- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROVISIONS OF THE 2021 EDITION OF THE
- ELEVATIONS (XXX'-XX") SHOWN ON PLANS ARE TO TOP OF CONCRETE, STEEL, OR WOOD DECK U.N.O. ELEVATIONS SHOWN ARE BASED ON FIRST FLOOR ELEVATION OF 100'-00" CONFIRM WITH ARCHITECTURAL.
- ALL CONTRACTORS AND ANY SUB-CONTRACTORS SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS AS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. WHERE DISCREPANCIES ARISE THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED.
- 4. ALL CONTRACTORS AND ANY SUB-CONTRACTORS SHALL CONSULT ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATION AND DIMENSIONS OF CURBS, PADS. INSERTS, SLEEVES, DRIPS, REGLETS, REVEALS, FINISHES, DEPRESSIONS, DOOR CLOSERS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- SIZE AND LOCATION OF ALL ROOF, FLOOR, AND WALL OPENINGS TO BE VERIFIED WITH MECHANICAL AND ELECTRICAL DRAWINGS AND CONTRACTORS. OPENINGS LESS THAN 12 INCHES ARE GENERALLY NOT SHOWN.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS, ERRORS, OR OMISSIONS OF THE CONTRACTOR OR ANY SUB-CONTRACTOR, OR ANY OF THE CONTRACTOR OR SUBCONTRACTORS AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND MANNER OF CONSTRUCTION AND FOR THE SAFETY OF PERSONS AND PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATION DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTION AND PROGRAMS.
- THE ARCHITECT, CONTRACTOR, OWNER, AND END-USER OF THE STRUCTURE SHOULD EXPECT TO SEE SOME DEGREE OF RANDOM CRACKING IN THE SLAB-ON-GRADE. RANDOM CRACKING INCLUDES, BUT IS NOT LIMITED TO: SHRINKAGE CRACKS, CRACKS AT RE-ENTRANT CORNERS, AND CRACKS ADJACENT TO POINTS OF SLAB FIXITY. RANDOM CRACKING GENERALLY DOES NOT INCLUDE CRACKS WITH VERTICAL DISPLACEMENT. RANDOM CRACKS WITHIN THE SLAB-ON-GRADE DO NOT TYPICALLY IMPACT THE STRUCTURAL INTEGRITY OF THE SLAB AND ARE NOT NECESSARILY INDICATIVE OF STRUCTURAL ISSUES OR CONCERNS.
- MECHANICAL UNITS AND EQUIPMENT SUPPORTED BY ROOF AND ELEVATED FLOOR STRUCTURE ARE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER, AND MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF UNIT SIZE, WEIGHT, AND LOCATION.
- THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. DURING ERECTION OF THE BUILDING, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TEMPORARY GUYING, SHORING. BRACING. FORMING, ETC., TO HOLD THE STRUCTURE IN PROPER ALIGNMENT AND TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED; INCLUDING LATERAL LOADS, TEMPERATURE DIFFERENTIALS, AND STOCKPILES OF MATERIAL AND EQUIPMENT. SUCH MEASURES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY AND UNTIL ALL FRAMING AND CONNECTIONS ARE IN PLACE. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF SUCH TEMPORARY MEASURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONSTRUCTION DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO
- ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH THE SUPPLIERS INSTRUCTIONS AND REQUIREMENTS.
- 12. CONTRACTOR AND SUB-CONTRACTORS SHALL THOROUGHLY REVIEW ALL DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING BIDS. MISCELLANEOUS FASTENERS, CLIPS, ETC., THAT ARE NOT DETAILED ON THE DRAWINGS BUT ARE PART OF THE REQUIREMENTS FOR FULL INSTALLATION OF ALL STRUCTURAL SYSTEMS ARE TO BE PART OF THE BID. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE BID TO ASCERTAIN CONDITIONS WHICH MY ADVERSELY AFFECT THE BID.
- 13. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONSTRUCTION DRAWINGS AND/OR SPECIFICATION AND/OR EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- 14. CONTRACTOR SHALL REVIEW, STAMP, SIGN, AND DATE ALL SHOP DRAWINGS PRIOR TO FORWARDING TO THE ARCHITECT/ENGINEER. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT. AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSION, ETC..

15. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES ALL DEPRESSIONS, DIMENSIONS, ELEVATIONS, SLEEVES, CHASES, HANGERS, OPENING, INSERTS, ANCHORS, EQUIPMENT SUPPORTS, AND DETAILS WITH THE ENTIRE CONTRACT DOCUMENT PACKAGE, INCLUDING SPECIFICATIONS AND ARCHITECTURAL, STRUCTURAL MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. FOR CONCRETE CONSTRUCTION, THE INSERTS, EMBEDDED PLATES, ETC., SHALL NOT INTERFERE WITH REINFORCEMENT LOCATIONS.

- THESE DRAWINGS INCLUDE SPECIFIED COMPONENTS AND PRODUCTS, I.E. EPOXY, METAL DECK. IF A SUPPLIER/MANUFACTURER DIFFERENT THAN SPECIFIED ON THESE DRAWINGS IS DESIRED AS A SUBSTITUTE. A SUBMITTAL SHOWING THE SUBSTITUTE IS EQUIVALENT TO THE PRODUCT SPECIFIED MUST BE PROVIDED TO AND APPROVED BY THE ENGINEER OF RECORD. IT IS THE SUBMITTERS RESPONSIBILITY TO SHOW THE SUBSTITUTE IS EQUIVALENT, NOT THE ENGINEER OF RECORD.
- 17. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC AS REQUIRED BY THE BUILDING OFFICIAL. INSPECTION REPORTS FOR THE ITEMS LISTED IN THE SPECIAL INSPECTION SCHEDULE SHALL BE FURNISHED TO THE STRUCTURAL ENGINEER OF RECORD IN A TIMELY MANNER AND SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES THAT ARE NOT CORRECTED SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND STRUCTURAL ENGINEER OF RECORD.

## **DESIGN LOADS**

1.	ROOF LIVE LOAD	20 PSF
2.	ROOF LIVE LOAD (PATIO)	100 PSF
3.	FLOOR LIVE LOAD (TYPICAL)	40 PSF
4.	FLOOR LIVE LOAD (CORRIDOR)	100 PSF
5.	GROUND SNOW LOAD	5 PSF
6.	ROOF SNOW LOAD	5 PSF
7.	OCCUPANCY CATEGORY	II
8.	BASIC WIND SPEED (ASCE/SEI 7)	105 M.P.H. EXPOSURE C
	WIND COMPONENTS AND OLARDING	00 505 (MALLO)
9.	WIND COMPONENTS AND CLADDING	39 PSF (WALLS)
10.	SEISMIC DESIGN CATEGORY (ASCE/SEI 7)	Α
	SDS SD1 SITE CLASS SEISMIC FORCE RESISTING SYSTEM	0.064 0.04 D SHEAR WALLS

## **EXISTING CONSTRUCTION**

- FIELD VERIFY GRADES, SIZES, LOCATIONS AND CONDITIONS OF ALL ITEMS ON PLANS AND DETAILS BEFORE STARTING WORK. REPORT DISCREPANCIES THAT WILL PREVENT CONFORMANCE TO CONSTRUCTION DOCUMENTS TO THE ENGINEER OF RECORD.
- EXISTING STRUCTURE TO REMAIN IS SHOWN SCREENED (LIGHT). EXISTING STRUCTURE TO BE REMOVED IS NOT SHOWN.
- ALL EXISTING CONSTRUCTION AFFECTED BY DEMOLITION SHALL BE SHORED UNTIL NEW CONSTRUCTION SUPPORT MEMBERS ARE IN PLACE.

### **FOUNDATION**

DESIGN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF HAS BEEN ASSUMED. ALL EXTERIOR FOOTINGS TO BE 3'-0" BELOW FINISH GRADE UNO.

UNLESS NOTED OTHERWISE; CENTER COLUMN FOOTINGS ON COLUMN CENTERLINES, CENTER WALL FOOTINGS ON FOUNDATION WALLS.

SLAB ON GRADE SHALL BE UNDERLAIN BY VAPOR BARRIER AND 6 INCHES MINIMUM OF CRUSHED ROCK OR CONCRETE. REINFORCE ALL SLABS ON GRADE WITH #3 AT 18 INCHES EACH WAY IN OTHER CELLS WITH GROUT AS INDICATED ON DRAWINGS. ALL REINFORCEMENT SHALL BE IN PLACE TOP 1/3 OF SLAB UNLESS NOTED OTHERWISE. AT DROPPED OR DEPRESSED SLABS ON GRADE MAINTAIN GRAVEL THICKNESS, SLAB DEPTH, REINFORCEMENT AND REINFORCEMENT POSITION.

BACK FILL AROUND THE EXTERIOR FOUNDATION WALLS WITH A FREE DRAINING GRANULAR MATERIAL TO THE ELEVATION OF THE ROUGH GRADE. PLACEMENT OF BACKFILL IS NOT ALLOWED UNTIL THE SLAB ON GRADE IS IN PLACE AND THE MAIN FLOOR DIAPHRAGM IS COMPLETED. TUNNEL CONCRETE WORK, FREE STANDING AND FOUNDATION WALLS SHALL BE COMPLETE AND AT DESIGN STRENGTH BEFORE BACKFILL IS PLACED.

CONTRACTOR TO KEEP EXCAVATIONS DRY AND PROTECTED FROM FROST AT ALL TIMES DURING THE FOUNDATION CONSTRUCTION. NOTIFY ENGINEER IF NATURE OF SOIL AT DEPTHS SHOWN IS NOT SUITABLE FOR FOUNDATIONS.

MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS

FOOTINGS INTERIOR SLABS ON GRADE SLABS OVER STEEL DECK	3500 PSI MAX. W/C RATIO OF 0.50 4000 PSI MAX. W/C RATIO OF 0.45 3500 PSI MAX. W/C RATIO OF 0.45
EXPOSED CONCRETE SLABS AND GARAGE SLABS	4000 PSI MAX. W/C RATIO OF 0.45
FOUNDATION WALLS, WALLS, COLUMNS AND BEAMS	4000 PSI MAX. W/C RATIO OF 0.45

EXTERIOR EXPOSED CONCRETE SHALL HAVE 4 TO 6% ENTRAINED AIR. SLABS WITH HARD TROWELLED FINISH TO HAVE NO AIR ENTRAINMENT ADDED. COORDINATE WITH ARCHITECTURAL FOR

AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33. MIX DESIGN SHALL CONTAIN A MINIMUM OF 50% COARSE AGGREGATES BY GRADATION REQUIREMENTS (NO.67 GRADING) SET FORTH IN ASTM C33.

NO ALUMINUM SHALL BE PLACED IN THE CONCRETE.

CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318-05 (R-05), "CHAPTER 3 FOR STANDARDS FOR TESTS & MATERIALS, CHAPTERS 4, 5, 6 & 7 FOR CONSTRUCTION REQUIREMENTS". REFER TO ACI 302.1R-04 FOR SLAB ON GRADE MIX DESIGN.

PIPE OR ELECTRICAL CONDUIT EMBEDDED IN CONCRETE SHALL NOT BE LARGER IN OUTSIDE DIAMETER AT ITS WIDEST (OR FITTING) THAN 1/3 THE THICKNESS OF THE SLAB OR WALL. SLEEVES. CONDUIT, OR PIPES THROUGH SLABS AND WALLS SHALL BE PLACED NO CLOSER THAN THREE DIAMETERS ON CENTER AND THEY DO NOT DISPLACE REINFORCING. DO NOT CUT HOLES IN CONCRETE SLABS, BEAMS, COLUMNS, OR WALLS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

LOCATION OF ALL CONSTRUCTION AND CONTROL JOINTS SHALL BE LOCATED AND DETAILED ON SHOP DRAWINGS AND ARE SUBJECT TO ENGINEERS APPROVAL. IF SLAB ON GRADE CONTROL JOINTS ARE NOT SPECIFICALLY LOCATED ON DRAWINGS, PROVIDE CONTROL JOINTS AT 10'-0" ON CENTER MAXIMUM WITH A LENGTH TO WIDTH RATIO OF 1.5. PROVIDE (2) #4x4'-0" AT ALL NON-CONTINUOUS CONTROL JOINTS. PROVIDE (2) #4x4'-0" AND (1) #4x24"x24" CORNER BAR AT ALL REENTRANT CORNERS OF SLAB ON GRADE.

REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DIMENSION OF CONCRETE REVEALS, NOTCHES, REGLETS, DRIPS, PADS, CURBS, CHAMFERS BLOCKOUTS AT DOORWAYS, AND ALL OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. CHAMFER ALL EXPOSED CORNERS OF BEAMS, COLUMNS, JOISTS AND WALLS, SUBJECT TO ARCHITECTS APPROVAL

- TRUSS TYPE MASONRY JOINT REINFORCEMENT: W1.7 (9 GAGE), ASTM A1064, FY=70,000 PSI
- WELDED WIRE REINFORCING (WWR): ASTM A82 AND A185

DEFORMED BARS (REBAR): ASTM A615, GRADE 40 FOR #3; GRADE 60 FOR #4 AND LARGER; ASTM A706 FOR WELDED CONDITIONS.

48-BAR DIAMETERS AT CELLS WITH SINGLE BAR (HORIZ. AND VERT.) 64-BAR DIAMETERS AT CELLS WITH TWO BARS (HORIZ, AND VERT.) CLASS "B' LAP SPLICE, TYPICAL UNLESS NOTED OTHERWISE WELDED WIRE FABRIC: WIRE SPACING +2"

CONCRETE COVER FOR CAST-IN-PLACE AND NON-PRE-STRESSED CONCRETE SHALL BE AS SPECIFIED BELOW UND ON THESE DRAW

IFIED BELOW U.N.O. ON THESE DRAWINGS:	
CONCRETE CAST AGAINST SOIL	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#6 OR GREATER)	2"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#5 OR LESS)	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER (SLAB, WALL, JOIST)	3/4"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER (BEAM, COLUMN)	1 1/2"
SLAB ON GRADE	1 1/2"

SECURELY TIE ALL REINFORCING IN PLACE WITH DOUBLE ANNEALED 16-GAUGE IRON WIRE OR

APPROVED CLIPS PRIOR TO CONCRETE OR GROUT PLACEMENT.

SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION.

## **TYPICAL CMU WALL REINFORCING**

UNLESS NOTED OTHERWISE ON THESE DRAWINGS. REINFORCE CMU WALLS AS FOLLOWS:

8" CMU WALLS - INTERIOR #5 VERT @ 48" O.C. CENTER OF WALL (2) #5 VERT AT EACH CORNER OF WALL

TRUSS TYPE HORIZ JOINT REINFORCEMENT @ 16" O.C.

SOLID GROUT AT REINFORCED CELLS ONLY UNO PROVIDE (2) TYPICAL VERT FULL HEIGHT JAMB STEEL EACH SIDE OF OPENINGS PROVIDE (2) #4 HORIZ BOND BEAM AT FLOOR AND ROOF LEVELS AND TOP OF WALL

MFORCING WITH GROUT IN LIFTS NOT EXCEEDING 4'-0" IN HEIGHT. FILL

ASTM C90 CONCRETE MASONRY UNITS WITH NET AREA MINIMUM COM ,9<mark>0</mark>0 PSI. ASTM C270 MORTAR TYPE S, MINIMUM COMPRESSIVE AT 28 DAYS. ASTM C476 GROUT WITH MINIMUM COMPRESSIVE STRENGTH OF 2 TAREA COMPRESSIVE STRENGTH OF MASONRY, F'M = 1,500

PRIOR TO GROUTING WITH VERTICAL BARS HELD AT TOP, BOTTOM AND 120 BAR DIAMETERS MAXIMUM ON CENTER: VIROUF SHALL 62 CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING.

CONTROL SHALL PROVIDE BRACING FOR MASONRY WALLS, AS REQUIRED, UNTIL CONNECTION TO FLOOR AND/OR ROOF DIAPHRAGMS ARE COMPLETED.

- STRENGTH OF MASONRY ASSEMBLY SHALL BE DETERMINED BY THE UNIT STRENGTH METHOD IN ACCORDANCE WITH SECTION 2105.2.2.1 OF THE 2006 IBC.
- PROVIDE HORIZONTAL TRUSS-TYPE REINFORCING AT 16" ON CENTER MAXIMUM UNO. NON-BEARING INTERIOR PARTITIONS SHALL STOP 1" BELOW STRUCTURAL SLABS OR STEEL
- WHERE BOND BEAMS INTERSECT AT CORNERS AT DIFFERENT ELEVATIONS, RUN EACH BOND
- BEAM AROUND CORNER FOR TWO BLOCK LENGTHS MINIMUM. WHERE BOND BEAMS INTERSECT PARALLEL AT DIFFERENT ELEVATIONS, LAP BOND BEAMS
- PROVIDE CORNER AND INTERSECTION BARS IN ALL BOND BEAMS.
- CONTROL AND EXPANSION JOINTS SHALL BE PROVIDED IN MASONRY WALLS AT 30' MAXIMUM PER TYPICAL MASONRY DETAILS. SEE ARCHITECTURAL FOR LOCATIONS.

PROVIDE (2) #4 VERTICAL EACH SIDE OF ALL OPENINGS IN MASONRY WALLS UNO.

COORDINATE WITH LINTEL SCHEDULE AND PROVIDE GREATER REINFORCING REQUIREMENTS.

COORDINATE WITH LINTEL SCHEDULE AND PROVIDE GREATER REINFORCING REQUIREMENTS. PROVIDE (2) #4 VERTICAL AT ALL WALL CORNERS, ENDS AND INTERSECTIONS UNO.

PROVIDE BOND BEAM WITH (2) #4 CONTINUOUS BENEATH ALL SLAB AND BEAM BEARINGS UNO.

PROVIDE 1/2" AIR GAP AROUND SIDES, TOP AND END OF WOOD STRUCTURAL MEMBERS BEARING ON MASONRY.

FRAMING U.N.O.

FOUR BLOCK LENGTHS MINIMUM.

STEEL JOISTS BEARING CONNECTIONS SHALL BE BY WELDED UNO. PROVIDE ERECTION BOLTS AT LOCATION REQUIRED BY SJI SPECIFICATIONS. WHERE JOIST BEARING CONDITIONS REQUIRE NON-STANDARD BEARING ENDS, JOIST FABRICATOR SHALL PROVIDE SPECIAL BEARING ENDS AS REQUIRED TO ACCOMMODATE SUCH CONDITIONS.

SUSPENSION OF ANY MISCELLANEOUS ITEMS FROM THE JOISTS SHALL BE ONLY AT TOP AND BOTTOM CHORD PANEL POINTS UNLESS SPECIFICALLY DETAILED OTHERWISE.

JOIST FABRICATOR SHALL PROVIDE JOIST BRIDGING PER SJI RECOMMENDATIONS. ALL JOISTS AND JOIST BRIDGING SHALL BE DESIGNED TO RESIST THE UPLIFT PRESSURES SHOWN ON

UNLESS NOTED OTHERWISE

ALL ROOF JOISTS TO BE DESIGNED FOR A 150 LB ADD-LOAD AND 150 LB BEND-CHECK ALL FLOOR JOISTS TO BE DESIGNED FOR A 300 LB ADD-LOAD AND 300 LB BEND-CHECK

JOIST MANUFACTURER MAY NOT DESIGN JOISTS FOR LESS THAN LOADS SPECIFIED IN THE SJI CAPACITY TABLES FOR JOIST DESIGNATIONS SHOWN ON PLANS.

### STRUCTURAL AND MISCELLANEOUS STEEL

STEEL CONSTRUCTION MANUAL, 14TH EDITION MATERIAL SPECIFICATIONS U.N.O.

WIDE FLANGE AND S SHAPES	ASTM A992, FY=50KSI
CHANNELS, ANGLES, PLATES AND BARS	ASTM A36, FY=36KSI
HOLLOW STRUCTURAL SHAPES (HSS)	ASTM A500 GR. B, FY=46KSI
PIPE	ASTM A53, GR. B, FY=35KSI
STRUCTURAL BOLTS (U.N.O.)	ASTM A325
MACHINE BOLTS (WHERE NOTED)	ASTM A307
ANCHOR BOLTS AND RODS AND THREADED RODS	ASTM F1554 GRADE 36KSI
HIGH STRENGTH ANCHOR BOLTS AND RODS (AS NOTED)	ASTM F1554 GRADE 105KSI
HEADED OR THREADED STUD ANCHORS (H.S.A. OR T.S.A.)	ASTM A108-69T
DEFORMED BAR ANCHORS (D.B.A.)	ASTM A496 OR ASTM A706
WELDING ELECTRODES	E70XX
NON-SHRINK GROUT (7,000 PSI)	ASTM C1107, GR. A
POWDER ACTUATED FASTENER (PAF OR PDF)	HILTI X-U (0.157" DIA)
EXPANSION BOLTS (CONCRETE)	HILTI KWIK BOLT TZ
EXPANSION BOLTS (MASONRY)	HILTI KWIK BOLT 3
EPOXY ADHESIVE - CONCRETE	HILTI HIT-HY 200
EPOXY ADHESIVE - MASONRY	HILTI HIT-HY 70 W/ SCREEN TU

ALL STRUCTURAL STEEL ERECTION AND FABRICATION SHALL BE ACCORDING TO THE CURRENT EDITION OF AISC "SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

ALL STRUCTURAL BOLTED CONNECTIONS SHALL BE ACCORDING TO THE CURRENT EDITION OF RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR SNUG TIGHTENED. PRETENSIONED, OR SLIP-CRITICAL JOINTS. ALL STRUCTURAL BOLTED CONNECTIONS TO BE SNUG TIGHTENED UNO. FOR SLIP-CRITICAL JOINTS, AS NOTED, THE USE OF TENSION INDICATING WASHERS OR TWIST-OFF BOLT ASSEMBLIES SHALL BE PERMITTED ONLY ACCORDING TO THE ABOVE MENTIONED STANDARD.

4. ALL WELDING SHALL BE PREFORMED IN ACCORDANCE WITH AWS D1.1. ALL WELDING SHALL BE PREFORMED BY AWS CERTIFIED WELDERS. ALL WELDING OF STRUCTURAL STEEL SHALL BE PREFORMED IN THE SHOP WHENEVER PRACTICAL. AN EFFORT HAS BEEN MADE TO INDICATE WELDS THAT CAN BE OR SHOULD BE FIELD WELDED. IT IS, HOWEVER, THE FABRICATORS RESPONSIBILITY TO DECIDE WHERE AND HOW THE WELDING IS TO BE ACCOMPLISHED TO ACHIEVE THE INTENDED RESULT.

COMPLETE JOINT PENETRATION (CJP) WELDING: PROVIDE BACKER BARS, RUN OFF TABS, AND ACCESS HOLES PER AWS D1.1. BACKER BARS SHALL BE REMOVED AFTER WELDING, THE ROOT WELD BACK GOUGED AND REPAIRED IF NECESSARY AND REINFORCED WITH A FILLET. RUN OFF TABS SHALL BE REMOVED AFTER WELDING WITH THE FLANGE EDGE GROUND SMOOTH.

STEEL FABRICATOR SHALL BE AN AISC CERTIFIED SHOP FOR CATEGORY 1 STEEL STRUCTURES AND SHALL MAINTAIN DETAILED QUALITY CONTROL PROCEDURES.

BEAMS SHALL BE FABRICATED FOR PLACEMENT OF NATURAL CAMBER UP.

STRUCTURAL STEEL SUPPLIER SHALL FURNISH COLUMN ANCHOR RODS.

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. PROVIDE CONNECTIONS REQUIRED FOR ATTACHMENT OF WOOD AND STEEL MEMBERS.

10. USE CONNECTIONS AS DETAILED ON PLANS. WHEREVER CONNECTIONS ARE NOT DETAILED FABRICATOR SHALL REQUEST ENGINEER TO SUPPLY CONNECTION DETAIL.

11. ALL 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. CONFORMANCE TO OR DEVIATION FROM ALLOWABLE CAPACITIES DURING STEEL ERECTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR (SEE GENERAL SECTION OF G.S.N.)

12. PRIOR TO GROUTING, COLUMNS SHALL BE ERECTED AND ALIGNED AS TO PLUMBNESS AND ELEVATION BY MEANS OF STEEL SHIMS OR LEVELING NUTS UNDER THE BASE PLATES. SETTING PLATES SHALL ONLY BE USED AS TEMPLATES TO LOCATE ANCHOR BOLTS DURING CONCRETE PLACEMENT.

