



## **Chester Upland School District Toby Farms Intermediate School**

### **Renovations**

**Addenda No. 05**

**Issued 04-17-23**

Please be advised that Addenda No. 05 is hereby released for the above listed solicitation. This addendum addresses the following items:

- **Roof Framing drawings uploaded for reference.**
- **Revised Phasing Plan F: The wrong phasing plan was uploaded with addenda 02, this has been corrected.**



GENERAL NOTES

CODES & STANDARDS

- 1. INTERNATIONAL BUILDING CODE - 2018 IBC
- 2. AMERICAN SOCIETY OF CIVIL ENGINEERS - ASCE 7-16
- 3. AMERICAN CONCRETE INSTITUTE - ACI 318-18
- 4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION - AISC 360-16
- 5. SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS - AISC 341-10
- 6. AMERICAN WELDING SOCIETY - AWS D1.4/D1.4M-2017
- 7. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION - NDS 2018
- 8. INTERNATIONAL MASONRY INSTITUTE - TMS 402-16/TMS 602-16
- 9. ASTM STANDARDS FOR THE MATERIALS SPECIFIED

DESIGN & STRUCTURAL CRITERIA

PROJECT LOCATION/LOCAL JURISDICTION RISK CATEGORY BROOKHAVEN, PA CATEGORY III

SNOW DESIGN DATA

GROUND SNOW LOAD, P<sub>g</sub> 20 PSF  
FLAT ROOF SNOW LOAD, P<sub>s</sub> 14 PSF

DEFLECTION DESIGN CRITERIA

ROOF TOTAL LOAD L/240  
ROOF LIVE LOAD L/360  
FLOOR TOTAL LOAD L/240  
FLOOR LIVE LOAD L/360  
LATERAL SYSTEMS L/180

GRAVITY DESIGN LOADS

LEVEL	DEAD	LIVE	TOTAL
ROOF	20 PSF	20 PSF	40 PSF

NOTES:

- 1. STRUCTURAL DESIGN IS BASED ON THE CODE CRITERIA/DESIGN GUIDELINE VALUES ABOVE THAT PRODUCE THE GREATEST LOADING CONDITION.
- 2. GRAVITY DESIGN DEAD LOAD DOES NOT INCLUDE STEEL SELF WEIGHT.
- 3. GRAVITY DESIGN LOADS PROVIDED ARE SERVICE LEVEL LOADS.

MISCELLANEOUS

- 1. REFERENCE CIVIL DRAWINGS FOR EQUIPMENT LOCATION AND ORIENTATION ON THE SITE. THE CONTRACTOR AND SUB-TRADES SHALL FURNISH ALL REQUIRED MATERIAL, LABOR, EQUIPMENT AND PERFORM ALL WORK AS NECESSARY, AS INDICATED ON THE PROJECT DOCUMENTS, OR AS REASONABLY INFERRED TO EXECUTE THE SCOPE OF WORK FOR A PROPERLY FINISHED, COMPLETE JOB.
- 2. THE QUALITY OF WORKMANSHIP SHOULD BE SET AND SUPERVISED BY THE CONTRACTOR TO PASS BUILDING DEPT. OR ENGINEER INSPECTION FOR ROUGH CONSTRUCTION. THE LEVEL OF QUALITY AND TOLERANCE SHOULD BE APPROPRIATE FOR THE INSTALLED ELEMENT TO RECEIVE THE NEXT IN-LINE FINISH ASPECT OF CONSTRUCTION.
- 3. THE PURPOSE OF PROJECT DRAWINGS IS TO DEPICT THE OVERALL SCOPE OF THE PROJECT. THE PROJECT DRAWINGS HAVE BEEN DEVELOPED TO SHOW A LEVEL OF DETAIL WITH THE OBJECTIVE OF PLAN CHECK APPROVAL AND ISSUANCE OF A BUILDING PERMIT. THIS MODERATE LEVEL OF DETAIL SHOULD ALLOW FOR A VARIETY OF STANDARD CONSTRUCTION METHODS AND SEQUENCES. THE PROJECT DRAWINGS ARE INTENDED TO COMPLY WITH THE ORDINANCES, RULES AND REGULATIONS OF THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
- 4. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNOLOGIES, SEQUENCES AND PROCEDURES.
- 5. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
- 6. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.
- 7. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. THEY SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF THEY CHOOSE AN OPTION AND THEY SHALL COORDINATE ALL DETAILS.
- 8. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.
- 9. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.
- 10. IN THE CASE OF DISCREPANCIES BETWEEN THE GENERAL NOTES, SPECIFICATIONS, PLANS/DETAILS OR REFERENCE STANDARDS, THE ARCHITECT/ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. SHOULD ANY DISCREPANCY BE FOUND IN THE CONTRACT DOCUMENTS, THE CONTRACTOR WILL BE DEEMED TO HAVE INCLUDED IN THE PRICE THE MOST EXPENSIVE WAY OF COMPLETING THE WORK, UNLESS PRIOR TO THE SUBMISSION OF THE PRICE, THE CONTRACTOR ASKS FOR A DECISION FROM THE ARCHITECT AS TO WHICH SHALL GOVERN. ACCORDINGLY, ANY CONFLICT IN OR BETWEEN THE CONTRACT DOCUMENTS SHALL NOT BE A BASIS FOR ADJUSTMENT IN THE CONTRACT PRICE.
- 11. VISITS TO THE JOBSITE BY THE ENGINEER TO OBSERVE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT THEY ARE THE GUARANTORS OF THE CONTRACTOR'S WORK, NOR SUPERVISION, NOR SAFETY AT THE JOBSITE.
- 12. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.
- 13. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER THROUGH ARCHITECT.
- 14. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- 15. CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. NOTED SCALES ARE INTENDED FOR FULL SIZE PLANS. DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS ONLY.
- 16. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL STRUCTURE IS CAPABLE OF PROVIDING THIS SUPPORT.CONTRACTOR TO REFER TO AISC STEEL DESIGN GUIDE #10 "ERECTION BRACING OF LOW RISE STRUCTURAL STEEL BUILDINGS" AND TO THE NATIONAL CONCRETE MASONRY ASSOCIATION TECHNICAL GUIDE #3-4 "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION".
- 17. UNLESS OTHERWISE INDICATED, ALL ITEMS NOTED TO BE DEMOLISHED SHALL BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED FROM THE SITE.
- 18. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.

