## ABBREVIATIONS AND SYMBOLS

| | | | | | |
|---|---|---|---|---|---|
| A/E | ARCHITECT/ENGINEER | FDN | FOUNDATION | PAF | POWDER ACTUATED FASTENER |
| ABV | ABOVE | FF | FINISHED FLOOR | PRL | PARALLEL |
| ADDL | ADDITIONAL | FL | FLOOR | PCF | POUNDS PER CUBIC FOOT |
| ADJ | ADJACENTV | FP | FIREPROOF(ING) | PCI | POUNDS PER CUBIC INCH |
| AFF | ABOVE FINISHED FLOOR | FS | FAR SIDE | PEMB | PRE-ENGINEERED METAL BUILDING |
| AHU | AIR HANDLING UNIT | FT | FOOT/FEET | PERM | PERIMETER |
| ALT | ALTERNATE | FTG | FOOTING | PERP | PERPENDICULAR |
| APPROX | APPROXIMATE(LY) | GA | GAUGE/GAGE | PJP | PARTIAL JOINT PENETRATION |
| ARCH | ARCHITECT(URAL) | GALV | GALVANIZED | PL | PLATE |
| AT | ANTITERRORISM | GB | GRADE BEAM | PLF | POUNDS PER LINEAR FOOT |
| AVG | AVERAGE | GC | GENERAL CONTRACTOR | PC | PRECAST |
| AWTS | AUTOMATIC WELDED THREADED STUDS | HORIZ | HORIZONTAL | PREFAB | PREFABRICATED |
| B PL | BASE PLATE OR BEARING PLATE | HP | HIGH POINT | PSF | POUNDS PER SQUARE FOOT |
| B/ | BOTTOM OF | HSA | HEADED STUD ANCHOR | PSI | POUNDS PER SQUARE INCH |
| BD | BOARD | HT | HEIGHT | PT | PRE/POST-TENSIONING |
| BF | BRACED FRAME | I/F | INSIDE FACE | PTW | PRESSURE TREATED WOOD |
| BFF | BELOW FINISHED FLOOR | ID | INSIDE DIAMETER | PVMT | PAVEMENT |
| BLDG | BUILDING | IN | INCH(ES) | QTY | QUANTITY |
| BLK | BLOCK(ING) | INCL | INCLUDE | RAD | RADIUS |
| BLW | BELOW | INFO | INFORMATION | RE: | REFER TO |
| BM | BEAM | INT | INTERIOR | REINF | REINFORCEMENT |
| BOT | BOTTOM | ISO JT | ISOLATION JOINT | REQD | REQUIRED |
| BRG | BEARING | JST | JOIST | REV | REVISE(ION) |
| BS | BOTH SIDES | JT | JOINT | RO | ROUGH OPENING |
| BTWN | BETWEEN | K | KIP(S) | RTU | ROOF TOP UNIT |
| CC | CENTER TO CENTER | KB | KNEE BRACE | SC | SLIP CRITICAL |
| CF | CUBIC FOOT OR CUBIC FEET | KCF | KIPS PER CUBIC FEET | SCHED | SCHEDULE |
| CFMF | COLD-FORMED METAL FRAMING | KLF | KIPS PER LINEAR FOOT | SECT | SECTION |
| CIP | CAST IN PLACE | KSF | KIPS PER SQUARE FEET | SF | SQUARE FOOT |
| CJ | CONTROL JOINT/CONSTRUCTION JOINT | KSI | KIPS PER SQUARE INCH | SHT | SHEET |
| CJP | COMPLETE JOINT PENETRATION | L | LENGTH | SIM | SIMILAR |
| CL | CENTERLINE | LAT | LATERAL | SL | SLOPE(D) OR SLOPING |
| CLR | CLEAR OR CLEAR COVER | LBS | POUNDS | SLV | SLEEVE |
| CMU | CONCRETE MASONRY UNIT | ld | DEVELOPMENT LENGTH | SOG | SLAB ON GRADE |
| COL | COLUMN | Ldh | HOOK DEVELOPMENT LENGTH | SOD | SLAB ON METAL DECK |
| CONC | CONCRETE | Lst | LAP SPLICE LENGTH | SP | SPACE(S) OR SPACING |
| CONN | CONNECTION | Lsc | LAP SPLICE LENGTH | SPEC | SPECIFY OR SPECIFICATIONS |
| CONST | CONSTRUCTION | LF | LINEAR FOOT | SQ | SQUARE |
| CONT | CONTINUOUS | LL | LIVE LOAD | SS | STAINLESS STEEL |
| CONTR | CONTRACTOR | LLH | LONG LEG HORIZONTAL | STD | STANDARD |
| COORD | COORDINATE | LLV | LONG LEG VERTICAL | STIFF | STIFFENER |
| CTR | CENTER(ED) | LONG | LONGITUDINAL | STL | STEEL |
| CY | CUBIC YARD | LP | LOW POINT | STRUCT | STRUCTURAL |
| db | BAR DIAMETER | LSH | LONG SIDE HORIZONTAL | SUSP | SUSPEND(ED) OR SUSPENSION |
| DBA | DEFORMED BAR ANCHOR | LSV | LONG SIDE VERTICAL | T&B | TOP AND BOTTOM |
| DBL | DOUBLE | LWT | LIGHT WEIGHT | T/ | TOP OF |
| DET | DETAIL | MEP | MECHANICAL, ELECTRICAL, & PLUMBING | TEMP | TEMPORARY |
| DIA | DIAMETER | MATL | MATERIAL | THD | THREAD(ED) |
| DIAG | DIAGONAL | MAX | MAXIMUM | THK | THICK(NESS) |
| DIM | DIMENSION | MCJ | MASONRY CONTROL JOINT | TL | TOTAL LOAD |
| DL | DEAD LOAD | MECH | MECHANICAL | TRANS | TRANSVERSE |
| DN | DOWN | MEZZ | MEZZANINE | TRTD | TREATED |
| DTL | DETAIL | MFR | MANUFACTURE(R) | TYP | TYPICAL |
| DWG | DRAWING | MID | MIDDLE | UNO | UNLESS NOTED OTHERWISE |
| DWL | DOWEL | MIN | MINIMUM | VERT | VERTICAL |
| E/ | EDGE OF | MISC | MISCELLANEOUS | VIF | VERIFY IN FIELD |
| EA | EACH | MULT | MULTIPLE | W | WIDTH |
| EF | EACH FACE | MO | MASONRY OPENING | W/ | WITH |
| EIFS | EXTERIOR INSULATION FINISH SYSTEM | MTL | METAL | W/C | WATER TO CEMENT RATIO |
| EJ | EXPANSION JOINT | MWT | MEDIUM WEIGHT | W/O | WITHOUT |
| ELEC | ELECTRICAL | NF | NEAR FACE | WL | WIND LOAD |
| ELEV | ELEVATION(S) | NIC | NOT IN CONTRACT | WP | WORKING POINT |
| EMBED | EMBED(ED)(MENT) | NUM | NUMBER | WT | WEIGHT |
| ENG | ENGINEER | NOM | NOMINAL | WWR | WELDED WIRE REINFORCEMENT |
| EOR | ENGINEER OF RECORD | NS | NEAR SIDE | | |
| EQ | EQUAL | NTS | NOT TO SCALE | @ | AT / AT EACH |
| EQUIP | EQUIPMENT | NWT | NORMAL WEIGHT | ( )° | DEGREE |
| EST | ESTIMATED | O/F | OUTSIDE FACE | ⌀ | DIAMETER |
| EW | EACH WAY | OC | ON CENTER | # | NUMBER |
| EXCL | EXCLUDE(ING) | OD | OUTSIDE DIAMETER | | |
| (E) | EXISTING | OPNG | OPENING | o FD | FLOOR DRAIN |
| EXP | EXPANSION | OPP | OPPOSITE | | |
| EXT | EXTERIOR | OH | OPPOSITE HAND | o RD | ROOF DRAIN |
| F/ | FACE OF | OVH | OVERHEAD | | |
| F/F | FACE TO FACE | OWJ | OPEN WEB STEEL JOIST | | |

## DRAWING LEGEND

### GENERAL ANNOTATIONS

FS# CONC SPREAD FTG TAG
FC# CONC CONTINUOUS FTG TAG
XC# COLUMN TAG
XW# WALL TAG
XB# BEAM TAG
XP# PIER TAG

'X' = MATERIAL
C = CONCRETE
M = MASONRY
S = STEEL
W = WOOD
# = NUMERICAL DESIGNATION

REF XX' - YY" — ELEVATION CALLOUT (SECTION / DETAILS)
REF XX' - YY" — ELEVATION CALLOUT (PLAN)
REF = T/OBJECT OR B/OBJECT
XX' - YY" = OBJECT ELEVATION FROM DATUM

CHANGE IN TOP OF ELEV
SLOPE — SLOPE DESIGNATION (SEE ARCH FOR ACTUAL SLOPES)
START OF SLOPE WHERE SHOWN
PLAN REFERENCE
TYPICAL (TYP) OR SIMILAR (SIM) DETAIL
SHEET REFERENCE
DETAIL, SECTION OR ELEVATION REFERENCE
TYPICAL (TYP) OR SIMILAR (SIM) DETAIL
SHEET REFERENCE

GREY TONE DESIGNATES EXISTING CONSTRUCTION
BLACK TONE DESIGNATES NEW CONSTRUCTION
UNLESS NOTED OTHERWISE
NEW CONST
EXIST CONST

### CONCRETE CONSTRUCTION

CONC SPREAD FOOTING
CONC CONTINUOUS FOOTING
CONC WALL
FOUNDATION PEDESTAL
CONC COLUMN
CONC COLUMN BELOW
CONC PIER
CONC BEAM
CONC BEAM/WALL BELOW
CONC LINTEL — OPENING BELOW

NOTE: AT FLOOR OR ROOF FRAMING PLANS, OPENINGS SHOWN ARE IN WALL BELOW

REINFORCED CAST-IN-PLACE CONCRETE SUSPENDED SLAB
CS # (1 WAY)
CS # (2 WAY)
CONCRETE SLAB ON GRADE
SOG #

### MASONRY CONSTRUCTION

MASONRY WALL
MASONRY COLUMN
MASONRY PIER
MASONRY LINTEL — OPENING BELOW

NOTE: AT FLOOR OR ROOF FRAMING PLANS, OPENINGS SHOWN ARE IN WALL BELOW

### STEEL CONSTRUCTION

STEEL COLUMN (W SHAPES)
STEEL COLUMN (HSS)
STEEL COLUMN (HSS ROUND)
STEEL BEAM / GIRDER
STEEL GIRDER TRUSS
STEEL JOIST
STEEL TRUSS JOIST
DRAG STRUT CONNECTION
FULLY RESTRAINED MOMENT CONNECTION
PARTIALLY RESTRANED MOMENT CONNECTION
BF — BRACED FRAME (RE: STRUCTURAL ELEVATIONS)
SPLICE CONNECTION
BEAM SIZE (X) C=Y" — Z — Z
BEAM SIZE = BEAM DESIGNATION
X = # OF HEADED STUDS (SPACED UNIFORMLY)
Y = BEAM CAMBER (CROWN UPWARD @ MIDSPAN)
Z = SPECIAL REACTIONS (kips) OR OTHER NOTES
STEEL ROOF DECK
CONCRETE SLAB ON STEEL DECK

### MATERIALS

CONCRETE
CMU
UNDISTURBED SOIL
ENGINEERED OR COMPACTED FILL
GRAVEL OR POROUS FILL
STEEL
ALUMINUM
SAND
BRICK
BAR GRATING
SPECIAL DECK OR FLOOR AREA (SEE PLAN NOTES)
CONTINUOUS WOOD FRAMING
WOOD BLOCKING OR SHIM

## DESIGN CRITERIA

DC-1 BUILDING CODE:
A. INTERNATIONAL BUILDING CODE (IBC) 2021 AS AMENDED BY
1. UFC 1-200-01 W/ CHANGE 3, DATED 26 FEB 2024
2. UFC 3-301-01 W/ CHANGE 1, DATED 11 APR 2023
B. EDITION OF ALL REFERENCED STANDARDS NOTED HEREIN ARE AS NOTED IN THE BUILDING CODE.

DC-2 VERTICAL LOADS
A. DEAD LOADS (INCLUDES SELF-WEIGHT)
1. ROOF — 30 PSF
A. MINIMUM (FOR UPLIFT) — 12 PSF
B. LIVE LOADS
1. ROOF (REDUCIBLE PER ASCE 7) — 20 PSF MINIMUM
2. FLOORS (REDUCIBLE PER ASCE 7)
A. TYPICAL GROUND FLOOR — 100 PSF
B. HANGARS — 200 PSF
C. STORAGE — 125 PSF
D. MECHANICAL — 150 PSF
C. SNOW LOADS
1. GROUND SNOW LOAD ($P_g$) — 5 PSF
2. ADDITIONAL SNOW DRIFT AND SLIDING SNOW AS PER APPLICABLE BUILDING CODE, REFER TO S-005.
D. CONSTRUCTION LOADS
1. NOT TO EXCEED THE DESIGN LIVE LOADS.

DC-3 LATERAL LOADS
A. RISK CATEGORY — III
B. WIND DESIGN CRITERIA
1. BASIC DESIGN WIND SPEED (V) — 105 MPH
2. ALLOWABLE DESIGN WIND SPEED ($V_{asd}$) — 82 MPH
3. EXPOSURE CATEGORY — C
4. INTERNAL PRESSURE COEFFICIENT
A. PARTIALLY ENCLOSED (FULL WIND SPEED) — +/- 0.55
5. COMPONENTS AND CLADDING — RE: S-005
6. WIND ULTIMATE BASE SHEAR
A. PLAN EAST/WEST (AREA A,D) — 101 K
B. PLAN EAST/WEST (AREA B,C) — 125 K
C. PLAN NORTH/SOUTH (AREA A,D) — 174 K
D. PLAN NORTH/SOUTH (AREA B,C) — 187 K
C. SEISMIC DESIGN CRITERIA
1. SEISMIC IMPORTANCE FACTOR ($I_e$) — 1.25
2. SITE CLASS — D
3. MAPPED SPECTRAL RESPONSE ACCELERATION
A. SHORT PERIOD ($S_S$) — 0.724
B. ONE SECOND ($S_1$) — 0.226
4. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS
A. SHORT PERIOD ($S_{DS}$) — 0.589
B. ONE SECOND ($S_{D1}$) — 0.324
5. SEISMIC DESIGN CATEGORY — D
6. SEISMIC RESPONSE COEFFICIENT ($C_S$) — 0.123
7. SEISMIC DESIGN BASE SHEAR
A. PLAN EAST/WEST (AREA A,D) — 84 K
B. PLAN EAST/WEST (AREA B,C) — 79 K
C. PLAN NORTH/SOUTH (AREA A,D) — 84 K
D. PLAN NORTH/SOUTH (AREA B,C) — 79 K
8. SEISMIC RESISTING SYSTEM:
A. STEEL SPECIAL CONCENTRIC BRACED FRAMES
1. RESPONSE MODIFICATION — R = 6
2. DEFLECTION AMPLIFICATION — $C_D$ = 5
3. OVERSTRENGTH FACTOR — $\Omega_O$ = 2
9. ANALYSIS METHOD: EQUIVALENT LATERAL FORCE PROCEDURE

DC-4 FOUNDATION DESIGN CRITERIA
A. FOUNDATION DESIGN IS BASED UPON THE FOLLOWING SOIL PARAMETERS AS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT LISTED BELOW:
1. REPORT AGENCY — UES
2. REPORT # — 4030.2400199
3. REPORT DATE — 2025-04-17
B. NET ALLOWABLE SOIL BEARING PRESSURE
1. SPREAD FOOTINGS — 3000 PSF
2. CONTINUOUS FOOTINGS — 3000 PSF
C. LATERAL EARTH PRESSURE PARAMETERS
1. SOIL DENSITY — 120 PCF
2. ANGLE OF INTERNAL FRICTION — 30 DEGREES
3. COEFFICIENT OF FRICTION (u) — 0.36
4. WIND/SEISMIC INCREASE — 1/3 INCREASE
5. PASSIVE EARTH PRESSURE (Kp) — 3.00
D. MODULUS OF SUB-GRADE REACTION (ks) — 120 PCI
E. MINIMUM BEARING DEPTH — 24 INCHES

DC-5 ANTITERRORISM (AT) CRITERIA
A. THIS FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE ANTITERRORISM REQUIREMENTS SET FORTH IN UFC 4-010-01, DATED 24 MAY 2024. BUILDING ANTITERRORISM STRUCTURAL DESIGN CRITERIA ARE AS FOLLOWS:
B. AT FACILITY CRITERIA
1. STANDARD 1: BUILDING STANDOFF DISTANCE > 50 FT TO PERIMETER
2. STANDARD 2: UNOBSTRUCTED SPACE — 33 FT
3. STANDARD 5: PARKING BENEATH BUILDINGS OR ON ROOFTOPS — N/A
4. STANDARD 6: PROGRESSIVE COLLAPSE — N/A
5. STANDARD 7: STRUCTURAL ISOLATION — N/A
6. STANDARD 8: BUILDING OVERHANGS AND BREEZEWAYS — N/A
7. STANDARD 9: EXTERIOR MASONRY WALLS #5@32" OC MAX VERTICAL REINF
8. STANDARD 15: OVERHEAD MOUNTED ARCH FEATURES — RE: DELEGATED DESIGN
9. STANDARD 19: EQUIPMENT BRACING RE: DELEGATED DESIGN

PRELIMINARY DESIGN — NOT FOR CONSTRUCTION

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. LAMBSON
SUBMITTED BY:
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

# STRUCTURAL DESIGN CRITERIA, LEGEND, AND ABBREVIATIONS

SHEET ID
S-001

FOR REVIEW

## GENERAL

G-1 METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE NECESSARY PRECAUTIONS TO MAINTAIN THE INTEGRITY OF THE STRUCTURE AT EACH STAGE OF CONSTRUCTION.

G-2 STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER THE CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCES OF CONSTRUCTION. STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATION IN THESE DOCUMENTS. THE CONTRACTOR IS SOLEY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THE PROJECT.

G-3 WHERE SUPPORTED SLABS OR ROOFS ARE TO BE USED FOR STAGING OR TEMPORARY CONSTRUCTION LOADS, THE CONTRACTOR MUST VERIFY THAT APPLIED LOADS DO NOT EXCEED THE DESIGN LOADS FOR THE SUPPORTING FLOORS OR ROOFS. DURING AND AFTER CONSTRUCTION, CONTRACTOR AND/OR CONTRACTING OFFICER MUST KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOADS AS NOTED IN THESE DRAWINGS.

G-4 THE STRUCTURAL SYSTEMS SHOWN IN THESE DRAWINGS MUST NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS ARE IN PLACE AND COMPLETED. TEMPORARY BRACING, SHEETING, SHORING, ETC, REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY/STABILITY OF THE EXISTING BUILDINGS, SIDEWALKS, UTILITIES, ETC, DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR.

G-5 WHEN NOT SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SLEEVE AND BLOCK-OUT REQUIREMENTS FOR PENETRATIONS PRIOR TO FABRICATION OR ERECTION OF THE STRUCTURE. PENETRATIONS OF STRUCTURAL MEMBERS ARE SUBJECT TO APPROVAL BY THE EOR. THE CONTRACTOR IS ALSO RESPONSIBLE FOR DETERMINING ANCHORAGE AND HANGER REQUIREMENTS REQUIRED FOR SUPPORTING EQUIPMENT, FINISHES, UTILITIES ET CETERA NOT INDICATED ON THE STRUCTURAL DRAWINGS.

G-6 CONTRACTOR MUST COORDINATE WITH ALL TRADES THE LOCATIONS AND DIMENSIONS OF ALL OPENINGS THROUGH FLOORS, ROOFS AND WALLS REGARDLESS OF IF THEY ARE SHOWN ON THE STRUCTURAL DRAWINGS.

G-7 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING DIMENSIONS AND INSTALLATION REQUIREMENTS OF EQUIPMENT WITH THE SUPPORTING STRUCTURE.

G-8 THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL AND OTHER DISCIPLINE DRAWINGS. DO NOT ATTEMPT TO BID NOR CONSTRUCT ANY PORTION OF THIS PROJECT WITHOUT CONSULTING OTHER DISCIPLINES' DRAWINGS WITHIN THIS PROJECT. ALL CONFLICTS OR OMISSIONS, INCLUDING DIMENSIONS, BETWEEN THE VARIOUS ELEMENTS OF THE STRUCTURAL DRAWINGS AND/OR SPECIFICATIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE THERE IS A CONFLICT BETWEEN DRAWINGS, SUBMIT A REQUEST FOR INFORMATION, AND PROCEED AS DIRECTED BY THE ENGINEER. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY WITHOUT OFFICIAL DIRECTION WILL BE DONE AT THE CONTRACTOR'S RISK.

G-9 FIREPROOFING, IF REQUIRED, OF STRUCTURAL ELEMENTS IS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO THE SPECIFICATIONS, FIRE PROTECTION DRAWINGS AND/OR ARCHITECTURAL DRAWINGS.

G-10 IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, DRAWINGS, OR WITHIN THESE DOCUMENTS, THE MOST STRINGENT REQUIREMENTS AS DETERMINED BY THE ENGINEER WILL GOVERN.

G-11 WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS, IS TO BE REPEATED.

G-12 TYPICAL DETAILS ARE GENERALLY NOT REFERENCED ON THE DRAWINGS AND WILL APPLY IN AREAS WHERE CONDITIONS ARE SIMILAR AS DESCRIBED IN THE DETAILS. THE CONTRACTOR MUST IDENTIFY, COORDINATE AND APPLY THESE DETAILS AS NEEDED. TYPICAL DETAILS MAY BE REFERENCED ON PLANS OR DETAILS TO CLARIFY OR IDENTIFY A PARTICULAR CONDITION. THE PRESENCE OF SUCH A REFERENCE DOES NOT ALTER THE OBLIGATION OF THE CONTRACTOR TO APPLY THE DETAIL(S) AS NEEDED EVEN IF THEY ARE NOT REFERENCED.

G-13 THE STRUCTURAL DOCUMENTS HAVE BEEN DRAWN TO SCALE AS INDICATED ON THESE DRAWINGS. THIS IS TO CONFIRM GENERAL GEOMETRIC TOLERANCES TO THE GREATEST EXTENT POSSIBLE. HOWEVER, SOME COMPONENTS MAY NOT BE DRAWN TO SCALE TO REFLECT DESIGN INTENT. IF DIMENSIONAL INFORMATION IS NOT INDICATED AND/OR PROVIDED, THE ENGINEER MUST BE NOTIFIED IN WRITING. DO NOT SCALE DRAWINGS.

## CONSTRUCTION ADMINISTRATION

CA-1 CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS PRIOR TO DELIVERY TO THE ENGINEER FOR REVIEW.

CA-2 PREPARATION OF SHOP DRAWING SUBMITTALS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND OTHER DISCIPLINE DRAWINGS. CONTRACTOR IS TO FURNISH SUFFICIENT INFORMATION, INCLUDING PROJECT SPECIFICATIONS, TO THE SUB-CONSULTANT CREATING THE SHOP DRAWING SUBMITTAL TO ALLOW FOR A COMPETE SUBMITTAL.

CA-3 SHOP DRAWINGS:
- A. SHOP DRAWINGS FOR MATERIALS MUST BE SUBMITTED TO THE ENGINEER AND CONTRACTING OFFICER FOR REVIEW PRIOR TO THE START OF FABRICATION OR COMMENCEMENT OF WORK.
- B. SHOP DRAWINGS MUST BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION. THE CONTRACTOR'S STAMP OF APPROVAL WILL CONSTITUTE CERTIFICATION THAT HE HAS VERIFIED FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. SHOP DRAWINGS SUBMITTED WITHOUT THE CONTRACTOR'S STAMP AND REVIEW WILL BE RETURNED WITHOUT REVIEW BY THE ENGINEER.
- C. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SUBMITTALS PROVIDED THAT INCLUDE REPRODUCTION OF THE CONTRACT DRAWINGS WILL BE RETURNED WITHOUT REVIEW BY THE ENGINEER.
- D. CHANGES TO SHOP DRAWINGS THAT ARE RE-SUBMITTED MUST BE CLOUDED OR SOMEHOW INDICATE THAT A CHANGE HAS BEEN MADE TO PREVIOUSLY ISSUED AND REVIEWED DRAWINGS. REVISED SHOP DRAWINGS PROVIDED WITHOUT CLOUDS OR CHANGES INDICATED WILL BE RETURNED WTIHOUT REVIEW BY THE ENGINEER.
- E. THE CONTRACTOR IS TO PROVIDE THE ENGINEER AND CONTRACTING OFFICER WITH WRITTEN NOTICE OF DEVIATIONS OF ANY TYPE FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE NOTICE MUST BE RECEIVED PRIOR TO SHOP DRAWING SUBMITTAL. THE CONTRACTOR REMAINS LIABLE FOR ANY DEVIATION UNLESS REVIEWED BY THE ENGINEER AND CONTRACTING OFFICER AND ACKNOWLEDGED IN WRITING, PRIOR TO THE RECEIPT OF THE SHOP DRAWINGS.
- F. CONTRACTOR IS NOT RELIEVED OF ANY REQUIREMENT OF THE CONTRACT DOCUMENTS BY VIRTUE OF ENGINEER OR CONTRACTING OFFICER REVIEW OF SUBMITTALS.
- G. REVIEW OF SUBMITTALS BY THE ENGINEER IS FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS ONLY AND IS NOT INTENDED AS APPROVAL.

CA-4 UNLESS NOTED OTHERWISE, ALLOW 10 BUSINESS DAYS FOR THE ENGINEER'S REVIEW.

CA-5 A QUALIFIED TESTING AGENCY MUST PERFORM TESTS AND SPECIAL INSPECTIONS. UPON COMPLETION OF WORK, THE TESTING AGENCY MUST FURNISH A CERTIFICATE OF COMPLIANCE, SIGNED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR MANGEMENT OF THE AGENCY. THE PROFESSIONAL ENGINEER MUST BE REGISTERED IN THE UNITED STATES.

## FOUNDATIONS

F-1 FOUNDATIONS HAVE BEEN DESIGNED AND MUST BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THIS PROJECT AS LISTED IN THE DESIGN CRITERIA WHICH IS CONSIDERED AS THE BASIS OF FOUNDATION DESIGN. CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND UNDERSTANDING REQUIREMENTS SET FORTH WITHIN THE REPORT AS THEY APPLY TO THIS FOUNDATION DESIGN. THE STRUCTURAL ENGINEER IS NOT LIABLE OR RESPONSIBLE FOR THE ACCURACY OF RECOMMENDATIONS PRESENTED WITHIN THE GEOTECHNICAL REPORT.

F-2 FOUNDATIONS MUST BE PLACED ON A MINIMUM OF 30" LAYER OF COMPACTED SELECT FILL AND A 6" LAYER OF SCARIFIED RE-COMPACTED SUBGRADE, CONFORMING TO RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT (MAXIMUM FILL LIFT = 8").

F-3 THE CONTRACTOR IS TO RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER, TO VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE CAPACITY AS NOTED IN THE DESIGN CRITERIA. PRIOR TO PLACING CONCRETE, AND AFTER COMPACTION OF SUBGRADE, ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND TESTED WHICH MUST INCLUDE IN PLACE DENSITY TESTING. IF THE SUBGRADE HAS LESS THAN THE STATED ALLOWABLE BEARING CAPACITY, THE WEAK SUBGRADE SHALL BE REMOVED, RECOMPACTED, AND RETESTED UNTIL IT IS SATISFACTORY AT NO ADDITIONAL COST TO THE OWNER. CONCRETE PLACEMENT SHALL NOT PROCEED UNTIL THE SUBGRADE MEETS THE MINIMUM DENSITY REQUIREMENTS OF THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT, WHICHEVER IS MORE STRINGENT.

F-4 EXTERIOR FOUNDATONS ARE TO BEAR BELOW THE MINIMUM BEARING DEPTH FROM FINISHED GRADE GIVEN IN DESIGN CRITERIA GENERAL NOTE DC-4. INTERIOR FOUNDATIONS TO BEAR THE MINIMUM BEARING DEPTH OR AS INDICATED. FINAL BEARING ELEVATIONS MAY VARY TO SUIT SUBSURFACE SOIL CONDITIONS OR BELOW GRADE UTILITIES. NOTIFY THE ENGINEER AND CONTRACTING OFFICER OF ANY CHANGES. PROVIDE FOUNDATION STEPS AS NECESSARY.

F-5 NO BACKFILLING AGAINST WALLS IS ALLOWED UNTIL THE SLABS AT THE TOP AND BOTTOM HAVE BEEN PLACED OR ADEQUATE SHORING HAS BEEN PROVIDED. WALLS AND GRADE BEAMS HAVING BACKFILL AGAINST BOTH SIDES ARE TO HAVE BACKFILL PLACED ON BOTH SIDES UNIFORMLY SO AS NOT TO EXCEED AN 8" DIFFERENTIAL.

F-6 FOUNDATION DRAINAGE, INSULATION AND/OR WATERPROOFING IS NOT SHOWN OR SPECIFIED WITHIN THE STRUCTURAL PORTION OF THE CONSTRUCTION DOCUMENTS. REFERENCE OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS FOR DRAINAGE, INSULATION AND/OR WATERPROOFING, OR ITEMS ASSOCIATED WITH OTHER DISCIPLINES.

## REINFORCED CONCRETE

C-1 REINFORCED CONCRETE WORK MUST BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE - ACI 318" AND THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS- ACI 301."

C-2 MAXIMUM MIX DESIGN W/C RATIO MUST NOT BE EXCEEDED. APPROVED ADMIXTURES SUCH AS PLASTICIZERS OR SUPERPLASTICIZERS MAY BE USED ON SITE TO INCREASE SLUMP AND FLOWABILITY AS REQUIRED FOR PLACEMENT. REFER TO ACI 311.5 FOR DOCUMENTATION REQUIREMENTS AND IBC CHAPTER 1703 FOR INSPECTION REQUIREMENTS.

C-3 CAST-IN-PLACE CONCRETE MUST HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c) AS INDICATED ON THE CONCRETE MIX DESIGN TABLE.

C-4 THE STRUCTURE SUPPORTING ELEVATED FLOORS IS DESIGNED TO HAVE AN INITIAL (PRE-COMPOSITE) DEFLECTION OF NOT MORE THAN ¾" DUE TO THE WEIGHT OF THE CONCRETE SLAB. THE CONTRACTOR MUST TAKE THIS DEFLECTION INTO ACCOUNT WHEN DETERMINING THE AMOUNT OF CONCRETE NECESSARY TO OBTAIN A LEVEL FLOOR *AND MONITOR DEFLECTION DURING CONCRETE PLACEMENT*.

C-5 REINFORCEMENT AND EMBEDDED ITEMS:
- A. PROVIDE STANDARD HOOKS ON BARS TERMINATING AT A CONCRETE FACE UNLESS NOTED SUCH AS AT EDGES OF OPENINGS, SLAB EDGES, EXPANSION JOINTS, ENDS OF BEAMS AND ENDS OF WALLS.
- B. SEE CONCRETE REINFORCEMENT DEVELOPMENT LENGTH AND SPLICE TABLE FOR ALL REQUIRED DEVELOPMENT AND SPLICE LENGTHS.
- C. PROVIDE ADEQUATE CONCRETE COVER IN ACCORDANCE WITH THE REQUIREMENTS AS SET FORTH BY ACI 318 AND AS PROVIDED WITHIN THE CONCRETE COVER TABLE IN THE SPECIFICATIONS.
- D. HOOKED BARS TO HAVE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, HOOKS CAN BE ORIENTED AS REQUIRED.
- E. CONTINUOUS REINFORCING BARS MUST BE TURNED AND LAPPED AT CORNERS AND INTERSECTIONS OF WALLS AND FOOTINGS.
- F. WELDING OF REINFORCEMENT IS PROHIBITED, UNLESS NOTED OTHERWISE AND MUST CONFORM TO ASTM A 706.
- G. PROVIDE EMBEDS (INCLUDING ANCHORS), AS REQUIRED, FOR ALL SUPPORTING NON-STRUCTURAL ELEMENTS INCLUDING BUT NOT LIMITED TO HAND RAILS, CANOPIES, WINDOW WASHING DAVITS, MISCELLANEOUS STEEL, ETC. REFER TO ARCHITECTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.

C-6 CONCRETE SLABS MUST BE CURED BY METHOD COMPATIBLE WITH SPECIFIED FLOOR FINISH. WHERE ACCEPTABLE USE A LIQUID MEMBRANE-CURING COMPOUND AT THE MANUFACTURERS RECOMMENDED COVERAGE.

C-7 CONCRETE SLAB CONTROL JOINT PLACEMENT AND LAYOUT PER GC AND SUBMITTED AS SHOP DRAWING FOR REVIEW.

C-8 SLEEVES, INSERTS, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS AND OTHER EMBEDDED ITEMS MUST BE PROVIDED AS SHOWN ON THE ARCHITECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING AND ELECTRICAL DRAWINGS AND BY EQUIPMENT MANUFACTURERS. INSTALLATION OF THESE ITEMS MUST BE COORDINATED AND PROVIDED FOR PRIOR TO PLACING CONCRETE.

C-9 OPENINGS IN CONCRETE SLABS AND/OR CONCRETE WALLS MUST HAVE ADDITIONAL REINFORCEMENT PER THE TYPICAL DETAILS. NO PENETRATIONS ARE PERMITTED THROUGH ANY CONCRETE BEAM, JOIST, COLUMN, PIER OR JAMB WITHOUT THE ENGINEER'S WRITTEN APPROVAL. PENETRATIONS MUST BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.

C-10 PENETRATIONS THROUGH CONCRETE SLABS AND/OR CONCRETE WALLS MUST BE PLACED DURING CONSTRUCTION OF THE WALL WITH THE APPROPRIATE SLEEVE.

C-11 REFER TO CONCRETE TABLES ON S-004 FOR ADDITIONAL INFORMATION.

## MASONRY

M-1 MASONRY WORK MUST BE IN CONFORMANCE WITH THE MASONRY SOCIETY (TMS) "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES — TMS 402" AND THE "SPECIFICATIONS FOR MASONRY STRUCTURES — TMS 602".

M-2 REINFORCEMENT AND EMBEDDED ITEMS:
- A. REINFORCING TO BE DISCONTINUOUS AT CONTROL JOINTS UNESS NOTED OTHERWISE. BOND BEAM REINFORCING AT THE TOPS AND BOTTOMS OF WALLS IS TO BE CONTINOUS THROUGH JOINT.
- B. DOWEL REINFORCED MASONRY WALLS TO FOUNDATION. SIZE DOWELS TO MATCH WALL REINFORCEMENT. LOCATE DOWELS IN CELLS TO CONTAIN WALL REINFORCEMENT. LAP DOWELS WITH WALL REINFORCEMENT PER MASONRY LAP TABLE.
- C. UNLESS NOTED OTHERWISE, PLACE TYPICAL CMU REINFORCEMENT IN CENTER OF FULLY GROUTED CELLS AND SPACE AS FOLLOWS:
  1. FOR 8" CMU: (1) #5 VERTICAL AT 32" ON CENTER, MINIMUM.
  2. FOR 12" CMU: (1) #5 VERTICAL AT 24" ON CENTER, MIMINUM.
  3. PROVIDE ADDITIONAL BARS AT CORNERS AND OPENINGS PER TYPICAL DETAILS.
- D. VERTICAL REINFORCING TO BE HELD SECURELY IN PLACE DURING GROUT PLACEMENT TO PREVENT DISPLACEMENT OF REINFORCEMENT.
- E. WELDING OF REINFORCEMENT IS PROHIBITED, UNLESS NOTED OTHERWISE.
- F. PROVIDE EMBEDS (INCLUDING ANCHORS) FOR SUPPORTING STRUCTURAL AND NON-STRUCTURAL ELEMENTS INCLUDING BUT NOT LIMITED TO: HANDRAILS, CANOPIES, MISCELLANEOUS STEEL, ETC.