13. STRUCTURAL STEEL PERMANENTLY EXPOSED TO VIEW SHALL RECEIVE COMMERCIAL BLAST CLEANING. PRIME WITH 5 MILS EPOXY PRIMER, TOP COAT SHALL BE 3 DRY MILS ALIPHATIC URETHANE, THIN FILM. ARCHITECT TO APPROVE COATING AND COLOR. DAMAGE DURING TRANSPORT, ERECTION, AND FIELD WELDING PROCESSES SHALL BE REPAIRED TO MATCH THE SHOP APPLIED COATING.

ALL WOOD BEARING ON CONCRETE OR MASONRY, IF LESS THAN 4'-0" ABOVE FINISH GRADE, SHALL BE PRESSURE TREATED. WHEREVER NECESSARY TO CUT OR DRILL TREATED LUMBER, TREAT THE CUT OR BORED SURFACES WITH TWO HEAVY COATS OF THE SAME PRESERVATIVE AS USED IN ORIGINAL TREATMENT.

LUMBER MINIMUM PROPERTIES SCHEDULE							
SPECIES/PRODUCT	GRADE	Fb (PSI)	Ft (PSI)	Fv (PSI)	Fc (PSI)	Fc (PSI)	E (PSI)
SPRUCE-PIN-FIR (NORTH)	No. 2	875	450	135	425	1150	1,400,000
MICROLLAM LVL	1.9E	2,600	1,555	285	750	2,510	1,900,000
PARALLAM PSL	1.8E	2,400	1,755	190	425	2,500	1,800,000
PARALLAM PSL	2.0E	2,900	2,025	290	750	2,900	2,000,000
TIMBERSTRAND LSL	1.55E	2,325	1,070	310	800	2,050	1,550,000

PLYWOOD SHEATHING SHALL CONFORM TO THE CURRENT EDITION OF THE U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD 1 OR 2 (DOC PS 1 OR 2) OR THE APA PANEL DESIGN SPECIFICATION (PDS) AND SHALL BE INSTALLED IN STAGGERED PATTERN.

BOLT HOLES IN WOOD SHALL BE DRILLED 1/16" MAXIMUM OVERSIZE. HOLES FOR SCREWS AND LAG SCREWS SHALL BE FIRST BORED FOR THE SAME DEPTH AND DIAMETER OF THE SHANK, THEN THE REMAINDER OCCUPIED BY THE THREAD PORTION SHALL BE BORED NOT LARGER IN DIAMETER THAN THE ROOT OF THE THREAD. ALL SCREWS SHALL BE SCREWED NOT DRIVEN INTO PLACE. PROVIDE WASHERS UNDER ALL NUTS AND HEADS OF BOLTS AND LAG SCREWS.

PROVIDE SOLID BLOCKING AT MID-HEIGHT OF ALL WALLS U.N.O.

PROVIDE SOLID BLOCKING BETWEEN JOISTS AT ALL SUPPORTS

WOOD FRAMING AND CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.

7. ALL COLUMNS SHOWN ON STRUCTURAL DRAWINGS SHALL BE CONTINUOUS U.N.O.

8. SET ALL JOISTS WITH CROWN UP.

TYPICAL FRAMING ANCHORS SHALL BE "SIMPSON STRONG TIE" OR APPROVED EQUIVALENT AS INDICATED ON DRAWINGS. INSTALL AND CONNECT PER MANUFACTURER RECOMMENDATIONS.

10. CONNECTORS, ANCHORS, AND FASTENERS ATTACHED TO PRESSURE TREATED WOOD TREATED WITH ACQ-C OR ACQ-D SHALL BE GALVANIZED AND SHALL MEET ONE OF THE FOLLOWING SPECIFICATIONS: ASTM-A653-G185 OR GREATER; ASTM-A123-2.0 OZ/FT2 MIN; ASTM-A153; ASTM-B695-

11. IF WOOD TREATMENT IS OTHER THAN LISTED ABOVE, CONTACT THE TREATMENT SUPPLIER FOR CORROSION PROTECTION REQUIREMENTS AND SUBMIT TO ARCHITECT/ENGINEER FOR APPROVAL. CONNECTIONS SHOULD NOT INCORPORATE DISSIMILAR METALS OR METALLIC COATINGS IN CONTACT WITH EACH OTHER.

## **ABBREVIATIONS**

NUMBER

ANCHOR BOLT ADD'L ADDITIONAL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL ALT ALTERNATE **ARCHITECTURAL** ATTM ATTACHMENT BLDG BUILDING BLKG BLOCKING BOTTOM BASEMENT BETWEEN COLD FORMED STEEL CFS CONTROL OR CONSTRUCTION JOINT COMPLETE JOINT PENETRATION WEL CENTERLINE CMU CONCRETE MASONRY UNITS COLUMN CONC CONCRETE CONN CONNECTION

CONT CONTINUOUS COORD COORDINATE DETAIL

DET

**EOR** 

**EXIST** 

EXP

FDN

FLR

FTG

**HORIZ** 

HS

HSA

HSS

LG

LLH

LSL

LVL

MAX

MECH

MFR

MIN

MTL

NS

OC OD

OPP

OSB

PEMB

PAF

PLF

PSF

PSI

PSL

QTY

REINF

REM

RTU

SCHD

SIM

SLV

SOG

SPF

SQ

STD

T&B

THK

TOF

TOM

TOS

TOW

TSA

TYP

**VERT** 

UNO

W/

WF

WWR

UPLIFT PRESSURE (PSF)

28.7

26.3

WIND COMPONENTS AND CLADDING

PRESSURES SHOWN ACT AWAY FROM THE

COMPONENT AREA SHOWN IS THE AREA

TRIBUTARY TO THE COMPONENT. LINEAR

INTERPOLATION IS ALLOWED BETWEEN 10

COMPONENT

AREA (SF)

100

ROOF SURFACE.

a = 14' - 0"

AND 100 SQUARE FEET.

**ROOF ZONES** 

(2)

48.2

31.2 31.2

72.6

REQ'D

PT

DEFORMED BAR ANCHOR DIAMETER **DIMENSION** DIRECTION DOUGLAS FIR-LARCH

EACH FACE **EMBEDDED** EDGE NAILING ENGINEER OF RECORD

**EACH WAY EXISTING EXPANSION FOUNDATION** FINISH **FLOOR** FIELD NAILING

FOOTING FIELD VERIFY GAUGE

GRADE HOOK HORIZONTAL HIGH STRENGTH HEADED STUD ANCHOR

INSIDE DIAMETER INFO INFORMATION POUNDS LONG LONG LEG HORIZONTAL LONG LEG VERTICAL

MAXIMUM MECHANICAL MANUFACTURER

NOT IN CONTRACT NON-SHRINK ON CENTER **OUTSIDE DIAMETER** OPPOSITE ORIENTED STRAND BOARD POWDER ACTUATED FASTENER

PLATE POINT QUANTITY

REMAINDER REQUIRED SCHEDULE SIMILAR

SQUARE STANDARD TOP AND BOTTOM THICK TOP OF FOOTING TOP OF MASONRY TOP OF STEEL

WIDE FLANGE WELDED WIRE REINFORCING

FIBER-REINFORCED POLYMER

HOLLOW STRUCTURAL SHAPE INTERNATIONAL BUILDING CODE

LAMINATED STRAND LUMBER LAMINATED VENEER LUMBER

MINIMUM METAL

PRE-ENGINEERED METAL BUILDING POUNDS PER LINEAR FOOT POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PARALLEL STRAND LUMBER

REINFORCING **ROOF TOP UNIT** SHORT LEG VERTICAL SLAB-ON-GRADE

SPRUCE-PINE-FIR

TOP OF WALL THREADED STUD ANCHOR TYPICAL VERTICAL UNLESS NOTED OTHERWISE

**REVISION:** 

O

1-16-2024 22-3281

SHEET NO.:



# STATEMENT OF SPECIAL INSPECTIONS

- THIS STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS IS INCLUDED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE BUILDING CODE. THE TABLE OF REQUIRED SPECIAL INSPECTIONS IDENTIFIES THE STRUCTURAL ITEMS TO BE INSPECTED APPLICABLE TO THIS PROJECT AS WELL AS IDENTIFYING THE APPROVED AGENCIES TO BE RETAINED FOR CONDUCTING THESE INSPECTIONS AND TESTS.
- SPECIAL INSPECTIONS SHALL BE PERFORMED BY PERSONNEL AS INDICATED IN THE TABLE.
- S.I. SPECIAL INSPECTOR G.E. GEOTECHNICAL ENGINEER
- IF SPECIAL INSPECTION IS WAIVED BY THE GOVERNING AUTHORITIES, THE GENERAL CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD A COPY OF THE BUILDING OFFICIALS WRITTEN EXEMPTION FOR SPECIAL INSPECTION PRIOR TO STARTING WORK.

MATEDIAL / ACTIVITY		INSPECTION	<u>N</u>
MATERIAL / ACTIVITY	SERVICE	EXTENT	AC
1705	.2 Steel Construction		
Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents)	Submittal Review	Each submittal	
Material verification of structural steel	Shop (3) and field inspection	Periodic	
3. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)  4. Verify member locations, braces, stiffeners, and	Field inspection	Periodic	
application of joint details at each connection comply with construction documents	Field inspection	Periodic	
Structural steel welding:     a. Inspection tasks Prior to Welding (Observe, or		Observe or Perform as	
perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1) b. Inspection tasks During Welding (Observe, or perform	Shop (3) and field inspection	noted (4)	
for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-2) c. Inspection tasks After Welding (Observe, or perform	Shop (3) and field inspection	Observe (4)	
for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3)	Shop (3) and field inspection	Observe or Perform as noted (4)	
6. Structural steel bolting:	Shop (3) and field inspection		
a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)		Observe or Perform as noted (4)	
b.Inspection tasks During Bolting (Observe the QA tasks		Observe (4)	
listed in AISC 360, Table N5.6-2) 2) Snug-tight joints		Periodic	
c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)		Perform (4)	
1705.2.2 Steel Cons	truction Other Than Structu	ral Steel	
Material verification of cold-formed steel deck:     a. Identification markings	Field inspection	Periodic	
b. Manufacturer's certified test reports	Submittal Review	Each submittal	
Connection of cold-formed steel deck to supporting     a. Welding	Shop (3) and field inspection	Periodic	
b. Other fasteners (in accordance with AISC 360,Section N6)			
Verify fasteners are in conformance with approved submittal     Verify fastener installation is in conformance with		Periodic	
approved submittal and manufacturer's		Periodic	
recommendations 1705.3	Concrete Construction		
Inspection of reinforcing steel installation (see 1705.2.2	Shop (3) and field inspection	Periodic	
for welding)  3. Inspection of anchors cast in concrete	Shop (3) and field inspection	Periodic	
4. Inspection of anchors and reinforcing steel post-installed in hardened concrete: Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection	Periodic or as required by the research report issued by an approved source	
Verify use of approved design mix	Shop (3) and field inspection	Periodic	
6. Fresh concrete sampling, perform slump and air content tests and determine temperature of concrete	Shop (3) and field inspection	Continuous	
7. Inspection of concrete placement for proper application	Shop (3) and field inspection	Continuous	
techniques 8. Inspection for maintenance of specified curing	Shop (3) and field inspection	Periodic	
temperature and techniques  12. Inspection of formwork for shape, lines, location and	Field inspection	Periodic	
dimensions 13. Concrete strength testing and verification of	Field testing and review of	Periodic	
i ·	laboratory reports	Feriodic	
compliance with construction documents	Macanry Construction		
1705.4	Masonry Construction  B - Quality Assurance		
1705.4 Level - (A) Level A, B and C Quality Assurance:	B - Quality Assurance	Daviadia	
1705.4 Level -		Periodic	
1705.4  Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f' <sub>AAC</sub> prior to construction	B - Quality Assurance	Periodic Periodic	
1705.4  Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:	B - Quality Assurance Field Inspection  Testing by unit strength method		
Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f' <sub>AAC</sub> prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals	B - Quality Assurance  Field Inspection  Testing by unit strength method or prism test method	Periodic	
1705.4  Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f' <sub>AAC</sub> prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project	B - Quality Assurance  Field Inspection  Testing by unit strength method or prism test method  Field testing	Periodic Continuous	
Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f' <sub>AAC</sub> prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals  3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons  4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages	B - Quality Assurance  Field Inspection  Testing by unit strength method or prism test method  Field testing  Field inspection  Field Inspection  Field Inspection	Periodic  Continuous  Periodic  Periodic  Periodic	
Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f'AAC prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals  3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons  4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and	Field Inspection  Testing by unit strength method or prism test method  Field testing  Field inspection  Field Inspection  Field Inspection  Field Inspection	Periodic  Continuous  Periodic  Periodic  Periodic  Periodic  Periodic  Level B - Periodic	
Level -  (A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f' <sub>AAC</sub> prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals  3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons  4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages  5. Verify construction of mortar joints  7. Verify grout space prior to grouting  9. Verify size and location of structural masonry	Field Inspection  Testing by unit strength method or prism test method  Field testing  Field inspection  Field Inspection  Field Inspection  Field Inspection  Field Inspection  Field Inspection	Periodic  Continuous  Periodic  Periodic  Periodic  Periodic  Level B - Periodic  Level C - Continuous	
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(A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f'AAC prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals  3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons  4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages  5. Verify construction of mortar joints  7. Verify grout space prior to grouting  9. Verify size and location of structural masonry elements  10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.  12. Verify preparation, construction, and protestion of	Field Inspection  Testing by unit strength method or prism test method  Field testing  Field inspection	Periodic  Continuous  Periodic  Periodic  Periodic  Periodic  Level B - Periodic  Level C - Continuous  Periodic  Level B - Periodic  Level C - Continuous	
(A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f' <sub>AAC</sub> prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals  3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons  4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages  5. Verify construction of mortar joints  7. Verify grout space prior to grouting  9. Verify size and location of structural masonry elements  10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.  12. Verify preparation, construction, and protestion of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)	Field Inspection  Testing by unit strength method or prism test method  Field testing  Field inspection	Periodic  Continuous  Periodic  Periodic  Periodic  Periodic  Level B - Periodic  Level C - Continuous  Periodic  Level B - Periodic  Level C - Continuous  Periodic	
(A) Level A, B and C Quality Assurance:  1. Verify compliance with approved submittals  (B) Level B Quality Assurance:  1. Verification of f'm and f'AAC prior to construction  (D) Levels B and C Quality Assurance:  1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project  2. Verify compliance with approved submittals  3. Verify proportions of site-mixed mortar, grout and prestressing grout for bonded tendons  4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages  5. Verify construction of mortar joints  7. Verify grout space prior to grouting  9. Verify size and location of structural masonry elements  10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.  12. Verify preparation, construction, and protestion of masonry during cold weather (temperature below 40°F)	Field Inspection  Testing by unit strength method or prism test method  Field testing  Field inspection	Periodic  Continuous  Periodic  Periodic  Periodic  Periodic  Level B - Periodic  Level C - Continuous  Periodic  Level B - Periodic  Level B - Periodic  Level B - Periodic  Level C - Continuous	
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### . G.E. Geotechnical Engineer 2. S.I. Special Inspector - Not Yet Selected