MATERIALS

STRUCTURAL STEEL	W & WT CHANNEL & ANGLE PLATES HSS SQ OR RECT HSS ROUND	ASTM A992, Fy = 50 KSI ASTM A36, Fy = 36 KSI ASTM A36, Fy = 36 KSI ASTM A500, GR C, Fy = 50 KSI ASTM A500. GR B, Fy = 42 KSI  PORTLAND CEMENT ASTM C150 TYPE II W/C RATIO = 0.45 MAXIMUM 28 DAY Fc = 4,000 PSI SLUMP RANGE = 3-5 INCHES AIR CONTENT = 4.5 - 7.5% 3/4" MAXIMUM NORMAL WEIGHT AGGREGATE ASTM A615, GRADE 60 (NON-WELDABLE) ASTM A706, GRADE 60 (WELDABLE) ASTM A-1064 (WELDED WIRE REINF)  ASTM F1554, GRADE 36 ASTM A325N  ASTM A307, GALVANIZED PER ASTM A153 (ONLY WHERE NOTED ON PLANS) ASTM A108  E70XX ELECTRODE  HILTI HIT HY 270 OR SIMPSON STRONG-TIE SET ANCHORING ADHESIVE HILTI HIT RE 500v3 ASTM A36 ALL-THREAD WITH CHISEL POINT  2x4 STUDS, D.F. STUD 2x4 STUDS AND LARGER, D.F. #2 SIMPLE SPAN GLU-LAMINATED BEAMS, 24F-V4 CONTINUOUS SPAN GLU-LAMINATED BEAMS, 24F-V8 PARALLEL STRAND LUMBER (PSL) E=2,000,000 PSI, Fb=2,900 PSI, Fv=290 PSI WALL SHEATHING, 24/16 OSB, EXPOSURE 1 ROOF AND FLOOR SHEATHING, 48/24 CDX PLYWOOD  STEEL STUDS, ASTM A653, 18 GA. Fy = 33 KSI U.N.O. CMU BLOCK: NORMAL WEIGHT, Fc = 1900 PSI MORTAR: PORTLAND CEMENT/LIME, TYPE M OR S GROUT: Fc = 2000 PSI (28 DAYS) WALL COMPRESSIVE STRENGTH = Fm = 2000 PSI (28 DAYS)
CONCRETE	ALL (U.N.O.)	
REINFORCING BARS		
ANCHOR RODS		
HIGH STRENGTH BOLTS		
BOLTS		
HEADED STUD ANCHORS		
WELD METAL		
ADHESIVE ANCHORS	MASONRY CONCRETE ALL	
WOOD		
COLD FORMED STEEL		
MASONRY		

DELEGATED DESIGN

1	TEMPORARY SHORING OF EXCAVATIONS & BUILDING STRUCTURE DURING CONSTRUCTION. OTHER CONTRACTOR MEANS & METHODS COMPONENTS (e.g. SCAFFOLDING, FALL PROTECTION, ETC.
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DELEGATED DESIGN SCHEDULE NOTES:

- 1. THE ITEMS LISTED IN THIS SCHEDULE HAVE NOT BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD FOR THIS PROJECT. A SPECIALTY ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PERFORM THE REQUIRED DESIGNS.
- 2. THE SPECIALTY ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
- 3. CALCULATIONS AND/OR SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL

- 1. DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360).
- 2. IF IT IS NECESSARY TO SPLICE ANY MEMBER, SPLICE LOCATIONS ARE SUBJECT TO REVIEW BY STRUCTURAL ENGINEER. SPLICES SHALL BE FULL PENETRATION WELDED AND TESTED. INDICATE ALL SPLICE LOCATIONS AND WELDING PROCEDURES ON SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
- 3. ALL BEAMS SHALL BE ERECTED WITH THE NATURAL CAMBER UPWARDS.
- 4. ALL BOLTS, ANCHOR BOLTS, EXPANSION/ADHESIVE ANCHORS, ETC. SHALL BE INSTALLED WITH STEEL WASHERS.
- 5. ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES, CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.
- 6. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.
- 7. SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSHING OR OTHER SUITABLE MEANS. WELDED JOINTS SHALL NOT BE PAINTED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED.
- 8. ALL FIELD WELDING OF STRUCTURAL ATTACHMENTS TO BEAMS OR OTHER MEMBERS SHALL BE PERFORMED WITH THE MEMBER POSITIONED TO ELIMINATE BENDING STRESSES IN THE AREA OF THE WELD.
- 9. BEAMS HAVING FLANGE(S) COPED LONGER THAN LENGTH OF CONNECTION ANGLE(S) OR THE FLANGE AND WEB COPED TO A DEPTH GREATER THAN REQUIRED FOR NORMAL FLANGE THICKNESS PLUS FILLET SHALL HAVE THE WEB REINFORCED TO CARRY LOAD UNLESS CONNECTION DESIGN COMPUTATIONS PROVE REINFORCEMENT UNNECESSARY.
- 10. STRUCTURAL STEEL MEMBERS SHALL BE IDENTIFIED WITH ERECTION MARKS THAT ARE CLEARLY DISCERNABLE THROUGH SHOP GALVANIZING OR PAINTING.
- 11. ALL REFERENCE TO HEADED STUDS SHALL INDICATE AUTOMATIC WELDED HIGH STRENGTH HEADED STUDS (NELSON OR EQUIVALENT). STUDS SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST EDITION OF THE "RECOMMENDED PRACTICES FOR STUD WELDING" AND THE "STRUCTURAL WELDING CODE" PUBLISHED BY THE AMERICAN WELDING SOCIETY. CONFORMANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL QUALITY CONTROL TESTING PROVISIONS OF THE AFOREMENTIONED PUBLICATIONS.
- 12. ALL WELDS AND WELDING PROCEDURES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PROVISIONS OF AISC AND AWS WELDING PROCEDURES AND CODES AS OUTLINED IN THE SPECIFICATIONS. SPECIAL ATTENTION SHALL BE GIVEN TO PROPER HEAT TEMPERATURE REQUIREMENTS.
- 13. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS. USE E80 SERIES FOR ASTM A706 REINFORCING BARS.
- 14. ALL STEEL BASE PLATES SHALL UTILIZE MAXIMUM RECOMMENDED HOLE SIZE AND STEEL PLATE WASHERS PER AISC CONSTRUCTION MANUAL TABLE 14-2 UNO. CONTRACTOR TO FIELD WELD PLATE WASHERS TO BASE PLATE WITH MINIMUM SIZE FILLET FULL WASHER PERIMETER AFTER INSTALLATION OF COLUMN.
- 15. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO VIEW SHALL BE SHOP PAINTED WITH ONE COAT OF SSPC 15-68, TYPE 1 RED OXIDE PAINT.
- 16. ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO WEATHER, INCLUDING ALL BRICK SHELF ANGLES, SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153.
- 17. ALL STEEL BELOW GRADE SHALL BE ENCASED IN CONCRETE OR SHALL RECIEVE (2) COATS OF BITUMINOUS PAINT.
- 18. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED.
- 19. PROTECTIVE COATINGS DAMAGED DURING THE TRANSPORTING, ERECTING, AND FIELD WELDING PROCESSES SHALL BE REPAIRED IN THE FIELD TO MATCH THE SHOP APPLIED COATING.
- 20. ALL HSS OR PIPE COLUMNS TO HAVE A 3/8" CAP PLATE WELDED ALL AROUND WITH A 1/4" FILLET WELD.
- 21. THE STRUCTURAL STEEL ERECTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING.
- 22. COLUMNS, ANCHOR BOLTS, BASE PLATES ETC. HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THESE MEMBERS FOR ADEQUACY DURING THE ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

STEEL JOISTS AND JOIST GIRDERS

- 1. ALL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE AND OSHA REGULATIONS.
- 2. JOIST SIZES ARE AS INDICATED ON PLAN. TYPICAL CALLOUTS ARE AS FOLLOWS:  
  
TYPICAL STEEL JOIST - 24LH 300/150/80  
  
24 INDICATES JOIST DEPTH (INCHES)  
LH INDICATES JOIST TYPE  
300 INDICATES TOTAL LOAD (PLF)  
150 INDICATES LIVE LOAD (PLF)  
80 INDICATES NET WIND UPLIFT LOAD (PLF)  
(00 INDICATES NO NET WIND UPLIFT)  
  