M-3 MASONRY ERECTION:
- A. GROUT CELLS SOLID AT: INSERTS, ANCHORS, AND ELEVATOR GUIDE RAILS IN ADDITION TO LOCATIONS SHOWN IN THE TYPICAL DETAILS.
- B. DO NOT FULLY GROUT WALLS UNLESS SPECIFICALLY CALLED OUT ON STRUCTURAL DRAWINGS.
- C. CONTROL JOINT SPACING IN MASONRY WALLS MUST BE PROVIDED WHERE INDICATED ON THE STRUCTURAL DRAWINGS, OR A MAXIMUM OF 24'-0" ON CENTER.
- D. MASONRY WALLS TO BE TEMPORARILY BRACED UNTIL FLOOR OR ROOF SYSTEM HAS BEEN INSTALLED AND HAS BECOME CAPABLE OF STABILIZING THE WALLS.
- E. COORDINATE BLOCKOUTS, REVEALS, HOLES, OPENINGS AND BUILT-IN ITEMS WITH ALL CONTRACT DOCUMENTS AND DISCIPLINES.
- F. PROVIDE VERTICAL MASONRY VENEER CONTROL JOINTS AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

M-4 REFER TO MASONRY TABLES ON S-004 FOR ADDITIONAL INFORMATION.

## POST-INSTALLED ANCHORS

PI-1 ALL ADHESIVE OR MECHANICAL ANCHORS MUST BE INSTALLED, INCLUDING HOLE DRILLING, DRILL BIT TYPE, PREPARATION, AND CLEANING IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), THE PROJECT DRAWINGS AND SPECIFICATIONS, AND IN ACCORDANCE WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).

PI-2 POST-INSTALLED ANCHORS HAVE BEEN DESIGNED WITH HILTI ANCHORS (NOTED BELOW) AS THE BASIS OF DESIGN. PROVIDE APPROPRIATE ANCHOR WITH SIZE AND FINISH AS NOTED AND EQUIVALENT SHEAR AND TENSION CAPACITIES AFTER MODIFICATION DUE TO EMBEDMENT, SPACING AND EDGE DISTANCES. OTHER AVAILABLE MANUFACTURERS INCLUDE SIMPSON, ITW RED HEAD AND DEWALT.
- A. EXPANSION ANCHORS:KWIK BOLT 3
- B. SCREW ANCHORS: KH-EZ SCREW ANCHOR
- C. ADHESIVE ANCHORS
  1. CONCRETE: HIT HY-200
  2. GROUTED CMU: HIT HY-270
- D. SCREEN TUBE ANCHORS: HIT HY-270

PI-3 SUBSTITUTION REQUEST FOR ALTERNATIVE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER PRIOR TO THE USE. SUBSTITUTION REQUEST MUST INCLUDE AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO OR APPROVED EQUAL) AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT. SUBSTITUTIONS MUST BE EVALUATED FOR THEIR COMPLIANCE WITH RELEVANT BUILDING CODES FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATIONS MUST CONSIDER HINSTALLED SUBSTITUTION ANCHORS IN CONCRETE MUST BE SUITABLE FOR USE IN CRACKED CONCRETE APPLICATIONS.

PI-4 DO NOT DISTURB, MAKE ATTACHMENTS, OR APPLY LOAD TO ADHESIVE ANCHORS PRIOR TO THE FULL CURE OF THE ADHESIVE. ADHESIVE ANCHORS MUST NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED 28-DAY DESIGN STRENGTH.

PI-5 CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION MUST BE MONITORED BY THE CONTRACTOR. CONTRACTOR MUST COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS RELATIVE TO SUBSTRATE TEMPERATURE.

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY:
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

GENERAL STRUCTURAL NOTES

PRELIMINARY DESIGN
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SHEET ID
S-002

FOR REVIEW

PI-6 INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS MUST BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION MUST INCLUDE WRITTEN AND PERFORMANCE TEST IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR APPROVED EQUIVALENT, IN ACCORDANCE WITH ACI. PROOF OF CURRENT CERTIFICATION MUST BE SUBMITTED TO THE ENGINEER AND CONTRACTING OFFICER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR THESE ANCHORS.

PI-7 IF REINFORCING IS ENCOUNTERED DURING DRILLING, THAT HOLE IS TO BE ABANDONED. DO NOT DAMAGE REINFORCING TO MAINTAIN STRUCTURAL INTEGRITY OF SUBSTRATE COMPONENT. FILL ABANDONED HOLES WITH NON-SHRINK GROUT AND CONTACT THE STRUCTURAL ENGINEER FOR NEW LOCATIONS AND FURTHER INSTALLATION INSTRUCTIONS.

PI-8 POST-INSTALLED ANCHORS TO BE GALVANIZED WHERE EXPOSED TO EXTERIOR AND/OR CORROSIVE ENVIRONMENTS UNLESS THE ANCHOR IS OTHERWISE PROTECTED.

PI-9 SUBSTITUTION OF POST-INSTALLED ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS IS NOT PERMITTED.

## STRUCTURAL STEEL

S-1 STRUCTURAL STEEL WORK IS TO BE DETAILED AND CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING STANDARD(S):
- A. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS"
- B. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 341 “SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS”

S-2 PRIOR TO FABRICATION, THE STEEL FABRICATOR IS TO SUBMIT TO THE CONTRACTING OFFICER FOR REVIEW SHOP DRAWINGS SHOWING ERECTION PLANS, PIECE DRAWINGS, AND CONNECTION DETAILS.

S-3 STRUCTURAL STEEL FABRICATOR IS TO PROVIDE FOR VERTICAL AND HORIZONTAL FIELD ADJUSTMENT OF SUPPORT ASSEMBLIES.

S-4 STEEL BEAMS ARE TO BE EQUALLY SPACED IN BAYS UNLESS OTHERWISE NOTED.

S-5 FABRICATE AND INSTALL BEAMS WITH NATURAL CAMBER UP UNLESS CAMBER IS NOTED ON THE DRAWINGS.

S-6 STRUCTURAL STEEL FRAMES AND TRUSSES ARE TO BE SECURELY BRACED UNTIL FLOOR SLABS, ROOF DECKS AND SHEAR WALLS HAVE BEEN INSTALLED AND BECOME CAPABLE OF STABILIZING THE FRAMES.

S-7 UNLESS OTHERWISE NOTED, STRUCTURAL STEEL CONNECTIONS TO BE SHOP WELDED AND FIELD BOLTED.

S-8 BOLTED CONNECTIONS:
- A. BOLTS, TYPICAL: 3/4" MINIMUM DIAMETER ASTM F 3125 GR. A325N UNO WITH MATCHING WASHERS AND HEAVY HEX NUTS. BOLTS MUST BE INSTALLED IN A SNUG TIGHT CONDITION WHICH IS ACHIEVED WHEN CONNECTED PARTS ARE IN FIRM CONTACT.
- B. DO NOT REUSE ANY BOLTS, NUTS, AND/OR WASHERS.
- C. DO NOT APPLY ANY WELD TO BOLTS, NUTS, OR WASHERS UNO.

S-9 WELDED CONNECTIONS:
- A. USE E70XX ELECTRODES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. E60XX MAY BE USED FOR WELDING COLD-FORMED STEEL DECKS AND FRAMING.
- B. WELDING OF DEFORMED BAR ANCHORS AND/OR HEADED STUD ANCHORS IS TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- C. FILLET WELD SIZES NOT DESIGNATED MUST BE THE SAME AS THE THINNEST CONNECTED PARTS OR ¼-INCH FILLET WELD ALL AROUND.

S-10 SUBSTITUTION OF POST-INSTALLED ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS IS NOT PERMITTED.

S-11 PAINT AND PROTECTION:
- A. EXPOSED STRUCTURAL STEEL TO RECEIVE PAINTED FINISH TO BE SHOP CLEANED AND PRIME PAINTED IN ACCORDANCE WITH SPECIFICATION SECTION 05 12 00 PART 2 - PRODUCTS. REFERENCE ARCHITECTURE FOR FINISH PAINT SYSTEMS.
- B. EXPOSED STRUCTURAL STEEL FOR SCREEN WALLS, EQUIPMENT PLATFORMS, LOOSE ANGLE LINTELS ETC, TO BE HOT DIPPED GALVANIZED PER ASTM A 123
- C. GALVANIZED FASTENERS AND ACCESSORIES TO BE HOT DIPPED GALVANIZED PER ASTM A 153/A 153M.
- D. PROVIDE MINIMUM 3" CONCRETE COVER FOR STEEL BELOW GRADE.

## MISCELLANEOUS STEEL

MS-1 COORDINATE ALL MISCELLANEOUS STEEL ITEMS WITH STRUCTURAL STEEL NOTES.

MS-2 PRIOR TO FABRICATION, THE STEEL FABRICATOR IS TO SUBMIT THE FOLLOWING TO THE CONTRACTING OFFICER FOR REVIEW:
- A. SHOP DRAWINGS SHOWING ERECTION PLANS, PIECE DRAWINGS, AND CONNECTION DETAILS.

MS-3 MANUFACTURE STEEL GRATING IN ACCORDANCE WITH THE “METAL BAR GRATING MANUAL” AS PUBLISHED BY THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS.
- A. STEEL FOR GRATING TO CONFORM TO ASTM A 1011/A 1011M. GRATING TO BE TYPE W-19-6 (1"x3/16") WITH GALVANIZED FINISH.
- B. ALUMINUM FOR GRATING TO CONFORM TO ASTM B 221. GRATING TO BE TYPE AS NOTED WITH MILL FINISH, UNO.

## OPEN WEB STEEL JOISTS

J-1 DESIGN, FABRICATION AND ERECTION OF OPEN WEB STEEL JOISTS MUST CONFORM TO THE STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS AND LOAD TABLES FOR STEEL JOISTS AND JOIST GIRDERS."

J-2 DESIGN ALL JOISTS, INCLUDING SLOPE, CAMBER AND BEARING ENDS. PROVIDE ALL BRIDGING LOCATIONS AND LAYOUTS. ALL DESIGNS MUST BE IN ACCORDANCE WITH SJI SPECIFICATIONS WITH A MAXIMUM DEFLECTION OF TL/180 AND LL/240.

J-3 STEEL JOISTS ARE TO BE DESIGNED FOR ALL LOADS INDICATED AS WELL AS WIND UPLIFT AS SHOWN ON SHEET S-005.

J-4 PROVIDE BRIDGING, BOTTOM CHORD EXTENSIONS AND ASSOCIATED ANCHORAGE IN ACCORDANCE WITH SJI REQUIREMENTS. BRIDGING, BOTTOM CHORD EXTENSIONS AND ASSOCIATED ANCHORAGE IS BY THE JOIST MANUFACTURER UNLESS NOTED OTHERWISE. WHERE ERECTION BRIDGING IS REQUIRED, HAVE IN PLACE A ROW OF BOLTED BRIDGING BEFORE RELEASING HOIST LINES.

J-5 BOTTOM CHORD EXTENSIONS TO BE INSTALLED AS REQUIRED BY OSHA AND THE STEEL JOIST SUPPLIER. DO NOT FULLY CONNECT EXTENSIONS TO THE SUPPORTING STRUCTURE UNTIL APPLICABLE DEAD LOAD HAS BEEN APPLIED.

J-6 STEEL JOIST MANUFACTURER IS TO PROVIDE ADDITIONAL BOTTOM CHORD BRIDGING FOR UPLIFT LOADS.

J-7 PROVIDE ANCHORS AND FASTENERS REQUIRED FOR INSTALLATION OF JOISTS, BRIDGING AND BOTTOM CHORD EXTENSIONS.

J-8 STEEL JOISTS ARE TO BE EQUALLY SPACED IN BAYS UNO. DO NOT EXCEED JOIST SPACING INDICATED ON THE DRAWINGS.

J-9 JOIST SEATS HAVE BEEN ASSUMED TO BE AS LISTED BELOW, UNO. MODIFICATIONS TO THE STRUCTURE FOR ALTERNATE DEPTHS MUST BE COORDINATED BY THE GENERAL CONTRACTOR.
- A. ALL SERIES: 5”

J-10 HANGERS SUPPORTING MECHANICAL, ELECTRICAL OR OTHER EQUIPMENT ARE TO BE PLACED AT JOIST PANEL POINTS (WELDING NOT PERMITTED) AND APPLIED LOADS ARE TO BE COORDINATED WITH STEEL JOIST MANUFACTURER. DO NOT SUSPEND EQUIPMENT FROM BRIDGING OR METAL DECK.

J-11 STEEL JOIST MANUFACTURER TO VERIFY SIZE, LOCATION AND WEIGHT OF SUPPORTED MECHANICAL UNITS AND ASSOCIATED OPENINGS PRIOR TO FABRICATION.

## METAL DECK

D-1 METAL DECK MUST BE DETAILED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS".

D-2 DECK UNITS HAVE BEEN DESIGNED TO BE A MINIMUM OF THREE (3) SPANS CONTINUOUS WITH LAPS PLACED OVER SUPPORTS.

D-3 REFER TO ROOF DECK SCHEDULE ON S-603 WHICH INCLUDES DEPTH PROFILE, THICKNESS, AND ATTACHMENT.

## LIGHT GAGE STEEL FRAMING

LG-1 STRUCTURAL MEMBERS MUST BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" (LATEST EDITION).

LG-2 STRUCTURAL MEMBERS TO BE FORMED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A 653/A 653M WITH MINIMUM YIELD STRESS (Fy) ACCORDING TO STRUCTURAL PERFORMANCE.

LG-3 LIGHT GAGE MEMBERS AND DETAILS SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS ARE FOR BID PURPOSES ONLY. STRUCTURAL STUD AND/OR JOIST FRAMING MEMBERS AND CONNECTIONS ARE TO BE ENGINEERED BY THE MANUFACTURER. DESIGN CALCULATIONS AND SHOP DRAWINGS INDICATING JAMBS, POSTS, HEADERS, BRACING AND PIECES NECESSARY FOR CONSTRUCTION MUST BE SUBMITTED TO THE CONTRACTING OFFICER FOR REVIEW. DESIGN CALCULATIONS ARE TO BE PREPARED BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE UNITED STATES AND BEARING THE SEAL OF THAT PROFESSIONAL ENGINEER.

LG-4 MAXIMUM STUD SPACING TO BE 16” ON CENTER WITH DOUBLED STUDS (MINIMUM) AT EACH SIDE OF OPENINGS.

LG-5 FRAMING COMPONENTS ARE TO BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS AN ANGULAR FIT AGAINST ABUTTING MEMBERS.

LG-6 FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING, TORCH CUTTING OF COLD-FORMED MEMBERS IS UNACCEPTABLE.

LG-7 FASTENING OF COMPONENTS IS TO BE WITH SELF-DRILLING SCREWS OR WELDING. WELDING OF STUDS MUST COMPLY WITH AWS D1.3/D1.3M. WELDS TO BE TOUCHED-UP WITH ZINC-RICH PAINT. SCREWS AND WELDS TO BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE TYING OF COMPONENTS IS NOT PERMITTED.

LG-8 LIGHT GAGE STEEL FRAMING MEMBERS ARE TO BE SECURELY ATTACHED TO THE STRUCTURE WHERE INDICATED ON THE DRAWINGS OR APPROVED SHOP DRAWINGS. FASTENERS TO BE COMPATIBLE WITH THE STRUCTURAL MEMBERS. POWDER DRIVEN FASTENERS ARE NOT ACCEPTABLE FOR STRUCTURAL APPLICATIONS.

LG-9 PROVIDE VERTICAL SLIDE TRACKS, OR SLIDE CLIPS, WHERE INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED TO ALLOW FOR VERTICAL STRUCTURAL MOVEMENTS. MAXIMUM EXPECTED STRUCTURE LIVE LOAD DEFLECTION IS L/360 AT FLOORS AND L/240 AT ROOFS.

LG-10 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION, INCLUDING SHEATHING TYPE, FINISHES, OPENINGS, LOCATIONS ETC.

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
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ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CAMPANA
SUBMITTED BY:
SIZE: ANSI D

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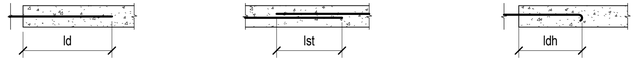
GENERAL STRUCTURAL NOTES

SHEET ID
S-003

FOR REVIEW

## CONCRETE REINFORCING DEVELOPMENT AND LAP SPLICE TABLE




DEVELOPMENT LENGTH | LAP SPLICE LENGTH | HOOK DEVELOPMENT LENGTH

**f'c = 4500 PSI**

| BAR SIZE | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |
|---|---|---|---|---|---|---|---|---|---|
| ld (TOP BARS) | 18 | 24 | 30 | 35 | 51 | 59 | 66 | 74 | 82 |
| ld (OTHER BARS) | 14 | 18 | 23 | 27 | 40 | 45 | 51 | 57 | 64 |
| lst (TOP BARS) | 24 | 32 | 39 | 46 | 67 | 77 | 86 | 97 | 107 |
| lst (OTHER BARS) | 18 | 24 | 30 | 35 | 51 | 59 | 66 | 74 | 82 |
| ldh | 12 | 12 | 12 | 14 | 17 | 19 | 21 | 24 | 27 |

**f'c = 5000 PSI**

| BAR SIZE | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |
|---|---|---|---|---|---|---|---|---|---|
| ld (TOP BARS) | 17 | 23 | 28 | 34 | 49 | 56 | 63 | 71 | 78 |
| ld (OTHER BARS) | 13 | 17 | 22 | 26 | 38 | 43 | 48 | 54 | 60 |
| lst (TOP BARS) | 23 | 30 | 37 | 45 | 64 | 73 | 82 | 93 | 102 |
| lst (OTHER BARS) | 17 | 23 | 28 | 34 | 49 | 56 | 63 | 71 | 78 |
| ldh | 12 | 12 | 12 | 14 | 16 | 18 | 20 | 23 | 25 |

**NOTES:**

1. LENGTHS SHOWN ARE IN INCHES.
2. LENGTHS SHOWN ABOVE ARE FOR SINGLE REINFORCING BARS WITH MAXIMUM YIELD STRENGTH OF 60KSI.
3. LENGTHS SHOWN ASSUME CLEAR SPACING OF BARS ARE AT LEAST 2 TIMES BAR DIAMETER AND CLEAR COVER OF AT...
4. LENGTHS SHOWN ABOVE ARE FOR NORMAL WEIGHT CONCRETE. FOR LIGHT WEIGHT CONCRETE, MULTIPLY VALUES BY...
5. FOR EPOXY COATED BARS, MULTIPLY VALUES BY 1.5.
6. WHEN SPLICING BARS OF DIFFERENT SIZES, USE SPLICE LENGTH FOR LARGER BAR.
7. SPLICES (LAPS) OF REINFORCING BARS MUST BE CLASS 'B' TENSION LAPS PER ACI 318, UNLESS NOTED OTHERWISE. lst VALUES ABOVE TO BE DIVIDED BY 1.3 FOR CLASS 'A' SPLICE.
8. TOP BARS ARE HORIZONTAL REINFORCING BARS WITH 12 INCHES OR MORE OF FRESH CONCRETE IS PLACED BELOW.
9. OTHER BARS ARE ANY REINFORCING BARS THAT DO NOT MEET QUALIFICATION FOR TOP BARS.

| ELEMENT | f'c (PSI), WEIGHT | EXPOSURE CLASS (NOTES 1 & 2) |
|---|---|---|
| FOOTINGS | 4500, NW | F0, S2, W0, C1 |
| FOUNDATION (STEM) WALLS | 4500, NW | F1, S2, W0, C1 |
| ADMIN INTERIOR SLAB ON GRADE | 4500, NW | F0, S2, W0, C0 |
| HANGAR BAY INTERIOR SLAB ON GRADE | 5000, NW | F0, S2, W0, C1 |
| EXTERIOR SLABS | 4500, NW | F1, S2, W0, C1 |
| LEVELING GROUT | 5000, NW | |

**NOTES:**

1. EXPOSURE CLASS INDICATES THE SEVERITY OF THE ANTICIPATED EXPOSURE OF CONCRETE MEMBERS, IN ACCORDANCE WITH ACI 318, CHAPTER 18.
2. PROVIDE TYPE V OR EQUIVALENT SULFATE RESISTANT CEMENT (AS APPROVED BY THE ENGINEER) IN ALL CONCRETE.
3. CONCRETE STRENGTH, f'c, IS THE COMPRESSIVE STRENGTH AT 28 DAYS UNLESS NOTED OTHERWISE.
4. NORMAL WEIGHT (NW) CONCRETE SHALL HAVE A DRY DENSITY OF 145 ±4 PCF, UNO. LIGHTWEIGHT CONCRETE (LW) MUST HAVE A DRY DENSITY OF 115 ±5 PCF UNO.
5. MIX DESIGNS MUST BE IN ACCORDANCE WITH ACI 301.
6. WHERE CONCRETE IS EXPOSURE CLASS F3, RESTRICTIONS ON MAXIMUM FLY ASH AND/OR OTHER CEMENTITIOUS MATERIALS APPLY. REFER TO ACI 318, TABLE 26.4.2.2(B) FOR REQUIREMENTS.
7. AIR CONTENT FOR F1 EXPOSURE MUST BE BETWEEN 4.5% TO 6% UNLESS APPROVED OTHERWISE BY THE ENGINEER. THERE IS NO AIR CONTENT REQUIREMENT FOR THE F0 EXPOSURE CONCRETE.
8. MAXIMUM W/C RATIO MUST NOT BE EXCEEDED. APPROVED ADMIXTURES SUCH AS PLASTICIZERS MAY BE USED ON SITE.
9. CONCRETE FLEXURAL STRENGTH OF HANGAR BAY SOG WILL BE 550 PSI MIN AND 650 PSI MAX AT 90 DAYS.

## MASONRY STRENGTH TABLE

| ELEMENT | SPECIFIED COMPRESSIVE STRENGTH |
|---|---|
| CONCRETE MASONRY | f'm = 2000 PSI |
| GROUT FOR CONCRETE MASONRY | f'g ≥ f'm (2000 PSI MINIMUM) |

**NOTES:**

1. PROVIDE MEDIUM WEIGHT HOLLOW CONCRETE MASONRY UNITS FOR GENERAL USE UNLESS OTHERWISE NOTED.
2. MORTAR FOR CONCRETE MASONRY MUST BE TYPE S AT EXTERIOR WALLS AND TYPE N AT INTERIOR WALLS.

## MASONRY REINFORCING SPLICE TABLE

| BAR SIZE | SINGLE REINFORCING | | | DOUBLE REINFORCING | | |
|---|---|---|---|---|---|---|
| | 8" CMU | 10" CMU | 12" CMU | 8" CMU | 10" CMU | 12" CMU |
| #3 | 12 | 12 | 12 | 13 | 13 | 13 |
| #4 | 13 | 12 | 12 | 22 | 22 | 22 |
| #5 | 19 | 16 | 13 | 35 | 35 | 35 |
| #6 | 37 | 29 | 24 | 54 | 54 | 54 |
| #7 | - | 40 | 33 | - | 63 | 63 |
| #8 | - | - | 50 | - | - | 72 |

NOTES:

1. LAP SPLICE LENGTHS ARE IN INCHES.
2. LAP SPLICES IN REINFORCED MASONRY MUST HAVEMINIMUM LENGTHS AS DEFINED ABOVE UNLESS NOTE OTHERWISE
3. TABULATED VAULES ARE CALCUATED IN ACCORDANCE WITH TMS 402/602-16 CHAPTER 6.
4. SPLICE AND DEVELOPMENT LENGTHS ARE THE SAME VALUE FOR HORIZONTAL AND VERTICAL BARS
5. SINGLE REINFORCING IS A SINGLE BAR CENTERED IN CMU BLOCK CELL, DOUBLE REINFORCING IS TWO BARS IN A CMU BLOCK CELL WITH 2 INCH MINIMUM CLEAR COVER FROM OUTSIDE FACE OF BLOCK.
6. TABULATED VALUES BASED ON UNCOATED REINFORCMENT WITH A YEILD STRENGTH, Fy =60 KSI
7. TABULATED VALUES BASED ON MASONRY COMPRESSIVE STRENGTH, f'm =2000 PSI

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SUBMITTED BY:
SIZE: ANSI D

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5700 OAKLAND AVE. SUITE 275
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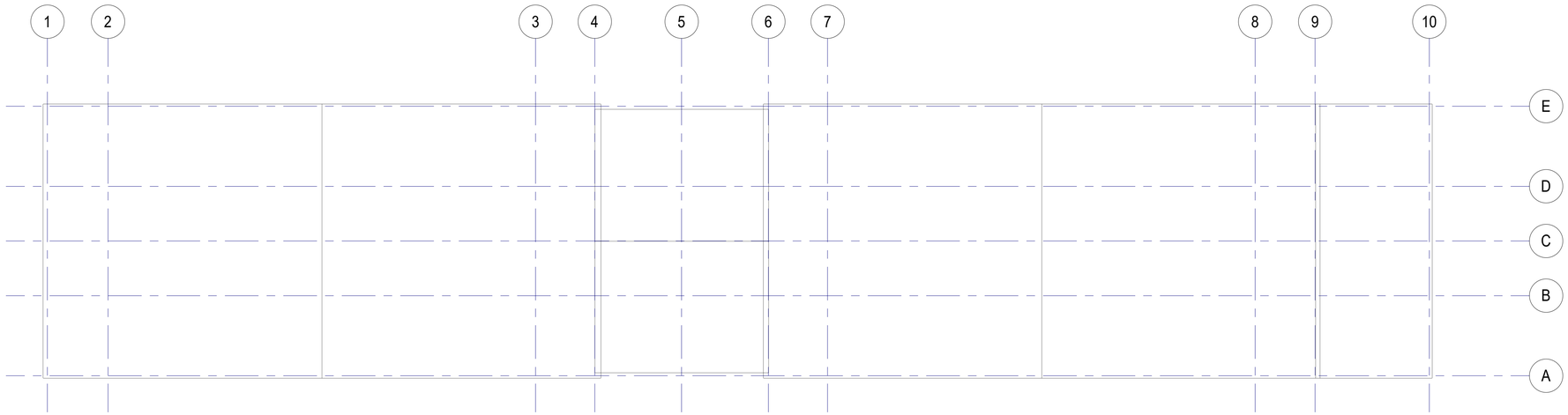
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

GENERAL STRUCTURAL NOTES

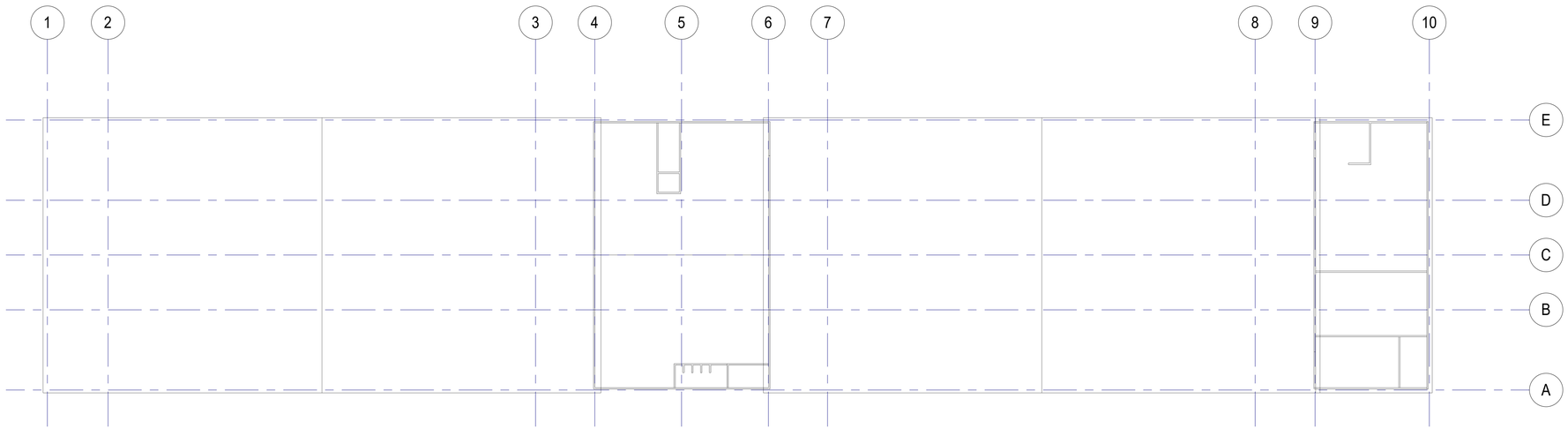
SHEET ID
S-004

FOR REVIEW




## K3 OVERALL ROOF SNOW DRIFT LOAD PLAN

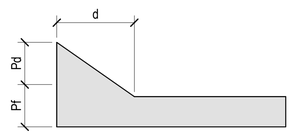
1" = 30'-0"




## D3 OVERALL WIND COMPONENTS AND CLADDING ROOF LOAD PLAN

1" = 30'-0"

| SNOW DRIFT LOAD KEY | | | |
|---|---|---|---|
| MARK | SURCHAGE LOAD (Pd) | DRIFT WIDTH (d) | BALANCED SNOW LOAD (Pf) |
| SD-1 | 30 PSF | 8 FT | 4.2 PSF |
| SD-2 | 25 PSF | 7 FT | 4.2 PSF |

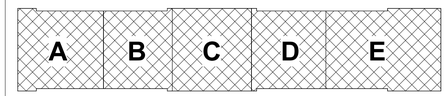



| WIND LOAD MAP KEY | | | | | |
|---|---|---|---|---|---|
| MARK | PATTERN | USAGE | WIND LOAD (PSF) | | |
| | | COMPONENTS AND CLADDING PRESSURES (ULTIMATE) | 50 FT$^2$ | 100 FT$^2$ | 500 FT$^2$ |
| 1 | | INTERIOR ROOF ZONE (ZONE1) | -36.0 PSF<br>16.0 PSF | -33.2 PSF<br>16.0 PSF | -26.7 PSF<br>16.0 PSF |
| 2 | | ROOF END ZONE (ZONE 2&3) | -59.7 PSF<br>16.0 PSF | -52.5 PSF<br>16.0 PSF | -35.7 PSF<br>16.0 PSF |
| 3 | | OVERHANG ZONE (ZONES 2&3) | -52.8 PSF<br>16.0 PSF | -44.4 PSF<br>16.0 PSF | -24.9 PSF<br>16.0 PSF |

1" = 30' - 0"  0  15'  30'  60'  90'

PLAN NORTH

## KEY PLAN

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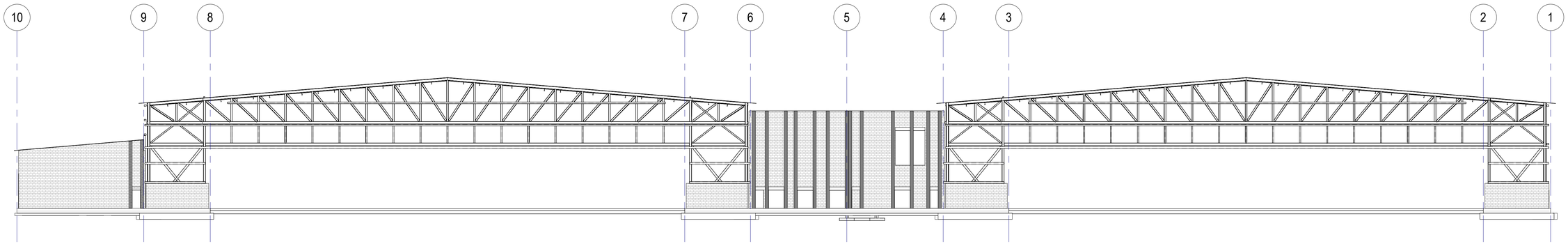
494137

LOADING PLANS

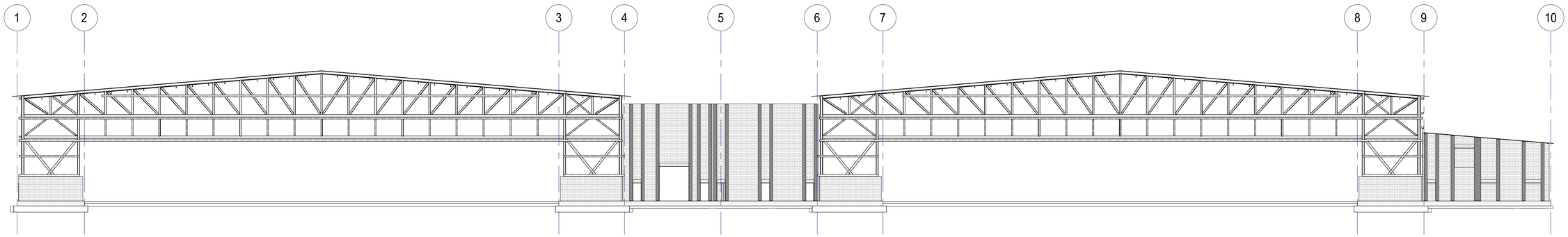
SHEET ID
S-005

FOR REVIEW



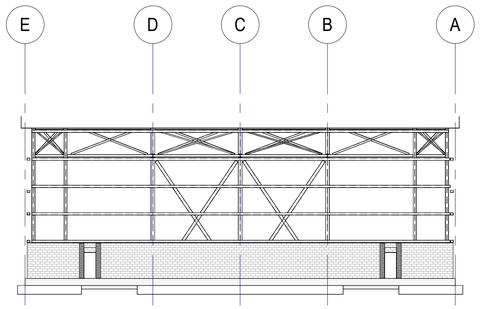

## K1 WIND LOAD ELEVATION - NORTH FACE

3/64" = 1'-0"



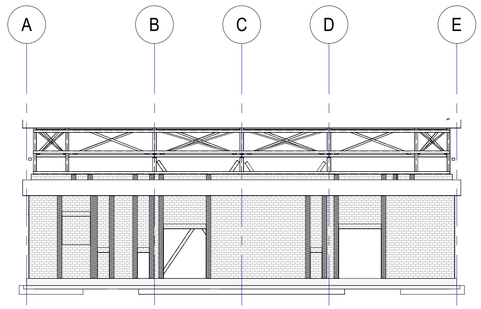

## F1 WIND LOAD ELEVATION - SOUTH FACE

3/64" = 1'-0"




## B1 WIND LOAD ELEVATION - WEST FACE

3/64" = 1'-0"




## B7 WIND LOAD ELEVATION - EAST FACE

3/64" = 1'-0"

**WIND LOAD MAP KEY**

| MARK | PATTERN | USAGE | WIND LOAD (PSF) | | |
|---|---|---|---|---|---|
| | | COMPONENTS AND CLADDING PRESSURES (ULTIMATE) | 10 FT² | 100 FT² | 200 FT² |
| 5 | | INTERIOR WALL ZONE (ZONE 4) | - 26.5 PSF<br>+ 24.4 PSF | - 22.9PSF<br>+ 20.8 PSF | - 21.8 PSF<br>+ 19.7 PSF |
| 6 | | EXTERIOR WALL ZONE (ZONE 5) | - 32.6 PSF<br>+ 24.4 PSF | - 25.4 PSF<br>+ 20.8 PSF | - 23.2 PSF<br>+ 19.7 PSF |
| 7 | | PARAPET | 79.3 PSF | 55.7 PSF | 48.6 PSF |

3/64" = 1' - 0"  0  5'  10'  20'  40'  80'

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CREECH AIR FORCE BASE, CLARK COUNTY, NV
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WIND LOADING ELEVATIONS