- Notes: 1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or
- the Design Professional. 2. If the list of Inspection Agents is noted as "Not Yet Selected" the General Contractor shall coordinate submittal of special inspection
- agencies for approval by the Building Offical and the Design Professional. 3. Special Insepctions as required by Section 1704.2.5 are not required where the fabricator is approved in accordance with
- 4. Observe on a random basis, operations need not be delayed pending these inspections. Perform these tasks for each welded joint, bolted connection, or steel element. 5. NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ.



REVISION:				

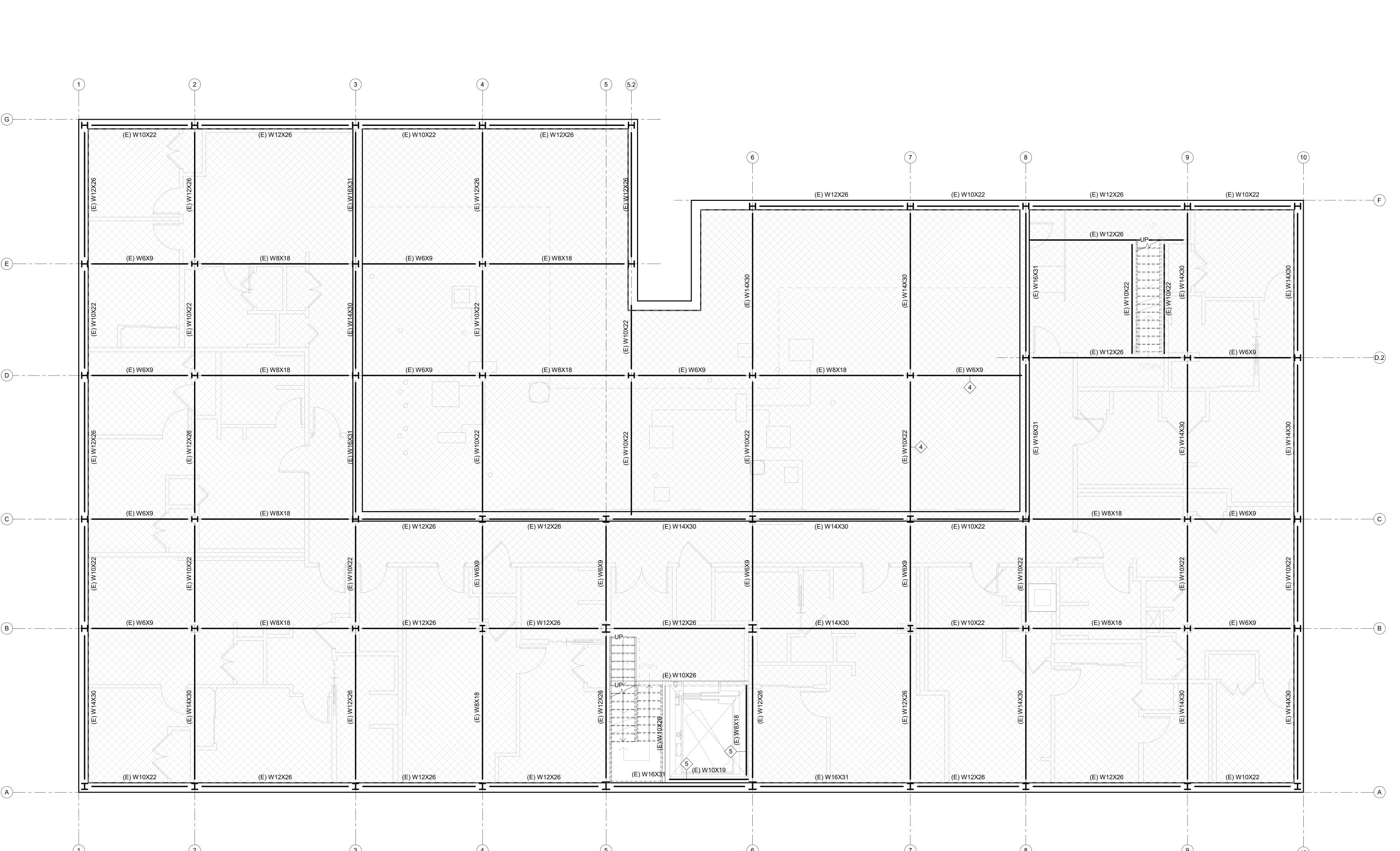
1-16-2024 JOB: 22-3281

SHEET NO.:

1. DEMO ALL FLOOR AND ROOF SLAB/DECK AND METAL JOISTS IN HATCHED AREA.

- 2. EXISTING BEAMS MARKED (E) TO REMAIN U.N.O.
- 3. CONTRACTOR TO SHORE AND BRACE EXISTING ELEMENTS DURING DEMO. BRACING TO REMAIN IN PLACE UNTIL NEW METAL DECK IS IN PLACE AND ATTACHED.
- 4 DEMO EXISTING BEAM AND REPLACE WITH NEW BEAM PER S1.1
- 5 DEMO EXISTING BEAM TO ACCOMODATE NEW CMU ELEVATOR SHAFT





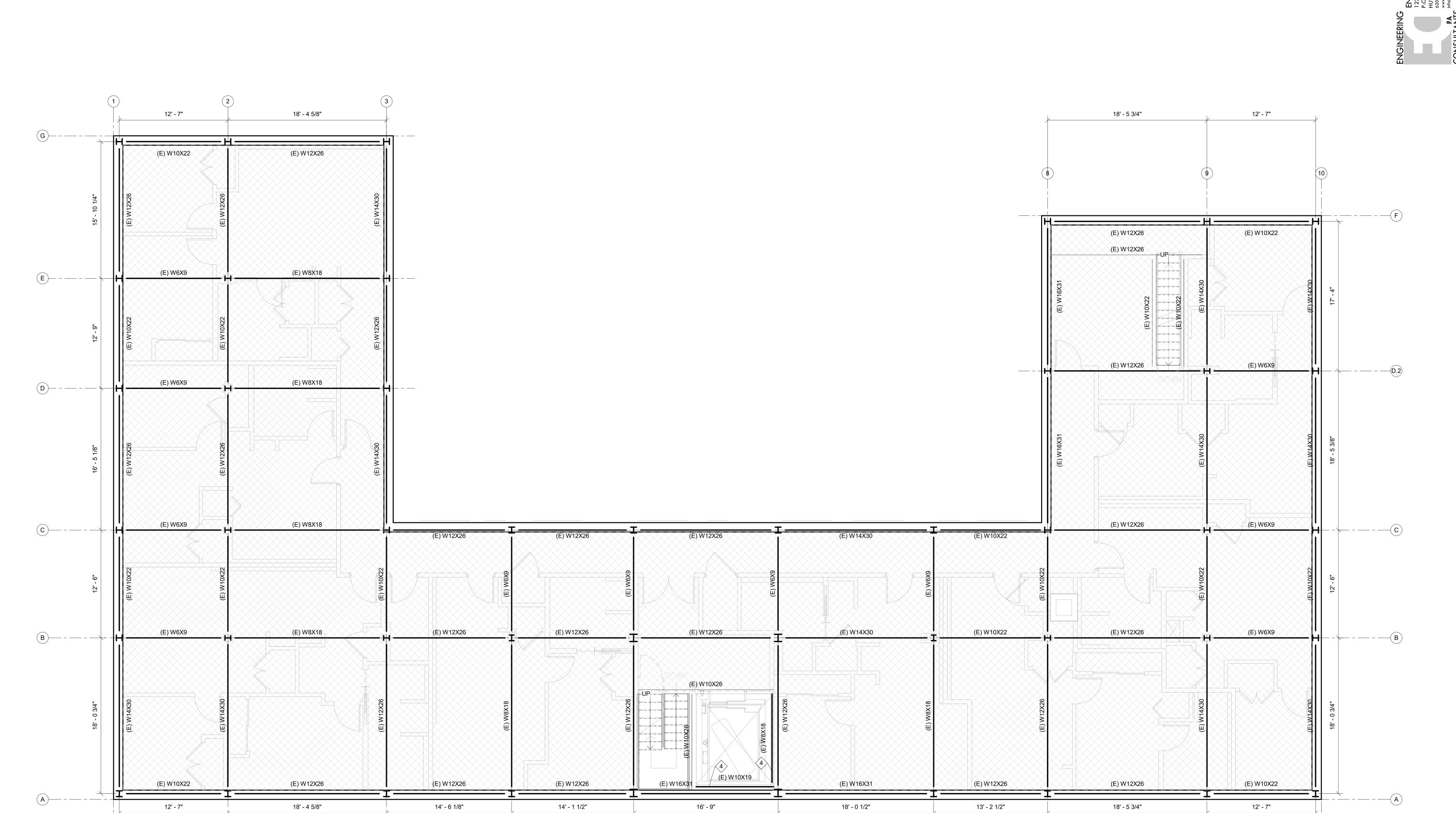


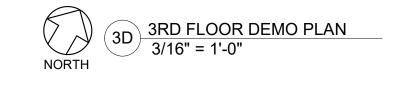
1-16-2024 JOB: 22-3281 SHEET NO.:

SD1.0

- 1. DEMO ALL FLOOR SLAB/DECK AND METAL JOISTS IN HATCHED AREA.
- 2. EXISTING BEAMS MARKED (E) TO REMAIN U.N.O.
- 3. CONTRACTOR TO SHORE AND BRACE EXISTING ELEMENTS DURING DEMO. BRACING TO REMAIN IN PLACE UNTIL NEW METAL DECK IS IN PLACE AND ATTACHED.
- 4 DEMO EXISTING BEAM TO ACCOMODATE NEW CMU ELEVATOR SHAFT