TYPICAL STEEL JOIST GIRDER - 32VG 5N 10.0K  
  
32 INDICATES GIRDER DEPTH (INCHES)  
VG INDICATES GIRDER TYPE  
5N INDICATES NUMBER OF JOIST SPACES  
10.0K INDICATES TOTAL LOAD AT PANEL POINT  
  
3. ALL JOISTS AND JOIST GIRDERS SHALL BE CAMBERED PER SJI SPECIFICATIONS.
- 4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION. CALCULATIONS SHALL BEAR THE SEAL AND SIGNATURE OF THE MANUFACTURER'S REGISTERED DESIGN PROFESSIONAL. SUBMITTAL SHALL INCLUDE CALCULATIONS FOR ALL JOIST SHOES WHERE BEARING LENGTH IS LESS THAN 4" AT LH SERIES JOISTS OR 2 1/2" FOR K SERIES JOISTS. CALCULATIONS SHALL INCLUDE DEAD AND LIVE LOAD DEFLECTIONS. STRESS RATIOS FOR INDIVIDUAL MEMBERS IN THE CALCULATIONS SHALL NOT EXCEED 1.00 FOR COMBINED DEAD AND LIVE LOADS AND 1.33 FOR ANY LOAD COMBINATION INCLUDING WIND OR SEISMIC. SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE DETAILS OF ANY OPTIONAL FIELD SPLICES AND IF HIGH STRENGTH BOLTS OR COMPLETE PENETRATION WELDS ARE UTILIZED. CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING LABORATORY FOR TESTING AND CERTIFICATION.
- 5. THE JOIST MANUFACTURER SHALL BE A SII CERTIFIED SHOP AND MAINTAIN APPROVED FABRICATION PROCEDURES AS REQUIRED TO SATISFY THE SPECIAL INSPECTION REQUIREMENTS OF THE IBC.
- 6. ALL JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL 500 LB. POINT LOAD ANYWHERE ALONG THE SPAN APPLIED AT THE BOTTOM CHORD PANEL POINTS.
- 7. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/360 AT SIMPLE SPAN FLOOR MEMBERS AND SPAN/240 AT SIMPLE SPAN ROOF MEMBERS.
- 8. ALL CONCENTRATED LOADS TO STEEL JOISTS SHALL OCCUR WITHIN 6" OF A PANEL POINT. TO ACCOUNT FOR ADDITIONAL CONCENTRATED LOADS, MANUFACTURER SHALL ADD ADDITIONAL WEB MEMBERS AS REQUIRED AND ADJUST CHORD AND WEB SIZES ACCORDINGLY, BUT SHALL NOT ALTER DEPTH OF JOISTS.
- 9. JOIST BRIDGING AND CONNECTIONS SHALL BE COMPLETELY INSTALLED PRIOR TO PLACING ANY CONSTRUCTION LOADS ON THE JOIST. CONSTRUCTION LOADING SHALL NOT EXCEED THE DESIGN LOAD.
- 10. WHERE CROSS BRIDGING INTERFERES WITH MECHANICAL INSTALLATIONS, REMOVE THIS CROSS BRIDGING AFTER ROOF/FLOOR DECK IS IN PLACE AND REPLACE WITH HORIZONTAL ANGLES 2"x2"x3/16" AT TOP AND BOTTOM CHORDS. COORDINATE WITH JOIST MANUFACTURER.
- 11. JOISTS ON COLUMN CENTERLINES SHALL HAVE EXTENDED BOTTOM CHORD CONNECTIONS PER TYPICAL DETAILS. DO NOT CONNECT BOTTOM CHORD EXTENSION UNTIL ALL GRAVITY DEAD LOADS ARE IN PLACE.
- 12. ALL JOISTS SHALL BE PROPERLY ANCHORED AT BEARINGS PER SJI REQUIREMENTS.
- 13. ALL JOISTS SHALL BE SHOP PAINTED IN ACCORDANCE WITH SJI REQUIREMENTS.

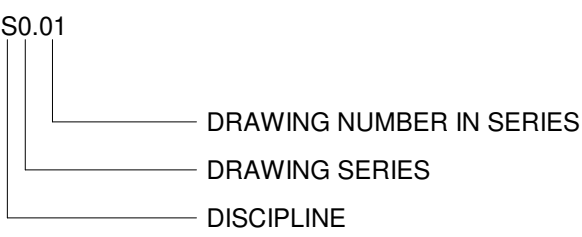
LEGEND AND ABBREVIATIONS

AB	ANCHOR BOLT	HORIZ	HORIZONTAL
ACI	AMERICAN CONCRETE INSTITUTE	HSS	HEADED STUD ANCHOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	IBC	HOLLOW STRUCT STEEL
			INTERNATIONAL BUILDING CODE
ALT	ALTERNATE	INT	INTERIOR
APPROX	APPROXIMATE	L	STEEL ANGLE
ARCH	ARCHITECTURAL	LG	LIGHT GAUGE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIAL	LLV	LONG LEG VERTICAL
		LONG	LONGITUDINAL
AWG	AMERICAN WELDING SOCIETY	MAX	MAXIMUM
		MCJ	MASONRY CONTROL JOINT
@	AT	MECH	MECHANICAL
BLDG	BUILDING	MANUF OR MFR	MANUFACTURER
BLK'G	BLOCKING	MIN	MINIMUM
BM	BEAM	MISC	MISCELLANEOUS
BOC	BOTTOM OF CONCRETE	NO. OR #	NUMBER
BOF	BOTTOM OF FOOTING	(N)	NEW
BOS	BOTTOM OF STEEL/SLAB	NTS	NOT TO SCALE
BOT	BOTTOM OF	OC	ON CENTER
BRG	BEARING	OCEF	ON CENTER EACH FACE
BTB	BACK TO BACK	OCEW	ON CENTER EACH WAY
BTWN	BETWEEN	OPP	OPPOSITE
C	STEEL CHANNEL	OWJ	OPEN WEB JOIST
CFS	COLD FORMED STEEL	PEMB	PRE-ENGINEERED METAL BUILDING
CIP	CAST IN PLACE	PLCS	PLACES
CJ	CONTROL JOINT	PL	PLATE
CL	CENTER LINE	PREFAB	PREFABRICATED
CLR	CLEAR	PSF	POUNDS PER SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
		PT	PRESSURE TREATED
COL	COLUMN	REF	REFERENCE
CONC	CONCRETE	REINF	REINFORCEMENT
CONN OR CXN	CONNECTION	REQ'D	REQUIRED
CONT	CONTINUOUS	REV	REVISION/REVISED
DEMO	DEMOLISH	SCH OR SCHED	SCHEDULE
DET	DETAIL	SFE	SUBFLOOR ELEVATION
DF	DOUGLAS FIR	SHT	SHEET
d OR DIA	DIAMETER	SIM	SIMILAR
DIM	DIMENSION	STD	STANDARD
DJ	DOUBLE JOIST	SPCS OR SPA	SPACE(S)
DWG	DRAWING	SPEC	SPECIFICATION(S)
EA	EACH	SQ	SQUARE
EA WAY OR EW	EACH WAY	STO	STANDARD
EF	EACH FACE	STRUCT	STRUCTURAL
EJ	EXPANSION JOINT	SYM	SYMMETRICAL
EL OR ELEV	ELEVATION	T&B	TOP & BOTTOM
EMBED	EMBEDMENT	THRU	THROUGH
ENG	ENGINEER	TOS	TOP OF BEAM
EOR	ENGINEER OF RECORD	TOT	TOP OF CONCRETE
EQ	EQUAL	TOF	TOP OF FOOTING
EXIST OR (E)	EXISTING	TOSL	TOP OF STEEL/SLAB
EXP	EXPANSION	TOW	TOP OF WALL
EXT	EXTERIOR	TRANS	TRANSVERSE
FDT OR FND	FOUNDATION	TYP	TYPICAL
FF	FLOOR	VIF	VERIFY IN FIELD
FLR	FLOOR	VERT	VERTICAL
FTG	FOOTING	UNO	UNLESS NOTED OTHERWISE
GA	GAUGE	W/	WITH
GALV	GALVANIZED	WF	WIDE FLANGE
GEN	GENERAL	WGL	WORKING POINT
GLB	GLULAM BEAM	WP	WEIGHT
GR	GRADE		

