUPPLIED INFORMATION AND SHOULD BE REVIEWED FOR COMPLIANCE BY THE MANUFACTURER'S CIVIL OR STRUCTURAL ENGINEER. LOADING INFORMATION MAY BE PROVIDED UPON REQUEST. NOTCHES, HOLES OR CUTS SHOWN IN THE TYPICAL DETAILS ARE ALLOWED WITHOUT ADDITION APPROVAL. ALL OTHER MEMBER MODIFICATIONS ARE TO BE APPROVED BY THE STRUCTURAL ENGINEER.

**PLYWOOD WEB JOISTS:**

- PLYWOOD WEB JOISTS NOTED "TJ" ARE TO BE MANUFACTURED BY TRUSS-JOIST MACMILLAN (NER-200 & ICBO ER-4354) OR APPROVED EQUAL. PROVIDE BLOCKING, WEB STIFFENERS, AND BRACING OVER THE SPAN PER THESE STRUCTURAL DRAWINGS AND ALL MANUFACTURER'S RECOMMENDATIONS. TOP AND BOTTOM FLANGES OF JOISTS ARE NEVER TO BE CUT AND ALL HOLES THROUGH THE JOIST WEB ARE TO BE SPECIFICALLY APPROVED BY STRUCTURAL ENGINEER.

**TABLE WS-1 : SHEATHING PRODUCTS:**

DESCRIPTION	REQUIREMENTS
ROOF SHEATHING	5/8" APA RATED T&G ROOF PLYWOOD SHEATHING, NAL W/ 10d @ 6" O.C. BOUNDARY EDGES AND 12" O.C. FIELD. (U.O.N. ON SHEARWALL SCHEDULE) SPAN INDEX = 4824
FLOOR SHEATHING	3/4" APA RATED FLOOR PLYWOOD SHEATHING, NAL W/ 10d @ 6" O.C. BOUNDARY EDGES AND 12" O.C. FIELD. (U.O.N. ON SHEARWALL SCHEDULE) SPAN INDEX = 4824
WALL SHEATHING	1/2" APA RATED WALL PLYWOOD SHEATHING, NAL W/ 10d @ 4" O.C. BOUNDARY EDGES AND 12" O.C. FIELD. (U.O.N. ON SHEARWALL SCHEDULE) 7/16" WATERBOARD AND ORIENTED STRAND BOARD CONFORMING TO NER-109 AND PRODUCT STANDARD 2-82, AND WITH THE SAME EXPOSURE DURABILITY CLASSIFICATION, NOMINAL THICKNESS AND SPANINDEX RATIO MAY BE SUBSTITUTED FOR PLYWOOD ONLY IF APPROVED BY THE STRUCTURAL ENGINEER.
NOTES:	1. THE NAIL EDGE DISTANCE FOR 3" NOMINAL (2-1/2" ACTUAL) WIDE MEMBERS ON WHICH SHEETS ARE SPLICED SHALL BE 3-1/2" MIN. 2. THE NAIL EDGE DISTANCE FOR 2" NOMINAL (1-1/2" ACTUAL) WIDE MEMBERS ON WHICH SHEETS ARE SPLICED SHALL BE 3-1/2" MIN. CAGE SHALL BE MADE NOT TO TO SPLIT THE MEMBERS. 3. NAILS MAY BE SLANT DRIVEN TO MAINTAIN MINIMUM EDGE DISTANCE.