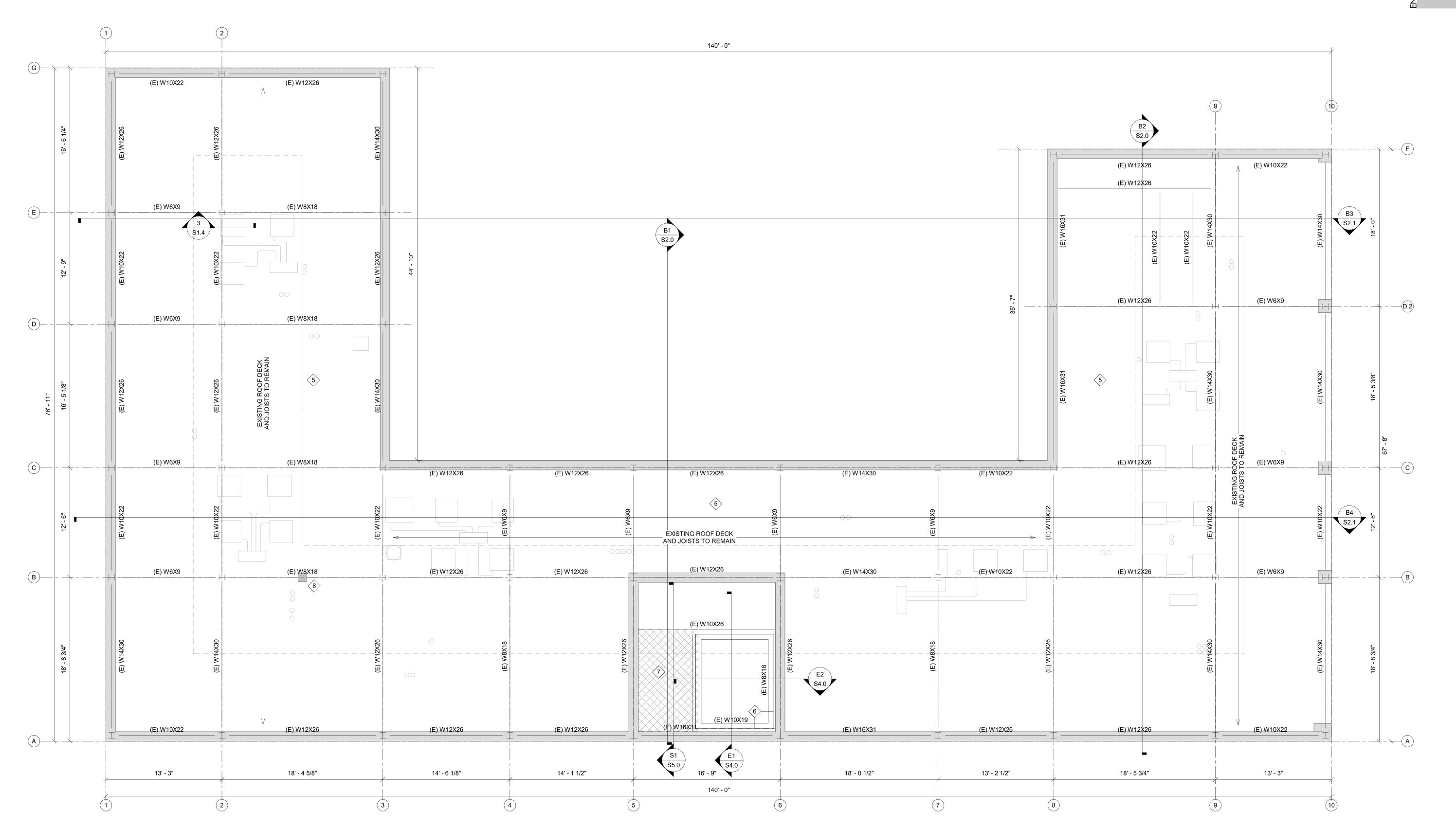
1-16-2024 JOB: 22-3281 SHEET NO.:

SD1.1

- 2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
- ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
- 4. EXISTING ROOF JOISTS & DECK TO REMAIN.
- DEMO AND REPLACE ROOFING, COVER BOARDS, INSULATION, AND MEMBRANE PER ARCHITECTURAL DRAWINGS. TAKE CARE TO PROTECT EXISTING CONCRETE ROOF DECK DURING RE-ROOF WORK.
- 6 DEMO EXISTING BEAM TO ACCOMODATE NEW CMU ELEVATOR SHAFT
- 7 DEMO EXISTING CONCRETE FLOOR DECK IN HATCHED AREA.
- DEMO EXISTING CONCRETE STUB COLUMN ABOVE ROOF TO ACCOMODATE NEW RTU SUPPORT BEAM.





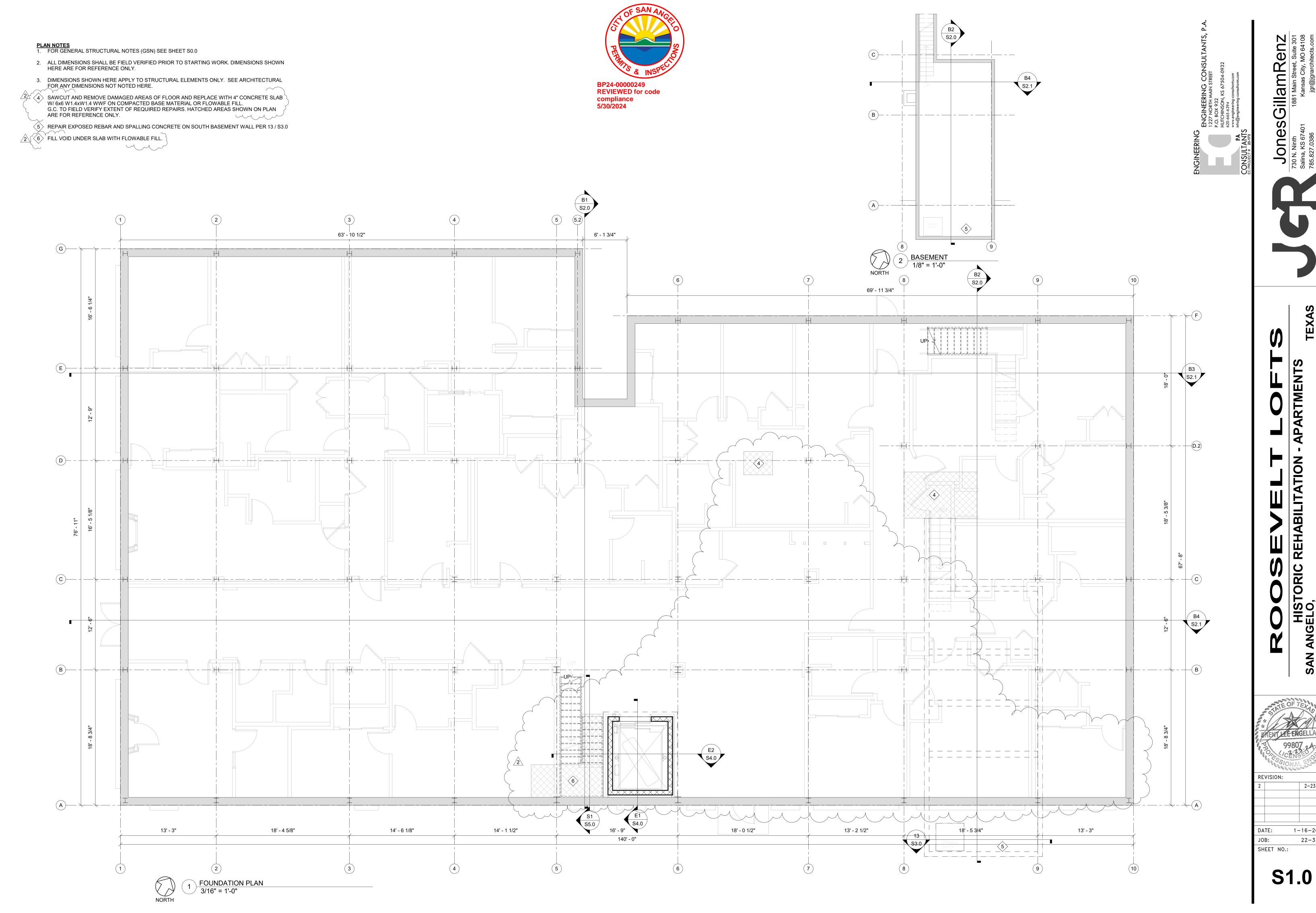




HISTORIC REHABILITA'S SAN ANGELO,

1-16-2024 JOB: 22-3281 SHEET NO.:

SD1.2



2-23-2024

1-16-2024

22-3281

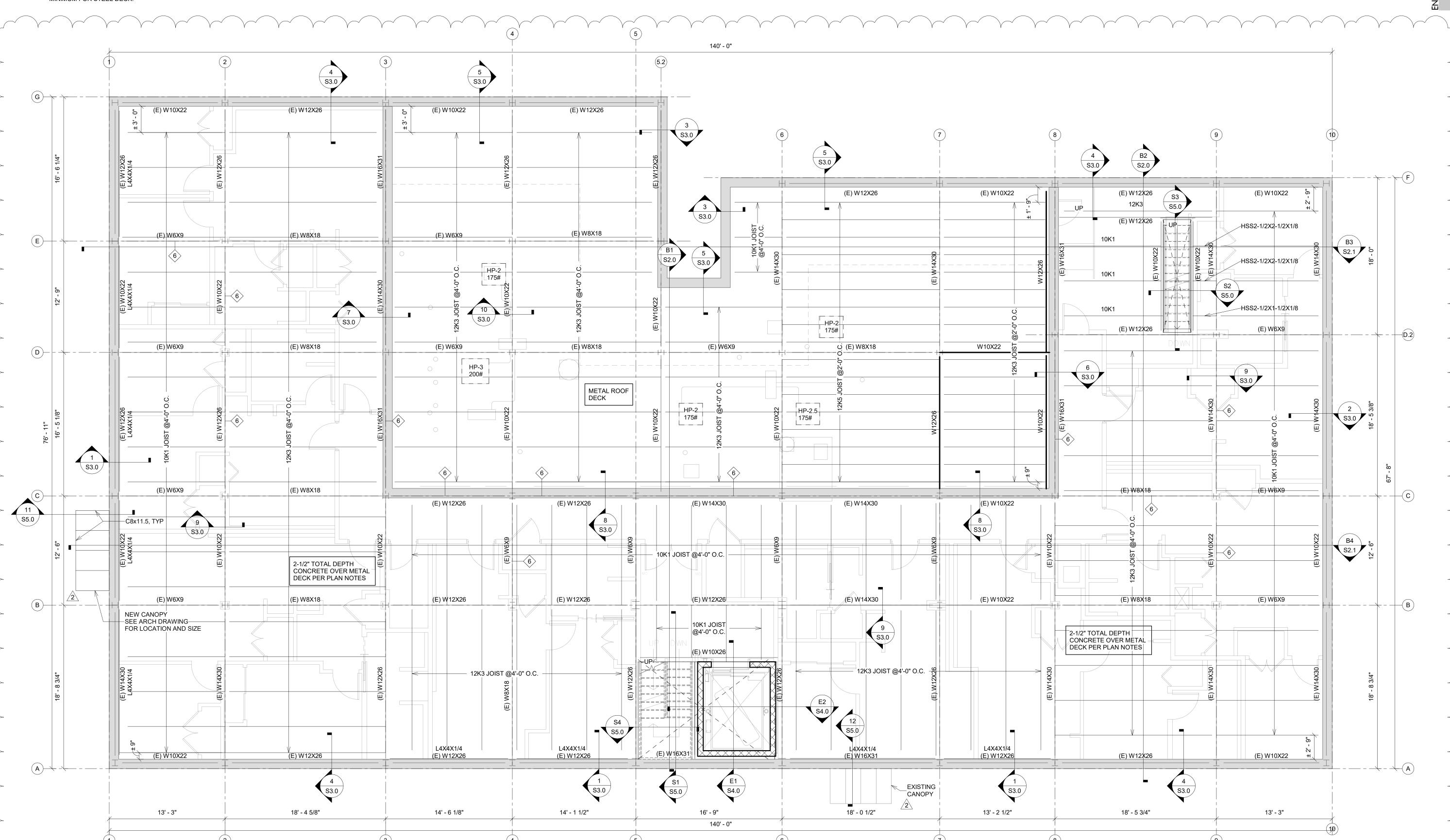
- 2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
- 3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
- 4. 2-1/2" TOTAL DEPTH CONCRETE SLAB OVER METAL DECK: NORMAL WEIGHT CONCRETE W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF CONCRETE W/ 1.0C24 METAL DECK. ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 33/4 PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
- METAL ROOF DECK:

NEW ROOF DECK TO BE 1.5C24 METAL DECK. ATTACH DECK TO PERPENDICULAR SUPPORTS WITH #12 TEK SCREWS AT EVERY FLUTE. ATTACH DECK TO PARALLEL SUPPORTS WITH #12 TEK SCREWS AT 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.