	CONCRETE		ELEVATION NOTED
	CONCRETE MASONRY UNIT		FLAG NOTE
	STEEL IN SECTION		REVISION SPECIFIED
	SECTION OR DETAIL DESIGNATION SYMBOL		STAIR IDENTIFICATION
	INDICATES COLUMN		INDICATES BASE PLATE, SEE SCHEDULE Sx.x

DRAWING SCHEDULE

DRAWING NUMBER NOMENCLATURE



DRAWING NUMBER	DRAWING NAME	ISSUE DATE	ISSUE DESCRIPTION	75% BID SET	75% BID SET	75% BID SET	75% BID SET	75% BID SET	75% BID SET	75% BID SET
S0.00	GENERAL STRUCTURAL NOTES	04/14/23		X						
S1.00	ROOF FRAMING PLAN A			X						
S1.01	ROOF FRAMING PLAN B			X						
S1.02	ROOF FRAMING PLAN C			X						
S1.03	ROOF FRAMING PLAN D			X						
S3.00	TYPICAL FRAMING DETAILS			X						

NOT FOR CONSTRUCTION, FOR REVIEW

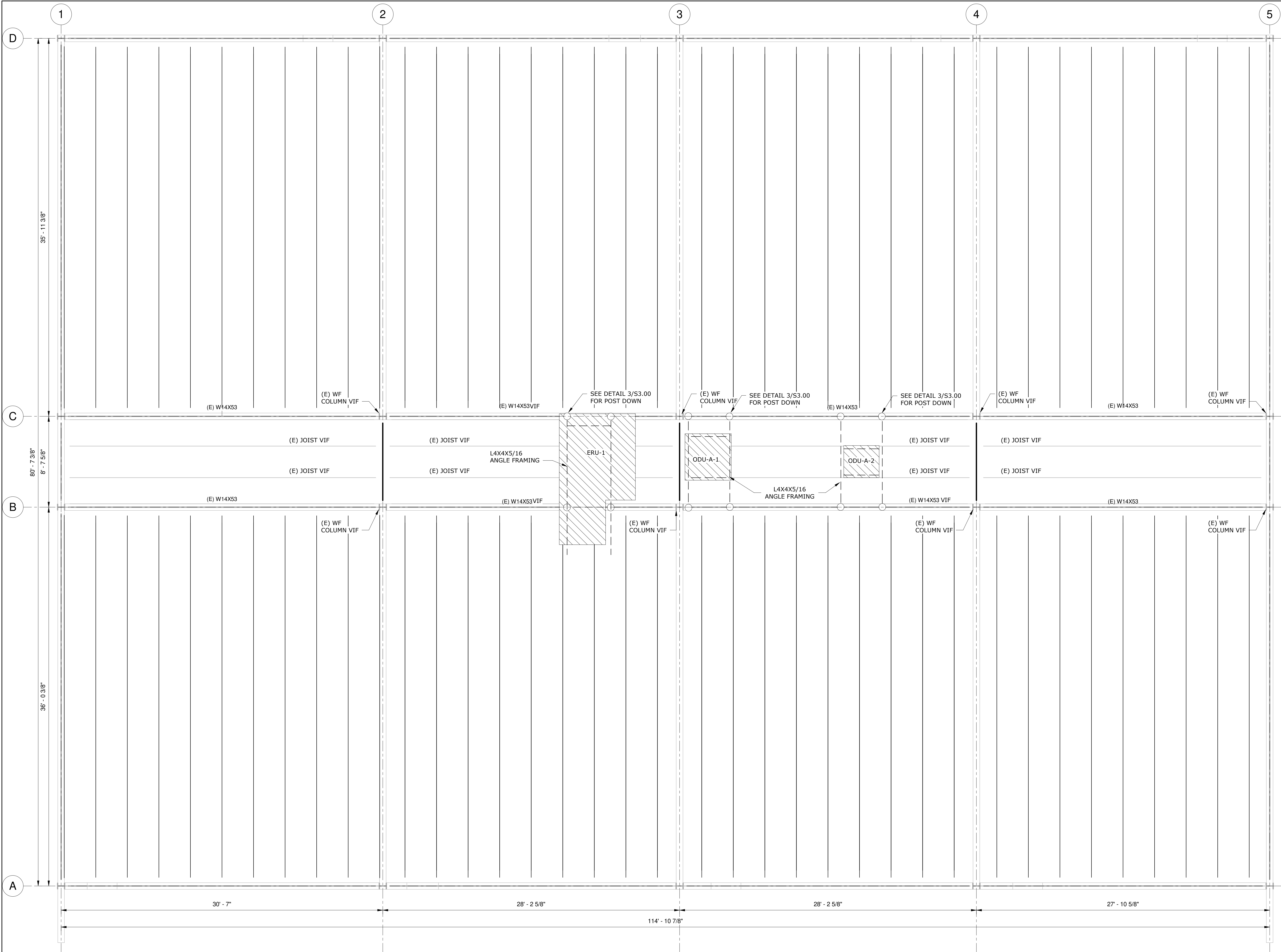


DRAWN BY: TJK  
DESIGNED BY: TJK  
QUALITY CHECK: MAD  
DATE: 04/14/2023  
JOB NO: M23-038  
FIELD BOOK:

TOBY FARMS ES HVAC ROOF FRAMING  
210 Bridgewater Road, Brookhaven, PA 19015

GENERAL STRUCTURAL NOTES





1 PLAN A ROOF FRAMING PLAN  
1/4" = 1'-0"

ROOF FRAMING NOTES

- CONTRACTOR TO VERIFY ALL EXISTING STEEL MEMBERS IN FIELD
- FABRICATOR TO SUBMIT STRUCTURAL STEEL CONNECTION DETAILS TO ENGINEER FOR REVIEW AND APPROVAL
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL INFORMATION NOT SHOWN
- STRUCTURAL STEEL SHAPES INDICATED THUS (E) ON PLAN ARE EXISTING TO REMAIN
- REFER TO DETAILS ON S3.00 FOR FRAMING REQUIRED TO SUPPORT ROOF TOP MECHANICAL UNITS AND ASSOCIATED DUCT OPENINGS. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL OBTAIN CERTIFIED MANUFACTURER'S DRAWINGS FOR ALL EQUIPMENT SHOWN. THE GC/CM SHALL COORDINATE DIMENSIONS INDICATED WITH (\*) WITH MECHANICAL CONTRACTOR FOR EQUIPMENT PURCHASED, PRIOR TO STEEL FABRICATION. SEE ARCH DRAWING FOR DIMENSIONS AND ADDITIONAL INFORMATION.