**TABLE WL-1 : MINIMUM LUMBER GRADES (PER NDS 2001 ED.)**

TYPE	PRIMARY USE	SIZES (IN)	MILL GRADE	BASE VALUES (PSI)			
				Fb	Fv	Ea	Fc   Fc
SAWN LUMBER	STUDS	2x	DF #2	700	180	1.4	850 625
	JOISTS	2" x WIDER	DF #2	900	180	1.6	1350 625
	BEAMS	5" x 5" & LARGER	DF #2	875	170	1.3	600 625
	POSTS	5" x 5" & LARGER	DF #2	750	170	1.3	700 625
MICRO-LAMS	BEAMS	ANY	LAM	2400	275	1.8	2400 500
PSL	BEAMS	ANY	LAM	2900	285	2.0	2900 750

FOOTNOTES:  
(R) 10X10"6 (PSI)

**TABLE WFS-1 : FASTENING SCHEDULE**

CONNECTION	FASTENING #/ft	LOCATION
1. JOIST TO SILL GIRDER	(3) 8d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	TOENAIL
2. BRIDGING TO JOIST	(2) 8d COMMON (3) 3" x 0.131" NAILS (2) 3" 14 GAGE STAPLES	TOENAIL EACH END
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST	(2) 8d COMMON	FACE NAIL
4. WIDER THAN 1"X6" SUBFLOOR TO EACH JOIST	(3) 8d COMMON	FACE NAIL
5. 2" SUBFLOOR TO JOIST OR GIRDER	(2) 16d COMMON	BLIND & FACE NAIL
6A. SOLE PLATE TO JOIST OR BLOCKING	16d @ 16" O.C. 3" x 0.131" NAILS @ 8" O.C. 3" 14 GAGE STAPLES @ 12" O.C.	TYPICAL FACE NAIL
6B. SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANEL	(3) 16d @ 16" (4) 3" x 0.131" NAILS @ 16" (4) 3" 14 GAGE STAPLES PER 16"	BRACED WALL PANELS
7. TOP PLATE TO STUD	(2) 16d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	END NAIL
8. STUD TO SOLE PLATE	(4) 8d COMMON (4) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	TOENAIL
9. DOUBLE STUDS	(2) 16d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	END NAIL
10. DOUBLE TOP PLATE	16d @ 24" O.C. 3" x 0.131" NAILS @ 8" O.C. 3" 14 GAGE STAPLES @ 8" O.C.	FACE NAIL
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	16d @ 16" O.C. 3" x 0.131" NAILS @ 12" O.C. 3" 14 GAGE STAPLES @ 12" O.C.	TYPICAL FACE NAIL
12. RIM JOIST TO TOP PLATE	(3) 8d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	LAP SPLICE
13. TOP PLATES, LAPS AND INTERSECTIONS	(2) 16d COMMON (3) 3" x 0.131" NAILS @ 6" O.C. (3) 3" 14 GAGE STAPLES @ 6" O.C.	FACE NAIL
14. CONTINUOUS HEADER, TWO PIECES	(3) 8d COMMON	16" O.C. ALONG EDGE
15. CEILING JOISTS TO PLATE	(3) 8d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	TOENAIL
16. CONTINUOUS HEADER TO STUD	(4) 8d COMMON	TOENAIL
17. CEILING JOISTS, LAPS OVER PARTITIONS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	(3) 16d COMMON, MINIMUM (4) 3" x 0.131" NAILS (4) 3" 14 GAGE STAPLES	FACE NAIL
18. CEILING JOISTS TO PARALLEL RAFTERS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	(3) 16d COMMON, MINIMUM (4) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	FACE NAIL
19. RAFTER TO PLATE (SEE SECTION 2308.10.1, TABLE 2308.10.1)	(3) 8d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	TOENAIL
20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE	(2) 8d COMMON (3) 3" x 0.131" NAILS (2) 3" 14 GAGE STAPLES	FACE NAIL
21. 1"X6" SHEATHING TO EACH BEARING WALL	(2) 8d COMMON	FACE NAIL
22. WIDER THAN 1"X6" SHEATHING TO EACH BEARING	(3) 8d COMMON	FACE NAIL
23. BUILT-UP CORNER STUDS	16d COMMON 3" x 0.131" NAILS 3" 14 GAGE STAPLES	24" O.C. 16" O.C. 16" O.C.
24. BUILT-UP GIRDER AND BEAMS	20d COMMON @ 32" O.C. 3" x 0.131" NAILS @ 24" O.C. 3" 14 GAGE STAPLES @ 24" O.C.	FACE NAIL AT TOP & BOTTOM STAGGERED ON OPPOSITE SIDES
25. 2" PLANKS	16d COMMON	AT EACH BEARING
26. COLLAR TIE TO RAFTER	(3) 16d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	FACE NAIL
27. JACK RAFTER TO HIP	(3) 16d COMMON (4) 3" x 0.131" NAILS (4) 3" 14 GAGE STAPLES	TOENAIL
28. ROOF RAFTER TO 2-BY RIDGE BEAM	(2) 16d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	FACE NAIL
29. JOIST TO BAND JOIST	(3) 16d COMMON (3) 3" x 0.131" NAILS (3) 3" 14 GAGE STAPLES	FACE NAIL
30. LEDGER STRIP	(3) 16d COMMON (4) 3" x 0.131" NAILS (4) 3" 14 GAGE STAPLES	FACE NAIL