SHEET ID

S-006

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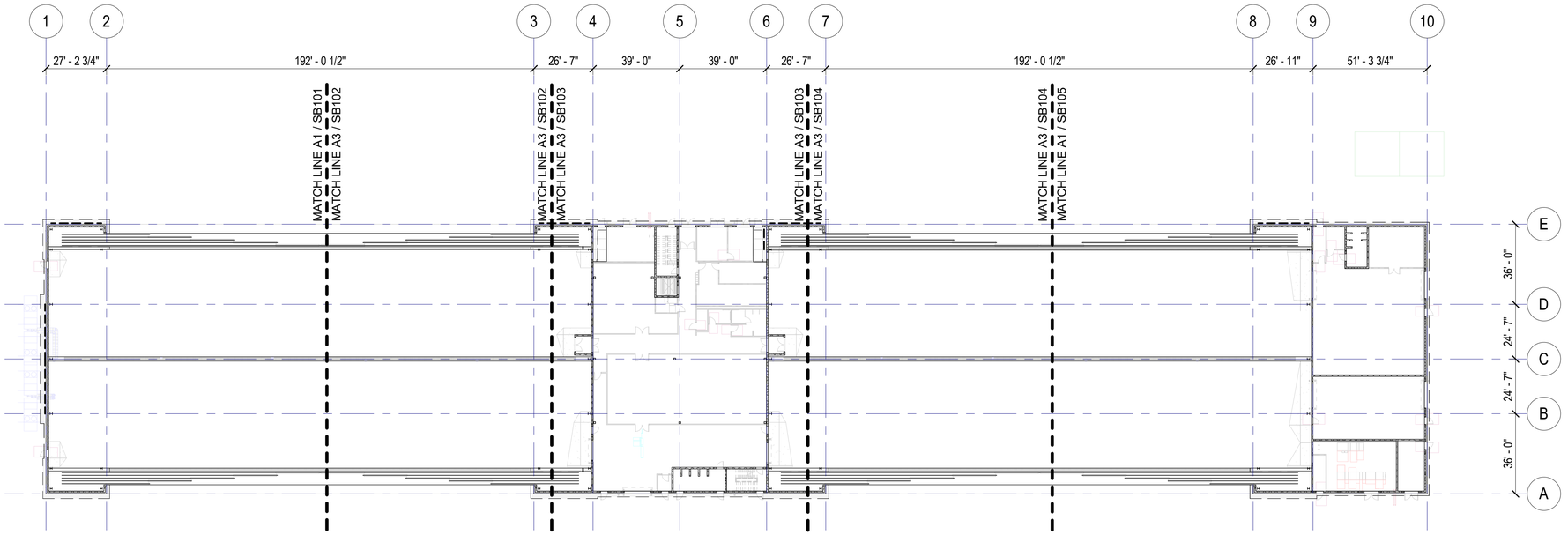


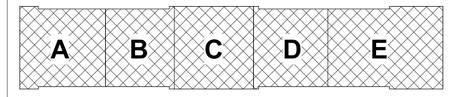

## D2 OVERALL FOUNDATION PLAN

SCALE: 1" = 30'-0"

1" = 30' - 0"  0  15'  30'  60'  90'

PLAN NORTH

### KEY PLAN

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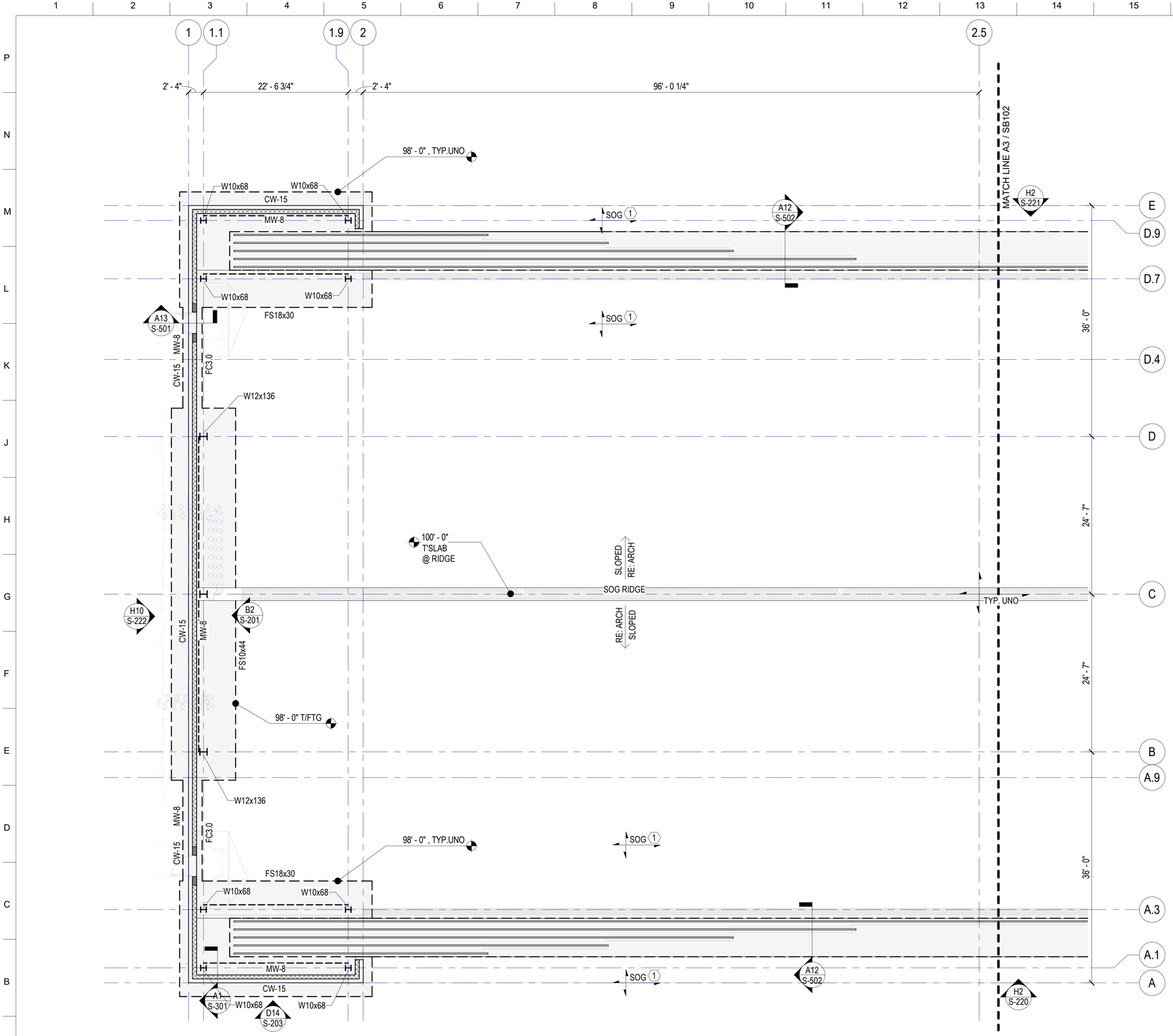
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

OVERALL FOUNDATION PLAN

SHEET ID

SB100




**A1** FOUNDATION PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

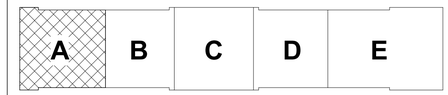
# GENERAL NOTES

1. SEE SHEETS S-001 TO S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
2. SEE ARCHITECTURAL, CIVIL, AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
3. TYPICAL TOP OF SLAB ELEVATION = RE: CIVIL AND ARCH. THIS IS THE DATUM 100'-0". ALL ELEVATIONS ARE REFERENCED FROM THIS ELEVATION.
4. FOUNDATIONS ARE SPREAD, STRIP, MAT FOOTINGS. ALL FOOTINGS TO BE CENTERED BELOW WALLS AND COLUMNS (OR COLUMN GROUP) UNLESS NOTED OTHERWISE.
5. ALL TOP OF FOOTING ELEVATIONS = 98'-0" UNLESS NOTED OTHERWISE.
6. ALL EXTERIOR FOOTINGS MUST BEAR AT OR BELOW MINIMUM BEARING DEPTH AS SPECIFIED IN DESIGN CRITERIA SECTION. PROVIDE ADDITIONAL FOOTINGS STEPS AS REQUIRED. CONTRACTOR SHALL COORDINATE ALL FOOTING STEP LOCATIONS.
7. RE: PLAN FOR SLAB ON GRADE THICKNESS AND REINFORCING.
8. FOR DIMENSIONS NOT SHOWN ON THESE SHEETS, COORDINATE WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
9. FOR UTILITIES PASSING BELOW FOOTINGS, SEE L17/S-501. CONTRACTOR MUST COORDINATE ALL UTILITY AND FOOTING STEP LOCATIONS. SEE L13/S-501 FOR TYPICAL FOOTING STEP DETAIL AND D9/S-501 FOR UTILITY PENETRATION THROUGH FOUNDATION WALLS.
10. ALL FOOTINGS AT THE END OF A WALL THAT DOES NOT END IN A CORNER CONDITION SHALL EXTEND 1'-0" PAST WALL END.
11. CMU WALLS ARE MW8 UNLESS NOTED OTHERWISE.
12. CONCRETE STEM WALLS ARE CW8 UNDER MW8 CMU AND CW15 UNDER MW8 WALLS WITH CMU VENEER UNLESS NOTED OTHERWISE.
13. RE: ARCH DRAWINGS FOR SLAB SLOPES AND DRAINS, ETC.

# KEYNOTES

1. 12 1/2" THICK UNREINFORCED SLAB ON GRADE ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 20 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
2. 6" THICK REINFORCED SLAB ON GRADE W/ # 4 @ 18" OC EACH WAY ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 15 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
3. 8" THICK UNREINFORCED CONC. SLAB OVER CONC. MAT FOOTING AT HANGAR DOOR SUPPORT RAILS. RE: A12/S-502
4. RE: H9/S-501 FOR SLAB REINFORCING AT OPENINGS AND RE-ENTRANT CORNERS, TYP

## KEY PLAN

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SIZE: ANSI D

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CREECH AIR FORCE BASE, CLARK COUNTY, NV
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FOUNDATION PLAN - AREA A

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SHEET ID

SB101

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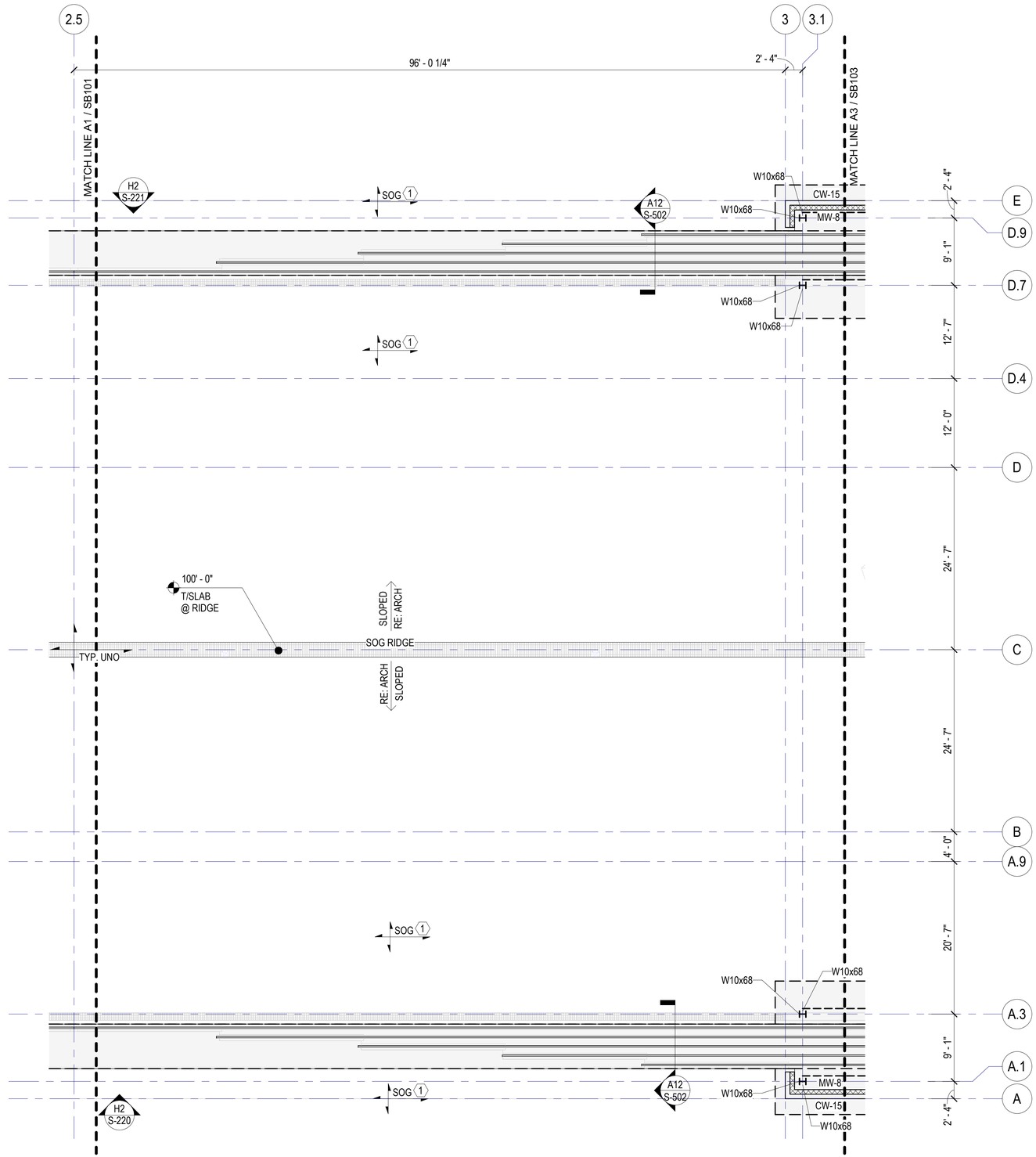


**A3** FOUNDATION PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0" 0 5' 10' 15' 30'

# GENERAL NOTES

1. SEE SHEETS S-001 TO S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
2. SEE ARCHITECTURAL, CIVIL, AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
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13. RE: ARCH DRAWINGS FOR SLAB SLOPES AND DRAINS, ETC.

# KEYNOTES

1. 12 1/2" THICK UNREINFORCED SLAB ON GRADE ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 20 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
2. 6" THICK REINFORCED SLAB ON GRADE W/ # 4 @ 18" OC EACH WAY ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 15 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
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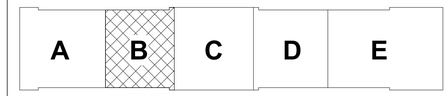
4. RE: H9/S-501 FOR SLAB REINFORCING AT OPENINGS AND RE-ENTRANT CORNERS, TYP

## KEY PLAN

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SIZE: ANSI D

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FOUNDATION PLAN - AREA B

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SB102

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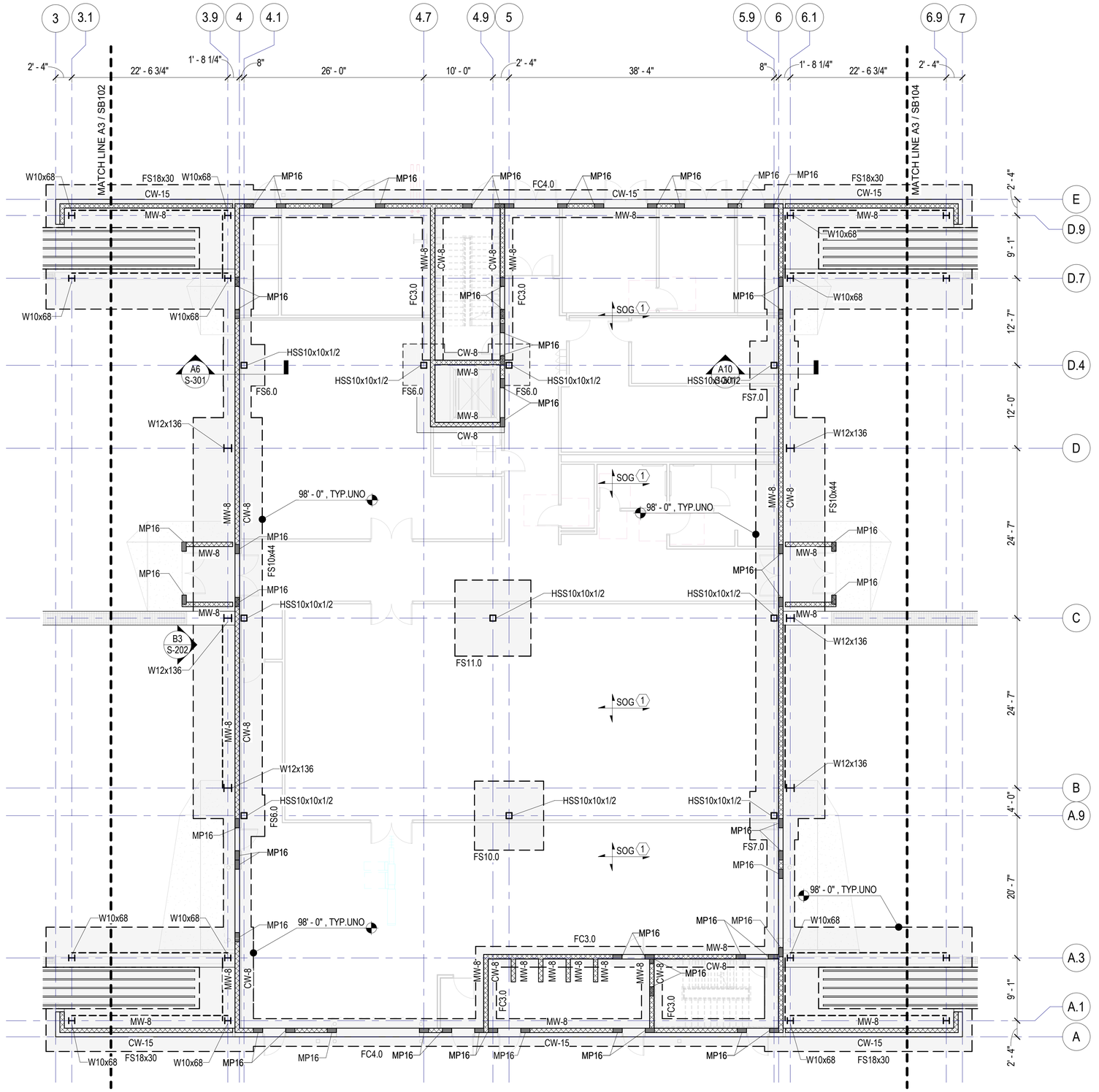


A3 FOUNDATION PLAN - AREA C
SCALE: 1/8" = 1'-0"

1/8" = 1' - 0"  0  5'  10'  15'  30'

PLAN NORTH

# GENERAL NOTES

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2. 6" THICK REINFORCED SLAB ON GRADE W/ # 4 @ 18" OC EACH WAY ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 15 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
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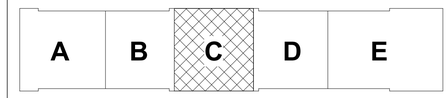
# KEY PLAN

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| MARK | DESCRIPTION | DATE |
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ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: C. ANDERSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE. SUITE 275
ST. LOUIS, MO 63110

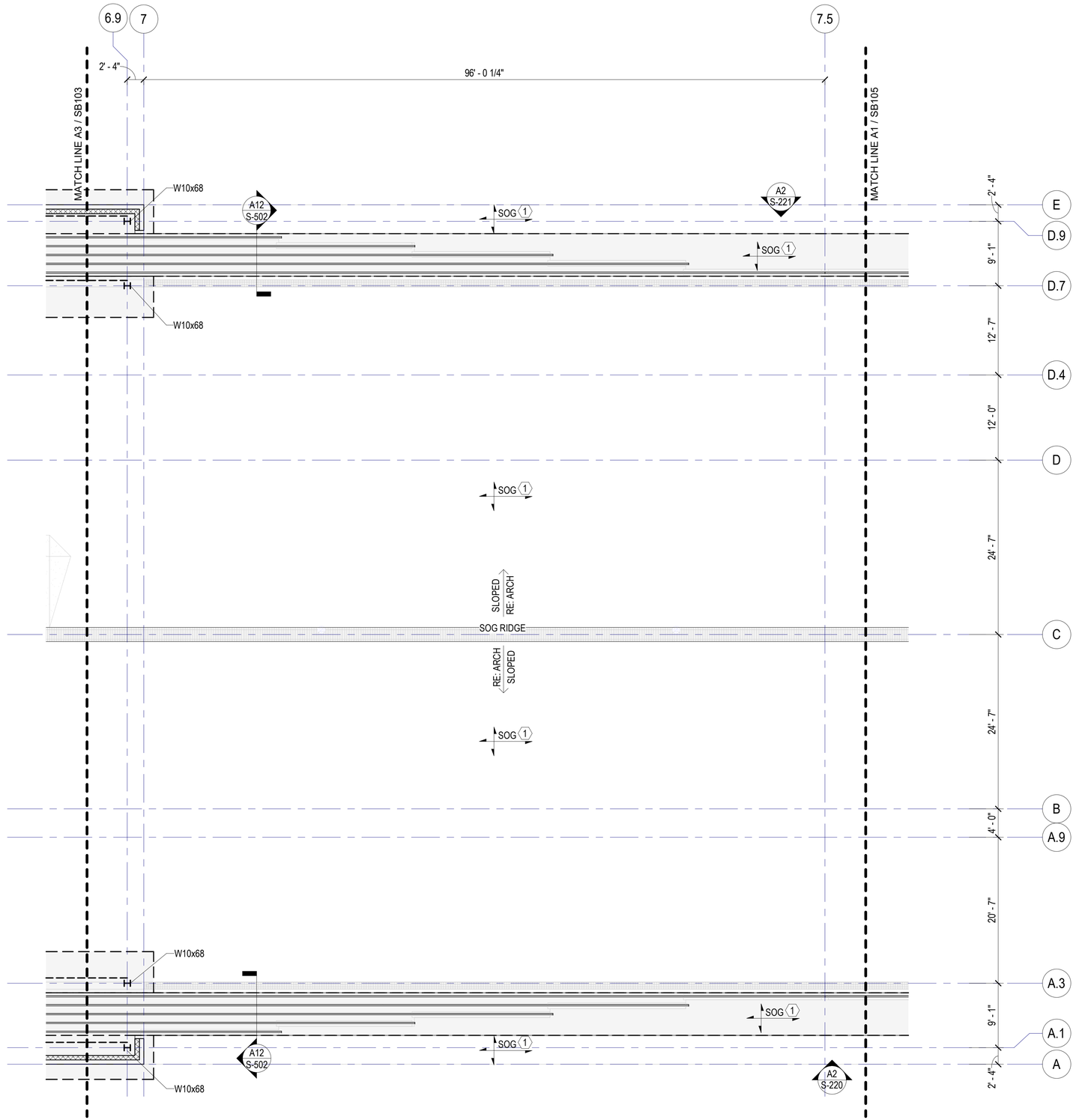
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

FOUNDATION PLAN - AREA C

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID
SB103

FOR REVIEW




**A3** FOUNDATION PLAN - AREA D
SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0" 0 5' 10' 15' 30'

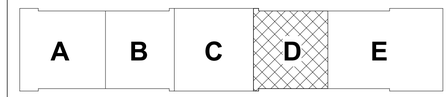
# GENERAL NOTES

1. SEE SHEETS S-001 TO S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
2. SEE ARCHITECTURAL, CIVIL, AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
3. TYPICAL TOP OF SLAB ELEVATION = RE: CIVIL AND ARCH. THIS IS THE DATUM 100'-0". ALL ELEVATIONS ARE REFERENCED FROM THIS ELEVATION.
4. FOUNDATIONS ARE SPREAD, STRIP, MAT FOOTINGS. ALL FOOTINGS TO BE CENTERED BELOW WALLS AND COLUMNS (OR COLUMN GROUP) UNLESS NOTED OTHERWISE.
5. ALL TOP OF FOOTING ELEVATIONS = 98'-0" UNLESS NOTED OTHERWISE.
6. ALL EXTERIOR FOOTINGS MUST BEAR AT OR BELOW MINIMUM BEARING DEPTH AS SPECIFIED IN DESIGN CRITERIA SECTION. PROVIDE ADDITIONAL FOOTINGS STEPS AS REQUIRED. CONTRACTOR SHALL COORDINATE ALL FOOTING STEP LOCATIONS.
7. RE: PLAN FOR SLAB ON GRADE THICKNESS AND REINFORCING.
8. FOR DIMENSIONS NOT SHOWN ON THESE SHEETS, COORDINATE WALL OPENINGS, ELEVATIONS, SECTIONS, AND DETAILS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
9. FOR UTILITIES PASSING BELOW FOOTINGS, SEE L17/S-501. CONTRACTOR MUST COORDINATE ALL UTILITY AND FOOTING STEP LOCATIONS. SEE L13/S-501 FOR TYPICAL FOOTING STEP DETAIL AND D9/S-501 FOR UTILITY PENETRATION THROUGH FOUNDATION WALLS.
10. ALL FOOTINGS AT THE END OF A WALL THAT DOES NOT END IN A CORNER CONDITION SHALL EXTEND 1'-0" PAST WALL END.
11. CMU WALLS ARE MW8 UNLESS NOTED OTHERWISE.
12. CONCRETE STEM WALLS ARE CW8 UNDER MW8 CMU AND CW15 UNDER MW8 WALLS WITH CMU VENEER UNLESS NOTED OTHERWISE.
13. RE: ARCH DRAWINGS FOR SLAB SLOPES AND DRAINS, ETC.

# KEYNOTES

1. 12 1/2" THICK UNREINFORCED SLAB ON GRADE ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 20 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
2. 6" THICK REINFORCED SLAB ON GRADE W/ # 4 @ 18" OC EACH WAY ON 15 MIL VAPOR RETARDER OVER 6" MIN OF CRUSHED STONE AGGREGATE AND 12" MIN COMPACTED NON-EXPANSIVE FILL (SEE GEOTECH REPORT). SLAB ON GROUND JOINTS MUST BE LOCATED NO GREATER THAN 15 FT ON CENTER EACH DIRECTION, RE: E6/S-502 AND E10/S-502.)
3. 8" THICK UNREINFORCED CONC. SLAB OVER CONC. MAT FOOTING AT HANGAR DOOR SUPPORT RAILS. RE: A12/S-502
4. RE: H9/S-501 FOR SLAB REINFORCING AT OPENINGS AND RE-ENTRANT CORNERS, TYP

## KEY PLAN

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SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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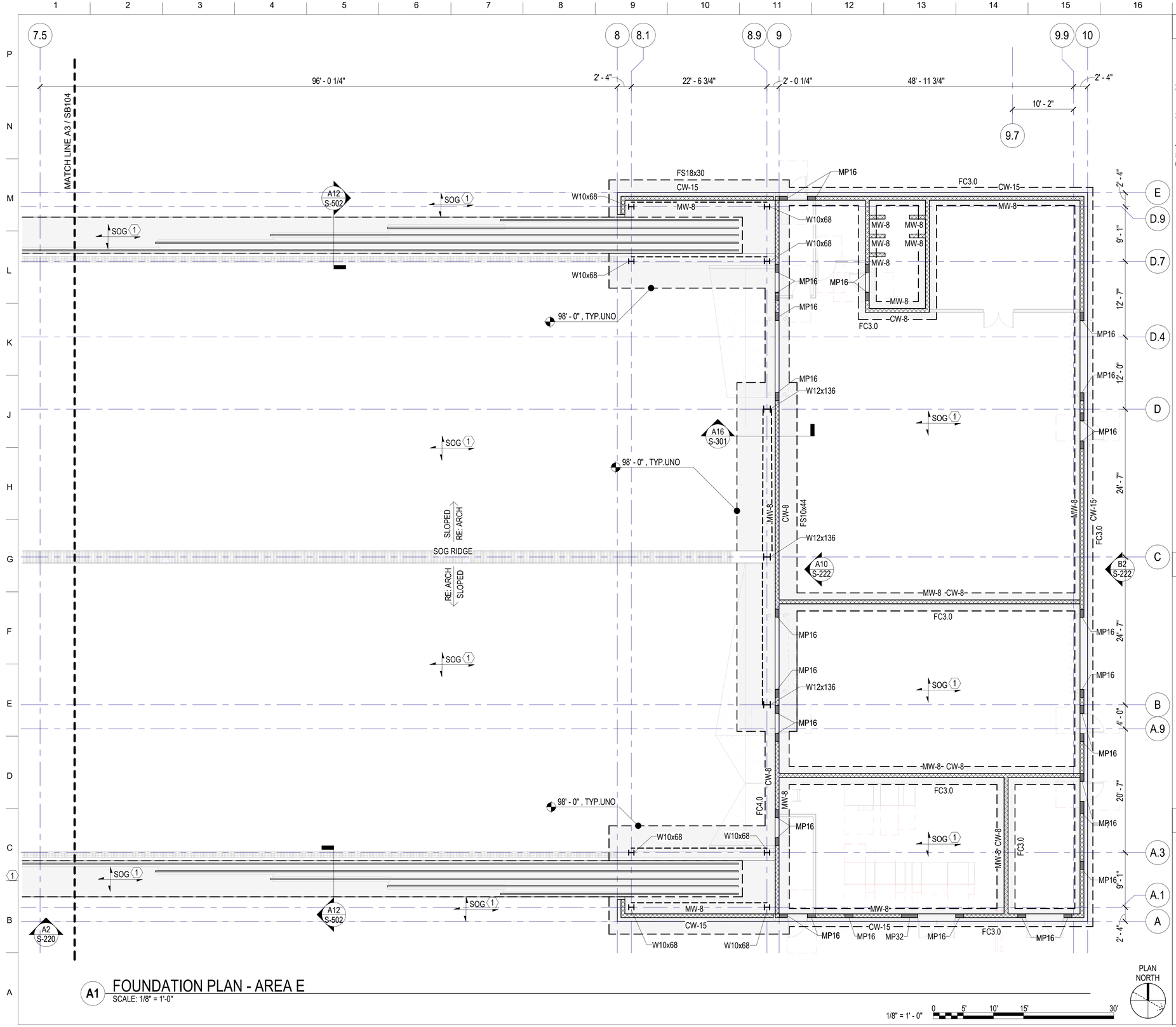
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

FOUNDATION PLAN - AREA D

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID
SB104

FOR REVIEW




## A1 FOUNDATION PLAN - AREA E

SCALE: 1/8" = 1'-0"

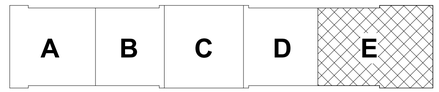
# FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
2. PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN




US Army Corps of Engineers ®

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ISSUE DATE: JULY 17, 2025
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DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
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CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

FOUNDATION PLAN - AREA E

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

SB105

FOR REVIEW


## D1 OVERALL SECOND AND MEZZANINE FLOOR FRAMING PLAN

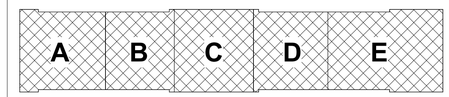
1" = 30'-0"

1" = 30' - 0"

0 15' 30' 60' 90'

PLAN NORTH

## KEY PLAN




PRELIMINARY DESIGN
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FOR REVIEW

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CHECKED BY: C. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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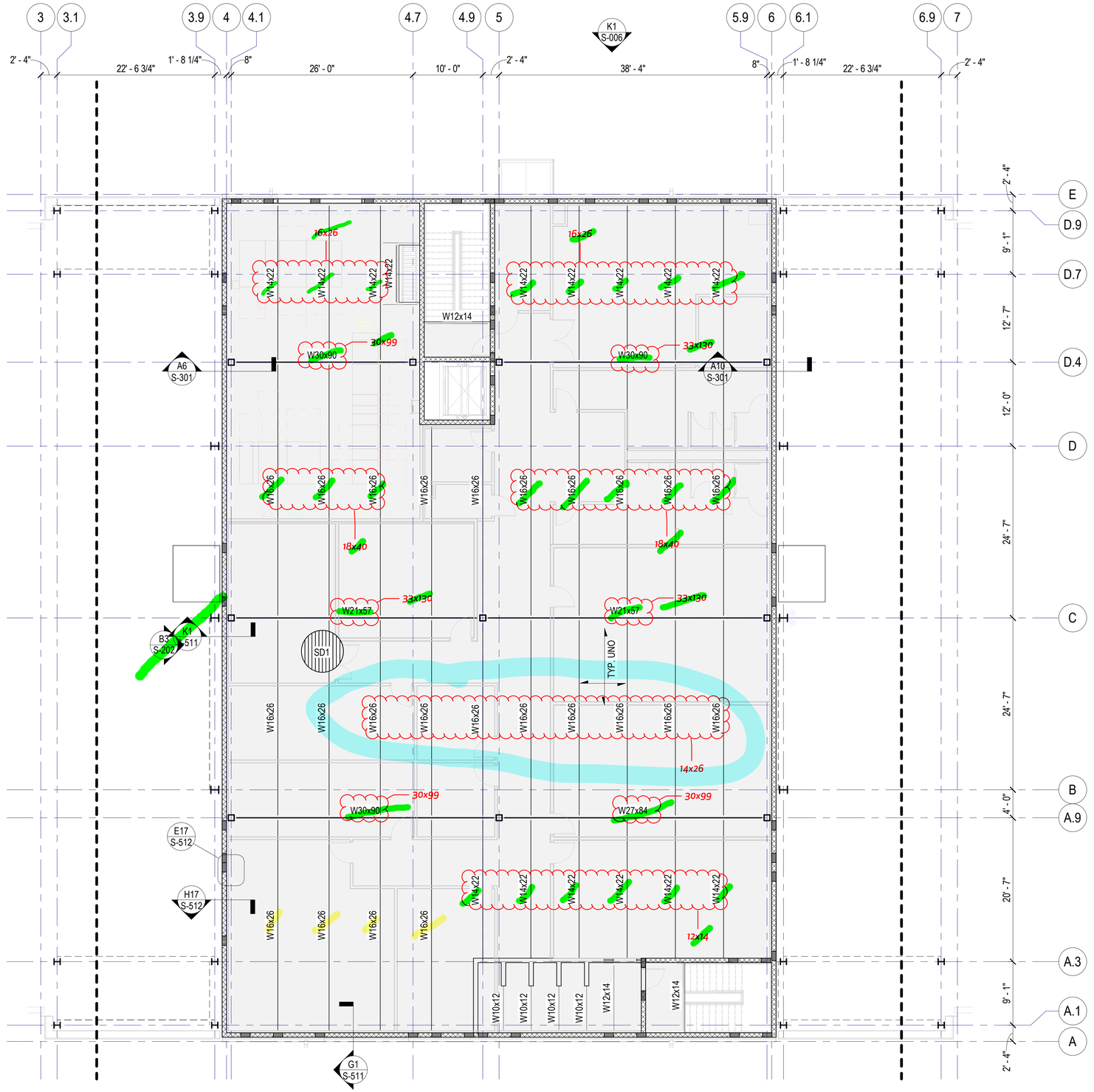
5700 OAKLAND AVE. SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

OVERALL SECOND AND MEZZAMINE FLOOR FRAMING PLAN

SHEET ID

SF120




A3 SECOND FLOOR FRAMING PLAN - AREA C

1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0" 0 5' 10' 15' 30'

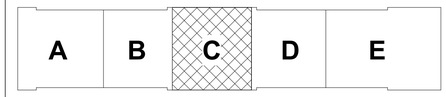
# ROOF FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. SHOP DRAWINGS MUST BE PRODUCED FOR ALL JOISTS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AND SHALL BEAR THE STAMP OF A LICENSED ENGINEER.
4. OPEN WEB STEEL JOISTS SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE MECHANICAL, AXIAL (WL/EQ), LATERAL, POINT, AND UNIFORM LOADS SHOWN ON PLANS AND IN DETAILS. LOADS SHOWN ARE ASD MAGNITUDE LOADS UNLESS NOTED OTHERWISE.
5. THE STEEL JOIST SUPPLIER IS RESPONSIBLE IN DESIGNING ALL JOISTS, INCLUDING SLOPE, CAMBER, BEARING ENDS, ETC. ALL DESIGNS SHALL BE IN ACCORDANCE WITH SJI SPECIFICATIONS WITH A MAXIMUM DEFLECTION OF JOISTS OF TL/180 AND LL/240.
6. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED, LOCATED, AND SUPPLIED BY THE JOIST MANUFACTURER.
7. ALL STABILIZER PLATES SHALL BE 6"x6"xCHORD GAP-1/4" WITH A 3/4" DIAMETER HOLE, AND MUST EXTEND 3" MINIMUM BELOW THE BOTTOM CHORD.
8. ALL CONCENTRATED LOADS GREATER THAN 100 POUNDS SUPPORTED BY OPEN WEB JOISTS SHALL BE LOCATED WITHIN 6" OF PANEL POINT. OTHERWISE, JOIST SHALL BE REINFORCED WITH AN ADDITIONAL WEB MEMBER. (RE: H1/S-511)
9. BOTTOM CHORD OF ANY JOIST SHALL NOT BE USED TO BRACE ANY MISC EQUIPMENT.
10. JOIST BRIDGING SHALL NEVER BE USED TO SUPPORT HANGING LOADS.
11. JOIST LOADS SHOWN ON PLAN WITH THE JOIST DESIGNATION "K (XX/XX)" ACCOUNTS FOR TOTAL LOAD/LIVE LOAD (ASD).
12. OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT DUE TO WIND LOADING, RE: SHEET S-005.
13. STEEL JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL VERT LIVE LOAD (ASD) OF +/-500# AT EACH PANEL POINT
14. STANDARD JOIST SEAT DEPTH SHALL BE 2 1/2". CONTRACTOR TO COORDINATE TOP OF GIRDERS USING 2 1/2" JOIST SEAT DEPTH UNO.
15. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
16. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
17. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
18. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. HANGING FAN ON BOTTOM CHORD OF TRUSS ON GRID D. APPROXIMATE WEIGHT OF 300LBS (DL ASD). RE: ARCH/MEP FOR EXACT LOCATION. RE: MFR FOR ATTACHMENT
2. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN




US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: C. LAMBOWITZ
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
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US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

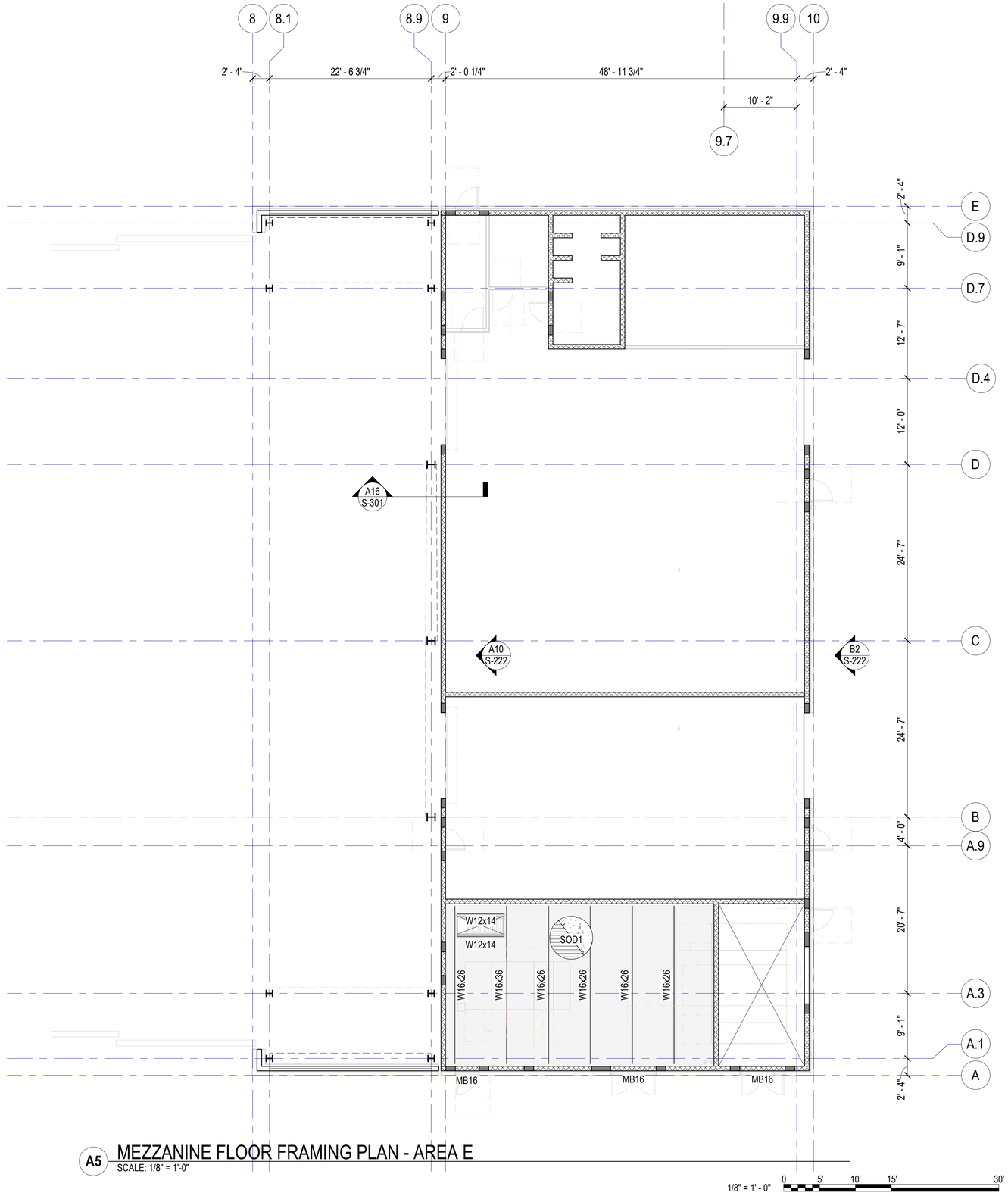
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

SECOND FLOOR FRAMING PLAN - AREA C

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID
SF121

FOR REVIEW




A5 MEZZANINE FLOOR FRAMING PLAN - AREA E
SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

# ROOF FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. SHOP DRAWINGS MUST BE PRODUCED FOR ALL JOISTS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AND SHALL BEAR THE STAMP OF A LICENSED ENGINEER.
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6. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED, LOCATED, AND SUPPLIED BY THE JOIST MANUFACTURER.
7. ALL STABILIZER PLATES SHALL BE 6"x6"xCHORD GAP-1/4" WITH A 3/4" DIAMETER HOLE, AND MUST EXTEND 3" MINIMUM BELOW THE BOTTOM CHORD.
8. ALL CONCENTRATED LOADS GREATER THAN 100 POUNDS SUPPORTED BY OPEN WEB JOISTS SHALL BE LOCATED WITHIN 6" OF PANEL POINT. OTHERWISE, JOIST SHALL BE REINFORCED WITH AN ADDITIONAL WEB MEMBER. (RE: H1/S-511)
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12. OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT DUE TO WIND LOADING, RE: SHEET S-005.
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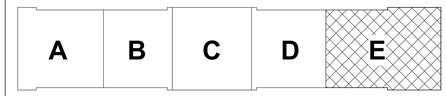
16. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
17. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
18. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. HANGING FAN ON BOTTOM CHORD OF TRUSS ON GRID D. APPROXIMATE WEIGHT OF 300LBS (DL ASD). RE: ARCH/MEP FOR EXACT LOCATION. RE: MFR FOR ATTACHMENT
2. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN




US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
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DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. LAMONTE
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
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US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

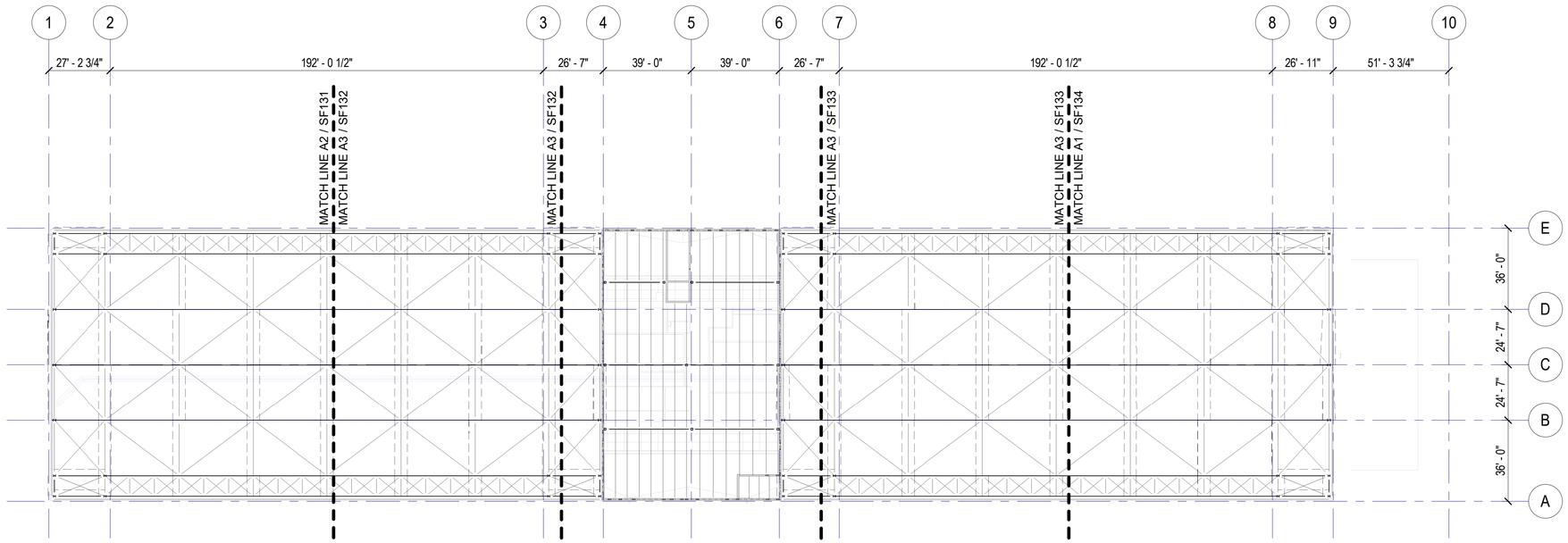
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

MEZZANINE FLOOR FRAMING PLAN - AREA E

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID
SF122

FOR REVIEW

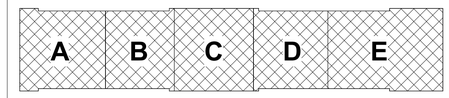



**D3** COMPREHENSIVE BOTTOM CHORD FRAMING PLAN
SCALE: 1" = 30'-0"

1" = 30' - 0"  0  15'  30'  60'  90'

PLAN NORTH

## KEY PLAN




PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID
SF130

FOR REVIEW

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DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CAMACHO
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE. SUITE 275
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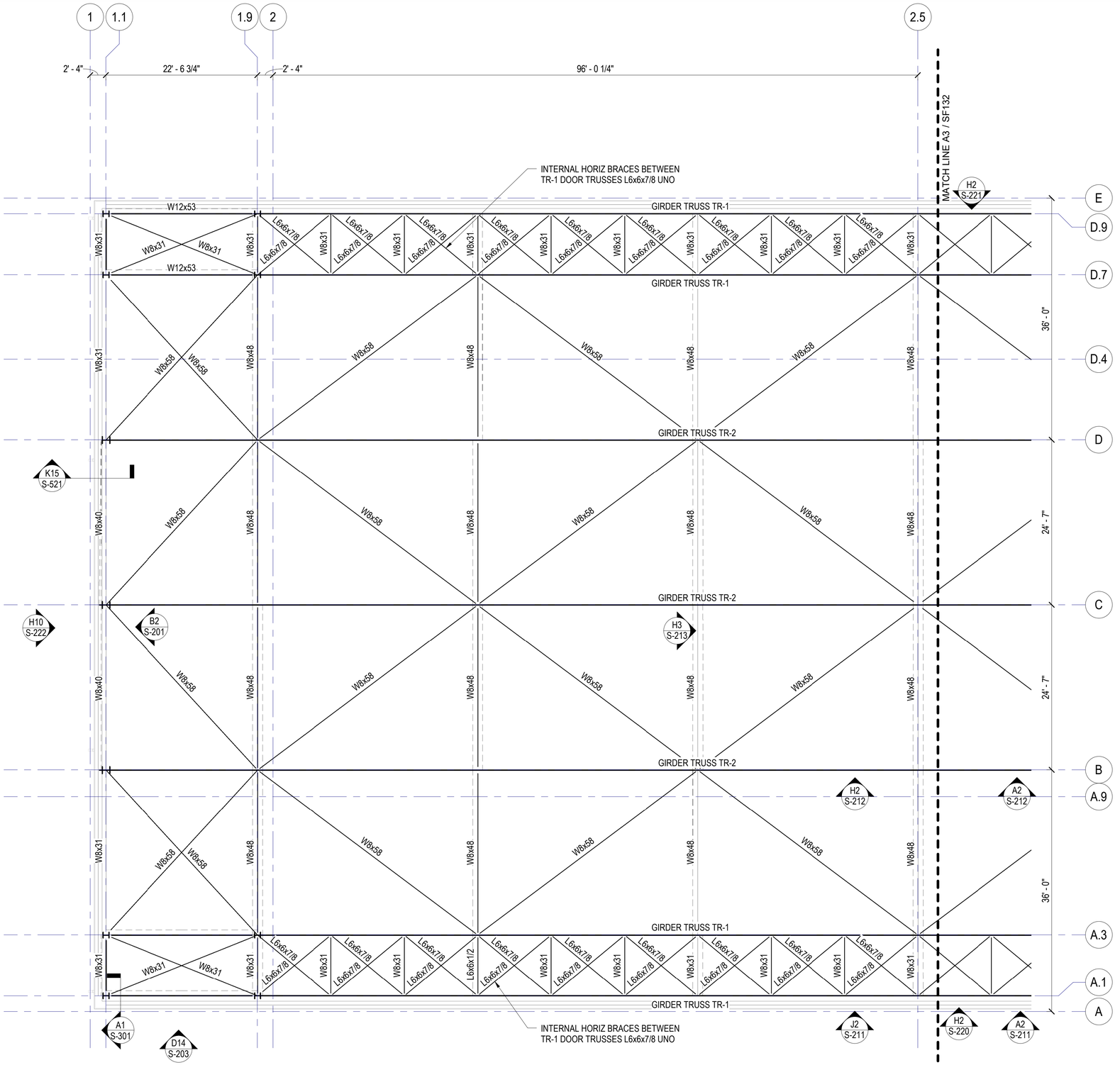
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

OVERALL BOTTOM CHORD FRAMING PLAN




## A2 GIRDER TRUSS BOTTOM CHORD HORIZONTAL BRACING PLAN - AREA A

SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

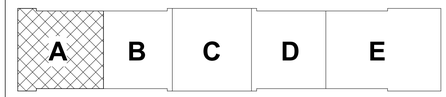
# FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
2. PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN




US Army Corps of Engineers ®

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DRAWN BY: R. CARLSON
CHECKED BY: D. LAWSON
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

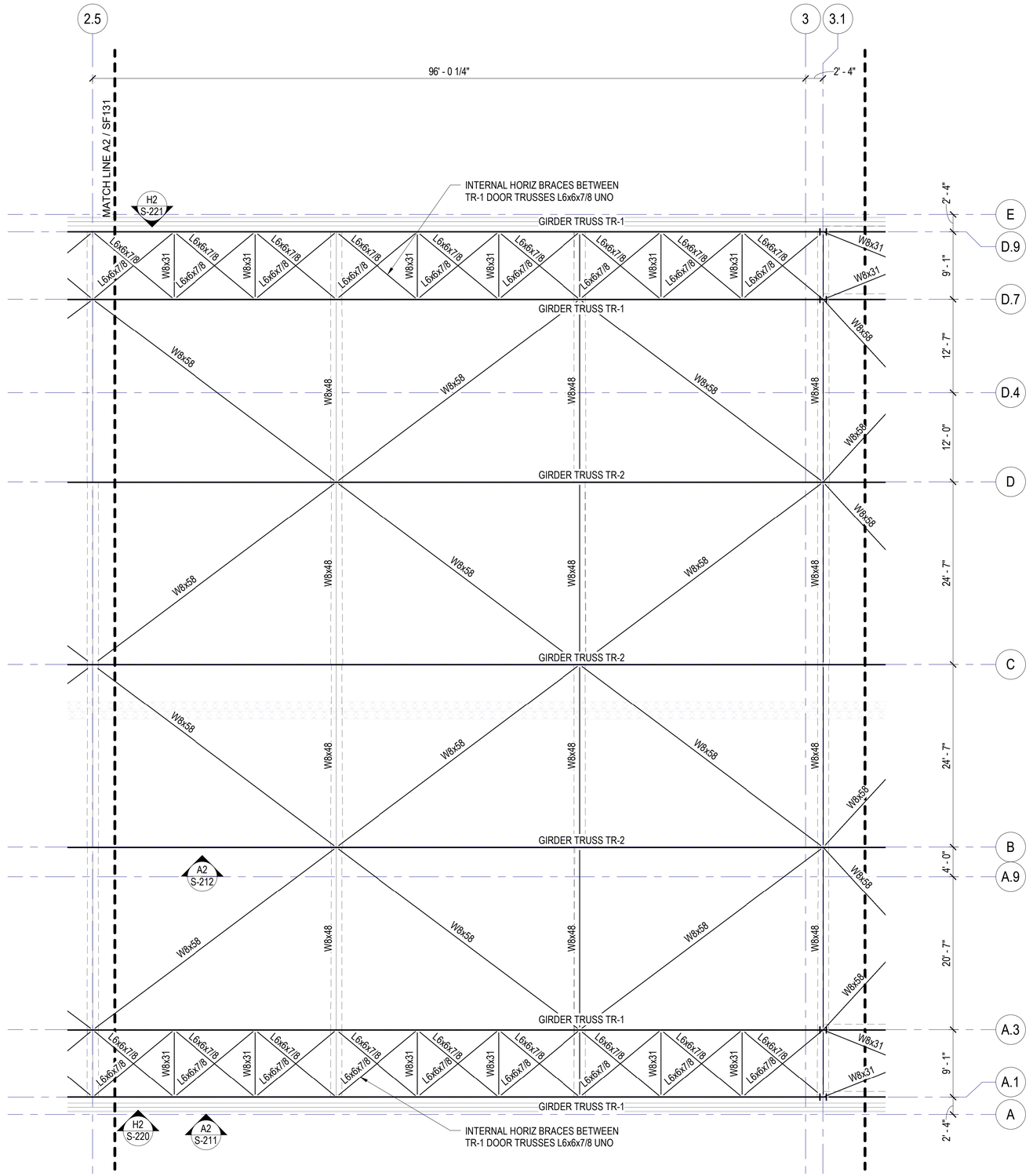
BOTTOM CHORD FRAMING PLAN - AREA A

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

SF131

FOR REVIEW




A3 GIRDER TRUSS BOTTOM CHORD HORIZONTAL BRACING PLAN - AREA B

SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

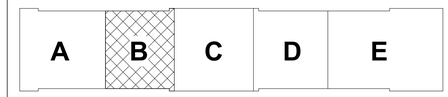
# FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
2. PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN




US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

BOTTOM CHORD FRAMING PLAN - AREA B

PRELIMINARY DESIGN
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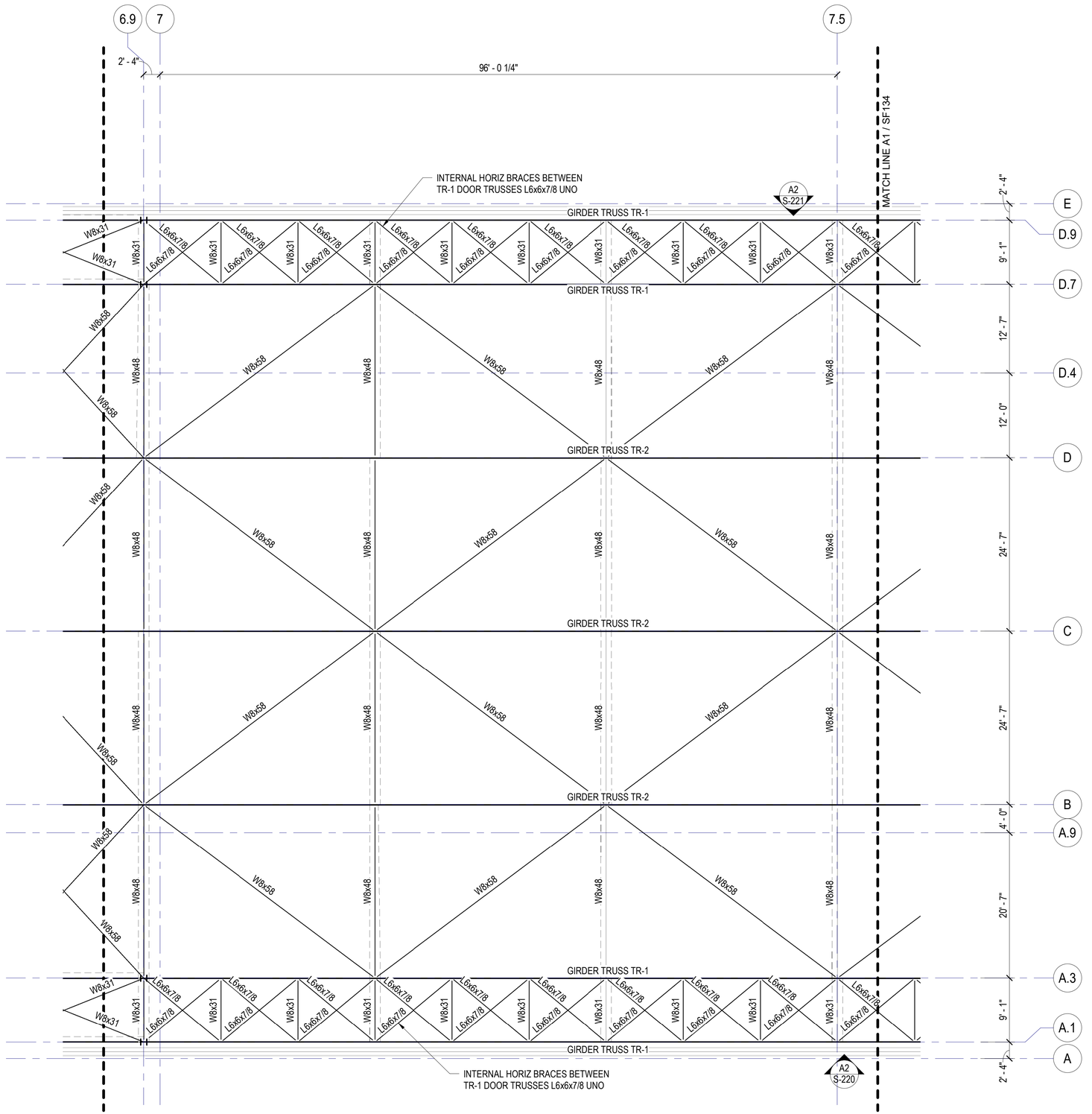
SHEET ID

SF132

FOR REVIEW




**A3** GIRDER TRUSS BOTTOM CHORD HORIZONTAL BRACING PLAN - AREA D
SCALE: 1/8" = 1'-0"

1/8" = 1' - 0"  0  5'  10'  15'  30'

PLAN NORTH

# FRAMING NOTES

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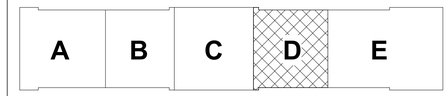
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
2. PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN

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US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: C. ANDERSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE. SUITE 275
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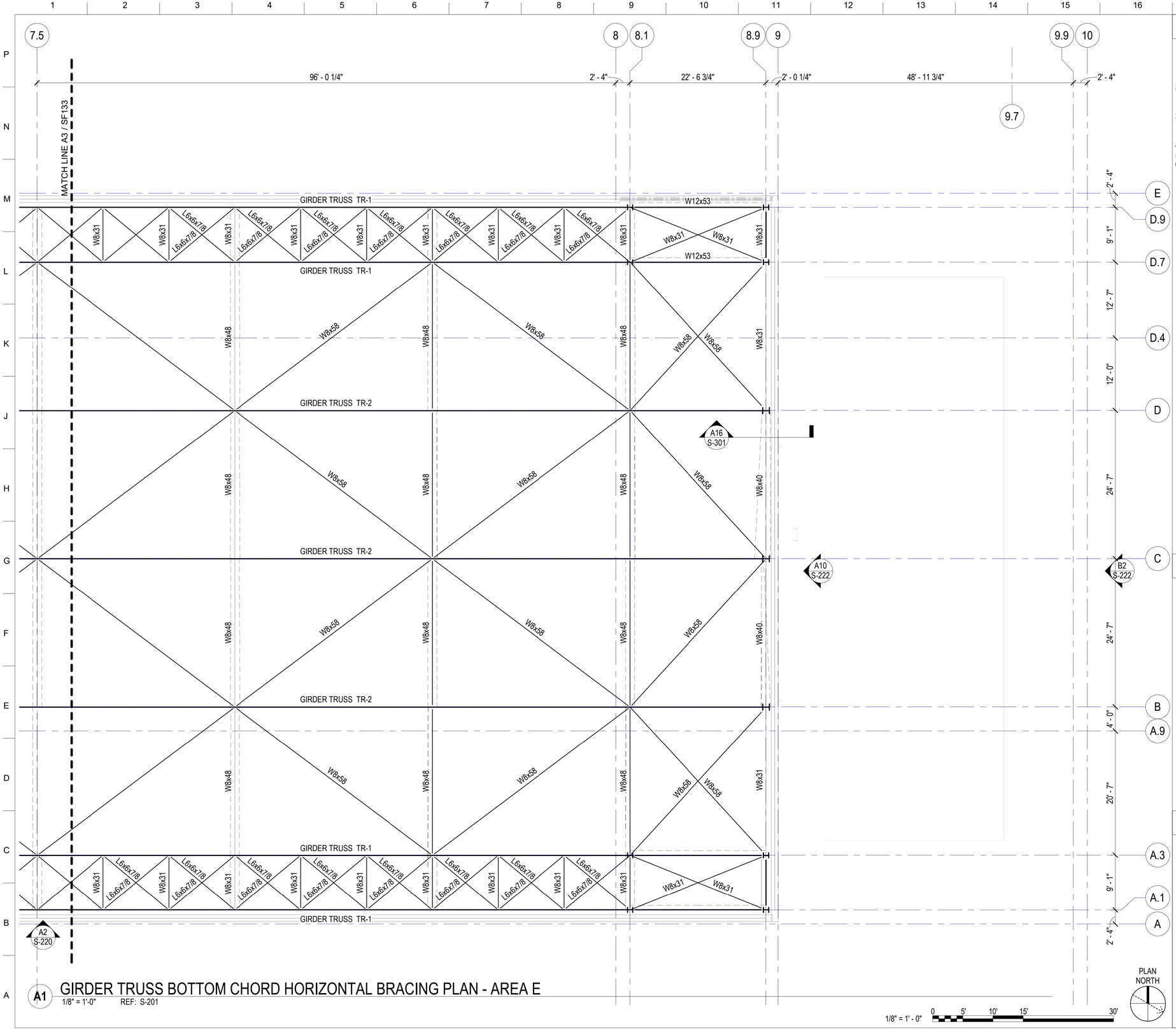
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

BOTTOM CHORD FRAMING PLAN - AREA D

SHEET ID

SF133

FOR REVIEW




## GIRDER TRUSS BOTTOM CHORD HORIZONTAL BRACING PLAN - AREA E

A1 — 1/8" = 1'-0" REF: S-201

## FRAMING NOTES

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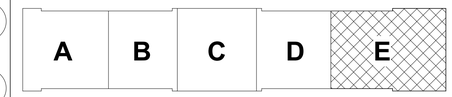
3. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
4. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
5. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
6. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

## KEYNOTES

1. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
2. PROVIDE L2x2x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K10/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

## KEY PLAN

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US Army Corps of Engineers ®

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ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
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DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CLAYCOMB
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

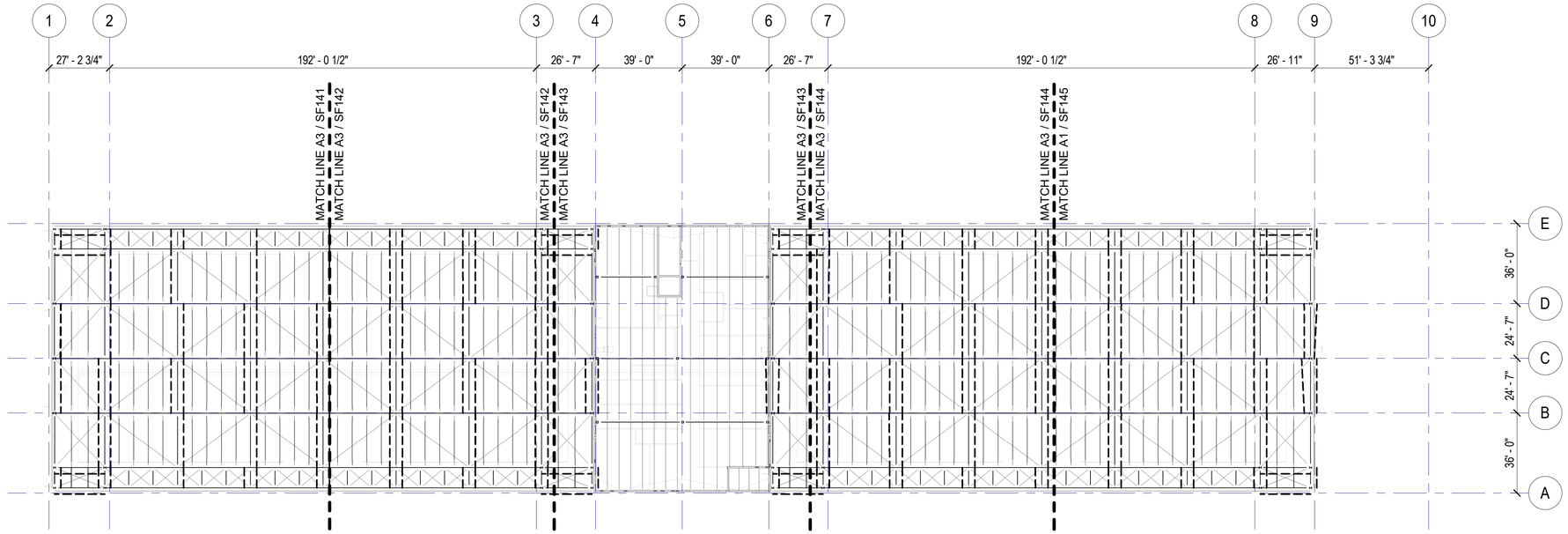
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

BOTTOM CHORD FRAMING PLAN - AREA E

SHEET ID

SF134

FOR REVIEW




## E3 COMPREHENSIVE ROOF PLAN

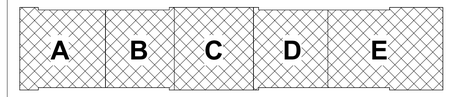
SCALE: 1" = 30'-0"

1" = 30' - 0"

0 15' 30' 60' 90'

PLAN NORTH

### KEY PLAN

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SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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5700 OAKLAND AVE. SUITE 275
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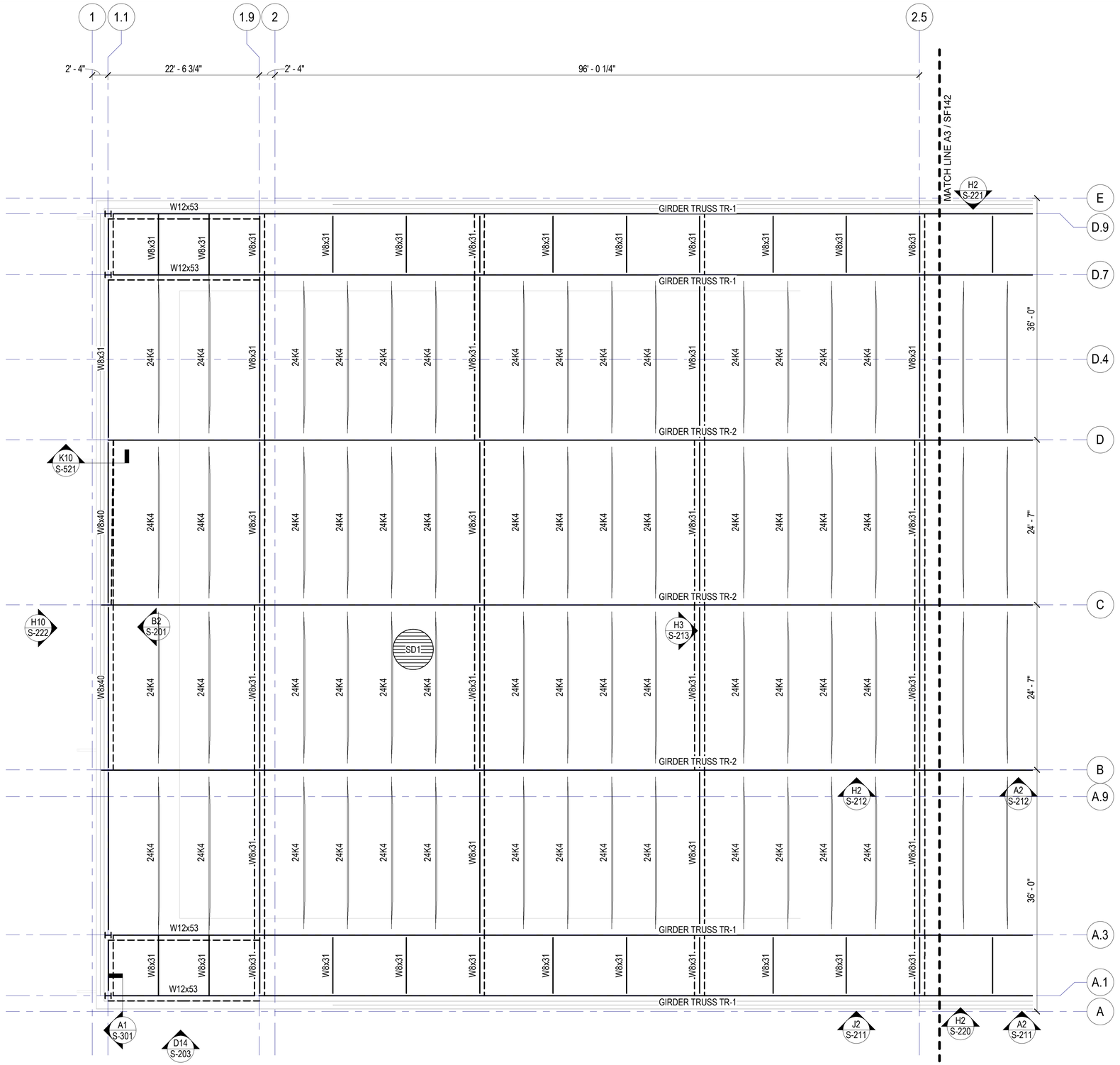
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

OVERALL ROOF FRAMING PLAN

SHEET ID

SF140




**A3** ROOF PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

# ROOF FRAMING NOTES

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3. SHOP DRAWINGS MUST BE PRODUCED FOR ALL JOISTS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AND SHALL BEAR THE STAMP OF A LICENSED ENGINEER.
4. OPEN WEB STEEL JOISTS SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE MECHANICAL, AXIAL (WL/EQ), LATERAL, POINT, AND UNIFORM LOADS SHOWN ON PLANS AND IN DETAILS. LOADS SHOWN ARE ASD MAGNITUDE LOADS UNLESS NOTED OTHERWISE.
5. THE STEEL JOIST SUPPLIER IS RESPONSIBLE IN DESIGNING ALL JOISTS, INCLUDING SLOPE, CAMBER, BEARING ENDS, ETC. ALL DESIGNS SHALL BE IN ACCORDANCE WITH SJI SPECIFICATIONS WITH A MAXIMUM DEFLECTION OF JOISTS OF TL/180 AND LL/240.
6. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED, LOCATED, AND SUPPLIED BY THE JOIST MANUFACTURER.
7. ALL STABILIZER PLATES SHALL BE 6"x6"xCHORD GAP-1/4" WITH A 3/4" DIAMETER HOLE, AND MUST EXTEND 3" MINIMUM BELOW THE BOTTOM CHORD.
8. ALL CONCENTRATED LOADS GREATER THAN 100 POUNDS SUPPORTED BY OPEN WEB JOISTS SHALL BE LOCATED WITHIN 6" OF PANEL POINT. OTHERWISE, JOIST SHALL BE REINFORCED WITH AN ADDITIONAL WEB MEMBER. (RE: H1/S-511)
9. BOTTOM CHORD OF ANY JOIST SHALL NOT BE USED TO BRACE ANY MISC EQUIPMENT.
10. JOIST BRIDGING SHALL NEVER BE USED TO SUPPORT HANGING LOADS.
11. JOIST LOADS SHOWN ON PLAN WITH THE JOIST DESIGNATION "K (XX/XX)" ACCOUNTS FOR TOTAL LOAD/LIVE LOAD (ASD).
12. OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT DUE TO WIND LOADING, RE: SHEET S-005.
13. STEEL JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL VERT LIVE LOAD (ASD) OF +/-500# AT EACH PANEL POINT
14. STANDARD JOIST SEAT DEPTH SHALL BE 2 1/2". CONTRACTOR TO COORDINATE TOP OF GIRDERS USING 2 1/2" JOIST SEAT DEPTH UNO.
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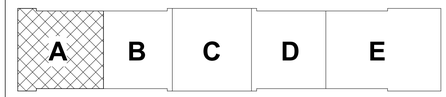
17. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
18. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