MECHANICAL EQUIPMENT WEIGHTS		
VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH THE MECHANICAL ENGINEER AND ARCHITECT		
MAR	EQUIPMENT WEIGHT (LBS)	REMARKS
RTU-1	1057	-
RTU-2	2819	-
RTU-3	2755	-
ODU-A-1	666	-
ODU-A-2	260	-
ODU-B-1	507	-
ODU-B-2	507	-
ODU-C	666	-
ODU-D-1	659	-
ODU-D-2	659	-
ERU-1	2993	-
ERU-2	2904	-
ERU-3	3199	-
ERU-4	3199	-
ERU-5	2789	-

TOBY FARMS ES HVAC ROOF FRAMING  
210 Bridgewater Road, Brookhaven, PA 19015

ROOF FRAMING PLAN A

DRAWN BY: RYS  
DESIGNED BY: RYS  
QUALITY CHECK: PMH  
DATE: 04/14/2023  
JOB NO: M23-038  
FIELDBOOK:

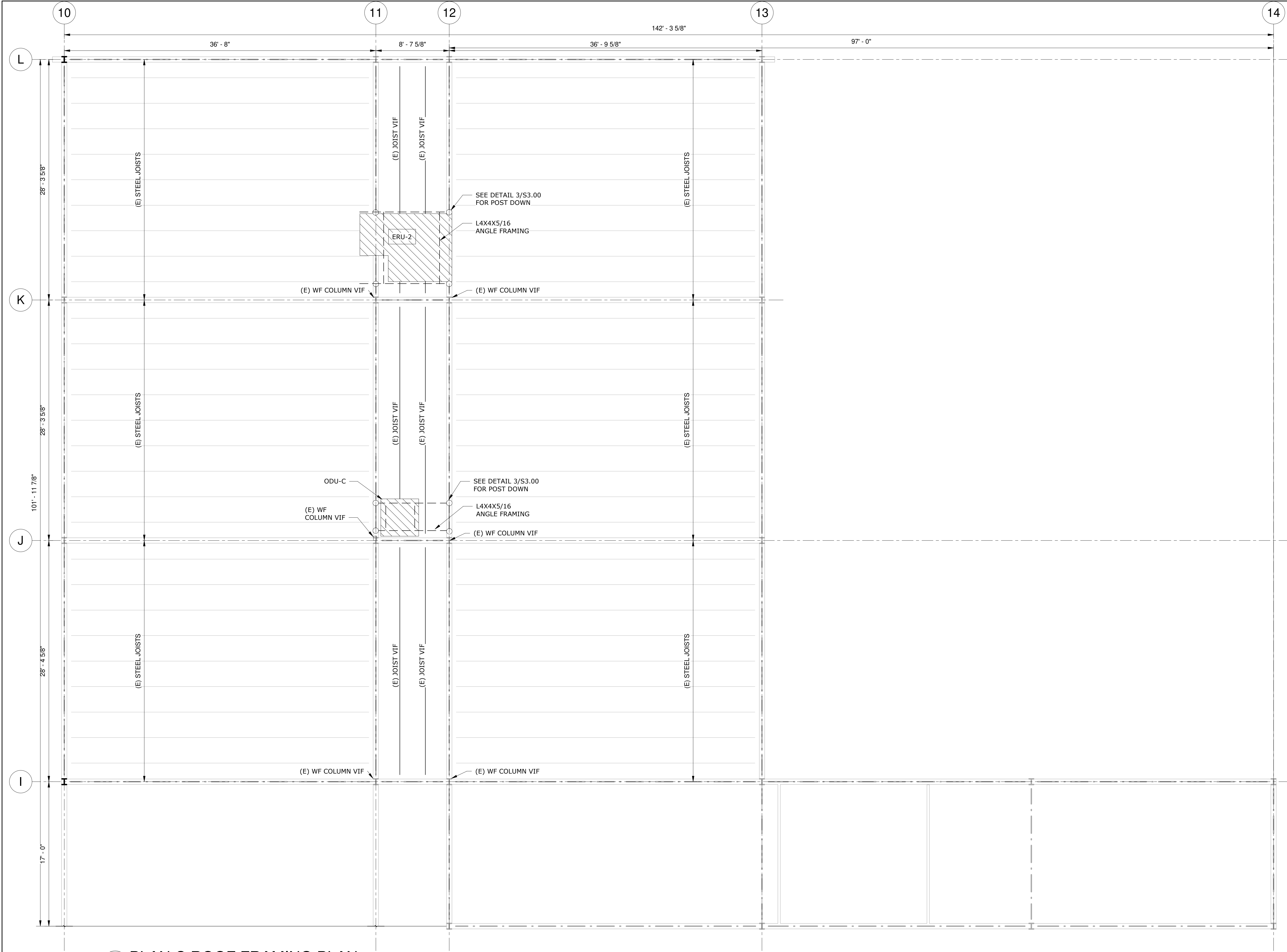


REV	DATE	75% BID SET	REVISION
1	04/14/23		

NOT FOR CONSTRUCTION, FOR REVIEW







1 PLAN C ROOF FRAMING PLAN  
3/16" = 1'-0"

ROOF FRAMING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING STEEL MEMBERS IN FIELD.
2. FABRICATOR TO SUBMIT STRUCTURAL STEEL CONNECTION DETAILS TO ENGINEER FOR REVIEW AND APPROVAL.
3. REFER TO ARCHITECTURAL DRAWINGS FOR ALL INFORMATION NOT SHOWN.
4. STRUCTURAL STEEL SHAPES INDICATED THUS (E) ON PLAN ARE EXISTING TO REMAIN.
5. REFER TO DETAILS ON S3.00 FOR FRAMING REQUIRED TO SUPPORT ROOF TOP MECHANICAL UNITS AND ASSOCIATED DUCT OPENINGS. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL OBTAIN CERTIFIED MANUFACTURER'S DRAWINGS FOR ALL EQUIPMENT SHOWN. THE GC/CM SHALL COORDINATE DIMENSIONS INDICATED WITH (\*) WITH MECHANICAL CONTRACTOR FOR EQUIPMENT PURCHASED, PRIOR TO STEEL FABRICATION. SEE ARCH DRAWING FOR DIMENSIONS AND ADDITIONAL INFORMATION.

MECHANICAL EQUIPMENT WEIGHTS

VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH THE MECHANICAL ENGINEER AND ARCHITECT

MAR	EQUIPMENT WEIGHT (LBS)	REMARKS
RTU-1	1057	-
RTU-2	2819	-
RTU-3	2755	-
ODU-A-1	666	-
ODU-A-2	260	-
ODU-B-1	507	-
ODU-B-2	507	-
ODU-C	666	-
ODU-D-1	659	-
ODU-D-2	659	-
ERU-1	2993	-
ERU-2	2904	-
ERU-3	3199	-
ERU-4	3199	-
ERU-5	2789	-