**FASTENING SCHEDULE (CONTINUED)**

CONNECTION	FASTENING #/ft	LOCATION
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD IN SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING); SINGLE FLOOR (COMBINATION SUBFLOOR-UNDERLAMENT TO FRAMING)	1/2" AND LESS 6d c1 3-3/8" x 0.131" NAIL # 1-3/4" 16 GAGE # 8d 4 OR 6d # 2-1/2" x 0.131" NAIL P 2" 16 GAGE P 8d c	
32. PANEL SIDING (TO FRAMING)	1-1/8" TO 1-1/4" 10d 4OR 8d # 3/8" x 0.131" NAIL # 7/8" TO 1" 8d # 1-1/8" TO 1-1/4" 10d 4OR 8d # 1/2" AND LESS 6d1	
33. FIBERBOARD SHEATHING-9	1/2" 11 GAGE ROOFING NAIL h 6d COMMON NAIL 16 GAGE STAPLE! 11 GAGE ROOFING NAIL h 8d COMMON NAIL 16 GAGE STAPLE!	
34. INTERIOR PANELING	1 1/4" 4d   6d	
FOOTNOTES:	(4) COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED. (5) NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 40 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEARWALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING. (6) COMMON OR DEFORMED SHANK. (7) DEFORMED SHANK. (8) CORROSION-RESISTANT SIDING OR CASING NAIL. (9) FASTENERS SPACES 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES O.C. AT INTERMEDIATE SUPPORTS. (10) CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH DIAMETER HEAD AND 1 1/2-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 3/4-INCH LENGTH FOR 25/32-INCH SHEATHING. (11) CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS. (12) PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED AT 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS. (13) FOR ROOF SHEATHING APPLICATIONS, 8d NAILS ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS. (14) STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH. (15) FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS. (16) FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING. (17) FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.	