1. HANGING FAN ON BOTTOM CHORD OF TRUSS ON GRID D. APPROXIMATE WEIGHT OF 300LBS (DL ASD). RE: ARCH/MEP FOR EXACT LOCATION. RE: MFR FOR ATTACHMENT
2. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN

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NOT FOR CONSTRUCTION

US Army Corps of Engineers ®

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DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

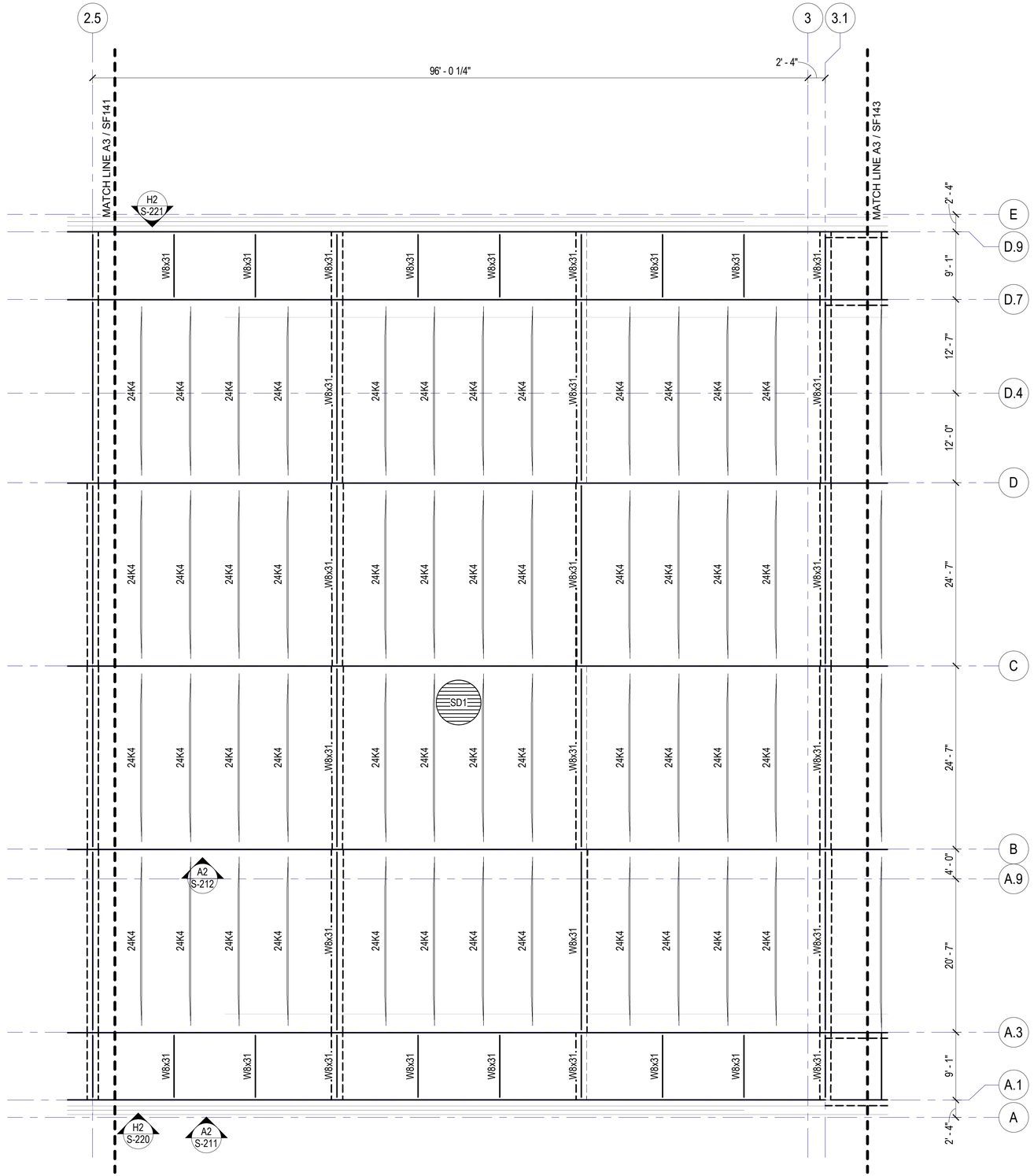
KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

ROOF PLAN - AREA A

SHEET ID
SF141

FOR REVIEW




A3 ROOF PLAN - AREA B

1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

# ROOF FRAMING NOTES

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# KEYNOTES

1. HANGING FAN ON BOTTOM CHORD OF TRUSS ON GRID D. APPROXIMATE WEIGHT OF 300LBS (DL ASD). RE: ARCH/MEP FOR EXACT LOCATION. RE: MFR FOR ATTACHMENT
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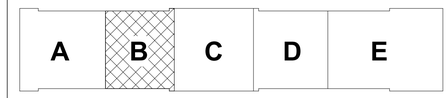
# KEY PLAN




US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
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DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
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US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
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CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

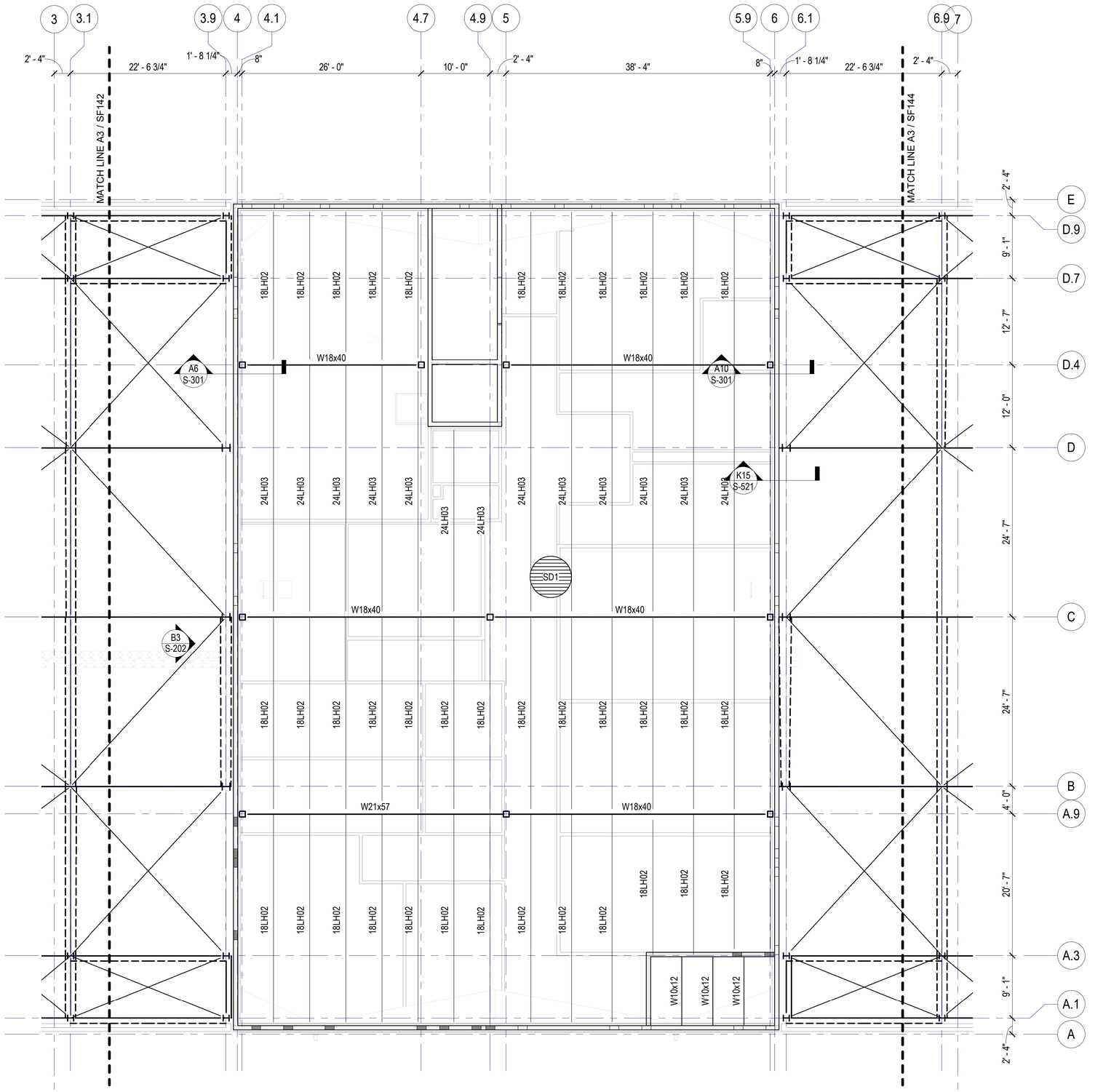
ROOF PLAN - AREA B

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

SF142

FOR REVIEW




A3 ROOF PLAN - AREA C

SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"

0 5' 10' 15' 30'

# ROOF FRAMING NOTES

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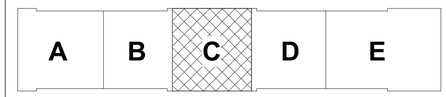
# KEYNOTES

1. HANGING FAN ON BOTTOM CHORD OF TRUSS ON GRID D. APPROXIMATE WEIGHT OF 300LBS (DL ASD). RE: ARCH/MEP FOR EXACT LOCATION. RE: MFR FOR ATTACHMENT
2. PROVIDE L4x4x1/4 BRACING AT THIRD POINTS OF BEAM, RE: K15/S-521
3. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: E4/S-521
4. PROVIDE L8x8x1/2 BRACING AT BEAM HALF POINT, RE: E4/S-521 (SIM)
5. PROVIDE L8x8x1/2 BRACING AT THIRD POINTS OF BEAM, RE: A12/S-213

# KEY PLAN




US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

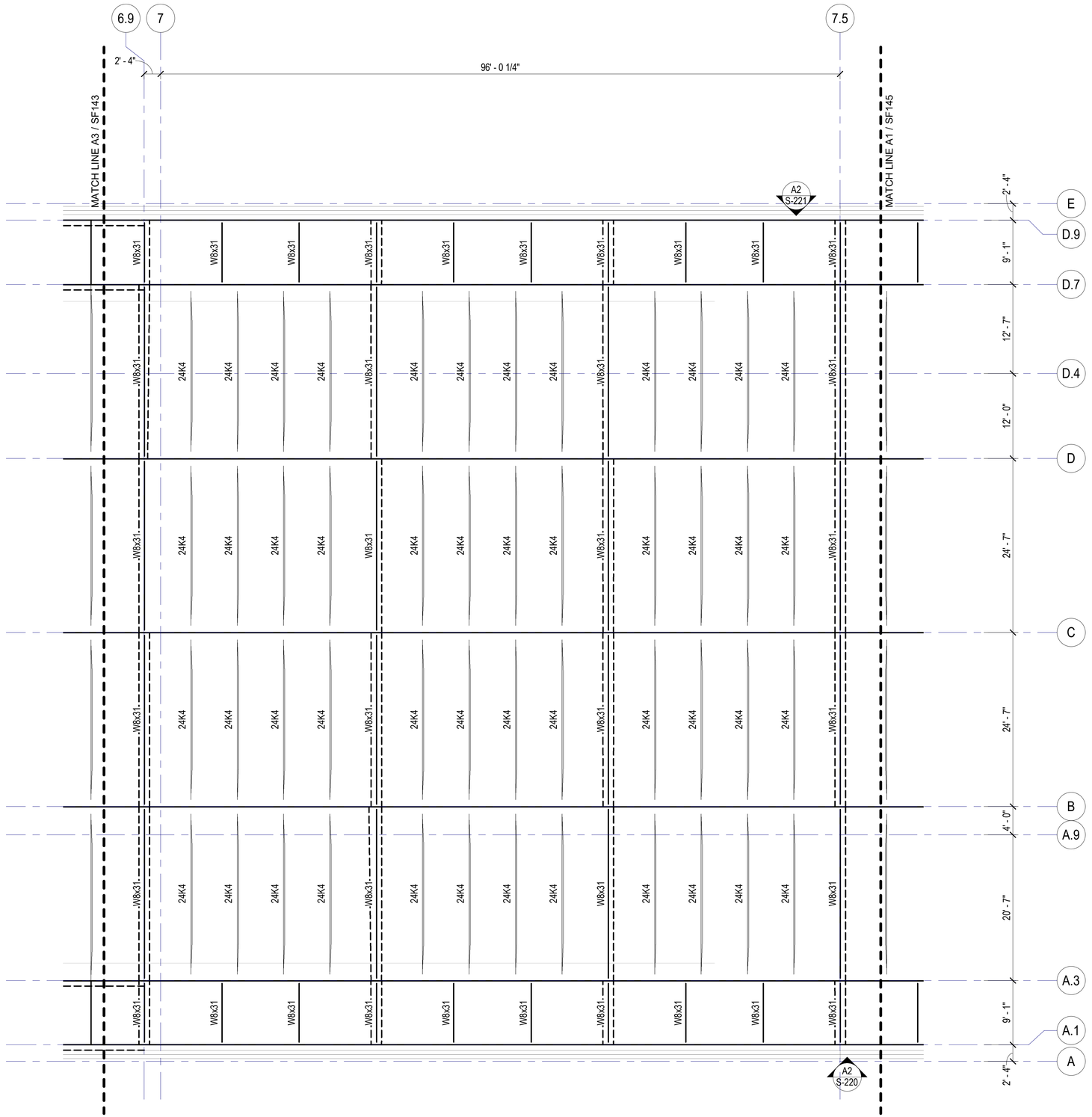
ROOF PLAN - AREA C

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

SF143

FOR REVIEW




A3 ROOF PLAN - AREA D

SCALE: 1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"

0 5' 10' 15' 30'

# ROOF FRAMING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
2. ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SINGLE SHEAR TAB CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL STEEL-TO-STEEL CONNECTION SCHEDULE.
3. SHOP DRAWINGS MUST BE PRODUCED FOR ALL JOISTS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AND SHALL BEAR THE STAMP OF A LICENSED ENGINEER.
4. OPEN WEB STEEL JOISTS SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE MECHANICAL, AXIAL (WL/EQ), LATERAL, POINT, AND UNIFORM LOADS SHOWN ON PLANS AND IN DETAILS. LOADS SHOWN ARE ASD MAGNITUDE LOADS UNLESS NOTED OTHERWISE.
5. THE STEEL JOIST SUPPLIER IS RESPONSIBLE IN DESIGNING ALL JOISTS, INCLUDING SLOPE, CAMBER, BEARING ENDS, ETC. ALL DESIGNS SHALL BE IN ACCORDANCE WITH SJI SPECIFICATIONS WITH A MAXIMUM DEFLECTION OF JOISTS OF TL/180 AND LL/240.
6. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED, LOCATED, AND SUPPLIED BY THE JOIST MANUFACTURER.
7. ALL STABILIZER PLATES SHALL BE 6"x6"xCHORD GAP-1/4" WITH A 3/4" DIAMETER HOLE, AND MUST EXTEND 3" MINIMUM BELOW THE BOTTOM CHORD.
8. ALL CONCENTRATED LOADS GREATER THAN 100 POUNDS SUPPORTED BY OPEN WEB JOISTS SHALL BE LOCATED WITHIN 6" OF PANEL POINT. OTHERWISE, JOIST SHALL BE REINFORCED WITH AN ADDITIONAL WEB MEMBER. (RE: H1/S-511)
9. BOTTOM CHORD OF ANY JOIST SHALL NOT BE USED TO BRACE ANY MISC EQUIPMENT.
10. JOIST BRIDGING SHALL NEVER BE USED TO SUPPORT HANGING LOADS.
11. JOIST LOADS SHOWN ON PLAN WITH THE JOIST DESIGNATION "K (XX/XX)" ACCOUNTS FOR TOTAL LOAD/LIVE LOAD (ASD).
12. OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT DUE TO WIND LOADING, RE: SHEET S-005.
13. STEEL JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL VERT LIVE LOAD (ASD) OF +/-500# AT EACH PANEL POINT
14. STANDARD JOIST SEAT DEPTH SHALL BE 2 1/2". CONTRACTOR TO COORDINATE TOP OF GIRDERS USING 2 1/2" JOIST SEAT DEPTH UNO.
15. CONTRACTOR TO COORDINATE ALL ROOF EDGES AND OPENINGS. OPENINGS LESS THAN 6" IN ALL DIRECTIONS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. RE: L1-L17/S-511 FOR PLACEMENT CRITERIA.
16. RE: SHEETS S-001 – S-005 FOR GENERAL NOTES AND DESIGN CRITERIA.
17. RE: SHEETS S-511 - S-513 FOR TYPICAL ROOF FRAMING DETAILS.
18. RE: SHEETS S-601 - S-602 FOR SCHEDULES.

# KEYNOTES

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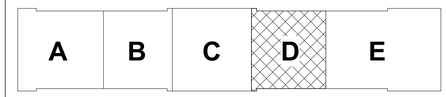
# KEY PLAN




US Army Corps of Engineers ®

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DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
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LOS ANGELES DISTRICT

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CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

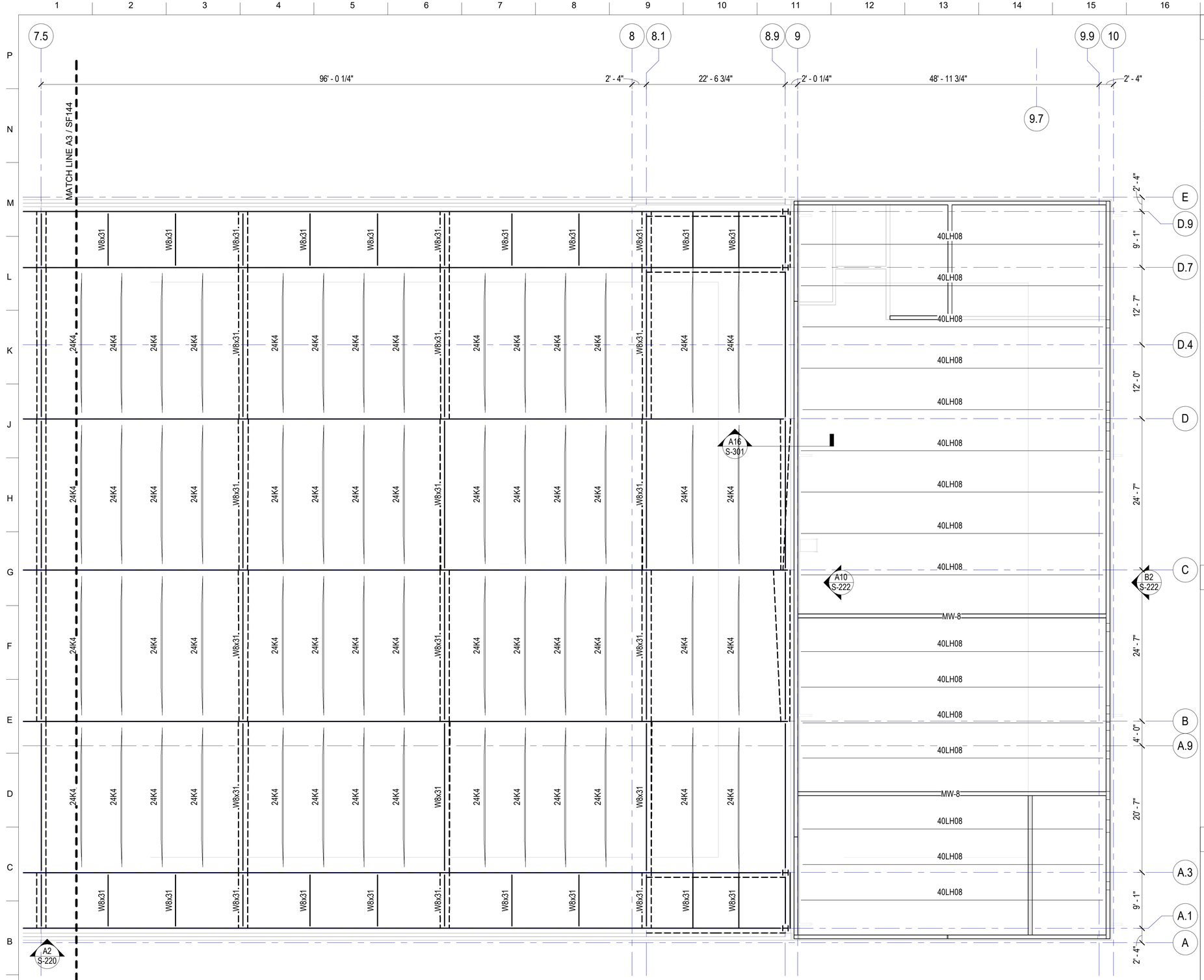
ROOF PLAN - AREA D

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

SF144

FOR REVIEW

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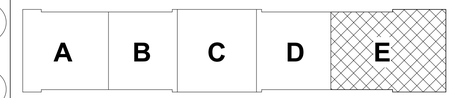
## KEY PLAN




A1 ROOF PLAN - AREA E
1/8" = 1'-0"

PLAN NORTH

1/8" = 1' - 0"  0  5'  10'  15'  30'

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
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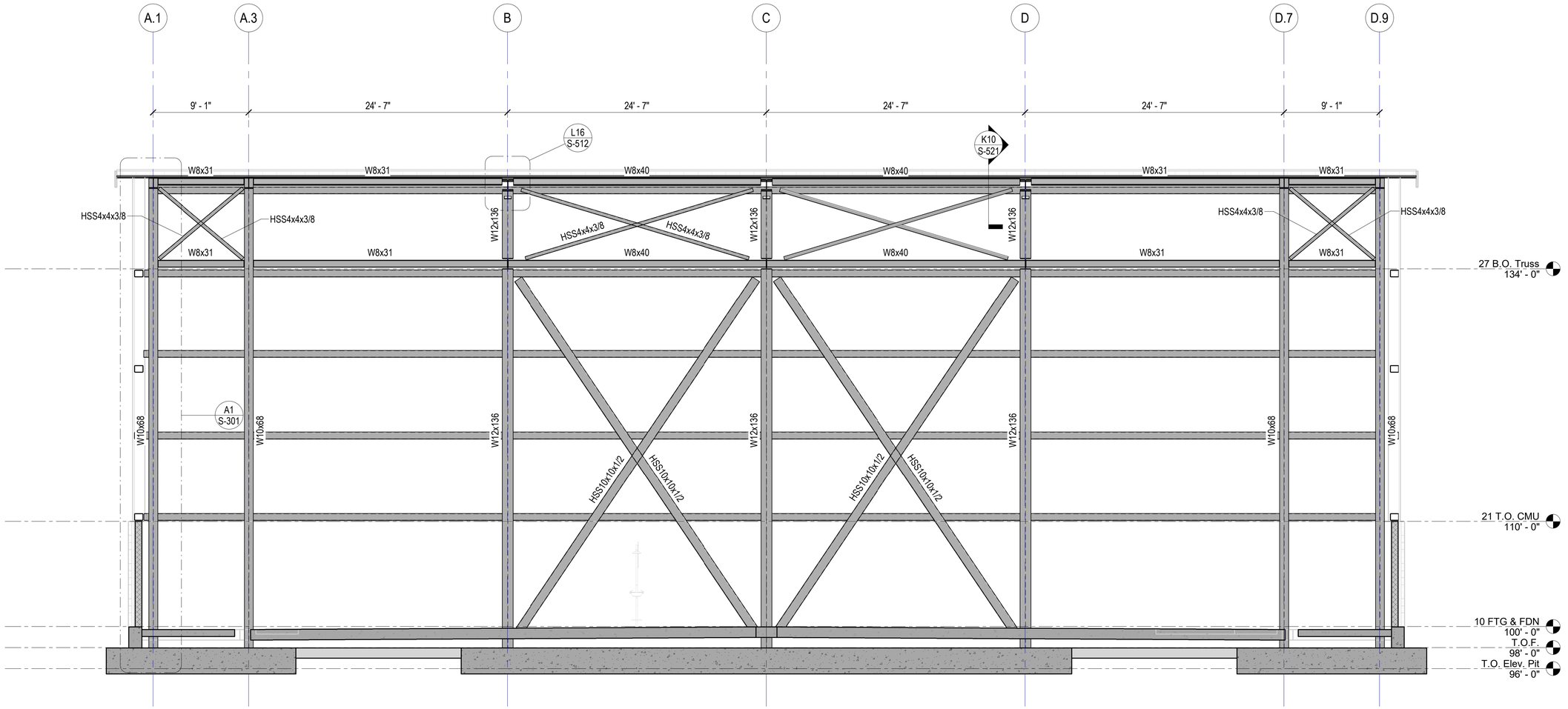
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

ROOF PLAN - AREA E

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID
SF145

FOR REVIEW




## B2 BRACED FRAME ELEVATION - GRIDS 1.1, 8.9

3/16" = 1'-0" REF: SB101

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|---|---|---|

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SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
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LOS ANGELES DISTRICT

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CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

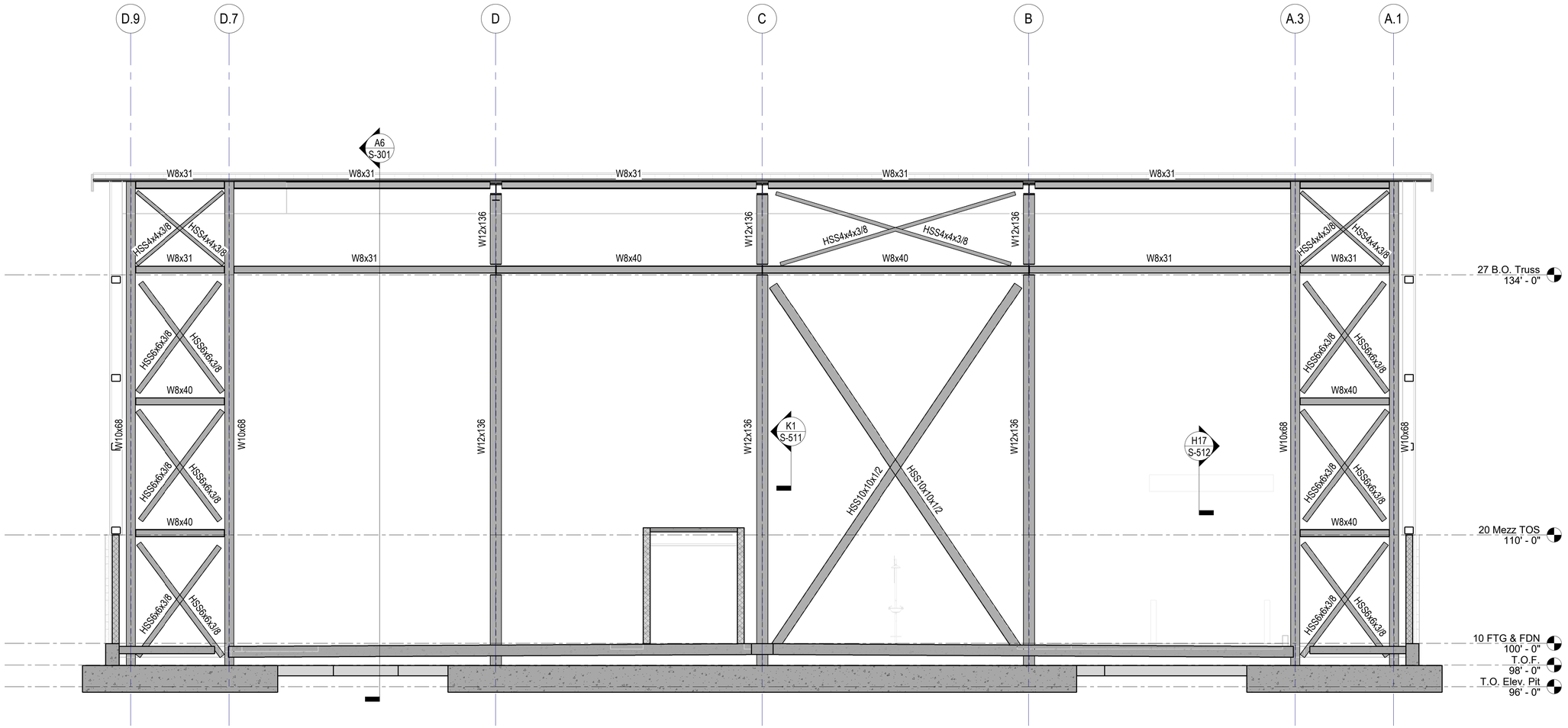
BRACED FRAME ELEVATIONS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

S-201

FOR REVIEW




**B3** BRACED FRAME ELEVATION - GRIDS 3.9, 6.1

3/16" = 1'-0" REF: SB103

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

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DRAWN BY: R. CARLSON
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DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

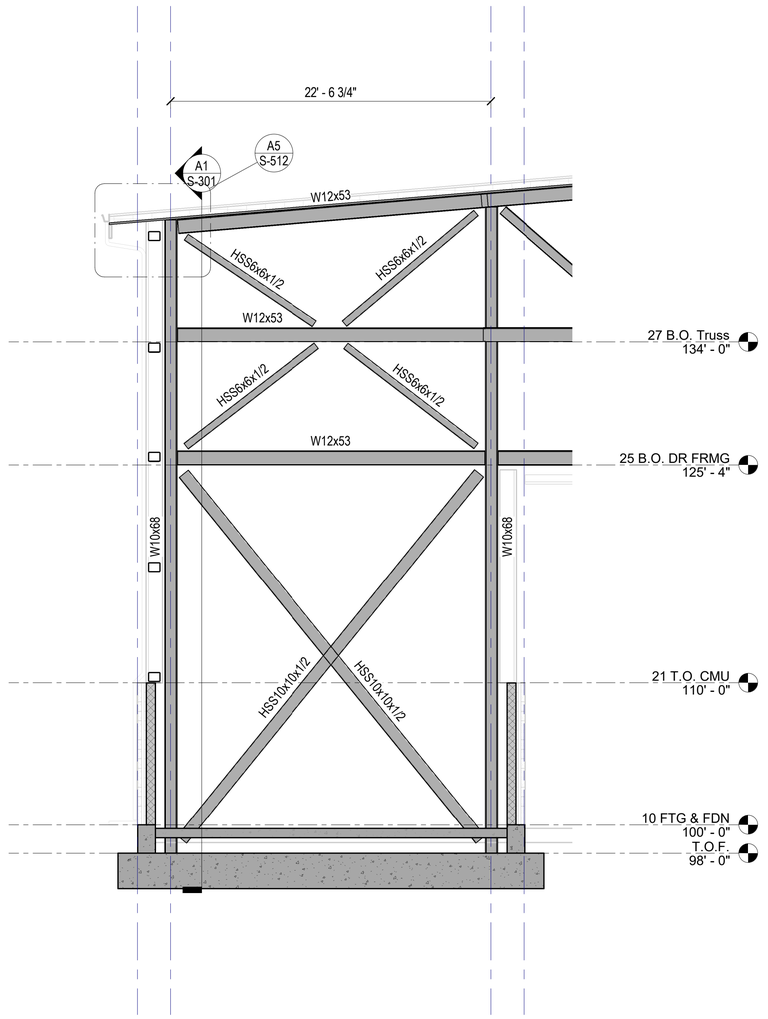
BRACED FRAME ELEVATIONS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

S-202

FOR REVIEW




**D14** BRACED FRAME @ TRUSS TR-1, TYPICAL
3/16" = 1'-0" REF: SB101

US Army Corps of Engineers ®

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SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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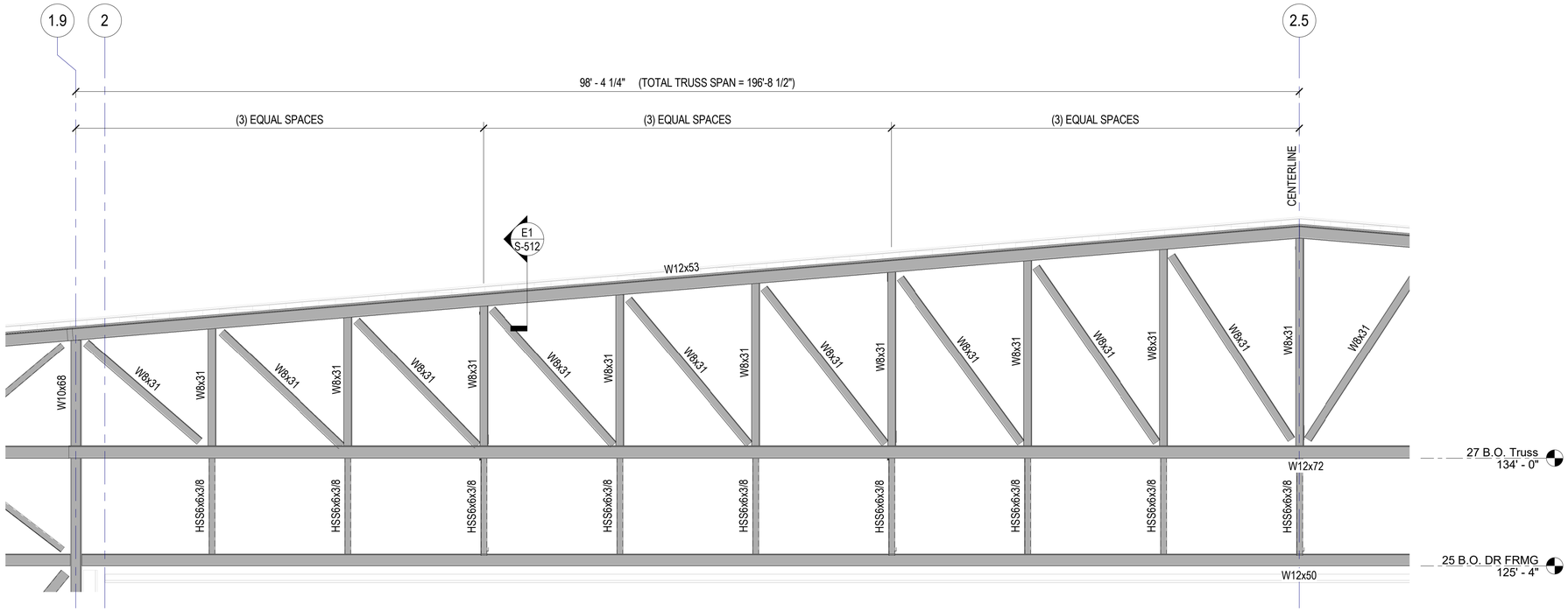
494137