NOT FOR CONSTRUCTION, FOR REVIEW

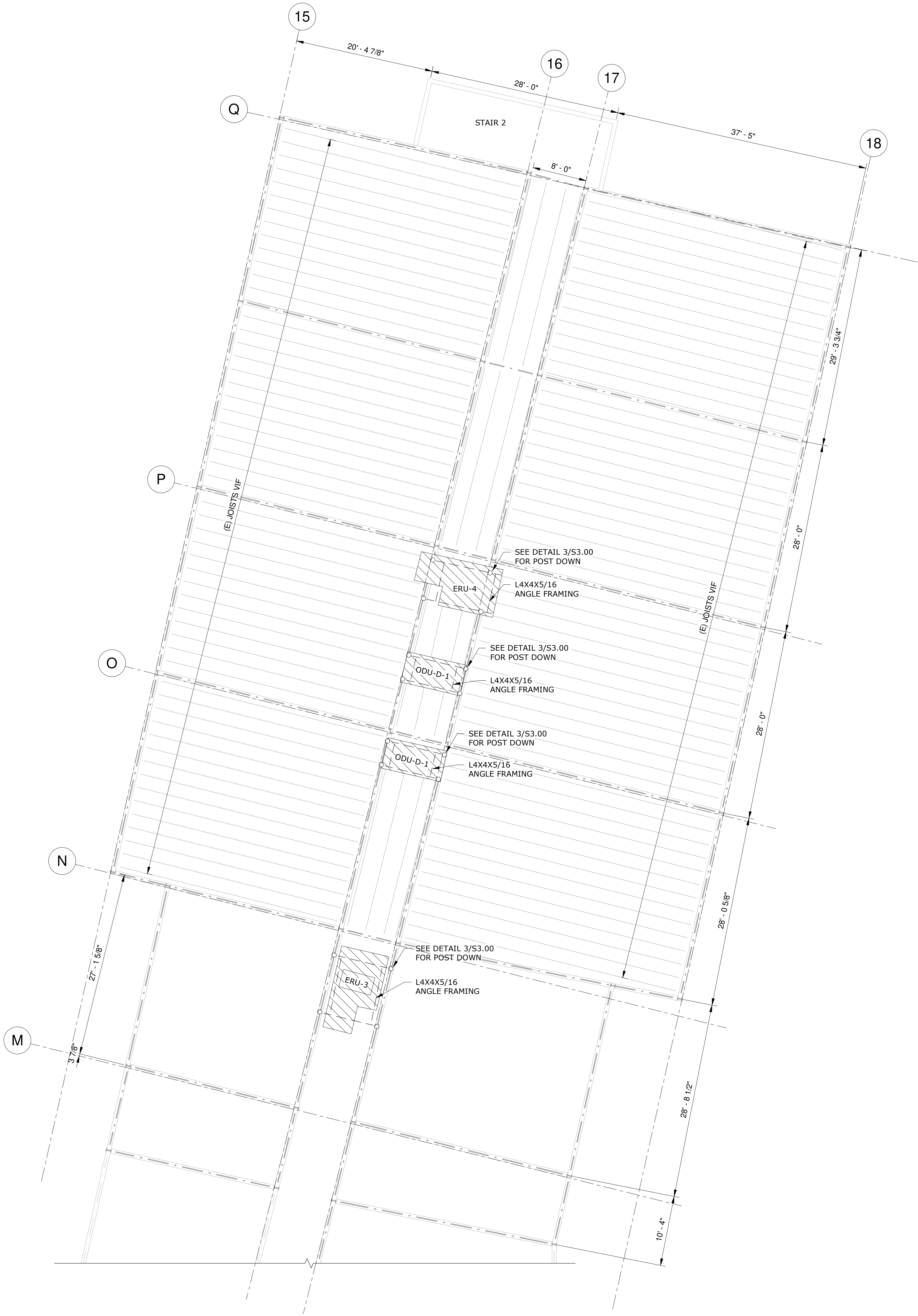
REV	DATE	75% BID SET
1	04/14/23	REVISION



DRAWN BY: RYS  
DESIGNED BY: RYS  
QUALITY CHECK: PMH  
DATE: 04/14/2023  
JOB NO: M23-038  
FIELDBOOK:

TOBY FARMS ES HVAC ROOF FRAMING  
210 Bridgewater Road, Brookhaven, PA 19015

ROOF FRAMING PLAN C



1 PLAN D ROOF FRAMING PLAN  
1/8" = 1'-0"

ROOF FRAMING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING STEEL MEMBERS IN FIELD.
2. FABRICATOR TO SUBMIT STRUCTURAL STEEL CONNECTION DETAILS TO ENGINEER FOR REVIEW AND APPROVAL.
3. REFER TO ARCHITECTURAL DRAWINGS FOR ALL INFORMATION NOT SHOWN.
4. STRUCTURAL STEEL SHAPES INDICATED THUS (E) ON PLAN ARE EXISTING TO REMAIN.
5. REFER TO DETAILS ON S3.00 FOR FRAMING REQUIRED TO SUPPORT ROOF TOP MECHANICAL UNITS AND ASSOCIATED DUCT OPENINGS. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL OBTAIN CERTIFIED MANUFACTURER'S DRAWINGS FOR ALL EQUIPMENT SHOWN. THE GC/CN SHALL COORDINATE DIMENSIONS INDICATED WITH (\*) WITH MECHANICAL CONTRACTOR FOR EQUIPMENT PURCHASED, PRIOR TO STEEL FABRICATION.  
SEE ARCH DRAWING FOR DIMENSIONS AND ADDITIONAL INFORMATION.

MECHANICAL EQUIPMENT WEIGHTS

VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH THE MECHANICAL ENGINEER AND ARCHITECT

MAR	EQUIPMENT WEIGHT (LBS)	REMARKS
RTU-1	1057	-
RTU-2	2819	-
RTU-3	2755	-
ODU-A-1	666	-
ODU-A-2	260	-
ODU-B-1	507	-
ODU-B-2	507	-
ODU-C	666	-
ODU-D-1	659	-
ODU-D-2	659	-
ERU-1	2993	-
ERU-2	2904	-
ERU-3	3199	-
ERU-4	3199	-
ERU-5	2789	-