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**CARPENTRY GENERAL NOTES**

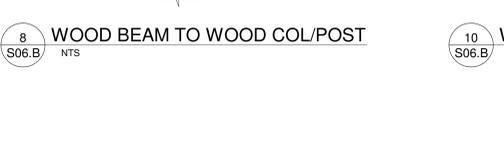
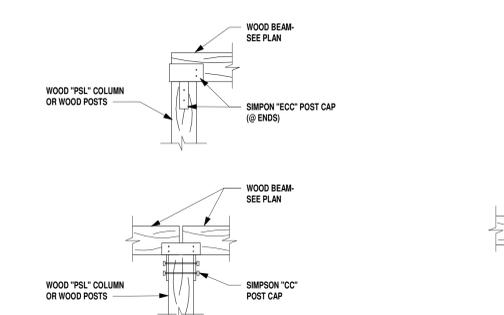
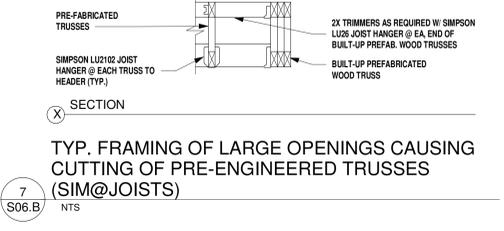
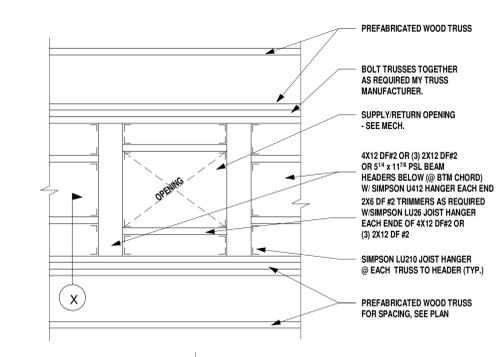
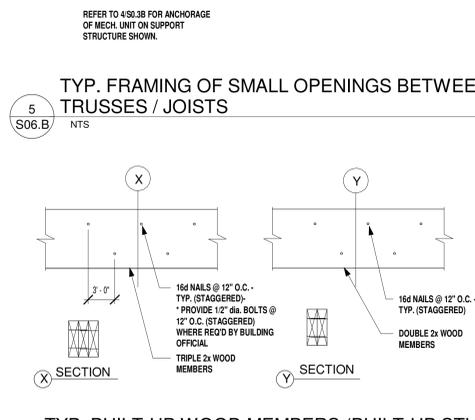
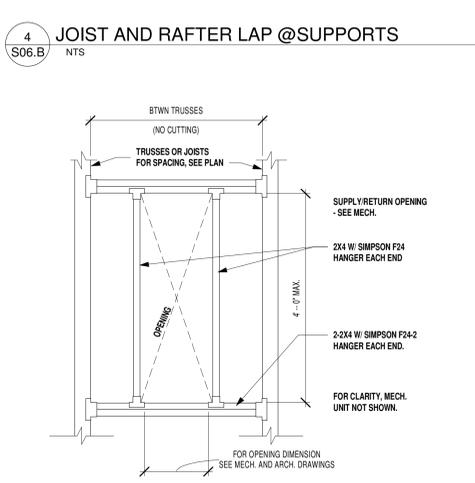
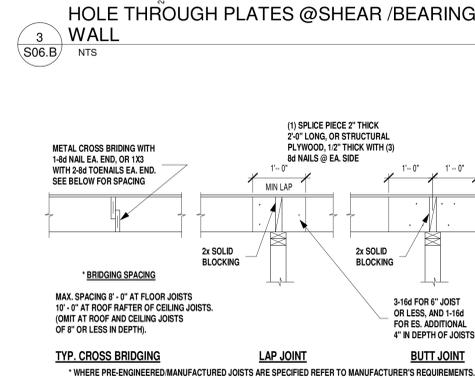
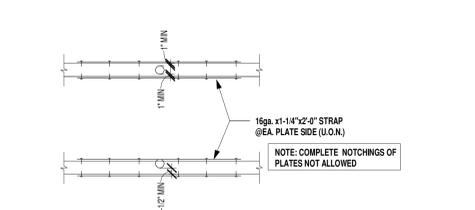
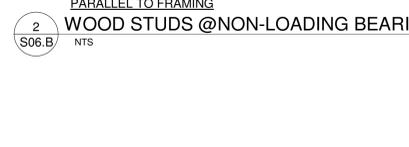
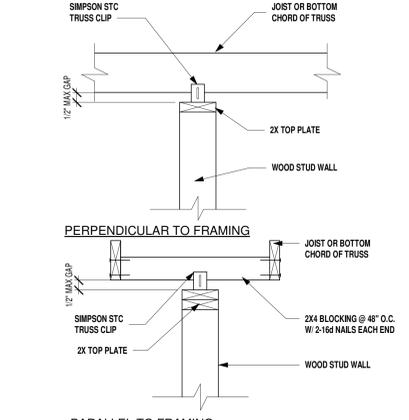
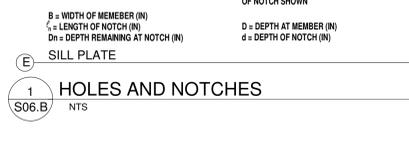
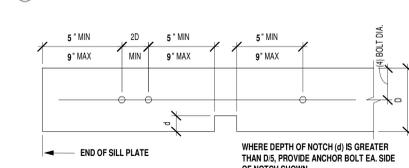
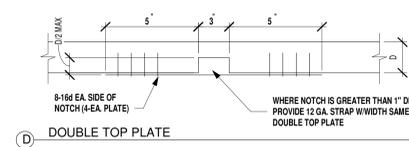
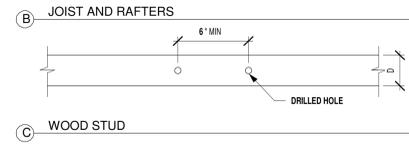
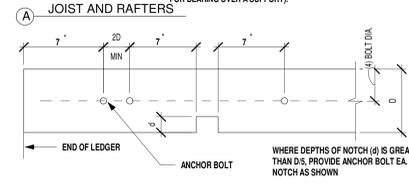
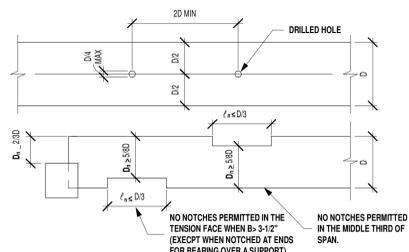
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INITIALS	REVIEWS