- 6 DELAMINATION ON BEAM
  - A. CLEAN AND REMOVE RUST AND SCALE.
  - B. CHECK REMAINING THICKNESS. C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE W/ MIN. 6" ON EACH SIDE OF DAMAGE. D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE
- 7. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.







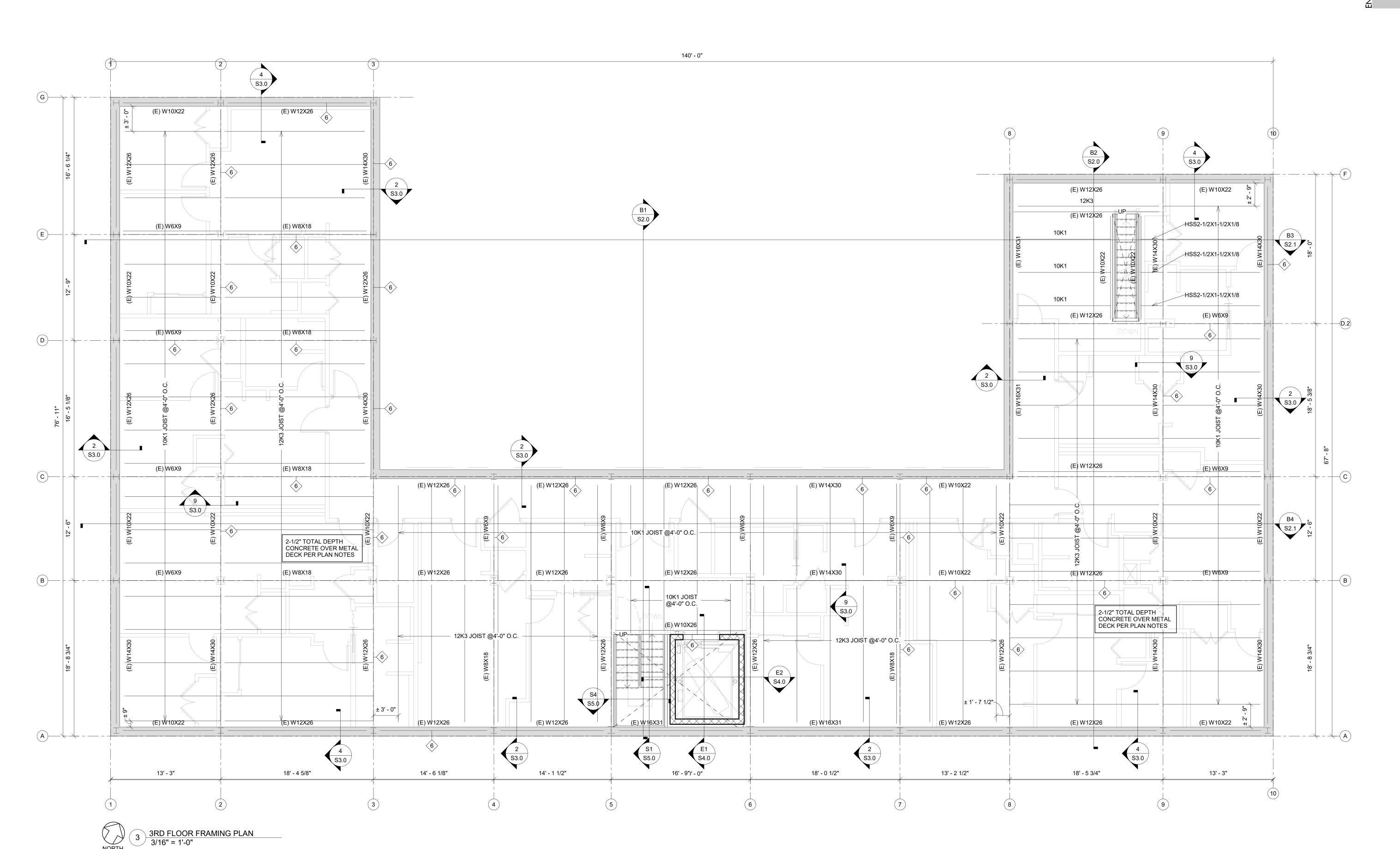
2-23-2024 3 ASI#3 5-8-2024 1-16-2024 JOB: 22-3281 SHEET NO.:

**S1.1** 

- 2. DIMENSIONS SHOWN HERE APPLY TO STRUCTURAL ELEMENTS ONLY. SEE ARCHITECTURAL FOR ANY DIMENSIONS NOT NOTED HERE.
- 3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.
- 4. 2-1/2" TOTAL DEPTH CONCRETE SLAB OVER METAL DECK: NORMAL WEIGHT CONCRETE W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF CONCRETE W/ 1.0C24 METAL DECK. ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 33/4
  PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
- METAL ROOF DECK:
- NEW ROOF DECK TO BE 1.5C24 METAL DECK. ATTACH DECK TO PERPENDICULAR SUPPORTS WITH #12 TEK SCREWS AT EVERY FLUTE. ATTACH DECK TO PARALLEL SUPPORTS WITH #12 TEK SCREWS AT 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
- 6 DELAMINATION ON BEAM
  - A. CLEAN AND REMOVE RUST AND SCALE.
  - B. CHECK REMAINING THICKNESS. C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE W/ MIN. 6" ON EACH SIDE OF DAMAGE. D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE
- 7. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.



compliance 5/30/2024



HISTORIC REHABILITA
ANGELO,

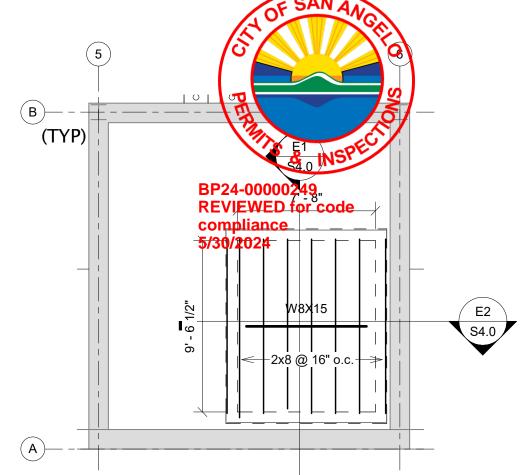
**REVISION:** 1-16-2024 JOB: 22-3281 SHEET NO.:

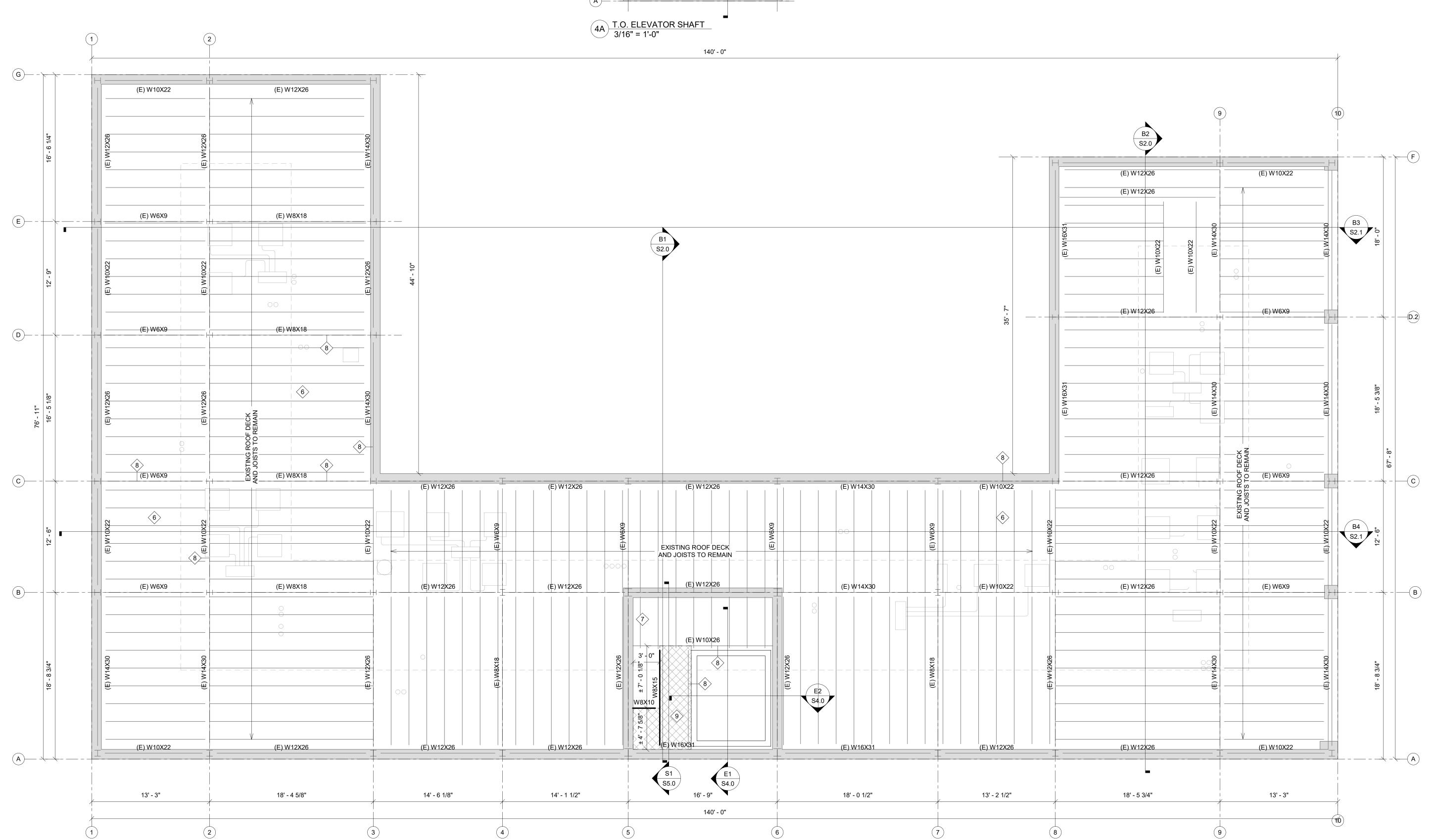
**S1.2** 

3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO STARTING WORK. DIMENSIONS SHOWN HERE ARE FOR REFERENCE ONLY.

- 4. EXISTING ROOF JOISTS & DECK TO REMAIN.
- 5. REPLACE EXISTING ROOFING, COVER BOARDS, INSULATION, AND MEMBRANE PER ARCHITECTURAL DRAWINGS. TAKE CARE TO PROTECT EXISTING CONCRETE ROOF DECK DURING RE-ROOF WORK.
- 6 REPAIR CORRODED JOISTS IN THIS BAY PER DETAIL 11 / S3.0 ANY JOIST ELEMENT THAT HAS LOST MORE THAN 25% OF ITS ORIGINAL CROSS-SECTION DUE TO CORROSION OR DAMAGE NEEDS TO BE REPAIRED. G.C. TO REVIEW ALL JOISS IN ALL BAYS FOR DAMAGE OR CORRODED JOISTS.
- 7 REPAIR DAMAGED CONCRETE ROOF DECK THIS BAY BY CAREFULLY REMOVING EXISTING DECK TO THE NEXT ADJACENT JOIST BEYOND THE DAMAGED AREA. REPLACE WITH 2-1/2" TOTAL DEPTH N.W. CONCRETE SLAB OVER 1.0C20 METAL DECK W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF CONCRETE. TACK WELD DECK TO EXISTING JOISTS ON BOTH SIDES AT EACH FLUTE.

- (8) DELAMINATION ON BEAM
- A. CLEAN AND REMOVE RUST AND SCALE.
  - B. CHECK REMAINING THICKNESS. C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE W/ MIN. 6" ON EACH SIDE OF DAMAGE. D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE
- 9 REPLACE EXISTING FLOOR IN HATCHED AREA W/ 2-1/2" TOTAL DEPTH CONCRETE SLAB OVER METAL DECK: NORMAL WEIGHT CONCRETE W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF
- CONCRETE W/ 1.0C24 METAL DECK. ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 33/4 PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C. DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN MINIMUM FOR STEEL DECK.
- 10. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.