NOT FOR  
CONSTRUCTION,  
FOR REVIEW

REV	DATE	BY	DESCRIPTION
1	04/14/23		75% BID SET

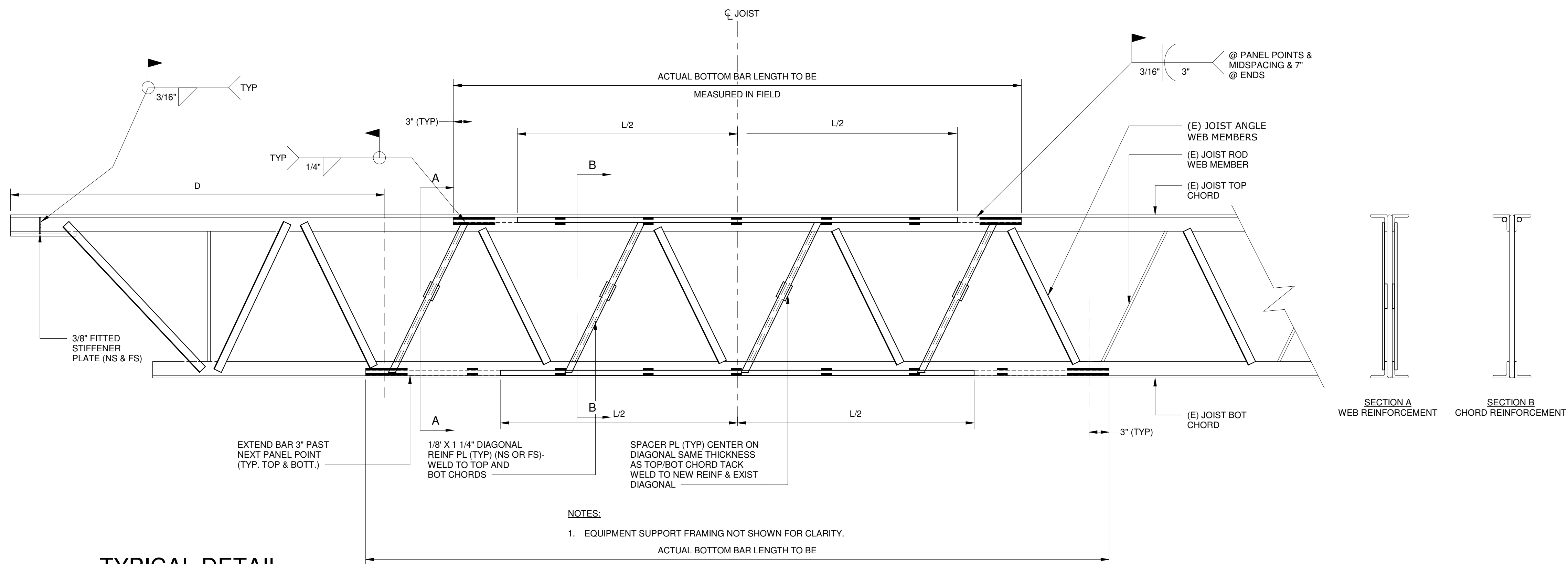


DRAWN BY: RYS  
DESIGNED BY: RYS  
QUALITY CHECK: PMH  
DATE: 04/14/2023  
JOB NO: M23-038  
FIELDBOOK:

TOBY FARMS ES HVAC ROOF FRAMING  
210 Bridgewater Road, Brookhaven, PA 19015

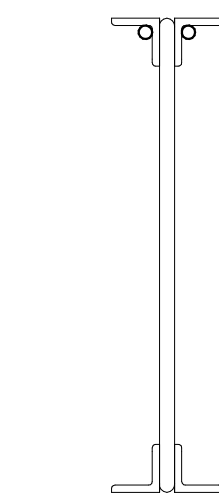
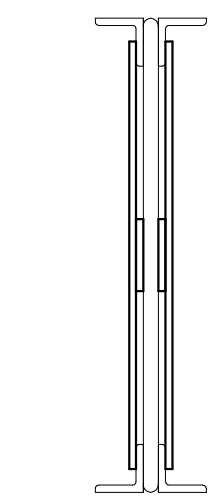
ROOF FRAMING PLAN D





JOIST REINFORCEMENT SCHEDULE				
MARK	CHORD REINFORCEMENT (V50)			WEB REINFORCEMENT
	SIZE	MIN LENGTH L (FT)	LOCATION (MEASURED OFF GL -F)	LOCATION
J1	5/8\" DIA BAR	13FT	12FT TO 25FT	SEE DETAIL AND PLAN

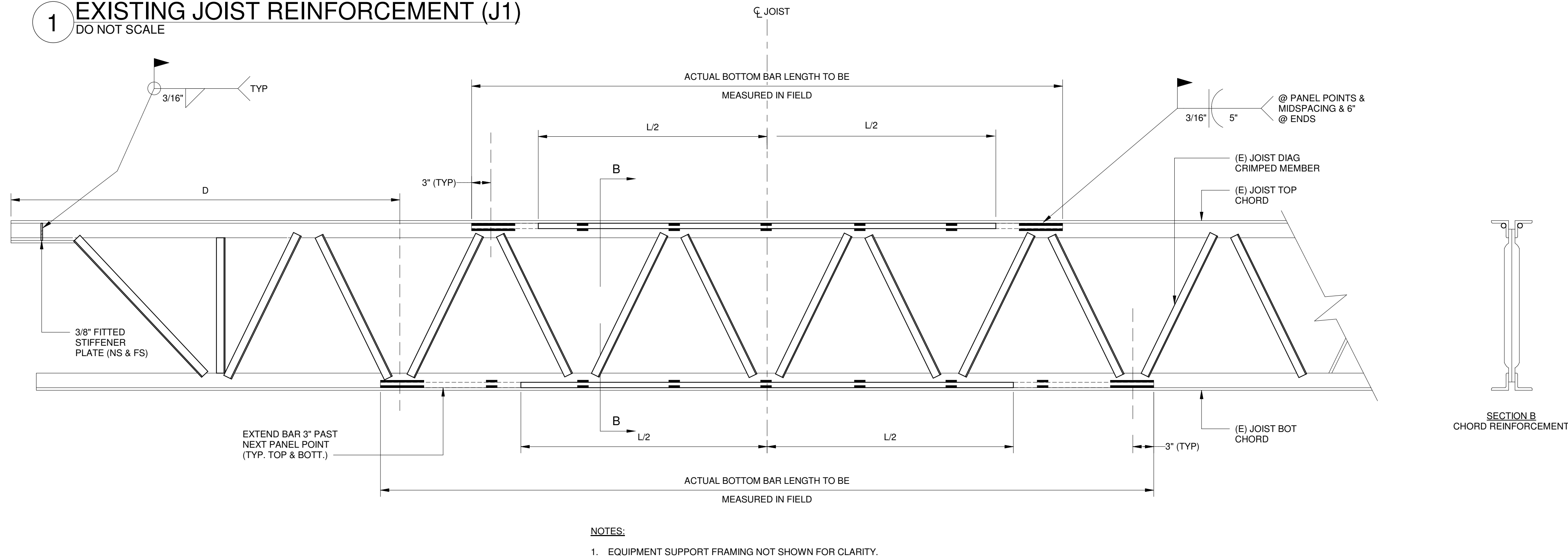
- NOTES:
1. "T" TOP, "B" BOTTOM, "NS" 1 SIDE, "BS" 2 SIDES.
  2. PROVIDE REINFORCING ANGLES FOR WEB MEMBERS WITHIN NOTED DISTANCE FROM EACH END OF JOIST. INCLUDE WEB MEMBERS THAT PARTIALLY FALL WITHIN DISTANCE D.
  3. REINFORCEMENT TO BE CONTINUOUS.