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Drawn By **JJR**  
Date **3/11/2024**

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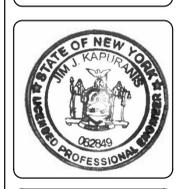
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**CARPENTRY GENERAL DETAILS**

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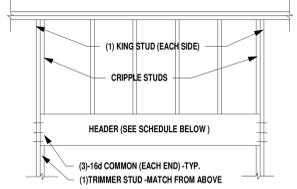
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Drawn By **Author**  
Date **3/11/2024**

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**TABLE RC - 1 :  
LUMBER HEADER SCHEDULE**

OPENING SIZE	HEADER SIZE
0'-4"	(2)-2X FLAT
4'-1" - 8'-0"	(2)-2X8
8'-1" - 12'-0"	(2)-2X12 HF#2

(DF#2, HF#2, OR SPF#2 MAY BE USED)

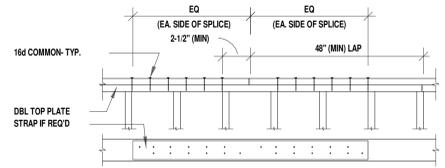
**1**  
S06.C  
TYP. NON-LOAD BEARING HEADER  
NTS

**TABLE RC - 2 :  
TYPICAL CEILING JOIST SCHEDULE**

JOIST SIZE	MAX. SPAN	BRIDGING SPACING	LEDGER AT MASONRY WALL	LEDGER AT STUD WALL
2 x 4	8'-0"	2'-9" O.C.	N/A	2x4 W/ (2) 16d NAILS EA. STUD
2 x 8	14'-0"	4'-8" O.C.	N/A	2x8 W/ (3) 16d NAILS EA. STUD
2 x 10	18'-0"	6'-0" O.C.	N/A	2x8 W/ (3) 16d NAILS EA. STUD

- NOTES:
1. SPACE CEILING JOISTS @ 24" O.C. MAX.
  2. HANG CEILING JOISTS FROM LEDGERS W/ SIMPSON LU FACE MOUNTED JOIST HANGER.
  3. PROVIDE CONTINUOUS FLAT 2X4 BRIDGING W/ 1-16d NAIL EACH JOIST AT THE TOP OF THE JOISTS.
  4. IF JOIST SPANS ARE GREATER THAN THOSE SHOWN ABOVE, NOTIFY THE STRUCTURAL ENGINEER.
  5. JOISTS ARE DESIGNED FOR 5 PSF DEAD LOAD AND 10 PSF LIVE LOAD. IF ACTUAL LOADS ARE GREATER, NOTIFY THE STRUCTURAL ENGINEER.
  6. ALL MATERIAL TO BE DF#2 OR SPF#2.