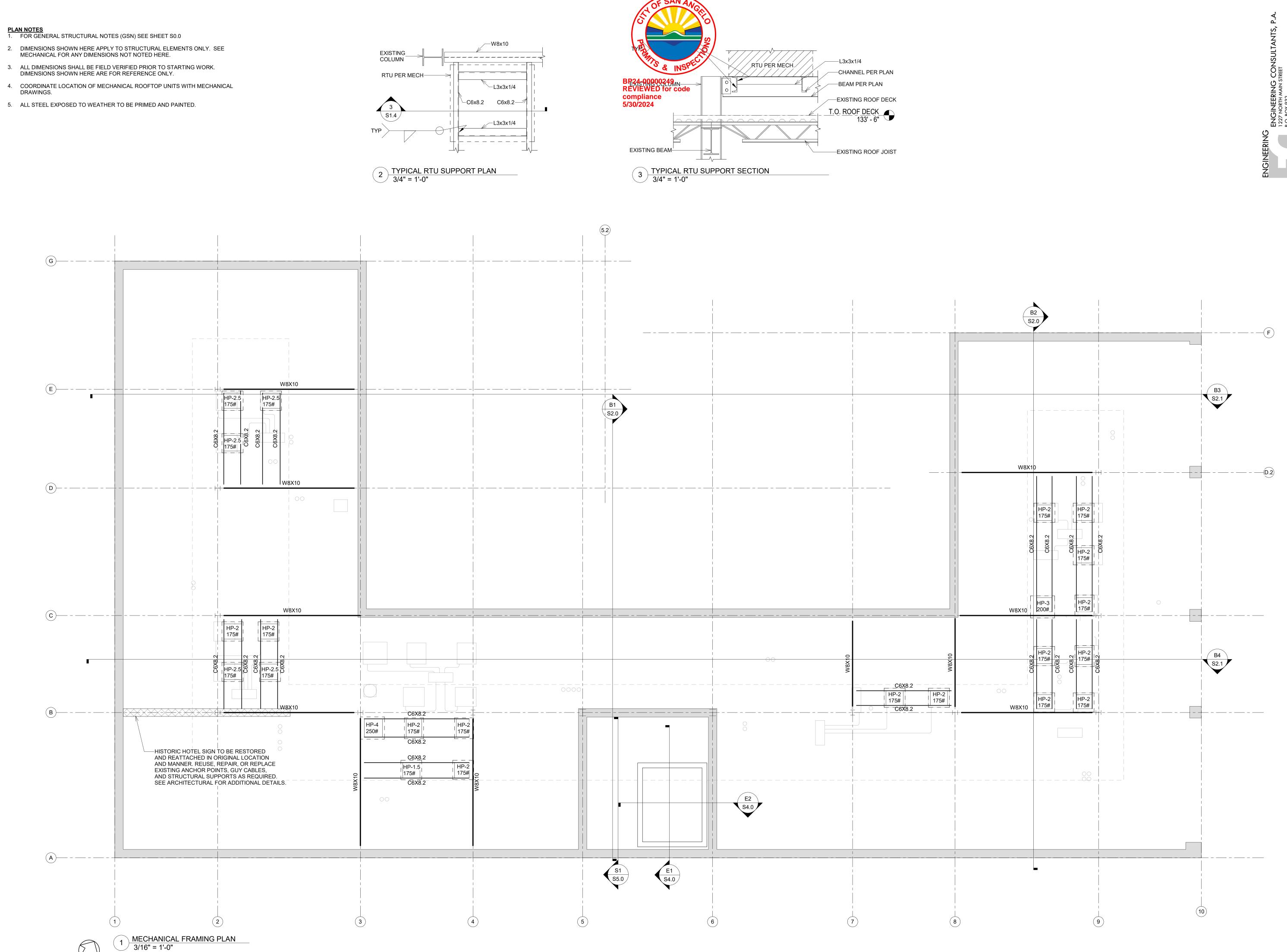




HISTORIC REHABILITATE

1-16-2024 JOB: 22-3281 SHEET NO.:

**S1.3** 



1-16-2024 JOB: 22-3281 SHEET NO.:

B1 Section B1 3/16" = 1'-0"

67' - 8" 18' - 0" 18' - 5 3/8" 12' - 6" 18' - 8 3/4" \_EXISTING ROOF DECK
TO REMAIN \_\_\_ \_ \_\_\_T.O. ROOF DECK 133' - 6" CONCRETE OVER METAL
DECK PER PLAN 3RD FLOOR 123' - 6" \_FLOOR JOIST PER PLAN, TYP S2 S5.0 \_\_CONCRETE OVER METAL DECK PER PLAN 2ND FLOOR 113' - 6" \_FLOOR JOIST PER PLAN, TYP 13 S3.0 —EXISTING SLAB —EXISTING SLAB FINISH FLR 100' - 0" BASEMENT 90' - 0"

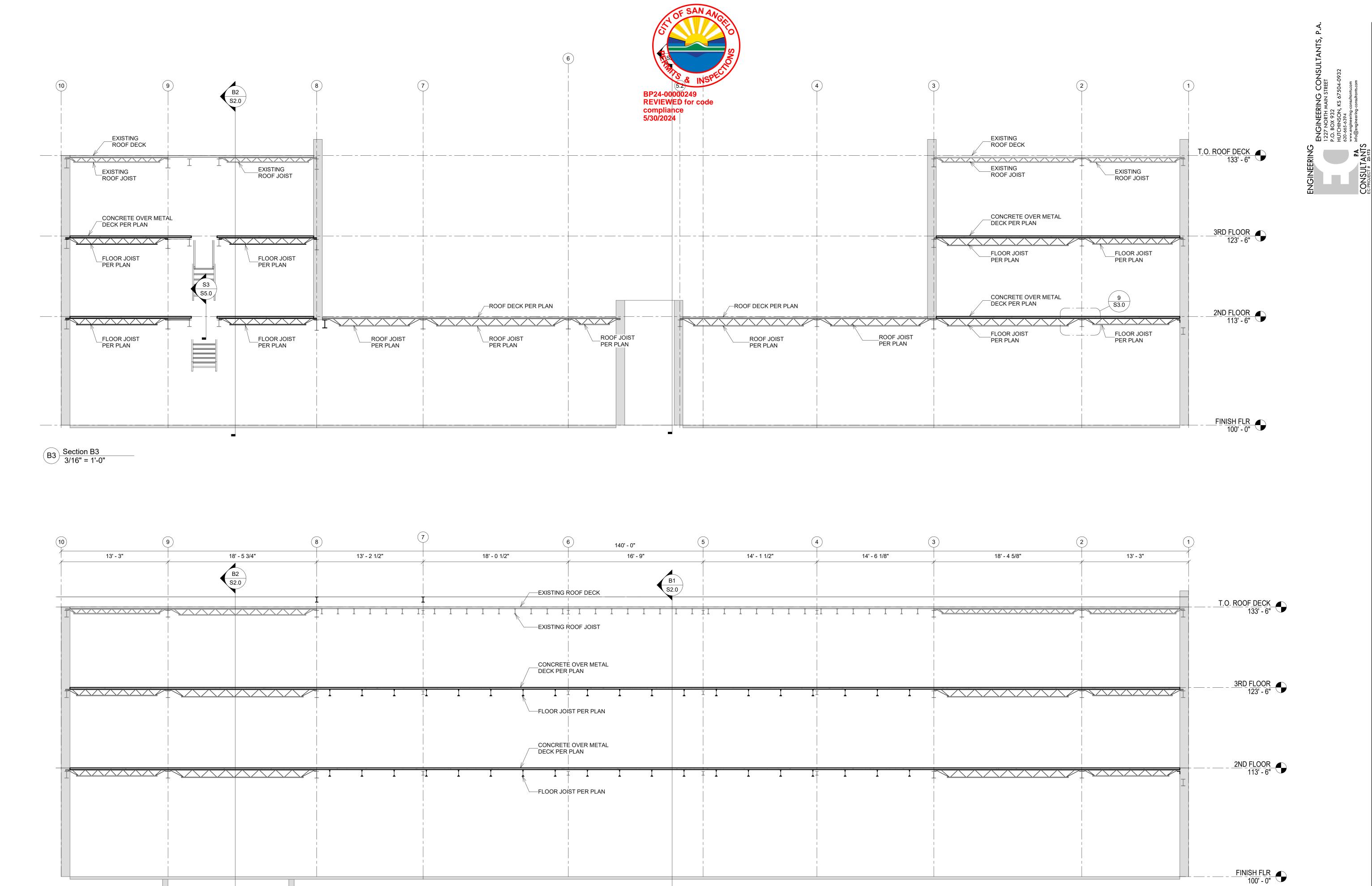
B2 Section B2 3/16" = 1'-0"

FINISH FLR 100' - 0"

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**REVISION:** 1-16-2024 DATE: JOB: 22-3281 SHEET NO.:

**S2.0** 



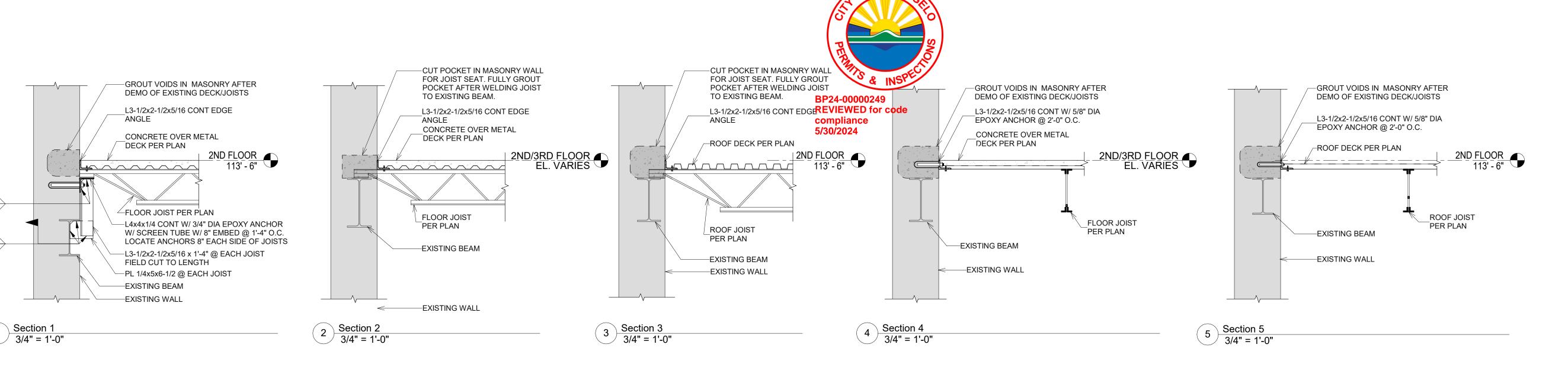
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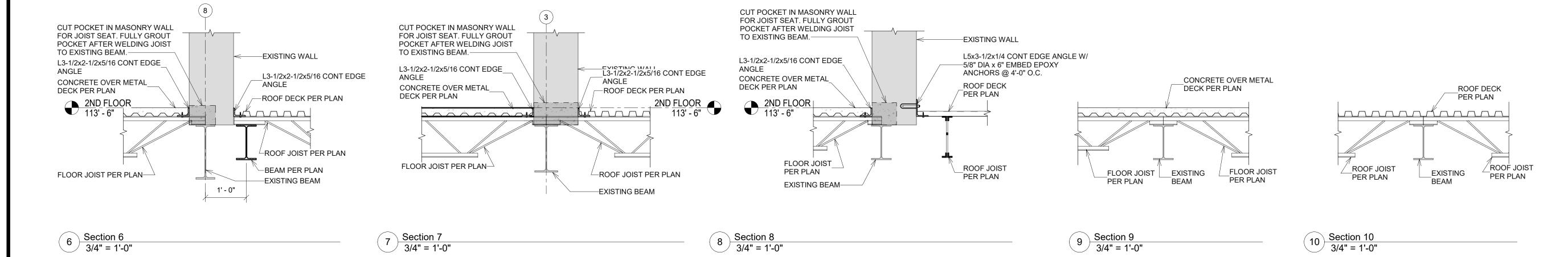
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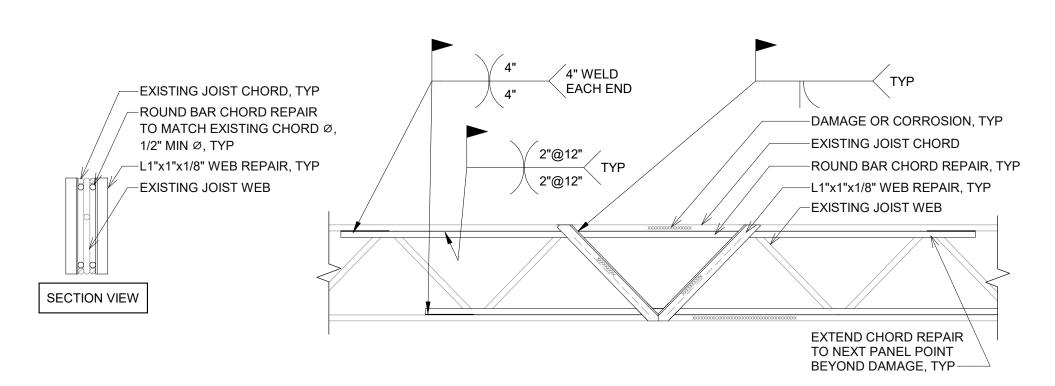
1-16-2024 JOB: 22-3281 SHEET NO.:

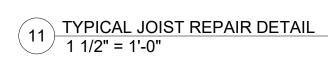
B4 Section B4 3/16" = 1'-0"

BASEMENT 90' - 0"





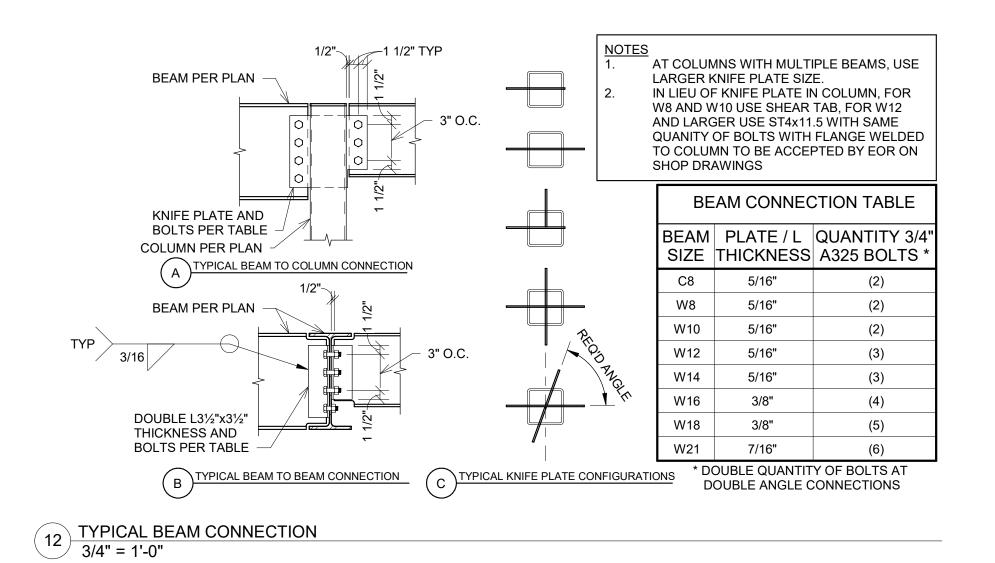




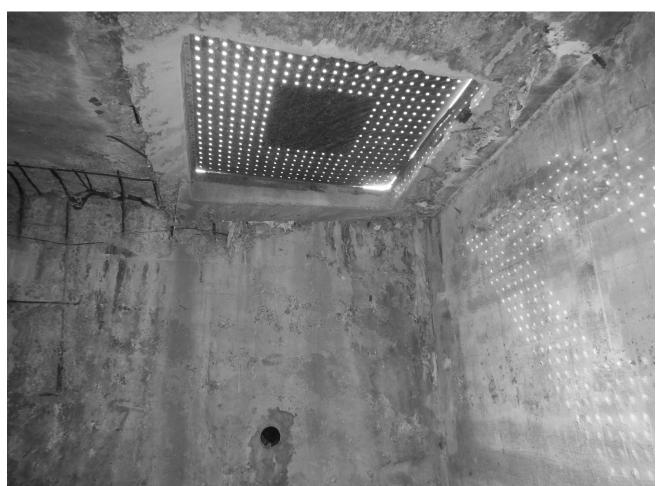
3/16 3/16

3/16

3/16







REBAR AND CONCRETE REPAIR: 1. REMOVE LOOSE AND SPALLING CONCRETE, ROUGHEN SURFACE TO REPAIR, AND CLEAN THOROUGHLY. 2. REMOVE RUST AND CORROSION FROM EXISTING REINFORCING. 3. COAT REPAIR AREA AND ALL SIDES OF REINFORCING WITH SIKA ARMATEC-110 EPOCEM BONDING PRIMER AND CORROSION PROTECTION.

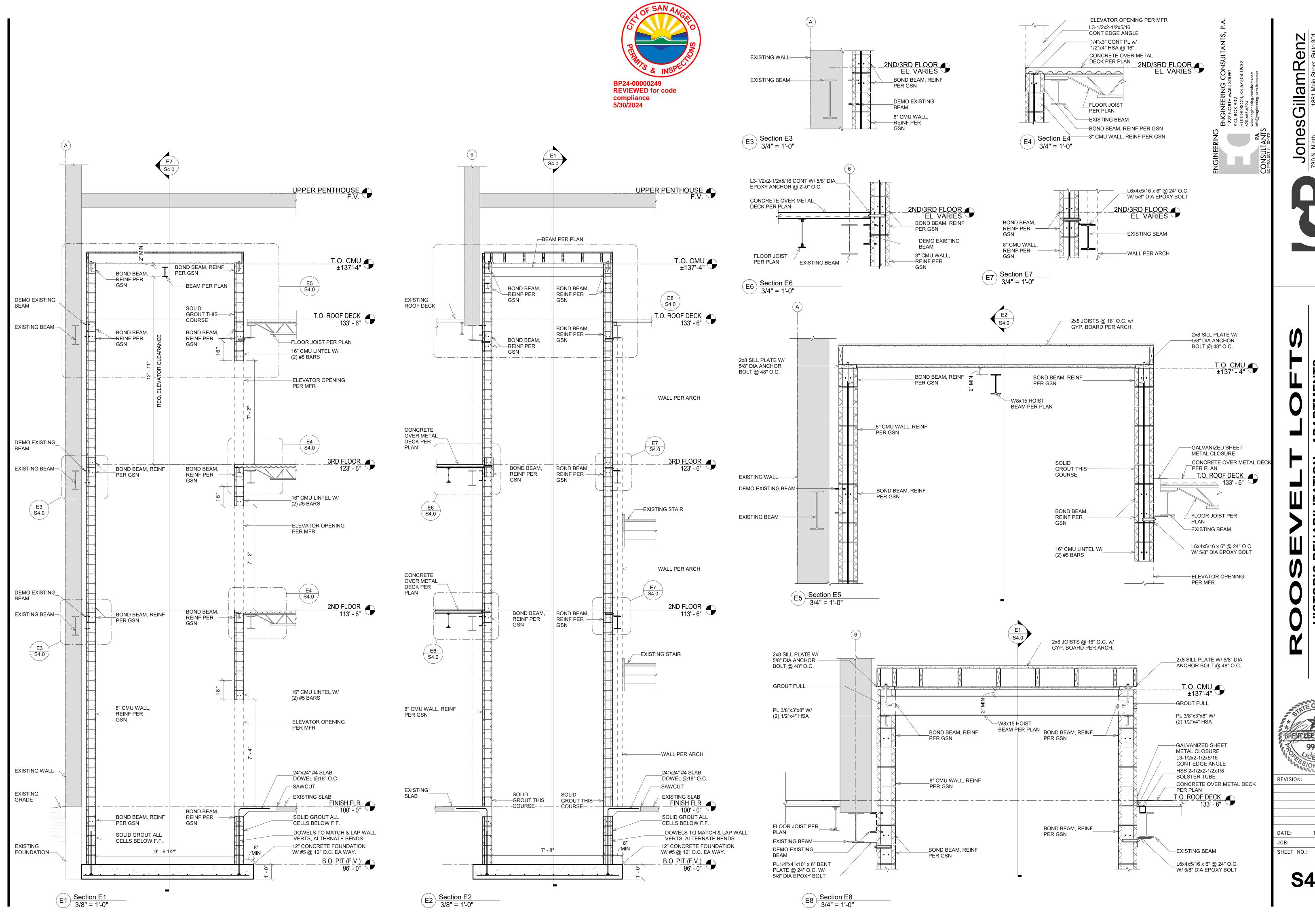
4. PATCH REPAIR AREA WITH SIKA SIKAREPAIR 223 PATCHING MATERIAL.

13 BASEMENT REPAIR DETAIL NTS

1-16-2024 22-3281

SHEET NO.:

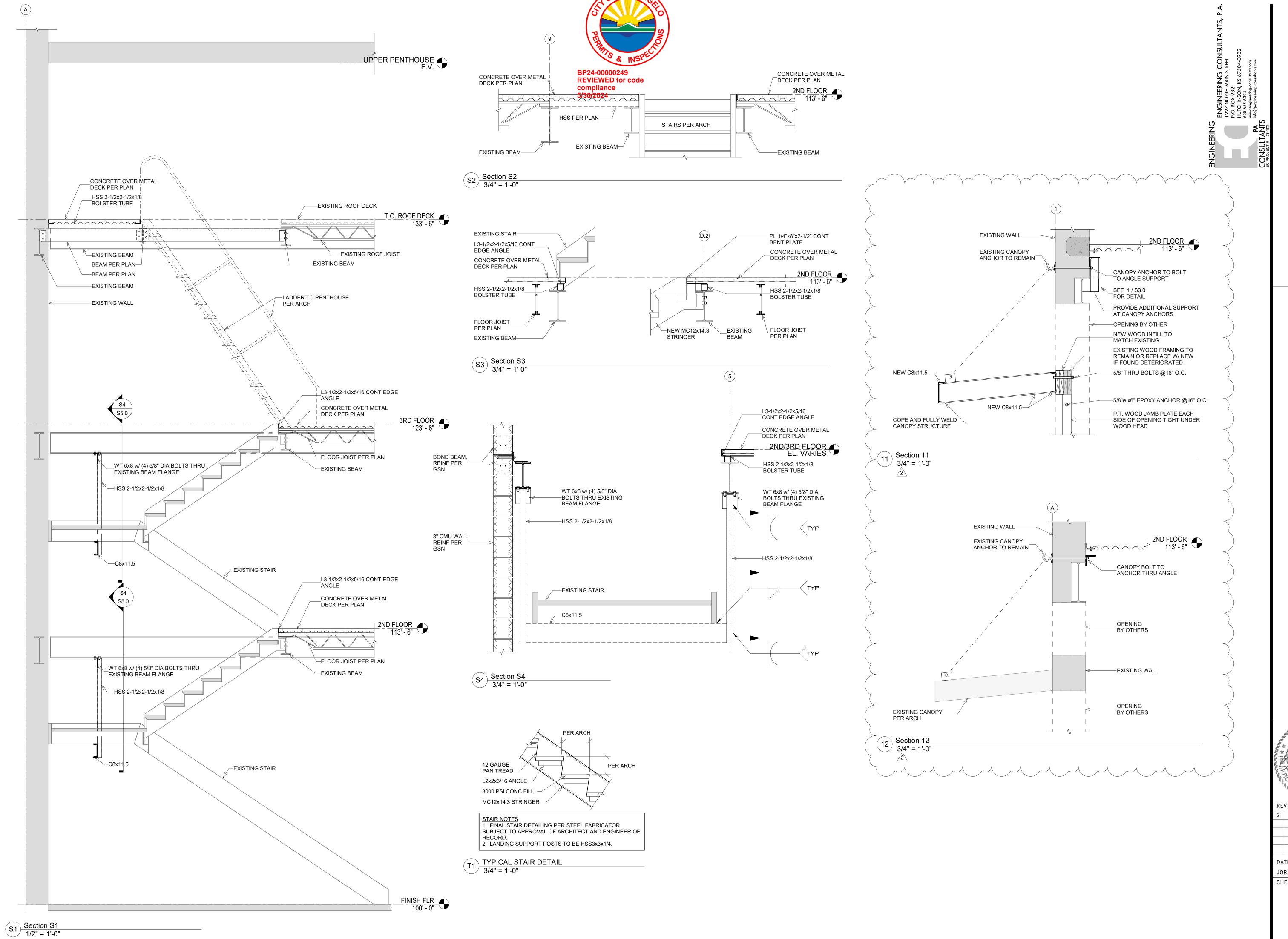
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**S4.0** 



ROOSEVELT LOFTS
HISTORIC REHABILITATION - APARTMENTS
ANGELO,
TEXAS

AND AND SOLONAL SOLONA

**S5.0**