SECTION A  
WEB REINFORCEMENT

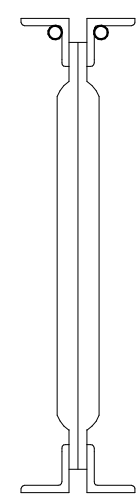
SECTION B  
CHORD REINFORCEMENT

1  
TYPICAL DETAIL  
EXISTING JOIST REINFORCEMENT (J1)  
DO NOT SCALE



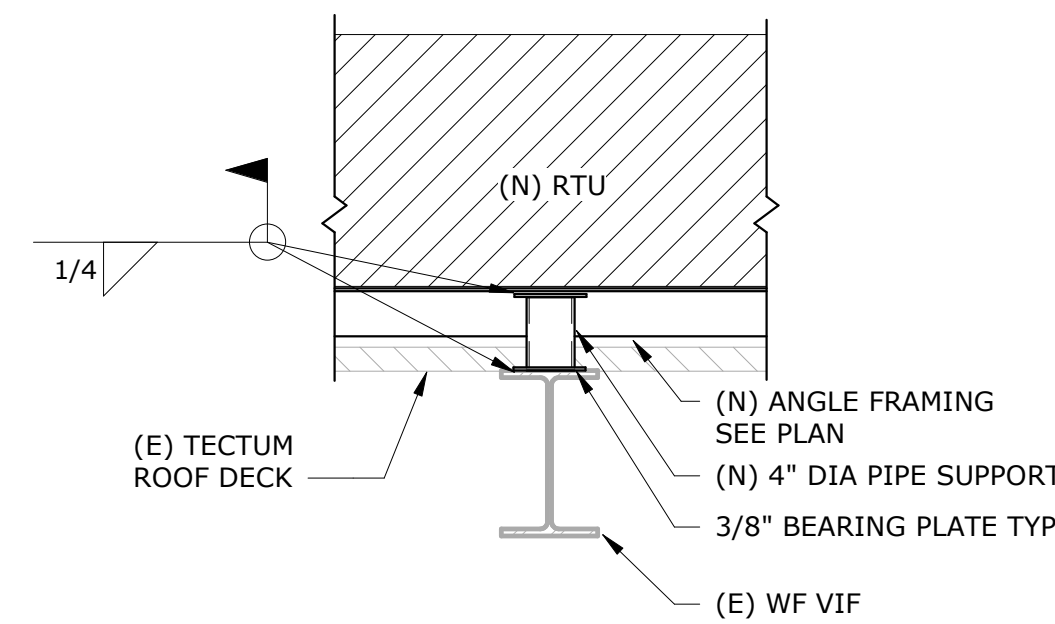
JOIST REINFORCEMENT SCHEDULE				
MARK	CHORD REINFORCEMENT (V50)			WEB REINFORCEMENT
	SIZE	MIN LENGTH L (FT)	LOCATION (MEASURED OFF GL-H)	LOCATION
J2	1/2\" DIA BAR	15 FT	14FT TO 29FT	N/A

- NOTES:
1. "T" TOP, "B" BOTTOM, "NS" 1 SIDE, "BS" 2 SIDES.
  2. PROVIDE REINFORCING ANGLES FOR WEB MEMBERS WITHIN NOTED DISTANCE FROM EACH END OF JOIST. INCLUDE WEB MEMBERS THAT PARTIALLY FALL WITHIN DISTANCE D.
  3. REINFORCEMENT TO BE CONTINUOUS.



SECTION B  
CHORD REINFORCEMENT

2  
TYPICAL DETAIL  
EXISTING JOIST REINFORCEMENT (J2)  
DO NOT SCALE



3  
TYPICAL POST DOWN DETAIL  
3/4\" = 1'-0"

NOT FOR  
CONSTRUCTION,  
FOR REVIEW

75% BID SET	REVISION
1	04/14/23
REV	DATE



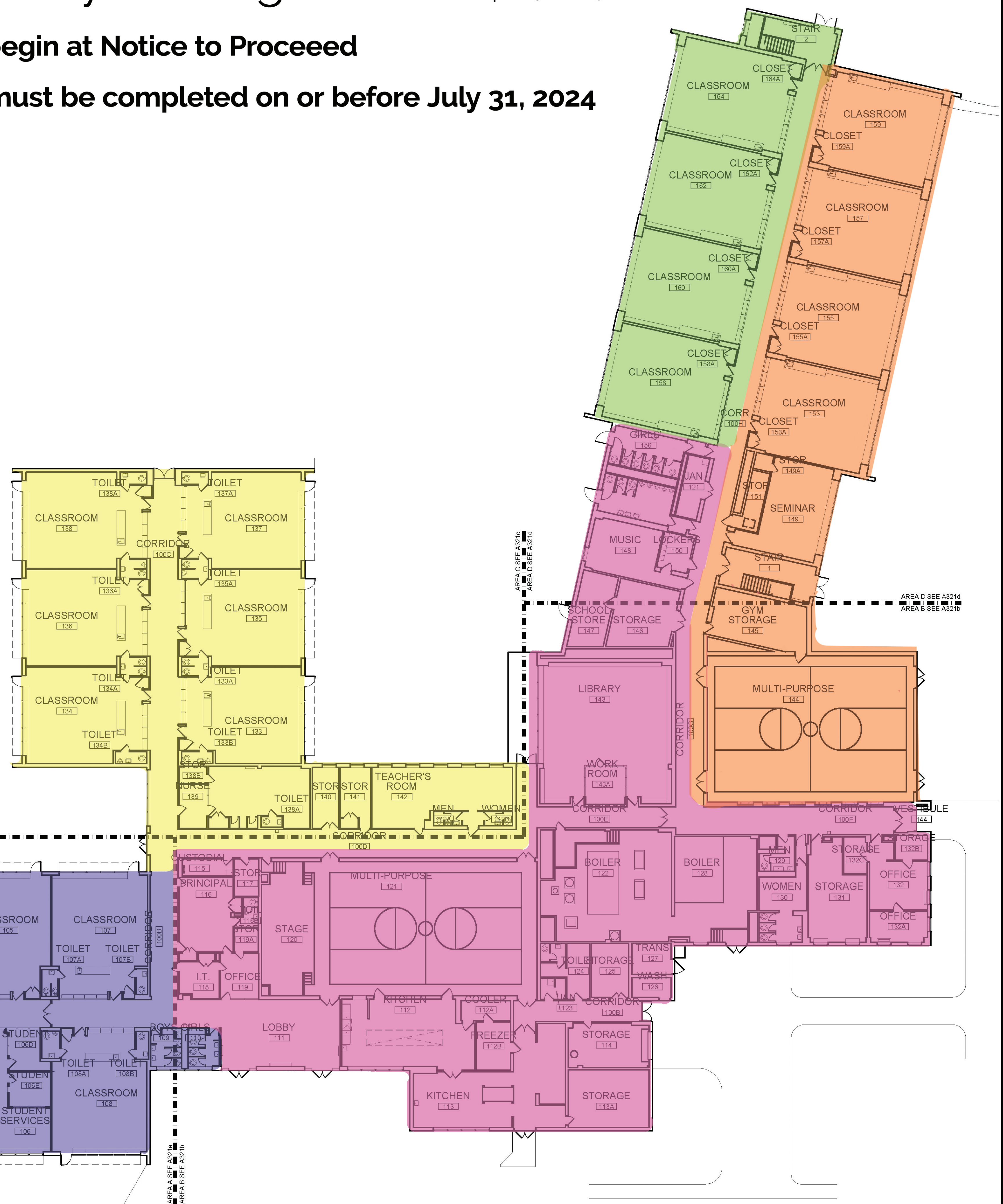
DRAWN BY: TJK  
DESIGNED BY: TJK  
QUALITY CHECK: MAD  
DATE: 04/14/2023  
JOB NO: M23-038  
FIELDBOOK:

TOBY FARMS ES HVAC ROOF FRAMING  
210 Bridgewater Road, Brookhaven, PA 19015

TYPICAL FRAMING DETAILS



**All work must be completed on or before July 31, 2024**



- Phase 1 -
- Phase 2 -
- Phase 3 -
- Phase 4 -
- Phase 5 -
- Phase 6 - Throughout School

# 1 OVERALL GROUND FLOOR

REV. #	REV. DATE	REV. NOTES
1	10/1/00	
2	10/1/00	
3	10/1/00	
4	10/1/00	
5	10/1/00	
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8	10/1/00	
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100	10/1/00	

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PA Registration: RA015197X

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**DESIGN DEV 20 Jan 2023**

CHESTER UPLAND S.D.  
TOBY FARMS WINDOW REPLACE.  
201 BRIDGEWATER ROAD  
BROOKHAVEN, PA 19015  
OVERALL GROUND FLOOR

PROJECT NO: 022 105  
DRAWN BY:  
DATE: 20 JAN 2023  
SCALE: AS NOTED

A300a  
△  
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