**2**  
S06.C  
CEILING JOISTS  
NTS



**TABLE RC - 3 :  
LUMBER HEADER SCHEDULE**

TYPE	NAILS BETWEEN BUTTS	STRAP TIE	CAPACITY (LBS)
A	(2) ROWS- 10 NAILS ROW 20 NAILS TOTAL / SIDE	N/A	0 to 7,500 MARK "A" USED FOR ALL SPLICES U.O.N. SPECIFICALLY ON PLANS
B	(2) / SIDE	CMST-16	7,500 to 12,000 (MAX)

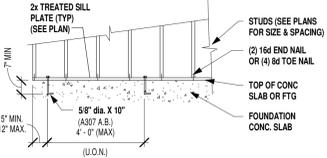
- NOTES:
1. REFER TO FRAMING PLAN GENERAL NOTES FOR TYPE.
  2. ALL NAILS TO BE 16d (COMMON)

**3**  
S06.C  
TYP. DOUBLE TOP PLATE SPLICE  
NTS

**TABLE RC - 4 :  
WASHER SCHEDULE**

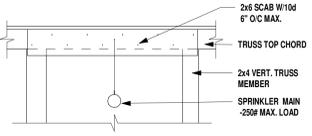
BOLT SIZE	WASHER TYPE		
	MALLEABLE IRON	HEAVY PLATE	STANDARD CUT
1/2" Ø	2-1/2" Ø x 1-1/4"	3" x 3" x 3/16"	1-3/8" Ø x 3/32"
USE 5/8" Ø	2-3/4" Ø x 5/16"	3" x 3" x 1/4"	1-3/4" Ø x 1/8"
3/4" Ø	3" Ø x 7/16"	3" x 3" x 5/16"	2" Ø x 5/32
7/8" Ø	3-1/2" Ø x 7/16"	3" x 3" x 5/16"	2-1/4" Ø x 1/16"
1" Ø	4" Ø x 1/2"	3-1/2" x 3-1/2" x 5/16"	2-1/4" Ø x 1/16"

- NOTES:
1. USE STANDARD CUT WASHER FOR ALL BOLTS, U.O.N.
  2. HEAVY PLATE WASHERS ARE REQUIRED @ SILL PLATE TO FOUNDATION AT ALL SHEARWALLS.
  3. HEAVY PLATE WASHERS ARE REQUIRED @ HOLDOWNS.

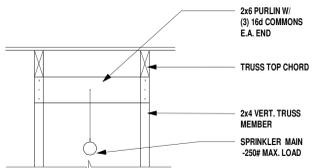


- NOTE:
1. PROVIDE (2) BOLTS MIN PER SILL PIECE.
  2. SEE PLANS FOR SIZE AND SPACING OF ANCHOR BOLTS AT SHEARWALLS.
  3. PROVIDE ANCHOR BOLTS AT ALL PERIMETER WALLS AND SHEARWALLS.
  4. PROVIDE WASHERS @ EA. ANCHOR BOLT - SEE SCHEDULE THIS SHEET.

**4**  
S06.C  
SILL PLATE ANCHORAGE  
NTS



**SPRINKLER MAIN (PERPENDICULAR) TO TRUSS**



**SPRINKLER MAIN (PARALLEL) TO TRUSS**

**5**  
S06.C  
SPRINKLER SUPPORT DETAILS  
NTS

**JJK Group, Inc.**  
Consulting Structural Engineers



**ROCKLAND GREEN CENTER FOR ANIMAL RESCUE AND EDUCATIONAL SERVICES, INC**  
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**ROUGH CARPENTER DETAILS**

REV #	DATE	COMMENTS
REVISION		
REVISION		
REVISION		

REVIEWS

INITIALS	

RGAS  
Project Number **2246**  
Drawn By **Author**  
Date **3/11/2024**

**S06.C**