BRACED FRAME ELEVATIONS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

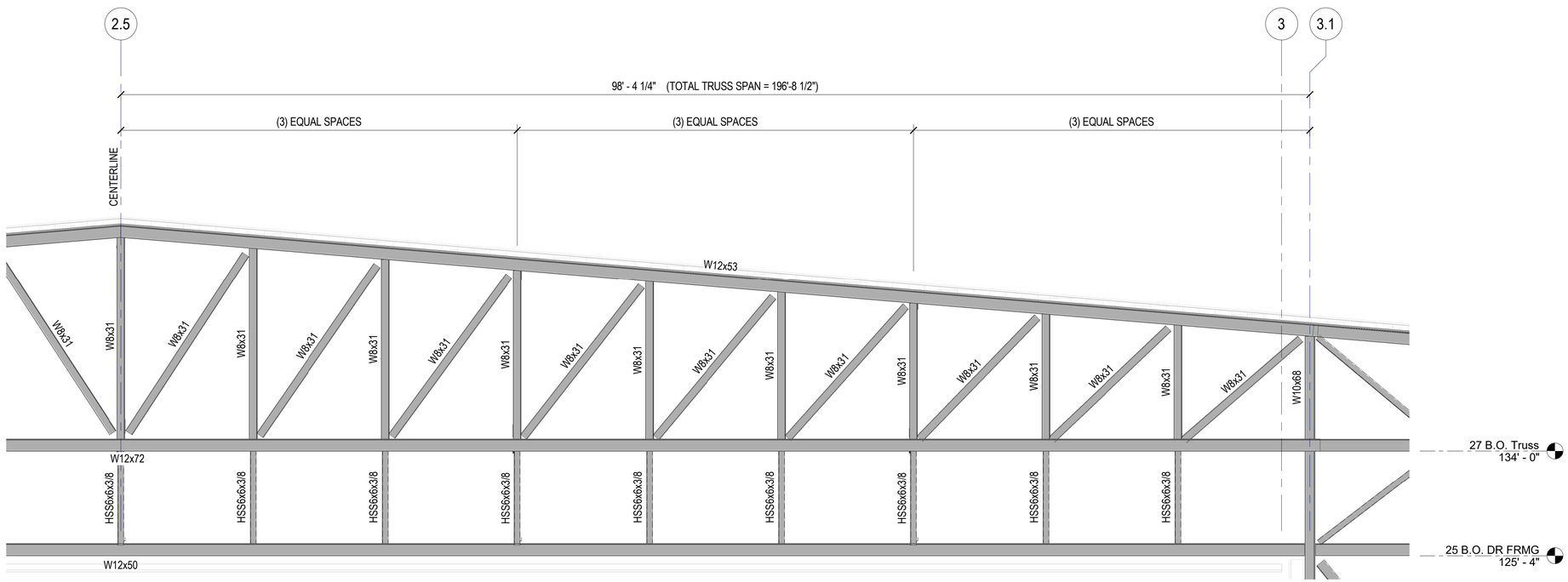
SHEET ID
S-203

FOR REVIEW




J2 GIRDER TRUSS TR-1 - GRIDS A.1 A.3 D.7 D.9 (WEST)

3/16" = 1'-0" REF: SF131




A2 GIRDER TRUSS TR-1 - GRIDS A.1 A.3 D.7 D.9 (EAST)

3/16" = 1'-0" REF: SF131

US Army Corps of Engineers ®

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|---|---|---|
| | | |

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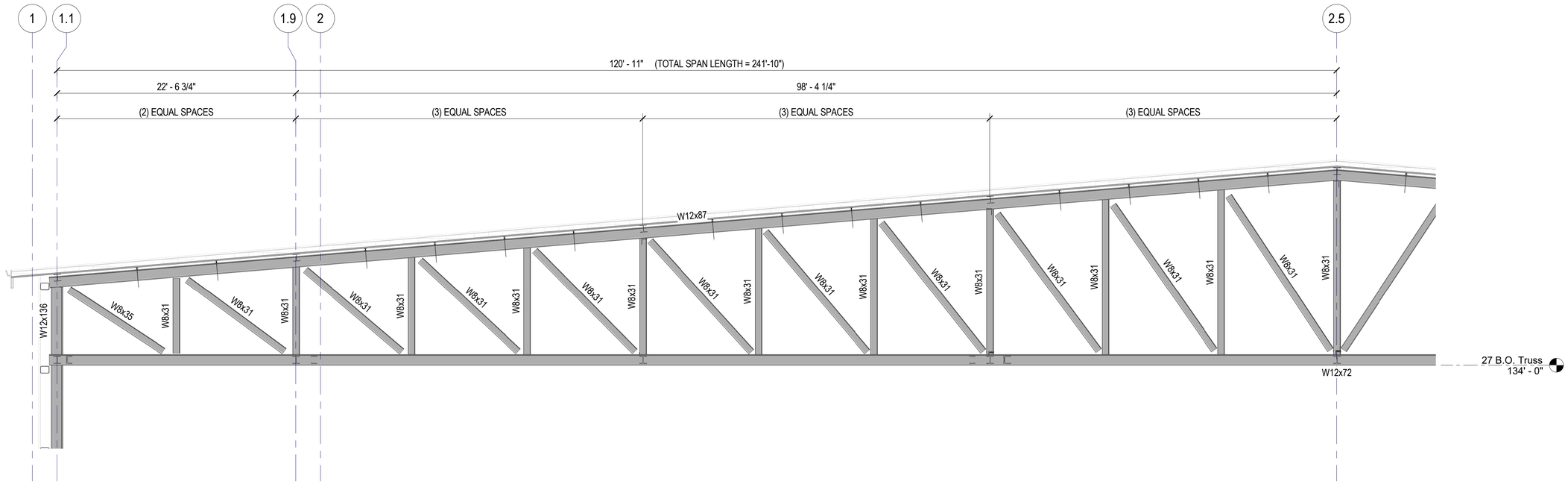
GIRDER TRUSS ELEVATIONS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

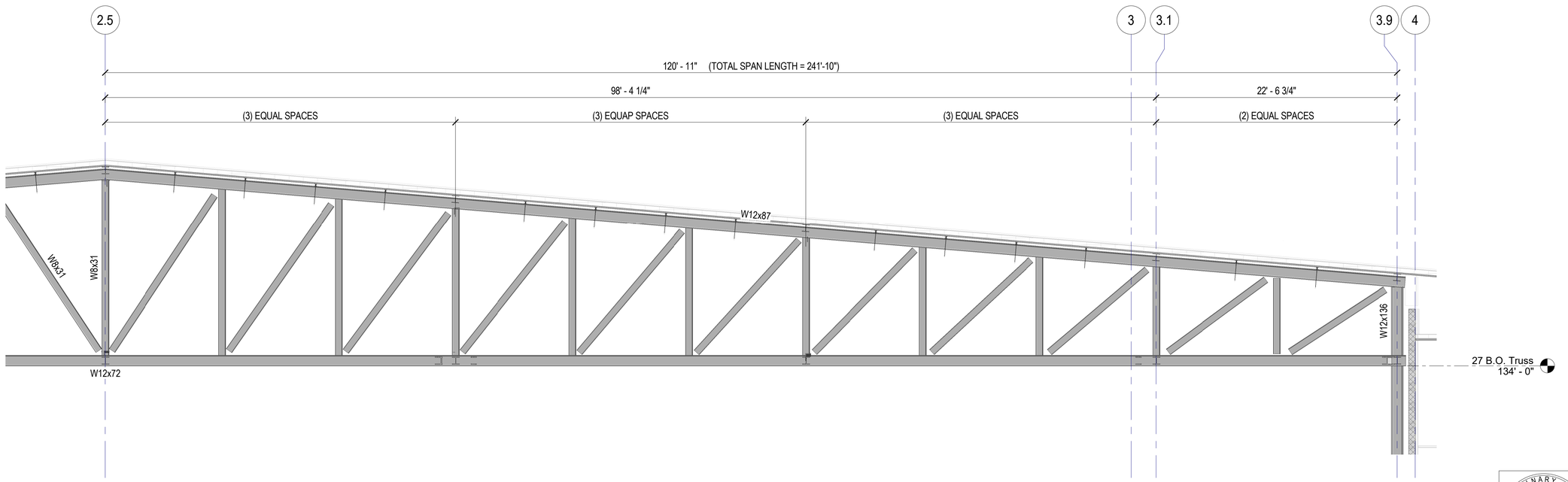
S-211

FOR REVIEW




## H2 GIRDER TRUSS TR-2 - GRIDS B C D (WEST)

3/16" = 1'-0" REF: SF131




## A2 GIRDER TRUSS TR-2 - GRIDS B C D (EAST)

3/16" = 1'-0" REF: SF131

US Army Corps of Engineers ®

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|---|---|---|

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494137

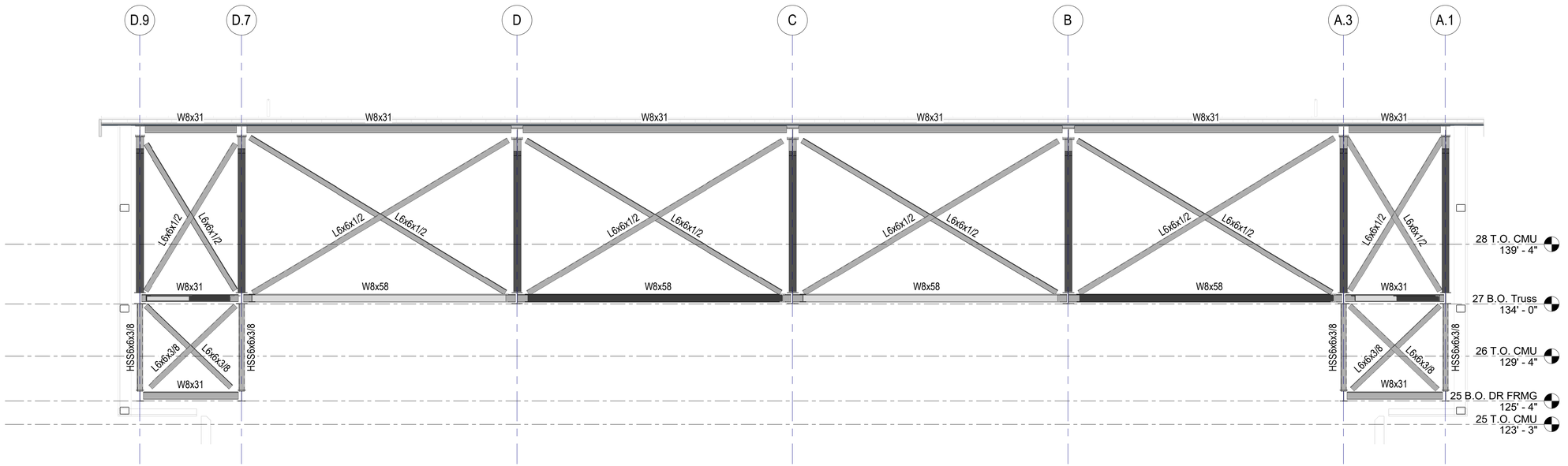
GIRDER TRUSS ELEVATIONS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

S-212

FOR REVIEW




## H3 TYPICAL GIRDER TRUSS VERTICAL BRACING ELEVATION

3/16" = 1'-0" REF: SF131

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: | A. VALENCIA |
| DRAWN BY: | R. CARLSON |
| CHECKED BY: | D. CARLSON |
| SUBMITTED BY: | P. PASZCZUK |
| SIZE: | ANSI D |
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494137

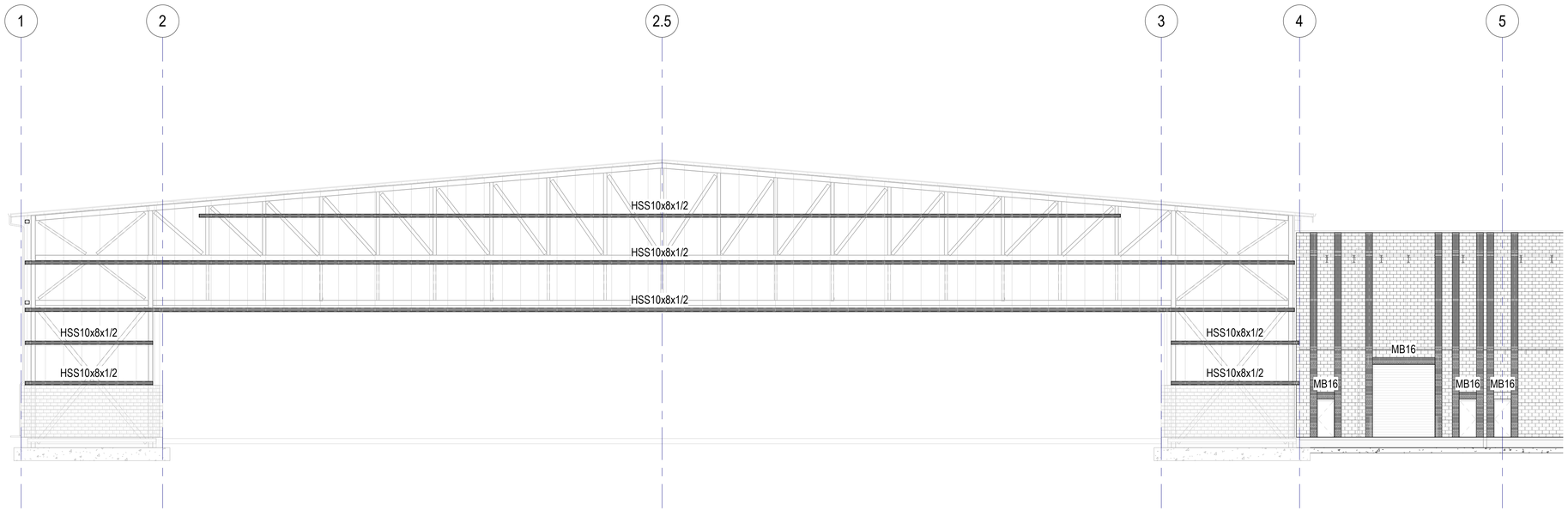
TYPICAL GIRDER TRUSS VERTICAL BRACING ELEVATION

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

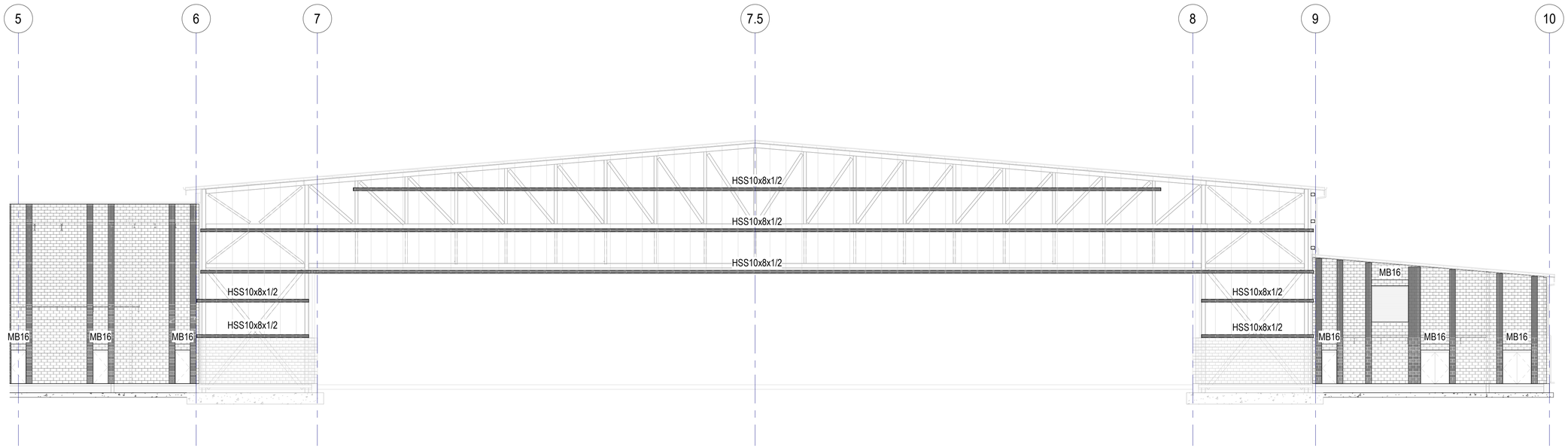
S-213

FOR REVIEW




## H2 WIND GIRT ELEVATION - SOUTH FACE, (WEST)

1 : 150 REF: SB101




## A2 WIND GIRT ELEVATION - SOUTH FACE, (EAST)

1 : 150 REF: SB103

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

US Army Corps of Engineers ®

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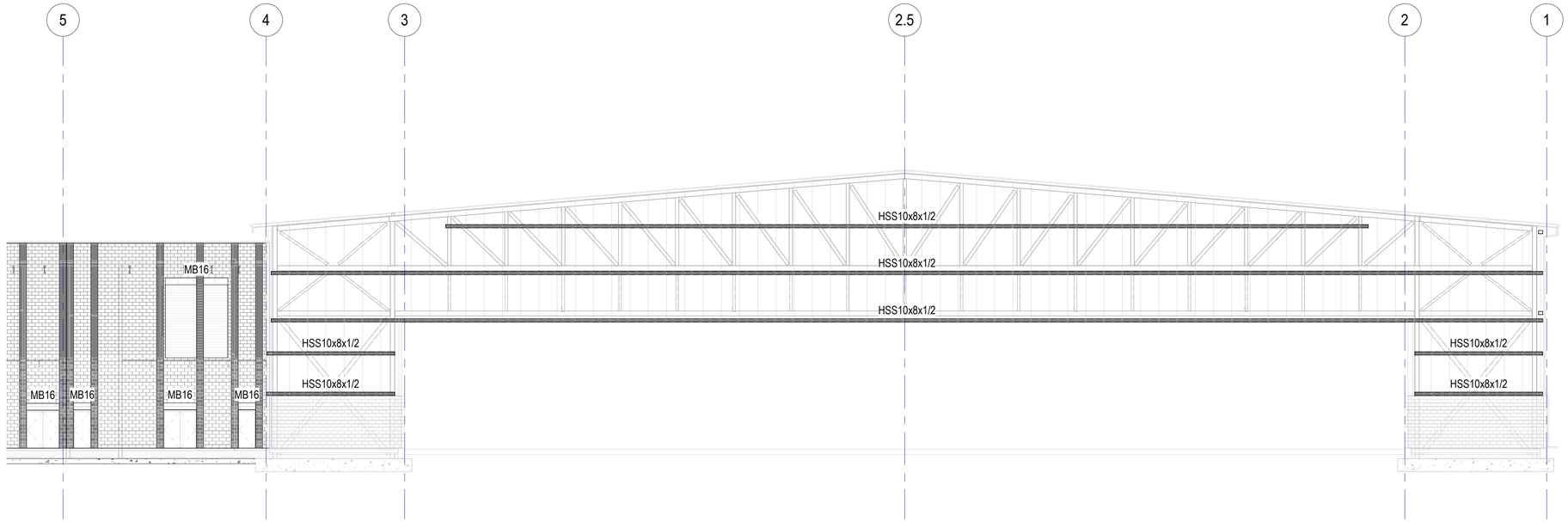
WIND GIRT ELEVATIONS

SHEET ID

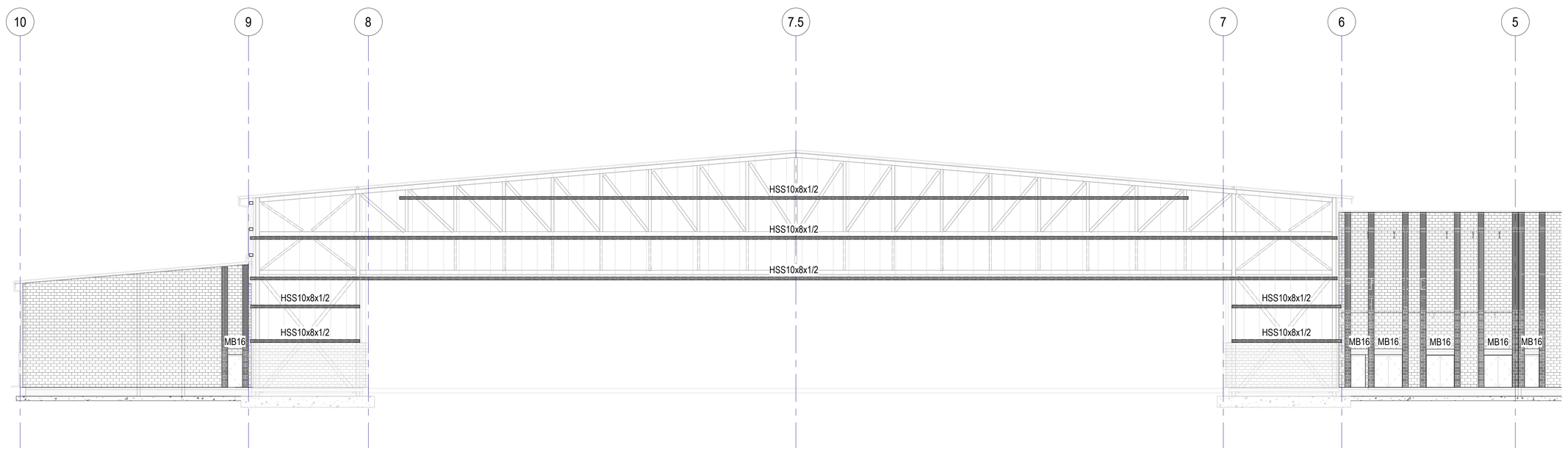
S-220

FOR REVIEW




## H2 WIND GIRT ELEVATION - NORTH FACE, (WEST)

1 : 150 REF: SB101




## A2 WIND GIRT ELEVATION - NORTH FACE, (EAST)

1 : 150 REF: SB103

US Army Corps of Engineers ®

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WIND GIRT ELEVATIONS

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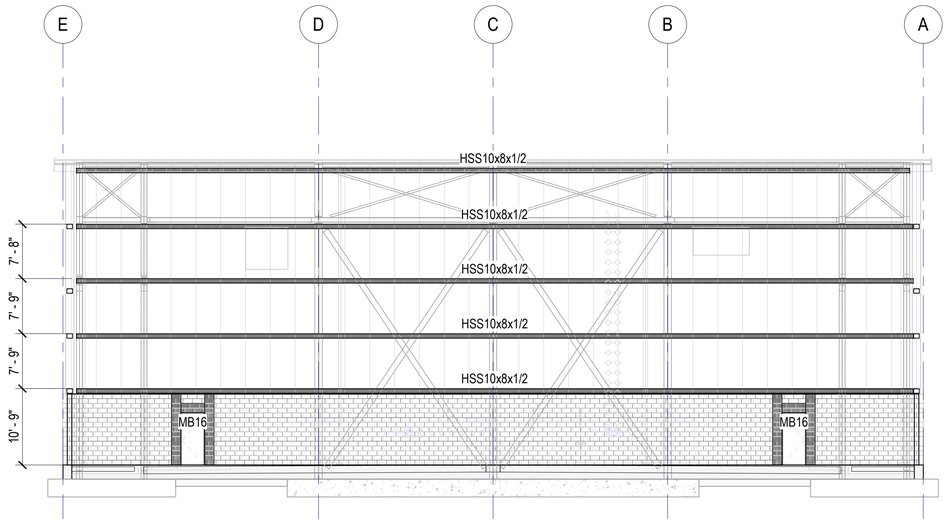
SHEET ID

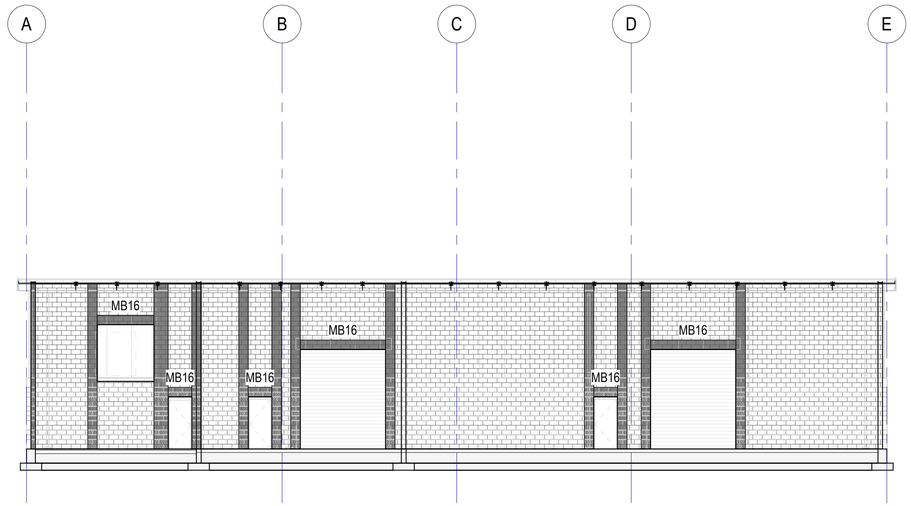
S-221

FOR REVIEW



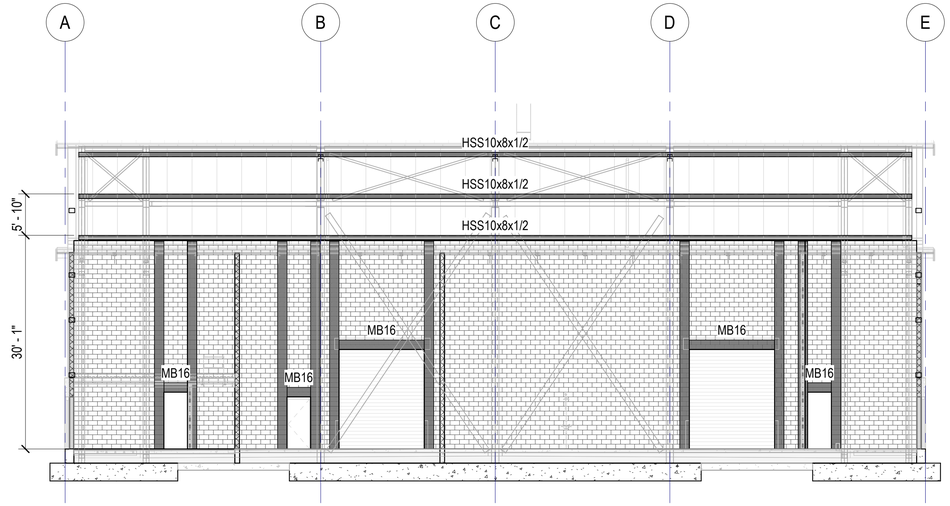

## H10 WIND GIRT ELEVATION - WEST

3/32" = 1'-0" REF: SB101




## B2 ELEVATION - EAST, GRID 10

3/32" = 1'-0" REF: SB105




## A10 WIND GIRT ELEVATION - EAST, GRID 9

3/32" = 1'-0" REF: SB105

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

WIND GIRT ELEVATIONS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SHEET ID

S-222

FOR REVIEW

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
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CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

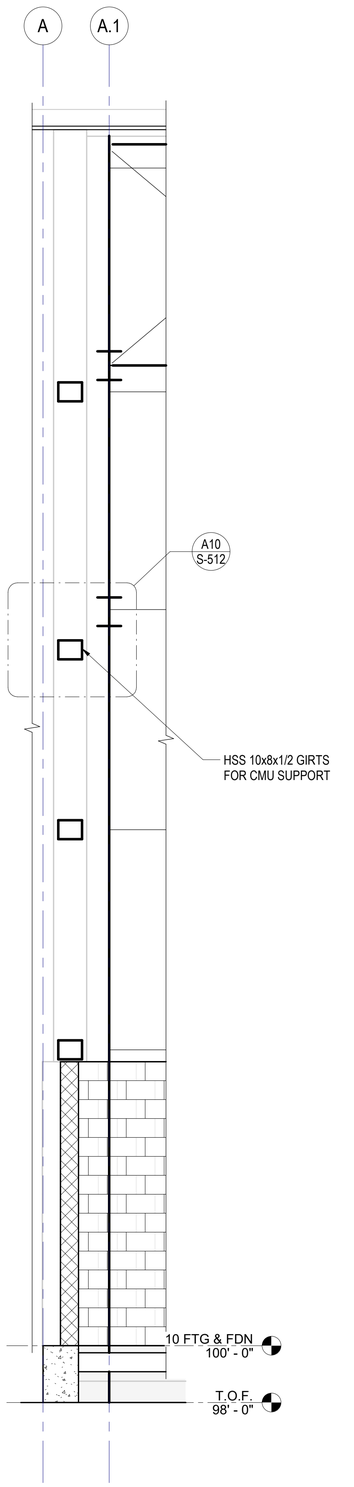
WIND GIRT ELEVATIONS

SHEET ID

S-223

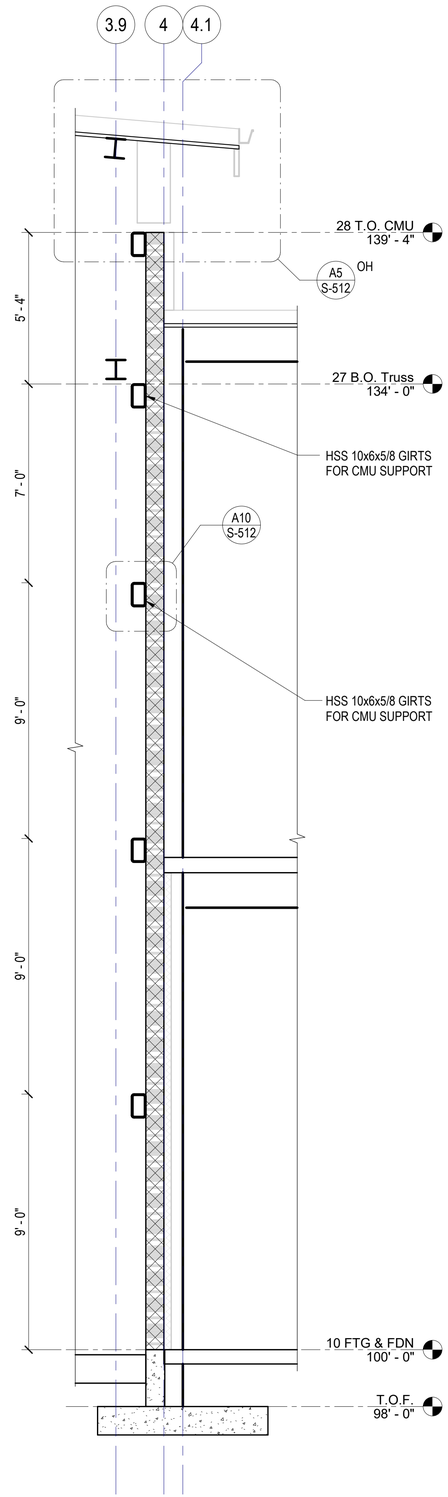
PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

FOR REVIEW



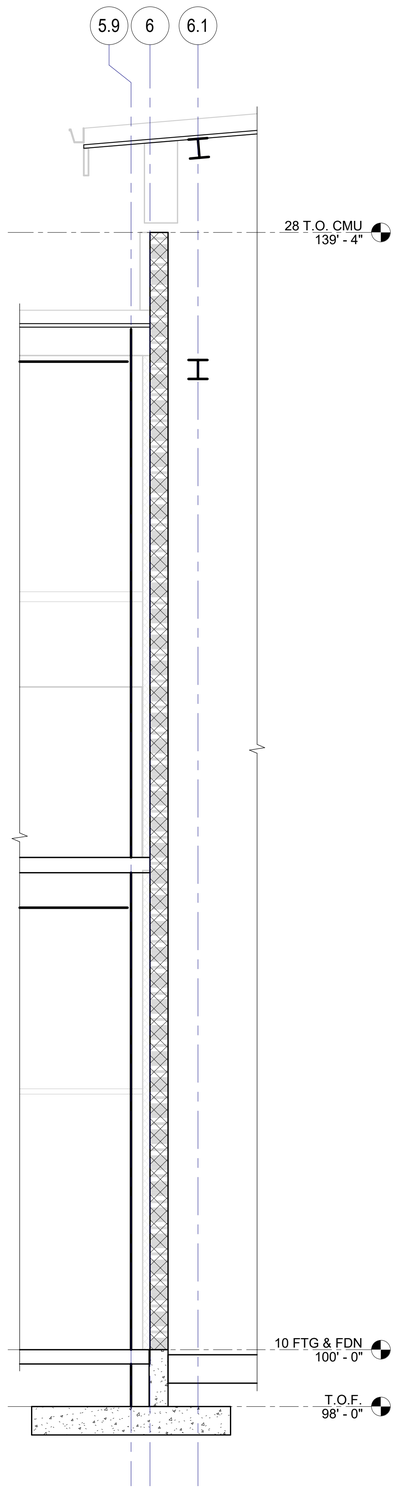

## A1 EXTERIOR WALL SECTION

3/8" = 1'-0" REF: S-201



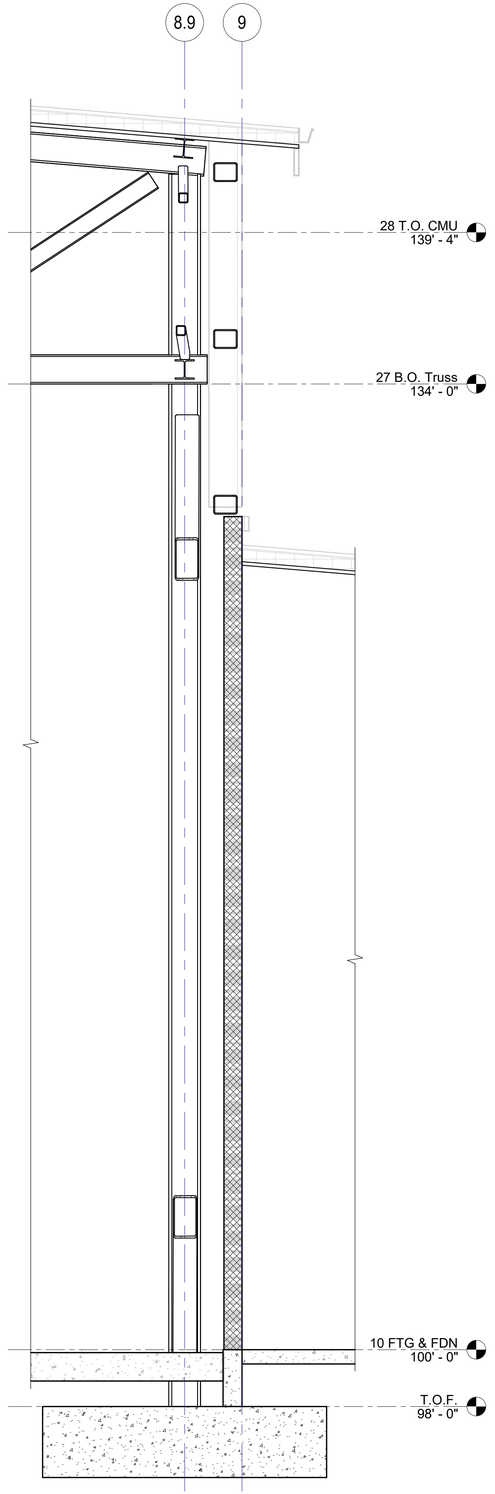

## A6 WALL SECTION

3/8" = 1'-0" REF: S-202




## A10 WALL SECTION

3/8" = 1'-0" REF: SB103




## A16 WALL SECTION

3/8" = 1'-0" REF: SB105

US Army Corps of Engineers ®

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|---|---|---|
| | | |

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SIZE: ANSI D

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CREECH AIR FORCE BASE, CLARK COUNTY, NV
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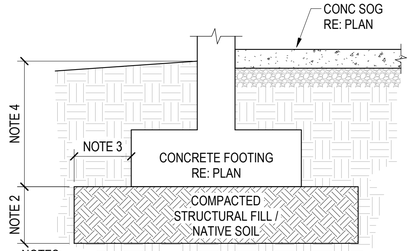
494137

WALL SECTIONS

SHEET ID

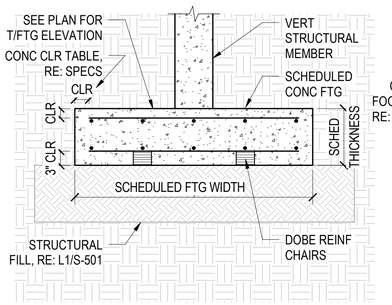
S-301

FOR REVIEW

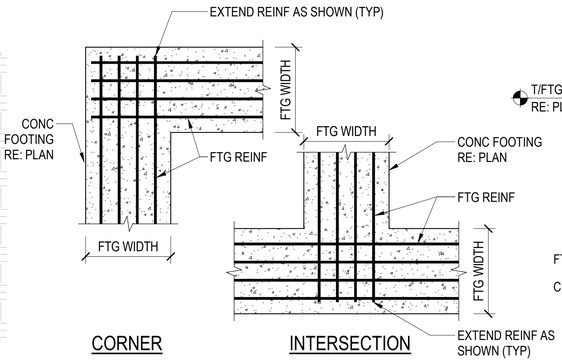



NOTES:
1. REFER TO GEOTECH REPORT AND GENERAL NOTES FOR COMPACTED STRUCTURAL FILL MATERIAL REQUIREMENTS AND ADDITIONAL INFORMATION.
2. REFER TO GEOTECH REPORT FOR DEPTH OF FILL BELOW FOOTING.
3. REFER TO GEOTECH REPORT FOR EXTENT OF FILL BEYOND FOOTING.
4. REFER TO DESIGN CRITERIA ON S-001 FOR MINIMUM DEPTH OF CONCRETE FOOTING.

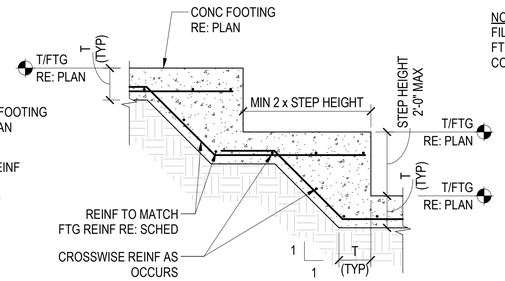
## L1 TYP CONCRETE FOOTING PLACEMENT
NTS




## L5 TYP FOOTING REINF
NTS

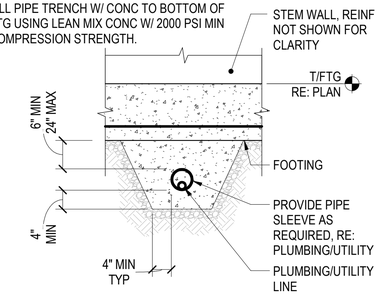



## L9 TYP FOOTING CORNER REINF
NTS

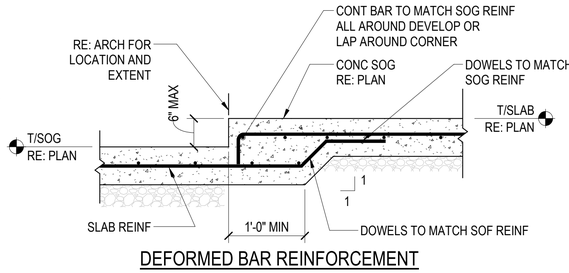



## L13 TYP STEPPED FOOTING DETAIL
3/4" = 1'-0"

NOTE:
FILL PIPE TRENCH W/ CONC TO BOTTOM OF FTG USING LEAN MIX CONC W/ 2000 PSI MIN COMPRESSION STRENGTH.

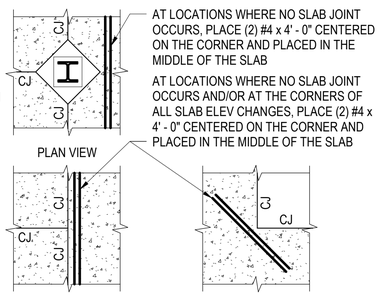



## L17 TYP SLEEVED PIPE UNDER CONT FTG
NTS

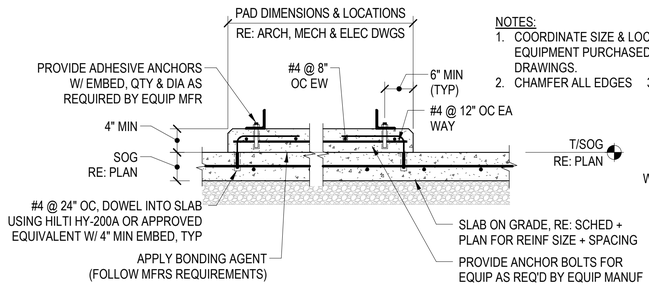



DEFORMED BAR REINFORCEMENT

## H1 TYP DEPRESSED SLAB
NTS

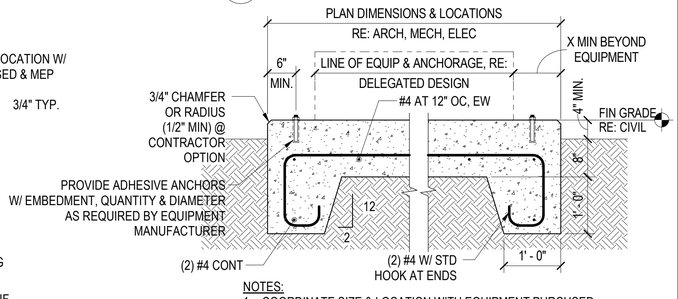



## H5 TYP DISCONTINUOUS JOINT REINF
NTS



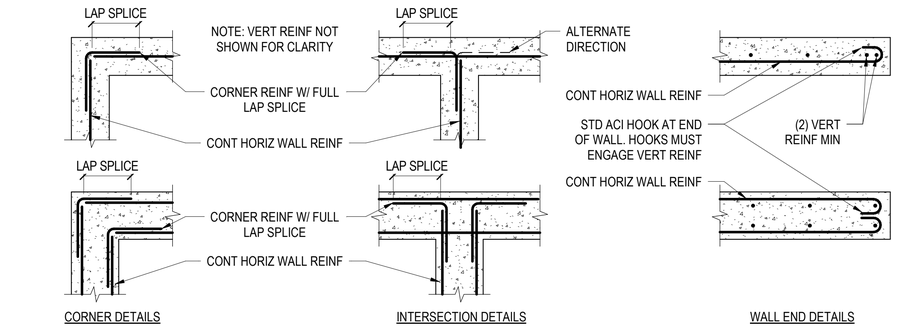

NOTES:
1. COORDINATE SIZE & LOCATION W/ EQUIPMENT PURCHASED & MEP DRAWINGS.
2. CHAMFER ALL EDGES 3/4" TYP.

## H9 TYP EQUIPMENT PAD ON PAVEMENT/SOG
NTS

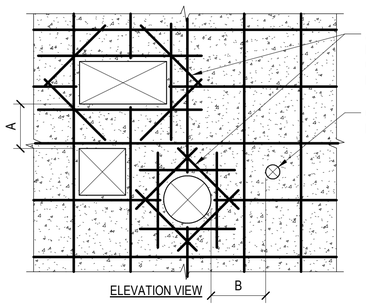



NOTES:
1. COORDINATE SIZE & LOCATION WITH EQUIPMENT PURCHSED.
2. 3/4" CHAMFER ALL EDGES ABOVE GRADE.

## H17 TYP EQUIPMENT PAD (NO SOG)
3/4" = 1'-0"



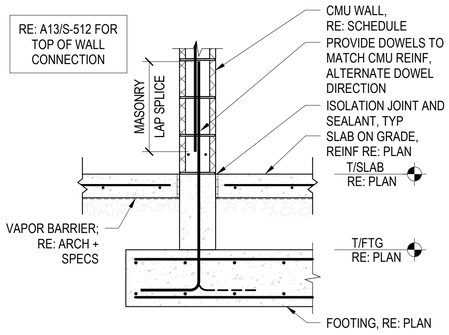

## D1 TYP CONC WALL HORIZ REINFORCING
NTS



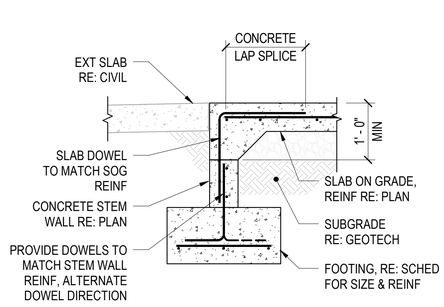

NOTES FOR REINFORCING AROUND OPENINGS:
1. ALL OPENINGS REQUIRE ADDITIONAL REINFORCING EXCEPT WHERE OPENING SIZE OR LOCATION IS SUCH THAT NO REINFORCING STEEL IS INTERRUPTED (I.E. CONDUITS, SMALL PIPES, ETC.). WHERE OPENINGS ARE LARGER THAN THIS SPACING, PROVIDE REINFORCING AROUND THE PERIMETER OF THE OPENING EQUAL TO THE AMOUNT INTERRUPTED AND PLACE HALF AT EACH SIDE OF THE OPENING. EXTEND A FULL LAP LENGTH BEYOND OPENING.

NOTES FOR ADJACENT OPENINGS MIN SPACING:
A = THE LARGEST HEIGHT OR DIAMETER OF THE TWO ADJACENT OPENINGS DIVIDED BY 2 (WALL THICKNESS MIN)
B = THE LARGEST WIDTH OR DIAMETER OF THE TWO ADJACENT OPENINGS DIVIDED BY 2 (WALL THICKNESS MIN)

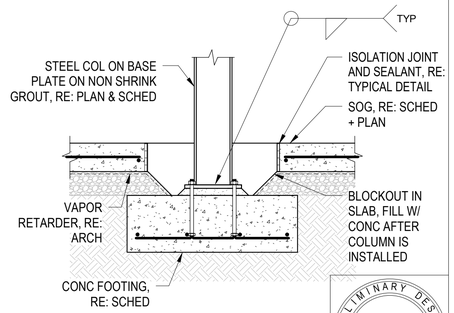
## D9 TYP MISC OPENINGS IN REINF CONC WALLS
NTS




## D17 MASONRY WALL FOOTING DETAIL
NTS




## A13 TYPICAL EXTERIOR THRESHOLD
NTS REF: SB101




## A17 TYP STEEL COL INT FTG
NTS

PRELIMINARY DESIGN
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US Army Corps of Engineers ®

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|---|---|---|

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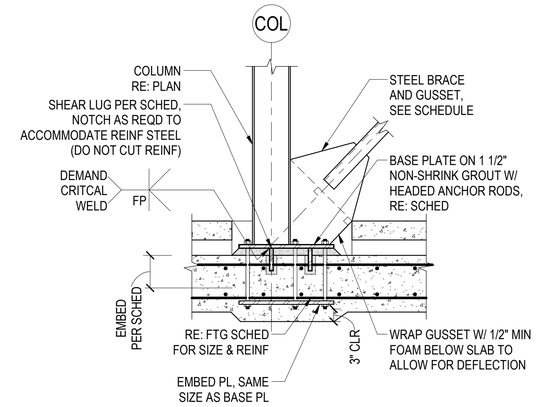
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

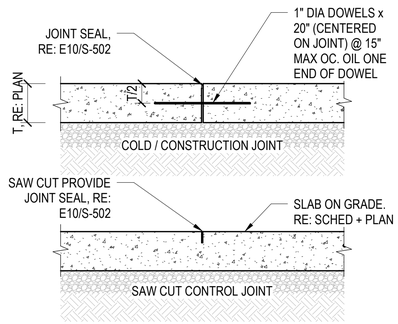
FOUNDATION DETAILS

SHEET ID
AOF
S-501

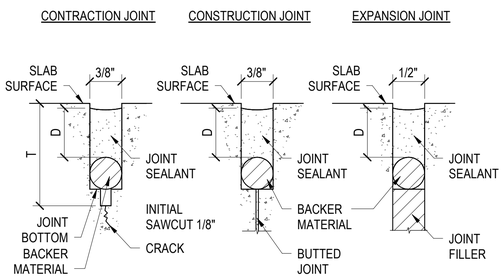
FOR REVIEW




## K15 BRACED FRAME @ FOOTING W/ EMBED PLATE
NTS




## E6 TYP SOG JOINTS
NTS

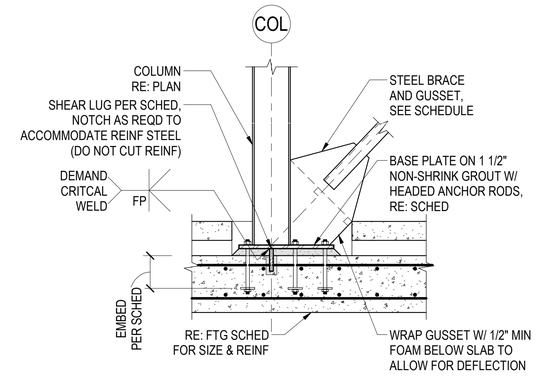



T = DEPTH OF INITIAL SAWCUT
- A. 1/4 SLAB THICKNESS + 1/2" FOR SLABS LESS THAN 12 INCHES.
- B. 3 INCHES FOR SLAB 12-18 INCHES.
- C. 1/6 SLAB THICKNESS FOR SLABS MORE THAN 18 INCHES.
- D. DIAMETER OF BACKER MATERIAL = JOINT WIDTH PLUS 1/8 INCH

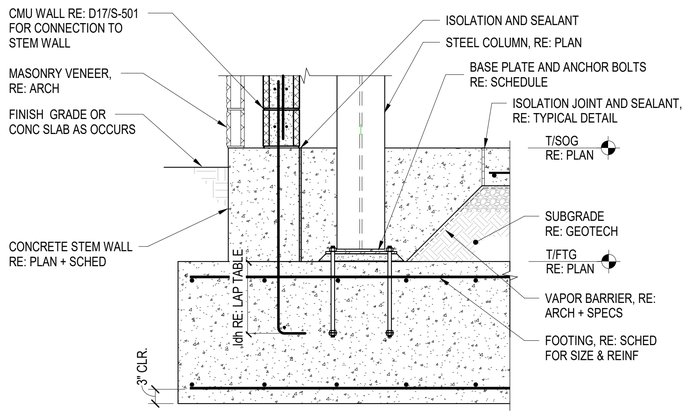
D = DEPTH OF SEALANT AS REQUIRED BY SEALANT MANUFACTURER

NOTE: TOP OF SEALANT TO BE 1/4" TO 1/16" BELOW TOP OF SLAB

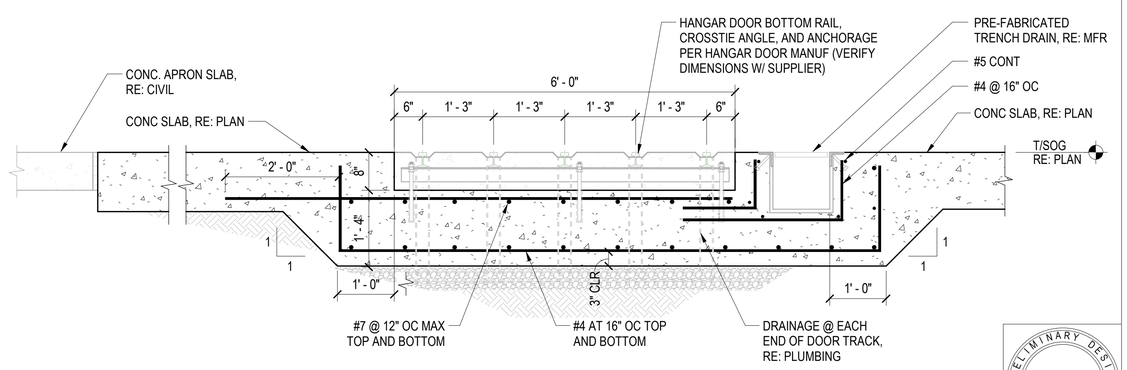
## E10 TYP JOINT SEALANT @ CONC SOG
NTS




## E15 TYP BRACED FRAME @ FOOTING DETAIL
NTS




## A5 TYP. EXTERIOR FOOTING DETAIL
NTS




## A12 HANGAR DOOR SUPPORT RAILS AND FOUNDATION
NTS REF: SB101

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
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SUBMITTED BY: P. PASZCZUK
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US ARMY CORPS OF ENGINEERS
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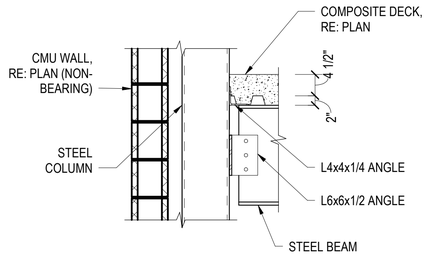
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

FOUNDATION DETAILS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

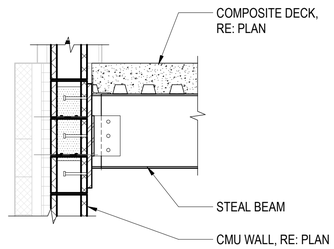
SHEET ID
AOF
S-502

FOR REVIEW



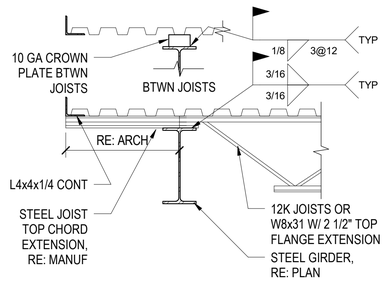

## K1 TYP. COMPOSITE DESK EDGE AT CMU

NTS REF: S-202



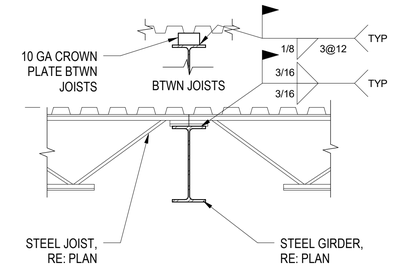

## G1 TYP. COMPOSITE DESK EDGE AT CMU

NTS REF: SF121



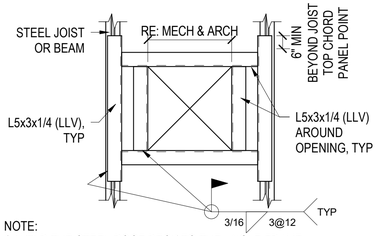

## H5 TYP ROOF JOIST ON EDGE GIRDER

NTS




## D5 TYP ROOF JOIST ON GIRDER

NTS




NOTE:
1. WELD THE STEEL ROOF DECK TO THE ANGLE FRAME.
2. PRE-ENGINEERED ADJUSTABLE FRAMES MAY BE USED IN LIEU OF WELDED ANGLES IF APPROVED BY EOR.

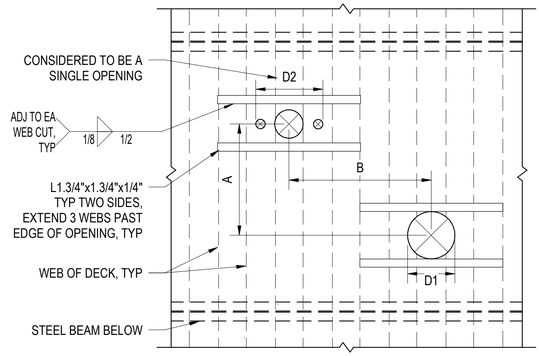
## A5 TYP ROOF OPENING SUPPORT

NTS

USE THIS DETAIL FOR HOLES CUTTING INTO MORE THAN:
3 ADJACENT WEBS FOR 6" AND 8" MODULE DECK OR
2 ADJACENT WEBS FOR 12" MODULE DECK

PRIOR TO CONCRETE POUR, SMALL OPENINGS SHOULD BE BLOCKED OUT AND FLOOR DECK LEFT INTACT. HOLES LESS THAN 6" IN DIAMETER AND CUTTING NO MORE THAN 1 WEB NEED NO REINFORCING. AFTER THE CONCRETE HAS CURED, THE BLOCKOUT CAN BE REMOVED AND THE FLOOR DECK IN THE AREA OF THE HOLE REMOVED.

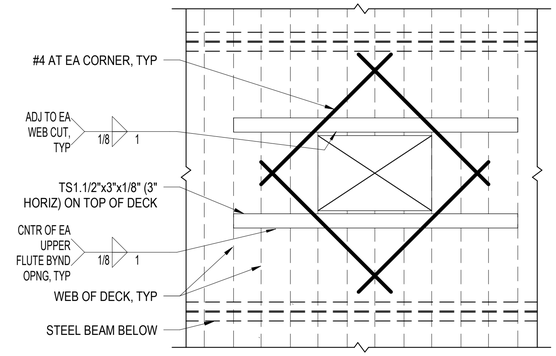
NOTES:
1. ANGLES SHALL BE PLACED ON TOP OF THE DECK
2. IF DIMENSION 'A' IS GREATER THAN 4XD1, 4XD2, OR 32" (WHICHEVER IS LARGER), THEN THERE IS NO RESTRICTION ON DIMENSION 'B'.
3. IF DIMENSION 'B' IS GREATER THAN 4XD1, 4XD2, OR 32" (WHICHEVER IS LARGER), THEN THERE IS NO RESTRICTION ON DIMENSION 'A'.
4. IF DIMENSIONS 'A' AND 'B' ARE LESS THAN 4XD1, 4XD2, OR 32" (WHICHEVER IS LARGER), THE OPENING GROUP WILL BE CONSIDERED AS A SINGLE HOLE, AND MUST BE REINFORCED AS REQUIRED FOR THE LARGER OPENING.




USE THIS DETAIL FOR LARGER HOLES, RECTANGULAR OR SQUARE

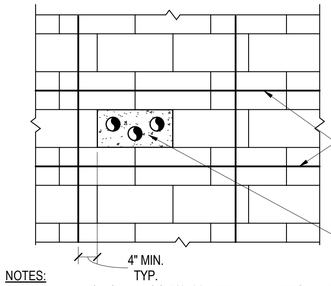
PRIOR TO CONCRETE POUR, SMALL OPENINGS SHOULD BE BLOCKED OUT AND FLOOR DECK LEFT INTACT. HOLES LESS THAN 6" IN DIAMETER AND CUTTING NO MORE THAN 1 WEB NEED NO REINFORCING. AFTER THE CONCRETE HAS CURED, THE BLOCKOUT CAN BE REMOVED AND THE FLOOR DECK IN THE AREA OF THE HOLE REMOVED.

NOTES:
1. IF THE OPENING OR GROUP OF OPENINGS OCCURS IN ONE DECKING UNIT, THE OPENING OR OPENING GROUP MAY BE CUT PRIOR TO POURING OF CONCRETE.
2. IF THE OPENING OR GROUP OF OPENINGS CUTS THROUGH TWO DECKING UNITS, THE DECKING SHALL NOT BE CUT UNTIL CONCRETE HAS BEEN PLACED AND CURED. AT THE TIME OF POURING, SUITABLE SLEEVES OR BULKHEADS SHALL BE PLACED AROUND THE OPENING.
3. WHEN THE MAX DIMENSION OF AN OPENING OR OPENING GROUP EXCEEDS 24", PROVIDE W8X10 HEADER BEAMS BELOW THE DECK AT ALL SIDES.




## H9 TYPICAL OPENINGS IN COMPOSITE DECK

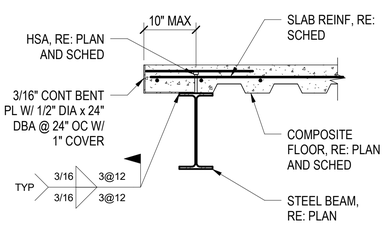
NTS




NOTES:
1. A MAXIMUM OF ONE BLOCK (1'-4") BETWEEN VERTICAL WALL REINFORCING LOCATIONS MAY BE SLEEVED FOR UTILITY PENETRATIONS.
2. DO NOT PLACE OF ENCROACH UPON CELLS CONTAINING VERTICAL WALL REINFORCING.

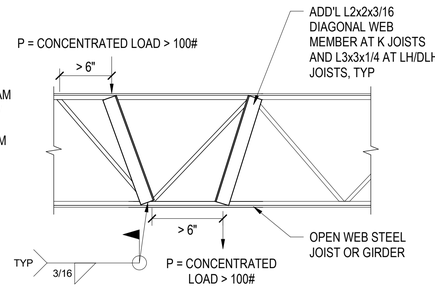
## D9 PENETRATION THROUGH MASONRY WALL

NTS




## A9 TYP COMPOSITE FLOOR SLAB EDGE

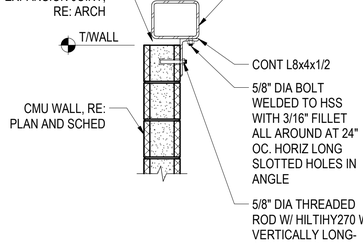
NTS




## D13 TYP JOIST REINFORCING DETAIL

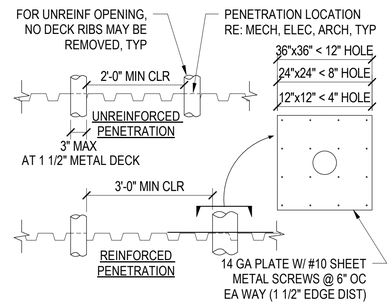
NTS

NOTE:
1. THIS DETAIL APPLIES WHEN SUPPORT AT A PANEL POINT IS IMPOSSIBLE. CONTACT THE EOR AND JOIST MANUFACTURER TO REVIEW CONCENTRATED LOADS > 100# THAT ARE NOT SPECIFICALLY RECORDED ON THE CONTRACT DRAWINGS AND PART OF THE INITIAL JOIST DESIGN.
2. CONCENTRATED POINT LOADS TOTALING 100# OR LESS CAN BE LOCATED AT ANY POINT ALONG THE TOP OR BOTTOM CHORD OF AN OPEN WEB JOIST OR GIRDER BETWEEN ADJACENT PANEL POINTS WITHOUT MEETING THESE REQUIREMENTS.
3. WHEN CONCENTRATED LOADS GREATER THAN 100# ON OPEN WEB JOISTS OR GIRDERS ARE LOCATED MORE THAN 6" FROM THE PANEL WORKPOINTS AT EITHER THE TOP OR BOTTOM CHORD, ADDITIONAL DIAGONAL WEB MEMBERS MUST BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS SHOWN IN THIS DETAIL.
4. A LIMIT OF (4) CONCENTRATED 100# POINT LOADS PER JOIST OR GIRDER WILL BE PERMITTED ON SPANS OF 12'-0" AND GREATER. JOIST BRIDGING MUST NEVER BE USED TO SUPPORT HANGING LOADS.




## A13 CMU STEEL GIRT

NTS




## A17 TYP ROOF OPENING < 12" DIAMETER

NTS

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: C. LAMBOLEY
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

KORTE CONSTRUCTION
5700 OAKLAND AVE. SUITE 275
ST. LOUIS, MO 63110

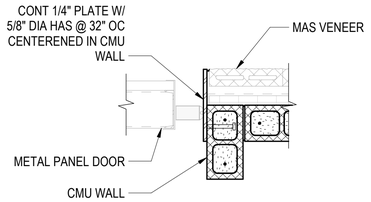
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

FRAMING DETAILS

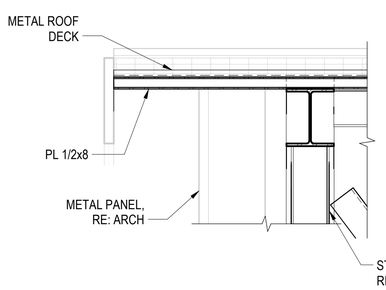
SHEET ID

S-511

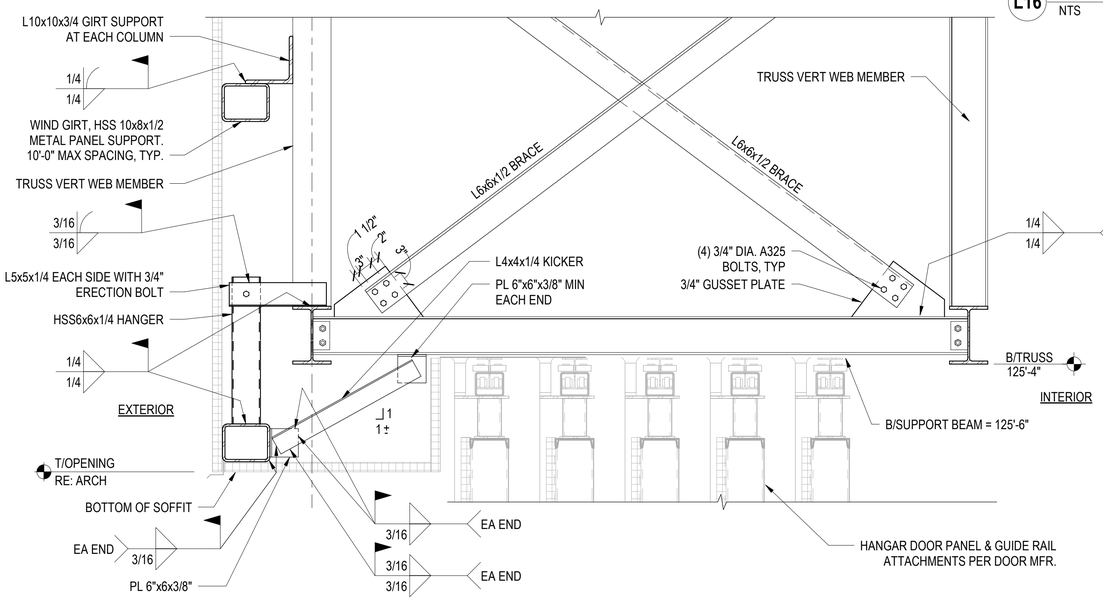
FOR REVIEW



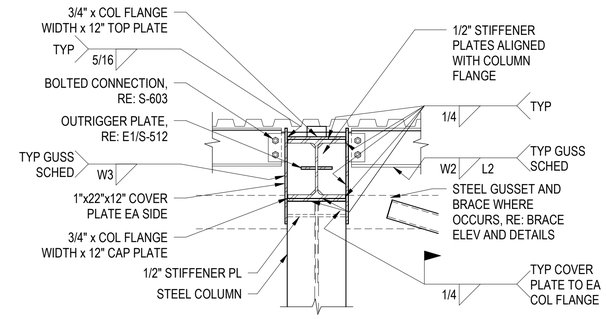

## H1 HANGAR DOOR JAMB
NTS



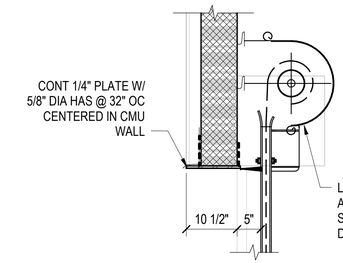

## E1 STRUCTURAL CONNECTION
NTS REF: S-211



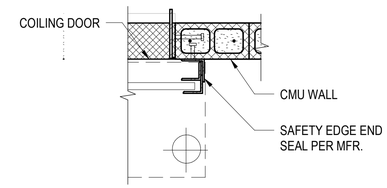

## E6 STEEL SLIDING HANGAR DOOR HEADER
NTS



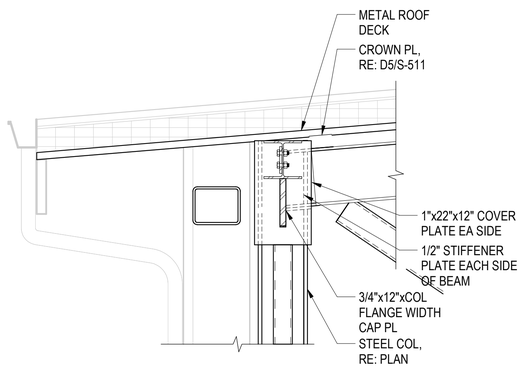

## L16 TRUSS TOP CHORD CONNECTION AT COLUMN
NTS REF: S-201



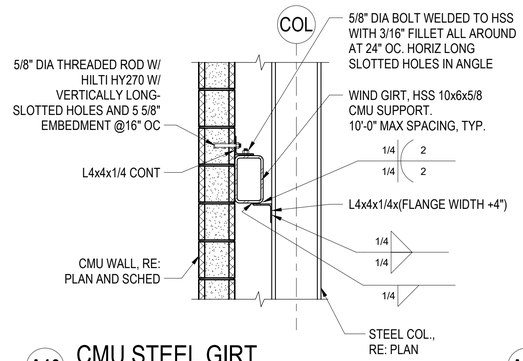

## H17 STEEL PANEL HEADER
NTS REF: S-202



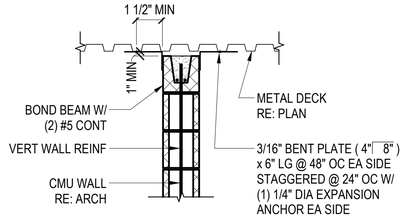

## E17 STEEL SLIDING HANGAR DOOR JAMB
NTS REF: SF121




## A5 TRUSS TOP CHORD CONN @ METAL WALL
3/4" = 1'-0" REF: S-203




## A10 CMU STEEL GIRT
NTS REF: S-301




## A13 TOP OF CMU WALL TO METAL DECK
NTS

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: C. ANDERSON
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
CONTRACT NO.:
SUBMITTED BY: P. PASZCZUK
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

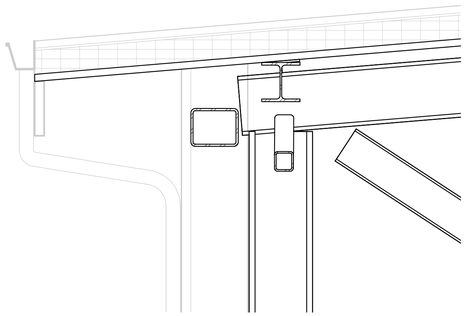
KORTE CONSTRUCTION
5700 OAKLAND AVE, SUITE 275
ST. LOUIS, MO 63110

CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

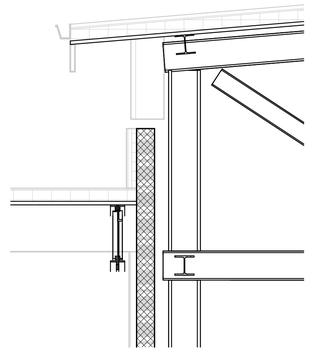
FRAMING DETAILS

SHEET ID
AOF
S-512

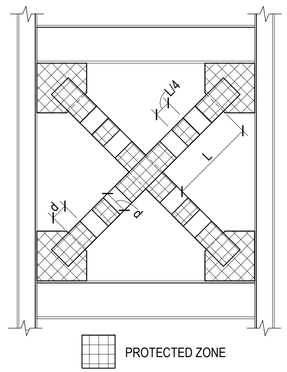
FOR REVIEW



## K10 Section 36
3/4" = 1'-0" REF: S-201

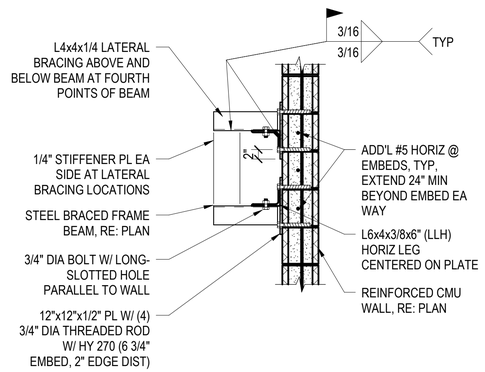


## K15 Section 34
3/8" = 1'-0" REF: SF131

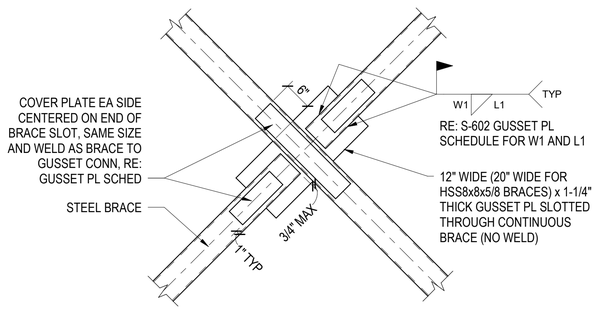



## E10 PROTECTED ZONE OF X-BRACED FRAME
NTS

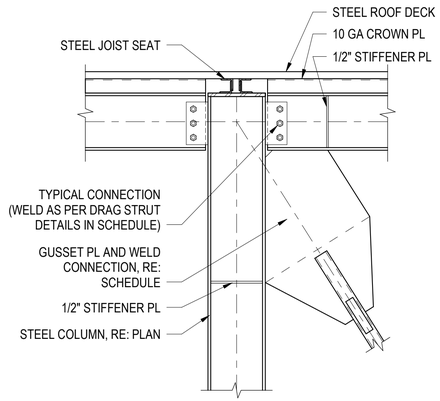
NOTES:
1. DISCONTINUNITIES RESULTING FROM FABRICATION AND ERECTION PROCEDURES AND FROM OTHER ATTACHMENTS ARE PROHIBITED IN THE REGION OF A MEMBER OR A CONNECTION ELEMENT DESIGNATED AS A PROTECTED ZONE.
2. WELDED STEEL HEADED STUD ANCHORS AND OTHER CONNECTIONS ARE PERMITTED IN PROTECTED ZONES.
3. WITHIN THE PROTECTED ZONE, HOLES, TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING, AND UNSPECIFIED THERMAL CUTTING FROM FABRICATION OR ERECTION OPERATIONS SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD (EOR).
4. STEEL HEADED STUD ANCHORS SHALL NOT BE PLACED ON BEAM FLANGE WITHIN THE PROTECTED ZONE.
5. ARC SPOT WELDS AS REQUIRED TO ATTACH DECKING ARE PERMITTED.
6. DECKING ATTACHMENTS THAT PENETRATE THE BEAM FLANGE SHALL NOT BE PLACED ON BEAM FLANGES WITHIN THE PROTECTED ZONE, EXCEPT POWER-ACTUATED FASTENERS UP TO 0.18 IN (4.6 MM) DIAMETER ARE PERMITTED.
7. WELDED, BOLTED, OR SCREWED ATTACHMENTS OR POWER-ACTUATED FASTENERES FOT PERIMETER EDGE ANGLES, EXTERIOR FACADES, PARITIONS, DUCT WORK, PIPING, OR OTHER CONSTRUCTION SHALL NOT BE PLACES WITHIN THE PROTECTED ZONE. EXCEPTION: OTHER ATTACHMENTS ARE PERMITTED WHERE DESIGNATED OR APPROVED BY THE EOR.
8. PROTECTED ZONES BE PERMANENTLY MARKED BY THE FABRICATOR AND RE-MARKED BY THE OWNER'S DESIGNATED REPRESENTATIVE IF THOSE MARKINGS ARE OBSCURED IN THE FIELD, SUCH AS BY APPLICATION OF FIREPROOFING.



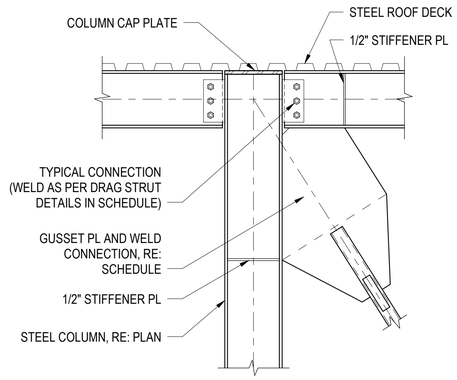

## A1 BEAM LATERAL BRACING @ CMU
3/4" = 1'-0"




## A5 TYP X-BRACE INTERSECTION DETAIL
NTS




## A10 TYP BRACED FRAME ROOF CONNECTION
NTS




## A15 TYP BRACED FRAME ROOF CONNECTION
NTS

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | JULY 17, 2025 |
| SOLICITATION NO.: | |
| CONTRACT NO.: | |
| DESIGNED BY: | A. VALENCIA |
| DRAWN BY: | R. CARLSON |
| CHECKED BY: | D. CARLSON |
| SUBMITTED BY: | P. PASZCZUK |
| SIZE: | ANSI D |

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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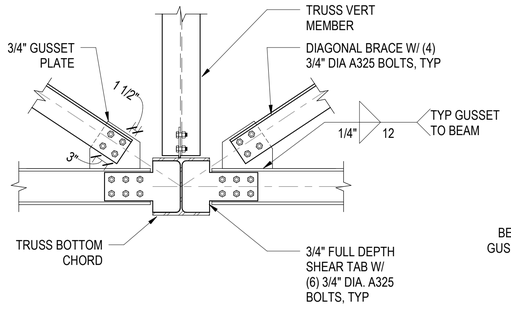
CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

BRACED FRAME DETAILS

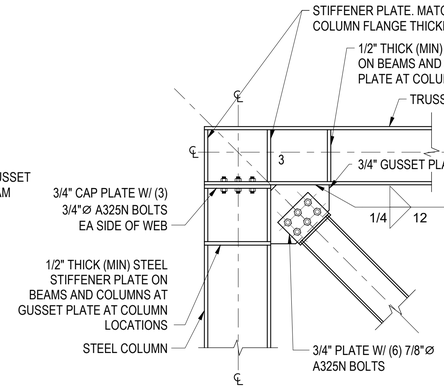
SHEET ID
AOF
S-521

FOR REVIEW



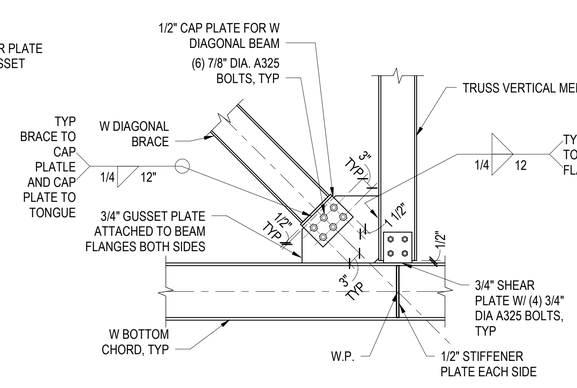

## DIAGONAL BRACE ATTACHED TO TRUSS BOT CHORD

F1 NTS



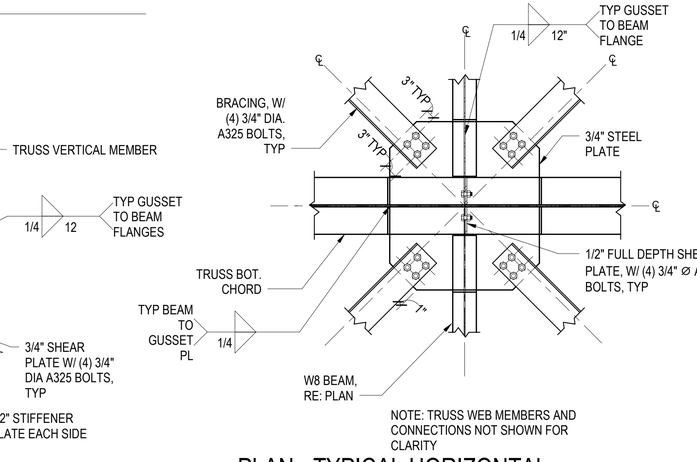

## TRUSS TOP CHORD AT STEEL COLUMN

F6 NTS




## TRUSS BOTTOM CHORD PANEL POINT

F10 NTS



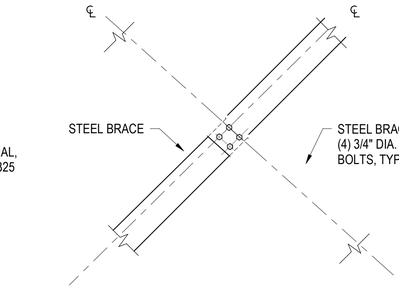

## PLAN - TYPICAL HORIZONTAL BOTTOM CHORD BRACING

F15 NTS



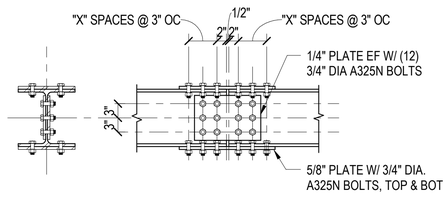

## TOP CHORD TRUSS GIRDER TO BRACE CONNECTION

L10 NTS



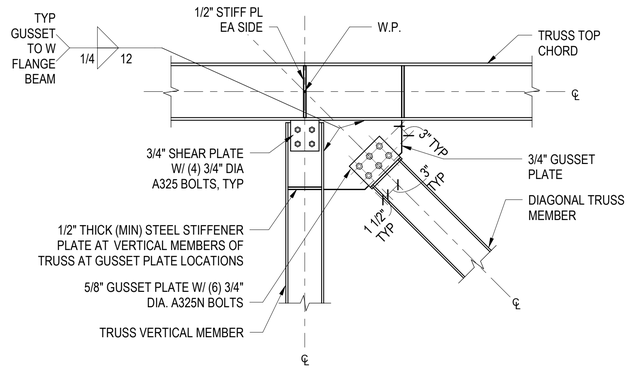

## CROSS BRACING AT GIRDER TRUSS

L16 3/4" = 1'-0"



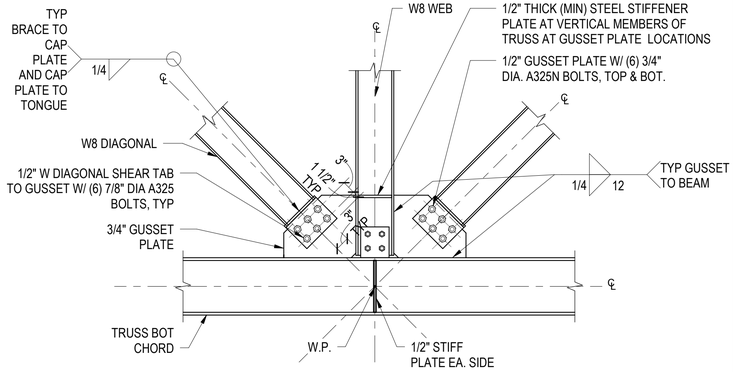

## TRUSS CHORD SPLICE DETAIL

A1 NTS




## TRUSS TOP CHORD PANEL POINT DETAIL

A9 NTS




## TRUSS BOTTOM CHORD PANEL POINT DETAIL

A15 NTS

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: A. VALENCIA
DRAWN BY: R. CARLSON
CHECKED BY: D. CARLSON
SUBMITTED BY: P. PASZCZUK
ISSUE DATE: JULY 17, 2025
SOLICITATION NO.:
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US ARMY CORPS OF ENGINEERS
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5700 OAKLAND AVE, SUITE 275
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CREECH AIR FORCE BASE, CLARK COUNTY, NV
DISASTER RESILIENCY PROGRAM (DRP) - PHASE 2
494137

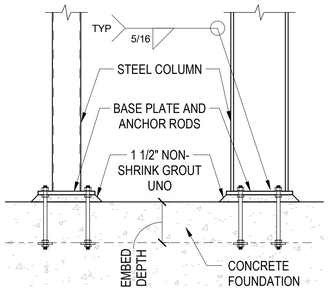
TRUSS CONNECTION DETAILS

SHEET ID
AOF
S-531

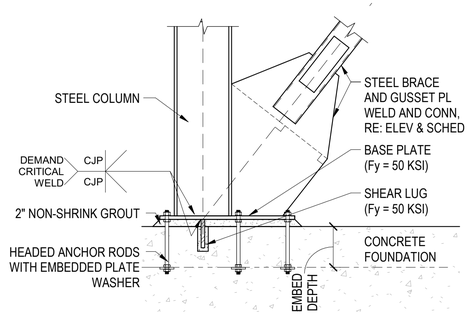
FOR REVIEW

# STEEL BRACED FRAME COLUMN & BASE PLATE SCHEDULE

| COLUMN MARK | COLUMN SIZE | BASE PLATE | | | | | | ANCHOR ROD | | SHEAR LUG | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TYPE | THICKNESS | "M" DIM | "N" DIM | "A" DIM | "P" DIM | DIA. | EMBED | THICKNESS | DEPTH | |

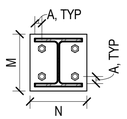



**TYPICAL COLUMN BASE CONDITION**

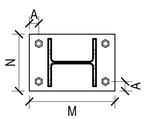



**TYPICAL BRACED FRAME COLUMN BASE CONDITION**

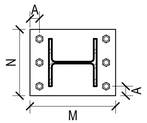
**NOTES:**
1. ALL BASE PLATES AND SHEAR LUGS MUST BE ASTM A572 GR50 STEEL, TYP UNO
2. ALL ANCHOR RODS MUST BE ASTM F-1554 GR55 MIN UNO. THEY MUST BE HEADED ANCHOR RODS W/ 3"x3"x3/8" PLATE WASHERS WITH DOUBLE NUTS OR EMBED PLATE EMBEDDED IN CONCRETE AT THE EMBEDMENT DEPTH SPECIFIED, TYP UNO.
   A. ALL ANCHOR RODS MUST HAVE HARDENED WASHERS AND NUTS, WITH FULL HEIGHT OF EXTENSIONS THREADED
   B. WASHERS MUST CONFORM TO AISC STEEL CONSTRUCTION MANUAL TABLE 14-2
   C. BASE PLATE HOLES MAY INCREASE PER AISC STEEL CONSTRUCTION MANUAL TABLE 14-2
3. ALL BASE PLATES MUST BEAR ON MIN 1 1/2" THICK (2" THICK AT BRACED FRAMES) 5000 PSI NON-SHRINK GROUT AND MUST HAVE LEVELING NUTS, TYP UNO
4. ALL BASE PLATES MUST BE WELDED TO THE COLUMN WITH A 1/4" FILLET WELD ALL AROUND, TYP UNO
5. ALL ANCHOR RODS MUST BE SET IN PLACE WITH A TEMPLATE. THEY MUST BE PLACED PLUMB AND AT THE CORRECT DEPTH AND EXTENSION
6. THE WIDTH OF ALL SHEAR LUGS IS THE SAME AS THE 'N' DIMENSION SHOWN IN BASE PLATE TYPES
7. NOTCH SHEAR LUGS AS REQ'D TO ACCOMMODATE REINF STEEL
8. SEE THE STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION




**TYPE-WA**




**TYPE-WB**

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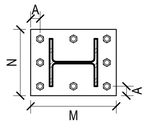
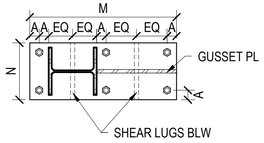
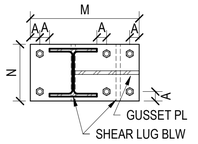


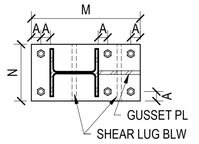

**TYPE-WD**



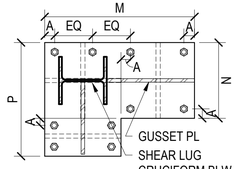

**TYPE-LWE**
*PROVIDE EMBED PLATE, RE: K15/S-502



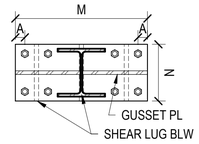

**TYPE-LWA**
*PROVIDE EMBED PLATE FOR SC9, RE: K15/S-502




**TYPE-LWB**




**TYPE-LWC**
*PROVIDE EMBED PLATE, RE: K15/S-502

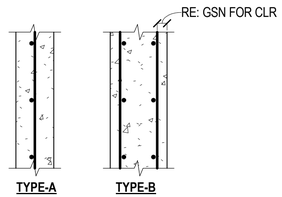



**TYPE-LWD**

# CONCRETE WALL SCHEDULE

| MARK | WIDTH | TYPE | WALL REINFORCING | | NOTES |
|---|---|---|---|---|---|
| | | | HORIZONTAL | VERTICAL | |
| CW-8 | 8" | TYPE A | #5 @ 12" OC | #5 @ 12" OC | |
| CW-15 | 1' - 3" | TYPE A | #5 @ 12" OC | #5 @ 12" OC | |

**NOTES:**
1. SEE TYPICAL DETAILS FOR REINFORCING AT CORNERS, INTERSECTIONS, AND OPENINGS.
2. PROVIDE DOWELS WITH STANDARD HOOKS AND/OR PROPER LAP LENGTH TO THE STRUCTURE ABOVE AND BELOW WITH SIZE AND SPACING TO MATCH THE VERT REINF IN THE WALL, TYP UNO.
3. THE LAP SPLICE LENGTH OF VERT REINF MUST BE AS SHOWN IN THE CONCRETE REINF DEVELOPMENT AND LAP SPLICE TABLE IN THE GENERAL NOTES. ADJUST HEIGHT OF EACH LIFT AS REQUIRED.
4. WHEN A SINGLE CURTAIN OF REINF IS SPECIFIED, PLACE THE VERT REINF IN THE CENTER OF THE WALL, TYP UNO.
5. AT TOP AND BTM OF WALL, INCLUDING ALL DECK BEARING ELEVATIONS, PROVIDE (2) #5 CONT IN ADDITION TO SCHEDULED REINFORCING.
6. ALL HORIZONTAL REINF MUST TERMINATE AT ENDS OF WALLS AND ALL JAMBS WITH A STANDARD 180 DEGREE HOOK. END OF WALL IS DEFINED AS ANY WALL SEGMENT THAT EITHER CHANGES DIRECTION AND/OR CHANGES TO A DIFFERENT WALL TYPE.
7. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.




**REINFORCED CONCRETE WALL TYPES**

# FOOTING SCHEDULE

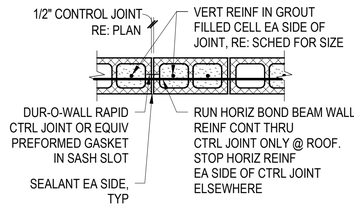
| MARK | WIDTH | LENGTH | THICK | TRANSVERSE REINFORCING | | LONGITUDINAL REINFORCING | | NOTES |
|---|---|---|---|---|---|---|---|---|
| | | | | NO. | SIZE | NO. | SIZE | |
| FS3.0 | 3' - 0" | 3' - 0" | 1' - 0" | (5) | #6 | (5) | #6 | |
| FS6.0 | 6' - 0" | 6' - 0" | 1' - 0" | (5) | #6 | (5) | #6 | |
| FS7.0 | 7' - 0" | 7' - 0" | 1' - 0" | (5) | #6 | (5) | #6 | |
| FS10.0 | 10' - 0" | 10' - 0" | 1' - 6" | (5) | #6 | (5) | #6 | |
| FS[illegible] | 5[illegible]' - 0" | [illegible]" CONT | 2' - 6" | (4) | #5 | -- | #5 @ 12" OC | TOP & BOTTOM |
| FS[illegible] | 1[illegible]' - 0" | [illegible]" CONT | 1' - 6" | (5) | #6 | (5) | #5 @ [illegible]2" OC | |
| FS18x30 | 18' - 0" | 30' - 0" | 2' - 6" | | | | | TOP & BOTTOM |

**NOTES:**
1. ALL FOOTINGS MUST BEAR ON PROPERLY PREPARED MATERIAL. SEE FOUNDATION SECTION OF THE STRUCTURAL GENERAL NOTES.
2. ALL FOOTINGS MUST BE CENTERED BELOW THE WALL AND/OR COLUMN ABOVE, TYP UNO.
3. ALL EARTH FORMED FOOTINGS MUST HAVE REQUIRED CONCRETE COVER FOR REINFORCEMENT PER THE CONCRETE COVER TABLE.
4. ALL EXTERIOR FOOTINGS MUST BEAR BELOW THE EFFECTS OF FROST. SEE THE DESIGN CRITERIA SECTION OF THE STRUCTURAL GENERAL NOTES FOR MINIMUM BEARING DEPTH.
5. PROVIDE MINIMUM COVER FOR ALL REINFORCING PER THE STRUCTURAL GENERAL NOTES AND/OR THE CONCRETE COVER SCHEDULE.
6. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER, TYP UNO.
7. PLACE TRANSVERSE REINFORCING NEAREST EARTH AND LONGITUDINAL REINFORCING ON TOP OF TRANSVERSE REINFORCING.
8. PLACE TOP REINFORCING IF NOTED ON SCHEDULE. AS A MINIMUM, ALL FOOTINGS GREATER THAN OR EQUAL TO 18" IN THICKNESS REQUIRE #6 @ 12" OC EA WAY IN THE TOP OF FOOTING UNLESS THE SCHEDULE PROVIDES MORE STRINGENT REQUIREMENTS.
9. EXTEND CONTINUOUS FOOTINGS 12" MINIMUM PAST EDGE OF WALL, UNLESS OTHERWISE NOTED ON PLANS.
10. REINFORCING IN CONTINUOUS FOOTINGS MUST PASS THROUGH INTERSECTING SPOT FOOTINGS.
11. ALL REINFORCING FOR SPOT FOOTINGS AND MAT FOOTINGS AT BRACED FRAMES AND MOMENT FRAMES MUST HAVE A 90 DEGREE HOOK AT EA END.
12. PROVIDE DOWELS WITH STANDARD HOOKS FROM FOOTINGS TO ANY REINFORCED ELEMENT ABOVE WITH SIZE AND SPACING TO MATCH VERTICAL REINFORCING IN THE ELEMENT ABOVE.
13. ANY INCREASE IN THE SIZE OF FOOTINGS SHOWN MAY REQUIRE ADDITIONAL REINFORCING. COORDINATE WITH THE ENGINEER OF RECORD.
14. PENETRATIONS THROUGH FOOTINGS ARE NOT ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.
15. ALL CONTINUOUS FOOTINGS MUST BE FC2.0 MINIMUM, AND ALL SPOT FOOTINGS MUST BE FS3.0 MINIMUM UNO ON PLANS.
16. SEE THE STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION.

# MASONRY WALL SCHEDULE

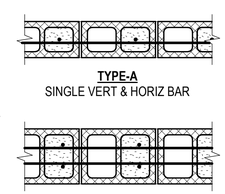
| MARK | WIDTH | TYPE | WALL REINFORCING | | NOTES |
|---|---|---|---|---|---|
| | | | HORIZONTAL | VERTICAL | |
| MW-8 | 8" | A | #5 @ 48" OC | #5 @ 32" OC | |

**NOTES:**
1. SEE TYPICAL DETAILS FOR REINFORCING AT CORNERS, INTERSECTIONS, AND OPENINGS.
2. GROUT ALL CELLS SOLID THAT CONTAIN REINFORCING, EMBEDS, AND/OR BOLTS, TYP.
3. DO NOT SOLID GROUT WALLS UNO.
4. ALL MASONRY BELOW GRADE MUST BE GROUTED SOLID.
5. LAY ALL BLOCK IN RUNNING BOND, TYP UNO.
6. HORIZONTAL WALL REINF MUST CONTINUE THROUGH LINTELS. WHERE BOTH HORIZ WALL AND LINTEL REINF OCCUR IN THE SAME COURSE, USE THE LARGER REINFORCEMENT ONLY.
7. ALL HORIZ REINF MUST TERMINATE AT ENDS OF WALL AND JAMBS WITH STANDARD 180 DEG HOOKS. PLACE ADDITIONAL VERT BAR IN CENTER OF WALL IF NECESSARY.
8. PROVIDE SCHEDULED BOUNDARY COLUMNS AT END OF WALLS. SEE TYP MASONRY ELEVATION.
9. AT TOP AND BOTTOM OF WALL PROVIDE (2) #5 CONT IN ADDITION TO SCHEDULED REINFORCING.
10. AT ALL DECK AND JOIST EMBED LOCATIONS, PROVIDE (2) #5 CONT IN ADDITION TO SCHEDULED REINFORCING.
11. PROVIDE DOWELS WITH STANDARD HOOKS AND/OR PROPER LAP LENGTH TO THE STRUCTURE ABOVE AND BELOW WITH SIZE AND SPACING TO MATCH THE VERT REINF IN THE WALL, TYP UNO.
12. THE LAP SPLICE LENGTH OF VERT REINF MUST BE AS SHOWN IN THE MASONRY REINF LAP SPLICE TABLE IN THE GENERAL NOTES. ADJUST HEIGHT OF EACH LIFT AS REQUIRED.
13. WHEN A SINGLE CURTAIN OF REINF IS SPECIFIED, PLACE THE VERT REINF IN THE CENTER OF THE WALL, TYP UNO.
14. WHEN A DOUBLE CURTAIN OF REINF IS SPECIFIED, PLACE EACH CURTAIN AT THE FACE OF THE WALL WITH THE VERT REINF CLOSEST TO THE SHELL WITH A CLEAR DISTANCE BETWEEN 1/2" AND 1" TO THE INSIDE FACE OF THE SHELL.
15. ALL WALLS MUST INCLUDE LADDER TYPE JOINT REINF SPACED AT 16" OC VERTICALLY WITH AT LEAST TWO WIRES OF W1.7 (GALVANIZED).
16. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.




WHERE CONTROL JOINT OCCURS AT EDGE OF OPENINGS, ALL WALL BEAM REINF AND GROUT MUST BE CONTINUOUS THROUGH JOINT. USE OPEN END UNITS OR BREAK OUT TOP HALF OF SHELL FOR GROUNT FLOW @ JOINT OF BEAM. DELETE PREFORMED GASKET FOR HEIGHT OF BEAM

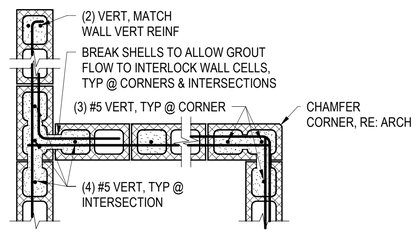
**MASONRY WALL CONTROL JOINT**



**TYPE-A**
SINGLE VERT & HORIZ BAR

**TYPE-B**
DBL VERT & DBL HORIZ BAR

**MASONRY WALL TYPES**




**MASONRY WALL REINF LAYOUT**

US Army Corps of Engineers ®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

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DRAWN BY: R. CARLSON
CHECKED BY: D. LAWSON
ISSUE DATE: JULY 17, 2025
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SUBMITTED BY: P. PASZCZUK
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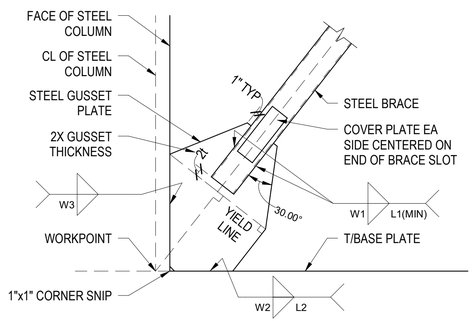
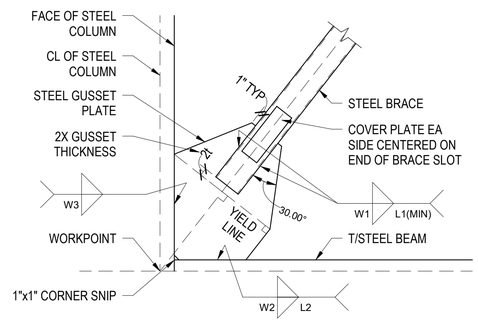
# STEEL GUSSET PLATE CONNECTION SCHEDULE

| # MARK | GUSSET PLATE THICKNESS | GEOMETRY AND WELDING INFORMATION | | | | | COVER PLATE INFO | | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| | | W1 SIZE | L1 LENGTH | W2 SIZE | L2 LENGTH | W3 SIZE | PLATE SIZE | WELD | |




**TYPICAL STEEL GUSSET PLATE TO BASE PLATE DETAIL**

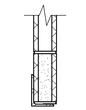



**TYPICAL STEEL GUSSET PLATE TO STEEL BEAM DETAIL**

**NOTES:**
1. RE: BRACED FRAME ELEVATIONS FOR MARKED LOCATIONS OF EACH GUSSET ASSEMBLY.
2. ALL GUSSET PLATES MUST BE A572 GRADE 50 STEEL.
3. ALL COVER PLATES MUST BE A572 GRADE 50 STEEL.
4. AT CONTRACTOR'S OPTION, FILLET WELDS MAY BE REPLACED WITH CJP WELDS SO LONG AS REQUIRED TESTING IS PERFORMED PER GOVERNING BUILDING CODE.
5. YIELD LINE SHOULD EXACTLY INTERSECT WITH COLUMN FACE OR BASE PLATE/BEAM FACE DEPENDING ON THE GEOMETRY.
6. LENGTH L1 IS A MINIMUM WELD LENGTH. USE LENGTH L2 AS A BASELINE TO ESTABLISH THE YIELD LINE.
7. PLACE 1/2" THICK FOAM EACH SIDE OF GUSSET PLATE WHEN CONCRETE POURS AROUND GUSSET PLATE.

# VENEER LINTEL SCHEDULE

| LOOSE LINTEL SCHEDULE FOR NON-LOAD BEARING MASONRY WALLS | |
|---|---|
| | WALL THICKNESS |
| OPENING WIDTH | 4" WALL |
| UP TO 4'-0" | L4x3 1/2x5/16 LLV |
| 4'-0" TO 6'-0" | L5x3 1/2x5/16 LLV |
| 6'-0" TO 8'-0" | L6x3 1/2x5/16 LLV |
| 8'-0" TO 12'-0" | L6x6x1/2 |
| 12'-0" TO 16'-0" | L8x6x5/8 LLV |



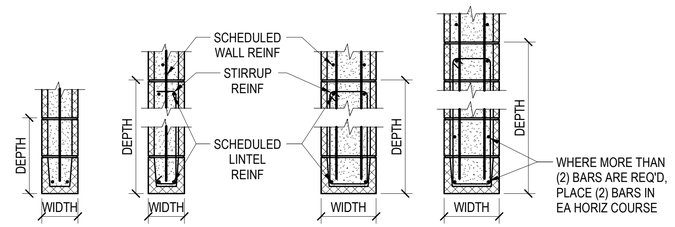
SINGLE ANGLE

**NOTES:**
1. RE: STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENING SIZE AND LOCATION.
2. CONNECT ALL DOUBLE ANGLES BACK TO BACK AT 2'-0" OC MAXIMUM SPACING.
3. PROVIDE 6" MINIMUM BEARING AT FIRST FULL MASONRY CELL AT EACH END OF LOOSE LINTEL.
4. FOR OPENINGS 6'-0" AND WIDER, FULLY GROUT FIRST FULL CELL EACH SIDE OF OPENING FOR FULL HEIGHT OF WALL.
5. FOR OPENINGS LESS THAN 6'-0" WIDE, FULLY GROUT FIRST FULL CELL EACH SIDE OF OPENING FOR MINIMUM HEIGHT OF 8", BUT NOT LESS THAN THE FULL CELL HEIGHT, BELOW LINTEL BEARING ELEVATION.
6. FULLY GROUT ALL CELLS WHERE LOOSE LINTELS ARE LOCATED.
7. ANGLES IN EXTERIOR WALLS ARE TO BE GALVANIZED.

# MASONRY LINTEL SCHEDULE

| MARK | WIDTH | DEPTH | TYPE | LINTEL REINFORCING | | NOTES |
|---|---|---|---|---|---|---|
| | | | | HORIZONTAL | STIRRUPS | |
| MB16 | 7 5/8" | 1' - 4" | A | (2) #5 | N/A | |

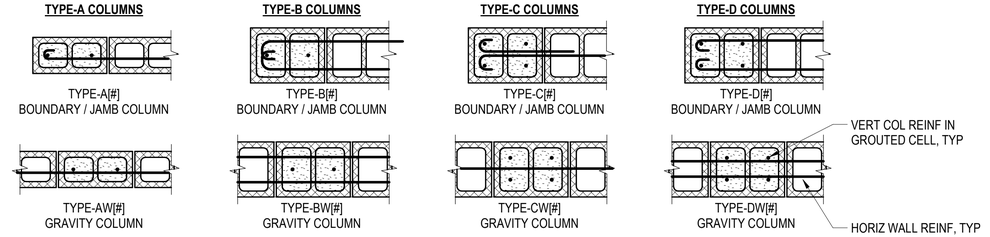
**NOTES:**
1. LINTELS MUST BE OF THE SAME MATERIAL AND WIDTH AS THE WALL IN WHICH THEY ARE CONSTRUCTED.
2. LINTELS MUST BE GROUTED MONOLITHICALLY WITH THE SUPPORTING WALL AND COLUMNS.
3. GROUT LINTELS SOLID FOR DEPTH SHOWN IN THE SCHEDULE, PLUS AS PER DETAILS, STRUCTURAL NOTES, AND/OR WALL SCHEDULE.
4. EXTEND HORIZONTAL REINFORCING 48 BAR DIAMETERS MIN BEYOND THE EDGE OF ALL OPENINGS. PROVIDE A 90° STANDARD HOOK WHERE THIS CANNOT BE ACCOMPLISHED.
5. NO DUCTS, OPENINGS, OR PENETRATIONS WILL OCCUR THROUGH BEAMS UNO.
6. REINFORCING INDICATED IN LINTEL SCHEDULE IS IN ADDITION TO WALL HORIZ AND VERT REINFORCING.
7. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.




**MASONRY LINTEL TYPES**

# MASONRY JAMB AND COLUMN SCHEDULE

| MARK | SIZE | TYPE | COLUMN REINFORCING | | NOTES |
|---|---|---|---|---|---|
| | | | VERTICAL | TIES | |
| MP16 | 8x16 | A2 | #5 EA CELL | N/A | |
| MP24 | 8x16 | A2 | #5 EA CELL | N/A | |
| MP32 | 8x16 | A2 | #5 EA CELL | N/A | |




**NOTES:**
1. DESIGNATION "TYPE A[#]" WHERE "A" EQUALS THE WALL TYPE IN WHICH THE COLUMN/JAMB OCCURS AND WHERE [#] EQUALS THE NUMBER OF VERTICALLY GROUTED CELLS CONTAINING REINFORCING.
2. HORIZONTAL WALL REINF MUST RUN CONTINUOUS THROUGH MASONRY COLUMNS.
3. GROUT ALL REINFORCED CELLS AND VOIDS SOLID.
4. MASONRY COLUMN REINF MUST EXTEND FULL HEIGHT FROM MARK ON PLAN DOWN TO FOUNDATION AND TERMINATE WITH A STANDARD 90° HOOK. FOR CONC FOUNDATION WALL HEIGHTS OVER 5'0", VERT MASONRY REINF MUST DOWEL 4'0" MIN INTO FOUNDATION WALL.
5. NUMBER OF VERT BARS IS TOTAL NUMBER OF BARS.
6. SEE ARCHITECTURAL DRAWINGS FOR SPECIAL COURSING ARRANGEMENTS.
7. ALL TIES MUST TERMINATE WITH A STANDARD MASONRY HOOK.
8. SEE MASONRY REINFORCING SPLICE LENGTH TABLES FOR REINF LAP LENGTHS.
9. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.

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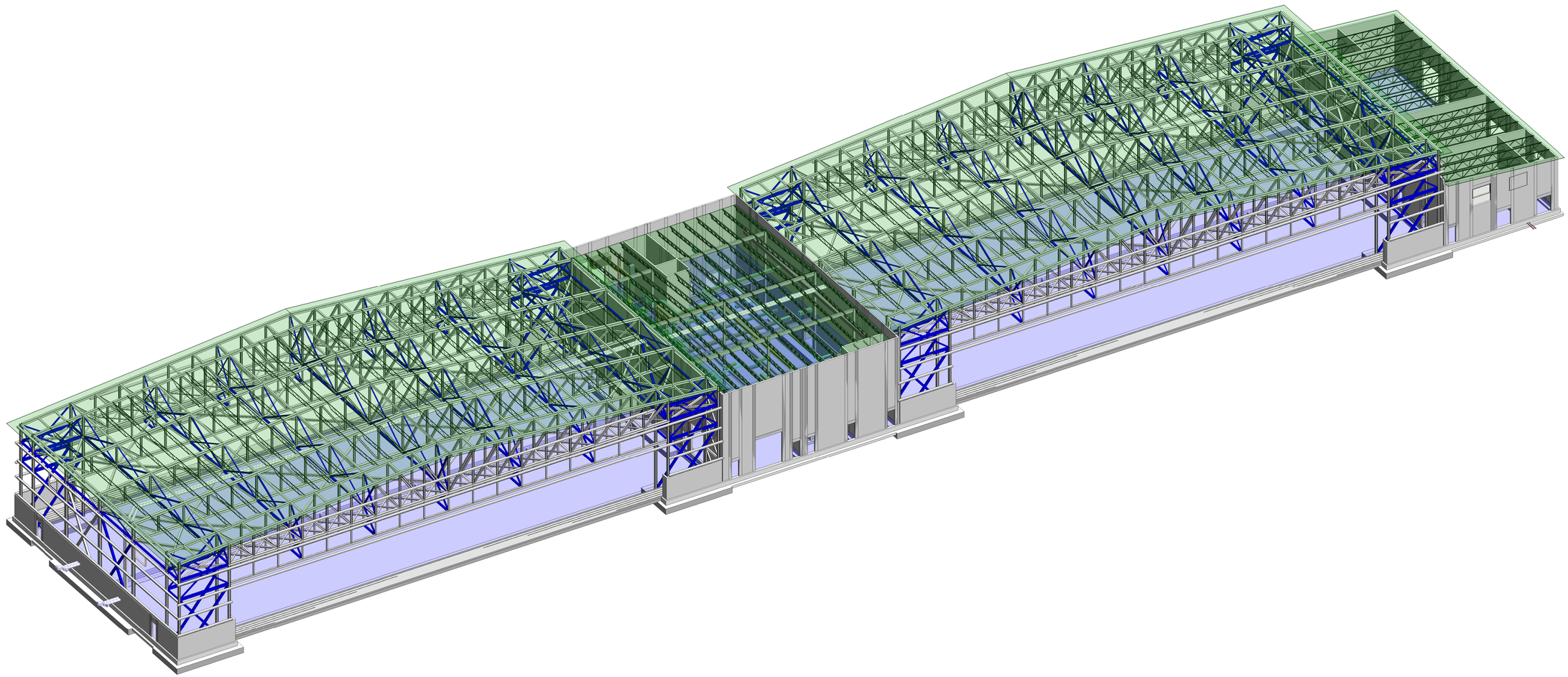

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